Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

To: Office of Chief Clerk **DATE:** September 14, 2022

From: Ruth Takeda

Staff Attorney

Environmental Law Division

Subject: Agenda backup - Executive Director's Response to Comments

Applicant: City of Corpus Christi

Proposed Permit No.: WRPERM 13676

Program: Water

Docket No.: TCEQ Docket No. 2020-1559-WR

The Executive Director's Response to Comments is attached as backup for the **October 5, 2022 agenda**.

Please let me know if you have any questions or wish to discuss. I can be reached at 512-239-6635 or ruth.takeda@tceq.texas.gov.

Thank you.

TCEO DOCKET NO. 2020-1559-WR

APPLICATION NO. 13676 BY THE CITY	§	BEFORE THE TEXAS
OF CORPUS CHRISTI TO OBTAIN A	§	
WATER USE PERMIT IN NUECES,	§	COMMISSION ON
KLEBERG, SAN PATRICIO AND	§	
ARANSAS COUNTIES, TEXAS	§	ENVIRONMENTAL QUALITY

EXECUTIVE DIRECTOR'S RESPONSE TO COMMENTS

The Executive Director of the Texas Commission on Environmental Quality (TCEQ or Commission) respectfully files this response to comments filed regarding Application No. 13676 by the City of Corpus Christi for a water use permit in Nueces, Kleberg, San Patricio and Aransas Counties. Requests for a contested case hearing were also filed, which the Executive Director addresses in a separate Response to Hearing Requests.

BACKGROUND

The Commission received this application on January 22, 2020. The application was declared administratively complete on February 26, 2020. Technical review was completed on August 18, 2020. Notice of the application was mailed by the Commission's Chief Clerk on October 26, 2020, to water right holders of record in the Nueces-Rio Grande Coastal Basin. Notice of the application was published in the *Corpus Christi Caller Times* on November 5 and November 12, 2020.

The comment period and hearing request period for this application closed on December 14, 2020. Due to a legislative request for a public meeting, the comment period was re-opened. The hearing request period was not re-opened.

Notice of a virtual public meeting was mailed on February 11, 2021. The re-opened comment period closed at the conclusion of the public meeting on March 18, 2021, but was extended to April 1, 2021, in response to several requests for a two week extension because of the winter storm in February 2021.

APPLICATION

The City of Corpus Christi (City) seeks authorization to divert and use not to exceed 93,148 acre-feet of water per year from a diversion reach on Tule Lake Channel (Corpus Christi Ship Channel), Nueces-Rio Grande Coastal Basin at a maximum diversion rate of 129 cfs (57,708 gpm), for municipal purposes in Nueces, Kleberg, San Patricio and Aransas counties. The City also seeks an exempt interbasin transfer to the portions of Nueces County within the Nueces River Basin and the San Antonio-Nueces Coastal Basin, to the portions of Nueces and San Patricio counties within the San Antonio-Nueces Coastal Basin and to Aransas County within the San Antonio-Nueces Coastal Basin.

COMMENTERS

The following individuals and entities provided comments (written, oral or both) to the application. When substantially the same comments were provided more than once by a commenter, the comments have been treated as one submission. When substantially the same comments were provided by more than one individual, the individuals are referred to collectively as commenters, individuals, or individual commenters. Businesses, groups, or organizations are referred to by acronym.

