IONA ISLAND WASTEWATER TREATMENT PLANT PROJECT
PROJECT DEFINITION PHASE
ONLINE PUBLIC MEETINGS
MAY 19, 2020 & May 21, 2020

SUMMARY

This is a combined summary from two online public meetings (Meetings) on the Iona Island Wastewater Treatment Plant (IIWWTP) Project held on May 19 & 21, 2020 via videoconference. The presentations for both Meetings are the same, and input received from each meeting is summarized in a table beginning on page four.

1. Call to Order

Lena Zordan, Policy Coordinator, Community Engagement, Metro Vancouver (MV), called the:
- May 19 Meeting to order at 12:03 p.m., with approximately 70 participants in attendance.
- May 21 Meeting to order at 6:34 p.m., with approximately 58 participants in attendance.

2. Welcome

On May 19th, Morgan Guerin, Councillor, Musqueam Indian Band (MIB), provided a Welcome to participants. He commented on the relationship between MIB and the IIWWTP Project and the Musqueam peoples' long history with Iona Island. He invited the Meeting participants to learn and express their concerns in the spirit of nə́c̓aʔmat tə šxʷqʷeləwən ct, which means "we are of one heart and one mind".

3. Project Overview and Update

Bryan Shoji, Director, Policy, Planning and Analysis, Liquid Waste Services (LWS), MV, provided a high-level overview of the IIWWTP project and highlighted:

- Overall project timeline
- December 31, 2030 federal and provincial regulatory deadline for the new IIWWTP to be operational
- Main goals of the IIWWTP:
  - Wastewater treatment
  - Community and park integration
  - Resource recovery
- The new IIWWTP is being designed to include tertiary treatment
- Context of the location of the IIWWTP
- Existing liquid and solid waste treatment streams at the IIWWTP
- A biosolids dewatering facility is under construction and will be operational in 2021 to allow for the sludge lagoons to be decommissioned
- Project definition design considerations.

4. Community Engagement Overview

Tom Sadleir, Program Manager, Community Engagement, LWS, MV, provided an update on community engagement:

- Meetings with interested stakeholders/groups have occurred over the past 18 months
- Values and wants identified through community engagement
- Next steps in community engagement and the Project Definition Phase.

5. Wastewater Treatment and Resource Recovery

Rick Bitcon, Senior Engineer, AECOM, led a presentation on the resource recovery and wastewater treatment options for the IIWWTP and highlighted:

- MV intends to utilize the existing deep sea outfall that extends approximately seven kilometres and discharges effluent to Sturgeon Banks
- Three design concepts have been identified as:
  - Treatment Concept 1 – Base Secondary
  - Treatment Concept 2 – Tertiary Disk Filtration
  - Treatment Concept 3 – Tertiary Membrane Biological Reactor (MBR)
- The use of activated sludge is common to all three treatment concepts
- The high-level consequence table utilized to evaluate the three concepts:
  - Concept 2 performs very well compared to Concepts 1 and 3
- Key benefits of the preferred concept, Tertiary Disk Filtration (Concept 2), compared to the other concepts are:
  - High quality effluent
  - Flexibility for continuous improvement and innovation
  - Ease of operation and maintenance
  - Lowest capital, operational and maintenance cost
  - Lowest net energy use
  - Lowest net GHG emissions
  - Optimal staff safety and wellbeing
- Key consideration is for the staged implementation of Concept 2 to reuse some of the existing WWTP equipment that is still current and functional, and to provide flexibility for future innovation
- Existing and new plant layouts
- Potential resource recovery products include:
  - Reclaimed water
  - Heat
  - Renewable natural gas
  - Nutrients / biosolids
  - MV is conducting demonstration testing at the Annacis Research Centre (ARC) of hydrothermal liquefaction to produce biocrude
- Potential district energy systems on Musqueam Indian Band lands, in the cities of Vancouver and Richmond, and the Vancouver International Airport could provide opportunities for effluent heat recovery.

