

**STATE OF CALIFORNIA  
REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL COAST REGION**

**SUPPLEMENTAL SHEET FOR REGULAR MEETING OF NOVEMBER 19-20, 2015**  
Prepared on November 16, 2015

**ITEM NUMBER:** 14

**SUBJECT:** Los Osos Groundwater Basin- Approved Stipulated Judgment and Update on Basin Management Plan: Presentation by Representatives from Los Osos Community Services District, Golden State Water Company and S&T Mutual Water Company

**STAFF CONTACT:** Lisa McCann 805/549-3132 or [Lisa.Mccann@waterboards.ca.gov](mailto:Lisa.Mccann@waterboards.ca.gov)

**KEY INFORMATION:**

Location: Los Osos, San Luis Obispo County  
Type of Activities: Groundwater Protection, Seawater Intrusion Prevention, Recycled Water, Permitting

**THIS ACTION:** Information

The Sierra Club submitted comments on the Basin Management Plan for Los Osos Groundwater Basin. The comments are attached to this Supplemental Sheet for Item 14.

The comments were submitted via email and include:

1. The email,
2. A letter dated October 5, 2015, and addressed to the Central Coast Regional Water Quality Control Board and the State Water Resources Control Board regarding a "Request for the Central Coast Regional Water Board and State Water Resources Control Board take such actions as necessary to preserve and protect the Los Osos Groundwater Basin, the sole source of water for the Los Osos area,"
3. Summary of improvements to correct deficiencies in the Basin Plan and Stipulated Judgment

**ATTACHMENTS**

## McCann, Lisa@Waterboards

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**From:** Santa Lucia Chapter of the Sierra Club <sierraclub8@gmail.com>  
**Sent:** Monday, November 16, 2015 8:26 PM  
**To:** McCann, Lisa@Waterboards  
**Subject:** RE 11/19/15 meeting, Item 14: Approved Stipulated Judgment and Los Osos Groundwater Basin Plan  
**Attachments:** LO Basin 11-19-15 - WB def.pdf; summary of BP improvements.pdf  
**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Dear Ms. Mccann,

Attached for entry into the administrative record on this item are the Sierra Club's recent comments as submitted to the Regional Water Board, consisting of summaries of identified deficiencies in Los Osos Basin Plan and Stipulated Judgment, and suggested improvements to the Plan. Please distribute to the board members.

We note that these summaries of deficiencies and suggested improvements are not intended to be comprehensive. The recommendations submitted do not represent a complete list of ways to maximize conservation measures and should not be taken to imply that implementation of these recommendations will allow the current Basin Plan and Stipulated Judgment to succeed in protecting the Basin. These summaries are intended only to highlight the key problems we see and some basic improvements. A thorough and complete analysis of the Plan's potential environmental impacts should have been conducted to identify and address all significant potential impacts to the Basin and identify environmentally superior alternatives, including some we may not have listed or which the Parties did not consider. Such review would also have identified the uncertainties and potential impacts to Basin yield, in order to provide more thorough and conservative Basin modeling and sustainable yields, the most effective objectives, benchmarks, triggers and thresholds for management actions, and the most effective monitoring and adaptive management programs and contingency plans.

We remain concerned about the urgency of the seawater intrusion problem and the need for an effective management plan to address it. The parties to the adjudication have recognized that "bold, decisive, and immediate action is needed." We maintain that such action is not what the Basin Plan and Stipulated Judgment provide.

Thank you for your attention to these issues,

Andrew Christie  
Chapter Director



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October 5, 2015

TO: Central Coast Regional Water Quality Control Board  
State Water Resources Control Board

RE: Request for the Central Coast Regional Water Board and State Water Resources Control Board take such actions as necessary to preserve and protect the Los Osos Groundwater Basin, the sole source of water for the Los Osos area.

Dear Board Members,

This letter is to again request that the State and Regional Water Boards intervene in the Los Osos Basin adjudication and take other actions necessary to protect and preserve the Los Osos Basin threatened by a severe seawater intrusion problem. The current Basin Plan, and the Stipulated Judgment that implements the Basin Plan, will result in unnecessary and unreasonable further loss of the Basin severely impaired by 40 years of overdraft and seawater intrusion. Further loss of the Basin could lead to total loss of this sole, irreplaceable water source necessary for sustainability of the Los Osos community and area farms, as well as Morro Bay National Estuary habitat. We briefly highlight here the main reasons the Basin adjudication will not stop seawater intrusion and preserve the water source.

