

Comment Summary and Responses
Comment Deadline: April 13, 2018
Resolution to Prioritize Actions to Adapt to and Mitigate the Impacts of Climate Change
on the Los Angeles Region’s Water Resources and Associated Beneficial Uses

Commenters:

1	Los Angeles Waterkeeper (LA Waterkeeper)
2	John Hamilton
3	Natural Resources Defense Council (NRDC)
4	California Coastal Commission
5	County Sanitation Districts of Los Angeles County (Sanitation Districts)

Comment Summary and Responses:

Comment No.	Commenter	Comment	Response
1.1	LA Waterkeeper	1) Since the Resolution defers most actions on climate change regulatory adaptation and mitigation measures to the Part 2 planning process now underway, we believe it is critical that the Part 2 planning process receive adequate internal resources and staffing to allow for the release of the Part 2 document in the 2018-19 Fiscal Year.	The Board agrees. Please note that the development of a regional strategy to address the effects of climate change on water quality, including the completion of Part 2 of the Los Angeles Region Framework for Climate Change Adaptation and Mitigation - <i>Potential Regulatory Adaptation and Mitigation Measures</i> , is a recommended priority project for the 2017-2019 Triennial, and should therefore receive adequate resources. The 2018-2019 Triennial Review will also be considered by

			the Board at its May 10, 2018 meeting.
1.2	LA Waterkeeper	2) On P. 1 of the resolution, we suggest changing the reference to “decreased streamflow” to something like “decreased streamflow overall, but potential for increased flashiness” to account for the possibility that future precipitation events could be more intense, which could lead to temporary increases in streamflow compared to the baseline conditions. Such an emphasis would also tend to increase the importance of stormwater capture/ multi-benefit projects.	<p>The Board agrees that the potential for future temporary increases in stream flow, as well as decreases, should be emphasized.</p> <p>The language of Finding 3 of the Resolution was modified to read: <i>“Potential impacts include decreases in stream flow <u>overall, together with potential for increased short-term rapid increases in flow following precipitation events that can cause scour and erosion;...</u>”</i></p>
1.3	LA Waterkeeper	3) On. P. 4 of the resolution, we suggest adding clarifying language to Paragraph 1b that expressly disfavors shoreline protection such as ripraps, seawalls, and coastal armoring, due to the significant likelihood of negative impacts to beneficial uses from these types of shoreline protection.	<p>Resolved 1.b. was modified to address the stakeholder’s concerns. It now reads:</p> <p><i>“Managed retreat of vulnerable infrastructure over <u>instead of</u> in-place adaptation measures in areas at risk of sea level rise or flooding where in-place adaptation is not feasible and/or may impair beneficial uses; and <u>preferential development of interim soft solutions to shoreline erosion protection techniques that protect, preserve, enhance, or restore beneficial uses, in</u></i></p>

			<u>lieu of shoreline protection such as riprap, seawalls, and coastal armoring due to their significant likelihood of negative impacts to beneficial uses, ecosystems, and habitat;</u> “
2.1	John Hamilton	I believe that while conservation is important it is only part of the future solution for the LA region and greater areas of Western and Southern California. Expansion of water importation should be considered for inter-state/inter-country for supplying and improving existing water within the LA region. There are potentially vast water tributaries in Canada, equatorial Pacific Ocean, and within the US that could supply water to the LA region. Over three meters of rainfall presently occurs in parts of the equatorial Pacific Ocean and probably more in the future. Capital expenditures for infrastructure to collect and transport the water would be economically sustainable (especially given the present rate of increasing water prices). These water imports would continue the terraformation of the deserts within the LA Region and California.	While water imports have been and will likely continue to be part of an overall strategy to address water supply in the region, the Board considers the development of local sustainable water supplies preferable. Moreover, decisions about water imports are not within the authority of the Los Angeles Water Board.
3.1	NRDC	On p.1 at ¶ 3, the Board should recognize and consider an increase in the urban heat island effect due to climate change, and the effect that green infrastructure and nature-based projects have on reducing urban heat island effect.	The purpose of Finding 3 is to specifically list the potential effects that climate change will have on the hydrological and aquatic ecosystem processes in the region. While we agree that climate change may increase the urban heat island

