

**National Water Research Institute Technical Advisory Panel (TAP) for  
City of Santa Barbara’s Subsurface Desalination Intake and Potable Reuse Feasibility Studies  
TAP Response to Public Comments related to Public Meeting #2 (held January 27, 2016)**

TAP Comment No.	Addressing the City’s Response	Comment	Potable Reuse or Subsurface Intake Study	Commenter and How Conveyed (meeting or e-mail)	Technical Advisory Panel (TAP) Response
1a.	1a-1.	Recycled water contains nano-contaminants, and if DPR is in our future, there are serious public health issues that need to be addressed. Regulations no longer protect public health and there is evidence of serious omissions by the City in looking at this.	Potable Reuse	Edo McGowan (at Meeting)	The State of California, under the State Water Resources Control Board (SWRCB), has a robust regulatory program for both potable and nonpotable recycled water applications that is based on the protection of public health and the environment. In addition, the National Research Council (NRC) of the National Academies organized a committee to review water reuse that evaluated chemical and pathogen risks and found that, “A portfolio of treatment options... exists to mitigate microbial and chemical contaminants in reclaimed water, facilitating a multitude of process combinations that can be tailored to meet specific water quality objectives.” Regarding microbial contaminants specifically, the “...risk from potable reuse does not appear to be any higher, and may be orders of magnitude lower than currently experienced in at least some current (and approved) drinking water treatment systems.” In other words, all water sources, including existing and approved sources, are vulnerable to microbial and chemical contaminants. Current research is directed at characterizing and controlling for emerging constituents of concern. The State of California and the City of Santa Barbara should continue to track this research to ensure that the regulations continue to be protective of public health and the environment.
1b.	1a-2.	The City’s response to the public comments made by this Commenter at Meeting #1 was that an analysis of these issues [public health issues] is beyond the scope of the study.	Potable Reuse	Edo McGowan (at Meeting)	The current studies are intended to evaluate the technical feasibility of potable reuse options. Additional work on specific IPR/DPR alternatives, if selected for implementation, would include a more detailed and robust review of the public health issues associated with those project alternatives as well as additional opportunities for public comment.
1c.	1a-2.	We need to think about filtration systems that can handle these contaminants, and this issue was not addressed in the environmental impact report for the City’s recycled water plant. By ignoring this issue the City has an incomplete document.	Potable Reuse	Edo McGowan (at Meeting)	If any of the IPR/DPR alternatives are chosen for further study or implementation, then water quality goals and associated treatment options would be addressed in the design efforts for any reuse alternatives.

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1d.	1a-3.	<p>The City’s underlying environmental document, a negative declaration (ND), relating to the City’s desire for expanded recycled water production is a missed-call, it should have been an EIR. That error by the City may thus put an irremediable flaw into the basis of the work by NWRI, especially because the ND ignored the pass-through of antibiotic resistant and multi-antibiotic resistant microbes and their genes. It has been shown by my work, that of Dr. Judy Meyers, Dr. Amy Pruden, the Fahrenfeld paper, the work of Harwood and the WERF study by Rose, specifically considering the plant at SB, documenting that the plant is generating and then releasing antibiotic resistant microbes and other pathogens that will fall within the range potentially adversely impacting public health. The improvements to its production of recycled water, as suggested by the City, do not correct for the pass-through of these pathogens as well as the various CECs found in sewage effluent being converted to recycled water. The City’s treatment train is, as planned, insufficient to deal with the potential associated public health risks and thus hazards to be later faced by this community.</p>	Potable Reuse	Edo McGowan (at Meeting)	<p>Regarding antibiotic resistant bacteria (ARB) and antibiotic resistant genes (ARGs), a specific regulatory level has not been established at either the federal or state levels. At this time, little information exists on ARGs in full advanced treatment potable reuse facilities (with reverse osmosis and advanced oxidation processes). The California SWRCB has established an Expert Panel on Direct Potable Reuse that is reviewing the question of ARB and ARGs in potable reuse. A draft report on this topic is expected in Summer 2016.</p> <p>In addition, it should be noted that the City has not proposed a specific treatment train at this time, but we would expect based on the “Groundwater Replenishment Using Recycled Water” that the project would include reverse osmosis (RO), which is required for direct injection projects.<sup>1</sup> The treatment train, including RO, is a proven and effective barrier for both ARBs and ARGs.</p> <p>Regarding contaminants of emerging concern (CECs), the occurrence, treatment, and public health significance of low levels of pharmaceuticals and other trace organics in potable reuse has been widely studied. The California SWRCB established a Recycled Water Policy in 2013 that addressed CECs. As called for in the policy, an Expert Panel was established and provided recommendations on CEC monitoring and research. The documents can be viewed at: <a href="http://www.waterboards.ca.gov/water_issues/programs/water_recycling_policy/">http://www.waterboards.ca.gov/water_issues/programs/water_recycling_policy/</a></p>