The Basin Plan and Stipulated Judgment:

1. **Do not analyze and mitigate adverse impacts from the Basin Plan, the LOWWP, the drought, and climate change, including cumulative impacts from the Basin Plan infrastructure programs and LOWWP, and the indirect impacts from induced unsustainable growth and desalination.** The Basin and Stipulated Judgment indicate that modeling accounts for impacts on the Basin and habitat, and adaptive management will address unexpected impacts, but neither addresses the impacts on rapidly advancing seawater intrusion, and the Upper Aquifer, Los Osos Creek, and the estuary from the worse drought on record, accelerating climate change, shifts in pumping to the upper aquifer, and the elimination of septic recharge happening concurrently, along with a major potential increase in water demand with new development.
2. **Do not define “sustainable yield” and identify sustainable yield targets that protect the Basin and sensitive habitat.** As defined, “sustainable yields,” and the pumping allocations based on “sustainable yields,” allow seawater intrusion to move into the Basin indefinitely and cause salts to build up in the internal parts of the Basin to unacceptable levels due to a closed Basin condition (lack of outflow). These conditions will cause irreversible harm and could persist indefinitely since the Stipulated Judgment requires an unlikely “unanimous” vote to change the definition of “sustainable yield” and reduce allocations.
3. **Do not develop mitigation programs—conservation, recycled water use, and infrastructure programs—that minimize adverse impacts on the Basin and**

**maximize opportunities for sustainability, consistent with Basin Plan, LOWWP CDP, and Water Board goals and objectives.** Rather than implement conservation and recycled water use programs to reduce water use to low, achievable levels consistent with potable water use in other coastal communities, the Stipulated Judgment allows purveyors to increase water use by 200 AFY, take a step backwards on conservation, and avoid implementing the most cost-effective infrastructure program (Program D) except to support new development

4. **Do not set time-specific objectives, implement enforceable mechanisms that commit the Parties to achieving Basin Plan, CDP goals and objectives, nor does it provide the Parties the means to quickly and effectively implement programs to address the urgent seawater intrusion problem.** Neither the Basin Plan nor Stipulated Judgment set time-specific objectives or benchmarks for implementing programs and achieving measurable improvements in seawater intrusion. Instead, they prohibit restrictions on private well production (agricultural and private domestic use--40% of Basin production) and limit enforceable restrictions on purveyor use to water shortage emergencies requiring a unanimous vote of the Basin Management Committee. (The present drought is not considered a water shortage emergency.)
5. **Do not provide a monitoring program and metrics (success criteria) needed to avoid adverse impacts and assess Basin sustainability.** A notable expert, Gus Yates, points out that many more monitoring and metric wells are needed for early detection of seawater intrusion and to avoid/minimize loss of the Basin, but they are not provided. Also, the Regional Water Board and purveyors have recommended mandatory metering and monitoring of private wells, but it is not provided. In fact, the Stipulated Judgment expressly prohibits the Basin Management Committee from requiring the Board of Supervisors to adopt such ordinance.
6. **Do not identify, analyze, and develop a range of funding sources necessary to effectively and feasibly implement programs to protect the Basin.** The Stipulated Judgment allows each party to decide whether the funding source(s) the Basin Management Committee develops is appropriate and adequate to fund that party's participation in the adjudication, and it makes implementation of programs contingent on funding. Thus, it does not ensure programs will be funded or implemented.

Our summaries of deficiencies in the Basin Plan and Stipulated Judgment (below) further explain these deficiencies. We have also attached earlier requests from the LOSG and Sierra Club for the Water Boards to take action to improve the Basin Plan and to stop seawater intrusion by all means available to the Boards, in order to avoid further unnecessary destruction of the Basin suffering from 40 years of unnecessary overdraft and seawater intrusion. Also, attached is our response to a Basin Review by Gus Yates in 2014, which verifies several deficiencies. Finally, we attached a summary of improvements needed to correct Basin Plan and Stipulated Judgment deficiencies and a list of recommended improvements to the LOWWP conservation program to maximize that program, which is adopted by the Basin Plan.

We are requesting that the Water Boards intervene in the adjudication to retain your authority and obligation to protect, preserve, and restore the Los Osos Basin. The Basin Plan and Stipulated Judgment will likely severely limit the Regional Board's authority to implement water quality objectives and water quality control plans aimed at reducing contamination of the Basin, as well as the authority to implement and/or modify salt and nutrient management plans, storm water management plans, and the LOWWP Waste Discharge Requirement. The adjudication will also remove the State Board's authority to determine water rights, restrict production to preserve the Basin, and ensure the Basin is sustainably managed pursuant to the Sustainable Groundwater Management Act.