			<p>effect, this impact does not directly relate to hydrological and aquatic ecosystem processes. Note, however, that the urban heat island effect is taken into consideration in relation to disadvantaged communities in Finding 6.</p>
3.2	NRDC	<p>The Board should include in its research and monitoring projects the water quality effects of wildfires and subsequent flooding and possible mudslides, including the effect of the chemicals used for fighting wildfires. (p.5 at ¶ 3.c.; p.1 ¶ 3.) The Board should also consider the impacts of increased stream flashiness on water quality and stormwater management projects. (p.1 ¶ 3.)</p>	<p>Resolved 3.c. of the tentative resolution “<i>directs staff to continue the development of research and monitoring projects that will advance understanding of current and future impacts of climate change on water quality and beneficial uses, and that will identify potential management and mitigation measures.</i>” Research and monitoring projects may include addressing the water quality effects of wildfires and post-fire flooding and possible mudslides, including the effect of the chemicals used for fighting wildfires, or the impacts of <u>short-term increased stream flow following precipitation events</u> on water quality and stormwater management projects.</p> <p>Furthermore, specific research and monitoring projects to be undertaken by the Los Angeles Water Board will be outlined in Part 2 of the Los Angeles Region Framework for Climate Change</p>

			<p>Adaptation and Mitigation - <i>Potential Regulatory Adaptation and Mitigation Measures</i> that Board staff is currently developing.</p> <p>The effects of climate change on hydrological and ecosystem processes listed in Finding 3 encompass the indirect effects of wildfires and post-fire flooding and possible mudslides, as well as the impacts of increased stream flashiness on water quality through the increase in sedimentation and pollutant levels. In addition, Part 1 of the Los Angeles Region Framework for Climate Change Adaptation and Mitigation - <i>Current State of Knowledge & Water Quality Regulatory Program Considerations</i> addresses in detail the impacts of climate change on water quality.</p> <p>The language in Finding 3 of the Resolution was modified to provide more detail, and now reads:</p> <p><i>“Potential impacts include decreases in stream flow overall, together with <u>potential for increased flashiness</u>; reductions in, and changes to, aquatic habitats; increases in surface water temperature;</i></p>
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3.3	NRDC	<p>P.4 ¶ 1.a. should include the conservation and protection of existing stream buffers and wetlands in addition to restoration and establishment of these resources.</p>	<p>Resolved 1.a. has been modified to include the stakeholder’s comment. It now reads:</p> <p><i>“Watershed planning, including coordination between regulatory and non-regulatory efforts to focus on measures to protect against climate change impacts such as stream and wetlands <u>protection and</u> restoration, <u>maintaining and</u> increasing shading to reduce water temperature and light penetration, streambank stabilization, and <u>protecting</u></i></p>

			<i>and establishing buffer areas around waterbodies to minimize erosion and discharge of pollutants;”</i>
3.4	NRDC	On p.4 ¶ 3.a., the Board should strike “move forward towards” so that it reads: “The Board directs staff to continue refining permit language to address climate change vulnerabilities, and to incorporate appropriate language in National Pollution Discharge Elimination System (NPDES) permits...”	The incorporation of adequate climate change adaptation and mitigation language within the various types of orders issued by the Los Angeles Water Board is an ongoing process that requires additional work. The current language adequately reflects the necessary process that needs to take place.
3.5	NRDC	On p.4 ¶ 2, the Board should include green infrastructure projects and nature-based solutions so that the paragraph reads: “In the face of expected increases in the frequency and duration of droughts, the Board supports the augmentation of local water supplies via projects such as green infrastructure projects and nature-based solutions that capture, recharge, and reuse stormwater for the benefit of our communities, local wildlife and other natural resources.”	While we agree that green infrastructure projects and nature-based solutions are often preferable, within the context of this specific action, it is not necessary, nor preferable, to restrict the types of projects that could be undertaken to augment local water supplies through stormwater capture, recharge, and reuse. More details on the preferred types of projects could be provided in Part 2 of the Los Angeles Region Framework for Climate Change Adaptation and Mitigation - <i>Potential Regulatory Adaptation and Mitigation Measures</i> .
3.6	NRDC	NRDC also suggests adding language to p.4 ¶1.b. that disfavors shoreline protection such	See the response to comment 1.3.

