

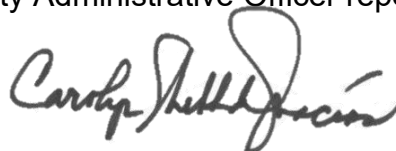
0150-12743-0000

**TRANSMITTAL**

TO Janisse Quinones, General Manager Los Angeles Department of Water and Power	DATE  11/18/2024	COUNCIL FILE NO.
FROM The Mayor	COUNCIL DISTRICT 11	

**MEMORANDUM OF AGREEMENT BETWEEN THE LOS ANGELES DEPARTMENT OF  
WATER AND POWER AND THE BUREAU OF SANITATION FOR THE FUNDING, DESIGN,  
CONSTRUCTION, AND OPERATION OF A PILOT MEMBRANE BIOREACTOR TESTING  
FACILITY AT THE HYPERION WATER RECLAMATION PLANT IN COUNCIL DISTRICT 11**

Transmitted for further processing.  
See the City Administrative Officer report attached.



MAYOR

Attachment

(Carolyn Webb de Macias for)

MWS:PJH/JVW:IR/jpq:10250082t

## OFFICE OF THE CITY ADMINISTRATIVE OFFICER

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Date: October 30, 2024

CAO File No. 0150-12743-0000

Council File No.

Council District: 11

To: The Mayor

From: Matthew W. Szabo, City Administrative Officer

Reference: Communication from the Department of Water and Power dated June 29, 2024; referred by the Mayor for report on July 23, 2024

Subject: **MEMORANDUM OF AGREEMENT BETWEEN THE LOS ANGELES DEPARTMENT OF WATER AND POWER AND THE BUREAU OF SANITATION FOR THE FUNDING, DESIGN, CONSTRUCTION, AND OPERATION OF A PILOT MEMBRANE BIOREACTOR TESTING FACILITY AT THE HYPERION WATER RECLAMATION PLANT IN COUNCIL DISTRICT 11**

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### RECOMMENDATION

That the Mayor:

1. Approve the Los Angeles Department of Water and Power (LADWP) proposed Resolution authorizing a Memorandum of Agreement (Agreement) between LADWP and the Bureau of Sanitation (LASAN) for funding, design, construction, and operation of a pilot membrane bioreactor facility at the Hyperion Water Reclamation Plant for a not-to-exceed cost of \$14,500,000 and a term starting from the date of execution by both LADWP and LASAN through December 31, 2027;
2. Authorize and direct, upon proper certification, the Chief Accounting Employee to draw demands on the Water Revenue Fund over the term of the Agreement, incurred by such Agreement; and,
3. Return the proposed Resolution to LADWP for further processing.

### SUMMARY

The Los Angeles Department of Water and Power (LADWP) requests authority to execute a Memorandum of Agreement (Agreement) with the Los Angeles Department of Public Works, Bureau of Sanitation (LASAN) for the funding, design, construction, and operation of a pilot membrane bioreactor (MBR) testing facility (Pilot Facility) at the Hyperion Water Reclamation Plant (Hyperion) for a total cost-share amount of \$14.5 million. The term of the Agreement will start following approval on the date of execution by both LADWP and LASAN through December 31,

2027. This Agreement will supersede Agreement No. WR-17-3001, which established and approved the cost sharing model, and is expired. The MBR Pilot Facility is a joint effort between LADWP and the LASAN that will study the viability of using MBR technology to improve the treated water produced at Hyperion. The total budget for the MBR Pilot Facility is \$30 million and includes \$4,163,680 in contingency funding. Construction of the facility is complete and is pending completion of a separate facility that is not subject to this Agreement before testing can begin. The operations and maintenance will be conducted by consultants and the estimated costs for the services is \$8,960,000 and already included in the total budget.

Approval of the Agreement is necessary to continue exploring treatment technologies for producing recycled water. Non-approval will compromise the Department's ability to evaluate the cost effectiveness and viability of using MBR technology for this purpose. The proposed Agreement has been reviewed and approved as to form by the City Attorney. Pursuant to Charter Section 373 and the Los Angeles Administrative Code Section 10.5(a), as the agreement is between two governmental agencies, Council approval is not required. Our Office has reviewed the request and recommends approval.

## **BACKGROUND**

The MBR Pilot Facility is a joint collaboration between the LADWP and the LASAN to achieve development of local water supply goals. Currently, a portion of treated wastewater produced at Hyperion is sold to the West Basin Metropolitan Water District (WBMWD). WBMWD conveys the treated water to its Edward C. Little Water Recycling Facility (ECLWRP) for further treatment to meet recycled water standards. LADWP purchases a portion of the advanced treated water for customers in West Los Angeles. The MBR Pilot Facility will study the use of MBR technology to treat one million gallons per day (MDG) of wastewater at Hyperion. If the study is successful, then a potential 272 MGD full-scale facility is possible and will lessen the amount of treatment needed at the ECLWRP to meet recycled water standards. The full list of objectives for the MBR Pilot Facility can be found in Attachment 1 to the Proposed Agreement.

*Prior Agreement No. WR-17-3001* - On January 18, 2018, the Board of Water and Power Commissioners (Board) approved an agreement between LADWP, LASAN, and WBMWD to cost-share the MBR Facility Project with the intent to develop a 70 MGD facility if the study was successful. Agreement WR-17-3001 stated the funding commitment levels for each of the three agencies. The total project cost was \$9.8 million. Under Agreement WR-17-3004, both the LADWP and LASAN contributed \$4.4 million and the WBMWD contributed \$1 million. In 2019, LADWP shifted direction to develop a full-scale 272 MGD MBR facility. Agreement No. WR-17-3001 expired on December 31, 2021 and a new agreement is needed to complete the MBR Pilot Facility.