6. Iona Island Ecological Priorities

Robyn Worcester, Natural Resource Management Specialist, MV, led a presentation on the Iona Island ecological priorities and noted:

- The importance of Iona Island to the region's residents, salmons and birds
- The current state of Iona Island creates a challenge for the migration of salmon, particularly Chinook salmon
- The IIWWTP project proposes removing land barriers and re-establishing aquatic connectivity
- Ecological priorities:
  - Restore fish habitat
  - Improve water quality
  - Enhance terrestrial ecosystems
  - Protect bird habitat

7. Design Concepts and Habitat Enhancement Opportunities

Jeff Cutler, Landscape Architect, space2place, provided an overview of the design concepts for the IIWWTP and the habitat enhancement opportunities:

- Preferred concept (Architectural Scheme One) includes:
  - Trail network throughout the site
  - Construction of potential breaches in the causeway, Fraser River North Arm, McDonald Slough and through the outfall jetty to create better connectivity and improve salmon migration
  - Tidal marsh and channels connected to the Fraser River
  - Preservation of intertidal marsh habitat
  - Retention of the riparian forest
  - Expanding freshwater wetlands that would be fed with high-quality effluent from the new plant
  - Enhancement of tidal areas through sediment augmentation
  - New parking lot to the west of the existing plant to improve the visitor experience
  - Improving cycling infrastructure
  - New build to the east of the existing plant and lower building heights to preserve the views to Vancouver Island that are culturally important to MIB
  - Potential for a private boat access for MIB at the east end of Iona Island
  - Raising the elevation of the causeway road and the plant to protect against future sea level rise
- The plant has been designed for minimal encroachment on valuable bird and fish habitat
- Proposed priorities and phasing of 20 potential ecological opportunities
- Park connection opportunities:
  - Enhance park ecology
  - Improve circulation, connections and visitor experience
  - Education and recreation programming
  - Park expansion
  - Sea level rise and climate change mitigation
  - New partnerships and community connections

- Artist renderings of:
  - Public face of the new Operations and Maintenance (O&M) building
  - Southern intertidal wetland
  - Knolls and freshwater wetlands
  - Tidal channels, freshwater wetlands and the IIWWTP
  - Southern view from the Musqueam Indian Band reserve.

8. Discussion

The following table summarizes, by topic, the responses to questions and comments provided by participants from both May 19 and May 21 Meetings.

Issue, Comment, Question	Response
Community Engagement	
Will the reports of community engagement meetings be made available to those who were not in attendance?	A list of previous meetings, and summaries of the larger public and stakeholder meetings, are available at www.metrovancouver.org/services/liquid-waste/projects-initiatives/iona-island-wwtp-project/Pages/default.aspx. A summarized list of comments will be provided to the MV Liquid Waste Committee and Greater Vancouver Sewerage and Drainage District (GVS&DD) Board in July 2020, and a comprehensive list of comments and MV responses will be included in a January 2021 report.
Will the presentation and recordings be available, and where?	The presentation will be available on May 22 www.metrovancouver.org/services/liquid-waste/projects-initiatives/iona-island-wwtp-project/community-engagement/Pages/default.aspx. The recording will only be used by the note taker in case of audio challenges and will not be shared.
Have you contacted anyone from the Wreck Beach Preservation Society and the Pacific Spirit Park Society?	Comment noted and staff will review. [Post-meeting comment: Both Society's have been previously contacted and invited to all public meetings held to date.]

Issue, Comment, Question	Response
Is there a deadline of June 30, 2020 for public input on the Project Definition Phase? Is there a further opportunity for public input in July 2020?	Additional feedback on the Project and from the May 2020 public meetings will be accepted until June 8, 2020 in order for the design team to incorporate the input, where feasible, into the recommendations to be made to the MV Liquid Waste Committee and GVS&DD Board in July 2020. [Post-meeting comment: Additional comments are welcome until October 15, 2020. These will continue to be shared with the Project team for consideration, and incorporated into a final engagement report that will go to the January 2021 LWC committee and GVS&DD Board.]
At what level of the International Association of Public Participation (IAP2) spectrum are you working?	Our engagement program primarily involves consultation due to the technical nature of the wastewater treatment plant. We did identify opportunities to involve and collaborate with the public and First Nations on resource recovery and community integration. MV is looking to a partnership with Musqueam Indian Band on aspects of the new IIWWTP Project.
Will there be further consultation opportunities as the project moves into detailed design?	After a design concept is approved in July 2020, we will be reporting back to the birder and naturalist groups and other interested parties. Many of the habitat enhancement projects will be developed over time and there will be opportunities for further input. Additionally, work on a new Iona Beach Regional Park Management Plan will begin in 2021 with opportunities for engagement with First Nations, and existing and new stakeholders and partners.