The Governor's Executive Order (B-29-15) requires the State Water Board to implement drought measures, including "frequent reporting of water diversion and use by water right holders" and to "bring enforcement actions against illegal diverters and those engaging in the wasteful and unreasonable use of water" (Order #10). It also requires the Water Board to "consider adopting regulations or taking enforcement actions to promote compliance" with an updated State Model Water Efficient Landscape Ordinance, which requires outdoor conservation measures for "new and existing landscapes through ... greywater usage, on-site stormwater capture" and low water-use landscaping (Order #11). The Basin Plan rejects these conservation measures, so the adjudication will likely prevent the Water Boards from implementing them. The outdoor measures required by the Efficiency Ordinance, despite \$3.7 million remaining of the \$5 million the County is required to spend on conservation "to help Basin residents to reduce potable water use as much as possible" pursuant to LOWWP CDP Special Condition 5b. Rather than reduce water use and production by 25% as compared to 2013 levels (which the Governor's Executive Order requires statewide) the Stipulated Judgment sets purveyor allocations at 2% under 2013 levels, allowing them to increase current production by about 200 AFY or 15%.

A "sustainable yield" definition and production goals that allow purveyors to increase production, even though seawater intrusion continues to rapidly advance—in addition to other deficiencies that allow seawater intrusion to cause avoidable degradation and further loss of the Basin—not only violate the Clean Water Act, but the California Constitution and Public Trust Doctrine. The responsibility of the Water Boards to stop such avoidable loss of the Basin by seawater contamination and to preserve this irreplaceable water source is clear.

We again ask that you intervene in the Los Osos adjudication prior to the October 14, 2015, hearing to protect, preserve, and restore the Los Osos Basin and related resources.

Sincerely,

Patrick McGibney, Acting Chair

### **Summary of deficiencies in the Los Osos Basin Plan— why it will not save the Basin**

- 1. Does not analyze and mitigate adverse impacts from the Basin Plan, the LOWWP, the drought, and climate change, including cumulative impacts from the Basin Plan infrastructure programs and LOWWP, and the indirect impacts from induced unsustainable growth and desalination.** For instance, Yates, the CSU Monterey Bay Watershed Institute, and USEPA in cooperation with the Morro Bay National Estuary Program (MBNEP) and Parties have recognized the potential for Basin Plan infrastructure programs and the LOWWP to have adverse impacts on sensitive habitat, including Los Osos Creek, and the Basin Plan estimates 220 AFY of groundwater will stop flowing to Willow Creek which supplies Los Osos Creek (see Basin Plan, Pages 302-305). Yates points out the potential for cumulative impacts from the LOWWP (elimination of septic recharge) and Basin Plan Infrastructure Programs A & B (shifts in pumping to the Upper Aquifer) to cause seawater intrusion in the Upper Aquifer. The 2013 USEPA Climate Change evaluation highlights the significant potential adverse impacts of climate change from overstated sustainable yield estimates. All of these impacts are confirmed and exacerbated by the record drought. However, the Basin Plan does not analyze or mitigate these impacts. Other impacts not addressed include the growth inducing effects of a major finding in the Basin Plan,

based on modeling, that the Basin can support full buildout and indirect, cumulative, and socio-economic impacts from a desalination facility proposed in the Basin Plan if other programs don't stop seawater intrusion.