<sup>1</sup> <http://www.cdph.ca.gov/services/DPOPP/regs/Pages/DPH14-003EGroundwaterReplenishmentUsingRecycledWater.aspx>

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1e.	1b.	The study by the TAP must look at and report back to the community on the pass-through, within recycled water, of pathogens, the genes of resistant organisms and antibiotic resistance generation by the sewer plant, and should discuss the inadequacy of current water quality standards, as covered by the above noted authors. As noted by Harwood: The failure of measurements of single indicator organism to correlate with pathogens suggests that public health is not adequately protected by simple monitoring schemes based on detection of a single indicator, particularly at the detection limits routinely employed.	Potable Reuse	Edo McGowan (via email)	Please see responses to TAP Comment Nos. 1a- through 1d.
2.	2.	Edo McGowan's comments reflect his concerns sufficiently regarding a future, significant, dangerous public health issue.	Potable Reuse	John Ackerman (at Meeting)	The comment is noted.
3a.	3a.	The directives from the City Council and Regional Board did not request a study to increase the capacities for these projects (the 10,000 AFY target).	Both	Kira Redmond, Santa Barbara Channelkeeper (at Meeting)	<p>The City will need to respond to this comment regarding the target water demand. The TAP commented on the 10,000 AFY objective in the TAP reports for Meeting #1 (August 5, 2015) and for Meeting #2 (January 27-28, 2016). The TAP's response to this issue following Meeting #2 requests that the City provide a description of the current baseline water use as well as a stacked bar or pie chart showing what comprises the 10,000 AFY of demand; one chart should be for drought conditions and another for non-drought conditions, including documented sources of the demand projections. Demand projections should be included in the upcoming planning documents such as an Urban Water Management Plan and/or Long Range Water Supply Planning document.</p> <p>The Feasibility Study evaluates a desalination facility that may be used during drought to produce up to 10,000 AFY. As a result, the study is a screening tool for this purpose. The Feasibility Study should state that future studies would consider SSIs that could not satisfy this target demand, but may satisfy a smaller facility. Future studies should be used to analyze supply and demand, validate the 10,000 AFY target and the</p>

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					<p>purpose of the desalination facility during drought and normal years, and craft a water supply plan that may combine portions of open ocean intake, the potential for SSIs, and, the potential for potable reuse.</p> <p>The City should revisit the capacity of desalination, as well as the design drought used for planning, to reflect their needs going forward. With this information, the City should revisit the issue of using SSI while considering the information developed from the Feasibility Study.</p>
3b.	3a.	We are concerned the project is set up to ensure the SSIs will look infeasible. The City must look at the actual amount of water that needs to be produced to meet demand. Due to this, the study is a disappointment.	Subsurface Intakes	Kira Redmond, Santa Barbara Channelkeeper (at Meeting)	See response to TAP Comment No. 3a. Also, the information collected can be used for future studies. In the TAP Report for Meeting #1, the TAP states: "...the information gathered for these feasibility studies will have a secondary use: to inform the City's long-term water supply planning efforts. Although an alternative may be flawed in its ability to meet the basis of design criteria for these specific feasibility studies, the same alternative may have utility if the objectives or basis of design criteria are different in future studies."
3c.	3b-1.	Santa Barbara Channelkeeper is extremely concerned about the move by water districts and municipalities to develop seawater desalination as a new source of water supply in response to the current drought. The environmental impacts of seawater desalination are significant and well-known, both to climate due to the extremely high energy requirement to remove salt from seawater, and to the marine environment due to the impingement and entrainment of marine life from open ocean seawater intakes and the discharge of concentrated brine waste into the ocean.	Subsurface Intakes	Kira Redmond, Santa Barbara Channelkeeper (via e-mail)	The City will need to respond to the policy question of considering ocean desalination. The role of desalination should be considered within the context of the water demand and results of the current feasibility study as discussed in the response to TAP Comment No. 3a.