Issue, Comment, Question	Response
Biosolids	
How are the solids currently disposed of?	The solids are currently stored in a stockpile to the east of the plant.
Have the solids been stockpiled for the 40 year operational life of the existing plant?	The solids are placed in the stockpile to dry during the summer months. They are and will continue to be removed for beneficial use in other parts of the province. The stockpile is expected to be cleared in 2024.
What class are the existing biosolids?	The existing biosolids are Class B and are used for land application at a variety of sites throughout the province.
Will the biosolids be dried to a level capable of incineration?	MV is considering the construction of a regional biosolids dryer to serve all five wastewater treatment plants; the location is not yet determined.
Plant Design & Wastewater Treatment	
Will the IIWWTP only provide minimal secondary treatment? The IIWWTP should be providing tertiary treatment given the amount of money that will be spent.	The federal regulatory requirement is for a minimum of secondary treatment. However, MV is planning for tertiary treatment, pending Board approval, by using tertiary disk filtration at the new IIWWTP.
How did you compare different components of each option? For example, why not membrane bioreactor (MBR) paired with mesophilic anaerobic digestion?	We used a robust structured decision-making process, with an objective hierarchy of over 30 criteria, and we had technologies embedded in the structured decision-making process. The next step was an evaluation at the technology level to explore factors such as greenhouse gas emissions, chemical use, costs. For example, we paired mesophilic anaerobic digestion with thermal hydrolysis. We could have paired other technologies but would have still come to the same conclusion as we evaluated each of the technologies at a detailed level.
It would be advantageous to add an environmental impact category to the comparison table to help inform the decisions of the MV Liquid Waste Committee and GVS&DD Board.	Comment noted.

Issue, Comment, Question	Response
Did you take the impact of the effluent discharge on aquatic life in the Strait of Georgia into consideration in determining the recommended treatment option? The food web values should be one of the major criteria in determining the option to be used.	There were a number of criteria related to the aquatic ecosystem in the objectives hierarchy and structured decision-making process. The comparison table presented today is a brief snapshot; many more criteria were considered.
What height is the plant designed for in terms of sea level rise?	The IIWWTP has been designed to be above the projected one meter of sea level rise by 2100. We are looking at elevations for critical areas of the plant at six metres or above. We will be raising the land where the plant is built and conducting pilot projects for sediment augmentation in the intertidal areas over a period of many years.
Which of the treatment options presented would best address some of the contaminants that are of serious concern to Chinook salmon and the endangered southern resident killer whales? The effluent from the IIWWTP should be made as clean as possible because of the serious health implications of the effluent to marine and human life.	All three concepts considered are active sludge-based and are designed to remove biochemical oxygen demand and suspended solids. In removing those chemicals, they also remove a portion of other components such as pesticides, endocrine disrupting chemicals, pharmaceuticals, flame retardants. The proportion removed is dependent on the compound and the length of treatment time in the activated sludge tanks. All three concepts considered are capable of providing the same level of treatment with respect to those chemicals. MV is intending to conduct a combination of pilot testing and demonstration testing of technologies to provide advanced treatment for some of these chemicals. The IIWWTP will be future-proofed by reserving space on the site to implement new, advanced treatment technologies as they become available.