		as ripraps, seawalls, and coastal armoring because of their negative effects on beneficial uses, ecosystems, and habitat.	
3.7	NRDC	Finally, because specific actions to address climate change will be developed during Part 2 of the process—“Los Angeles Region Framework for Climate Change Adaptation and Mitigation <i>Potential Regulatory Adaptation and Mitigation Measures</i> ,” it is imperative that this process adequately engage stakeholders, grant opportunities for ample public input, and receive adequate internal resources and funding.	The Board agrees that stakeholder engagement should be an integral part of the development of Part 2 of the Los Angeles Region Framework for Climate Change Adaptation and Mitigation - <i>Potential Regulatory Adaptation and Mitigation Measures</i> . To this effect, Resolved 5 of the tentative resolution directs staff to coordinate with appropriate partners, including nongovernmental organizations, to address the impacts of climate change. In addition, the development of a regional strategy to address the effects of climate change on water quality, including the completion of Part 2 of the Los Angeles Region Framework for Climate Change Adaptation and Mitigation, is a recommended priority project for the 2017-2019 Triennial Review, and should therefore receive adequate resources.
4.1	California Coastal Commission	First, we commend you and your staff for taking this important step toward protecting coastal water resources in light of climate change impacts. We recognize that the State Water Resources Control Board adopted its first climate change resolution,	Comment noted.

		<p>"Comprehensive Response to Climate Change" on March 7, 2017 (Resolution No. 2017-0012) in light of Governor's Executive Order B-30-15 (April 29, 2015) which specifically addresses California's climate adaptation framework, and directs state agencies to factor climate change into their planning and investment decisions, guided by these key principles:</p> <ol style="list-style-type: none"> 1) actions should be prioritized that build climate preparedness; 2) where possible, flexible and adaptive approaches should be taken to prepare for uncertain climate impacts; 3) the state's most vulnerable populations should be prioritized; 4) natural infrastructure solutions should be prioritized. 	
4.2	California Coastal Commission	<p>The Tentative Resolution appears to incorporate the EO-B-30-15 principles; The EO also requires the California Natural Resources Agency to update the state's climate change adaptation strategy "Safeguarding California" every three years (the latest update, "Safeguarding 2018" is pending). The California Ocean Protection Council (OPC) is the lead for the Ocean and Coastal Resources and Ecosystems Sector and has recently adopted the latest findings on sea level rise of the OPC Science Advisory Team (OPC-SAT) working group, and these findings will offer "best available science" on sea level rise for "Safeguarding 2018". As you know, the OPC-SAT findings adopted by the OPC in 2017 include emerging information</p>	<p>Comment noted. The Board is aware of the findings of the Ocean Protection Council Science Advisory Team, and has started using the CoSMoS model to identify permitted facilities in the region at risk along the coast.</p>

