STAKEHOLDER ENGAGEMENT COMMITTEE

MINUTES

REGULAR MEETING
Wednesday, January 22, 2020
3:00 PM
(Paragraph numbers coincide with agenda item numbers)

1. WELCOME/CALL TO ORDER

The regular meeting of the Delta Conveyance Design and Construction Authority (DCA) Stakeholder Engagement Committee (SEC) was called to order at the Belle Vie Vineyards, 19900 Sherman Island Cross Rd., Rio Vista, CA 94571 at 3:06pm.

Sarah Palmer welcomed SEC members and the public to the meeting, thanked the venue hosts and acknowledged the work of staff to prepare for the meeting. This facility accommodates our large meeting size and allows for live streaming during the meeting.

The purpose of the SEC is to create a forum for Delta stakeholders to provide input and feedback on technical and engineering issues related to the DCA's current activities. The SEC is a formal advisory body to the DCA Board of Directors and is therefore subject to public transparency laws applicable to public agencies such as the Brown Act and the Public Records Act. It is important to note that the SEC and its meetings are not part of the Department of Water Resources's (DWR's) California Environmental Quality Act (CEQA) scoping process related to a potential Delta Conveyance project and comments made at this meeting will not be tracked or recorded for those purposes.

Ms. Palmer noted that the public comment for sub- items 4a-4d would be taken at the end of all the presentations for Item 4. Members of the public who wish to speak should submit a speaker card.

2. ROLL CALL/HOUSEKEEPING

Committee members in attendance were Angelica Whaley, Anna Swenson, Barbara Barrigan-Parrilla, Douglas Hsia, Jim Wallace, James Cox, Karen Mann, Malissa Tayaba, Dr. Mel Lytle, Phillip Merlo, Sean Wirth and Mike Hardesty. Ex-officio members Gilbert Cosio and Michael Moran were also in attendance. Tribal representative alternate Jesus Tarango also attended.

Committee members not present included David Gloski and Lindsey Liebig.

DCA Board Members in attendance were Director Sarah Palmer (Chair) and Director Barbara Keegan (Vice Chair). In addition, DCA and DWR staff members in attendance were Kathryn Mallon, Valerie Martinez, Joshua Nelson, Phil Ryan and Carrie Buckman.

Ms. Palmer stated the purpose of the SEC is to create a forum for Delta Stakeholders to provide input and feedback on technical and engineering issues related to the DCA's current activities. The SEC is a formal advisory body to the DCA Board of Directors and is therefore subject to public transparency laws applicable to public agencies such as the Brown Act and the Public Records Act. It is important to note that comments made during SEC meetings do not directly feed into DWR's CEQA process related to a potential Delta Conveyance project.

Ms. Palmer reviewed housekeeping items. Members should sign in for accurate record-keeping. Members of the public can fill out and submit speaker cards in order to speak during the public comment period. Meeting is being filmed and webcast live. Please be mindful of cameras and walk behind them if leaving the meeting. Emergency exits were reviewed.

Ms. Palmer provided an overview of materials provided to SEC members and members of the public. Documents included the current meeting agenda, meeting minutes from last meeting, question tracking packet, staff contact list, updated glossary, updated maps showing the corridor options and information from DWR including the NOP and supporting Q & A as well as a list of scoping meetings. A copy of the meeting presentation and some lookup tables were also provided.

Ms. Palmer reiterated the SEC's three areas of focus. SEC creates a forum for Delta Stakeholders to provide input and feedback on technical and engineering issues related to the DCA's current activities. It provides an opportunity to identify engineering and design opportunities that would avoid, reduce or offset effects from construction and facility siting. The committee members can relay information between their respective groups and the SEC.

SEC Meetings are subject to the Brown Act, meaning committee members must avoid discussing committee business outside of the meeting with a majority of members either all at once or via serial meetings. The chairperson presides over meetings and discussion will be guided by the meeting facilitator, Valerie Martinez. Staff will provide technical information to support the committee's work. Each meeting will be goal-oriented and will be purpose driven. The information provided is for purposes of discussion only and is subject to change. The committee holds no formal voting authority. We will seek consensus. All views will be recorded and reported. Participation in the SEC does not imply support for any proposed conveyance project.

3. MINUTES REVIEW: December 11, 2019 Regular SEC Meeting

Ms. Palmer asked if there were any comments on the minutes. Mr. Cox noted the minutes were excellent and helped clarify things he heard in the meeting. No objections or changes were reported.

4. DISCUSSION ITEMS/PRESENTATIONS

a. Follow-up and Roundtable on Dec. 11, 2019 SEC Meeting

Kathryn Mallon said the DCA wants to ensure SEC member questions are answered. The question tracking packet distributed at this meeting contains a log of SEC member questions asked at the December 11 meeting. The log notes the questions asked, date, who asked, which staff member responded and whether or not the question has been answered or will be answered in a future meeting. The packet contains the answers to questions that are listed

"answered" on the log. The information in the question tracking packet has also been entered into a customer service system that will eventually be integrated on the website as part of a publicly-searchable database. This is a suggestion made previously be SEC member Anna Swenson.

The packet also contains a memo in response to a question asked at the last meeting by Mr. Wallace in regards to how the SEC would be reflected in the DWR's Environmental Impact Report (EIR).

Ms. Swenson asked to have the question tracking packet in a digital format. Ms. Mallon indicated a PDF of the packet would be available following the meeting.

Carrie Buckman reviewed the memo DWR prepared to address the question about reflecting the SEC in the EIR. The DWR released the NOP last week on January 15 and the scoping period has now begun. However, comments made at SEC meetings are not a part of the scoping comment process and are not tracked or recorded for those purposes. The memo is detailed in regards to the interconnection between DWR and DCA. DWR is the lead agency and is leading the project as the owner and operator. DWR has asked DCA to design the project with a focus on reducing or avoiding effects caused by construction. The DCA has formed the SEC to inform that work and this committee is specific to the DCA's work in that regard. DCA's work is under DWR's oversight and will therefore be included in the Administrative (Admin) Record that is legally required for the EIR. The Admin Record contains applicable background documents that have informed the environmental process, including emails, staff communications, management meeting notes, reference documents and other items that have informed the EIR. Where the EIR includes conceptual engineering designs that reflect input from the SEC, that design information will be part of the Admin Record. DWR will include a chapter in the EIR that will focus on public involvement processes that focus on EIR development. The SEC will likely be referenced in that chapter. It will be specifically note that the SEC is a committee to the DCA and the role is limited to providing input on DCA's design and construction process, which is a process separate from the public outreach undertaken by DWR as the Lead Agency.

Barbara Barrigan-Parrilla thanked staff for the detailed information. Will the questions she asked about water quality be included for tracking purposes? Ms. Mallon said one of the reasons the minutes are so detailed is to capture those questions and ensure they are logged. Also, if members have questions between meetings and want to send them to Nazli, we will ensure those are also tracked.

Ms. Barrigan-Parrilla noted a follow-up question to add to the log: will there be real-time disclosure of any water quality issues found during construction?

Ms. Martinez noted that staff member Karen Askeland will be adding topics for future discussion on an easel at the meeting so members can see them as the meeting moves along.

Mr. Hsia noted that the maps included in the binders didn't include one specifically for cultural sites. Are cultural sites a factor considered in siting facilities? Ms. Martinez noted that the upcoming NOP discussion would likely address this question.

Ms. Martinez expressed to goal of the member roundtable is to follow-up on materials distributed at the previous meeting and also hear from SEC members about the outreach they are conducting within their communities and what feedback they have been getting. She asked if there were any questions or clarifications needed about the technical elements of the materials distributed at the December meeting.

Ms. Tayaba reported that she has conducted outreach to tribes and was able to hear about a lot of their concerns, including effects to villages, sacred sites, ancestral homelands, natural resources, traditional waterways, ceremonies, traditional regalia and food. Other concerns include water quality, water levels rising and falling and how that will affect fish and plants, how much water is being pulled out and from where. Tribes would like to get an understanding of what will be happening throughout the project from the North to the South. Ms. Tayaba shared the materials from the December meeting and will be meeting with tribes on a regular basis to insure they are well informed. Overall, they are very concerned about how this project will affect tribes.

