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Meeting Notes
Barton, Murray, Magnolia, North Beach CSO Facilities Project
E00022E06
King County Department of Natural Resources and Parks
Wastewater Treatment Division

Date of Meeting:	September 23, 2009	**Date of Notes:**	September 25, 2009	**Work Order No:**	7562A.10

Time: 1:00 pm

Location: King Street Center 7044 North Wind

Purpose:
1. Review response to North Beach Basin alternative comments.
2. Present revisions to North Beach Basin alternatives.
3. Review Informational needs for non-technical criteria associated with North Beach Basin alternatives.

Meeting # 100-54 - North Beach Non-technical Criteria Review

Attendees:

County		Consultants
Shahrzad Namini	Meredith Redman	Brian Matson
Chris Okuda	Kevin Schock	Karl Hadler
Hien Dung	Bob Swarner	Jennifer Corrigan
Pam Erstad	Mary Wohleb	Lloyd Skinner
Sue Meyer	Monica Van Der Vieren	Bob Wheeler
Jim Weber		

SPU
Sahba Mohandessi

Distribution: Attendees, Betsy Cooper, John Cameron, Karen Huber, John Phillips, Sekhar Palepu, Ron Kohler, Kathy Mathena, Kevin Sandquist, Lee Miller, Ukwenga Oleru, Shaun O'Neil, Mike Sand, Martha Tuttle, Karl Zimmer, Allen de Steiguer, Jeff Lykken, Kevin Dour

PRELIMINARY DRAFT

ACTION ITEMS

Item #	Action	Action By	Due By
1	Need to determine if environmental funding sources would be available if we eliminate the North Beach Force Main by eliminating the sewer force main in tidelands.	Shahrzad Namini/ Brian Matson	11/15/09

DISCUSSION

1. Response to North Beach Basin Alternative Comments
   a. Review responses to comments. Address any issues with consultant team.
2. Revisions to North Beach Basin Alternatives

a. Need to consider priming of force mains as an issue for startup of Alternative 1B, 1C, 2A, 2B and 3B.

b. Consider option of incorporating North Beach Pump Station requirements into option 1C, 2A and 2B. Eliminating the North Beach Force Main has several advantages including elimination of upgrade costs in the future.

c. Combining the North Beach Pump Station and CSO Pump Station in Alternative 1C may have higher pumping costs for base flows to the 8th Avenue interceptor (over the ridge) instead of to Carkeek Pump Station (around the ridge). Pumping costs need to be considered in the evaluation.

d. Need to determine if environmental funding sources would be available if we eliminate the North Beach Force Main by eliminating the sewer force main in tidelands.

e. Examine if flow can be routed by gravity in Alternative 1D. Determine if electrical and odor control can be at the bottom of the basin.

f. Need to provide information on Carkeek Treatment Facility improvements as part of Alternative 2A and 2B.

g. Increasing CSOs at Carkeek is contradictory to Native American tribes goal of reducing overflows in the area and promoting geoduck habitat/harvesting.

h. The team is consulting the PAO on condemning properties with CCRs and homeowner association rights to refuse property transactions.

i. Consider odor control facilities within layout of pump stations.

j. Treatment facilities within the shoreline zone and residential areas are currently prohibited. The team needs to assess the impacts of trying to obtain a zoning change.

k. Provide elevations of structures for criteria evaluation.

l. Need to consider the impact of I/I control on groundwater flows and surface flows. Basic assumption at this preliminary stage is that we would need to provide a stormwater conveyance system for flows that are removed from the combined sewer system.