- 2. Does not define “sustainable yield” and identify sustainable yield targets that protect the Basin and sensitive habitat.** In the CHG letter to the LOCSO, Spencer Harris defines sustainable yield as “the quantity of water that can be withdrawn every year, including drought years, without causing an undesirable result.” However, the Basin Plan defines “sustainable yield” in a way that allows chloride levels in production wells to rise to 250 mg/l, the maximum level recommended for drinking. This results in contamination of wells not now contaminated and allows the seawater intrusion front to advance further into the Basin before it stops at some indefinite, distant point in the future. Mr. Yates points out the current “sustainable yield” does not stop seawater intrusion in the deep aquifer, Zone E, and it causes a “closed basin” condition resulting in salt concentrations rising to unacceptable levels in the inland portion of the Basin due to the lack of groundwater outflow. He cites a modeling simulation using a 30% buffer in which salinity “leveled off at acceptable levels in inland areas.” Thus, “sustainable yield” as defined in the Basin Plan is not a true sustainable yield. The Basin Plan recognizes that it does not produce a desirable result and recommends a 20% reduction in “sustainable yield” to reverse seawater intrusion. Yates confirms the need for this reduction. However, the Basin Plan also asserts that the 20% buffer will account for uncertainties in modeling (modeling error). Because the 20% is needed to redefine “sustainable yield,” the Basin Plan has no margin of safety to account for modeling error although that error is likely to be substantial, as the Basin Plan and Yates point out. In fact, reducing the current “sustainable yields” by 40% (20% to redefine it and 20% to account for uncertainties) is still not likely to produce the reasonably cautious sustainable yield target necessary to achieve Basin sustainability and protect habitat. The Basin Plan fails to state modeling uncertainty values and upgrade the model to a transient model, as recommended by the Stetson Engineers peer review in 2010. The transient model could show the impacts of the LOWWP and drought. The 2010 Yates review of the model does analyze uncertainties. That analysis suggests modeling error could result in overstating yields by 50% or more (and it does not address the current drought or climate change). If yields are overstated, according to the Basin Plan, harm to the Basin may be irreversible by the time it is known (Page 137).
- 3. Does not develop mitigation programs—conservation, recycled water use, and infrastructure programs—that minimize adverse impacts on the Basin and maximize opportunities for sustainability, consistent with Basin Plan and LOWWP CDP goals and objectives.** As we have exhaustively documented, the Basin Plan does not fully develop these programs to avoid harm to the Basin and maximize its potential for sustainability. Failing to do so is inconsistent with Basin Plan and LOWWP CDP goals and objectives, as well as state mandates to respond to the record drought with aggressive programs. It is also a violation of the public trust because it jeopardizes a public water source and other very high-value natural resources. A fully developed indoor-outdoor conservation program with low residential targets consistent with other coastal communities (about 50 gpcd), must be implemented immediately, and additional agricultural reuse and community supply wells east of Los Osos Creek (Infrastructure Program D) should be ready to implement when the LOWWP starts up in 2016.

4. **Does not set time-specific objectives, implement enforceable mechanisms, that commit the Parties to achieving Basin Plan and CDP goals and objectives, and provide the Parties the means to quickly and effectively implement programs to address the urgent seawater intrusion problem.** The Basin Plan states that “bold, decisive, and immediate” action is needed to stop seawater intrusion and preserve the Basin, but it fails to commit the Parties to any action, except regular monitoring, which is required by state mandates. The County is also required to comply with the LOWWP CDP conditions, including Special Condition 5 conservation, recycled water, monitoring, reporting and adaptive management programs. However, the County and Basin Plan are not implementing these programs consistent with the CDP (in a manner that maximizes the “health and sustainability” of the Basin and related resources). Further, the County is not implementing an ordinance requiring meters and monitoring of private wells although the Regional Water Board recommends it, the seawater intrusion monitoring program depends heavily on private wells, and the Basin Plan warns that errors in production estimates due to the lack of private well data could result in permanent harm to the Basin (Page 137). The ISJ agreement under which the Basin Plan is developed within the adjudication process allows the County to enact a Basin management ordinance, and the Sustainable Groundwater Management Act grants the Parties the rights to use other management options, including mandatory conservation and pumping restrictions. The Water Code gives the Parties the authority to require recycled water use. However, none of these rights and authorities is being applied to address seawater intrusion in the Basin. Furthermore, the Basin Plan requires program to be funded by an uncertain Proposition 218 assessment, a condition that limits the responsibility and commitment of the Parties.

Yates points out in a 2014 Basin Review that the Basin Plan does not provide for enough metric and monitoring wells, especially along the coast, to measure the effects of programs and detect seawater intrusion that may occur with the major changes from the LOWWP and Basin Plan programs. He also points out that the Water Level Metric does not stop seawater intrusion in Zone E, the deep aquifer, and recommends that it is set at 12 feet above mean sea level (amsl), rather than the 8 feet amsl target in the draft Basin Plan (2013), which he says will “abandon Zone E to seawater intrusion.” The CSU Monterey Bay Watershed Institute also supports thorough monitoring, warning that the LOWWP can cause seawater intrusion anywhere along the bay. The Basin Plan plans one new monitoring “location” for the Upper Aquifer and one for the Lower, but not the “many more” wells Yates says is needed and the “well cluster” CHG agrees should be added. The Basin Plan raises the Water Level Metric slightly to 8.5 amsl, so the metric allows intrusion to continue in Zone E.

5. **Does not provide a viable adaptive program to minimize/avoid adverse impacts that may occur in spite of Basin Plan programs or as a result of them.** The Basin Plan provides for an “Adaptive Management Program” but it commits the Parties only to a yearly review of monitoring data, no specific contingency measures, timelines, or protocols to address problems. The CSU Monterey Bay Watershed Institute points out the program must identify specific, feasible measures for addressing the most likely adverse impacts with future changes (e.g., seawater intrusion in the Upper Aquifer, reduced flows to habitat) to quickly implement measures and minimize impacts. The Parties must also develop triggers or decision-making protocols and commit to funding and implementing the contingency measures—as the LOCSA has done with its Water Shortage Contingency Plan, implemented in response to the drought. These are necessary criteria for a viable adaptive program, essential to avoiding/minimizing adverse impacts from the drought and major changes ahead.

