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GROUNDWATER SUSTAINABILITY PLAN EMERGENCY REGULATIONS

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TITLE 23. WATERS

DIVISION 2. DEPARTMENT OF WATER RESOURCES

CHAPTER 1.5. GROUNDWATER MANAGEMENT

SUBCHAPTER 2. GROUNDWATER SUSTAINABILITY PLANS

ARTICLE 1. Introductory Provisions

§ 350. Authority and Purpose

These regulations specify the components of groundwater sustainability plans, alternatives to groundwater sustainability plans, and coordination agreements prepared pursuant to the Sustainable Groundwater Management Act (Part 2.74 of Division 6 of the Water Code, beginning with Section 10720), and the methods and criteria used by the Department to evaluate those plans, alternatives, and coordination agreements and information required by the Department to facilitate that evaluation.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Sections 10733.2, 10733.4. Water Code.

§ 350.2. General Principles

Consistent with the State's interest in achieving groundwater sustainability through local management and the avoidance of undesirable results within groundwater basins, the following general principles shall guide the Department in the implementation of these regulations.

(a) The Plan, individually or as a set of coordinated ~~or~~ Plans, must achieve the sustainability goal for the entire basin within 20 years of Plan implementation, or as extended with the approval of the department. ~~without adversely affecting the ability of an adjacent basin to implement their Plan or achieve their sustainability goal.~~

(b) The Plan or Plans shall describe a process for the collection, interpretation, and reporting of sufficient ~~reliable~~ information to permit the Department to evaluate the adequacy of the Plan.

(c) The Department shall evaluate the adequacy of all Plans, Plan amendments, reports and periodic evaluations based on a standard of substantial compliance with the Act and this subchapter. Notwithstanding the provisions of this subchapter, the

Comment [jw1]: Refer to Plan or Plans when discussing basin wide issues

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Comment [jw2]: Reflect extension throughout when referring to 20 years

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Comment [jw3]: Statute does not mandate no adverse affect on adjacent basin. In fact there will be legal and unavoidable impacts.

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Comment [jw4]: Make substantial compliance standard an overriding framework. Recognize not all information will be needed in all basins.

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Department may waive any specific requirement under this subchapter where it determines that such waiver is consistent with the intent of the Act. An agency may request a waiver, or the Department may waive any specific requirement based on its own initiative.

~~(c) The Department shall evaluate the adequacy of all Plans, including subsequent modifications to Plans, and reports and periodic evaluations based on a substantial~~

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~~compliance standard as described in Article 6, provided that the goals of the Act are satisfied.~~

(d) The Department may determine that ~~an initial~~ a Plan is adequate, notwithstanding identified deficiencies, provided that the Plan contains sufficient ~~credible~~ information to support reasonable interpretations about basin conditions and describes all of the following:

(1) A process for prioritizing and filling data gaps throughout the course of Plan implementation.

(2) The specific actions and projects that will bring the Plan into compliance ~~within minimum standards and best management practices~~ on a reasonable schedule.

(3) A definite course to achieve the sustainability goal within 20 years of Plan implementation, or as otherwise extended with the approval of the Department.

(4) The institutional system that will maintain sustainability over the planning and implementation horizon.

(e) Adaptive management may be employed as a tool for improving local and regional management of the state's groundwater basins within 20 years of Plan implementation and over the planning and implementation horizon.

(f) The processes for an Agency to develop and submit a Plan for evaluation by the Department, and for Department evaluation, as described in these regulations, ~~are made applicable~~apply to multiple Agencies developing multiple Plans for a basin and to Alternatives, as described in Article 9.

~~The Department may evaluate a Plan at any time after its adoption, for compliance with the Act and this Subchapter.~~

~~(g)~~

~~(h)~~(g) Unless otherwise noted, all section references in these regulations refer to this Chapter.

§ 350.4. Local Management of Basins and Plans

(a) In enacting the Sustainable Groundwater Management Act, the Legislature stated its intent "[t]o manage groundwater basins through the actions of local government agencies to the greatest extent feasible, while minimizing state intervention to only when necessary to ensure that local agencies manage groundwater in a sustainable manner."

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Comment [jw5]: Random periodic evaluations will not be productive to progress

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Comment [jw6]: Clarify local authority to define needs with substantial compliance framework.

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(b) Consistent with the Legislature's intent, an Agency may vary or omit from its Plan or related reports any provisions in Articles 3, 5 or 7 if the Agency determines, based on findings supported by substantial evidence, that the inclusion of the provision or provisions would not materially contribute to the Agency's ability to manage the basin to achieve the sustainability goal and that the Plan is in compliance with the Act.

(c) Consistent with the Legislature's intent, the Agencies that are parties to a coordination agreement may vary or omit from their agreement or related reports any provisions in Article 8 of these regulations if all of the Agencies determine, based on findings supported by substantial evidence, that the inclusion of the provision or provisions would not materially contribute to the Agencies' ability to manage the basin to achieve the sustainability goal and the Plan is in compliance with the Act.

(d) The Department may review the determinations of the Agency or Agencies under subdivision (b) or (c) as part of its review of the Plan or Plans under Section 355.2.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Sections 113, 10720.1, 10733, 10733.2, 10733.4, 10733.6, Water Code.

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ARTICLE 2. Definitions

§ 351. Definitions

In addition to terms defined in the Sustainable Groundwater Management Act and in Bulletin 118, and terms defined in Subchapter 1 of this Chapter, which definitions apply to these regulations, the following terms used in this Subchapter have the following meanings:

(a) "Agency" refers to a groundwater sustainability agency as defined in the Act.

(b) "Agricultural water management plan" refers to a plan adopted pursuant to the Agricultural Water Management Planning Act as described in Part 2.8 of Division 6 of the Water Code, commencing with Section 10800 et seq.

(c) "Alternative" refers to any alternative to a Plan described in Water Code Section 10733.6.

(d) "Annual report" refers to the report required by Water Code Section 10728.

(e) "Baseline" or "baseline conditions" refer to historic information, including information about the sustainability condition metrics, as defined by the Agency based on substantial evidence in the administrative record and used to project future conditions for hydrology, water demand, and availability of surface water and to evaluate potential sustainable management practices of a basin.

(f) "Best available information" refers to information that is accurate, applicable, actionable, and accessible.

(g) "Best available science" refers to the use of ~~high-value~~ information and data, specific to the decision being made and the time frame available for making that decision, that is consistent with scientific and engineering professional standards of practice.

(h) "Best management practice" refers to a practice, or combination of practices, that are not required but designed to achieve sustainable groundwater management and have been determined by the Agency to be technologically and economically effective, practicable, and based on best available science.

(i) "Submitting~~Coordinating~~ agency" refers to a groundwater sustainability agency or other authorized entity that represents two or more Agencies or Plans for a basin and is the sole point of contact with the Department.

(j) ~~"Critical parameter"~~ "Sustainability Condition" refers to those general surface water,

Comment [DA7]: This term reflects the fact that the agency submitting a plan is not some type of "super-agency" but merely the one that submits the plan.

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Comment [DA8]: These parameters are not "critical" but they are the conditions that are related to sustainability. Hence the need to change the term here and throughout the regulations.

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groundwater, water quality, land elevation, or seawater intrusion conditions in a basin that may potentially ~~conditions that may~~ lead to undesirable results, as described in Water Code Section 10721(x).including

1) chronic lowering of groundwater levels indicating a depletion of supply if continued over the planning and implementation horizon,
2) reductionof groundwater storage,
3) sea water intrusion,
4) degraded water quality,
5) land subsidence that ~~substantially~~ interferes with surface land uses, and
6) depletions of surface water that have adverse impacts on beneficial uses of surface water. ~~that may lead to undesirable results, as described in Water Code Section 10721(x).~~

The Sustainability Conditions are to be measured using specific metrics chosen by the Agency in its discretion, which shall not be subject to oversight by DWR *provided* that the metrics are supported by substantial evidence.

~~(i)~~(k) "Groundwater flow" refers to the ~~volume~~ rate and direction of groundwater movement into, out of, or throughout a basin.

~~(j)~~(l) "Interested parties" refers to all persons and entities on the list of interested persons established by the Agency pursuant to Water Code § 10723.4.

~~(k)~~(m) "Interconnected surface water" refers to conditions where surface water and the underlying aquifer are hydraulically connected by a continuous saturated zone ~~and the overlying surface water is not completely depleted.~~

~~(l)~~(n) "Interim milestone" refers to a target value for management actions or measurable groundwater conditions set by an Agency as part of Plan implementation.

~~(m)~~(o) "Management area" refers to areas within a basin where conditions such as water use sector, water source type, geology, aquifer characteristics, or critical parameters ~~related to undesirable results~~ are significantly different from basin conditions as a whole or in other management areas, and justify different minimum thresholds, measurable objectives, monitoring and management actions.

~~(n)~~(p) "Measurable objectives" refer to specific, quantifiable goals for the maintenance or improvement of specified groundwater conditions that have been included in an adopted Plan or set of coordinated plans to achieve the sustainability goal in a basin.

~~(o)~~(q) "Minimum threshold" refers to the point at which groundwater conditions for a given critical parameter are significant and unreasonable and may lead to undesirable results.

~~(p)~~(r) "NAD83" refers to the North American Datum of 1983 computed by the National Geodetic Survey.

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~~(q)~~(s) "NAVD88" refers to the North American Vertical Datum of 1988 computed by the National Geodetic Survey.

~~(r)~~(t) "Plain Language" means language that the intended audience can readily understand and use because that language is concise, well-organized, uses simple vocabulary, avoids excessive acronyms and technical language, and follows other best practices of plain language writing.

~~(s)~~(u) "Plan" refers to a groundwater sustainability plan as defined in the Act. As appropriate in these regulations, the term "Plan" also refers to a series of plans adopted by Agencies pursuant to a Coordination Agreement. The status of a Plan may change as follows:

Comment [jw10]:

Comment [DA11]: This is a simple change in nomenclature that is intended to include a interlocking series of plans for subbasins or management areas that are intended to work together to manage a basin.

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(1) "Adopted Plan" refers to a Plan that has been adopted by an Agency pursuant to the requirements of the Act and this Subchapter.

(2) "Adequate ~~pproved~~ Plan" refers to an adopted Plan that has been evaluated by the Department and found to be adequate.

(3) ~~"Initial Plan" refers to the first version of a Plan developed by an Agency and evaluated by the Department~~.

(v) "Plan area" refers to an area of a basin that is managed by a groundwater sustainability plan.

~~(t)~~(w) "Plan implementation" refers to the ~~date when an~~ Agency ~~exercises~~ exercising any of the powers described in the Act, or performing any of the actions included in the Plan after adopting and submitting to the Department a Plan or Alternative.

~~(u)~~(x) "Plan manager" is an employee or authorized representative of a groundwater sustainability agency who ~~has been delegated management authority for submitting the groundwater sustainability plan and serving~~ serves as the point of contact between the groundwater sustainability agency and the Department.

~~(v)~~(y) "Principal aquifers" refer to aquifers or aquifer systems that store, transmit, and yield significant or economic quantities of groundwater to the wells, springs, or surface water systems.

~~(w)~~(z) "Reference point" refers to a permanent, stationary and readily identifiable mark or point on a well, such as the top of casing, from which groundwater level measurements are taken.

~~(x)~~(aa) "Reporting period" refers to the period covered by the annual report required by Water Code Section 10728~~, which shall consist of the previous water year~~.

(aa) "Representative monitoring" refers to a monitoring site ~~within a broader system of~~ or sites that typifies one or more conditions within the basin or an area of the basin.

(ab) "Seasonal high" refers to the highest annual static groundwater elevation that is typically measured in the Spring and associated with ~~stable~~ aquifer conditions following a period of lowest ~~annual~~ seasonal groundwater demand.

(ac) "Seasonal low" refers to the lowest annual static groundwater elevation that is typically measured in the Summer or Fall, and associated with ~~a period of stable~~ aquifer conditions following a period of highest seasonal~~annual~~ groundwater ~~-~~demand.

(ad) "Seawater intrusion" refers to the advancement of seawater into a groundwater supply that results in degradation of water quality in the basin. ~~, and includes seawater from any source.~~

Comment [DA12]: The Act calls for DWR to "evaluate" GSPs but not to approve them. This changes should be made throughout the regulations

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Comment [jw13]: Plans will be iterative. No need for initial designation.