*Proposed Agreement* – Under the new Agreement, WBMWD is no longer participating aside from its initial commitment of \$1 million. The potential shift to a 272 MGD facility along with supply chain issues, inflation, and WMDWD no longer participating in the project have contributed to changes in scope, budget, and schedule. The total cost of the MBR Pilot Facility has increased from \$9.8 million to \$30 million and the remaining \$20.2 million will be split evenly between the LADWP and

the LASAN with each agency contributing an additional amount of \$10.1 million. Table 1 shows the commitment of the agencies, including the amount provided in Agreement WR-17-3001.

**Table 1: LADWP and LASAN Agency Cost-Share Commitment**

<b>Agency</b>	<b>Commitment under WR-17-3001</b>	<b>Additional Commitment under Proposed Agreement</b>	<b>Total</b>
LADWP	\$4,400,000	\$10,100,000	\$14,500,000
LASAN	\$4,400,000	\$10,100,000	\$14,500,000
WBMWD	\$1,000,000	\$0	\$1,000,000
<b>Totals</b>	<b>\$9,800,000</b>	<b>\$20,200,000</b>	<b>\$30,000,000</b>

LASAN is the primary agency responsible for the MBR Pilot Facility and study, including retaining consultants and managing the budget and schedule. The LADWP will be responsible for the reimbursement of activities related to the MBR Pilot Facility and study as shown in Attachment 2 of the Agreement. The Agreement also provides for the creation of a Technical Committee and a Management Oversight Committee for the implementation and management of the MBR Pilot Facility. Each committee will consist of members from both the LADWP and LASAN. In addition to the Technical and Management Oversight Committees, the Agreement provides for the creation of an Independent Advisory Panel (IAP) which will consist of independent experts in wastewater treatment, potable reuse, and permitting. The Technical and Management Committees will consult with the IAP during all phases of the MBR Pilot Facility.

Construction of the MBR Pilot Facility was completed in January 2024. Start-up activities and the study are pending completion of an odor control facility that is not subject to this Agreement and is the responsibility of LASAN in its entirety. Testing of the MBR Pilot Facility is anticipated to start in early 2025 and the study to determine the viability of using MBR technology is anticipated to be completed by December 31, 2027. All reports on the tests conducted will be reviewed by the Technical Committee. Completion of the study does not obligate the City to build a full-scale facility or allocate any water produced at Hyperion to potential partners. Terms for any allocation of future recycled water from Hyperion will be addressed through a separate agreement. The Agreement contains indemnification language to protect the agencies.

## **CITY COMPLIANCE**

*California Environmental Quality Act (CEQA)* – Pursuant to Article 19, Section 15306, Class 6 CEQA requirements, the MBR Pilot Facility is exempt as the activities involved consist of data collection, research, experimental management, and resource evaluation which do not result in serious or major disturbance.

The City Attorney has approved the proposed Memorandum of Agreement as to form. In accordance with Charter Section 373 and the Los Angeles Administrative Code Section 10.5(a), as the Agreement is between two governmental agencies, Council approval is not required.

## **FISCAL IMPACT STATEMENT**

Approval of the proposed Resolution and Agreement with the Department of Public Works Bureau of Sanitation for the funding, design, construction, and operation of a pilot membrane bioreactor facility at the Hyperion Water Reclamation Plant will not have an impact on the General Fund. The total cost-share of \$14,500,000 is funded by the LADWP's Water Revenue Fund. The recommendations in this report comply with LADWP Financial Policies.

Attachment – June 29, 2024 Correspondence from LADWP, Proposed Resolution, and Agreement.

*MWS:PJH:JVW:IR/jpq:10250082*



Los Angeles  
Department of  
Water & Power

BUILDING A STRONGER L.A.

Karen Bass, Mayor

Board of Commissioners

Richard Katz, President

George S. McGraw, Vice President

Nurit D. Katz

Mia Lehrer

Wilma J. Pinder

Chante L. Mitchell, Secretary

Janisse Quiñones, Chief Executive Officer and Chief Engineer

July 29, 2024

The Honorable Karen Bass  
Mayor, City of Los Angeles  
Room 303, City Hall  
Mail Stop 370

Attention: Ms. Heleen Ramirez, Legislative Coordinator

Dear Mayor Bass:

Subject: Funding, Design, Construction, and Operation of a Pilot Testing Facility Utilizing  
Membrane Bioreactor Technology to Produce Nitrified-Denitrified Tertiary Recycled  
Water at the Hyperion Water Reclamation Plant

In accordance with Executive Directive No. 4, enclosed is a copy of a Board letter and supporting documents recommending approval and transmittal to the Los Angeles City Council of Agreement between the Los Angeles Department of Water and Power and the Los Angeles Department of Public Works Bureau of Sanitation regarding the Funding, Design, Construction, and Operation of a Pilot Testing Facility Utilizing Membrane Bioreactor Technology to Produce Nitrified-Denitrified Tertiary Recycled Water at the Hyperion Water Reclamation Plant.

It is respectfully requested that your office complete its review as soon as possible. Once the required City Administrative Officer report has been received, the matter will be scheduled for action by the Los Angeles Board of Water and Power Commissioners and forwarded to the Los Angeles City Council for final consideration.

Please contact Mr. Paul Habib, Director of Legislative and Intergovernmental Affairs at (213) 367-3846 upon completion of the review, if the review will take longer than 30 days, or if there are any questions regarding this item.