Issue, Comment, Question	Response
Would wet-weather events impact the amount of treatment time and if so, would wet weather result in greater quantities of contaminants being released into the receiving environment?	There are hundreds of compounds of potential concern and we do not know how they fluctuate over time and the compounds are challenging to measure. IIWWTP and all wastewater treatment plants in BC are permitted to route streams above two-times average dry weather flow to primary treatment. The primary treatment stream is then blended with the secondary treatment stream of less than two-times dry weather flow before being discharged. There would be a minimal impact on the receiving environment as operating in wet-weather mode occurs approximately 8% of the time (on average, annually).
Minimal treatment, even for only 8% of the time, still causes harm. Metro should be thinking about ways to offset this damage. It is a reason to consider habitat enhancements in other parts of the estuary as offsets.	Comment noted.
What would be the cost to double the residence time for sludge in the digesters?	MV is planning to reuse the existing digesters in the initial build of upgrades. The cost to replace the existing digesters with new digesters would be tens of millions of dollars.
Will microplastics be captured in secondary or tertiary treatment?	A percentage of microplastics are removed in the activated sludge process and latest research shows that microplastics are effectively removed with tertiary disk filtration or MBR treatment. [Post-meeting comment: In an effort to better understand emerging contaminants, Metro Vancouver is partnering with the Ocean Wise Conservation Association to study microplastics. It is also hosting a laundry machine testing facility for research on microplastics that are shed during washing.]

Issue, Comment, Question	Response
I would concentrate on sand lance, various smelts, and Pacific herring with respect to the ingestion of microplastics. All three are near the bottom of the food web and bioaccumulate organic (vs. aqueous) toxins when ingesting microplastics. These make their way up the food chain into salmonids and orcas. As the sand lance, smelts, and Pacific herring live close to shore, pollution from treatment plants will affect them more than offshore fishes and invertebrates.	Comment noted.
Are there any plans for odour control using biological treatment?	The new Plant will have a robust two-stage odour control treatment system. The first stage uses a biological process and we are considering what technology to use in the second stage; it could include biological treatment or activated carbon.
Has the engineering team contacted the General Manager of the new tertiary treatment plant in Orange County, California, to learn about the treatment technology utilized to produce drinking water quality effluent? The Brightwater plant in King County Washington, visited by the engineering team, does not produce drinking water quality effluent.	The engineering team will contact the plant manager of the Orange County, California plant. MV has investigated advanced treatment. The challenge is that advanced treatment options are very expensive in terms of both capital and operating costs, particularly at the scale of IIWWTP with flows ranging from 500 to 1,500 megalitres per day in average and wet weather, respectively. MV intends to conduct pilot and bench-scale testing to develop a future pathway for advanced treatment; this pilot and bench-scale testing program will be included in the initial build of the IIWWTP.

Issue, Comment, Question	Response
Resource Recovery Opportunities	
Is the biofuel planned for the new Plant suitable for use in a commercial aircraft?	At this time, most commercial aircraft use jet fuel, which is a special blend of fuel. The aviation industry is interested in the use of biofuels, and the use of battery-power in smaller aircraft is on the horizon. The hydrothermal liquefaction technology being demonstrated at the Annacis Research Centre (ARC) could be a pathway to producing fuel that could be used by aircraft.
What would the liquid waste temperature be at the outlet of the heat recovery system?	On the district energy system side, after the new Plant is operational, the outlet temperature would be as low as 4° C at certain times of the year.
Has MV considered that dried biosolids could be used as a low-carbon fuel for local cement kilns? Advantages include reduction in GHGs due to transition away from fossil fuels (currently used at Lafarge and Lehigh kilns); local use of material; and no residue since the ash becomes part of the cement product. The cement industry is very interested and supportive of working with MV on this option.	In order to use biosolids for cement kilns, it would be necessary to undergo a drying process. MV is considering the construction of a regional dryer before 2031 that would support all five wastewater treatment plants. The goal of the dryer would be to diversify beneficial use of biosolids.
Do you plan on producing sodium hypochlorite in-house using electrochlorination processes, using brine?	We will be using reclaimed water within the plant so we will treat with UV disinfection and sodium hypochlorite to meet the provincial requirements for reclaimed water. However, the quantities required would be too small to produce it within the plant using brine.
What are the potential uses for reclaimed water?	Onsite uses for reclaimed water include tank cleaning and wash down, and grey water in the O&M building. MV has been meeting with potential partners to discuss options for reclaimed water. Potential uses are irrigation for golf courses and various construction and industrial uses.