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(ae) "Substantial compliance" means the Plan meets the content requirements of the Act and contains sufficient data and analysis to support the Agency's finding that the sustainability goal will be achieved, and the Department determines that any discrepancy would not materially affect the ability of the Agency to achieve the sustainability goal or of the Department to evaluate the likelihood of the Plan to attain that goal. In other words, a Plan meets the substantial compliance standard if there is substantial evidence in the record before the Agency to support the Agency's conclusion that the Plan meets the sustainability requirement of the Act. The Department may only find a Plan to be inadequate if the Department determines that the Agency lacked substantial evidence for its findings. The Department shall presume that there is substantial evidence to support an Agency's finding if the finding is supported by the opinion of a register Professional Engineer, Professional Geologist or other qualified expert.

(~~ae~~af) "Urban water management plan" refers to a plan adopted pursuant to the Urban Water Management Planning Act as described in Part 2.6 of Division 6 of the Water Code, commencing with Section 10610 et seq.

(~~af~~ag) "Water source type" represents the source from which water is derived to meet the applied beneficial uses, including, but not limited to, groundwater, recycled water, reused water, and local or imported surface water sources identified as Central Valley Project, the State Water Project, the Colorado River Project, local supplies, and local imported supplies.

(~~ag~~ah) "Water supply reliability" refers to the likelihood that the supply of water within the basin will satisfy reasonable demands for the beneficial uses and users of water.

(~~ah~~ai) "Water use sector" refers to categories of water demand based on the general land uses to which the water is applied. They include, but may not be limited to, urban, industrial, agricultural, managed wetlands, managed recharge, and native vegetation.

~~(ai) "Water year" refers to the period from October 1 through the following September 30, inclusive, as defined in the Act.~~

(aj) "Water year type" refers to the classification system index provided by the Department to assess the ~~amount of precipitation in~~annual hydrologic conditions of a basin, or an area from which the basin receives imported water.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Section 10727.2. 10733.2, Water Code.

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Comment [jw14]: Consider allowing for other year definitions. This may be cumbersome for some basins

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ARTICLE 3. Technical and Reporting Standards

§ 352. Introduction to Technical and Reporting Standards

This Article describes the use of ~~best management practices and~~ minimum standards for monitoring sites and other technical matters appropriate to develop or monitor the implementation of a Plan.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Section 10733.2, Water Code.

§ 352.4. ~~Best Management~~Agency Practices and Procedures

~~(a)~~ Each Plan shall include practices and procedures ~~best management practices~~ adopted by the Agency for management actions, data collection and analysis, and other necessary elements of the Plan. ~~The Agency may rely on best management practices developed by the Department or shall develop and adopt their own best management practices.~~

(a)

(b) ~~Best management practices shall be reviewed~~ Practices and procedures shall be reviewed at least every five years as part of the periodic evaluation of the Plan and modified as necessary.

~~(c) If best management practices develo Ped by the Department are modified, an Agency shall not be required to amend the Agency's best management practices until the next five-year review.~~

Note: Authority cited: Section 10733.2, Water Code.

Reference: Section 10728.2, 10729, 10733.2, 10733.8, Water Code.

§ 352.6. Data and Reporting Standards

(a) The following reporting standards apply to all information required of a Plan, unless otherwise indicated:

Comment [jw15]: BMPs should not be cited in regulations. Agency practices will prevail.

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Comment [DA16]: These standards are all phrased using the words "shall" or "will" and, as a general matter, these are the ways in which data should be reported. But, agencies should have some discretion to use other data collection/reporting protocols if those make sense under the circumstances.

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(1) Water volumes shall be reported in acre-feet.

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(2) Groundwater, surface water, and land surface elevations shall be measured and reported in feet relative to ~~NAVD88, or as modified~~a common datum for the basin, to an accuracy ~~of at least 0.1 feet~~ defined in the Agency practices and procedures that is appropriate to the purpose of each data type.

(3) Reference point elevations shall be measured and reported in feet relative to ~~NAVD88, or as modified~~a common datum for the basin, to an accuracy defined in the Agency practices and procedures that is appropriate to the purpose of the data type~~of at least 0.5 feet or the best available information~~, and the method of measurement described.

(4) Geographic locations shall be reported in GPS coordinates by latitude and longitude relative to a common datum for the basin~~NAD83, or as modified~~, in decimal degrees ~~to five decimal places, and a minimum accuracy of 30 feet.~~ To an accuracy defined in the Agency practices and procedures that is appropriate to the purpose of each data type.

(b) The following minimum standards apply to wells and monitoring sites, unless otherwise indicated:

(1) All monitoring sites shall include the following information, as appropriate:

(A) A unique site identification number and narrative description of the site location.

(B) A description of the type of monitoring, type of measurement, and monitoring frequency.

(C) Location, elevation of the ground surface, and reference point, including a description of any reference ~~-~~point.

(D) A description of the standards used to install the monitoring site, and identification of any sites that do not conform to ~~best management~~Agency practices~~.~~ and procedures.

~~(2)~~ Wells used as the source of basic geologic or other information, including data used to develop the hydrogeologic conceptual model, to determine the water budget, or establish the basin setting, shall provide the best available information. ~~All available information about the wells shall be reported in the Plan, which shall include, at a minimum, well location, well construction, and well use.~~

~~(3)~~(2) Wells used to monitor groundwater conditions shall be constructed according to standards described in DWR Bulletin 74-90, as amended, if practicable, and shall include the following identifying information presented in ~~both~~ tabular ~~and geodatabase-compatible shapefile~~ form, if available:

(A) CASGEM well identification number and, if available, a State well identification

Comment [jw17]: Overly prescriptive and precise. Could add significant cost with no benefit

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Comment [jw18]: excessive

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number and any local well identification.

(B) Well location, elevation of the ground surface, and reference point, including a description of the reference point.

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(C) A description of the well use, such as public supply, irrigation, domestic, monitoring, or other type of well, whether the well is active or inactive, and whether the well is a single, cluster, or nested well.

(D) A list of all casing perforations, borehole depth, and total well depth if known.

~~(E) A copy of any well completion reports.~~

~~(F)~~(E) ~~Any geophysical logs, well construction diagrams, or other relevant information, if available.~~

~~(G)~~(F) Identification of aquifers monitored, if applicable.

~~(H)~~(G) Any other relevant well construction information, such as well capacity, casing diameter, casing modifications, or other information as available.

~~(4)~~(3) If an Agency relies on wells that lack information on casing perforations, borehole depth, and total well depth ~~information~~ to monitor groundwater conditions ~~as part of an initial Plan~~, the Agency shall describe a schedule for acquiring monitoring wells with the necessary information, or demonstrate to the Department that such information is not necessary to understand and manage groundwater in the basin.

(c) Maps submitted to the Department shall meet the following requirements:

(1) Each map, including all data layers, shapefiles, geodatabases, and other information used to create the map, shall be submitted electronically to the Department in accordance with Article 4.

(2) Each map shall contain a level of detail and be clearly labeled to ensure that the map is informative and useful.

(3) The datum shall be clearly identified on the maps or in an associated legend or table included in the Plan.

(d) Hydrographs submitted to the Department shall meet the following requirements:

(1) Hydrographs shall be submitted electronically to the Department in accordance with Article 4.

(2) Hydrographs shall include the state well number or CASGEM well identifier, if available, and any local well designation, and elevation of the ground surface~~,~~ and reference point.

Comment [jw19]: excessive for inclusion in plan

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(3) Hydrographs shall use the same datum and scaling to the greatest extent practical. ~~and contain a level of detail and be clearly labeled to ensure that they are informative and useful.~~

(e) Groundwater and surface water models developed or utilized as part of or in support of a Plan shall ~~be consist of public domain open-source software that~~ meet~~s~~ the following requirements:

(1) Shall have publically available supporting documentation that establishes its ability to represent groundwater and surface water flow according to clearly stated mathematical equations and hydrological principles.

(2) Shall be calibrated against site-specific field data.

(3) Shall be based on actual field or laboratory measurements, or equivalent methods, that document the appropriateness ~~validity~~ of chosen parameter values.

(f) The Agency shall provide a list of references and technical studies relied upon by the Agency in developing the Plan. The Agency shall provide electronic copies of ~~all~~ reports and other documents and materials that are not otherwise generally available to the public. ~~Proprietary data and reports need not be disclosed unless requested by the Department to resolve interbasin disputes, as described in Section 355.12.~~

Note: Authority cited: Section 10733.2, Water Code.

Reference: Sections 10727.2, 10733.2, Water Code.

§ 352.8. Data Management and Recordkeeping

Each Agency shall develop and implement a ~~coordinated~~ data management system that is capable of storing, maintaining, and reporting all relevant ~~information~~ data related to the development or implementation of the Plan.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Section 10727.2, 10733.2, 10728, Water Code.

Comment [jw20]: there are many useful models that have documentation and are well understood that are not public domain. Could add unnecessary cost.

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ARTICLE 4. Procedures

§ 353. Introduction to Procedures

This Article describes procedural and notification requirements related to the submission of Plans and public comment to those Plans.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Section 10733.2, Water Code.

§ 353.2. Information Provided by the Department

(a) The Department shall make forms and instructions for submitting Plans available on its Internet Web site.

(b) Information provided by the Department pursuant to this Subchapter shall be provided on the Department's Internet Web site.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Section 10729, 10733.2, Water Code

§ 353.4. Reporting Provisions

Plans, Plan amendments, annual reports, and five-year assessments shall be submitted by each Agency in accordance with the requirements of this section.

(a) ~~All materials~~ Materials shall be submitted electronically to the Department through an online reporting system, in a format provided by the Department as described in Section 353.2.

(b) ~~All materials~~ Materials shall be accompanied by a transmittal letter signed by a person duly authorized under California law to bind the party submitting the report, and including the following certification:

~~"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly~~

Comment [JW21]: Not clear who this is for a GSA

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~~responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete."~~

Comment [jw22]: Excessive standard

(c) ~~All materials~~ Materials submitted to the Department shall be posted on the Department's Internet Web site.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Sections 10728, 10728.2, 10733.2, 10733.4, 10733.6, Water Code.

§ 353.6. Initial Notification

(a) Each Agency shall notify the Department, in writing, ~~within 30 days of an Agency's decision to develop a Plan~~prior to initiating development of a Plan. The notification shall provide general information about the Agency's process for developing the Plan, including the manner in which interested parties may contact the Agency and participate in the development and implementation of the plan. The Agency shall make the information publicly available by posting relevant information on the Agency's Internet Web site.

(b) The Department shall post the initial notification required by this Section, including Agency contact information, on the Department's Internet Web site within 20 days of receipt.

(c) Upon request, prior to adoption of a Plan, the Department shall provide reasonable assistance to an Agency regarding the elements of a Plan required by the Act and this Subchapter. Notwithstanding any advice provided by the Department, the Agency is solely responsible for the development and adoption of a plan that is capable of achieving sustainable groundwater management.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Sections 10723.4, 10727.8, 10733.2, Water Code.

§ 353.8. Public Comment

Any person may provide comments to the Department regarding any ~~proposed or~~ adopted Plan submitted to the Department.

~~(a) The Department shall accept public comment on any aspect of an Agency's decision to develop a Plan as described in Section 353.6, including all elements of the proposed Plan as it may be developed by the Agency.~~

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~~(b)~~(a) The Department shall ~~establish a comment period of no less than~~provide 60 days for persons to submit comments on an adopted Plan following posting on its internet website of a Plan that has been accepted by the Department for evaluation pursuant to Section 355.2.

~~(c)~~(b) The following ~~guidelines~~ apply to all public comments:

(1) Public comment shall be submitted by written notice, and shall include the name, address, and electronic mail address of the person or entity providing the comments and information, with a duplicate copy of the comment provided to the Agency at the same time.

(2) Public comment should include a clear statement of relevant issues that are the subject of the comments and information.

~~(3) The level of detail provided by public comment need not be as comprehensive as that contained in the proposed or adopted Plan, but should rely on similar scientific and technical information, including the reliance upon the best available information and best available science.~~

~~(d)~~(c) ~~All comments~~ Comments and other information received shall be posted on the Department's Internet Web site.