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3d.	3b-2.	Increased water conservation, water use efficiency, stormwater capture and reuse, and recycled water are far less expensive than desalination as drought response measures and have multiple economic and environmental benefits, including water quality improvements, habitat restoration, reduced energy demand and natural flood control. Channelkeeper believes that desalination should be a last resort after all the aforementioned alternatives are exhausted – which they have not been yet. Our position is that if Santa Barbara absolutely must still resort to desalination to meet any remaining shortfall in water supply, then the best, least environmentally harmful technologies available today should be used, including subsurface intakes and brine diffusers, and appropriate mitigation should be done to offset the harm it will cause to marine life.	Subsurface Intakes	Kira Redmond, Santa Barbara Channelkeeper (via e-mail)	Please see response to TAP Comment Nos. 3a through 3c.
3e.	3b-3.	The SB City Council’s directive for the feasibility studies was to “explore a range of alternatives, including subsurface intakes and potable reuse options.” The RWQCB’s directive for the studies, laid out as a condition of the City’s NPDES permit for its wastewater treatment plant and brine discharge, was to “analyze the feasibility of a range of alternatives, including subsurface intake and potable reuse options.” These directives in no way demand that the studies evaluate only a complete replacement of the existing open ocean intake nor only to deem feasible those alternatives that can produce 10,000 AFY– more than three times the amount of desalinated water the City intends to produce (3,125 AFY). It is plain that there was some direction from the City to its consultant to make the leap from these directives to using a 10,000 AFY threshold to frame the studies’ definition of “feasible.”	Subsurface Intakes	Kira Redmond, Santa Barbara Channelkeeper (via e-mail)	Please see response to TAP Comment No. 3a.

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3f.	3b-4.	Channelkeeper voiced concern about the inappropriateness of the 10,000 AFY threshold at the first public meeting of the TAP in August 2015. That concern was echoed by the RWQCB in its October 20, 2015 letter to the City on the studies’ scope of work. Those concerns were ignored, and the study proceeded to use the 10,000 AFY threshold, thereby all but ensuring that SSI alternatives would come out looking infeasible.	Subsurface Intakes	Kira Redmond, Santa Barbara Channelkeeper (via e-mail)	Please see response to TAP Comment No. 3a.
3g.	3b-5.	Santa Barbara’s desalination plant as it is being recommissioned would likely never be permitted today because of what we now know about the environmental harm caused by open ocean intakes and the Ocean Plan Amendment recently enacted by the SWRCB to address that harm. The feasibility study that would be required today pursuant to that policy had the City not sought an exemption would have demanded an evaluation of SSI alternatives for the ACTUAL amount of desalinated water to be produced as well as a combination of subsurface and surface intakes.	Subsurface Intakes	Kira Redmond, Santa Barbara Channelkeeper (via e-mail)	The TAP recognizes that the current facility is exempt from the California Ocean Plan.  The TAP also recognizes that seawater intakes (both open ocean and subsurface) require site-specific environmental review to establish environmental impacts, and that environmental harm is not a foregone conclusion for each site and intake configuration.
3h.	3b-6.	This SSI feasibility study as it stands is a shame and a disappointment for those who sought a sincere assessment of a true range of viable alternatives and solutions to the death of billions of marine organisms that will be caused by the City’s open ocean intake. As the principal advocate for the conduct of this study in the first place, SB Channelkeeper respectfully requests that the study be revised to give a more fair and useful analysis of the various subsurface intake options, including analyzing their feasibility at different realistic capacity levels (3,125; 5,000; and 7,500 AFY, and the amount of water that would be produced if the plant was again placed in standby mode) as well as in combination with the open ocean intake. We also ask that the potable reuse	Both	Kira Redmond, Santa Barbara Channelkeeper (via e-mail)	Please see response to TAP Comment Nos. 3a and 3b.  Following Meeting #1 in August 2015, and again after Meeting #2 in January 2016, the TAP noted that “full replacement of the screened open ocean intake is listed as the only option. Subsurface desalination intakes and potable reuse are considered as mutually exclusive rather than combined to develop integrated solutions; however, it is likely that the best solution will include combinations of components and complimentary opportunities.”  In our response to Meeting #2, the TAP states, “Regardless of what conclusions are reached for meeting current project goals (with 10,000 AFY demand), the conclusions should also include alternatives to meet partial