Sincerely,

Janisse Quiñones

Chief Executive Officer and Chief Engineer

KS:jre

Enclosure(s)

c/enc: Mr. Luis Gutierrez, Office of the Mayor  
Dr. Frederick H. Pickel, Office of Public Accountability  
Board of Water and Power Commissioners  
Mr. Paul Habib



RESOLUTION NO. \_\_\_\_\_

BOARD LETTER APPROVAL

  
**ANSELMO G. COLLINS**  
Senior Assistant General Manager  
Water System

  
**ARAM BENYAMIN**  
Chief Operating Officer

  
**JANISSE QUIÑONES**  
Chief Executive Officer and Chief Engineer

**DATE:** July 3, 2024

**SUBJECT:** Funding, Design, Construction, and Operation of a Pilot Testing Facility Utilizing Membrane Bioreactor Technology to Produce Nitrified-Denitrified Tertiary Recycled Water at the Hyperion Water Reclamation Plant

**SUMMARY**

This Memorandum of Agreement (Agreement) shall supersede Agreement No. WR-17-3001 executed on January 18, 2018, to cost-share with the Los Angeles Department of Public Works Bureau of Sanitation and Environment (LASAN) and West Basin Municipal Water District (WBMWD). The Agreement was initiated to conduct a pilot study of Membrane Bioreactor (MBR) technology and collect data to plan for a potential 70 million gallon per day (MGD) MBR Facility at Hyperion Water Reclamation Plant (HWRP) to improve recycled water for the WBMWD recycled water system and LADWP recycled water system in West Los Angeles. In 2019, the City of Los Angeles (City) shifted direction and plans to potentially implement a 272 MGD MBR facility, requiring a full-scale conversion at HWRP. The shift to full-scale MBR, coupled with COVID-19 related supply-chain issues, escalation, and WBMWD no longer participating in the project, resulted in changes to the scope, budget, and schedule provided under prior Agreement No. WR-17-3001.

Agreement No. WR-17-3001 expired on December 31, 2021. A new Agreement is required to continue coordination on the revised design, construction, and operation of the Hyperion MBR Pilot Facility and implementation of the Hyperion MBR Pilot Study to establish the basis of design and regulatory compliance for the full-scale conversion of the existing secondary treatment process at HWRP to MBR technology.

This new Agreement will authorize LADWP to provide up to \$14.5 million (budgeted) for LASAN to retain contractors to continue design, construction, and operation of the Hyperion MBR Pilot Facility and Study.

This partnership presents a major opportunity to increase production of recycled water for direct and indirect potable reuse that would otherwise flow to the Pacific Ocean. HWRP is owned and operated by LASAN, therefore, this partnership will facilitate the advancement of overlapping sustainability goals.

City Council approval is required in accordance with Charter Section 373.

### **RECOMMENDATION**

It is recommended that the Board of Water and Power Commissioners adopt the attached Resolution authorizing execution of Agreement between LASAN and LADWP; WBMWD will not be part of this new Agreement.

### **ALTERNATIVES CONSIDERED**

Not participating in the development of MBR Pilot Facility would hinder the City and LADWP's ability to evaluate the cost effectiveness of MBR Technology and its application to the development of advanced treated recycled water.

### **FINANCIAL INFORMATION**

The Agreement will be effective from the date of execution until testing is deemed complete, but no later than December 31, 2027.

LADWP and LASAN shall each contribute up to \$4.4 million (\$8.8 million combined), as designated under Agreement No. WR-17-3001, which expired on December 31, 2021. WBMWD's previous contribution of \$1 million under said Agreement will be the maximum contribution for WBMWD with no additional contribution per execution of this new Agreement. Additional contribution, beyond the original \$9.8 million, will be split equally between LADWP and LASAN at up to \$10.1 million each (\$20.2 million combined). The total combined funding contributions from all Parties shall be no more than \$30 million (\$9.8M as designated under Agreement No. WR-17-3001; \$20.2M under this Agreement). Any unused money at the conclusion of the testing shall be returned in equal proportionality to the parties.

The increase in funds and delay in schedule for Agreement No. WR-17-3001 were due to additions to the testing and monitoring plan scope (as recommended by the independent advisory panel), impacts of COVID-19 on the availability of resources and delivery of material, and adjustments made to the project design to avoid conflicts with adjacent projects.



## **BACKGROUND**

This pilot project supports the City's local water supply development goals that include sourcing water locally and maximizing recycling of available wastewater for beneficial reuse. LADWP and LASAN are motivated to partner on the implementation of the Hyperion MBR pilot facility to evaluate the technology's application to production of advanced treated recycled water for beneficial reuse and reduce the City's dependence on purchased imported supplies.

LASAN owns and operates HWRP and is responsible to treat wastewater at HWRP to the secondary level for discharge into the Pacific Ocean. LADWP holds ownership of treated wastewater and sells a portion of this secondary effluent to WBMWD. WBMWD conveys this secondary effluent to its Edward C. Little Water Recycling Facility (ECLWRF) in El Segundo for further treatment to meet water recycling standards. A portion of WBMWD's water is purchased by LADWP for recycled water customers in West Los Angeles.

LADWP and LASAN have agreed that additional treatment at HWRP would improve recycled water quality and reduce treatment costs at ECLWRF. MBR technology has been identified as a potential additional treatment that could be effectively implemented at HWRP. The proposed pilot study of MBR technology would collect data to plan, design, construct, and operate full-scale MBR facilities at HWRP that may serve potential partners and/or the full advanced water treatment facilities that could then serve highly purified recycled water for beneficial use by the City.

In accordance with the Mayor's Executive Directive No. 4, the City Administrative Officer's Report has been requested.

## **ENVIRONMENTAL DETERMINATION**

Determine item is exempt pursuant to California Environmental Quality Act (CEQA) Guidelines Article 19, Section 15306, Class 6. In accordance with this section, activities which consist of basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource are exempt. These may be strictly for information gathering purposes, or as part of a study leading to an action which a public agency has not yet approved, adopted, or funded. A thorough analysis under CEQA will occur for the full-scale project for which the pilot testing is developing.

## **CITY ATTORNEY**

The Office of the City Attorney reviewed and approved the Resolution and Agreement as to form and legality.