		<p>about the increased sea level rise risk posed to California by the contributions of West Antarctica ice sheet losses. The OPC's latest sea level rise assessment metrics therefore include the "H++" extreme sea level rise planning scenario developed by OPC-SAT last year. H++ anticipates the potential for as much as ten feet of sea level rise by the end of this century. OPC-SAT research on the H++ scenario continues, and while the OPC has not yet assigned H++ a probability factor as it has for other increments of sea level rise potential, the magnitude and timing, and the non-linear changes in sea level suggested by the H++ scenario send a strong signal to state agencies and local governments with responsibility for coastal resource planning.</p> <p>Although we do not yet know if ten feet of sea level rise (OPC's H++ scenario) will occur by 2100, research published by the U.S. Geological Survey (USGS) in 2017 shows that by 2100 between thirty to seventy percent of southern California beaches from Santa Barbara to San Diego may become completely eroded by 2100 based on only one to two meters (approximately three to six and a half feet) of sea level rise. The USGS study uses a recently developed computer model "CoSMoS-COAST" (Coastal Storm Modeling System- Coastal One-line Assimilated Simulation Tool) to predict the extent of beach loss that will occur from the impact of sea level rise meeting the armored footprint of existing beachfront development and/or sea cliffs.</p>	
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4.3	California Coastal Commission	<p>The USGS research and the early warnings of potentially even more extreme levels of sea level rise during this century underscore the importance of seeking other methods of addressing attendant risks to infrastructure along the edge of the rising sea. Coastal rail corridors, roads, wastewater treatment plants, drinking water infrastructure, and coastal resources including beaches, ecosystems and water supplies face unprecedented threats. Commission staff urges the Los Angeles RWQCB to include measures in Tentative Resolution No. R18-0XX (Climate Change) that reduce the need for armoring of existing development in favor of solutions that rely on climate change/sea level rise adaptation measures that ensure resilience of infrastructure and are protective of coastal resources and environmentally sustainable over the long-term. This means that the Resolution should clearly require appropriate, long-term advanced planning including relocation of development where feasible. Feasibility should take into consideration the economies of appropriate action, including the costs of mitigating the effects of armoring on beach profiles, the increasing maintenance costs and challenges of retaining threatened development in current shoreline locations, and the overall benefits of inland relocation as a long-term strategy and adaptation alternative offering maximum feasible protection of public beaches, wetlands, and other coastal ecosystems.</p>	<p>Resolved 1.b, which discusses managed retreat of vulnerable infrastructure, is addressing actions other agencies may be taking. Setting forth specific feasibility considerations related to relocation of infrastructure is not within the Los Angeles Water Board's authority.</p>
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4.4	California Coastal Commission	<p>We note that continuing public access to California's public beaches is a matter of social and environmental justice. If California's heavily-visited southern California beaches are eventually lost due to rising seas meeting shoreline armoring at the water's edge, meaningful access to the California coast will be lost for most Californians. State residents and visitors of limited economic means would suffer the greatest loss of coastal access if public beaches are etched away by rising seas and coastal armoring fixing the otherwise naturally ambulatory line of the Public Trust boundary.</p> <p>In light of these concerns, and in addition to the recommendations noted above, we suggest that the Tentative Resolution incorporate these comments and offer a few additional suggestions:</p> <p>Recommended change (from preamble to the Resolution text):</p> <p>6. Communities that are socially or economically disadvantaged are especially vulnerable to climate change impacts, due for example to limited access to clean and affordable water; lack of proper infrastructure to deal with extreme weather events and the economic resources necessary to prepare and respond to these events; proximity of environmental hazards; and lack of shade cover that heightens the risk of the urban heat island effect. <u>Public beaches are the most significant form of coastal access and</u></p>	<p>Finding 6 of the tentative resolution was modified to acknowledge the impact of the loss of public beaches on disadvantaged communities. It now reads:</p> <p>6. <i>“Communities that are socially or economically disadvantaged are especially vulnerable to climate change impacts, due for example to limited access to clean and affordable water; lack of proper infrastructure to deal with extreme weather events and the economic resources necessary to prepare and respond to these events; proximity of environmental hazards; and lack of shade cover that heightens the risk of the urban heat island effect. <u>In addition, beach erosion will affect disadvantaged communities for which public beaches are the most significant form of coastal access and recreation.</u>”</i></p> <p>Furthermore, Part 2 of the Los Angeles Region Framework for Climate Change Adaptation and Mitigation - <i>Potential Regulatory Adaptation and Mitigation</i></p>
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4.5	California Coastal Commission	<p>Recommended change (Resolution): 1. The Board encourages stakeholders in the region, including other <u>agencies such as the California Coastal Commission, which unanimously adopted 2015 sea level rise adaptation recommendations CCC Sea Level Rise Policy Guidance, and local governments,</u> to take actions to help mitigate direct and indirect impacts of climate change on water quality and beneficial uses. Actions may include:</p>	<p>The California Coastal Commission is implicitly included among the “other agencies” in the region that are taking actions to mitigate the impacts on climate change. Part 2 of the Framework will go into more details regarding the types of collaboration that could be leveraged with specific agencies.</p>
4.6	California Coastal Commission	<p>a) <u>Watershed planning, including reliance on best available science and</u></p>	<p>The Board agrees that encouraging reliance on the best available</p>

		<p><u>emerging climate change and sea level rise monitoring tools such as CoSMoS, TNC's Coastal Resilience tool, the Pacific Institute hazards viewer and maps, Cal-Adapt, and the NOAA SLR Viewer, and including</u> coordination between regulatory and non-regulatory efforts to focus on measures to protect against climate change impacts such as stream and wetlands restoration, increasing shading to reduce water temperature and light penetration, streambank stabilization, and establishing buffer areas around waterbodies to minimize erosion and discharge of pollutants;</p>	<p>science and models is an important tool to address the impacts of climate change in the most efficient way. See also response to comment 4.2.</p> <p>Resolved 1 of the tentative resolution was modified by adding a new sub-part that reads as follows:</p> <p><i><u>“(d) Encouraging reliance on best available science and emerging climate change and sea level rise monitoring tools such as the USGS Coastal Storm Modeling System (CoSMoS), The Nature Conservancy’s Coastal Resilience tool, the Pacific Institute hazards viewer and maps, the Cal-Adapt visualization tools and data, and the NOAA Sea Level Rise Viewer.”</u></i></p>
4.7	California Coastal Commission	<p>b) Managed retreat of vulnerable infrastructure over <u>instead of</u> in-place adaptation measures in areas at risk of sea level rise or flooding where in-place adaptation is not feasible and/or may impair beneficial uses <u>or increase the loss of sandy beaches due to increased erosion caused by shoreline armoring meeting rising seas,</u> and <u>interim soft solutions to shoreline erosion</u></p>	<p>The impairment of beneficial uses mentioned in Resolved 1.b includes the loss of sandy beaches due to increased erosion; therefore, there is no need to state this specifically. As noted in our response to comment 1.3, Resolved 1.b was modified to favor interim soft solutions to shoreline erosion over</p>