- 1. Yvette Arellano, Fenceline Watch
- 2. Rebecca Bateman
- 3. Dawn Bissell
- 4. David Bradsby, Texas Parks and Wildlife Department
- 5. Tom Bridges, San Patricio Municipal Water District
- 6. Kirk Cammarata
- 7. Sylvia Campos
- 8. Eduardo Canales
- 9. Elida Castillo
- 10. Melony Chandler
- 11. Danny Cox, San Patricio Municipal Water District
- 12. Phillip Davis
- 13. Katherine Dennenmaier
- 14. Margaret Duran
- 15. Kristina Flakowitz
- 16. Guillermo Gallegos
- 17. Hillcrest Residents Association (HRA)
- 18. Donna Hoffman
- 19. Wendy Hughes
- 20. Edwin Jimenez
- 21. Larry Kalich, San Patricio Municipal Water District
- 22. Cassady Keener
- 23. Doil Kellar, San Patricio Municipal Water District
- 24. James Klein
- 25. Uneeda Laitinen
- 26. David Loeb
- 27. Kathryn A Masten
- 28. Carrie Robertson Meyer
- 29. Alan Miller, San Patricio Municipal Water District
- 30. Troy Mircovich, San Patricio Municipal Water District
- 31. Patricia Mitchell
- 32. Robert Muir
- 33. Emily Nye
- 34. Patrick Nve. Ingleside on the Bay Coastal Watch (IOBCWA)
- 35. Blanca Parkinson
- 36. Robert Paulison, Port Industries of Corpus Christi
- 37. Daniel Pena
- 38. Ed Rainwater, San Patricio Municipal Water District
- 39. Thomas Rodino
- 40. Sandra Love Sanchez
- 41. Robin Schneider

- 42. Encarnacion Serna
- 43. Ashara Slagger
- 44. Greg Smith
- 45. Shiv Srivastava, Fenceline Watch
- 46. Thomas Strubbe
- 47. Errol Summerlin
- 48. Tom Tagliabue
- 49. Lamont Taylor
- 50. Kenneth Teague
- 51. Billie Jo Tennill, San Patricio Municipal Water District
- 52. Clara Villareal Varner
- 53. John Weber
- 54. Daniel Wilkerson
- 55. Brian Williams
- 56. Henry Williams, Hillcrest Residents Association (HRA)
- 57. Melissa Zamora

RESPONSE TO COMMENTS

GENERAL COMMENTS

COMMENT NO. 1: Individual commenters thanked Representative Abel Herrero for making the public meeting possible so that the public could offer comments on the permit.

COMMENT NO. 2: Individuals thanked TCEQ for providing information on the application and an opportunity for the public to comment on the application.

COMMENT NO. 3: An individual thanked TCEQ for having an interpreter for the public meeting.

COMMENT NO. 4: Port Industries of Corpus Christi, San Patricio Municipal Water District, and other commenters expressed support for the project.

COMMENT NO. 5: IOBCWA, HRA, Fenceline Watch and individual commenters expressed opposition to the application and requested that TCEQ deny the application. Individual commenters were opposed to desalination projects in Corpus Christi Bay or its estuary systems. An individual commented that there are numerous individuals and organizations that have expressed concerns about the application and that TCEQ should listen to those concerns.

Response to Comment Nos. 1 – 5: The ED acknowledges these comments and thanks all of the commenters for participating in TCEQ's public comment process.

COMMENT NO. 6: Fenceline Watch, HRA, and individual commentors requested that the public comment period be extended for two weeks because of Winter Storm Uri and the related loss of water and power. An individual also requested the extension so that persons who attended the public meeting would have time to review the comments made at the meeting and become more familiar with the ramifications of the permit. An individual commented that there should have been more advanced

advertising for the hearing. Individual commentors requested an in-person public meeting after COVID restrictions are lifted. Fenceline Watch commented that the public input process is predicated on providing an opportunity for all Texans to voice their concerns about an issue.

Response to Comment No. 6: The ED responds that TCEQ continued to carry out its mission to protect our state's public health and natural resources consistent with sustainable economic development during the unprecedented times faced in 2021. As Texas adapted to the ever-changing situation, TCEQ implemented solutions to move forward with agency business. Public participation is an integral part of the permitting process which is why the agency began using virtual meetings for public meetings. The ED believes that the virtual public meeting on this application provided an opportunity for the public to voice their concerns and comments. The public was also provided an opportunity to participate via telephone during the public meeting.

In response to the concerns raised about the impacts of Winter Storm Uri, TCEQ extended the public comment period for a period of two weeks to ensure that everyone had an opportunity to express their comments and concerns. In addition, a public meeting is not the only avenue for the public to express their concerns and ask questions. The public may also provide written comments to the TCEQ anytime during the public comment period. The TCEQ takes both oral and written comments into consideration during the permitting process.