## **ATTACHMENTS**

- Resolution
- Agreement

WHEREAS, The Los Angeles Department of Water and Power (LADWP) and the Los Angeles Department of Public Works, Bureau of Sanitation and Environment (LASAN), referred to individually as "Party" and collectively as "Parties", are public entities with a common goal to cost-effectively optimize use of recycled water in the Los Angeles region; and

WHEREAS, the Parties, in addition to previous participation from the West Basin Municipal Water District (WBMWD), executed Agreement No. WR-17-3001 on January 18, 2018 to: conduct a pilot study in support of the supply development of 70 million gallons per day (MGD) of Nitrified/Denitrified (NdN) recycled water from Hyperion to WBMWD's and LADWP's customers, including design and construction of a \$1 million gallon per day (MGD) pilot-scale Membrane Bioreactor (MBR) facility to determine the treatment requirements of the Hyperion Water Reclamation Plant (HWRP) primary effluent; collect data from the pilot to help inform design of the future full-scale project; operate pilot study for one year to obtain data for the full-scale project; and

WHEREAS, Agreement No. WR-17-3001 expired on December 31, 2021, but before completion of the Hyperion MBR Pilot Facility and Study, and Parties desire to refine the understanding of this treatment potential as well as to determine downstream impacts and develop design parameters for full-scale implementation of MBR treatment at the HWRP; and

WHEREAS, LADWP proposes to enter into a new Agreement with LASAN to continue their cooperation in the funding, design, construction, and operation of the HWRP MBR Pilot Facility and the implementation of the Hyperion MBR Pilot Study under Agreement No. WR-17-3001; and

WHEREAS, the City of Los Angeles (City) plans to implement a full-scale 272 MGD MBR facility at HWRP to support local water supply goals for the City, requiring a need for a new agreement due to expiration of Agreement No. WR-17-3001 and a revised scope to increase the allotted budget and extend the schedule for completion and implementation of the Hyperion MBR Pilot Facility and Study; and

WHEREAS, the Agreement specifies the responsibilities of each party in regards to the proposed MBR pilot, which would pilot test MBR technology to provide a conceptual outline for a 272 MGD MBR Facility; and

WHEREAS, LADWP and LASAN will each contribute up to \$14.5 million, in addition to WBMWD's prior contribution of \$1 million (\$30 million combined) for the design, construction, and operation of the Hyperion MBR Pilot Facility and Study.

NOW, THEREFORE, BE IT FURTHER RESOLVED that the Agreement between LADWP and LASAN, approved as to form and legality by the City Attorney, and filed

with the Secretary of the Board of Water and Power Commissioners (Board), is hereby approved.

BE IT FURTHER RESOLVED that the President or Vice President of this Board, or the General Manager, or the Senior Assistant General Manager over the Water System, and the Secretary, Assistant Secretary, or the Acting Secretary of this Board are hereby authorized and directed to execute said Agreement herein specified in its current form or substantially similar for containing no material changes for and on behalf of LADWP.

BE IT FURTHER RESOLVED, that the President or Vice President of this Board, or the General Manager, or the Senior Assistant General Manager over the Water System, and the Secretary, Assistant Secretary, or the Acting Secretary of this Board are hereby authorized to amend and/or modify the subject Agreement for and on behalf of LADWP for items of non-material and/or administrative nature that do not change either the costs or term of the Agreement.

BE IT FURTHER RESOLVED that the Chief Accounting Employee of the LADWP, upon proper certification, is authorized and directed to draw demands on the Water Revenue Fund, in accordance with the terms of this Agreement and this Resolution for the work proposed under this Agreement.

I HEREBY CERTIFY that the foregoing is a full, true, and correct copy of the Resolution adopted by the Board at its meeting held

APPROVED AS TO FORM AND LEGALITY  
HYDEE FELDSTEIN SOTO, CITY ATTORNEY

MAY 15 2024

BY

JOHN A. CARVALHO  
DEPUTY CITY ATTORNEY

\_\_\_\_\_  
Board Secretary

**MEMORANDUM OF AGREEMENT BETWEEN  
LOS ANGELES SANITATION AND ENVIRONMENT AND  
LOS ANGELES DEPARTMENT OF WATER AND POWER  
RELATED TO THE HYPERION MEMBRANE BIOREACTOR PILOT  
FACILITY AND STUDY**

**MEMORANDUM OF AGREEMENT BETWEEN  
LOS ANGELES SANITATION AND ENVIRONMENT AND  
LOS ANGELES DEPARTMENT OF WATER AND POWER  
RELATED TO THE HYPERION MEMBRANE BIOREACTOR PILOT  
FACILITY AND STUDY**

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This Memorandum of Agreement (MOA) is made and entered into by and between the Los Angeles Department of Public Works, Bureau of Sanitation (LA Sanitation and Environment, or LASAN) and the Los Angeles Department of Water and Power (LADWP), referred to individually as "Party" and collectively as "Parties", for the Hyperion Membrane Bioreactor (MBR) Pilot Facility and Study to conduct a pilot study of MBR treatment of primary wastewater effluent at the Hyperion Water Reclamation Plant (HWRP). Data collected from the pilot study will be used to help inform the potential full-scale planning, design, and construction of an MBR treatment facility at HWRP to support development of Nitrified/Denitrified (NdN) tertiary recycled water supplies for LADWP's customers and potential partners.

## RECITALS

WHEREAS, the Parties, and previously, the West Basin Municipal Water District (WBMWD), executed Agreement No. WR-17-3001 on January 18, 2018 to: conduct a pilot study in support of the development of 70 Million Gallons per Day (MGD) of NdN recycled water from HWRP to WBMWD's and LADWP's customers, including design and construction of a pilot-scale MBR facility to determine the treatment requirements of HWRP primary effluent; collect data from the pilot to help inform design of the 70 MGD facility; operate pilot study for one year to obtain data for the 70 MGD facility; develop a feasibility study for the 70 MGD facility; and develop an Environmental Impact Report for the 70 MGD facility; and

WHEREAS, the City of Los Angeles (City) in 2019 announced new local water supply goals that require a full-scale MBR facility at the HWRP, instead of a 70 MGD facility as initially planned; and

WHEREAS, as a result of the City's new local water supply goals and the need for a full scale MBR facility, a feasibility study and Environmental Impact Report for a 70 MGD facility is no longer required; and

WHEREAS, after its first payment of \$1 million under Agreement No. WR-17-3001, WBMWD opted to no longer participate further in that agreement or in this MOA; and

WHEREAS, the updated costs for the Hyperion MBR Pilot Facility and Study are exceeding the preliminary cost estimates in Agreement No. WR-17-3001; and

WHEREAS, Agreement No. WR-17-3001 expired on December 31, 2021, before completion of the Hyperion MBR Pilot Facility and Study; and

WHEREAS, the Parties desire to continue their cooperation in the design, construction and operation of the Hyperion MBR Pilot Facility and the implementation of the Hyperion MBR Pilot Study to refine the understanding of this treatment potential as well as to determine downstream impacts and develop design parameters for full-scale implementation of MBR treatment at the HWRP; and

WHEREAS, the Parties desire to enter into this MOA in order to complete the revised design, construction, and operation of the Hyperion MBR Pilot Facility and Study, define the roles and responsibilities of each Party, and implement cost sharing procedures.