Ms. Martinez reminded SEC members that the DCA can arrange to make informational presentations to constituent groups if it would be helpful as part of SEC member outreach.

Ms. Swenson reported the feedback she has received from the community is that many are wondering why there hasn't been significant analysis of alternatives to the tunnels. It looks like a re-packaging of the same plan. They had hoped that there would be new ideas and ideologies about how to solve our problem. Overall, it looked like the same plan they've seen over and over again.

Ms. Mann met with her group, Save the California Delta Alliance, last week at Discovery Bay. The concern is that the project looks and sounds the same as before and there was concern that alternatives were not taken seriously. The group is looking forward to the information brought forward from this point.

Ms. Barrigan-Parrilla noted her members reported similar concerns. Additionally, there are concerns from members throughout the state that the scoping meetings do not include impacted areas in the San Francisco Bay. Requests have been received from Berkeley, Oakland, Vallejo, Richmond and San Francisco. Groups in Southern California report that one meeting in Southern California is not adequate. There need to be additional meetings in South Central LA and East Los Angeles to really talk about water production through the scoping process and cost analysis.

While it is understood environmental justice (EJ) work will be done including meetings with groups throughout the state, there is a question as to DWR's EJ work in other parts of the state that are going to be dependent on the project including EJ communities in Fresno and whether or not they will be receiving the water. There are also concerns for tribes in Northern California and groundwater users. While EJ outreach is good, it doesn't reach the whole community. That's why there is concern if the scoping meetings are really broad enough for the project overall. Existing EJ groups in the Delta and other groups are concerned about the increased urban impacts of the Eastern alignment. Feedback was also received about why there are no meetings in Antioch or Rio Vista. It is important to note that members of EJ communities are under stress; they aren't able to drive 20 miles to a meeting. Providing food and childcare is

standard practice. You can't hold a meeting in Brentwood and expect impacted communities that are struggling in Antioch or Rio Vista to make it.

Barbara Keegan reported hearing disappointment that Paul Clausen had to leave the committee due to a move. The interests of recreational boaters that he brought to the table is still a perspective that is needed. There is hope he will be replaced with another person from the recreational boating committee.

Ms. Mann indicated she was recently asked to join the board of Boaters of California (BOC) and she is also extremely active on the waterways in her boat. Until another representative is identified, Ms. Mann offered to represent those interests on the committee.

Ms. Palmer thanked Ms. Mann for her offer.

Ms. Martinez reminded members that there is an application process open until January 24, 2020 for replacing the Recreational Boating position on the SEC. Please encourage qualified candidates to apply. The hope is to have the new member at the next SEC meeting.

Ms. Swenson thanked staff for extending the deadline for filling the opening on the SEC following her email exchange with them.

Mr. Moran reported some of the concerns he has heard include groundwater and local impacts on irrigation and restoration possibilities going forward. There is question as to the possible impact to the Park District's several properties in the South-Central Delta that are under irrigation leases considering the routes of tunnels and their impacts to certain water sources. Contracts are being signed for particular amounts of water on those properties and it's not certain what the impacts will be.

There are also concerns about restoration plans and mitigation plans and their effects on state parks such as the Franks Tract Project that is currently underway. There was a lot of curiosity about the project's justification; the "why" and the reasoning for the project. The Cultural Services Coordinator was very concerned about having a rigorous process in place for any undocumented cultural sites that might be discovered during construction.

Big Break Visitor Center and the City of Antioch have great meeting places, if they are needed in order to get meeting places closer to communities. Mr. Moran indicated he would be happy to help with that effort.

Ms. Martinez reminded once again that these comments are not being recorded as part of the DWR's CEQA scoping process. Members are encouraged to submit scoping comments to DWR.

b. NOP Overview and SEC Work Product Discussion

Ms. Buckman announced the Notice of Preparation (NOP) was released on January 15 and reminded members of the overall environmental process that generally moves through phases. The process begins with initial outreach, moves into project definition, then to development of a Draft EIR followed by the Final EIR.

Release of the NOP is the very beginning of the environmental process. There is quite a bit of outreach and work needed to define the proposed project and the alternatives and to analyze them. All of that work is forthcoming.

Ms. Buckman provided background on the NOP. In July 2017, DWR approved WaterFix, a two-tunnel conveyance project. In February 2019, Governor Newsom announced his support for a single tunnel project. In April 2019, Governor Newsom issued an executive order directing DWR to assess planning for a single tunnel project. In May 2019, DWR withdrew all California WaterFix approval and environmental compliance documentation and all planning on WaterFix ceased. In January 2020, the State released the draft Water Resilience Portfolio which identifies issues which face California water into the future and a suite of actions to address those issues. One of those actions is to consider a potential single-tunnel conveyance project to modernize Delta conveyance. After that, the DWR issued the NOP to officially begin the environmental compliance process.

The purpose of the NOP is to document the intent to develop an EIR for a proposed Delta Conveyance project. The NOP triggers the start of scoping, where DWR receives public input on the scope of the environmental analysis, the alternatives and the content of the EIR. It begins the public comment period, which is scheduled to go through March 20, 2020. Scoping is typically 30 days as defined in CEQA, but DWR has extended the comment period to 60 days to allow more time for public comment. There are seven public meetings scheduled statewide; most meetings are in the Delta.

Ms. Swenson asked if comments made at public scoping meetings are considered part of the record, or if comments need to be made in writing. Ms. Buckman said there will be a court reporter at all scoping meetings and all comments made at scoping meetings will be part of the scoping comment record.

Ms. Buckman explained the content of the NOP. The NOP includes the description, objectives, area and facilities of the proposed project.

In regards to Mr. Hsia's earlier question, effects to heritage areas will be analyzed. That is also a great question to submit via the scoping process.

Ms. Buckman emphasized that the NOP is intended to provide information in order for the public to comment about the scope of the environmental analysis. The NOP does not indicate a decision has been made about the proposed project. The NOP is a starting point; it is not a decision.

The NOP's project purpose and objectives address the "why" that Mr. Moran mentioned earlier. The NOP documents the fundamental reason DWR is considering the project. The proposed project's purpose is to develop new diversion and conveyance facilities in the Delta necessary to restore and protect the reliability of water deliveries in a cost-effective manner, consistent with the State Water Resilience Portfolio.

The proposed project's objectives are to address sea level rise and climate change, minimize water supply disruption due to seismic risk, protect water supply reliability and provide operational flexibility to improve aquatic conditions.

Ms. Buckman provided an overview of the proposed project facilities. There are intakes on the Sacramento River, shown on the NOP map as three black dots. Two intake facilities will be considered for the proposed project, but there are three potential sites. The proposed project also includes tunnel reaches and tunnel shafts. Two forebays are also being considered; an intermediate forebay and a forebay at the southern end to help regulate flows in the tunnel. A pumping plant is proposed at the southern end of the facility. South Delta conveyance facilities are also part of the proposed project to convey water from the pumping facility to the existing State Water Project facilities and potentially the Central Valley Project.

Only a single tunnel is proposed, but the NOP notes two different corridor options. The NOP map shows the Central Tunnel Corridor in yellow. The Central Tunnel Corridor is similar to past alignments. The NOP map shows the Eastern Tunnel Corridor in lavender. The Eastern Tunnel Corridor is included to explore the options to potentially reduce some of the anticipated effects within the Central Delta and gauge potential trade-offs.

Mr. Moran asked if there are yet any proposed locations for tunnel shafts. Ms. Buckman said this committee will work on that, but those locations are not specified in the NOP.

Ms. Mann asked if the barge mapping would change depending on which corridor is ultimately selected. Ms. Mallon said that when the committee gets to the discussion on locating facilities, members will see updated barge maps that were developed with the barging consultant and show where access is possible with large and small barges. Those maps will be presented to the committee for comment and review. Barging could potentially drive locating facilities in the corridor to some degree. DCA will reissue the maps provided to the committee before that show the corridor options. The maps previously issued did not show the corridors because the NOP had not yet been released at that time.

Ms. Buckman stated the proposed project includes a capacity of 6,000cfs, which would include two intake facilities along the Sacramento River with a capacity of 3,000cfs each. The NOP acknowledges that DWR will likely consider alternatives that could range from 3,000cfs to 7,500cfs.