COMMENT NO. 7: HRA, Fenceline Watch, and individual commenters requested a contested case hearing. One commentor commented that many commenters won't meet the affected party status as they've already been displaced by industry.

Response to Comment No. 7: The ED responds that several requests for a contested case hearing were received on this application and that they are addressed by the ED in a separate Response to Hearing Requests. The TCEQ Commissioners will consider the requests at an open meeting, referred to as a Commission agenda, and will decide whether to refer the application to the State Office of Administrative Hearings for a contested case hearing.

COMMENT NO. 8: IOBCWA and individual commenters expressed concerns that TCEQ did not consider the cumulative effects on the environment of multiple desalination plants in Corpus Christi Bay. An individual commented that it is harder and more expensive to clean the water when it is downstream from other desalination plants. IOBCWA commented that scientists have found that circulation and flushing of the Bay's water occurs on average, once every 1.4 years. Even one desalination project would affect the salinities with a cascading negative effect on marine and avian life dependent on the Bay's resources. IOBCWA gave two examples of projects that have not been constructed. Port of Brownsville failed and CC Polymer announced its desalination project in 2014 and it is yet to be operational. A Tampa Bay facility cost \$158 million and has been bankrupt several times. The Carlsbad Desalination Facility in San Diego cost over \$1 billion dollars with annual operating costs in the tens of millions of dollars annually.

Response to Comment No. 8: The ED responds that TCEQ staff performed technical reviews on this application for instream uses, hydrology, and water conservation as required by the Texas Water Code and applicable TCEQ rules governing water rights. The ED believes that his proposed draft permit is protective of issues within TCEQ's jurisdiction and was developed in accordance with applicable water rights statutes and rules.

COMMENT NO. 9: The San Patricio Municipal Water District submitted a resolution in support of the application. The resolution states that the District was established in 1951 by the by the Texas Legislature (52nd session) and receives its water supply from the City of Corpus Christi which acts as the regional developer and provider of water. The District supplies potable water to nine municipalities (Aransas Pass, Gregory, Ingleside, Ingleside on the Bay, Odem, Portland, Rockport/Fulton, Taft, and jointly with City of Corpus Christi, Port Aransas) in three counties (San Patricio, Aransas and Nueces) which is used to meet the residential and commercial needs of customers in these municipal areas as well as potable water to Rincon Water Supply Corporation and Seaboard Water Supply Corporation. The District also supplies industrial process and untreated water to San Patricio industrial customers, which is critical to the economic viability of San Patricio County and the people living in it. The District's Board of Directors is a seven member elected body with its members representing distinct geographic areas of San Patricio and Aransas County that roughly correspond with the municipalities served within and one appointed member that has historically represented industry. Securing new water supplies that are sustainable, affordable and drought resistant is critical to the future of this region in order to meet the needs of the District's current customers and allow for additional potable water to serve residential and commercial needs. The District supports all viable alternate water sources including, but not limited to this source. Utilizing this source in an environmentally sensitive way will create more reliability and resiliency in the system.

COMMENT NO. 10: Port Industries of Corpus Christi commented that its members have been participants in the City of Corpus Christi's current seawater desalination effort and have worked with the City and others throughout the process. An ample supply of clean, fresh water is important to everyone in the region, and securing a new water supply that is sustainable, affordable and drought resistant is critical to the future of the area. A new source will enable the City to meet the needs of current customers and supply additional potable water to serve future residential and commercial needs.

Response to Comment Nos. 9 and 10: The ED acknowledges these comments.

COMMENT NO. 11: An individual commented about notification to water rights. Although Segment 2481 is located in both the San Antonio-Nueces and the Nueces-Rio Grande Coastal Basins, Segment 2481 is one body of water and aquatic life moves freely throughout the bay system. Therefore, cumulative water rights should be considered by TCEQ.

Response to Comment No. 11: The ED responds that notice of the application and public meeting were provided in accordance with applicable TCEQ statutes, rules, and procedures for water right applications. Notice of the application was mailed to water right holders on October 26, 2020. Notice of the application was published on

November 5 and November 12, 2020 in the Corpus Christi Caller Times. Notice of the public meeting was sent on February 11, 2021.