6. **Does not identify, analyze, and develop a range of funding sources necessary to effectively and feasibly implement programs to protect the Basin.** The Basin Plan indicates that Purveyors are funding Infrastructure Program A (about \$3 million) through water rates and tariffs, but all other Basin Plan programs will be funded through a Proposition 218 assessment. The Parties recommend an initial assessment of about \$30 million, \$7 million for Infrastructure Program C and about \$24 million for the monitoring, conservation, and recycled water programs. The Basin Plan would shift the cost of the LOWWP conservation and reuse programs (about \$23 million) to the assessment. The Basin Plan indicates this is to spread the costs equitably among water users, but since about 90% of residents live within the wastewater service area, their costs for these programs would likely go down very little. There is no analysis of the benefits of this strategy versus others, and no proposal to fully develop grant funding. The pursuit of grants is a goal of the ISJ and would minimize socio-economic impacts (e.g., property owner rejection of a 218 that slows implementation of programs). A commitment to fund the \$7 million for Program C with rates supplemented with grants assures a funding source. Also, a surcharge or fee based on water extractions provides a definite funding source, which also spreads the costs.

### **Deficiencies in the Stipulated Judgment—why it will not save the Basin**

(The Stipulated Judgment does not correct the deficiencies we identify in the “Summary of deficiencies in the Los Osos Basin Plan” above. The same headings are used as above.)

1. **Does not analyze and mitigate adverse impacts from the Basin Plan, the LOWWP, the drought, and climate change, including cumulative impacts from the Basin Plan infrastructure programs and LOWWP, and the indirect impacts from induced unsustainable growth and desalination.** The Stipulated Judgment does nothing to correct the deficiencies we cite in earlier comments. On the contrary, the parties expressly stipulate to the present model “being useful for evaluating...projected impacts on the Basin from various proposed management actions...” and they agree to its general use “to establish a common factual basis for decision making by the Court, the Basin Management Committee and the parties...” (SJ, Page 6). Thus, the Stipulated Judgment, like the Basin Plan, does not address the above impacts, in part because it does not provide for use of the Transient model, as recommended in a 2010 peer review. (Also see #2.) The Stipulated Judgment allows for limited restrictions on purveyor water use in an emergency water shortage situation (pursuant to Water Code 351 et seq) but such action is unlikely, and the Stipulated Judgment does not consider the current drought to be an emergency. (Also see #4 & #6.)
2. **Does not define “sustainable yield” and identify sustainable yield targets that protect the Basin and sensitive habitat.** The definition of “sustainable yield” is the same used in the Basin Plan, which allows seawater intrusion to progress into Lower Aquifer Zone D for the infinite future, does not stop seawater intrusion in Lower Aquifer Zone E, and allows unacceptable levels of salt build up in the Basin. Setting the “sustainable yield” at 2400 AFY provides an implied “buffer” of 2% to 20% [50 AFY below modeled “sustainable yield” without Basin Plan programs in place (2450 AFY) and 20% below modeled yields with conservation, recycled water use and Infrastructure Programs A & C in place (3000 AFY)]. However, this buffer is not enough to redefine “sustainable yield” as a yield that avoids significant harm to the Basin and also accounts for uncertainties. As we explain, this requires at least a 45%

buffer. In fact, the 2400 AFY “sustainable yield” has already been achieved, and seawater intrusion continues to rapidly advance. The Stipulated Judgment states that it will keep the 2400 AFY as the Basin “sustainable yield” for five years “unless conditions warrant an adjustment.” (SJ, Page 15). By definition, the “sustainable yield” allows seawater intrusion to advance. Neither the Stipulated Judgment nor the Basin Plan set criteria for reducing sustainable yields, and adjusting the “sustainable yield” requires a unanimous vote of the Basin Management Committee (BMC). Thus, significantly more loss of the Basin is likely to occur before the BMC reduces yields. Furthermore, the Stipulated Judgment does not limit production to the “sustainable yield” (2400 AFY). Although it identifies groundwater allocations for each water using group, it states that water users “shall have a continued right to use Groundwater for reasonable and beneficial uses on property overlying the Basin,” adding that groundwater use for each non-party “shall remain unaffected by the Stipulated Judgment” unless a non-party intervenes or the Basin Management Committee takes legal action. (SJ, Pages 16-18). Allocations are based on 2013 water use. However, the 1430 AFY allocation for purveyors represents an increase of about 200 AFY over current production. Purveyor production was 1470 AFY in 2013, but dropped to 1246 AFY in 2014 according to the Board of Supervisors’ 7/14/15 review of the Basin Plan. The allocation allows purveyors to increase production and cut back on conservation by about 15%. It also allows the County to justify substantial new development (about 1000 new homes) over the Basin within purveyor service areas, without any improvement in seawater intrusion.