NOW, THEREFORE, the Parties agree as follows:

**SECTION 1: TERMS AND CONDITIONS FOR THE DESIGN, CONSTRUCTION, AND OPERATION OF THE HYPERION MBR PILOT FACILITY**

- 1.1 The Parties shall continue with designing, constructing, and operating the one MGD Hyperion MBR Pilot Facility to confirm the viability of the MBR process for producing NdN recycled water and to inform the development of design criteria and operating protocols for a full-scale MBR facility at HWRP in order to improve source water quality for subsequent production of advanced treated recycled water.
- 1.2 The Hyperion MBR Pilot Facility will be located at the HWRP, a property owned by LASAN.
- 1.3 The Parties shall collaborate to develop design specifications and test protocols, and LASAN shall contract with appropriate service providers or contractors to design, construct, and operate the Hyperion MBR Pilot Facility as further described in Attachment No.1. The parties understand that the Hyperion MBR Pilot Facility may employ temporary piping configurations and otherwise be adaptable to changing conditions during all testing pursuant to the Testing and Monitoring Plan.

The Parties shall share equally the cost of design, construction, and operation of the Hyperion MBR Pilot Facility and Study in accordance with Section 4.1.

- 1.4 Design and construction costs shall include the cost of planning studies, plans, specifications, and for obtaining necessary permits for the Hyperion MBR Pilot Facility from all appropriate regulatory agencies, including but not limited to the City of Los Angeles - Department of Building and Safety, Regional Water Quality Control Board, State Water Resources Control Board Division of Drinking Water.

**SECTION 2: TERMS AND CONDITIONS FOR THE HYPERION MBR PILOT STUDY**

- 2.1 LASAN shall be the agency primarily responsible for the Hyperion MBR Pilot Study with participation from LADWP.
- 2.2 On October 1, 2018, LASAN, for the development and implementation of the Hyperion MBR Pilot Facility and Study, issued Task Directive No.12 under TOS SN-53 of LASAN's On-call Consultant Services Contract (C-124324) with Carollo Engineers, Inc. LASAN also issued Purchase Orders 200000302954, 200000302962, 200000303098, and 200000303120 with Koch Separation Solutions, Inc., Evoqua Water Technologies, LLC., Filmtec Corporation, and Suez



WTS Systems USA, INC., respectively. LASAN may retain additional consultant teams and/or contractors for the planning, design, construction, and operation of the Hyperion MBR Pilot Facility. LASAN shall be responsible for managing the contract documents, budget and schedule, permit applications, insurance requirements, compliance with City of Los Angeles labor policies, invoicing, and all other aspects of contract administration. All other contracts relating to this MOA, including the activities described in Section 3, shall be similarly managed by LASAN.

- 2.3 The Parties shall form a Technical Committee consisting of representatives from each Party to oversee the technical aspects of the project. The Technical Committee shall be involved in budget monitoring, schedule development, design review, procurement management, construction oversight, permit application, and the development of detailed testing protocols and water quality requirements and sampling procedures. The Technical Committee shall, at a minimum, meet on a quarterly basis to receive project updates by LASAN representatives. Each Party shall designate at least one representative to participate in the Technical Committee.
- 2.4 The Technical Committee shall develop decision making criteria agreeable to all members to facilitate decision making for the duration of the MOA. Disputes by the Technical Committee shall be resolved by the Management Oversight Committee.
- 2.5 The Parties shall form a Management Oversight Committee consisting of representatives from each Party, who shall not be members of the Technical Committee, to resolve any disputes by the Technical Committee and to approve final budgets and changes to funding requirements as the Hyperion MBR Pilot Facility testing protocols for the Hyperion MBR Pilot Study adapt and change. Determinations and decisions by the Management Oversight Committee must be unanimous. The Management Oversight Committee shall meet on an as-needed basis. Each Party shall designate at least one representative to participate in the Management Oversight Committee.
- 2.6 It is anticipated that the construction and commissioning of the Hyperion MBR Pilot Facility and all testing related to the Hyperion Pilot Study will be completed prior to December 31, 2027. The consultant or contractor conducting the Pilot Study will issue draft and final reports on the pilot tests to the satisfaction of the Technical Committee. The Technical Committee shall be responsible for reviewing the draft reports to provide comments to the contractor in a timely manner prior to finalization of the reports.
- 2.7 The Parties shall collaborate in working with regulatory agencies to address pertinent issues concerning the full-scale Hyperion MBR Pilot Facility that will produce NdN recycled water for non-potable reuse and for further treatment for potable reuse.

- 2.8 All Parties shall have immediate access to data generated from the Hyperion MBR Pilot Study. The Technical Committee shall oversee the use of the data for external purposes.

### SECTION 3: INDEPENDENT ADVISORY PANEL

- 3.1 The Parties shall create an Independent Advisory Panel (IAP) for the Hyperion MBR Pilot Study through LASAN contracting with an third-party entity specializing in independent advisory panel management. The IAP shall consist of three to seven independent experts in wastewater treatment, potable reuse, and permitting. The independent entity shall facilitate selection of the independent experts by the Parties. The IAP shall be managed by the independent entity. The Technical and Management Oversight Committees will consult with the IAP during the design, construction, and operation phases of the Hyperion MBR Pilot Facility and consider the IAP's recommendations.
- 3.2 The Management Oversight Committee shall approve the budget and scope of the IAP and the independent entity and receive direct project updates from LASAN representatives on an as-needed basis.