END OF NOTE
North Beach Non-technical Criteria Review
9/23/09

PRELIMINARY DRAFT

CONTRACT NO.:			**CSO Beach Projects Team Member Review of Alternative Identification Process**	
PROJECT MANAGER: Shahrzad Namini				
Project No.: 423607-610			**Return Comments to: Mary Wohleb**	**Comment Due Date: 0/01/09**
Sub-Proj. No.:			**Email: mary.wohleb@kingcounty.gov**	**Response Due Date:**
Phase:				**Check Off Due Date:**
Comment No.	**Basin**	**Alternative #/ New**	**Comment**	**Response/Resolution, If appropriate**
1.	North Beach	General Comment	The North Beach Basin has 4 sites that could potentially be extremely difficult to permit or acquire easements (E,G,H, I). Hien will most likely provide additoinal details on potential property issues.	Comment noted. Site E, G and I are playfields. Site H is a private parcel behind Swanson's Nursery and would presumably have similar permit/easement requirements to other privately owned parcels up in the basin.
2.	North Beach	Site E	This site appears to be located on a playfield (soccer?). Looking at a close up aerial view of the site using Google Earth, it appears that this field is not as well-maintained (although photo may be old) as Soundview playfield; if not used regularly, this may have potential as a site; if it is a popular playfield and used regularly, may be a fatal flaw or very difficult to get City approvals to locate utility service uses underneath this site.	When I conducted a site visit this summer, the area appeared to be little used.
3	North Beach	Site G	This site appears to be located on 4 well-maintained ballfields or soccer fields. Moderate -high risk of being very difficult to locate facilities at this location.	Comment noted.
4.	North Beach	Site H	It appears that a portion of the property where storage is proposed is within a green corridor that is heavily forested. May be very difficult to permit if requires major tree removal.	Storage is not proposed for this site. A tunnel access portal for Alternative 1D may be feasible as a portion of this site is in back of a nursery and currently used for plant storage.
5	North Beach	Site I	Based on Hien's conversations with Parks, this may be a diffucult site to acquire access to.	Comment noted.
6	North Beach	Alternatives 1A-1C	Storage tanks under these three alternative are very large - construction impacts (e.g., traffic, # truck trips, length of construction time) to surrounding neighborhood will likely be very significant issue.	Comment noted.
7.	North Beach	Site A	Based on the size of the proposed structure, a Shoreline Permit Plan will likely be required (e.g., requires justification that there is no feasible alternative to locate structure upland out of shoreline district) prior to submittal of Shoreline Permit.	Comment noted.
8.	North Beach	Site D	Although this site is listed in the overal basin map, I couldn't find it associated with any of the specific Alternatives.	The Initial Alternatives Matrix lists this site as a potential location for an access portal for Alternative 1D.
9.	North Beach	5A	A challenge for I/I control is maintaining reduction levels in a basin once I/I rehabilitation has occurred.	Comment noted.
10.	North Beach	5A	Most I/I occurs on private property and that degradation will occur not only to portions of a basin that were rehabilitated but to the portions that were functioning well at the time of a rehabilitation project.	Comment noted.

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11.	North Beach	5A	Maintenance is an issue t because local collection systems are the responsibility of local agencies. Long-term maintenance has also not been tested by the I/I pilot projects due largely to the fact that only a few years have passed. The maintenance issue is key to successful I/I control, and potentially even more so for I/I control as a means of managing CSOs. A successful maintenance program would include regular inspection (SSES work) and a responsive repair program that should involve the City – but also put some responsibility on private property owners to repair side sewers when they are found to be leaking.	Comment noted.
12.	North Beach	5A	I/I reduction should only be pursued as an alternative if the City is a participating partner in all aspects of an I/I reduction project – and takes lead responsibility for long-term maintenance.	Comment noted.
13.	North Beach	5A	Due to lack of experience in completing a large scale I/I reduction project, this risk exists even if Seattle partners on the project.	Comment noted.
14.	North Beach	5A	A sample-level SSES work in the project basins in order to get some idea of the sources of I/I. Alternatively, if SSES work has been done in the past several years, review that information. Smoke and dye testing alone should not be viewed as adequate SSES work – even at a sample level.	Comment noted.
15.	North Beach	5A	Based on the results of SSES work and the results of the County's I/I pilot project work and current project design work for the initial I/I control projects, development of planning level project scope estimates of the I/I work necessary to reach the I/I reduction target (e.g. pipe bursting x-number of side sewers, dis-connecting y-number of downspouts, fixing z-number of mains and manholes, etc.) With this information, it will be possible to develop planning level project cost estimates.	Comment noted.
16.	North Beach	5A	A pre-design level of evaluation will; require full SSES work inside the basin. This is necessary for solid information about where the sources of I/I are, and what types of rehabilitation work is necessary. CCTV work needs to be completed. There may be some smoke and dye testing – but the CCTV images provide the most reliable information. There have been significant advancements in camera technology in the last few years that have dramatically improved image quality, camera mobility, and speed. As a result more information is clearer, faster, and less expensively.	Comment noted.
17.	North Beach	5A	The initial I/I control projects on the eastside won't be constructed until 2011. King County won't know if they met their target I/I reduction levels until the end of the following wet season at the soonest. This means that I/I reduction is a currently unproven means of reducing or eliminating the need for investments in the regional conveyance system – or – the regional CSO control system.	Comment noted.
18.	North Beach	New	Planning project for this basin was divided into two phases, phase 1 - increase capacity of pump station and forcemain to Carkeek and phase 2- build necessary storage	Comment noted.
19.	North Beach	New	New forcemain should be considered for street ROW	For Alternative 2A, we will do a preliminary investigation of this option for the pipeline and try to ascertain whether it offers advantages over a separate parallel pipeline. The preferred pipeline option will be carried forward in the alternatives analysis process as part of Alternative 2A.