For alternatives development, DWR will select a reasonable range of potentially feasible alternatives that meet project objectives and present opportunities to reduce impacts. The NOP includes a short discussion on alternatives, but DWR will mostly look to scoping comments for help in this area. Following scoping, DWR will go through an alternatives selection process to identify the range that will be analyzed more closely in the EIR. DWR will publicize that effort. Identification of alternatives is being done through the CEQA process's public involvement effort and will not be conducted in the SEC meetings. The SEC does not have a direct role in alternatives development.

The release of the NOP has enabled further clarification of DCA's role. DWR has directed DCA to develop conceptual designs for the two corridor options that are part of the proposed project. The proposed project includes 6,000cfs as the capacity, but there is an economy of scale from evaluating other capacities at the same time design is being done. Therefore, DWR has asked DCA to look at the alternate capacities of 3,000cfs, 4,500cfs and 7,500cfs now rather than waiting until scoping has concluded to begin their evaluation. There has been no

decision made to include any other capacity; alternatives are all subject to input received during scoping.

The SEC's role is to develop an understanding of Delta conveyance components and siting drivers. The SEC also reviews materials on facility layouts, site selections and efforts to address construction effects such as traffic volume, noise, site run-off and air emissions and provide advice to the DCA. Comments made for the formal CEQA process must be made to DWR. Some comments made tonight during the roundtable discussion would be helpful for the scoping process. SEC members are encouraged to submit those comments to DWR through their scoping process.

Ms. Buckman reviewed how to submit scoping comments, which is also outlined in the NOP. Comments are accepted via email at DeltaConveyanceScoping@water.ca.gov, via mail to Delta Conveyance Scoping Comments, Attn: Renee Rodriguez, Department of Water Resources, P.O. Box 942836, Sacramento, CA 94236 or at a public meeting listed in the NOP. Verbal comments made at a public scoping meeting will be documented by a court reporter and will be part of the record.

There are seven public scoping meetings scheduled during the first three weeks of February. There is a meeting scheduled for February 12, which is the same night as the next SEC meeting, so Ms. Buckman will not be able to attend that SEC meeting and will send a delegate in her place. The agenda will also be developed to not depend as much on the environmental portion.

Ms. Buckman reviewed the key milestones of the project. The Draft EIR is anticipated at the end of 2020 and the Final EIR is anticipated in early 2022.

Ms. Palmer suggested reading the Question and Answer document included with the NOP before reading the NOP itself as it sets up a nice scaffolding to know what to look for and how to read through the NOP. Also, make note of how to submit scoping comments as that is where SEC members' individual input will be reflected in DWR's CEQA process.

Ms. Mallon provided some disclaimers before addressing how the DCA will move forward now that the NOP has been released. The DCA is committed to sharing all of the pertinent information related to DCA's design studies with the SEC and wants to have an engaging and interactive dialogue will all SEC members. The technical information presented represents findings of current work products, but DCA is very early in the engineering process. Continued study can lead to refined recommendations or solutions. As long as the SEC continues, DCA will share any new ideas or changes that are developed. The work product DCA provides to the SEC should be considered in draft form. It does not yet reflect the opinions and comments from the SEC members that will be taken into account. The information DCA is sharing is all work-in-progress.

DWR is the final arbiter of the engineering plans that are put forward as part of the CEQA process and their participation at SEC meetings demonstrates their commitment to fully understanding the public issues surrounding the design and construction of the proposed project.

The NOP's key items for DCA include the facilities that comprise the proposed Delta conveyance project, the corridor map and a range of flows for study.

The work products DCA develops for DWR so that DWR can conduct their environmental analysis are called Engineering Project Reports (EPRs). DCA will develop an EPR for the Central Alignment, an EPR for the Eastern Alignment and an additional EPR for any additional alignments that arise as a result of the scoping process. DCA will also be doing alternate facility sizing for the four different flows ranging from 3,000cfs-7,000cfs.

The EPR contains three volumes: a narrative report that describes the engineering work, a drawing book with schematic layouts of facilities and a map book that shows the alignment. The EPR is attached to the Draft EIS for review.

All design work, largely focused on things that are most relevant to the Delta, will be routed through this committee. Reports will be finished up for submittal to DWR around mid-July.

Ms. Mallon outlined how the DCA and the SEC will move forward together. For the next six months, the SEC will be focused on siting facilities within the corridors that have been identified, preparing facility drawings to illustrate project components, preparing site layouts to construct facilities, describing and quantifying construction activities (i.e., construction schedule, anticipated noise effects, traffic projections, RTM production), identifying design solutions to reasonably and effectively reduce construction effects and identifying dual benefits where possible.

Moving forward, meetings will be more technical than they have been previously. Today's discussion will be about intakes and then DCA will provide a quick introduction about the key issues around logistics of traffic for the launch shafts. DCA would like for the first meeting in February to focus on siting the Intermediate Forebay (which is also a co-location of a launch shaft) and the location of the second launch shaft along the alignment in both of the corridors.

In the second February meeting, the planned discussion topic is the maintenance/retrieval shafts which have much smaller area footprints than the launch shafts so should hopefully be much easier to site. The discussion will also include Reusable Tunnel Material (RTM) management, as a lot of RTM will be produced as part of the proposed project. How much material will be produced and how it will be used may drive some of the decisions about where the facilities might be located.

Ms. Martinez reminded members that the roundtable portion of each meeting will be focused on what was presented at the previous meeting. This will allow members time to absorb the information received at a meeting and talk to their communities about it before returning to have meaningful discussion at the next SEC meeting.

Ms. Palmer asked if there were any questions from SEC members.

Ms. Barrigan-Parrilla asked for clarification regarding how the SEC members would be discussing the range of flows without discussing operations. Ms. Mallon explained that regardless of how the facilities operate, the design of the facility stays the same. The flow capacity doesn't affect the design of the facilities. For example, a project with a flow capacity

of 3,000cfs would include one intake with a smaller tunnel and smaller shafts that produce less RTM. The term "sizing" refers to the capacity of the project, which could be 3,000-7,500cfs. While facilities for a 3,000cfs capacity project would be smaller than the sizing of facilities for the 7,500cfs, all facilities would be in generally the same location except for the intakes where more than one facility might be needed because there is a limit of 3,000cfs per facility.

Ms. Barrigan-Parrilla asked if there will be discussion about the flow capacity used and whether it would be pressurized or not pressurized. Ms. Mallon said the SEC can discuss engineering issues, but it won't have anything to do with what capacity ends up being selected.

Mr. Moran asked what the role of an SEC member would be when attending a scoping meeting. Ms. Buckman explained the role would be that of a member of the public. The general structure of the scoping meeting is a short presentation followed by a brief period to ask clarifying questions and then members of the public can provide their comments.

Mr. Wallace asked if the proposed project's capacity was in any way tied to potential federal involvement. Ms. Buckman said at the moment DWR is asking for a range of flows so that design work is being done at the same time so that the issue doesn't have to be revisited later. DWR does not yet have an answer about federal involvement, and that is why the NOP consistently says "and potentially the Central Valley Project (CVP)." It will depend on feedback received from the federal government.

Mr. Hsia said a corridor was proposed through the Deepwater Channel with an intake near Rio Vista. Is that corridor completely out of the question? Ms. Buckman said it is not a part of the proposed project but could still be suggested as an alternative to be included in the alternative formulation documentation.

Dr. Lytle asked why the Eastern Corridor was created. Ms. Buckman explained the potential effects of the proposed project are focused on places where there is work being done primarily at the surface, such as the tunnel shafts and the intakes. DWR wanted to evaluate if potential effects would be reduced by moving that activity closer to I-5. The two options in the NOP indicate a trade-offs analysis and do not represent a decision. Including both in the NOP provides the opportunity to analyze and compare both options. Input from the SEC will also be helpful in that regard.

Mr. Hardesty asked if there would be some information provided to the committee regarding hydraulic impacts such as water surface elevations and velocity in making comments on the sizing and capacities. Ms. Buckman explained that work will be part of the CEQA process. DWR will do quite a bit of technical analysis and is planning to conduct technical workshops that include information about topics such as hydraulics. There will be opportunity for public comment as part of DWR's CEQA process.