COMMENT NO. 12: Individual commenters expressed concerns about the power needs of the facility and impacts to the Texas electrical grid. An individual commented that desalination plants require huge amounts of power to operate; 69% of the cost associated with operating the Aguas Antofagasta desalination plant in Antofagasta, Chile goes merely to power the plant.

Response to Comment No. 12: The ED acknowledges the comments and responds that TCEQ's role in the process is to evaluate the water rights application pursuant to applicable requirements. The energy to operate the project and effects on the Texas power grid were not factors included in the application and were not considered in TCEQ staff's review of the application under applicable TCEQ statutes and rules for water rights applications.

COMMENT NO. 13: IOBCWA and individual commenters expressed concerns that the diverted water would be used for industrial use instead of municipal use. Individuals expressed concerns that the application is a public subsidy for industries. An individual commented that they are opposed to recruiting additional industrial facilities to the area.

COMMENT NO. 14: An individual expressed concerns that the City did not provide useful information at the public meeting and that the comments from the public provided better information about the project and its impacts. An individual expressed concerns that the City is not prepared to take on a project of this magnitude.

COMMENT NO. 15: An individual expressed concerns that the City plans to design, build, and operate this plant themselves. An individual commented that the City applied for the permit but will not be constructed, operated, or maintained by the City and the City has not determined what entity will do so.

COMMENT NO. 16: Individual commenters commented that the public should be able to vote on the project and whether or not they want the rights to this water. An individual commented that the public should be part of the planning process.

COMMENT NO. 17: An individual commented that decisions on the plants have taken place behind closed doors, and individuals expressed concerns that the process lacked transparency.

Response to Comment Nos. 13 - 17: The ED acknowledges the comments and responds that TCEQ has no role in or jurisdiction over the City's public information and decision-making processes or in determining what information the City provides to citizens.

COMMENT NO. 18: An individual commented that historically, after completion of a water project, the City has needed to immediately start the process on the next water project so it can have the water it needs when it needs it. This includes planning for the desalination plant, which began because of strong citizen interest, so the City could determine whether it was viable or feasible. The individual further commented

that successive City councils have worked on the project, and the project has strong backing from private citizens and businesses. One of the benefits of a city water utility holding this type of permit is that when there is an issue, the City would have other sources of water to use while modifications are made to the desal plant and the City would be accountable to the public on a local level through the normal electoral process. Over ten years of direct planning and public discussion have gone into this project, and that although the project might not be built in the near term, having the permit and knowing its conditions will greatly aid the City Council and community in accurately weighing the costs and benefits of building and operating the facility. The City is the only entity with the personnel, training, customer base and delivery system to feasibly implement a seawater desalination plant. The City has meticulously studied the options and selected reasonable intake and disposal solutions with mitigation for environment. The City is a major regional water supplier (18 counties and about 500K users), has surface water rights, pipelines, and IBT permits to maximize industrial water supply during a time of drought without sticking it to residential consumers.

Response to Comment No. 18: The ED acknowledges the comment.

COMMENT NO. 19: Individuals expressed concerns about boil water notices and a "water ban" alert caused by negligence and accidents on the part of the City and industries. An individual commented that the City identified a lack of a backflow preventer, which allowed the water to be contaminated. Individuals commented that in Sept. of 2020, the City was sued by the EPA for violating the Clean Water Act, and by the TCEQ for violating the Texas Water Code.

Response to Comment No. 19: The ED acknowledges the comments and responds that the City's operation of its water treatment plant and wastewater treatment plant are not factors included in the application and were not considered in TCEQ staff's review of the application under applicable TCEQ statutes and rules for water rights applications.

COMMENT NO. 20: An individual commented that Article III, section 52, and Article XI, section 3 of the Texas Constitution prohibit a city from lending its credit or granting anything of value in aid of a corporation. The \$220 million low-interest SWIFT loan recently granted by the Texas Water Development Board to the City to support building the Inner Harbor desalination plant will benefit private industries, and City taxpayers will have to pay back the loan.