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20.	North Beach	5A	I/I Control. Suggest provide a refined order of magnitude cost estimate for I/I control. Base analysis on data currently available-with no added SSES at this time. Purpose is to compare cost with other alternatives.	See Comment 15 above. Team needs to define a method for evaluating I/I.
21.	North Beach	2A	KC evaluated condition of ex 14" NB forcemain some years past. Line is in beach area and it was pitted. Alt 2A replaces ex FM. This approach provides a dual benefit-for CSO project and replacement of existing 1962 infrastructure that is at the end of its useful life.	Comment noted.
22.	North Beach	2A	Develop a new alternative, upsizing the existing 14-inch NB forcemain, increasing the pumping capacity at NB with a combination of lower operating head at the existing station, possible impellar replacment as well as adding a parallel pumping facility pumping from the storage to be constructed at NBeach. This approach is feasibile if Carkeek and other downstream facilities can accommodate. This option also would reduce the size of storage required at NBeach.	For Alternative 2A, we will do a preliminary investigation of this option for the pipeline and try to ascertain whether it offers advantages over a separate parallel pipeline. The preferred pipeline option will be carried forward in the alternatives analysis process as part of Alternative 2A.
23.	North Beach	1C	1C requires two stage high head pumping. Avoid as a general practice. Can carry thru analysis, but the capital and operating costs need to be realistically assessed.	Comment noted.
24.	North Beach	new combination of Alts	If construction of full storage volume at NBeach PS site is not feasible, consider a combination large dia tunnel for a portion of the flow together with a cast in place tank. The tunnel would have to go east-west into the hillside to get req'd depth. Could be in street, replacing ex san sewer and made with a cunnete to be self cleaning. ie about 350 feet of 14 dia tunnel is 400k gallons.	This alternative does not appear to offer significant advantages over Alternative 1D which is a tunnel option. Alternative 1D could include storage at the North Beach site if necessary, but this option loses the economy of scale for a tunnel option and requires all of the same facilities (although smaller) permits, environmental issues, etc.
25.	North Beach	Odor Control	Can odor control be simplified? Consider that CSOs are a wet weather event with fresher, dilute sewage and cooler air temp. Consider bioxide storage with chem feed pump.	This is a pre-design issue. For alternatives evaluation, we will assume a worst case scenario for alternatives to encompass footprint, O&M activities, etc.
26.	North Beach	Offsite storage, new site	Is offsite storage available at existing Carkeek Park CSO facility tankage?	No offsite storage is currently available at the Carkeek Park CSO facility.
27.	North Beach	Offsite storage, new site	Is space for new offsite storage available at existing Carkeek Park CSO site?	This will be examined as part of Alternative 2A.
28.	North Beach	Crown Hill Elem. School	Parks purchased most of this site (the commercial frontage) for approximately $5M. Small Faces purchased rest of property (the school building & playground) for approximately $1M in June 2009. Parks states that Crown Hill Elementary should not be considered at all, because a federal convenant is being passed from Magnuson to Crown Hill which requires the park to be a park. Small Faces & Crown Hill Community wants to work with Parks to turn the park into a ballfield, community space. School bldg is now called Crown Hill Center.	Comment noted.
29.	North Beach	Blue Ridge Property	BNSF bought a small easement on property in 2007. Will need to double check location of easement. Blue Ridge House is adjacent to property: House is listed for sale. Has been on market since 3/2009. Price has dropped from $2M to $1.8M Parcel #0868002455 shows lot is approx. 17K SF/ House Property is part of a Homeowner's Association. If KC WTD were to want to buy this, the Homeowner's Association has a tool to restrict the sale. Also, rules are legally enforceable by the homeowners association, unless a specific provision conflicts with federal, state or local laws. CCR's = convenants, conditions, & restrictions	Comment noted.