~~(e)~~(d) The Department is not required to respond to comments, but ~~will~~ may consider comments as part of its evaluation of a Plan.

~~(f)~~(e) The Department shall give the Agency a reasonable opportunity to respond to public comment, including the opportunity to modify the Plan consistent with Section 355.2. The agency shall not be required to respond to any public comment.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Section 10727.8, 10733.2, 10733.4, Water Code.

§ 353.10. Withdrawal or Amendment of Plan

An Agency may withdraw a Plan at any time by providing written notice to the Department. An Agency may amend a Plan at any time pursuant to the requirements of Section 356.12.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Section 10728.4, 10733.2, Water Code.

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ARTICLE 5. Plan Contents

§ 354. Introduction to Plan Contents

This Article describes the required contents of Plans, including general information, a description of the basin setting and characteristics of the aquifer system, sustainable management criteria, and a description of the monitoring network, reports, and projects.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Section 10733.2, Water Code.

SUBARTICLE 1. Administrative Information

§ 354.2. Introduction to Administrative Information

This Subarticle describes administrative and other general information in the Plan relating to the Agency that has adopted the Plan, the area covered by the Plan, and other procedural matters.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Section 10733.2, Water Code.

§ 354.4. Executive Summary

Each Plan shall include an executive summary written in plain language that provides an overview of the Plan and description of groundwater conditions of the basin.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Section 10733.2, 10733.4, Water Code.

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§ 354.6. Agency Information

When submitting an adopted Plan to the Department, the Agency shall include a copy of the information provided pursuant to Water Code Section 10723.8, with any updates, if necessary, along with the following information:

(a) The name and mailing address of the Agency.

(b) Documentation of the organization and management structure of the Agency. The documentation shall identify persons with management authority for implementation of the Plan.

(c) The name and contact information, including phone number, mailing address and electronic mail address, of the plan manager.

~~(d) The legal authority of the Agency with specific reference to citations setting forth the duties, powers, and responsibilities of the Agency, including information demonstrating that the Agency has the necessary legal authority to implement the Plan.~~

~~(e)~~(d) ~~A description of anticipated revenues and costs of implementing the Plan, including programs, projects, contracts, administrative expenses and other expected costs, and information demonstrating that the Agency has the necessary financial ability to implement the Plan~~.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Sections 10723.8, 10733.2, Water Code.

§ 354.8. Description of Plan Area

Each Plan shall include a description of the geographic areas covered, including the following information:

(a) One or more maps of the basin that depict the following:

(1) The area managed ~~by~~ under the Plan and name and location of any adjacent basins.

(2) Jurisdictional boundaries of federal land, state land, tribal land, cities and counties and other land use agencies~~, and all general plans~~.

Comment [DA23]: Excessive. Any challenge should be when the Agency determines to be a GSA, not on the submission of a Plan.

Comment [jw24]: Excessive. Actions may be implemented by numerous entities.

Comment [JW25]: Too much info.

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(3) Adjudicated areas, all Agencies within the basin, and areas governed by Plan alternatives.

(4) Designation of existing land uses.
~~(4) and the identification of each water use sector and water source type.~~

~~(5) The density of wells per square mile, by dasymetric or similar mapping techniques, showing the distribution of all agricultural, industrial, and domestic water supply wells in the basin, including de minimis extractors, and the location and extent of communities dependent upon groundwater. Each Agency shall utilize data available from the Department, as specified in Section 353.2, or the best available information.~~

~~(b) A written description of the Plan area, including a summary of the jurisdictional areas and other features depicted on the map.~~

~~(c)~~(b) A description of existing water resource monitoring and management programs including, but not limited to, agricultural water management plans, urban water management plans, the California Statewide Groundwater Elevation Monitoring Program, the Irrigated Lands Regulatory Program, and the Groundwater Ambient Monitoring Assessment Program, Salt Nutrient Management Plans. To the extent existing programs require information similar to that required by this Subchapter, the Plan may incorporate data from existing programs.

~~(d) How existing water resource monitoring and management programs and agencies with water management authority, could affect the ability of the Agency to achieve sustainable groundwater management, and how the Plan addresses potential effects.~~

~~(e) A description of coordination between the Plan, Integrated Regional Water Management Plans, and Flood Management Plans, if applicable.~~

~~(f) A description of conjunctive use programs and infrastructure in the basin.~~

~~(g)~~(c) A ~~plain language~~ general description of the land use ~~elements or topic categories of any applicable general plans~~in the basin that includes the following:

(1) A ~~summary~~ listing of general plans or other land use plans governing the basin.

(2) A description of how implementation of existing land use plans are expected to change water demands within the basin.

~~(3) An identification and assessment of proposed land use activities that may pose a risk to groundwater quality or quantity in the basin.~~

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Comment [jw26]: Difficult to produce and not very useful

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Comment [DA27]: Duplicative of the map requirement.

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~~(4) An assessment of how implementation of the Plan may affect applicable land use plans.~~

~~(5) A summary of land use plans outside the basin, for any area the Agency determines to be linked to the hydrology of the basin governed by the Plan.~~

~~(6)~~(3) A ~~summary~~ description of the process for permitting wells in the basin.

~~(7) How implementation of existing land use plans may affect the ability of the Agency to achieve sustainable groundwater management, and how the Plan addresses potential effects.~~

~~(8) How implementation of existing land use plans outside the basin, including a description of how implementation of those land use plans could affect the ability of the Agency to achieve sustainable groundwater management, for any area the Agency determines to be linked to the hydrology of the basin governed by the Plan.~~

~~(h)~~(d) A description of any ~~of the~~ additional Plan elements included in Water Code Section 10727.4 that the Agency determines to be appropriate.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Sections 10720.3. 10727.2, 10727.4, 10733.2, Water Code.

§ 354.10. Notice and Communication

Each Plan shall include a summary of information relating to notification and communication by the Agency with other agencies and interested parties including the following:

(a) The list of interested persons established and maintained by the Agency.

(b) A description of the interests of beneficial uses and users of groundwater in the basin, and the persons or entities representing those interests, and the nature of consultation with those interests.

(c) A ~~summary~~ listing of public meetings at which the Plan was discussed or considered by the Agency.

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Comment [jw30]: This should be covered in projecting future water budget

Comment [jw31]: Beyond scope of statute

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(d) A ~~copy~~ summary of all comments regarding the Plan received by the Agency and a summary of any responses made by the Agency.

(e) A communication plan adopted by the Agency, including the following;

(1) An explanation of the Agency's decision-making process and how stakeholder input and public response will be used.

(2) Identification of opportunities for stakeholder engagement.

(3) A description of how the Agency encourages the active involvement of diverse social, cultural, and economic elements of the population within the basin.

~~(4) A schedule of milestones and scheduled dates for known projects or actions.~~

~~(5) A description of the roles and responsibilities of local agencies and the public.~~

Note: Authority cited: Section 10733.2, Water Code.

Reference: Sections 10723.2, 10723.4, 10727.8, 10733.2, 10733.4, Water Code

SUBARTICLE 2. Basin Setting

§ 354.12. Introduction to Basin Setting

This Subarticle describes the information about the physical setting and characteristics of the basin and current conditions of the basin that shall be included with each Plan. Information provided pursuant to this Subarticle shall be prepared by or under the direction of a professional geologist or professional engineer.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Section 10733.2, Water Code.

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§ 354.14. ~~Hydrogeologic Conceptual Model~~ Basin Setting & Description

(a) Each Plan shall include a description of the basin and its setting ~~hydrogeologic conceptual model of the basin~~ consisting of a written description, map, and cross-sections, based on technical studies or qualified maps. The written description shall include a discussion of the following:

(1) Regional geologic and structural setting of the basin and surrounding area.

(2) Lateral basin boundaries, including major geologic features that significantly impede or impact groundwater flow.

(3) The definable bottom of the basin.

(4) Principal aquifers and aquitards, including the following information:

(A) Formation names, if defined.

(B) The physical properties of aquifers and aquitards, including their lateral and vertical extent, hydraulic conductivity, and storativity, which information may be based on existing technical studies or other sources of information.

(C) The structural properties of the basin that restrict groundwater flow within the principal aquifers, including information regarding stratigraphic changes, truncation of units, or other features.

(D) General water quality of the principal aquifers, which may be based on information derived from existing technical studies or regulatory programs.

(E) Identification of the aquifers used for domestic, irrigation, or municipal water supply.

(5) Other relevant information identified by the Agency that is ~~required by the Department as~~ necessary to evaluate the Plan.

(b) The plan area ~~hydrogeologic conceptual model~~ shall be represented graphically by ~~at least two~~ one or more scaled cross-sections~~, approximately perpendicular to one another and extending the length and width of the basin,~~ that display the information required by this section.

(c) Physical characteristics of the ~~basin~~ Plan area shall be represented on one or more maps that depict the following:

(1) Topographic information, of adequate scale, derived from the U.S. Geological Survey or

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another qualified source.

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(2) Surficial geology ~~derived from a qualified map~~, including the locations of ~~basin wide~~ cross-sections required by this Subarticle.

(3) Soil characteristics such as ~~hydraulic conductivity~~permeability and other relevant ~~or other water transmitting~~ properties as described by the appropriate Natural Resources Conservation Service (NRCS) soil survey or other applicable studies.

(4) Delineation of existing recharge areas that substantially contribute to the replenishment of the basin, ~~potential recharge areas~~, and significant discharge areas, including active springs, seeps, and wetlands within or adjacent to the basin.

(5) Surface water bodies that are significant to the management of the basin. ~~with water supply diversions greater than 10 acre-feet per year, storage facilities with a capacity of greater than 100 acre-feet~~.

(6) The source ~~location, distribution system,~~ and point of ~~diversion~~ delivery for imported water supplies.

~~(6)~~(d) A summary of any gaps in the information identified in this section, and an evaluation of whether it significantly limits management of the basin.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Section 10727.2, 10733.2, Water Code.

§ 354.16. Basin Conditions

The Plan shall characterize current and historical groundwater conditions in the ~~basin~~Plan area. The Plan shall rely on the best available data to characterize historical conditions prior to January 1, 2015 and may include basin conditions believed to represent a sustainable basin condition priori to 2015. The description ~~of historical basin conditions~~ shall specifically include conditions that existed as of January 1, 2015 or basin conditions believed to represent a sustainable basin conditions prior to 2015, and a comparison with present conditions. The description shall also contain all of the following:

(a) Groundwater elevation data demonstrating flow directions, lateral and vertical gradients, and regional pumping patterns, including:

(1) Groundwater elevation contour maps depicting the current seasonal high and seasonal low for each principal aquifer within the basin.

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(2) Hydrographs depicting long-term groundwater elevations. ~~, historical highs and lows, and hydraulic gradients between principal aquifers.~~

(b) Groundwater storage ~~data~~ information demonstrating the annual and cumulative change in storage based on seasonal high groundwater conditions, water use, and water year type.

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(c) Seawater intrusion conditions in the ~~basin~~ Plan area that includes maps and cross-sections of the seawater intrusion front for each principal aquifer, if applicable.

(d) Groundwater quality issues that may impact the supply and beneficial uses of groundwater, including a description and map of the following:

(1) The location of known groundwater contamination ~~sites and~~ plumes. ~~including current or historical waste discharge requirements, known historical or ongoing cleanup activities, and superfund sites.~~

(2) A summary discussion of the ~~Horizontal and vertical~~ proximity of wells to known sources of groundwater contamination.

(e) The extent, cumulative total, and annual rate of land subsidence~~, including maps depicting total subsidence.~~. Each Agency ~~shall~~ may utilize data available from the Department, as specified in Section 353.2~~, or the best available information~~.

(f) Identification of interconnected surface water ~~systems and groundwater dependent ecosystems~~bodies within the ~~basin~~Plan area. Each Agency may ~~shall~~ utilize data available from the Department, as specified in Section 353.2, or the best available information

Note: Authority cited: Section 10733.2, Water Code.

Reference: Section 10727.2, 10733.2, Water Code.