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		feasibility study be reframed to examine these various capacity alternatives.			demand.” The TAP understands the information developed through the current feasibility study will provide information for future studies. In addition to evaluating demand projections and climate change scenarios, these future studies will also evaluate, as mentioned above, combinations of components and complementary opportunities.
4a.	4a.	Heal the Ocean supports the work on <b>potable reuse</b> and looks forward to the next TAP meeting where potable reuse will be discussed in more detail.	Subsurface Intakes	James Hawkins, Heal the Ocean (at Meeting)	The comment is noted.
4b.	4b-1.	Following the 1.27.2016 meeting, Heal the Ocean brought several points of clarification to Carollo Engineers on Tech Memo No. 3. Our questions related to the designation of the #3, #8, and #9 initial screening criteria as “Not Feasible,” as defined within the study’s parameters. Our inquiry into these criteria stemmed from the possibility that consideration of a smaller desalination plant than the study’s screening goal of 10,000 AFY could result in a designation of “potentially feasible” for these screening criteria. This would fall under the added feasibility designation developed by the work plan: “Potentially Feasible, but does not meet study goals” (or PF*).	Subsurface Intakes	James Hawkins, Heal the Ocean (via e-mail)	The TAP commented on the presentation of the initial screening information in the TAP Report for Meeting #2 (Section 3.3.6) and suggested that the City create another table or modify the report to address the potential feasibility of the SSI alternatives to be components of a long-term future water supply. The terminology in the existing tables is likely to become clearer once the table is revised to reflect drought and non-drought.
4c.	4b-2.	Heal the Ocean greatly appreciates Carollo’s receptiveness to addressing these issues and bringing it to the attention of the TAP. We understand this matter was discussed during the closed session and that it was determined to change #3, #8, and #9 initial screening criteria to PF*. While Heal the Ocean’s focus is on potable reuse, and not subsurface intake technology, we believe these changes best represent the final parameters of the Work Plan and will result in a more accurate final study.	Subsurface Intakes	James Hawkins, Heal the Ocean (via e-mail)	The comment is noted.