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30.	North Beach	North Beach Elementary	This is a school	Comment noted. Area considered is what appears to be an under-utilized grassy area on the west side of the property.
31.	North Beach	Redeemer's Lutheran Church	This is an active church, and uses the parking lot for a homeless camp. Church owns four lots	Comment noted.
32.	North Beach	Sound View Playfield	Parks Property	Comment noted.
33.	North Beach	Swanson's Nursery	is surrounded by residential homes. This would be a condemnation of commercial property. Value is approx. $5M. May consider is a "joint" project with Seattle Parks for parks use after we build our property -- "swap" for use of other parks area.	The parcel shown on the preliminary information is not Swanson's Nursery itself but a property to the south. It appears Swanson's is using a portion of the property. Options noted in the preliminary information only consider using this site for a tunnel access portal (~1/2 acre) which could likely fit in the flat area being used by the nursery and limit the impact on surrounding homes.
34.	North Beach	2A	This alternative could present significant issues in terms of permitting. John explained that the pipe is located within the intertidal area of the beach and is submerged during different times of the day. John also provided me a link to the report (1989) on the Carollo ftp site which summarized repairs conducted on the pipe. The report does not provide the beach elevation but does state that it is buried four feet below the substrate. As I mentioned to you at previous meetings (and will discuss more during the criteria evaluation meetings), there is a highly likely chance that we may be required to submit a Plan Shoreline Permit. This is a review process that must precede the Shoreline Permit process. What we would need to do is submit an alternatives analysis that explains why it wouldn't be feasible to have an alternate site for locating the force main. If there is another feasible site located outside of the Shoreline District (e.g., 200 feet from MHHW), we would need to relocate the pipe at an upland site. There is a possibility that we could do the work on the beach if the City would consider this a replacement pipe. If, as Ron mentioned at the meeting, we burst the pipe and installed a new pipe in the same location as existing, the City may consider this a replacement pipe – this would not require us to go through the Plan Shoreline Permit process, BUT, it would still be a long permitting process. At a minimum, we would need the following environmental reviews: ✓ Corps of Engineers (COE) permit – Section 10 (permit can be appealed) ✓ COE Section 106 (Archeological Review) ✓ COE Section 401 review (delegated to COE by DOE)	Per suggestions above and this comment, we will look at this alternative as a replacement option. Based on County information this pipeline needs to be repaired and combining it with CSO upgrades may be beneficial. This alternative has several other significant issues to overcome such as expansion of the Carkeek Treatment Facility which will be costly and have its own set of permit issues.

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			✓ COE Section 7 (ESA review)	
			✓ HPA (state review – w/ appeal process)	
			✓ Environmental Critical Areas review (City of Seattle)	
			✓ Shoreline Permit (City of Seattle with appeal process)	
			Not an easy process – and keep in mind that those are environmental reviews only and do not include construction-related permits. If we want to keep 2A on the list of approaches, I suggest we sit down as a small group and meet on this issue.	