§ 354.18. Water Budget

The Plan shall include a water budget for the basin that provides an ~~accounting and~~ assessment of the total annual amount of groundwater and surface water entering and leaving the basin, including change in the amount of water stored under historical, current and projected water budget conditions~~, and the~~. ~~change in the amount of water stored~~. A summary of ~~W~~water budget information shall be reported in narrative, tabular and graphical form.

(a) The water budget shall quantify the following, either through direct measurements or estimates:

(1) ~~All water supplies~~Inflows to groundwater, including, but not limited to infiltration of precipitation, infiltration from applied water, infiltration from surface water systems, and subsurface groundwater inflow.

(2) ~~All water demands~~Outflows from groundwater, including but not limited to

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evapotranspiration, groundwater extraction, groundwater discharge to surface water sources, and subsurface groundwater outflow.

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(3) ~~All w~~Water supplies by water source type.

(4) ~~All w~~Water demands by water source type and water use sector.

(5) The change in the annual volume of groundwater in storage between seasonal high conditions.

(6) The water year type associated with the annual supply, demand, and change in groundwater stored.

(b) The Plan shall quantify the current~~, historical,~~ and projected water budget for the basin as follows:

(1) The Plan ~~Current water budget information~~ shall quantify a present-day ~~supply and demand~~ water budget using the most recent hydrology over a representative period ~~-~~and current land use information.

(2) Historical ~~water budget~~ information shall be used to evaluate past surface water supply reliability and aquifer response to water supply and demand trends. ~~relative to water year type.~~ The historical ~~water budget~~analysis shall include the following:

(A) An ~~quantitative~~ evaluation of the historical surface water supply reliability ~~as a function of the historical planned versus actual annual surface water deliveries,~~ by water year type, and based on at least the most recent ten years of surface water supply information.

(B) An ~~quantitative~~ assessment of the historical water budget, starting with the most recently available information and extending back a minimum of 10 years, or as is sufficient to ~~adequately calibrate and reduce the uncertainty of the tools and methods used to~~ estimate and project future water budget information and future aquifer response to proposed sustainable groundwater management practices over the planning and implementation horizon.

(C) A description of how historical conditions concerning hydrology, water demand, and surface water supply reliability have impacted groundwater conditions in he Plan area. ~~the basins ability to achieve sustainable yield.~~

(3) Projected water budgets shall be used to estimate future supply, demand, and aquifer response to Plan implementation, and to identify the uncertainties of ~~these~~ projected water budget components. The projected water budget shall utilize the following methodologies and assumptions ~~for historical baseline conditions~~ concerning hydrology, water demand and surface water supply reliability:

(A) Hydrology: Projected hydrology shall utilize 50-years of historical precipitation, evapotranspiration, and streamflow information, if available, as the baseline

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hydrology over the

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planning and implementation horizon, while evaluating scenarios of future hydrologic uncertainty. ~~associated with projections of climate change and sea level rise.~~

(B) Water Demand: Projected water demand shall utilize the most recent land and water use~~, evapotranspiration, and crop coefficient~~ information ~~as the baseline water demand over the planning and implementation horizon~~, while evaluating scenarios of future water demand uncertainty. ~~associated with projections of local land use planning, future population growth, and climate change.~~

(C) Surface Water Supply and Reliability: Projected water supply shall utilize the most recent water supply information ~~as the baseline surface water supply over the planning and implementation horizon~~, while evaluating scenarios of future water supply uncertainty. ~~associated with historical surface water supply reliability, and projections of future local land use planning, future population growth, and climate change.~~

(c) ~~The Plan shall rely on the best available information and best available science to quantify the water budget for the basin in order to provide an adequate understanding of historical and projected hydrology, water demand, water supply, land use, population, climate change, sea level rise, groundwater-surface water interaction, and subsurface groundwater flow. If a groundwater-surface water model is not used to quantify and evaluate the projected water budget conditions and the potential impacts to beneficial uses and users of water, the~~ The Plan shall identify and describe ~~an equally effective~~the methods or tools used to evaluate projected water budget conditions~~, or identify provisions for developing a groundwater-surface water model capable of quantifying projected water budget conditions no later than the first five-year assessment~~.

(d) The following information shall be provided by the Department and ~~shall~~ may be used by Agencies in developing the water budget:

(1) Historical ~~water budget~~ information for mean annual temperature, mean annual precipitation, water year type, and central valley land use.

(2) Current ~~water budget~~information information for temperature, water year type, evapotranspiration, and Statewide land use.

(3) Projected ~~water budget~~ information for population, population growth, climate change, and sea level rise.

(e) The Department shall provide the California Central Valley Groundwater-Surface Water Simulation Model (C2VSIM) and the Integrated Water Flow Model (IWFM) for use by Agencies in developing the water budget. Each Agency may choose to use a different flow model or an alternative ~~other~~ methodology, tool or method to develop the water budget.

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(f) Information required to be provided by the Department pursuant to this Subchapter shall be provided on the Department's Internet Website not later than December 31, 2016.

(g) The Agency may utilize other data and tools in addition to or in lieu of information provided by the Department if the Agency is able to demonstrate that the data is of sufficient quality to support development and implementation of the Plan. Any dataset that is commonly used by professional engineers or professional geologists to evaluate groundwater conditions shall be deemed to be of sufficient quality to support the development and implementation of the Plan.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Section 10727.2, 10733.2, Water Code.

§ 354.20. Management Areas

Each Agency may define one or more management areas within a ~~basin~~Plan area ~~if local conditions for one or more critical parameters differ significantly from those of the basin at large, and~~ if the Agency has determined that subdivision into management areas will facilitate implementation of the Plan. Management areas may have different minimum thresholds and be operated to different measurable objectives ~~than the basin at large~~, provided that the goal of the Plan is to achieve sustainable management for the entire basin by the target date and that operation to different standards within a management area does not produce undesirable results elsewhere.

(a) Plans that include management areas shall describe the following:

(1) The basis for the formation of each management area.

(2) The minimum thresholds and measurable objectives appropriate to each management area.

(3) The appropriate level of monitoring and analysis for each management area based on documented differences between the areas ~~and the basin at large~~.

(b) If a Plan ~~creates~~ includes one or more management areas, the descriptions, maps, and cross- sections required by this Subarticle shall include information about those areas.

Note: Authority cited: Section 10733.2, Water Code.

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Reference: Section 10733.2, 10733.4, Water Code.

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SUBARTICLE 3. Sustainable Management Criteria

§ 354.22. Introduction to Sustainable Management Criteria

This Subarticle describes criteria for sustainable management of a basin, including the standards by which an Agency shall define undesirable results and minimum thresholds for each relevant critical parameter. ~~Critical parameter refers to chronic lowering of groundwater levels indicating a depletion of supply if continued over the planning and implementation horizon, reduction of groundwater storage, sea water intrusion, degraded water quality, land subsidence that substantially interferes with surface land uses, and depletions of surface water that have adverse impacts on beneficial uses of surface water that may lead to undesirable results, as described in Water Code Section 10721(x).~~ This Subarticle describes the following:

(a) The interrelationship between minimum thresholds, undesirable results, and measurable objectives.

~~(b) The groundwater conditions for which critical parameters are significant and unreasonable, at a given location, which determines the minimum threshold.~~

~~(c)~~(b) The process for determining the point at which exceeding minimum thresholds has the cumulative effect of causing undesirable results.

~~(d)~~(c) ~~The operational range above the minimum threshold that defines the measurable objective~~.

~~(e)~~(d) The requirements for the Agency to establish measurable objectives and interim milestones necessary to achieve the sustainability goal in the basin within 20 years of Plan implementation, or as extended with approval of the Department and to maintain the sustainability goal over the planning and implementation horizon.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Sections 10733.2, Water Code.

§ 354.24 Sustainability Goal

Each Agency shall establish a sustainability goal for the basin. The Plan shall include a description of the sustainability goal, including a discussion of the measures meant to ensure that the basin will be operated within its sustainable yield, and an explanation of

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how the sustainability goal will be achieved within 20 years of Plan implementation. The Agency will show that it has achieved the sustainability goal by demonstrating that the management and use of groundwater in the basin can be maintained through the planning and implementation horizon without causing undesirable results.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Sections 10721, 10727, 10727.2, 10733.2, Water Code.

§ 354.26. Undesirable Results

Each Agency shall describe the processes and criteria relied upon to define undesirable results applicable to the ~~basin~~Plan area. Undesirable results occur when significant and unreasonable effects for any of the critical parameters are caused by groundwater conditions occurring throughout the basin.

(a) The description provided by the Agency shall include, but is not limited to, the following:

(1) The groundwater conditions under which the critical parameters are significant and unreasonable, which shall define minimum thresholds for that critical parameter as described in Section 354.28.

(2) An explanation of the criteria used to define when and where the cumulative effects of such groundwater conditions create undesirable results.

(3) A description of known or projected effects on the beneficial uses and users of groundwater, and other potential effects that would occur or are occurring.

(4) A description of the cause of groundwater conditions that would lead to undesirable results based on information developed in the basin setting and description~~hydrogeologic conceptual model~~, basin conditions, water budget, and other data or models as appropriate.

~~(b) Each Agency may apply different criteria and establish different definitions of the groundwater conditions giving rise to undesirable effects in management areas, provided that the interests of beneficial uses and users of groundwater have been adequately considered and that the Agency demonstrates that the use of different criteria in management areas does not adversely affect the ability of the Agency to achieve the sustainability goal for the basin.~~

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~~(c)~~(b) The Agency may need to evaluate multiple minimum thresholds to determine whether an undesirable result is occurring in the basin. The determination that undesirable results are occurring may depend upon measurements from a network of instruments, rather than a single point or the measurement value of one instrument.

~~(d)~~(c) An Agency that is able to demonstrate that conditions for one or more critical parameters would not be likely to lead to undesirable results in the basin shall not be required to conduct the analysis for those critical parameters described in this Section.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Section 10721, 10727.2, 10733.2, Water Code.

§ 354.28. Minimum Thresholds

Each Agency shall establish minimum thresholds for each critical parameter based on the conditions under which the Agency determines that those critical parameters are significant and unreasonable, as described in Section 354.26. The minimum threshold refers to the point at which conditions for a given critical parameter are significant and unreasonable.

(a) Minimum thresholds shall be numeric values that define conditions that, if exceeded and occurring throughout the basin, could represent~~lead to~~ undesirable results. The description of minimum thresholds shall include the following:

(1) The information and criteria relied upon in establishing minimum thresholds for each critical parameter. The justification for the minimum threshold shall be supported by information from the basin setting and description ~~hydrogeologic conceptual model~~, basin conditions, water budget, and other data or models as appropriate.

~~(2) The interrelationship between critical parameters that explains how the minimum threshold for each critical parameter will not cause undesirable results for any other critical parameter.~~

~~(3)~~(2) A discussion of how the minimum thresholds ~~do not~~may adversely affect the ability of adjacent basins to achieve sustainability goals.

~~(4)~~(3) How minimum thresholds will affect the interests of beneficial uses and users of groundwater.

~~(5)~~(4) State, federal, or local standards that relate to the critical parameter for which the minimum threshold has been established.

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~~(6)~~(5) How each minimum threshold will be quantitatively measured throughout the basin, consistent with the monitoring network requirements described in Subarticle 4.

(b) Minimum thresholds for each critical parameter shall be defined based on the following:

~~(1)~~ Chronic Lowering of Groundwater Levels. The minimum threshold for chronic lowering of groundwater levels shall be the groundwater elevation that indicates a significant and unreasonable depletion of supply. ~~Minimum thresholds for chronic lowering of groundwater levels shall be supported by the following:~~

~~(A) The rate of elevation decline calculated based on historical trends and projected water use in the basin, based on water year type.~~

~~(B) Potential effects on other critical parameters, including reduction of groundwater storage and land subsidence, and where appropriate, sea water intrusion, surface water depletion, and degraded water quality.~~

~~(C) Management of extractions and recharge to ensure that chronic lowering of groundwater levels or depletion of supply during periods of drought is offset by increases in groundwater levels or storage during other periods.~~

~~(2)~~ Reduction of Groundwater Storage. The minimum threshold for reduction of groundwater storage ~~shall~~ may be a total volume of groundwater that can be taken out of storage without causingsignificant and unreasonable or undesirable results, groundwater elevation at one or more monitoring points, or other appropriate parameter identified by the Agency. ~~Minimum thresholds for reduction of groundwater storage shall be supported by the following:~~

~~(A) The annual sustainable yield of the basin, calculated based on historical trends and projected water use in the basin, based on water year type.~~

~~(3)~~(1) Seawater Intrusion. The minimum threshold for seawater intrusion shall be the location where seawater intrusion is considered significant and unreasonable, and shall be defined by a ~~numeric~~ chloride concentration isocontour for each principal aquifer, chloride concentration at specific monitoring points, or other appropriate parameter identified by the Agency. Minimum thresholds for seawater intrusion shall be supported, if applicable, by the following:

(A) Maps and cross-sections of the chloride concentration isocontour that defines the minimum threshold~~, interim milestones, and measurable objective~~ for seawater intrusion for each principal aquifer.