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4d.	4b-3.	Potable Reuse Tech Memo No. 2: Heal the Ocean found this to be a comprehensive and accurate description of regulatory issues involved in pursuing a PR project. We have no additions or suggested changes.	Subsurface Intakes	James Hawkins, Heal the Ocean (via e-mail)	The comment is noted.
5.	5.	I am a business/property owner and native of SB and pay city rates for water. I am not in favor of changing what we have in terms of the intake; it seems like a huge waste of money and involves changing our waterfront and increasing our water rates.	Subsurface Intakes	Steve Nipper, Independent Business Owner (at Meeting)	The comment is noted. The impacts on the waterfront should be evaluated as part of the feasibility study and should be further evaluated as part of the environmental review and/or triple bottom line analysis of social, economic, and environmental impacts. Rate impacts are the purview of the City.
6.	6.	The SSI Feasibility Study identified sites which include possible development sites on SB public beaches. We adamantly oppose the proposal to place well buildings and electrical service and motor control buildings on East or West Beach. The negative impact to tourism in Santa Barbara would be tremendous. The main attractions in Santa Barbara are the beautiful beaches and ocean views. This type of development would have a profound negative impact on Santa Barbara's coastline which would give a substantial undesirable impression to our visitors and locals. In addition this proposed development would adversely affect our business thus potentially requiring the reduction of our workforce.	Subsurface Intakes	Matthew La Vine, The Fess Parker Resort (via e-mail)	The comment is noted. The impacts on the waterfront should be evaluated as part of the feasibility study and should be further evaluated as part of an environmental review and/or triple bottom line analysis of social, economic, and environmental impacts.
7a.	7a.	We would like to correct a misstatement in the Feasibility Study. The Feasibility Study refers to 103 South Calle Cesar Chavez as "City-owned" property and, therefore, a possible location for a subsurface intake facility. (See Section 3.2.2 and Figure 3.1). This property is owned by American Tradition, LLC, not the City. Please update the Feasibility Study to delete all references to 103 South Calle Cesar Chavez as a City-owned property or a potential subsurface intake site.	Subsurface Intakes	Graham Lyons, on behalf of American Tradition, LLC (via letter delivered by USPS)	The City will need to review and respond to this comment.

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7b.	7b-1.	<p>The Feasibility Study concluded that no combination of sites and technologies could pass the basic screening criteria. In short, a SSI facility in the City is not feasible. We have no reason to doubt this conclusion and we see no reason why additional resources should be spent considering a SSI facility. The technical constraints imposed on such a facility essentially force the location to be on or near the beach. Such a location will undoubtedly create significant impacts. While the Feasibility Study did not consider them, any subsurface intake facility would be subject to a host of local coastal plan policies and regulations. Given the scope of development required to produce the necessary volume of water, we do not believe such a facility could comply with the City's development policies and regulations. Similarly, any new facility would be subject to CEQA review, which would likely identify many significant environmental impacts that cannot be mitigated. If there is any further study of a potential subsurface intake facility, these land use realities need to be taken into consideration.</p>	Subsurface Intakes	Graham Lyons, on behalf of American Tradition, LLC (via letter delivered by USPS)	The comments involving the process of further studies are noted. The types of issues identified should be addressed in the required studies and documents.
7c.	7b-2.	<p>The type of development analyzed in the Feasibility Study would profoundly impact the SB coastline. The experience of visitors and locals would be forever changed if our beaches were pump stations and well houses. As a business owner operating along the beach, our client has no doubt that any such development on the beach would negatively impact its business operation and decrease the desirability of SB as a tourist destination. This is simply not the type of development that is acceptable or should even be considered in SB.</p>	Subsurface Intakes	Graham Lyons, on behalf of American Tradition, LLC (via letter delivered by USPS)	The comment is noted. Impacts on the waterfront are evaluated as part of the feasibility study and would be further evaluated as part of an environmental review.