### SECTION 4: FUNDING

- 4.1 LASAN and LADWP shall each contribute to the project as outlined in Section 4.3. The total combined funding contributions from all Parties, including the \$1M contribution from WBMWD under Agreement No. WR-17-3001, shall be no more than \$30,000,000 (which includes contingency) as specified in Attachment No. 2. Party contributions already made under Agreement MBR WR-17-3001 count towards the maximum funding commitment of each Party. In no event shall the maximum total contribution by each Party exceed \$14,500,000.
- 4.2 Each Party may incur additional costs for contract administration, design review, meeting attendance, and pilot facility implementation and study development, which shall be borne individually by the Party incurring such additional costs. Each Party shall have no financial obligation to the other Party under the MOA, except as herein expressly provided.
- 4.3 The budget and cost breakdowns for the Hyperion MBR Pilot Facility and Study, along with the amount and timing of the Parties' respective contributions, are set forth in Attachment No. 2 and incorporated herein by reference. Attachment No. 2 consists of three tables. Table 1 summarizes the project budget including contingency. Table 2 establishes the contributions of the Parties for project costs, and Table 3 reconciles previous payments and establishes future contributions. LASAN will issue invoices for the required contributions, and LADWP will pay them within 60 days.

- 4.4 All Parties shall evaluate opportunities for outside funding for the Hyperion MBR Pilot Facility and Study and for any other eligible activities specified in this MOA. The amount of outside funding will reduce the funding obligation of each Party in proportion to the contributions made by each Party.
- 4.5 LASAN shall provide to LADWP, on a quarterly basis, a summary report on expenditures, including contractor proof-of-payment, progress photos, and the status of the Hyperion MBR Pilot Facility and Study.
- 4.6 LADWP has the right to audit any and all invoices, schedules, time sheets or other supporting documents during or upon termination or completion of the Hyperion MBR Pilot Facility and Study. Specific requirements for availability of records and audits are listed in Section 9 below.

#### SECTION 5: TERMS OF AGREEMENT

- 5.3 This MOA shall be effective from the day and year of execution by all Parties until the Hyperion MBR Pilot Facility and Study has been completed with the submittal of the final testing results and report to the IAP but no later than December 31, 2027.
- 5.4 This MOA does not in any way obligate the City of Los Angeles to develop a full-scale City-wide recycled water program, make water available to potential partners through exchange or other mechanism, allocate any Hyperion water to potential partners, or set any precedent for terms of any such allocation. Terms for any future allocation of recycled water from the HWRP shall be provided through a separate agreement between the Parties.
- 5.5 Upon mutual written agreement of all Parties, the MOA may be terminated in which case no further Section 4.3 funding obligation from the Parties will exist. Payment for any outstanding invoices and costs resulting from this MOA shall be made in full.

#### SECTION 6: INDEMNIFICATION

- 6.1 **LIABILITY.** It is the intention of this MOA that no Party shall be responsible for any liability which arises by reason of the negligent acts, errors, omissions or willful misconduct of any of the other Parties. Each Party agrees that it will be responsible for its own acts and the results thereof and shall not be responsible for the acts of any of the other parties and results thereof. Therefore, each Party agrees that it will assume all risk and liability for and to itself, its agents, contractors, or employees, for any injury to persons or property resulting in any manner from the conduct of its own operations, and the operations of its agents, contractors, or employees, under this MOA, and for any loss, costs, damage, or expense resulting at any time from any and all causes due to any act or acts, negligence, or the failure to exercise proper precautions, of or by itself or its own agents, contractors, or employees.

Additionally, as it relates to the Hyperion MBR Pilot Facility and Study and notwithstanding any established funding agreement, LASAN shall retain all liability for the acts, errors, omissions or willful misconduct of its officers, agents, employees, consultants, contractors, or the contractor's officers, agents, employees or subcontractors of any tier as it relates to the Hyperion MBR Pilot Facility's design, installation, operation, maintenance, or lack thereof.

The foregoing paragraphs shall survive for a period of two years from the expiration or termination of this MOA.

#### SECTION 7: AMENDMENTS

- 7.1 Following the execution of this MOA, any Party may request a modification to this MOA that the requesting Party believes is necessary due to unforeseen changed circumstances. No modification or amendment of this MOA or its Attachments shall be valid unless the said modification or amendment is in writing and is signed by all Parties to this MOA.

#### SECTION 8: ASSIGNMENTS

- 8.1 No Party to this MOA shall either voluntarily or by operation of law assign or transfer its right nor delegate its duties to any third party without first obtaining written consent of the other Party to the MOA. Such consent shall not be unreasonably withheld. No assignment hereto shall operate to discharge a Party to this MOA of any duty or obligation hereunder without the written consent of the other Party.

#### SECTION 9: AVAILABILITY OF RECORDS AND AUDITS

- 9.1 Upon 30 days written notice to the other Party, any Party may examine, inspect, copy, review, and audit any documents or records within the custody or control of the other Party upon which are based any changes or credits allowed under this MOA. Such examination of documents and records shall be carried out during normal business hours, at the site where said records are maintained in the normal course of business, at the expense of the inspecting Party and in conformance with general auditing standards and procedures. Following any inspection and/or audit pursuant to this Section, the inspecting Party shall within 90 days give written notice to the other Parties of any dispute or disagreement pertaining to the performance under this MOA.