Ms. Palmer announced the committee would recess for a 10-minute break. Food is provided for SEC members due to the length and timing of the meeting. Once SEC members have served themselves, members of the public are welcome to partake of the refreshments as well.

c. Intakes Overview

Ms. Palmer asked Ms. Mallon to introduce the discussion on intakes.

Ms. Mallon thanked members for the time in opining on the design concepts that reflect their values and concerns. DCA is grateful for their respect and hope they feel their voice is being heard within the boundaries of what the SEC is here to achieve.

If given the choice, intakes would not be where to start discussion on the proposed project. Intakes may be one of the more challenging aspects of the project. Because intakes are where the flow begins, intakes are where the SEC will begin the discussion.

At the last meeting, a brief introduction was provided on each of the component facilities of the proposed project, but today we will take a deep dive. We will present information on the siting analysis that has been conducted, screen technologies under evaluation, construction site requirements, construction schedule, key activities and potential effects. Questions are welcomed during the presentation if clarification is needed to understand; DCA wants to ensure SEC members fully understand the information being presented so members can substantively opine. We may need to table some discussions for the sake of time but we will pick it up at a future meeting.

We are also prepared to skip the last technical presentation so that there is ample time to discuss intakes.

Unlike the siting of the other component facilities in the proposed conveyance project, the State Department of Fish & Wildlife, the U.S. of Fish & Wildlife Service and the National Marine Fisheries Service are the primary drivers for identifying constraints and siting criteria for these intakes. DCA shares this information not to dodge responsibility but to point out the reality of the limitations of locating the facilities at any given point along the river.

Ms. Mallon introduced Phil Ryan, DCA Engineering Manager, and one of the most experienced fish screen and intake engineers in the United States. Mr. Ryan served as the lead designer on the Freeport intake which is just upstream of Clarksburg.

Mr. Ryan explained that intakes are fairly complicated and the discussion will be technical, so please ask questions if there is something you don't understand. The discussion may be more detailed that some members care to understand, but DCA hopes to provides detailed information for those who want to fully understand and also to help address some common misunderstandings.

The intake siting study area is on the Sacramento River from the American River to Sutter Slough where there are better flow conditions. Sites on the east bank are viable with the NOP corridors, but the west bank is not viable due to poor availability of access routes needed to construct the facilities.

The number of intake facilities needed for the proposed project varies by the flow capacity. A flow capacity of 3,000cfs would require one intake. A flow capacity of 4,500cfs would require 2 intakes; one at 3,000cfs and one at 1,500cfs. A flow capacity of 6,000cfs would require 2 intake facilities at 3,000cfs each. A flow capacity of 7,500cfs would require 3 intake facilities; two at 3,000cfs and one at 1,500cfs.
DCA conducted a detailed site investigation. It is important to understand that DCA conducted its own detailed analysis and also utilized information compiled by the Fish Facility Technical Team (FFTT) for the previous WaterFix project. The FFTT was comprised of the fish regulatory agencies, consultants and other interested people who helped evaluate the river for potential intake sites. The FFTT identified, analyzed and then made conclusions on site locations. DCA reviewed their information to ensure understanding of their methodology, but then re-evaluated using new information such as the State's underwater river mapping conducted last summer. All of this information was used to re-evaluate and verify the potential intake sites.

There are several factors that are considered in identifying intake sites. River conditions are the first category of factors. Outside bends of the river are ideal because sediment washes by and the water levels are typically deeper. Shoaling, or the accumulation of sediment, is also less likely in those areas. The facilities are roughly 900-1,600ft long, so potential intake sites also need to contain a relatively long, straight section. If there will be more than one intake, the regulatory agencies require at least 1 mile between intake sites.

The landside effects are also considered, such as what types of properties are affected, what is currently built in the area and how close the sites are to existing development. The cities of Hood and Clarksburg, for example, are important to consider when selecting an intake site.

There are also geotechnical considerations for the type of work that is required at the intake sites.

Additionally, habitat and environmental concerns are also considered. Mr. Ryan noted that the habitat and environmental concerns did not turn out to be a big differentiator and is roughly the same for each of the potential intake sites.

Finally, there has to be ability to get to the sites to build them, so road access is also considered.

Based on evaluation of all of these factors, five candidate sites emerged. These are the same sites identified in the previous project. The river has been exhaustively studied and extensive studies have been conducted. DCA studied new land use, flows and river bathymetry. There are no other sites between roughly Freeport and Sutter Slough that meet all the qualifications. The facilities may be able to slide back or forth a few hundred feet, but there really aren't any other places along the east bank to place the intake facilities. The West bank is not logistically feasible. All of the intakes are compatible with either corridor option in the NOP.

Ms. Swenson asked if SEC members could have the GPS coordinates of the three favorable intake sites. Mr. Ryan said those will be provided.

Ms. Martinez noted that some of the slides in the printed presentation are marked "superseded" for which there are replacements slides available. The team was working to improve and refine

the presentation up until the very last minute. When the presentation is posted online, it will contain the most updated and accurate information.

Mr. Moran asked if there is any correlation with outside bends and in-migration and out-migration of fish. Mr. Ryan said he is not a biologist and can't answer the question, but the question will be noted.

Ms. Hsia asked Mr. Ryan to identify the intake sites that were part of the WaterFix project. Mr. Ryan reiterated that the intake sites displayed and under current consideration are the same sites identified in the WaterFix project.

Mr. Ryan noted all intake facilities will be designed to the highest level of compliance with fishery agencies' protective measure for out-migrating fish.

In the analysis of five potential intake site, DCA ranked sites C-E-1 and C-E-4 as least favorable and not recommended for use unless the 3 other sites are not implementable. These two were ranked least favorable because of development in the area and relatively poor geotechnical conditions. C-E-4 is simply too close to Hood. The needed road improvements would literally stretch right into town.

Site C-E-3 has been ranked as the best site because it is the deepest, has the best conditions along the river and there are no existing homes in the footprint.

Sites C-E-2 and C-E-5 are not being ranked in comparison to one another. Site C-E-2 is not as deep, but is further upstream and there are less regulation concerns with the Delta smelt.

Analysis and comparison of all sites will be included in the environmental documentation.

Ms. Barrigan-Parrilla indicated it would be good to see answers to questions about the river bends even though it comes from fish biologists. It is an unresolved issue for Delta stakeholders. Mr. Ryan noted that the agencies want intakes on the outside of bends as well because the sweeping flow is better to bring fish past the structures. Ms. Barrigan-Parrilla noted there is a difference of opinion within the fish biology community on the matter.

Ms. Swenson asked where the DCA obtained the geotechnical information that was used in the past couple months and can members have access to that information. Mr. Ryan said there were river borings in front of each intake as well as publicly-available state and county well data that was analyzed. In regards to sharing geotechnical data, Ms. Mallon said DCA would share whatever it could legally release.

Ms. Swenson asked what would happen if facilities were built to meet current regulations but then regulations were changed after facilities were built. Mr. Ryan said agencies don't normally require changes to facilities once permits have been issued, but there are some considerations for adapted management. The intakes will be designed for Delta smelt protection, even though there really are very few Delta smelt in this area. This level of protection is almost double the level required for salmonids.

Mr. Ryan explained the discussion will now focus on the different types of screens used at intake structures: plate screens and cylindrical tee screens. There are four types of facilities that use plate screens: in-channel vee type, in river, on-bank inclined plate or on-bank.

The in-channel vee type is used in Redding at the Anderson Cottonwood Irrigation District. It is a facility that sits in the river, directly in line with the flow. The fish collected at the apex of the vee are collected and returned to the river. This type of facility is also used at the State facility, where fish are pumped into a truck and hauled away. The in-channel vee type facility is not recommended by the regulatory agencies if other alternatives are available.

The second type of facility that uses plate screens is an in-river facility as can be seen in the City of Sacramento. The facilities for the proposed project will likely be ten times larger than this facility. Evaluations have determined an in-river facility is not appropriate for the proposed project because it is too large and would have too great an effect on flood levels.

The third type of plate screen intake facility is an on-bank inclined plate that is placed along the bank of the river. The inclined plates mimic the side of a river. This type has the smallest footprint of the plate screen type facilities, but are difficult to clean because of the slant on the screen. The screens must be cleaned with an air burst. Due to the length of the facility needed for the proposed project, the agencies indicate this type of facility should not be used because the cleaning mechanism is not as effective and the protection needed is not provided.