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8a.	8a.	As the General Manager of the Santa Barbara Inn, located on East Beach, I was alarmed to learn of the Vertical Well Proposal, whereby eight buildings would be constructed on the beach. Tourism is clearly one of the leading industries of SB city and county, and constructing buildings on our pristine beaches would certainly be detrimental to tourism. The owner of the Santa Barbara Inn is therefore strongly opposed to this alternative. We sincerely urge you to adopt an alternate plan which does not adversely impact the scenic beauty of our beaches.	Subsurface Intakes	Ed Galsterer, The Santa Barbara Inn (via e-mail)	The comment is noted. The impacts on the waterfront should be evaluated as part of the feasibility study and should be further evaluated as part of an environmental review and/or triple bottom line analysis of social, economic, and environmental impacts.
9a.	9a.	The Feasibility Study (FS) did not assess the feasibility of SSIs based on SB’s “need” for desalinated water. The FS states “the target yield for each alternative is based on the City’s permitted capacity for its existing screened, open ocean intake, which is the amount of seawater necessary to produce 10,000 AFY of desalinated water.” This self-selected target yield has no factual or legal basis. The directive from the Regional Water Board places no requirement that the studies evaluate only a complete replacement of the existing open ocean intake nor only to deem feasible those alternatives that can produce 10,000 AFY. Furthermore, there is no legal reason to select a target yield of 10,000 AFY. In the contrary, the State Water Board’s regulations dictate that the target yield should be 3,125 AFY – if not less.	Subsurface Intakes	Sean Bothwell, California Coastkeeper (via e-mail)	Please see response to TAP Comment No. 3a.
9b.	9c.	The Study’s “target yield” has no legal basis. A 10,000 AFY target yield isn’t even the design capacity for the currently proposed facility. Even if 10,000 AFY was the design capacity, the Desalination OPA is clear that a design capacity above the demonstrated “need” cannot be a reason to find subsurface	Subsurface Intakes	Sean Bothwell, California Coastkeeper (via-email)	Please see response to TAP Comment No. 3a.  The TAP made a similar point about the Ocean Plan and demand, and our comments on Meeting #2 point out that “the California Ocean Plan states that the RWQCB shall require the owner or operator to: “Consider whether

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		<p>intakes infeasible. Ocean Plan, Chapter III.M.2.d.(1).a., states that “design capacity in excess of the need for desalinated water as identified in chapter III.M.2.b.(2) shall not be used by itself to declare subsurface intakes as not feasible.” Assuming the City’s current intake proposal of 3,125 AFY is the City’s true “need”, then any intake capacity beyond that number cannot be used to justify subsurface intakes being infeasible. Therefore, the Study’s reliance on a 10,000 AFY target yield is grossly overinflated. <b>To be consistent with the law, we request NWRI revise its Study and adjust the target yield to a maximum of 3,125 AFY.</b></p>			<p>the identified need for desalinated water is consistent with an applicable adopted urban water management plan prepared in accordance with Water Code section 10631, or if no urban water management plan is available, other water planning documents such as a county general plan or integrated regional water management plan.” (Chapter III.m.2.b.[2]). The TAP recognizes, however, that the current facility is exempt from the California Ocean Plan. The information developed under this feasibility study should be used to inform the City’s future Long Term Water Supply Plan update.”</p> <p>Also, the City, not NWRI, is responsible for establishing the scope of this study.</p>
9c.	9e,f.	<p>The City has not demonstrated that 3,125 AFY is the true need for the city as required under the Desalination OPA. Ocean Plan, Chapter III.M.2.b.(2) requires to <i>consider whether the identified need for desalinated water is consistent with an applicable adopted urban water management plan, or if no urban water management plan is available, other water planning documents such as a county general plan or integrated regional water management plan.</i> The City has not demonstrated a need for 3,125 AFY of ocean desalinated water – and certainly not the target yield of 10,000 AFY. <b>Therefore, NWRI should reevaluate its Study to consider 3,125 AFY as the maximum target yield, and then analyze SSIs for various sizes smaller than the maximum target yield.</b></p>	Subsurface Intakes	Sean Bothwell, California Coastkeeper (via e-mail)	Please see response to TAP Comment No. 9b.
9d.	9g.	<p>The Feasibility Study failed to consider a reasonable range of alternative intake design capacities. The law requires using the best available design to minimize the intake and mortality of marine life. The SWB has interpreted this statutory</p>	Subsurface Intakes	Sean Bothwell, California Coastkeeper (e-mail)	Please see response to TAP Comment No. 9b.