(B) A description of the consideration given to the effects of current and projected sea level rise on seawater intrusion of the following during development of the

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Comment [jw38]: Too prescriptive

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Comment [jw39]: Too prescriptive

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seawater intrusion minimum threshold.

~~(B)~~

~~(4)~~(2) Degraded Water Quality. The minimum threshold for degraded water quality shall be the significant and unreasonable degradation of water quality, including the migration

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of contaminant plumes that impair water supplies. The minimum threshold shall be defined by , based on the number of supply wells, a volume of water, or a location of an isocontour that exceeds concentrations of constituents determined by the Agency to be of concern for the basin.

(5)(3) Land subsidence. The minimum threshold for land subsidence shall may be the defined as the rate of subsidence, the cumulative amount of subsidence, or other appropriate parameter identified by the Agency that creates a significant and unreasonable undesirable result.rate of subsidence that substantially interferes with surface land uses. Minimum thresholds for land subsidence shall be supported by the following:

(A) Identification of land uses and property interests that have been affected or are likely to be affected by land subsidence in the basin, including an explanation of how those uses and interests were determined and considered, and the rationale for how minimum thresholds were established in light of those effects.

(B) Maps and graphs showing the extent and rate of land subsidence in the basin that defines the minimum threshold, interim milestones, and measurable objectives.

(6)(4) Depletions of interconnected surface water. The minimum threshold for depletions of interconnected surface water shall be the rate or volume of surface water depletions caused by groundwater use that has significant and unreasonable adverse impacts on beneficial uses of the surface water. The minimum threshold established for depletions of interconnected surface water shall be supported by the following:

(A) The location, quantity, and timing of depletions of interconnected surface water. If sufficient data to quantify depletions of interconnected surface water is not available, the Plan shall describe how the Agency will acquire sufficient information no later than the first five-year assessment.

(B) A description of the groundwater-surface water modemethodology! used to quantify surface water depletion, and to assess whether such depletion is a result of groundwater extraction. If a groundwater-surface water model is not used to estimate surface water depletion, the Plan shall identify and describe an equally effective method or tool to accomplish this requirement, or identify provisions for developing a groundwater-surface water model capable of quantifying surface water depletion no later than the first five-year assessment.

(d) An Agency, after consultation with the Department, may alternatively establish a representative minimum threshold for groundwater elevation to serve as the minimum threshold value for multiple any critical parameters, as appropriate. The Agency shall demonstrate that the representative minimum threshold for groundwater elevation is a reasonable and effective surrogate based on substantial evidence in the administrative record before the Agency. for multiple individual minimum thresholds and is supported

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Comment [jw40]: Naturally losing streams that are depleted to groundwater are not covered.

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~~by clear and convincing evidence in the Plan~~.

(e) The~~If the~~ Agency may ~~determines~~demonstrate that minimum thresholds are not required for seawater intrusion, land subsidence, depletions of interconnected surface water, or water quality, by relying upon substantial evidence in the administrative record ~~providing adequate information~~ to support a low potential for these types of undesirable results. ~~, and the Plan shall support this determination with clear and convincing evidence in the Plan~~.

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Note: Authority cited: Section 10733.2, Water Code.

Reference: Section 10721, 10727.2, 10733.2, Water Code.

§ 354.30. Measurable Objectives

Each Plan shall include one or more measurable objectives for each critical parameter that has an established minimum threshold. The measurable objectives shall ensure that the basin is managed to avoid undesirable results at the end of the ~~within~~ 20 years of Plan implementation and groundwater is sustainably managed over the planning and implementation horizon.

(a) Measurable objectives shall be represented by quantitative values using the same metrics as are used to define the minimum threshold for each measurable objective, and shall rely on the same monitoring sites as minimum thresholds.

(b) The measurable objective shall be above the minimum threshold to provide a reasonable margin of operational flexibility under adverse conditions which shall take into consideration components such as historical water budgets, seasonal and long-term trends, and overdraft during a period of drought.

(c) Each Agency may establish measurable objectives that exceed the reasonable margin of operational flexibility for the purpose of improving overall conditions in the basin, but failure to achieve those objectives shall not be grounds for a finding of inadequacy of the Plan.

(d) Each Agency may ~~use representative minimum thresholds for groundwater levels~~ develop~~ed pursuant to Section 354.26(d), as the basis for defining~~ a representative measurable objective for groundwater ~~level~~elevation ~~that represents all~~ for any critical parameter~~s~~. The Agency must demonstrate that the representative measurable objective for groundwater elevation is a reasonable and effective surrogate by means of substantial evidence in the administrative record. ~~for multiple individual measurable objectives and support the decisioned by clear and convincing evidence in the Plan~~.

(e) Each Plan shall include interim milestones for each measurable objective, in increments of five years, which outline a reasonable path to attaining the measurable objectives within 20 years of Plan implementation. Interim milestones shall be expressed numerically in the same units as the measurable objective.

~~(f) Each Plan may include measurable objectives and interim milestones for additional Plan contents described in Water Code Section 10727.4 where the Agency determines such measures are appropriate for sustainable groundwater management in the basin.~~

Comment [DA41]: There are a number of places where the standard of evidence is now called out as "substantial evidence" in the administrative record. This is the typical burden of proof in administrative hearings/proceedings. In the case of SGMA, the GSA determination is the quasi-legislative determination about how to manage the groundwater basin. Under normal principles of administrative law, therefore, that determination must only have substantial evidence to support it. In other words, reasonable people can disagree with the finding but the prerogative is that of the local agency. Much of the draft regulations was written to require the local agency to have "clear and convincing" evidence, which is a very high burden of proof and one that is not required in the vast majority of administrative proceedings.

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Note: Authority cited: Section 10733.2, Water Code.

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Reference: Section 10727.2, 10733.2, Water Code.

SUBARTICLE 4. Monitoring Networks

§ 354.32. Introduction to Monitoring Networks

This Subarticle describes the monitoring network that shall be developed for each basin, including monitoring objectives, monitoring site summary, monitoring frequency, monitoring protocols, and data reporting requirements. The monitoring network shall promote the collection of data of sufficient quality, frequency, and from sufficient locations to adequately characterize ~~surface water and~~ groundwater conditions in the basin, evaluate management actions, and assess progress toward achieving the sustainability goal.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Sections 10733.2, Water Code.

§ 354.34. Monitoring Network

Each Agency shall develop a monitoring network capable of collecting sufficient data to demonstrate short-term, seasonal, and long-term trends in ~~surface and~~ groundwater conditions and yields representative information about changes relative to the minimum thresholds and measurable objectives for the basin.

(a) Each Plan shall include a description of the monitoring network objectives for the basin, including an explanation of how the network will be developed and implemented to monitor surface water and groundwater conditions, and the interconnection of surface water and groundwater, with sufficient temporal frequency and spatial density to adequately evaluate the affects and effectiveness of Plan implementation. The monitoring network objectives shall be implemented to accomplish the following~~:~~

~~(1) Demonstrate progress toward achieving measurable objectives described in the Plan.~~

~~(2) Identify impacts to the beneficial uses or users of groundwater.~~

~~(3)~~(1) Identify changes in basin conditions relative to measurable objectives and minimum thresholds.

Comment [jw42]: This is not monitored directly. It is part of threshold setting.

Comment [JW43]: This is handled in plan development and minimum threshold setting.

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~~(4) Quantify annual changes in water budget components.~~

~~(5)~~(2) Identify impacts to the ability of adjacent basins to meet the sustainability goal.

(b) The monitoring network shall be designed to ensure adequate coverage of groundwater conditions related to critical parameters. If localized conditions warrant the formation of management areas, those areas shall be specifically monitored with a quantity and spacing of monitoring sites sufficient to evaluate conditions in that area.

(c) A Plan may incorporate site information and monitoring data from existing sources into the monitoring network. Incorporated sources of data may include, but are not limited to, existing groundwater management plans, California Statewide Groundwater Elevation Monitoring data, or other Department programs, Salt and Nutrient Management Plans, the Irrigated Lands Regulatory Program, the Surface Water Ambient Monitoring Program, the Groundwater Ambient Monitoring Assessment Program, the Salt Nutrient Management Plans, as well as other relevant monitoring sites.

(d) The density of monitoring sites and frequency of measurements ~~required to demonstrate short-term, seasonal, and long-term trends~~ shall be adequate to measure progress in achieving measurable objectives and compliance with minimum thresholds.
~~(d) determined based upon the following factors:~~

~~(1) Level of current and projected groundwater use.~~

~~(2) Aquifer characteristics including, but not limited to, confined or unconfined aquifer conditions, or other physical characteristics that affect groundwater flow.~~

~~(3) Impacts on beneficial uses and users of groundwater and the ability of adjacent basins to meet the sustainability goal.~~

~~(4) Whether the Agency has adequate long-term existing monitoring results or other technical information that demonstrates an understanding of aquifer response.~~

(e) The Plan shall describe the following information about the monitoring network:

(1) Scientific rationale used for the site selection process.

(2) Monitoring site compliance with ~~best management practices~~policies and procedures. If a site is not consistent with Agency policies and procedures for monitoring ~~best management practices~~, the Plan shall explain why the site is necessary to the monitoring network and provides useful information..

(3) For each critical parameter, the quantitative values for the minimum threshold, measurable objective, and interim milestones for each monitoring site, if

Comment [JW44]: There will be little value in identifying water budget changes on an annual basis. Could require running a model every year. Very costly.

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applicable.

Comment [JW45]: Each monitoring point likely won't have a minimum threshold.

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(f) The location and type of each monitoring site within the basin shall be displayed on a map, and reported in tabular format, and shall include information regarding the monitoring site type, frequency of measurement, and the purposes for which the site is being monitored.

(g) The ~~best management practices~~policies and procedures developed by each Agency shall include a description of technical standards, data collection methods, and other procedures or protocols pursuant to Water Code Section 10727.2(f) for all monitoring sites or other data collection facilities to ensure that the monitoring network utilizes ~~on the~~ comparable data and methodologies. Best management practices related to construction and completion standards for wells or other monitoring sites developed for this purpose shall apply prospectively.

(h) The ~~best management practices~~policies and procedures for monitoring developed by each Agency shall include the following minimum standards:

~~(1)~~ Groundwater Elevations. The monitoring network shall be capable of demonstrating groundwater occurrence, flow directions, and hydraulic gradients between principal aquifers and surface water features. ~~that includes the following:~~

~~(A) A sufficient density of monitoring wells capable of collecting representative measurements through depth discrete perforated intervals to adequately characterize the potentiometric surface for each of the principal aquifer.~~

~~(B)~~(A) Static groundwater elevation measurements shall be collected at least two times per year, to represent seasonal low and seasonal high groundwater conditions.

(2) Groundwater Storage. The monitoring network shall be capable of providing sufficient data to enable a reasonably accurate ~~and detailed~~ assessment of the change in annual groundwater storage.

(3) Seawater Intrusion. The network shall be capable of monitoring chloride concentrations, or other constituents ~~approved by the Department~~, and be sufficiently dense to calculate the current and projected rate of seawater intrusion for each principal aquifer.

(4) Water Quality. The monitoring network shall be capable of collecting sufficient spatial and temporal data from each principal aquifer to determine groundwater quality trends for established constituents of concern.

(5) Land subsidence. The monitoring network shall be capable of identifying the rate and spatial distribution of land subsidence, which may be measured by extensometers, GPS surveying, remote sensing technology, or other appropriate method ~~approved by the Department.~~.