Category	Sample Criteria	Sample Questions	Information Needs for North Beach Alternatives								
			1A: Bottom of Basin Storage w/ Conveyance to Carkeek PS	**1B: Centralized Storage w/ Conveyance to Carkeek PS**	**1C: Centralized Storage w/ Conveyance to 8th Avenue Interceptor**	**1D: Tunnel Storage**	**2A: Conveyance to Carkeek CSO TP through Beach Alignment of Pipeline**	**2B: Conveyance to Carkeek CSO TP through Neighborhood Alignment of Pipeline**	**3A: Bottom of Basin Treatment Facility**	**3B: Centralized Treatment Facility Up in Basin**	**5A: I/I Control**
Land Use and Permitting											
	1. Land Use Compatibility										
		1. Is proposed site compatible with Zoning?	A. Determine zoning designations included within the potential placement area for the facilities. B. Review building and development restrictions that are specific to the zoning designation C. Assess whether the facilities are compatible given the zoning designation. D. If the facilities are not compatible; what are the schedule impacts and other risks associated with pursuing a zoning change.	Same as Alternative 1A for storage up in basin and pump station at the bottom of basin.	Same as Alternative 1A for storage up in basin and pump station at the bottom of basin.	Same as Alternative 1A for portal and ancillary facilities up in basin and portal at the bottom of basin.	Same as Alternative 1A for pump station at the bottom of basin. A. Determine zoning designations included within the potential expansion area for the treatment facility at Carkeek. B. Review building and development restrictions that are specific to the zoning designation	Same as Alternative 2A.	A. Determine zoning designations included within the potential placement area for the treatment facility. B. Review building and development restrictions that are specific to the zoning designation C. Assess whether CSO treatment is compatible given the zoning designation. D. If treatment is not compatible; what are the schedule impacts and other risks associated with pursing a zoning change.	Same as Alternative 3A for treatment facility up in basin and pump station at the bottom of basin.	A Zoning should not be an issue with the I/I control alternative that includes rehabilitation of laterals and mains, installation of new sanitary and/or storm drain pipelines in the right-of-way and re-routing of private property drainage. Need to confirm.
	2. City of Seattle Planning Policies (Comp Plan)										
		1. Will location of new facilities be consistent with Seattle's short and long-term planning policies?	A. Research Seattle's planning policies within the potential placement area for the proposed storage and conveyance facilities. B. Research	Same as Alternative 1A for storage up in basin and pump station at the bottom of basin.	Same as Alternative 1A for storage up in basin and pump station at the bottom of basin.	Same as Alternative 1A for portal and ancillary facilities up in basin and portal at the bottom of basin.	Same as Alternative 1A for pump station at the bottom of basin. A. Research Seattle's planning policies for	Same as Alternative 2A.	A. Research Seattle's planning policies within the potential placement area for treatment. B. Research restrictions that	Same as Alternative 3A for treatment facility up in basin and pump station at the bottom of basin.	

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			restrictions that may relate to siting and construction of CSO storage and conveyance facilities. C. Assess likelihood of schedule impacts and other risks related to the current policies.				treatment at Carkeek. B. Research restrictions that may relate to siting and construction of additional CSO treatment at Carkeek. C. Assess likelihood of schedule impacts and other risks related to the current policies.		may relate to siting and construction of CSO treatment. C. Assess likelihood of schedule impacts and other risks related to the current policies.		
	3. Municipal Code and Shoreline Management Plan										
		1. Is the location and type of construction consistent with Seattle's Municipal Code (SMC) and the Growth Management Act (GMA) requirements?	A. Research SMC and GMA requirements within the potential placement area for the facilities. B. Research restrictions that may relate to siting and construction of CSO storage and conveyance facilities. C. Assess likelihood of schedule impacts and other risks related to the current requirements.	Same as Alternative 1A for storage up in basin and pump station at the bottom of basin.	Same as Alternative 1A for storage up in basin and pump station at the bottom of basin.	Same as Alternative 1A for portal and ancillary facilities up in basin and portal at the bottom of basin.	Same as Alternative 1A for pump station at the bottom of basin. A. Research SMC and GMA requirements for additional treatment facilities at Carkeek. B. Research restrictions that may relate to siting and construction of additional CSO treatment at	Same as Alternative 2A.	A. Research SMC and GMA requirements within the potential placement area for the treatment facility. B. Research restrictions that may relate to siting and construction of CSO treatment facility. C. Assess likelihood of schedule impacts and other risks related to the	Same as Alternative 3A for treatment facility up in basin and pump station at the bottom of basin.	A. Research SMC and other applicable codes and regulations (such as Drainage Code) for likely requirements related to treatment of stormwater.