		<p>protection techniques that protect, preserve, enhance, or restore beneficial uses. <u>Consideration of "feasibility" should take into consideration the economies of appropriate action, including the costs of mitigating the effects of armoring on beach profiles, the increasing maintenance costs and challenges of retaining threatened development in current shoreline locations, and the overall benefits of inland relocation as a long-term strategy and adaption alternative offering maximum feasible protection of public beaches, wetlands, and other coastal ecosystems.</u></p>	<p>riprap, seawalls, and coastal armoring. In addition, this resolved clause is addressing actions other agencies may be taking, and specific feasibility considerations related to managed retreat of infrastructure are not within the Los Angeles Water Board's authority. Resolved 1.b now reads:</p> <p><i><u>"Managed retreat of vulnerable infrastructure over instead of in-place adaptation measures in areas at risk of sea level rise or flooding where in-place adaptation is not feasible and/or may impair beneficial uses; and preferential development of interim soft solutions to shoreline erosion protection techniques that protect, preserve, enhance, or restore beneficial uses, in lieu of shoreline protection such as riprap, seawalls, and coastal armoring due to their significant likelihood of negative impacts to beneficial uses, ecosystems, and habitat;</u>"</i></p>
4.8	California Coastal Commission	c) Coordinating on the latest science and research on sea level rise effects on sea	The effects of groundwater extraction and other activities that

		<p>water intrusion from the perspective of coastal resilience and groundwater contamination, <u>including support for local and regional requirements to limit groundwater extraction that may exacerbate seawater intrusion in coastal aquifers, and for measures to monitor, meter, and report on existing and future proposed well development and other activities that affect groundwater dynamics at the saltwater/freshwater interface.</u></p>	<p>affect groundwater dynamics at the saltwater/freshwater interface are expected to be part of the research developed by local stakeholders to address sea level rise effects on sea water intrusion.</p> <p>Note that groundwater extraction is not regulated by the Los Angeles Water Board as it is not within the Board's authority. Support for local and regional requirements to limit groundwater extraction are appropriately made to local agencies, counties, groundwater sustainability agencies, the Department of Water Resources, and/or the State Water Board.</p>
4.9	California Coastal Commission	<p>d) Encouraging studies and documentation of the effects of climate <u>change</u> on habitat and ecological resources (e.g., trends in harmful algal blooms (HABs));</p> <p>e) Coordinating with appropriate partners to anticipate and prevent hazards to water quality resulting from fire such as increased sediment and pollutant load, and incentivizing management measures that will ensure better resilience to fire, such as appropriate landscaping and erosion control measures.</p>	<p>The recommended change was made in Resolved 1.e of the resolution.</p>
4.10	California Coastal Commission	<p>3) The Board directs staff to incorporate considerations of expected impacts from climate change in its programs, including the following:</p>	<p>The language in Resolved 3.a addresses the development of vulnerability assessments to ensure infrastructure protection from all of</p>