LASAN shall maintain, and shall cause LASAN's consultants and/or suppliers as applicable to maintain, all records pertaining to the management of the MOA and performance of services pursuant to the MOA, including related subcontracts, in their original form, including but not limited to, reports, documents, deliverables, employee time sheets, accounting procedures and practices, records of financial transactions, and other evidence, regardless of form (e.g., machine readable media such as disk, tape, etc.) or type (e.g., databases, applications software, database management software, utilities, etc.), sufficient to properly reflect all costs claimed

to have been incurred and services performed pursuant to the MOA. If LASAN, LASAN's consultants and/or suppliers are required to submit cost or pricing data in connection with the MOA, LASAN shall maintain all records and documents necessary to permit adequate evaluation of the cost or pricing data submitted, along with the computations and projections used. All records shall be retained, and shall be subject to examination and audit by LADWP personnel or by LADWP's agents (herein after referred to as Authorized Auditors), for a period of not less than four years following payment made by LADWP hereunder or the expiration date of the MOA, whichever is later. LASAN shall make said records or to the extent accepted by the Authorized Auditors, photographs, microphotographs, etc., or other authentic reproductions thereof, available to the Authorized Auditors at LASAN's offices at all reasonable times and without charge. Authorized Auditors will have the right to reproduce, photocopy, download, transcribe, and the like any such records. Any information provided by LASAN on machine-readable media shall be provided in a format accessible and readable by the Authorized Auditors. LASAN shall not, however, be required to furnish the Authorized Auditors with commonly available software.

LASAN shall be subject, at any time within 60 calendar days following written notice, to audits or examinations by Authorized Auditors relating to all billings and to verify compliance with all MOA requirements relative to practices, methods, procedures, performance, compensation, and documentation.

Examinations and audits will be performed using generally accepted auditing practices and principles and applicable City, County, State and Federal government audit standards. For consultants, subconsultants, and suppliers that utilize or are subject to Federal Acquisition Regulation, Parts 30 and 31, et seq., accounting procedures, or a portion thereof, examinations and audits will utilize such information.

To the extent that the Authorized Auditor's examination or audit reveals inaccurate, incomplete, or noncurrent records, or records are unavailable, the records shall be considered defective.

Consistent with standard auditing procedures, LASAN will be provided 60 calendar days to review the Authorized Auditor's examination results or audit and respond to Authorized Auditor prior to the examination's or audit's finalization and public release.

If the Authorized Auditors' examination or audit indicates LASAN has been overpaid under a previous payment application, the identified overpayment amount shall be paid by LASAN to LADWP within 90 calendar days of notice to LASAN regarding such overpayment.

- 9.2 If applicable, in any contracts entered into after the execution of this MOA, LASAN shall require all contractors, consultants, and suppliers with whom it contracts for services required for the Hyperion MBR Facility and Study to include provisions from

LADWP's General Condition (GC), Section 18, "Retention of Records, Audit, and Reports" (Attachment No. 3) in their contracts, as well as provisions requiring each subcontractor to include GC-18 in any of its subcontracts. In addition, LASAN, their contractors, consultants, and/or suppliers, shall also include the following language in each contract:

"The Los Angeles Department of Water and Power (LADWP) is a third-party beneficiary of the foregoing audit provision. The benefits of the audit provision shall inure solely for the benefit of LADWP. The designation of LADWP as a third-party beneficiary of the audit provision shall not confer any rights or privileges on LASAN, contractors, consultants, or any other person/entity."

If an examination or audit undertaken pursuant to the Retention of Records, Audit, and Reports provision of GC-18 reveals that LADWP's overpayment to the Project Consultant/Contractor is more than 5 percent of the billings reviewed, the Project Consultant/Contractor shall pay all expenses and costs incurred by the Authorized Auditors arising out of or related to the examination or audit. Such examination or audit expenses and costs shall be paid by the Project Contractor/Consultant to LADWP within ninety (90) calendar days of notice to the Project Contractor/Consultant of the costs and expenses.

- 9.3 LASAN has, for the development and implementation of the Hyperion MBR Pilot Facility and Study, issued Task Directive No.12 under TOS SN-53 of LASAN's On-call Consultant Services Contract C-124324 with Carollo Engineers, Inc. on October 1, 2018, and Purchase Orders 200000302954, 200000302962, 200000303098, and 200000303120 with Koch Separation Solutions, Inc., Evoqua Water Technologies, LLC., Filmtec Corporation, and Suez WTS Systems USA, INC., respectively. The Parties agree that, in place of Section 9.1, the audit provisions of the LASAN's contractors, consultants and/or suppliers task orders and purchase orders shall govern the auditing rights and protocols as to such that LADWP shall have all of the rights set forth in the task orders and purchase orders as are provided to the "CITY" thereunder, and to the extent necessary, LASAN will, at LADWP's direction, enforce such rights.

- 9.4 The provisions of this section shall survive expiration or termination of the MOA.

#### SECTION 10: OTHER TERMS

- 10.1 A Party's failure to enforce any provision of the MOA shall not be construed as a general waiver or relinquishment on its part of any portion of this MOA.
- 10.2 Consistent with Section 6, in no event shall any Party be liable to any of the other Parties for any special, consequential, or indirect damages (including by way of illustration, lost revenues and lost profits) arising out of this MOA or any obligation

arising thereunder, whether an action for or arising out of breach of contract, tort, indemnity or otherwise.

10.3 Any written notice under this MOA shall be deemed properly given if delivered in person or sent by registered or certified mail, postage prepaid, to the person specified below unless otherwise provided for in this MOA:

a. If to LASAN:

Hyperion Water Reclamation Plant  
12000 Vista Del Mar  
Playa Del Rey, California 90293-8504  
Attention: Hyperion Plant Manager

b. If to LADWP:

Los Angeles Department of Water and Power  
111 North Hope Street, Room 1336  
Los Angeles, California 90012  
Attention: Director of Water Engineering and Technical Services

10.4 Any of the Parties may, by written notice to the other Party, change the name or address of the person to receive notices pursuant to this MOA.

10.5 This MOA may be executed in counterparts, each of which may be deemed an original, and all of which collectively shall constitute a single instrument. Photocopies, facsimile copies, and PDF copies shall have the same force and effect as a wet ink original signature.

10.6 Each person signing this MOA on behalf of a Party hereto warrants and represents that he or she has authority to sign on behalf of the said Party, and that this MOA has been validly authorized and constitutes a legally binding and enforceable obligation of the said Party.