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							Carkeek. C. Assess likelihood of schedule impacts and other risks related to the current requirements.		current requirements.		
	4. Permitting Complexity										
		1. How many permits will be Required? Will COE permit be required – if so, will Section 106 and Section 7 be triggered?	A. List of likely permits for construction within the potential placement areafor CSO facilities. B. Identification of permits with long lead times. C. Identification of permits that may require significant mitigation.	Same as Alternative 1A for storage up in basin and pump station at the bottom of basin.	Same as Alternative 1A for storage up in basin and pump station at the bottom of basin.	Same as Alternative 1A for portal and ancillary facilities up in basin and portal at the bottom of basin.	Same as Alternative 1A for pump station at the bottom of basin. A. List of likely permits for construction of additional treatment facilities at Carkeek. B. List of likely permits related to treatment & discharge of CSO's. C. Identification of permits with long lead time. D. Identification of permits that may require significant mitigation.	Same as Alternative 2A.	A. List of likely permits for construction within the potential placement area for the treatment facility. B. List of likely permits related to treatment & discharge of CSO's. C. Identification of permits with long lead time. D. Identification of permits that may require significant mitigation.	Same as Alternative 3A for treatment facility up in basin and pump station at the bottom of basin.	A. List of likely permits for construction or rehabilitation of pipelines within right-of-way. B. List of likely permits required for disconnection of roof drains on private properties. Also need to confirm whether these would be blanket permits for all properties or whether individual permits required for each property.
		2. How many permits will be required that will be "appealable"?	A. List of required permits that can be appealed. B. Estimate schedule	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.

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			delays and other risks that could result from an appeal.								
		3. Alternative changes NPDES permit requirements. (Note: Relocated from Program Criteria. Need to determine if this is the appropriate location and consult Betsy Cooper about question and impact scale.)	A. Assemble a list of the requirements from the current permit. B. Assess how or if the alternative would deviate from each requirement.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.
	5. Property Acquisition Complexity										
		1. How complex is acquisition of the property?	A. Assemble a list of properties including ownership and assessed value. B. Estimate the number of properties that would be required for the alternative. C. Estimate the amount of time that would be required for acquisition of the properties.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	
		2. Do we share an ingress/egress with another property?	A. Assess likely facility access requirements.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	
		3. Do we need any permanent easements or just temporary construction easements?	A. Assess need for temporary easements during construction. B. Assess need for permanent easements following construction for O&M access.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	A. Assess whether private property disconnections would require a right-of-entry agreement for the work; or construction easements. B. Estimate the amount of time

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											required to complete process of acquiring agreements for private properties work.
Environment											
	1. Cultural Resources										
		1. Will construction of the alternative impact significant archaeological resources?	A. Assemble archaeological information from state database B. Assess likelihood of encountering resources within the potential placement area for facilities based on database. C. Identify likely survey needs and affect on project sequence and schedule	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	
		2. Will construction of the alternative impact significant historic resources?	A. Research and assemble any historical resource data within the potential placement area for facilities.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	
	2. Fish and Wildlife										
		1. Will construction of the alternative adversely affect fish and wildlife?	A. List of fish and wildlife species in the vicinity of the areas for facilities (bald eagles nest, etc.). B. Estimate the impacts of staging via Puget Sound for bottom of basin construction.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	A. Assess concerns and potential restrictions related to water quality treatment of stormwater.