The fourth type of plate screen intake facility is an on-bank facility with vertical plate screens. An example of this type is the Freeport facility near Downtown Sacramento. This is the type of facility the proposed project would utilize if plate screens are used. More information will be provided in this presentation.

Ms. Swenson asked the flow capacity and approximate length of the Freeport facility. Mr. Ryan said it is a little over 300cfs with a length of approximately 200ft. A direct size comparison to the proposed facility will be shown momentarily.

In addition to plate screen intake structures, there are also cylindrical tee intake facility types: vertical and inclined. The Yellowstone River in Montana has an on-bank vertical cylindrical tee screen intake facility. There are also several of these types of facilities in California, but the photo displayed was chosen for the presentation because it shows several plate screens lined up, similar to the configuration of the proposed project. The second type of intake facility type with cylindrical tee fish screens is the inclined as seen in Alameda County. The incline type is not applicable to the proposed project because of the structure type that is required in the levee because it is a flood control levee.

The proposed project is currently focused two potential options for intake facilities: the vertical cylindrical tee (like on Yellowstone River) with on-bank structure and the vertical plate with on-bank structure (like the Freeport facility).

Mr. Ryan gave an overview of fish screens. Fish screens are designed to protect the target species, juvenile salmon/steelhead and the juvenile Delta fish species, commonly referred to as the Delta smelt. The fish screens are designed with an approach velocity of .33fps (feet per second) for salmonids and .2fps for Delta smelt, which is an incredibly slow rate; much slower

rate than walking. Flow equals the velocity times the area. In other words, if the flow is known and the approach velocity is known, the area can then be determined. This is the formula that will determine the area of the screen.

The fish screens contain a 1.75mm opening and a 1.75mm bar, meaning they have a 50% open area, which exceeds the 27% minimum open area requirement. The screen system itself is comprised of the screen, a baffle system that ensures uniform flow and a screen cleaner.

Mr. Ryan showed a sample illustration of a layout for a vertical plate screen system. The black panels in the illustration are fish screens. The posts shown that come up to the top of the structure are guide rails. The fish screens are big, flat panels that slide down the guide rails to the bottom. Solid panels are placed above; the flow can only go through where the fish screen is down at the bottom. There are docking areas where the screen cleaners are kept. There is a motor atop the docking areas with cables that connect to a giant brush. The brush is drawn back and forth across the face of the fish screens to clean them. A counterweight keeps the brush against the screen. The flow goes through the screens, into the structure and leads into sedimentation basins through box conduits.

Mr. Ryan showed a presentation slide featuring a photo of each of these component parts of the vertical plate fish screens: flow baffle panel, panel guide rails, cleaner brush and screen cleaner assembly. The baffle plate slides behind the fish screens and ensures an even distribution of flow across the screen. Occasionally, the fish screens are pulled up for pressure-washing on the backside in order to prevent growth of foreign materials on the side of the plate that the brush does not clean. During this process, the solid plates slide down to where the screens typically sit to temporarily prevent flow into the intake.

A video was shared to show how the brushes clean the face of the fish screens. Regulatory agencies require brush assembly systems capable of running the entire length of the fish screens every five minutes, although cleaning isn't always performed that frequently. Ms. Palmer asked how often the screens are realistically cleaned. Mr. Ryan indicated regular inspection is required and screens are cleaned as often as required in order to keep the screens clean. The river water temperature typically determines the cleaning frequency. At the Freeport facility during the summer, the brushes run every hour or less. In the winter, they may run once or twice a day because less algae grows during that time because the water is colder. Nevertheless, operators are encouraged to run the brushes at least twice a day in order to ensure the brushes are operational.

Ms. Swenson asked how noisy the fish screen cleaning process is because people located across from the Freeport facility have reported the process creates noise impacts. Mr. Ryan said that concern is worth noting because the Freeport system was creaky when it first started due to a pulley system that was not properly lubricated. Ms. Giacoma asked for the noise information in decibels.

Mr. Wallace asked what happens to the material that comes off the screens. Mr. Ryan explained that each time the brushes complete their sweep of the face of the screen, the material on the brush is pulled downstream. Because frequent cleaning prevents the build-up of large quantities of material, the brushes aren't removing much. Also, the Sacramento River is relatively clean in

comparison to many rivers across the country and doesn't regularly have large mats of weeds or seaweed.

Ms. Swenson noted that Delta farmers might disagree that the Sacramento River is clean. Near Clarksburg, filtration systems on vineyard irrigation drip lines have to be cleaned every twenty minutes in some cases. Ms. Palmer said that river cleanliness is relative. Mr. Ryan further explained that the proposed project is not far downstream from the Freeport facility, which has relatively clean water. Also, the intake facilities are not trying to clean to the same degree as a drip line.

Dr. Lytle said the City of Stockton has a pumping station with vertical plate screens at the end of Empire Tract for their drinking water. They utilize an automated brush system that cleans the face of the screens, collects the debris, pulls it up from the water and deposits it into a dumpster that is periodically emptied. The cleaners can sometimes be less than reliable. Tidal effects and changes in velocity changes the amount of debris in the water. Moss, sponges, tree limbs, leaves, garbage and other things are often found. Mr. Ryan acknowledged that the screens are the number one maintenance issue on intake facilities. The proposed project facility includes a debris fender and a log boom plan so that most floating debris is distributed downstream. The sloughs are different from main river stems not much material is anticipated to collect on the screen faces. Dr. Lytle said the Stockton facility is on the Deepwater Ship Channel and has experienced more debris than anticipated, even with log booms in place. Log booms quiet the water in front of the screen, but if even one piece of hyacinth gets between the log boom and the screen, then the screens are full of hyacinth blooms. Mr. Cox said debris in water is relative to the individual. Mr. Ryan agreed and clarified that the Sacramento River is much cleaner than other rivers he has experienced.

Ms. Barrigan-Parrilla asked about the FFTT reports for intakes 2, 3 and 5; her understanding was that salmonids did worse at those sites, so she has some questions. Is there an intake facility anywhere in California or anywhere in the U.S. that is built to the scale of the proposed facility? Mr. Ryan said the Glenn-Colusa Irrigation District in Hamilton City on the Sacramento River is a 3,000cfs vertical place screen facility. The Tehama Colusa Canal diversion facility on the Sacramento River at Red Bluff is a 2,500cfs facility.

Ms. Barrigan-Parrilla asked if the impact analysis of the fish screen brushing on the food web would be performed to a microscopic level. Ms. Buckman asked Ms. Barrigan-Parrilla to submit that concern as a scoping comment.

Ms. Barrigan-Parrilla asked about the accumulation of sediment through the screen. Mr. Ryan explained that the intakes are located in areas where sedimentation buildup is not expected. Also, the screens are kept off the bottom so that the bedload goes by. The sediment that is diverted in to the intake will be settled in order to keep it out of the tunnel system. This sediment will be sand-sized because it is not flushable by velocity.

Ms. Barrigan-Parrilla asked if there are calculations being done on the volume of sediment for these flows and for high water events. Mr. Ryan answered that those calculations are indeed being done. There has been statistical analysis performed on all of the USGS sediment data. Once the modelling is done, the sediment calculations can be calibrated with how much water will be brought through the intakes. Ms. Barrigan-Parrilla asked when the SEC members will see that

information. Mr. Ryan explained that data will take some time because the modelling is needed first.

Ms. Swenson asked if there were any facilities that are 6,000cfs or 7,500cfs. Mr. Ryan reiterated that each individual intake of the proposed project would be a maximum of 3,000cfs. Ms. Swenson asked if there are any projects with multiple intakes that equal a total flow of 6,000cfs or 7,500cfs on a single river. Mr. Ryan multiple intakes exist on the same river, he is not aware of any intake facilities in close proximity to one another with a flow capacity in that range.

Mr. Ryan reviewed an illustration of a sample cylindrical tee screen facility and explained the parts of the fish screens. The screen is a cylinder with an internal and external brush that sweep both the inside and outside surface as the screen rotates, which is a much more effective cleaning mechanism than other systems. Large clumps of debris that reach the screens are stopped by the brush and the river sweeps it to the side and away from the intake. These types of screens are lifted out of the water via crane when they need to be more thoroughly cleaned.