		<p>a) The Board directs staff to continue refining permit language to address climate change vulnerabilities, and to move forward towards incorporating appropriate language in National Pollution Discharge Elimination System (NPDES) permits, Clean Water Act (CWA) section 401 water quality certifications, waste discharge requirements (WDRs) and waivers of WDRs issued by the Los Angeles Water Board. The Board also directs staff to work with others to explore meaningful metrics and tools for conducting vulnerability assessments to ensure infrastructure protection. <u>These assessments should prioritize sea level rise adaptation needs for infrastructure protection through long-term inland relocation over in-place shoreline protective devices that increase shoreline erosion.</u></p>	<p>climate change impacts, including sea level rise. Therefore, specific sea level rise provisions should not be prioritized here over other types of climate change impacts.</p> <p>As noted in the response to comment 4.7, Resolved 1.b expresses the Los Angeles Water Board's preference for managed retreat of vulnerable infrastructure instead of in-place adaptation measures, and interim soft solutions to shoreline erosion over in-place shoreline protective devices that increase shoreline erosion.</p>
4.11	California Coastal Commission	<p>Given that climate change will disproportionately affect disadvantaged communities, the Board directs staff to take into account environmental justice factors when addressing climate change impacts. <u>As noted in the preamble to this Resolution, public beaches are the most significant form of coastal access and recreation for socially and economically disadvantaged populations unable to afford the high cost of coastal real estate ownership. The benefits of coastal recreation will become even more important as a refuge from increasing urban heat effects projected as a consequence of climate change. The USGS has determined that 30 to 70 percent of public beaches in southern</u></p>	<p>As noted in the response to comment 4.4, Finding 6 of the tentative resolution was modified to acknowledge the impact of the loss of public beaches on disadvantaged communities along with others such as limited access to clean and affordable water; lack of proper infrastructure to deal with extreme weather events and the economic resources necessary to prepare and respond to these events; proximity of environmental hazards; and lack of shade cover that heightens the risk of the urban heat island effect.</p>

		<p><u>California may be lost by the end of the century due to increased erosion where development protected by shoreline armoring meets the rising sea. Future reliance on in-place armoring of shoreline development as an adaptation to sea level rise for the protection of drinking water, wastewater treatment, roads, railroads, and other infrastructure along the coast therefore poses a threat to public coastal access for all Californians as beaches erode away; however, the loss of public beaches will be disproportionately borne by environmental justice communities.</u></p>	<p>Resolved 4 addresses all impacts of climate change on disadvantaged communities, including the loss of public beaches. It is not necessary or preferable to single out one impact over the others.</p>
4.12	California Coastal Commission	<p>We further recommend that the Los Angeles Board's Resolution acknowledge the relationship between imported water supplies and the significant amount of energy required to transfer water to the Los Angeles region. All measures to conserve the use of water and reduce overall regional water demand have a direct impact not only on the overall supply of water in the state and within the Los Angeles region, but also have the potential to directly reduce energy consumption and the associated greenhouse gas emissions driving climate change.</p>	<p>Imported water supply and water conservation measures are not within the authority of the Los Angeles Water Board. However, the State Water Board discusses some of these issues in its <i>Comprehensive Response to Climate Change</i> resolution (Resolution No 2017-0012), under Section I. "Reduce Greenhouse Gas Emissions".</p>
5.1	Sanitation Districts	<p>In general, we support many elements of the Proposed Resolution. We would like to offer the following comments on and proposed changes to the Proposed Resolution for the Los Angeles Regional Board's consideration.</p>	<p>Although the Los Angeles Water Board promotes recycled water projects, and is supportive of other actions that will help mitigate and adapt to climate change in general, such as producing biogas and other forms of renewable energy, and</p>

		<p>Resolved #1 – We recommend that Resolved #1 be broadened to include climate change mitigation and adaptation activities that many stakeholders are engaged in, such as supplying recycled water and acceptance of additional organic waste diverted from landfills at publicly owned treatment works (POTWs) to create renewable fuel or energy from biogas, be recognized and encouraged by the Los Angeles Regional Board.</p> <p>Recommended change to Resolution: <i>Revise Resolved #1 to read: “The Board encourages stakeholders in the region, including other agencies, to take actions to help mitigate direct and indirect impacts of climate change <u>on the region, including on water quality and beneficial uses.</u> Actions may include:”</i></p> <p><i>Add new (f) to Resolved #1, to read: <u>(f) Encouraging and incentivizing, where feasible, the regulated community to take steps to mitigate and adapt to climate change, including, but not limited to, developing recycled water supplies, producing biogas and other forms of renewable energy, and recycling biosolids.</u></i></p>	<p>recycling biosolids, the Board’s specific mission and authority is to preserve and enhance water quality and beneficial uses in the region. Resolved 1.a is meant to outline actions the stakeholders could take to help mitigate direct and indirect impacts of climate change on water quality and beneficial uses specifically.</p>
5.2	Sanitation Districts	<p>Resolved #3a – We recommend that the Los Angeles Regional Board coordinate closely with the State Water Board and other Regional Boards as they develop their approach regarding the preparation of vulnerability assessments at facilities in the Los Angeles Region, consistent with the State</p>	<p>The Los Angeles Water Board is collaborating with the State Water Board on the implementation of the <i>Comprehensive Response to Climate Change</i> resolution (Resolution No 2017-0012), including Resolved 15:</p>