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		requirement to mean the best available “size, layout, form, and function of a facility, including the intake capacity and the configuration and type of infrastructure, including intake and outfall structures.” <sup>2</sup> <b>Without NWRI considering a design capacity that would best minimize the intake and mortality of marine life, the Study fails to meet the requirements of the California Water Code and the California Ocean Plan. 2</b> Ocean Plan, Chapter III.M.2.c.			
9e.	9h.	The FS fails to assess a reasonable range of alternative target yields. The Ocean Plan, Chapter III.M.2.d.(1)a.ii, requires that if a feasibility analysis determines SSIs are not feasible for the proposed intake design capacity, than the analysis “shall determine whether subsurface intakes are feasible for a <i>reasonable range of alternative intake design capacities</i> . NWRI failed to assess any target yield beyond the incorrectly, self-selected yield of 10,000 AFY. If this Study is to be credible to the Regional Water Board, <b>NWRI should re-evaluate the feasibility of subsurface intakes using a reasonable range of alternative intake design capacities.</b>	Subsurface Intakes	Sean Bothwell, California Coastkeeper (e-mail)	See response to TAP Comment No. 9b.
9f.	9h.	The FS should evaluate a reasonable range of alternative sites that are likely to support subsurface intakes. The FS failed to apply the proper criteria for determining appropriate site alternatives and states that the “project site alternatives for a subsurface intake (SSI) were selected based upon (a) their proximity to the City’s desalination plant, (b) proximity to the existing intake pipeline, (c) the City’s existing easement for a railroad crossing, and (d) the availability of prior geotechnical data.” <b>Under the legal requirements of the Ocean Plan, these criteria are not adequate justifications for site selection.</b>	Subsurface Intakes	Sean Bothwell, California Coastkeeper (e-mail)	The TAP has noted in response to Meeting #2 that consideration be “given to streamlining the evaluation process since this facility is exempt from the Ocean Plan. For example, costs, land use conflict, or other factors could possibly be included earlier in the assessment.” Since it is an existing facility, the SSI alternatives are influenced by the facility’s location.

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TAP Response to Public Comments related to Public Meeting #2 (held January 27, 2016)**

TAP Comment No.	Addressing the City’s Response	Comment	Potable Reuse or Subsurface Intake Study	Commenter and How Conveyed (meeting or e-mail)	Technical Advisory Panel (TAP) Response
9g.	9h.	<p>The FS placed improper criteria on the site selections to determine SSI feasibility. The Ocean Plan requires an evaluation of “a reasonable range of nearby sites, including sites that would likely support subsurface intakes.” Therefore, an evaluation of alternative sites should begin with locations most likely to support SSIs; this initial criteria is missing from the FS. Furthermore, the Ocean Plan lays out the criteria one should use to evaluate alternative sites. Of those criteria to be considered, proximity to existing intake pipes, easements, and data availability are not acceptable reasons to dismiss alternative site locations that would likely support subsurface intakes. Of the Study’s criteria, only “proximity to the City’s desalination plant” is permissible.</p> <p><b>Therefore, NWRI should re-evaluate a reasonable range of alternative sites that are likely to support subsurface intakes, regardless of whether they may be ideal for the City.</b></p>	Subsurface Intakes	Sean Bothwell, California Coastkeeper (e-mail)	<p>The City, not NWRI, is responsible for establishing the scope of this study and the reasonable range of alternatives.</p> <p>Following Meeting #1, the TAP noted its concern “that the City has limited itself with the criteria for the project site locations. It may be too narrow to start with this reduced suite of only onshore locations. As an example, the City of Santa Cruz evaluated approximately 18 different onshore locations that could accommodate a pump station and an almost equal number of offshore locations for the intake (i.e., slant wells, horizontal wells, infiltration gallery, and open intake).” However, since the treatment plant is an existing facility, the SSI alternatives are influenced by the facility’s location, which limits the reasonable range of site alternatives. Given the location of the existing facility and related infrastructure, there are practical considerations that influence the geographic extent of alternatives. Looking too far afield for alternative sites will add to the cost, feasibility, and impacts associated with the added infrastructure.</p>