Ms. Mann asked about the likelihood of small fish getting tangled in the floating clumps of debris near the brushes of the screen. Mr. Ryan indicated the likelihood of this happening near a fish screen is no greater than it happening elsewhere in the river, and reminded members that the velocity is so low that even very small fish can swim away from the screens.

Mr. Ryan provided a conceptual drawing to illustrate to potential sizing of a vertical flat plate intake structure assuming a 3,000cfs flow rate (the maximum capacity of each intake facility). The total intake structure width is 40 feet while the overall concrete structure length is approximately 1,175 feet for Intake 3 and 1,575 feet for Intake 2, and the approximate length of Intake 5 falls within that range. The variation is due to the variation of the river depth at those locations. Mr. Ryan explained the various components that comprise the total length and the length of each of those individual components. The drawing shared is an example of the type of drawing that will be included in DCA's Engineering Project Report to DWR.

For a cylindrical tee screen intake structure assuming a 3,000cfs flow rate, the intake structure width is approximately 65 feet while the overall concrete intake structure length is approximately 965 feet long. Mr. Ryan explained the various components that comprise the total length and the length of each of those individual components. One advantage of the cylindrical tee screens is that the flow through every screen is controllable because each is equipped with a valve and flow meter. The other advantage is that the overall facility length is the shortest of all options being considered for the proposed project.

Ms. Hsia said it has been reported that the Clifton Forebay was killing Delta smelt. What does that facility not have that the proposed facility will have in order to ensure that doesn't happen? Mr. Ryan explained it is a different type issue because the facility is configured in a completely different way. The Clifton Forebay is not an on-bank type system. The flow is brought into the forebay and screened on the downstream end. DWR could probably provide a more thorough response, so the question will be noted.

Mr. Ryan showed an illustration demonstrating a comparison of the footprints of a vertical plate screen structure as opposed to a cylindrical tee screen structure. For reference, the visual comparison also included the footprint of the Freeport Facility.

Comparing the utilization of cylindrical tee screens to vertical flat plate screens, the cylindrical tee screens would mean a substantially shorter structure and would allow for better screen cleaning and flow control. Refugia (fish resting area) is possible along the structure face of cylindrical tee screens, but does not add length like it does on structures with vertical plate screens. On the other hand, there is a perception that the cylindrical tee screens allow for more predator holding areas. They could possibly lead to more debris collection, but this hasn't yet been known to happen.

The vertical flat plate screen intake structures allow for effective flow control, have known regulatory acceptance and minimal predator holding areas. However, they are longer than cylindrical tee screen structures and refugia adds both length and cost. They also have less effective screen cleaning and screen cleaners are susceptible to debris damage.

Mr. Ryan showed a conceptual rendering of the components of a sample vertical plate screen intake facility and explained a highway relocation would be necessary in order to build the intake structures in the North Delta.

Mr. Ryan explained the flow of water through the facility. Once water flows through the fish screens, it enters buried box conduits and flows through gates into a sedimentation basin. From the sedimentation basin, water enters the flow control structure and goes into the tunnel shaft. Approximately once a year a floating dredge will pump sediment from the sedimentation basin into drying beds where it will be dried and then trucked away from the site.

An overlay of the footprint of a tee screen intake footprint was shown on the illustration for comparison purposes. The tee screen type facility is shorter in overall length but the sedimentation basins are slightly longer because more length is required to settle the sedimentation before it reaches the flow control structure.

Mr. Ryan showed a high-level conceptual animation of the construction sequencing with a time-lapse counter illustrating the order in the which the facility components are constructed and approximately how much time the construction takes. First the identified site is cleared and some administrative offices are constructed. Temporary batch plants can be added at this time, as well. Next, ground improvement is conducted so that the ground will not liquefy in the event of an earthquake. Slurry walls are built as flood protection and to minimize potential impacts on local groundwater. Then a flood control levee is built to US Army Corps of Engineers (USACE) standards. This levee would be better than the existing levee because it would be brand new. A new road would be constructed atop this levee. Then, a trestle would be installed on both the land side and the river side, followed by a cofferdam. The foundation piles would be installed inside the cofferdam and then the structure would start to be built. The ground would be excavated for the buried box conduits, which would be placed in as we go. During this time, some of the structure at the back (landside) of the facility are being built. Then the trestle is removed, the temporary levee road is removed and the highway would be reopened. It is important to note that there is a levee in place 100% of the time that the facility components and structures are built. The USACE doesn't allow any work to be done in the area without these types of safeguards in place.

Ms. Swenson asked for clarification on the highway closure time. Mr. Ryan clarified the highway is closed in the first year and an alternate levee road is used until it is reopened in the fifth year.

Ms. Barrigan-Parrilla asked if analysis would be done on what effect the new levee would have on the other Delta levees. When a levee is raised in one area, it raises in other areas. Mr. Ryan clarified that the configuration of the river isn't being changed. Levees themselves don't impact water levels. However, we are looking at levee vulnerability issues such as traffic effects. Ms. Barrigan-Parrilla said the analysis should be done because the work of Delta Stewardship Council and others have shown that changes to one levee can impact other levees. Mr. Ryan said the USACE does require analysis on flood impacts that the DCA is currently performing.

Ms. Barrigan-Parrilla asked how far in the ground the slurry walls will go. Mr. Ryan said the depth will depend on geotechnical results, but it could be roughly 100ft. A determining factor will be finding the confining layer to tie into.

Mr. Wallace asked if the sedimentation basin is at-grade. Mr. Ryan said the bottom of the sedimentation basins is a little below the bottom of the intakes. At Intake 2, as an example, the bottom of the intake is -10 (feet below sea level). For reference, the river level is at 3 the majority of the time.

Mr. Wallace asked if the basin would be lined, and if not, asked if the basins would be in groundwater from 4 or 5 feet below existing ground level and below. Mr. Ryan said the basin would not be lined, but the slurry walls are constructed to keep from encroaching on groundwater. Mr. Wallace asked if DCA expected the slurry walls to keep them out of groundwater. Mr. Ryan agreed it will need to be dewatered prior to construction.

Mr. Wallace said the presentation has been informative, but the SEC is constrained to discuss design and construction and the presentation was mostly about operations. He requested that future presentations be only about design and construction. Mr. Wallace also said if the geotechnical reports do not indicate a confining layer, there will be a lot of repeated dewatering needed. His groundwater well in Courtland is about 150 feet deep and groundwater is about 5-6 feet below existing ground surface. Most of the water comes from about 140 feet deep. Given these types of groundwater levels, how will this facility be kept operational once it is constructed?

Mr. Ryan said the basins aren't lined, but the river water is higher than the groundwater so we don't want it to flow out and affect local areas as a result of mounding. On the other hand, during construction and dewatering, we don't want it drop down to areas next to us, either. It is definitely a topic that needs to be resolved.

Ms. Wallace noted that the hydrology reports of the river have determined the potential intake sites, but is there a possibility the geotechnical reports DWR is currently conducting could change where the intakes are located? Ms. Mallon said the question would be answered at the next meeting, but there are a lot of existing bore holes in the water from the previous program. Additional landside data is being collected, but there is definitely data for those areas. Mr. Wallace said he has seen the existing data and DWR made enormous leaps of faith about confining layers, but that is not the reality of estuary geology. Ms. Mallon explained one of the

purposes of the extensive geotechnical studies underway is to verify the consistency of the data collected.

Mr. Wallace asked if the Geotech program is intended only for the design and construction of the potential Delta conveyance project. Ms. Buckman responded that he existing data was gathered from a wide variety of unrelated efforts and the sites selected for geotechnical analysis were selected to fill in information gaps in Delta geotechnical understanding for this and other projects in the Delta.

Mr. Wirth said one of the big terrestrial species concerns for the intakes was the disruption of the riparian zone. Is it possible to incorporate a riparian zone into the design of an intake facility, and would that be easier with the cylindrical tee screen or vertical flat plate type? Mr. Ryan noted that such a zone would need to receive a lot of water to be considered a riparian zone. Also, there do need to be roads at both ends of the top of the intake.