		<p>Water Board’s expressed intent in Item 15 in the <i>Comprehensive Response to Climate Change</i> resolution (Resolution No 2017-0012). In particular, we encourage the Los Angeles Regional Board to consider approaches other than incorporating requirements for POTWs to conduct vulnerability assessments into permits. For example, consider voluntary efforts to prepare vulnerability assessments and the use of existing planning efforts (i.e., facility planning documents and municipal Climate Action Plans).</p> <p>If the vulnerability of a facility to climate change has not been assessed through other means and a permit requirement to do so becomes necessary, we strongly recommend that the requirements be flexible in order to target a facility’s specific vulnerability, that they be coordinated with other facility planning efforts in order to avoid duplicative work by permittees, that they provide sufficient time for facility plan development, and that the approach/strategy adopted for increasing the resilience of a facility allow for case-specific modifications, depending on the unique circumstances of a given facility’s location and anticipated vulnerabilities.</p> <p><i>Recommended changes to Resolution:</i> <i>Revise Resolved 3(a) to read: “The Board directs staff to continue refining permit language to address climate change vulnerabilities, and to move forward towards incorporating appropriate language in</i></p>	<p>“Division of Water Quality shall work with the Regional Water Boards to evaluate and by July 1, 2018 make recommendations to the State Water Board on the need to modify permits and other regulatory requirements to reduce water and wastewater treatment infrastructure vulnerability to flooding, storm surge, and sea level rise. “</p> <p>The development of language for incorporation into permits and other orders is necessary to address potential vulnerabilities of permitted facilities to climate change and potential water quality impacts from such vulnerabilities. The Board acknowledges that in some cases other efforts have been undertaken to address climate change impacts by dischargers, and agrees that those existing planning efforts could be leveraged to produce vulnerability assessments required by the Los Angeles Water Board. As noted in the tentative resolution, the Board is seeking input on how to best assess vulnerability, and appropriate language in permits and other orders is still being developed and will be refined considering stakeholders’ input.</p>
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			<p><i>WDRs issued by the Los Angeles Water Board. The Board also directs staff to work with others to explore meaningful metrics and tools for conducting vulnerability assessments to ensure infrastructure protection."</i></p>
5.3	Sanitation Districts	<p>Resolved #5 – We recommend that the Los Angeles Regional Board form a Stakeholder Advisory Group to create a forum for collaboration among the staff and various interested parties.</p> <p>Several of the Resolved items direct staff to work with stakeholders and other parties, and a Stakeholder Advisory Group could provide an organized forum for collaboration and discussions on all of these interrelated topics. As appropriate, subgroups could be formed to focus on targeted subject matter.</p> <p><i>Recommended changes to Resolution:</i> <i>Revise Resolved #5 to read: "The Board directs staff to <u>form a Stakeholder Advisory Group to provide a forum</u> to coordinate with appropriate partners, including public agencies and nongovernmental organizations in the region, to address the impacts of climate change and to collaborate to maximize efficiency and success of the Board's actions. "</i></p>	<p>The Board agrees that stakeholder engagement should be an integral part of the development of its strategies to address climate change.</p> <p>To this effect, Resolved 5 of the tentative resolution directs staff to coordinate with appropriate partners, including public agencies, to address the impacts of climate change. Specific approaches and processes to facilitate coordination can be discussed in Part 2 of the region's Framework.</p>

5.4	Sanitation Districts	<p>Resolved #6b - We recommend that local agencies also be included and consulted in the "projects and actions related to instream flow," particularly in relation to studies and processes occurring in the context of Section 1211 change petitions, which currently are underway for the San Gabriel, Los Angeles, and Santa Clara Rivers and potentially are or may in the future be undertaken for other water bodies in this region. The more coordinated and integrated these efforts can be, the more efficient and effective they will be for everyone involved.</p>	<p>Projects and actions related to instream flow, including Section 1211 change petitions, are under the authority of the State Water Board Division of Water Rights. The Los Angeles Water Board is acting as a partner on these actions, and will transmit the desire of local agencies, such as the commenter, to be included in these projects.</p> <p>Note that a pilot project is set to begin in the near future to address flow requirements in the Los Angeles River, and stakeholder outreach will be an important component of the study.</p>
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