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Comment [JW46]: Statute doesn't provide for mandated methods

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(6) Interconnected surface waters. The monitoring network shall be capable of monitoring surface and groundwater conditions where interconnected surface water exists. ~~Monitoring of interconnected surface water systems shall be sufficient to characterize the spatial and temporal exchanges between surface water and groundwater, as necessary and appropriate, to adequately calibrate and apply the tools and methods selected to identify interconnected surface water systems.~~ The interconnected surface water monitoring network shall be able to characterize the following:

(1) Flow potential ~~conditions~~ including, but not limited to, surface water elevation and groundwater elevation in proximity to the surface water body ~~surface water discharge and , surface water headelevation., and baseflow contribution~~.

(2) Identifying the approximate date and location where ephemeral or intermittent flowing streams and rivers cease to flow, if applicable.

~~(3) Monitor the conditions to adequately characterize temporal changes in conditions with varying stream discharges and regional groundwater pumping conditions.~~

~~(4)~~(3) Any other factor that is necessary to identify potential significant and unreasonable adverse impact on beneficial uses of the surface water.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Sections 10727.2, 10733.2, Water Code

§ 354.36. Representative Monitoring

Each Agency may designate a subset of monitoring sites as representative of conditions in the basin or an area of the basin for the purposes of establishing specific minimum thresholds, measurable objectives, and related interim milestones, as follows:

(a) Representative monitoring sites may be designated by the Agency as the point at which critical parameters are monitored, and for which quantitative values for the minimum threshold, measurable objective, and interim milestones are defined.

(b) Groundwater elevations may be used as a proxy for monitoring other critical parameters if the Agency demonstrates the following.

(1) A substantial correlation exists between groundwater elevations and the critical parameters for which groundwater elevation measurements serve as a substitute.

Comment [JW47]: It is unrealistic that we will have ongoing monitoring at this level of detail. Characterization, modeling, and then water level measurements will suffice.

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(2) Measurable objectives established for groundwater elevation shall include a reasonable margin of operational flexibility taking into consideration the basin conditions required to avoid undesirable results for the critical parameters for which groundwater elevation measurements serve as a substitute.

(c) The designation of a representative monitoring site shall be supported by technical evidence demonstrating that the site adequately reflects general conditions in the area.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Sections 10727.2, 10733.2, Water Code

§ 354.38. Assessment and Improvement of Monitoring Network

Each Agency shall evaluate the monitoring network and include an assessment in the initial Plan and each five-year evaluation, including ~~an assessment of~~ whether there are data gaps that could affect the ability of the Plan to achieve the sustainability goal.

(a) Each Agency shall identify data gaps wherever the basin does not contain a sufficient number of monitoring sites, does not monitor sites with sufficient frequency, or utilizes monitoring sites that are unreliable, including those that do not satisfy ~~best management practices~~policies and procedures adopted by the Agency.

(b) If the monitoring network contains data gaps, the Plan shall include a description of the following:

(1) The location and reason for gaps in the monitoring network.

(2) Local issues and circumstances that limit or prevent monitoring.

(c) Each Agency shall describe steps that will be taken to fill any data gaps ~~within the first five years of implementation of the Plan or~~ before the next five-year assessment, including the location and purpose of newly added or installed monitoring sites.

(d) Each Agency shall consider ~~adjust~~ increasing the monitoring frequency and density of monitoring sites to provide a greater level of detail about site-specific surface and groundwater conditions and the effectiveness of management actions under circumstances that include, but are not limited to the following:

(1) If minimum thresholds are exceeded.

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(2) Highly variable spatial or temporal conditions.

(3) Unforeseen a~~A~~dverse impacts to beneficial uses and users of groundwater.

(4) Conditions that ~~A~~adversely affect~~s~~ the ability of an adjacent basin to implement their Plan or impede~~s~~ achievement of sustainability goals in an adjacent basin.

(e) An Agency may reduce the monitoring frequency and density of monitoring sites where such action will improve the cost effectiveness of monitoring if it does not substantially reduce the ability to monitor the progress of Plan implementation and the achievement of the sustainability goal.

~~(4)~~

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Note: Authority cited: Section 10733.2, Water Code.

Reference: Sections 10727.2, 10733.2, Water Code

§ 354.40. Reporting Monitoring Data to the Department

All monitoring data shall be stored in the data management system developed pursuant to Section 352.8. A copy of that data shall be submitted electronically on forms provided by the Department according to the Department's data standards, in one of the following methods:

(a) Each Agency shall compile and include all monitoring data in each Annual Report and, or

(b) The Agency shall make all monitoring data available to the Department throughout the year, as collected or measured by the Agency.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Sections 10728, 10728.2, 10733.2, Water Code.

SUBARTICLE 5. Projects and Management Actions

§ 354.42. Introduction to Projects and Management Actions

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This Subarticle describes the criteria for actions and projects to be included in a Plan to meet the sustainability goal of the basin.

Note: Authority cited: Section 10733.2, Water Code.

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Reference: Section 10733.2, Water Code.

§ 354.44. Projects and Management Actions

(a) Each Plan shall include a description of ~~the~~ any projects and management actions adopted to meet measurable objectives and prevent undesirable results. The description shall include the following:

(1) A list and description of all projects and management actions proposed in the Plan.~~ with a description of the measurable objective that is expected to benefit from the project or action~~.

(2) A summary of the permitting and regulatory process required for each project and management action.

(3) The status of each project and management action, including a time-table for expected initiation and completion, and the accrual of expected benefits.

(4) An explanation of the benefits that are expected to be realized from the project or management action, and how those benefits will be evaluated~~ and measured~~.

(5) An explanation of how the project or management action will be accomplished~~. If the Plan relies on water from outside the jurisdiction of the Agency,~~, including the parties that will implement the project or action.

~~(5)~~(6) A~~a~~n explanation of the source and reliability of any ~~that~~ water supply that is needed to implement a project or action~~shall be included~~.

~~(6) A description of the legal authority required for each project and management action, and the basis for that authority within the Agency.~~

(7) A description of the financial requirement and sources of funding for each project and management action.

(b) ~~Each~~ A Plan ~~shall~~ may include contingency projects or actions as follows:

(1) For each contingency project or management action, the plan shall identify criteria that would trigger implementation and/or termination of contingency projects or actions, and the process by which the Agency shall determine that conditions requiring implementation of contingency projects or actions have occurred.~~and for each measurable objective, the Plan shall describe contingency projects or actions that will be implemented in the event that groundwater conditions have not adequately responded to measures described in the Plan, or if the measures are no longer feasible.~~the information in subdivision (a), as available, and

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Comment [DA48]: Overbroad.

Comment [JW49]: The idea that every basin will have emergency contingencies is ill conceived. Contingencies should be allowed, but not mandated.

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~~(2) The Plan shall describe emergency contingency projects or actions that will be implemented in the event that groundwater conditions in the basin have passed a minimum threshold or that undesirable results have occurred or are imminent. Emergency contingency projects or actions shall be designed to achieve immediate~~

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~~results such that the Agency is able to demonstrate that the emergency has been abated by or before the next annual report.~~

~~(3) Contingency projects or actions shall be supported by available scientific data, analytical methods, and groundwater models, if available, and quantify changes to groundwater use required to achieve the measurable objectives of the Plan or to avoid undesirable results in the basin.~~

~~(4) The Plan shall describe the following:~~

~~(A)~~ (2) ~~Criteria that would trigger implementation and/or termination of contingency projects or actions, and the process by which the Agency shall determine that conditions require implementation of contingency projects or actions have occurred.~~

~~(B) The process by which the Agency shall provide notice to the public and other agencies that the implementation of contingency projects or actions is being considered or has been implemented, including a summary of the anticipated consequences of those projects or actions.~~

~~(5)~~(2) Implementation of a contingency project or action, if fully described in the approved Plan, shall not constitute an amendment to that Plan.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Section 10727.2, 10733.2, Water Code.

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ARTICLE 6. Evaluation and Assessment

§ 355. Introduction to Evaluation and Assessment

This Article describes the methodology and criteria for the evaluation and assessment of a Plan, which shall also be applied, as appropriate, to the periodic evaluation and assessment of Plans undertaken by the Agency or by the Department, as well as to any amendments to a Plan previously approved by the Department.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Section 10733.2, Water Code.

§ 355.2. Department Review of ~~Initial~~ Adopted Plan

Comment [JW50]: I don't see any real need for distinction between initial and any subsequent plan. Each plan amendment will be an evolution of the previous one.

Upon adoption of a Plan the Agency shall submit a copy of the initial adopted Plan to the Department for evaluation.

(a) Upon receipt of an adopted Plan, the Department shall assign a submittal date to the Plan based on the day the Plan is received.

(b) The Department shall post the adopted Plan, submittal date, and all materials submitted by the Agency on the Department's Internet Web site within 20 days of receipt.

(c) The Department shall establish a period of no less than 60 days to receive public comments on the adopted plan, as described in Section 353.8.

(d) ~~If the Board has jurisdiction over the basin or a portion of the basin pursuant to section 10735.2, the Department, after consultation with the Board, may proceed with an evaluation of a Plan.~~

Comment [DA51]: The Department should evaluate all plans, regardless of whether or not the Board has jurisdiction over all or a portion of the basin.

(e) The Department shall evaluate a Plan within two years of its submittal date and issue a written assessment of the Plan that includes a description supporting the assessment, which will be posted on the Department's website. The Department may include recommended corrective actions to address any deficiencies identified in the assessment. When Department review is final, the assessment will include a determination of whether the Plan as one the following:

(1) Adequate. The Department has determined that the Plan satisfies the goals of the Act and is in substantial compliance with this Subchapter.

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(2) Conditionally adequate. The Department has determined that the Plan has minor deficiencies that preclude an adequacy determination, but that could be rectified by the Agency through corrective actions recommended by the Department as described in this Section.

(3) Inadequate. The Department has determined that the Plan as submitted is not complete and does not satisfy the requirements of Section 355.4(a), that the Plan contains significant deficiencies that preclude an adequacy determination, and those deficiencies cannot be rectified by the Agency in a timely manner, or that the Agency has failed to address deficiencies in a Plan previously classified as conditionally adequate through corrective actions recommended by the Department as described in this Section. If the Department makes any of the determinations described in this subsection, the Department shall seek consultation with the Board to determine whether the Plan is inadequate.

(f) For a Plan that is conditionally adequate, the Agency may modify a Plan based on a request for additional information from the Department or to include corrective actions to address any deficiencies identified by the Department and submit the modified adopted plan for further evaluation.

(1) The Department may consult with the Agency to determine the amount of time needed by the Agency to address any deficiencies.

(2) The Department may allow up to 180 days from the date the Department recommends corrective actions to address deficiencies in a Plan, unless a greater amount of time remains before the basin is required to be managed pursuant to a Plan established by Water Code Section 10720.7.

(3) No time limit shall apply to address deficiencies to Plans submitted for low or very low priority basins.

(g) If an Agency fails to address deficiencies in its Plan so that the Department is able to determine the Plan to be adequate, the Department shall issue an assessment of the Plan as inadequate and seek consultation with the Board.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Section 10733.2, 10733.4, 10720.7 Water Code.

§ 355.4. Criteria for Plan Evaluation

The Department shall evaluate a Plan to determine whether implementation of the Plan is likely to have ~~has~~ the overall effect of achieving the sustainability goal for the basin, ~~complies with the Act,~~ and is in

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substantial compliance with the Act and this Subchapter. ~~Substantial compliance means that the Agency has attempted to comply with these regulations in good faith, that the supporting information is sufficiently detailed and the analyses sufficiently thorough and reasonable, in the judgment of the Department, to permit evaluation of and support the implementation of the Plan, and the Department determines that any discrepancy would not materially affect the ability of the Agency to achieve the sustainability goal or of the Department to evaluate the likelihood of the Plan to attain that goal.~~ Notwithstanding the provisions of this subchapter, the Department may waive any specific requirement under this subchapter of its own volition or on the findings of an Agency.

(a) A~~n initial~~ Plan will be deemed inadequate unless it satisfies all of the following conditions:

(1) The Plan was submitted within the statutory period established by Water Code Section 10720.7, if applicable.