Ms. Keegan said she was surprised that aesthetics of the intake facility had not yet been raised as an area of concern. This is a very special area and it would be great for the design to be softened and blended with the natural environment to the extent possible in order to minimize any intrusive visual impacts. Mr. Wirth said the incorporation of a riparian zone could serve that purpose while also maintaining the wildlife corridor.

Ms. Hsia asked who set the 7,500cfs maximum flow capacity for the potential project. Ms. Buckman the said the DWR included that flow capacity as the upper range of alternatives that may be considered, but that is just a preliminary set of information and refinements will be forthcoming through the scoping process.

Ms. Barrigan-Parrilla asked when the animation would be available on the website. Ms. Mallon indicated all meeting materials would be available within a couple of days following the meeting. Ms. Martinez noted that the materials would be posted as smaller, downloadable files just as they were following last meeting.

Mr. Ryan reminded members that the animations are developed for illustrative and discussion purposes only and are not perfect or final. Ms. Barrigan-Parrilla said to include that disclaimer with the materials when they are posted.

Mr. Ryan showed a brief animation about flow control. The flow through the structure causes a small amount of headloss into the basins, so a flow control structure in the back of the facility will always maintain the same drop between the river and the sedimentation basins. This helps maintain the settling depth. There are also flow control gates that can be adjusted per the level of desired cfs through particular sections. As the river elevation goes up and down, the sedimentation basin will likewise go up and down. But the flow control structure is controlled from downstream by the pump station. The important take-away is that the intake system is hydraulically separated from the rest of the system so that flow can be managed according to permits, not pull extra water and maintain the .2fps flow through the screens at all times.

Mr. Moran asked if there is any consideration given to any type of unexpected animal that gets stuck in the sedimentation basin, such as monitoring of eggs. Ms. Buckman said that would be part of mitigation and the environmental process.

Ms. Barrigan-Parrilla asked for clarification about the hydraulic separation from what is being taken out at the rest of the system. Mr. Ryan explained that intakes are the flow controllers into the system. If the operational rules say the intake can be turned on at a certain rate, then the control system would open the right number of gates at the proper flow rates in order to deliver the appropriate amount of water downstream. The pump station is mainly designed to maintain a level consistent with the intake. The pump stations just pump out what the intake systems put in.

Mr. Ryan discussed access routes to the intake sites. Rail goes near the intake sites while barges routes and roads go directly to intake sites. Rail could be used, but staging sites would be needed between the rail and the sites.

Ms. Swenson asked approximately how large the staging areas would be and if the land is private property or already owned by a public entity. Mr. Ryan said the staging areas have not yet been identified or sited yet. Staging sites could be used for worker parking or materials staging, and their size would depend on the use. DCA is currently in the process of determining some of these factors. Ms. Mallon said it would be helpful for SEC members to weigh in on whether or not there is a preference to rely more on rail in order to alleviate traffic on I-5. Specifics are not yet known, but DCA wanted to show SEC members what would be involved if rail was utilized because rail does not go all the way to the intake sites.

Mr. Wallace asked if using rail would involve new siting with the railroads. Ms. Mallon confirmed that is the case.

Mr. Ryan discussed the projected truck traffic effects. At the peak of construction (around the end of year 4), an estimated 150 trucks per day would be on the roads if no reduction measures were used. There are measures to reduce the effects, including constructing new, parallel roads for construction traffic only, improving existing road systems to accommodate additional traffic volumes and loads, storing construction vehicles onsite to minimize volume of large trucks and having batch plants onsite to reduce concrete truck traffic.

In addition to truck traffic, there will also be worker traffic. At its peak (during year 4), worker traffic is estimated to be between 150 and 200 worker trips per day at each intake without reduction measures. One potential measure to reduce worker traffic include park-and-ride locations, where individual workers park in a lot and then take a bus to the construction site. These lots could be placed at locations with less effects and converted for other use after construction. Other potential reduction measures include staggering shifts at construction sites and using food trucks to minimize lunch traffic.

Mr. Ryan showed a map with existing significant roads highlighted. There is an interchange off of I-5 for Hood Franklin and Twin Cities Roads; Lambert Road is an overcrossing. There is also Highway 160. One of the concepts under consideration to use staging areas and existing farm road corridors in order to lessen the take of agricultural lands. If these corridors and staging sites are used, dependence on existing roads is greatly reduced. Materials can be brought in using these haul routes and it can be worked out with the community to allow for agricultural use during some parts of the year or after the project. Another concept under consideration is an interchange or some other way to use Lambert Road more to distribute traffic. These are considerations where SEC member input would be particularly helpful.

Mr. Moran asked if new roads or road improvements would remain after the project is completed. Mr. Ryan said that the improvements to existing roads would obviously remain after the project. It is not certain whether any freeway interchanges added would remain. It is a matter for future discussion whether haul roads constructed for the project would remain after project construction is completed. Keep in mind sediment will need to be periodically removed, which will require truck trips.

Ms. Barrigan-Parrilla said traffic studies will need to include analysis in consideration of the peak times during harvest. Even now, driving during harvest is difficult. Ms. Mallon said this is why parallel roads are being considered, is to alleviate traffic on existing roads. Ms. Swenson said there will still be interchanges required at certain points. The amount of trucks anticipated is unfathomable considering the 45-minute traffic backup that occurs on Delta roads when there is an event at Delta High School. Mr. Moran said wildlife tourism seasons should also be a consideration in traffic studies. Ms. Whaley added that emergency vehicle traffic, especially during those periods, should also be considered.

Ms. Mallon said these are all reasons to consider relying less on existing roads is optimal. Ms. Swenson said that constructing alternate roads will impact neighbors because easements will be required. She cannot be glib about it and pointed out for every action there is a reaction that is negative on the residents of the Delta; relying on other forms of access will just mean there are other impacts. Ms. Keegan said that it is important to have a dialogue before concluding that any given action will have a negative impact and assuming no one would support it.

Ms. Mann said as a real estate appraiser, property owners who are used to the sounds of nature and being able to let their children play outside suffer an external obsolescence value loss on their properties because of the safety and noise effects from increased truck traffic.

Mr. Moran said in addition to deleterious hyper-local effects and real estate values, the I-5 is a major traffic corridor for communities to and from Sacramento and San Joaquin County and in some cases between Sacramento and places like Tracey or Livermore. Adding up to 150 trucks on the road per day would seriously affect residents and industries in the Northern California mega-region. San Joaquin's second largest industry is logistics and trucking companies would suffer serious delays. There are 30,000 commuters from Stockton alone that mostly take I-5. These will cause not only quality of life impacts for residents of San Joaquin County but also economic impacts to the larger region. If there is an opportunity to focus on rail, if will potentially benefit hundreds of thousands of people.

Ms. Buckman clarified that the SEC will be trying to identify improvements that would help reduce or avoid some traffic-related effects, but DWR will certainly be conducting a full analysis of the potential traffic effects and a further consideration as part of the CEQA document.

Ms. Giacoma asked if the truck trip estimates included the operational traffic for hauling away sediment. Mr. Ryan said the estimates provided were for during construction. The sediment trucking will be during operations and will be less than during construction. Estimates won't be ready until modelling has been completed, but will be included in the EIR process. Ms. Giacoma said it would be helpful to have the operations truck trip estimates as well. Ms. Mallon said DCA

will log the question. The overall point is that there is rail, barging and roads. DCA will brainstorm ideas to present to the committee for their input and comments.

Mr. Ryan said barging is another option for accessing the intake sites. DCA's barging consultants have indicated a 2,000-ton barge can go up the Sacramento River to an existing barge landing in Hood that is currently used for flood fighting materials. If that barge landing is used, Hwy 160 would be used to get materials from that barge landing to the other intake sites. Alternately, new barge landings could be created near the intake sites and use potential haul roads. Barging has issues such as the regulatory requirements from fishery agencies and disruptions to recreational boating, but has the potential to significantly reduce the number of truck trips.

Ms. Barrigan-Parrilla said if this committee is supposed to be looking at construction effects such as air quality, a chart is needed to compare the effects between rail, barges and roads. The chart should include effects on water quality, boating, truck trips, etc. There isn't really a great option for people who live in the community; there will be effects regardless of the option selected. The exchanges have to be presented to the committee so members can evaluate the analysis and provide recommendations. Ms. Mallon said the full environmental analysis will be presented in the EIR.