Issue, Comment, Question	Response
Ecological and Habitat Enhancement Opportunities	
What is the required width and depth of the breaches in order to be effective for fish migration?	The proposed causeway breach is expected to be between 150 and 200 metres wide. We are looking for substantial width to allow for the beneficial mixing of fresh and salt waters, which is important for juvenile salmon. We will conduct hydrological studies and obtain more details before moving forward.
MV must place a priority on bird watching and habitat.	This has been considered through all stages of the project with the birding community providing input.
Does the presentation include considerations of what is important for chum salmon?	The design concepts considered the use of these habitats for all out-migrating salmon fry as well as returning adults. Chinook salmon fry were given the greatest consideration as they spend the most time in the estuary and were found in large numbers in MacDonald Slough.
What is the timeframe for the habitat restoration of the tidal marsh at the sites of the sludge lagoons?	The focus over the next few months will be to evaluate the ecological opportunities that could be undertaken in the near term and that could have synergies with plant construction.
Will there be a pilot project for measuring blue carbon within the tidal marsh regions?	There is a robust sustainability strategy for the IIWWTP. We will be considering and evaluating different metrics to measure the success of the interventions that are being proposed.
What is blue carbon?	Blue carbon is the improvement of estuary areas to capture carbon and to improve the carbon profile of the overall project. [Post-meeting comment: www.thebluecarboninitiative.org]
Can the lagoon decommissioning be done in a way that the wetland bird habitat is not lost during the construction of the IIWWTP?	This will be considered in the phasing strategy and in detailed design.
Will the freshwater marshes be fed with the effluent from the IIWWTP?	Yes, we are proposing the marshes would be fed with a higher quality effluent, but not drinking water level.

Issue, Comment, Question	Response
There should be a visitor welcome centre in the overall design. Nature centres are extremely popular with the public. It would not be necessary for it to be funded by MV Parks. The visitor centre could highlight Boundary Bay which is internationally significant for birds; the importance of the Fraser River estuary to salmonid juveniles; the ecologically friendly wastewater treatment; and Musqueam culture.	At this time a visitor centre is not planned. An interpretive and educational plan is being developed for Iona Island Regional Park and IIWWTP that addresses these items. We are considering including a flexible space within the O&M building for park and educational use. Metro Vancouver Regional Parks will also create a Park Management Plan for Iona Beach Regional Park.
Will the WildResearch bird banding station be included in the design? The data would be especially interesting during construction of the IIWWTP and afterwards.	The comparative data from before and after the construction of the IIWWTP will be of value. We have been engaging with WildResearch regarding education and research. There will be a place for the banding station in the design of Iona Beach Regional Park.
Will there be opportunities to take part in development of an interpretive program? It could be a great way to share information about ecological functions, biomimicry and green rainwater infrastructure that is being used to treat green rainwater in Vancouver and around the world.	There is an education and interpretive design consultant on the team that is developing a plan with staff. MV is looking at a number of interpretive opportunities for the island, including the plant itself, treatment processes and ecology. MV will also be working with Musqueam Indian Band on elements of the education and interpretive plan.
Are there any goals or policies of no net loss of habitats on the island? Will the end result be more habitat or different habitat types?	There was a robust structure decision-making process undertaken for ecological, as well as technical, considerations. All of the new habitat created, protected and restored is measured in terms of square metres. The result of the IIWWTP project will be an increase in the quality of the habitat, no net loss in the area of available high quality habitat, and the same or more diversities of habitats.