(2) The Plan is complete and includes all information required by the Act ~~and this Subchapter~~, including a legally adequate coordination agreement, if necessary.

(3) The Plan or Plans cover~~s~~ the entire basin.

(4) The Agency has taken corrective actions, within the period described in Section 355.2, to address deficiencies in the Plan identified by the Department.

(b) The Department shall evaluate a Plan that satisfies the requirements of Subsection (a) to determine whether the Plan is likely to achieve the sustainability goal for the basin. When evaluating whether a Plan is likely to achieve the sustainability goal, the Department shall consider the following:

(1) Whether the Plan substantially complies with the requirements of the Act and this Subchapter.

(2) The ~~quality~~ adequacy of information, data, monitoring, and scientific methods upon which the Plan relies.

(3) Whether the assumptions, criteria, findings, and objectives, including the sustainability goal, undesirable results, minimum thresholds, measurable objectives, and interim milestones, are reasonable and supported by the substantial ~~available~~ evidence.

(4) Whether the interests of the beneficial uses and users of groundwater have been ~~adequately~~ considered, including access to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes.

(5) The feasibility of projects and management actions, ~~including contingency projects,~~

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and the likelihood that these actions will prevent undesirable results and ensure that the basin is operated within its sustainable yield.

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~~(6) Whether the Plan will adversely affect the ability of an adjacent basin to implement their groundwater sustainability Plan or impede achievement of sustainability goals in an adjacent basin.~~

~~(7) Whether the coordination agreements ensure the Plans utilize the same data and methodologies specified in Water Code Section 10727.6.~~

~~(8) Whether the Agency has the legal authority and financing plan necessary to implement the Plan.~~

~~(9)~~(6) Whether the policies and procedures ~~best management practices~~ adopted by the Agency cover the range of projects and management actions anticipated by the Plan. ~~or are consistent with the best management practices recommended provided by the Department or general industry standards.~~

~~(10)~~(7) Public comments and other information indicating that impacts were not adequately considered in determining undesirable results or in developing the plan.

~~(11) Whether the Plan would impair the right access to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes.~~

Note: Authority cited: Section 10733.2, Water Code.

Reference: Sections 106.3, 10720.7, 10727, 10723.2, 10727.2, 10733.2, Water Code.

§ 355.6. Periodic Review of Plan by Department

The Department shall periodically review approved Plans to ensure the Plan, as implemented, remains in conformance with the Act and likely to achieve the sustainability goal for the basin.

(a) The Department shall evaluate existing Plans at least every five years and whenever the Plan is amended. Department review shall be based on information provided in the annual reports and the periodic evaluation of the Plan prepared and submitted by the Agency.

(b) The Department shall consider the following in determining whether a Plan and its implementation is adequate:

(1) The Agency is meeting all of its interim milestones.

(2) The Agency is implementing actions and contingencies outlined in the Plan.

Comment [jw52]: Not a requirement

Comment [jw53]: Evaluation of coordinating agreement, not each plan.

Comment [jw54]: Not a specific criterion. Included in beneficial uses and users.

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(3) Amendments to the Plan are compatible with the measurable objectives and sustainability goal.

(4) The Agency is compliant with the annual reporting requirements and periodic evaluation requirements.

~~(5)~~ The Department concludes that the Plan and its implementation are likely to achieve the sustainability goal ~~and not likely to adversely affect the sustainability goals of adjacent basins.~~

~~(5)~~

(6) ~~The Department may request from the Agency any information the Department deems necessary to evaluate the progress toward achieving the sustainability goal and the potential for adverse effects on adjacent basins.~~

(7) The Department may identify deficiencies in a Plan or its implementation and coordinate with the Agency to correct deficiencies prior to the issuance of the assessment.

(8) The Plan satisfies the criteria for an initial Plan as described in Section 355.4.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Sections 10728.2, 10733.2, Water Code.

§ 355.8. Consultation with Board

The Department shall consult with the Board if any of the following occur:

(a) The Department determines that a Plan may be inadequate.

(b) The Department determines that a groundwater sustainability program is not being implemented in a manner that will likely achieve the sustainability goal for the basin.

(c) The Agency has not taken actions to address any deficiencies in a Plan that had been identified by the Department.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Sections 10733.2, 10735.2, 10735.4, Water Code.

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Comment [jw55]: Not a reason for inadequacy

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Comment [DA56]: Overbroad. The process should be that the Department provides an evaluation of the plan (perhaps asking questions) and evaluation rather than allowing unlimited additional information.

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~~§ 355.10. Resolution of Conflicts by Department~~

Comment [jw57]: No basis for this in statute

~~The Department shall address disputes between Agencies or other entities responsible for groundwater management as follows:~~

~~(a) Disputes within a basin shall be the responsibility of the Coordinating Agency or other entities responsible for managing Plans and alternatives within that basin.~~

~~(b) Disputes between basins which claim that the implementation of Plans or alternatives in one basin affects the ability of an adjacent basin to implement its Plan, or impedes its ability to achieve the sustainability goal, shall be resolved by the Department.~~

~~(c) In resolving disputes, the Department may require additional information from each basin, including any proprietary data used by the Agency. Information withheld will be presumed not to support the interpretations that rely on that data.~~

~~(d) If the parties are unable to resolves disputes that relate to fundamental issues of sustainable groundwater management, the Department may find the relevant Plan or Plans and alternatives to be inadequate.~~

Note: Authority cited: Section 10733.2, Water Code.

Reference: Sections 10727, 10727.6, 10733.2, Water Code.

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ARTICLE 7. Reports, Assessments, and Amendments

§ 356. Introduction to Reports, Assessments, and Amendments

This Article describes the procedural and substantive requirements for annual reports, the periodic evaluation and assessments of Plans, and any proposed amendments to an approved Plan prepared by an Agency.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Section 10733.2, Water Code.

SUBARTICLE 1. Annual Reports

§ 356.2. Introduction to Reports

This Article describes the requirements for annual reports submitted by Agencies on or before April 1 of each year after the adoption of the Agency's Plan, including information required to demonstrate progress towards achieving the sustainability goal based on performance relative to measurable objectives described in the Plan, and Department review of those reports.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Section 10733.2, Water Code.

§ 356.4. Annual Report

Each Agency shall submit an annual report to the Department by April 1 of each year following the adoption of the Plan. The annual report shall include the following components:

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(a) General information, including a title page, a transmittal letter, as described in Section 353.4, a table of contents, an executive summary, and a location map depicting the basin covered by the report.

(b) A detailed description and graphical representation of the following conditions of the basin managed in the Plan:

(1) Groundwater elevation data from all monitoring wells identified in the monitoring network shall be analyzed and displayed as follows:

(A) Groundwater elevation contour maps for each principal aquifer in the basin illustrating, at a minimum, the seasonal high and seasonal low groundwater conditions.

(B) Hydrographs of groundwater elevations and water year type using historical data to the greatest extent available, but at a minimum from January 1, 2015, to current reportingyear.

(2) Annual aggregated data identifying groundwater extraction for the preceding water year. Data shall be ~~collected from the best available measurement methods and shall be~~ presented in a table that summarizes groundwater extractions by water use sector, ~~location of extractions,~~ and identifies the method of measurement (direct or estimate) and accuracy of measurements~~, and a map that illustrates the general location and volume of groundwater extractions~~.

(3) Surface water supply used or available for use, for groundwater recharge or in-lieu use shall be reported based on quantitative data that describes the annual volume and sources for the preceding water year.

(4) Total water ~~use shall be collected from the best available measurement methods and~~ shall be reported in a table that summarizes total water use by water use sector and ~~,~~ water source type, and identifies the method of measurement (direct or estimate) and accuracy of measurements. Existing water use data from the most recent Urban Water Management Plans or Agricultural Water Management Plans within the basin may be used, as long as the data are reported by water year.

(5) Change in groundwater storage shall include the following:

(A) Change in groundwater storage maps for each principal aquifer in the basin.

(B) A graph depicting water year type and cumulative change in groundwater storage for the basin based on historical data to the greatest extent available, but at a minimum from January 1, 2015, to the current reporting year.

Comment [JW58]: Not necessary every year

Comment [JW59]: Way beyond statute and not needed annually

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(c) A synopsis of progress towards implementing the Plan, the ability of the Agency to achieve interim milestones and the implementation of any contingency measures.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Section 10727.2, 10728, 10733.2, Water Code.

§ 356.6. Department Review of Annual Reports

(a) The Department shall acknowledge the receipt of annual reports by written notice and post the report and all related materials on the Department's Internet Web site within 20 days of receipt. If the Department determines that the annual report is incomplete, the Department shall provide written notice to the requesting agency of the need for additional information.

~~(b)~~ The Department may provide recommended corrective actions to address any deficiencies in the annual report, which the Agency shall remedy pior to the next annual report. ~~or implementation of the Plan based on review of the annual report and shall treat the Plan as conditionally adequate, Plan as described in Section 355.26, and notify until the Agency of any necessary corrective actions. The Department may identify the Plan as conditionally adequate until the Agency takes appropriate actions to remediate any deficiencies.~~

Note: Authority cited: Section 10733.2, Water Code.

Reference: Section 10728, 10733.2, Water Code.

SUBARTICLE 2. Periodic Evaluation of Plan

§ 356.8. Introduction to Agency Evaluation and Assessment

This Subarticle describes the requirements for periodic Plan evaluation and assessment undertaken by the Agency, including Department review of that assessment.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Section 10733.2, Water Code.

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Comment [J60]: Annual review of plan is excessive

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§ 356.10. Agency Evaluation and Assessment

Each Agency shall evaluate and assess the Plan at least every five years and whenever the Plan is amended. The assessment shall be submitted to the Department together with the annual report for that year. The assessment shall describe basin conditions relative to the previous five-year period and the long-term sustainability goal for the basin. The Agency's assessment shall include an objective evaluation of Plan implementation and management of groundwater in the basin, including the following:

(a) A description of ~~each of the measurable objectives and~~ current groundwater conditions for each critical parameter relative to measurable objectives, interim milestones and minimum thresholds.

(b) A description of the implementation of any corrective actions identified by the Agency or recommended by the Department, and the effect on groundwater conditions resulting from those actions.

(c) A description of the implementation of any projects and management actions or contingency projects or actions, and the effect on groundwater conditions resulting from those projects or actions.

(d) A description of new information that has been made available since adoption or amendment of the ~~initial~~ Plan, or since the last five-year evaluation. The description shall also include whether new information warrants changes to any aspect of the Plan, including, but not limited to, the evaluation of basin conditions, minimum thresholds, or the criteria defining undesirable results.

(e) An evaluation of the basin setting and description~~hydrogeologic conceptual model~~, basin conditions, and the water budget in light of new information or changes in water use.

(f) A survey of the monitoring network within the basin, and evaluation of whether any areas within the basin are represented by less data or by data of insufficient quality or control than required by the policies and procedures adopted by the Agency ~~or best management practices provided by DWR~~. The survey shall include the following:

(1) An assessment of monitoring network function with an analysis of data collected to date, identification of potential data gaps, and the actions necessary to improve the monitoring network.

(2) If the Agency identifies areas that require more or better data or other information, the Plan shall describe a program for the acquisition of such data sources and incorporation of newly obtained information into the overall Plan.

(3) Gaps in data or data quality shall be remedi~~at~~ed no later than the ~~first~~ next five-year assessment by the ~~Department~~Agency.

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~~(4)~~ (g) Elements of the Plan, including, but not limited to, the basin setting and description~~hydrogeological conceptual model~~, groundwater conditions, management areas, water budget, or the identification of undesirable results and the setting of minimum thresholds and measurable objectives, shall be reconsidered and revisions proposed, if necessary, for the next~~second~~ five-year assessment by the Department.

~~(5) The Plan shall prioritize the installation of new data collection facilities and analysis of new data based on the needs of the basin.~~

(4)

(g) ~~Information describing any legislative actions, including a summary of regulations or ordinances related to the Plan adopted by the Agency.~~

(h) Information describing any enforcement or legal actions taken by the Agency.

(i) A description of completed or proposed Plan amendments.

(j) A summary of coordination that occurred between Agencies in a single basin and Agencies in hydrologically connected basins, and land use agencies where applicable.