3. **Does not develop mitigation programs—conservation, recycled water use, and infrastructure programs—that minimize adverse impacts on the Basin and maximize opportunities for sustainability, consistent with Basin Plan and LOWWP CDP goals and objectives.** The 50 gpcd indoor goal set by the Stipulated Judgment for purveyors has already been achieved based on current water use data and estimates in the Basin Plan (BP, Pages 190 & 192. Note that conservation graphs show total purveyor water use of 1246 AFY below the level at which 50 gpcd indoors is achieved.). However, as explained previously, 32 to 42 gpcd indoor use is easily achievable according to experts, and more outdoor measures are needed (in part to maintain current low levels of use). The additional outdoor amount (yet-to-be-determined) will most likely be based on 2013 water use, making the indoor-outdoor residential target well over 80 gpcd and much more than the 55 gpcd residential average achieved in other coastal communities. The Stipulated Judgment allows a major step backwards in the conservation occurring now. Furthermore, the “goal” is unenforceable because purveyors retain the right to use groundwater “for the reasonable and beneficial uses” and the Stipulated Judgment indicates that water data will be provided in “aggregate,” which makes verifying residential use versus other uses (e.g., commercial) impossible. The Stipulated Judgment also limits recycled water use “to the distribution and use set forth in Condition 97 of the Coastal Development Permit for the LOWWP and the Water Reinvestment Program of the Basin Plan “ (SJ, p. 18). It does not mention Special Condition 5, which requires recycled water use, conservation, monitoring, and adaptive programs to be implemented in a manner that will “maximize” the sustainability of the Basin and related resources, including “ with respect to offsetting seawater intrusion as much as possible.” It also does not provide for the Executive Director of the Coastal Commission to evaluate and require improvements in the programs and/or to amend the CDP pursuant to Special Condition 5d for “better resource protection and better means to achieve Basin Plan objectives....” The conservation goal of 50 gpcd indoors (already achieved) clearly fails to comply with Special Condition 5b, which requires the program to “help Basin residents to

reduce water use as much as possible...” The Stipulated Judgment may even remove the County’s obligation to require conservation measures as a condition of hook up to the sewer (i.e., “enforceable mechanisms” pursuant to Special Condition 5b) since the only mandatory conservation mentioned in the Stipulated Judgment is for a water shortage emergency, approved by a unanimous vote of the Basin Management Committee. Thus, the Stipulated Judgment is not consistent with the LOWWP CDP.

4. **Does not set time-specific objectives, implement enforceable mechanisms that commit the Parties to achieving Basin Plan and CDP goals and objectives, nor does it provide the Parties the means to quickly and effectively implement programs to address the urgent seawater intrusion problem.** The Stipulated Judgment, which enacts the Basin Plan, sets no time-specific objectives or benchmarks for implementing programs, achieving measurable improvements in seawater intrusion, or establishing a sustainable Basin and the Basin Management Committee is not obligated to implement programs until a funding source has been identified (BP, Page 190). The Stipulated Judgment, for instance, does not require maximizing program benefits or progressively stringent measures if the metrics developed in the Basin Plan show seawater intrusion is not improving or it is getting worse. Instead, the Stipulated Judgment identifies a “sustainable yield” and allocations for parties and non-parties based on modeling, and sets a “Purveyor Production Goal” to be achieved with conservation “as promptly as practical” (although that goal has already been achieved without slowing seawater intrusion) (SJ, Page 12). Moreover, the Basin Plan excludes use of enforceable mechanisms, including mandatory conservation, metering, and monitoring outside the purveyor service areas—and makes restrictions/reductions in purveyor water use unlikely by requiring a unanimous vote of the Basin Management Committee to reduce the purveyor allocation (2400 AFY) and to implement restrictions (e.g., mandatory conservation and denial of service for new development). It provides for the more stringent measures to be implemented with triggers in an emergency water shortage situation, but does not recognize the present drought rapidly advancing seawater intrusion as such emergency (SJ, Pages 22 & 23). Although the Stipulated Judgment allows purveyors to use “any available authority” under SGMA, the authority is limited by the qualifying phrase: “consistent with any applicable limitations in the Stipulated Judgment” (SJ, Page 22). The Stipulated Judgment expressly prohibits the Basin Management Committee from requiring the Board of Supervisors to adopt an ordinance that mandates the reporting of groundwater production (SJ, Page 32). The Stipulated Judgment also allows a party to request that the court amend or augment the Stipulated Judgment, but it seems doubtful the court would grant such request if opposed by the other parties. Without time-specific, enforceable objectives and benchmarks (in addition to other deficiencies in the Basin Plan, including the current definition of sustainable yield), seawater intrusion could continue destroying the Basin indefinitely. As a result, the Stipulated Judgment is inconsistent with the LOWWP CDP (whose objective is to maximize the health and sustainability of the Basin and related resources) and the first “Immediate goal” of the Basin Plan, to “Halt, or to the extent possible, reverse seawater intrusion into the Basin.”
5. **Does not provide a monitoring program and metrics (success criteria) necessary to avoid adverse impacts and assess Basin sustainability.** The Stipulated Judgment does nothing to correct the deficiencies we cite in earlier comments. On the contrary, it expressly prohibits the Basin Management Committee from requiring the Board of Supervisors to adopt an ordinance mandating the reporting of groundwater production (SJ, Page 32).