PRELIMINARY DRAFT

			Information Needs for North Beach Alternatives								
Category	Sample Criteria	Sample Questions	**1A: Bottom of Basin Storage w/ Conveyance to Carkeek PS**	**1B: Centralized Storage w/ Conveyance to Carkeek PS**	**1C: Centralized Storage w/ Conveyance to 8th Avenue Interceptor**	**1D: Tunnel Storage**	**2A: Conveyance to Carkeek CSO TP through Beach Alignment of Pipeline**	**2B: Conveyance to Carkeek CSO TP through Neighborhood Alignment of Pipeline**	**3A: Bottom of Basin Treatment Facility**	**3B: Centralized Treatment Facility Up in Basin**	**5A: I/I Control**
		2. Will operation of the alternative adversely affect fish and wildlife?	A. Provide a list of adverse effects from operation of the facility (e.g., noise, light, etc)	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A. A. Identify potential affects to fish and wildlife associated with effluent discharge.	Same as Alternative 2A.	Same as Alternative 2A.	Same as Alternative 2A.	
		3. Will operation of the alternative have indirect effects on fish and wildlife?	A. Provide a list of indirect adverse effects from operation of the facility.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A. A. Identify potential indirect effects to fish and wildlife associated with effluent discharge.	Same as Alternative 2A.	Same as Alternative 2A.	Same as Alternative 2A.	
		4. Will a WDFW and/or COE permit be required (trigger would be in-water work or access to worksite adjacent to Puget Sound)? If so, multiple work closure periods could be imposed for fish and wildlife protection. Will work hours be restricted on permit due to noise and traffic disruption?	A. Estimate likely restrictions for noise resulting from construction in a residential neighborhood. B. Estimate likely restrictions due to traffic disruptions from construction access. C. Estimate the impacts of staging via Puget Sound for bottom of basin construction.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	
	3. Environmentally Critical Areas										
		1. Will the alternative impact wetlands and/or wetland buffers?	A. Identify wetlands and critical areas in the vicinity of the proposed facility. B. Identify likely constraints/restrictions to working within the identified wetlands	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	

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			Information Needs for North Beach Alternatives								
			or critical areas.								
		2. Will the alternative require disruption of steep slopes or increase the likelihood of landslides?	A. Identify steep slopes in the areas that would affect facility locations.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	
	4. Contaminated Soils and Sediments										
		1. Will construction of the alternative disturb contaminated soils?	Hold for Development of information by technical team	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	
	5. Water Quality										
		1. Relative to other alternatives, will Puget Sound water quality be positively or negatively affected during construction?	A. Estimate ability to contain sediment during construction and limit water quality impacts in the vicinity of construction.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	
Community Impact											
	1. Location										
		1. Is the site visible to surrounding neighbors/users? Are there extreme requirements for lighting, noise control, or odor control that exceed WTD design standards?	A. Define the design parameters that would be necessary to site facilities adjacent to residential and/or commercial properties (including noise suppression; odor control; site security; etc.).	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	
		2. Will facility change long term traffic patterns, public access? Are we affecting public use of the property for dog walks, bicycling, hiking, etc.?	A. List of potential impacts to public access resulting from siting of proposed facilities.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	
		3. Will siting the facility in this location affect adjacent properties?	A. List of potential public concerns (such as noise; vibration; settlement; etc) to	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	

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			adjacent properties resulting from siting of proposed facility.								
	2. Long Term Risk, New Facilities										
		1. Will the project increase the potential for flooding or affect slope stability?	Hold for Development of information by technical team	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	
		2. What are the affects of O&M activities on the Surrounding community?	Hold for Development of information by technical team	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	
	3. Construction Impacts										
		1. What is the construction schedule/duration?	Hold for Development of information by technical team	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	
		2. Will construction be carried out in public access areas, including parks, beaches and roadways?	A. Identify public access areas likely affected by construction	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	
		3. What are anticipated construction impacts to near neighbors? What are the traffic disruptions?	A. List of impacts to be considered for facility construction (noise, vibration, settlement, etc.).	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	Same as Alternative 1A.	

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