IN WITNESS WHEREOF, the Parties thereto have executed this Memorandum of Agreement to be executed by their duly authorized representatives.

DEPARTMENT OF PUBLIC WORKS  
BUREAU OF SANITATION  
OF THE CITY OF LOS ANGELES BY  
BOARD OF PUBLIC WORKS COMMISSIONERS OF  
THE CITY OF LOS ANGELES

By: \_\_\_\_\_  
Aura Garcia  
President, Board of Public Works

Date: \_\_\_\_\_

By: \_\_\_\_\_  
BARBARA ROMERO  
Director and General Manager

Date: \_\_\_\_\_

APPROVED AS TO FORM:  
MICHAEL N. FEUER, City Attorney

By: \_\_\_\_\_  
VIRGINIA M. CHOI  
Deputy City Attorney

Date: \_\_\_\_\_

ATTEST:  
HOLLY L. WOLCOTT, City Clerk

By: \_\_\_\_\_  
Deputy City Clerk

Date: \_\_\_\_\_



IN WITNESS WHEREOF, the Parties thereto have executed this Memorandum of Agreement to be executed by their duly authorized representatives.

DEPARTMENT OF WATER AND POWER  
OF THE CITY OF LOS ANGELES BY  
BOARD OF WATER AND POWER COMMISSIONERS

By: \_\_\_\_\_  
JANISSE QUIÑONES  
Chief Executive Officer and Chief Engineer

Date: \_\_\_\_\_

By: \_\_\_\_\_  
CHANTE L. MITCHELL  
Board Secretary

Date: \_\_\_\_\_

APPROVED AS TO FORM AND LEGALITY  
HYDEE FELDSTEIN SOTO, CITY ATTORNEY  
MAY 24, 2024

BY \_\_\_\_\_  
JOHN A. CARVALHO  
DEPUTY CITY ATTORNEY

**ATTACHMENT NO. 1**  
**HYPERION MBR PILOT FACILITY AND STUDY DESCRIPTION**

The Hyperion MBR Pilot Facility shall consist of three packaged units downstream of one common bioreactor consisting of the vendor's smallest, full-sized membrane separation cassette/rack for the purpose of achieving the following objectives:

- Scalability for a full-scale MBR facility at HWRP
- Determine the viability of the MBR process for treatment of HWRP primary effluent
- Develop criteria for selecting vendors for the full-scale MBR facility at HWRP
- Provide a design basis for the full-scale MBR facility at HWRP
- Develop the basis for capital and O&M cost estimates
- Determine comparative vendor performance
- Initiate regulatory review for ultimate approval of MBR pathogen log removal credits by Division of Drinking Water (DDW)
- Test the system's performance under varying conditions to determine the process stability and membrane integrity
- Evaluate downstream reverse osmosis (RO) performance and quantify impacts on operations and maintenance (O&M) of the RO systems and regulatory compliance concerning implications of RO concentrate discharge into the Santa Monica Bay.
- Simulation of sludge/membrane interaction
- Means of integrity monitoring
- Duplication of air scour impacts
- Reproduce mechanical systems' impacts

## ATTACHMENT NO. 2

**TABLE 1: Hyperion MBR Pilot Facility and Study Budget Breakdown**

Item	Estimated cost	Source
Procurement and installation of facility	\$21,040,000	Board Report for Board of Public Works (February 2024)
Consultant support through July 2024	\$4,516,320	Task Directive 12 between LASAN and Carollo
Independent Advisory Panel	\$280,000	Estimate from National Water Research Institute
Contingency	\$4,163,680	To be determined. Potential uses include: outsourcing of laboratory analyses; continuation of consultant support after July 2024; equipment replacement and repair
<b>Total</b>	<b>\$30,000,000</b>	

**TABLE 2: Cost Share Distribution**

Agency	Share under expired WR-17-3001	Additional cost-share under this MOA	Total
LASAN	\$4,400,000	\$10,100,000	<b>\$14,500,000</b>
LADWP	\$4,400,000	\$10,100,000	<b>\$14,500,000</b>
WBMWD	\$1,000,000	\$0	<b>\$1,000,000</b>
<b>Total</b>	<b>\$9,800,000</b>	<b>\$20,200,000</b>	<b>\$30,000,000</b>

**TABLE 3: Invoice and Reimbursement Schedule and Status**

Component	Amount	Status		
		WBMWD	LADWP	LASAN
Initial deposit (WR-17-3001)	\$3,000,000	Invoice #1 for \$1,000,000 (paid)	Invoice #1 for \$1,000,000 (paid)	Invoice #1 for \$1,000,000 (paid)
Expenditures through Dec 31, 2021 less initial deposit (WR-17-3001)	\$4,626,190.88	NA	Invoices # 2 and 3 for \$2,313,095.44 (paid)	Invoices # 2 and 3 for \$2,313,095.44 (paid)

Remaining balance of WR-17-3001	\$2,173,809.12	NA	LASAN will send Invoice #4 to LASAN and LADWP for \$1,086,904.56 each upon execution of this MOA and after total actual expenditures have exceeded \$9,800,000.	
Future other reimbursements (this MOA)	Up to a maximum of \$20,200,000	NA	<p>LASAN will send Invoice #5 to LASAN and LADWP for \$5,050,000 each upon execution of this MOA and after total actual expenditures have exceeded \$19,900,000.</p> <p>For the remaining balance and upon completion of the project, LASAN will send Invoice #6 to LASAN and LADWP. The invoice amount for each Party is 50% of the total actual expenditure less \$19,900,000. The amount of Invoice #6 for each Party cannot exceed \$5,050,000.</p>	
	<b>Project budget ceiling: \$30,000,000</b>	<b>WBWMD share: \$1,000,0000</b>	<b>LADWP share: \$14,500,000</b>	<b>LASAN share: \$14,500,000</b>

**ATTACHMENT NO. 3**  
**GENERAL CONDITIONS-18 RETENTION OF RECORDS, AUDIT, AND REPORTS**