6. **Does not provide a viable adaptive program to minimize/avoid adverse impacts that may occur in spite of Basin Plan programs or as a result of them.** The Stipulated Judgment allows for use of more stringent measures but requires the Basin Management Committee to unanimously agree that an emergency water shortage exists, which makes such measures unlikely. (See further discussion in #4 above). Other than that, it does nothing to correct the deficiencies we cite in earlier comments.
  
7. **Does not identify, analyze, and develop a range of funding sources necessary to effectively and feasibly implement programs to protect the Basin.** It allows the Basin Management Committee to pursue all funding mechanisms, but does not identify funding options. It also restricts options by requiring that the funding plan “relies on an independent sources(s) of revenue sponsored by the Basin Management Committee and does not require contribution from any of the parties’ general funds” (BP, Page 31.) The Stipulated Judgment indicates the Basin Management Committee is not obligated to implement programs until a funding source has been identified (SJ, Page 19). Thus, it does not ensure Basin Plan programs will be implemented. The Stipulated Judgment also allows any party to withdraw from the adjudication if the Basin Management Committee fails “to establish or secure a mechanism(s) to fund each party’s participation...as determined by each party in its sole and complete discretion” (BP, Page 36.) If a party withdraws, the Stipulated Judgment states that “..the court shall retain jurisdiction over a withdrawing party subject to the Action, except that no party nor the Basin Management Committee shall seek any court order or direction that imposes any funding obligation on a withdrawing party inconsistent with or disproportionate to the party’s right to extract Groundwater from the Basin. ” It also states that upon withdrawing, the party “shall immediately relinquish all rights and obligations as a member of the Basin Management Committee” (BP, Page 36). Because the Basin Plan incorporates LOWWP Special Condition 5 programs (conservation, recycled water, monitoring, and adaptive programs), these provisions suggest that the County could withdraw from the adjudication and no longer be responsible for funding the programs.

## Summary of improvements to correct deficiencies in the Basin Plan and Stipulated Judgment

- 1. Identify, analyze, and mitigate all significant potential adverse impacts, including cumulative, indirect, and socio-economic, and identify and analyze a range of mitigation measures to determine the environmentally superior alternatives (i.e., feasible options that minimize/avoid impacts and offset seawater intrusion as much as possible as soon as possible).** Other improvements below address impacts to a large extent. A redefined safe yield and yield target with a margin of safety that accounts for uncertainties, maximized conservation and reuse programs, time-specific objectives with benchmarks and triggers, improved monitoring and metrics, and an adaptive program with specific contingency measures address these impacts. However, further impacts and alternatives analysis is needed maximize the potential for Basin sustainability.
- 2. Redefine “sustainable yield” and set cautious sustainable yield targets (allocations) that avoid harm to all parts of the Basin, reverse seawater intrusion, and increase Basin storage capacity as soon as possible.** Based on the Basin Plan and Yates Basin review, identifying a true sustainable yield (which avoids harm to the Basin) requires a definition resulting in yield estimates 20 to 30% lower than Basin Plan estimates, not including a buffer to account for uncertainties. Thus, the yield target should be 30% below current or more. A thorough analysis of uncertainties should be done, analyzing and modeling impacts from the drought, climate change, LOWWP, and Basin Plan modeled, including worse-case scenarios. The transient model should be used and uncertainty values stated, as recommended by the Stetson Engineers 2010 peer review of the model. Transient modeling shows relatively short-term impacts that can cause irreversible harm. Until the model is redefined and a thorough analysis done, targeted Basin yields should be under 2000 AFY. This is 45% below the current modeled Basin Yield with all proposed Basin Plan programs in place (3500 AFY) and over 33% below estimated yields with recycled water and Infrastructure Programs A & C in place. A 2000 AFY production level is achievable with the improved conservation, recycled water, and infrastructure programs below.
- 3. Fully develop and implement conservation, recycled water reuse, and infrastructure programs to avoid/minimize impacts and maximize Basin sustainability with the existing population.** Further developing the three proposed mitigation programs will provide maximum offset of adverse impacts, by raising water levels and improving water balance in the Western and Central Areas of the basin, while maintaining water levels the Eastern Basin and flows to sensitive habitat. Improvements include a comprehensive indoor-outdoor conservation program with a full range of measures, including greywater reuse, rainwater harvesting, LID (low impact development, stormwater recharge), and low water use landscaping options. The program should incorporate the LOWWP septic systems repurposing program for cost-effectiveness and include a strong media/outreach program. (See our recommended improvements to the LOWWP conservation program attached.) The conservation target should be a low achievable target consistent with other coastal communities (45 to 55 gpcd indoors and outdoors). The improvements would also include a recycled water program that maximizes seawater intrusion offset with strategic use of recycled water, including more urban reuse and a program to replace recycled water sent to the Eastern Basin (east of Los Osos Creek) with potable water