Issue, Comment, Question	Response
I really like that the product being removed to create the breaks in the causeway and north and east jetties is being utilized somewhere else in the project.	The plan to do this is expected to reduce the amount of truck traffic going to and from the site, and reduce the amount of fill needed to build up the land to above sea level rise.
Will there be areas that have limited access by people, and especially dogs, to give migrating birds a safe space to rest?	There are no off-leash dog areas being proposed. Currently, dogs are not allowed in marsh areas and this is expected to continue for the most ecologically sensitive areas. Secluded areas for wildlife will be maintained and protected to allow for limited disturbances from park users.
The concept drawings appear to have many more trails and not provide secluded areas.	These are conceptual drawings and there will be many areas that are secluded. It is difficult to discern in the high-level drawings. There will be secluded areas for wildlife maintained and protected to allow for limited disturbances from park users.
Are there any plans to improve the jetty itself, for example information signage, washrooms, benches or shelters, viewpoint signage at the lookout at the end?	There is an existing toilet that Regional Parks maintains at the east end of this jetty. Work on a new Iona Beach Regional Park Management Plan will begin in 2021. Items like this can be considered in that Plan through future engagement processes. The outfall jetty, where the effluent is being discharged, is not within the scope of the current project. We have identified a potential breach in the jetty as a future project to improve connectivity. The north arm jetty is not within the jurisdiction of MV. It was installed to make the north arm a navigable waterway. However, we are investigating and speaking to other levels of government about the option of breaches in the north arm to improve connectivity.

Issue, Comment, Question	Response
Will there be space allocated for bicycle parking and/or transit i.e. covered bus stops or loops?	We expect bicycles to have a greater share of use in the future. MV is starting discussions with the airport authority about improving cycling infrastructure on Ferguson Road, which leads to the popular destination of Iona Island. If a bridge is constructed in place of the causeway, it would include cycling lanes. Ample opportunities for bicycle parking in multiple areas will be included in the final design.
Maintain bird refuge areas on the island. Many dog owners ignore the current signs. The goals of increased access and habitat preservation may not be compatible. Wherever you increase human and dog access, you are likely to reduce habitat value.	This is a concern at many parks. The area that is currently a gated liquid waste area will be turned into bird and wildlife habitat with public access. The balance between public access and refuge for wildlife will be managed in the same manner as other MV regional parks. We can work on the dog issues with assistance from citizens who are concerned with the stewardship of the land.
If you go the lagoons during migration, there are ten times the birds in the inner ponds than the outer ponds due to lack of disturbance. It is important to preserve the kind of spaces we currently have for migrating birds to rest and recover. The presence of people and dogs will reduce the value of the space to migrating birds. Your plans show a boardwalk through the tidal marsh where there is currently no public access.	In the plan, the two existing north ponds will be converted to intertidal marshes where public access will be restricted. The Project team has been examining the features that attract birds to the inner ponds, and this will need further study as we proceed to detailed design.
Will the lagoons be preserved in a good state for aquatic insect production and benefit to swallows?	The ecologists on the Project team are looking into the reasons that the existing sludge lagoons provide valuable habitat for birds. One reason identified to date is the insects that emerge from the sludge lagoons. Specific expertise will be sought as we proceed to detailed design. The complex web of interdependencies will be studied and considered. This will ensure that we have a rich insect life to support the bird population.

Issue, Comment, Question	Response
I am really excited by what I have seen so far. The landscaping looks amazing. I think the idea of using the O&M buildings as a public face is brilliant, appreciate the focus on climate change and restoring the water systems.	Comment noted.
Sewer Separation & Stormwater Management	
What is the timeline for completion of sewer separation?	The wastewater coming to the IIWWTP is through combined sanitary and stormwater sewers from the City of Vancouver and parts of the City of Burnaby. The current plan is for Vancouver and Burnaby to separate the stormwater from the sanitary sewers by 2050 and 2075, respectively. After separation is complete, it will be only sanitary sewer wastewater coming into the IIWWTP.
How will stormwater be controlled and grit handled in the new plant during storms?	The City of Vancouver has combined sanitary and stormwater sewers that result in significant inflows. There are significant grit loads from the stormwater collected from roads. In preliminary treatment, there are screens to take out debris, followed by grit removal using a state-of-the-art stacked plate grit removal system. We want to remove as much grit as possible so that it does not deposit in the anaerobic digesters. Grit removal is particularly important for the IIWWTP because of the combined sewer system upstream.
It seems that stormwater management and wet weather flow should be a major consideration given that we know even a small quantity of contaminants can have severe health impacts for marine life like endangered Southern Resident orcas, of which only 72 remain.	The current plan is for Vancouver and Burnaby to separate the stormwater from the sanitary sewers by 2050 and 2075, respectively. After separation is complete, it will be only sanitary sewer wastewater coming into the IIWWTP.
During storms, is it possible that	The mitigation plan in the event of concurrent