(k) Other information the agency deems appropriate, along with any information necessary to the Department to conduct a periodic review as required by Water Code Section 10733.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Section 10727.2, 10728.2, 10733.2, 10733.8, Water Code.

SUBARTICLE 3. Plan Amendments

§ 356.12. Amendments and Modifications to Plan

Any amendment or other modification to a Plan shall be evaluated by the Department for consistency with the requirements of the Act and of this Subchapter.

(a) An Agency may modify a Plan at any time, and submit the modified Plan to the Department for evaluation.

(1) Prior to modifying a Plan, the Agency may submit the proposed modifications to the Department for evaluation.

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Comment [DA61]: Overbroad.

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(2) If the Department determines the proposed modifications are not significant, the Department shall notify the Agency that no further review shall be required and that the Agency may adopt the proposed modifications without formally amending the Plan.

(3) If the Department determines that the proposed modifications are or may be significant, the Department shall notify the Agency that the proposed modifications may only be adopted as formal amendments to the Plan.

(b) Whenever a Plan is amended, the Agency shall submit a copy of the amended Plan to the Department for evaluation pursuant to the requirements of this Subchapter for submission of a Plan.

(c) The Department shall review and issue an assessment of the amended Plan that states whether the amended plan is adequate, conditionally adequate, or inadequate as described in Section 355.2.

(d) The Department's evaluation shall focus on the amended portions of the Plan and any new information that is relevant to the amendments or other Plan elements. The Department will not evaluate any part of the Plan that has not been amended unless the Department has reason to believe the proposed amendment may result in changed conditions to other areas or to other aspects of the Plan.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Sections 10727.2, 10728.4, 10733.2, Water Code.

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ARTICLE 8. Coordination Agreements

§ 357. Introduction to Coordination Agreements

This Article describes the requirements for ~~voluntary coordination agreements between agencies in different basins and mandatory~~ coordination agreements between agencies within a basin developed pursuant to Water Code Section 10727.6, and voluntary agreements between Agencies in adjacent basins.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Sections 10733.2, Water Code.

§ 357.2. Interbasin Agreements

Two or more Agencies in adjacent basins may enter into ~~an interbasin~~ an agreement to establish compatible goals and understandings regarding fundamental elements of the Plans of each Agency as they relate to sustainable groundwater management. ~~Interbasin agreements should facilitate the exchange of technical information between Agencies and include a process to resolve disputes concerning the interpretation of that information. Interbasin agreements may include any information the participating Agencies deem appropriate, including the following:~~Such agreements may be included in the Plan to support a finding that implementation of the Plan will not adversely impact an adjacent basin's ability to implement its Plan or impede the ability to achieve its sustainability goal.

~~(a) General information:~~

~~(1) Identity of all basins participating in and covered by the terms of the agreement.~~

~~(2) For each basin, a list of all Agencies or other public agencies or other entities with groundwater management responsibilities.~~

~~(3) For each basin, a list of all Plan or alternatives or adjudicated areas.~~

~~(b) Technical information:~~

~~(1) An estimate of groundwater flow across basin boundaries, including consistent and coordinated data, methods and assumptions.~~

~~(2) An estimate of stream aquifer interactions at boundaries.~~

~~(3) Establish a common understanding of the geology and hydrology of the basins and~~

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~~their hydraulic connectivity as it applies to determining groundwater flow across basin~~

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~~boundaries, and describe the different assumptions utilized by different Plans and how the Agencies reconciled those differences.~~

~~(4) Establish measurable criteria and a monitoring network regarding threshold values that would confirm that no adverse impacts are resulting from managing groundwater in any basin pursuant to terms of the agreement. If minimum thresholds or measurable objectives differ substantially between basins, the agreement will specify how the Agencies will reconcile those differences and manage the basins to avoid undesirable results. The Agreement shall identify all differences that the parties consider significant and include a plan and schedule to reduce the uncertainties so that over time, they collectively resolve those important uncertainties and differences.~~

~~(c) A description of the process for identifying and resolving conflicts between Agencies that are party to the agreement.~~

~~(d) Interbasin agreements submitted to the Department shall be posted on the Department's Internet Web site.~~

~~Note: Authority cited: Section 10733.2, Water Code.~~

~~Reference: Sections 10733, and 10733.2, Water Code.~~

§ 357.4. ~~Intrabasin~~ Coordination among Agencies

(a) Agencies intending to develop and implement Plans pursuant to Water Code Section 10727(b)(3) shall enter into a coordination agreement to ensure that the Plans are developed and implemented utilizing the same data and methodologies and that elements of the Plans necessary to achieve the sustainability goal are based upon consistent interpretations of basin conditions.

(b) ~~Intrabasin~~ Ceoordination agreements ~~shall~~ may establish or identify a Submitting Agency that ~~shall b~~may serve as ~~e~~ the single point of contact with the Department.

~~(c) Each Agency shall submit to the Submitting Agency all Plans, Plan amendments, supporting information, all monitoring data and other pertinent information, along with annual reports and periodic evaluations.~~

~~(d)~~(c) ~~The Submitting Agency shall compile and rectify data and interpretations regarding basin conditions provided by the Agencies and produce a single report synthesizing and summarizing that information into a coherent and credible account of basin conditions. Reports produced by the Submitting Agency shall includ~~e the following:

Comment [JW62]: This is not a required part of statute

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(1) An explanation of how the Plans implemented together satisfy the requirements of the Act and are in substantial compliance with this Subchapter.

~~(2) An explanation of how the Plans have been integrated using the same data and methodologies to provide useful information regarding the following:~~

~~(A) Hydrogeologic conceptual models, as described in Section 354.12.~~

~~(B) State of the basin, as described in Section 354.14.~~

~~(C) Water budgets, as described in Section 354.16.~~

~~(D) Undesirable results, minimum thresholds, measurable objectives, as described in Subarticle 3 of Article 5.~~

~~(E) Monitoring networks, and monitoring objectives, as described in Subarticle 4 of Article 5.~~

~~(F) Projects and management actions, as described in Subarticle 5 of Article 5.~~

Comment [JW63]: Not required elements of coordination agreement in statute

~~(3)~~(2) An explanation of how the integration of information and interpretations described in this section provides useful information regarding each of the assumptions described in Water Code Section 10727.6.

~~(4)~~(3) ~~Reports produced by the Submitting Agency shall accompany the initial Plan, any amendment to the Plan, annual reports, and the five-year assessment by each Agency within~~ the basin.

~~(c)~~(d) ~~Intrabasin coordination~~ Coordination agreements shall describe the responsibilities of each Agency for meeting the terms of the agreement, the procedures for the timely exchange of information between Agencies ~~and with the Submitting Agency~~, and procedures for resolving conflicts between Agencies.

~~(f)~~(e) ~~Intrabasin coordination~~ Coordination agreements shall identify adjudicated areas within the basin, and any local agencies that have adopted an alternative that has been accepted by the Department.

~~(g)~~(f) The ~~intrabasin coordination~~ Coordination agreement shall be submitted to the Department together with the Plans for the basin and, if approved, shall become part of the Plan for each participating Agency.

~~(h)~~(g) The Department shall evaluate the Coordination a~~A~~greement for compliance with the procedural and technical requirements of this section~~, to assure that the Agreement is binding on all~~

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~~parties, and that provisions of the Agreement are sufficient to address any disputes between or among Agencies that are party to the agreement.~~

~~(i)~~(h) Plans subject to the requirement of this section shall not be deemed adequate without a legally binding agreement.

~~(j)~~(i) Interagency agreements shall be reviewed as part of the five-year assessment, revised as necessary, dated, and signed by all parties.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Sections 10727.6, 10733, and 10733.2, Water Code.

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ARTICLE 9. Alternatives and Adjudicated Areas

§ 358. Introduction to Alternatives and Adjudicated Areas

This Article describes the methodology and criteria for the submission and evaluation of alternatives to a Plan and for adjudicated areas.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Section 10733.2, Water Code.

§ 358.2. Adjudicated Areas Subject to Water Code Section 10720.8

The watermaster or a local agency shall submit the following to the Department for an adjudicated area described in Water Code Section 10720.8:

(a) By April 1, 2016, a copy of a governing final judgment, or other judicial order or decree, and any amendments entered before April 1, 2016.

(b) Within 90 days of entry by a court, a copy of any amendment made and entered by the court to the governing final judgment or other judicial order or decree on or after April 1, 2016.

(c) By April 1, 2016, and annually thereafter, a report containing the following information to the extent available for the portion of the basin subject to the adjudication:

(1) Groundwater elevation data unless otherwise submitted pursuant to Water Code Section 10932.

(2) Annual aggregated data identifying groundwater extraction for the preceding water year.

(3) Surface water supply used for or available for use for groundwater recharge or in-lieu use.

(4) Total water use.

(5) Change in groundwater storage.

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(6) The annual report submitted to the court.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Section 10720.8, 10733.2, Water Code.

§ 358.4. Alternatives to Groundwater Sustainability Plans

(a) A local agency that submits an alternative shall demonstrate that the alternative applies to the entire basin or is subject to a Coordination Agreement pursuant to Water Code section 10727.6 and satisfies the eligibility requirements of Water Code Section 10733.6, including an assessment that the alternative satisfies the objectives of the Act, and that the alternative is within a basin that is in compliance with Part 2.11 of the Water Code (commencing with Section 10920).

(b) An alternative shall be submitted to the Department by January 1, 2017, and every five years thereafter.

(c) A local agency shall include the following information based on the type of alternative submitted:

(1) An alternative submitted pursuant to Water Code Section 10733.6(b)(1) shall include a copy of the groundwater management plan.

(2) An alternative submitted pursuant to Water Code Section 10733.6(b)(2) that is not an adjudicated area described in Water Code Section 10720.8 shall do the following:

(A) Demonstrate that the adjudication submitted to the Department as an alternative is a comprehensive adjudication as defined by Chapter 7 of Title 10 of Part 2 of the Code of Civil Procedure (commencing with Section 830).

(B) Provide the Department with a copy of the adjudication order and any annual report submitted to the court pursuant to the adjudication.

(C) A local agency submitting an alternative based on an adjudication action described in Water Code Section 10733.6 (b)(4)(B) may, notwithstanding Water Code Section 10733.6 (c), submit the adjudication action to the Department for evaluation after January 1, 2017.

~~(3)~~ An alternative submitted pursuant to Water Code Section 10733.6(b)(3) shall demonstrate that the basin has been operated within its sustainable yield for a period of at least ~~no undesirable results are present in the basin or have occurred~~

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ten years. ~~between January 1, 2005, and January 1, 2015~~. ~~Each subsequent submission shall~~

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~~demonstrate that no undesirable results are present in the basin or have occurred for the preceding ten-year period.~~

(e) A local agency shall include sufficeient data and analysis to demonstrate ~~an explanation of the functional equivalence of terms and concepts used in~~ the alternative satisfies the objectives ~~with the substantive and procedural requirements~~ of the Act ~~and this Subchapter~~.

(f) If a local agency submits an alternative for a basin that includes areas outside its jurisdiction or service area, the local agency shall enter into agreements with any local agency or other entity from which information will be required to comply with reporting requirements for the alternative and to demonstrate that basin satisfies ongoing requirements of the alternative. An agreement shall include a list and map of all local agencies or entities that are party to the agreement.

(g) After an alternative has been approved by the Department, if one or more Plans are adopted within the basin, the alternative and any agreements shall be revised, as necessary, to reflect any changes that may have resulted from adoption of the Plan, and the local agency responsible for the alternative and Agency responsible for the Plan shall enter into an agreement that satisfies the requirements of Section 357.4.

(h) Any person may provide comments to the Department regarding an alternative in a manner consistent with Section 353.8.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Section 10727, 10733.2, 10727.2, 10733, 10733.6, 10733.8, Water Code.

§ 358.6. Department Evaluation of Plan Alternatives

The Department shall evaluate an alternative to a Plan consistent with Article 6 of these regulations to determine whether the alternative satisfies the objectives ~~goals~~ of the Act to achieve groundwater sustainability through local management and avoid undesirable results~~, including to adjacent groundwater basins~~.

Note: Authority cited: Section 10733.2, Water Code.

Reference: Section 10733.2, 10733.6, Water Code.

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Comment [jw64]: Consistency with statute

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