from that area (to better maintain balance in both parts of the Basin). Infrastructure Program D would achieve this goal, and should be implemented to support the current population, along with Programs A & D, which allow shifts in pumping to the Upper Aquifer and inland. Fully developed programs will achieve the revised, more cautious sustainable yield targets, and also increase the buffer between predicted yield increases (with infrastructure programs) and actual production, improving Basin balance and minimizing/avoiding impacts on habitat while maximizing seawater intrusion offset.

4. **Set time-specific, enforceable objectives and benchmarks that commit the parties to implementing programs and achieving measurable improvements in seawater intrusion in the near future.** Triggers or thresholds should also be developed that implement progressively more aggressive programs and stringent measures, as needed, to achieve the objectives and benchmarks (e.g., more aggressive conservation targets, mandatory recycled water use, mandatory production limits). Measures should be enforced with a County ordinance and other management options provided by the Sustainable Groundwater Management Act, including mandatory monitoring of all wells and fees set according to water use. All water users in the Basin and agency stakeholders must participate in the effort to reverse seawater intrusion and restore Basin capacity as soon as possible to ensure a sustainable water supply for the existing population first, then the future population.
  
5. **Develop and implement monitoring programs and metrics that ensure Basin sustainability.** More monitoring and metric wells are needed to establish accurate baselines and provide early detection of seawater intrusion and other adverse effects, to minimize/avoid loss of the Basin and habitat. More wells are needed to avoid gaps in data and accurately gauge the benefits of programs and the sustainability of the Basin. Experts agree that seawater intrusion could happen at any point along the western side of the community with the major changes in store for the Basin. A series of monitoring wells is needed in Cuesta-by-the Sea and Baywood to detect intrusion, in addition to more wells throughout the Upper aquifer to assess aquifer status. The water level metric for Zone E should be changed to 12.5 feet above mean sea level to stop and reverse intrusion in that aquifer. Additionally, a metric that sets a sustainability standard for Basin storage capacity should be developed. This is needed to restore Basin resilience (i.e., the ability to weather droughts and climate change) also to assess the ability of the Basin to support future development. All the changes Yates recommends in his 2014 Basin review should be implemented, in addition to those listed here and any others needed to ensure Basin sustainability.
  
6. **Develop and implement an adaptive program with specific contingency measures to address potential impacts, in particular the areas of uncertainty with the greatest potential to adversely impact the Basin and habitat.** Some of these areas of uncertainty include impacts on the on the Upper Aquifer and estuary habitat from the elimination of septic system recharge and shifts in pumping to the Upper Aquifer in conjunction with the drought and climate change, also impacts on LO Creek from shifts in pumping inland. The CSU Monterey Bay Watershed Institute recommendations for developing contingency plans (e.g., determining target areas and identifying specific measures) should be applied, including the target areas they identify and others where significant potential impacts could occur

7. **Analyze, pursue and apply a variety of funding sources, with a focus on grants, to achieve early implementation and minimize socio-economic impacts.** All feasible funding options should be identified and pursued with an emphasis on the quickest and most certain. The \$3.7 million required by the LOWWP for conservation should be applied, and all available grants should be pursued to offset costs. The parties should make a commitment to implementing measures including the improvements above within a year by all the means at their disposal, including increases in water rates and fees based on water use.