Issue, Comment, Question	Response
untreated water could be discharged into the habitat of Iona island? How do you see that impact?	power outage and storm flows is to incorporate the existing containment pond and new influent storage as a means to store influent should it ever be required. The plant will be designed to deal with up to 1,530 megalitres of regular storm flow per day and will have a standby power system to run the plant in the event of a power disruption.
What consideration has been given to storing storm runoff so it can all be treated prior to discharge?	It was not contemplated in the provincially-approved Liquid Waste Management Plan that storing stormwater would be done at the IIWWTP.
Other	
What project delivery model will be used for the IIWWTP?	Determining the project delivery model is part of this phase of work. The Project team will provide a recommendation by the end of 2020 as part of the Project Definition Report.
Does the project require provincial and federal government environmental assessments?	Now that we have developed a conceptual design, we will be meeting with the federal and provincial government representatives to determine environmental assessment requirements.
What is the decommissioning timeline of the existing plant?	The existing plant must stay in service during the construction, tie-in and commissioning of the new plant. The parts of the old plant that will not be reused will be deconstructed or demolished beginning sometime in 2032. However, MV may decide to retain parts of the existing plant for future pilot testing programs and research.
How many new jobs could be created?	Labour estimates are being worked on in the coming months. There are typically over one thousand jobs related to a construction site of this size. There will be more permanent O&M staff required as the plant will double in size.
You indicated the cost of advanced	MV is requesting contributions from both the

Issue, Comment, Question	Response
treatment [drinking water quality effluent] is possibly too expensive. Where is the funding coming from? Since the effluent is being discharged into the ocean, which is under federal jurisdiction, could the federal government be requested to provide additional funding to provide advanced treatment?	provincial and federal commitments but there is currently no senior government funding committed to the IIWWTP. If no funding is provided, the IIWWTP would be funded solely by MV in accordance with their cost allocation bylaw. The IIWWTP project and the accompanying ecological projects are "shovel worthy" and are good candidates for stimulus funding from the provincial and federal governments.
[Final remarks by participants] - Wanted to thank everyone who contributed today. I'm excited by the scope, inclusivity, and thoughtfulness of the project so far and I look forward to seeing it develop and following progress. - Thank you for a very good presentation. - Thanks for good data well presented. - I appreciate all the information that was provided. Thank you for this. - Thanks. Look forward to the next update. - Thank you for the presentations and for the opportunity to comment. - Great work, really impressive meeting and information summary.	Comments noted.

9. Closing Remarks

Mr. Sadleir thanked the Meeting participants for their contributions. He noted that additional thoughts and input can be submitted to ionawwtp@metrovancouver.org by June 8, 2020 for consideration in the development of the recommendation to the MV Liquid Waste Committee and GVS&DD Board in July 2020.

The Meetings concluded at (May 19, 2020) 1:53 p.m. and (May 21, 2020) 8:30 p.m.

APPENDIX A –LIST OF STAFF AND RESOURCES

Staff and Resources:

Rick Bitcon	AECOM
Joyce Chang	Jacobs
Chris Chong	Metro Vancouver
Martin Clarke	Metro Vancouver
Jeff Cutler	space2place
Lea Elliott	Metro Vancouver
Morgan Guerin	Musqueam Indian Band (May 19, 2020)
Dave Keeney	Metro Vancouver
Deanna McGillivray	Metro Vancouver
Sylvia Pendl	Metro Vancouver
Tom Sadleir	Metro Vancouver
Bryan Shoji	Metro Vancouver
Scott Wolf	Miller Hull
Matthew Woodruff	Local Practice Architecture and Design
Robyn Worcester	Metro Vancouver
Lena Zordan	Metro Vancouver
Carol Lee	Recording Secretary, Mosaic Writing Group