Mr. Ryan discussed the noise effects from the construction of the project. The loudest construction sound will be pile driving. A chart was presented to show the comparison of pile driving sound with other common noises. A quiet urban setting is approximately 50dBA, while a noisy urban setting is approximately 75dBA. EPA suggests construction that is compatible with neighborhoods is 55dBA. There are noise reduction measures being considered. For example, pile driving machines can be equipped with a shroud that cuts the area in which the noise in heard in half and reduces the sound from 101dBA at 50ft to 90dBA at 50ft away. A pile driving analysis will be conducted at the sites in order to determine what noise reduction methods will be most effective at the potential intake sites, such as sound walls, windows, etc., especially for the homes right across the river. The goal is to reduce the noise as much as possible for the surrounding communities.

Mr. Ryan addressed site runoff control. Regulations are very strict in this regard and the project constructed in compliance with all legal requirements. Runoff is controlled from flowing onto site as well as from the site to other areas. A diagram demonstrated the various controls that will be implemented, all of which will be continuously monitored and performed in a highly-regulated environment. California laws have been changed within the last few years, so compliance will be the responsibility of DWR and not the contractors.

Ms. Barrigan-Parrilla asked if compliance is the responsibility of the State Water Board. Mr. Ryan said the State Water Board issues the permit, but the project owner is responsible for compliance.

Mr. Ryan reviewed reduction of air quality emissions from construction activities. Ironically, water trucks used to control trucks are the largest source of greenhouse gas emissions at the construction sites. Air quality effects can be reduced by requiring "Tier 4" or hybrid construction vehicles, created surface areas to reduce the amount of dust, using onsite batch plants and consolidation centers.

Mr. Cox if hybrid equipment would be required of potential construction contractors. Mr. Ryan said that is a potential consideration.

Mr. Ryan reviewed dust control measures. Typical sources of dust pollution include wind erosion of exposed soils such as unpaved roads and storage piles, site clearing, grating, concrete surface finishing and soil particles that leave the site on vehicle tire and are blown into the wind. Dust reduction methods include building gravel or paved roads on site, using tackifier (soil binder) or covers on soil piles and on-site water and irrigation systems.

Ms. Martinez asked if any committee members had questions on Mr. Ryan's presentation.

Ms. Hsia asked if barges could go under Walnut Grove Bridge without the bridge opening. Mr. Ryan said the bridge has to open.

Mr. Wirth mentioned that Lambert Road interchange is in Sacramento County and is therefore a massive growth inducer. Any time infrastructure is built, houses are built near it. We want to keep that area of the Delta rural for terrestrial species. In terms of noise control, it is important to note that pile driving is not like most noises. For animals who are typically hunted, the noise sounds close to gunfire so the analysis should go beyond the dBA's.

Ms. Tayaba said levee construction is concerning for tribes because it involves pushing up soil. Also, the proposed staging areas should be surveyed for cultural resources. Tribes will also be concerned about any road construction and traffic. Early consultation with tribes with complete information is requested.

Mr. Tarango noted that attending one of the seven scheduled scoping meetings will be especially difficult for indigenous persons of California. Northern, Central and Southern meetings for tribes are recommended.

Ms. Swenson said it should be taken into consideration that the acoustics in the Delta are different and sound travels far.

Dr. Lytle said the impact of landside flooding from the Cosumnes River needs to be carefully considered. In 1986, I-5 was flooded between Hood Franklin to Twin Cities Road for months. The Cosumnes is an uncontrolled river and the proposed project facilities are being planned in the heart of it.

Ms. Martinez noted that the roundtable about tonight's meeting will be held at the next SEC meeting on February 12 and asked Ms. Mallon if there were any questions or information that the SEC members should focus on in conversations with their communities. Ms. Mallon said most conversations should be around logistics issues. The noise and mitigation measures will continue to be studied. The purpose of tonight's presentation was to give SEC members a sense of the size and scale of the facilities, as well as the construction duration and effects might be. Any SEC member questions should be submitted and staff will log them. Intakes are the most challenging facilities in this project.

Ms. Palmer noted the meeting summary that is released on Friday should also be reviewed and members can provide their input.

Mr. Cox asked if the pile driving vibration effects on the fisheries has been studied. Mr. Ryan indicated it would be studied.

Ms. Martinez asked if intake siting is something input is needed on. Ms. Mallon said while SEC member comments are always welcome, intake siting is mostly determined by the regulatory agencies and there isn't much ability to relocate these sites.

d. Preparation for Next SEC Meeting

Ms. Palmer explained this agenda item was not presented or discussed so that the meeting time could be focused on the intakes discussion. Ms. Mallon said the agenda included this item in case there was time. At the next meeting, an hour of the meeting time will be dedicated to the roundtable discussion on the materials presented at this meeting.

5. PUBLIC COMMENT – AGENDA ITEMS

Ms. Palmer opened public comment for agenda items.

James Sarmento, Shingles Band of Miwok Indians Executive Director, said he is encouraged there is tribal representation on this committee. Cultural resources are not just single points on a map, they are multi-faceted. Impacts should be considered broadly. There will be AB 52 consultation with tribes, but please provide the information shared today with tribes so they understand where intakes are located and can provide information to the project team about sites that are important to them. Without early consultation, tribes are placed in an adversarial position right off the bat.

Tribes are usually an afterthought in project construction. Project construction will mean the disruption of sacred areas- villages and human remains coming out of the ground. These realities should be anticipated and planned for in advance. Please think creatively about mitigation measures.

Osha Meserve, Local Agencies of the North Delta, said she missed the first part of the meeting but read DWR's memo about the documentation of the SEC in the EIR and doesn't feel it addressed the stakeholder concerns. The memo seemed to indicate the SEC would be included in the Public Outreach chapter, and stakeholders were saying it shouldn't be documented that way. If it is included in the EIR, it should be clear that this committee had no input whatsoever in developing alternatives and the extremely confined role the committee has been asked to undertake.

With respect to intake locations, there have been suggestions of alternative intake sites and other ways to meet water supply needs. Those have been disregarded. Perhaps it is the JPA's fault, perhaps it is DWR's fault, but it is disappointing that the same 5 intake locations are being presented given the amount of resources the JPA and other entities are putting in. There was no analysis on the alternatives such as the Western Delta or Ship Chanel or through Delta alternatives. Although those alternatives will be pushed through the EIR process, this is a huge missed opportunity and the range of options provided is not enough.

The response to Mr. Gloski's question about flows is marked in the question tracking packet as "answered," but says that diversions can be stopped on a dime if the flows change at all or reverse. It should be clarified if dynamic baffling can be controlled on a real-time basis.

Mr. Whaley said they were asked to provide design and engineering recommendations. We've been promised a lot of things but have been ignored. Where are risk assessments for the loss of life in construction of this project, levee failure and how that will impact this project, storm flooding and for project operations? How many people will die as a result of this project? You cannot say that building this single tunnel project is not an environmental disaster for the Delta. If you do, you are disingenuous.

6. PUBLIC COMMENT – NON-AGENDA ITEMS

Ms. Palmer opened public comment for non-agenda items. Connie Cramer asked if the King's River had been considered, and if not, why?

7. FUTURE AGENDA ITEMS

Ms. Keegan noted that ahead of this meeting there were concerns that there might not be many technical questions asked. However, there were many technical questions asked in this meeting. The members are doing a great job. It is important to hear you have to say, even if not fully agreeing with every statement.

Not everyone had their questions answered. Board members and staff will be available after the meeting if there are additional questions you would like to ask.

Ms. Palmer reminded members they can also email questions.

Ms. Palmer provided an overview of the next SEC meeting. We will have a member roundtable on tonight's presentation and discuss Launch Site Overview and Logistics.

The next SEC meeting will be Wednesday, February 12, 2020 at 3pm at the Willow Ballroom, 10724 CA-160, Hood, CA.

Ms. Palmer will not be able to attend next meeting and Ms. Keegan will preside over the meeting.

8. ADJOURNMENT

Ms. Palmer adjourned the meeting at 6:12pm.