Response to Comment No. 20: The ED responds that TCEQ staff's review of the application did not include funding considerations. The TCEQ's jurisdiction over water rights permitting is established by the Legislature. Consideration of how the City funds a project is not within the TCEQ's statutorily established jurisdiction over water rights permitting.

COMMENT NO. 21: Fenceline, HRA, and individual commentors stated that this project poses environmental justice concerns. Specifically, that the historic neighborhood of Hillcrest, which is a primarily Black and Hispanic neighborhood with other indigenous and POC residents, face a disproportionally higher effect of industry encroachment and contaminants than other neighborhoods. There were further concerns for the unhoused. An individual disagreed with the City's assertion that the proposed facility

is not in a neighborhood because the facility is located in the Hillcrest neighborhood and not in an industrial area.

Response to Comment No. 21: The ED responds that water rights applications evaluated by the TCEQ are reviewed without reference to the socioeconomic or racial status of the surrounding community. The TCEQ is committed to protecting the health of the people of Texas and the environment regardless of location. Although there are no TCEQ water rights rules addressing environmental equity issues, such as the location of permitted facilities in areas with minority and low-income populations, disparate exposures of pollutants to minority and low-income populations, or the disparate economic, environmental, and health effect on minority and low-income populations, the TCEQ has a strong policy commitment to address environmental equity.

The TCEQ has long encouraged participation in the permitting process. The Office of the Chief Clerk works to help the public and neighborhood groups participate in the regulatory process to ensure that agency programs that may affect human health or the environment operate without discrimination and to make sure that concerns are considered thoroughly and are handled in a way that is fair to all. You may contact the Office of the Chief Clerk at 512-239-3300 for further information.

COMMENT NO. 22: IOBCWA and individual commenters expressed concerns about the number of industrial facilities around the bay and the pollution from those facilities. An individual commented that the application should be denied because industry has already polluted the area. Individuals commented about adverse health impacts from the industry located in the area. An individual commented that populations at risk have more health issues such as asthma and cancer. An individual expressed concerns about greenhouse gasses associated with the project. An individual commented that a 2018 peer reviewed study of desalination plants in China found that such facilities are a significant contributor of greenhouse gases as well as a source for NOx and SOx emissions. The increased emissions of this facility would be detrimental to surrounding communities and add onto the cumulative health impacts, such as respiratory ailments and inflammation of the throat and skin, experienced by those who live in the area. Further, the emissions from this plant will introduce environmental hazards caused by the atmospheric mixture of NOx and SOx that can lead to acid rain. Texas as a state has failed one ozone standard and is on the path to fail a second one in the weeks ahead. Currently Nueces/San Patricio are designated unclassifiable meaning there is little to no information on air quality under any of the National Air Quality Standards (Ozone 2015/2008, Lead, Carbon Monoxide, Nitrogen Dioxide, Sulfur Dioxide, or PM 10/2.5). IOBCWA commented that during the 95 years of Port operations, lax environmental requirements have allowed untold amounts of pollutants to be released into the harbor including heavy metals, carcinogens, plastics, hydrocarbons, coke, sulfur, chrome, mercury, and lead.

Response to Comment No. 22: The ED responds that TCEQ staff's review of the application did not include emissions, greenhouse gases, or other issues related to pollutants. The TCEQ's jurisdiction over water rights permitting is established by the Legislature. Consideration of air quality and waste issues are not within the TCEQ's statutorily established jurisdiction over water rights permitting.

COMMENT NO. 23: An individual commented that the Corpus Christi Ship Channel is not independent of the bay and that the Corpus Christi Bay feeds the Ship Channel.

Response to Comment No. 23: The ED acknowledges the comment and responds that the Corpus Christi Ship Channel is connected to Corpus Christi Bay.

COMMENT NO. 24: Individuals commented that we are stewards of the environment. An individual commented about fishing and crabbing on the bay and that Corpus Christi Bay is a source of life. An individual commented that the bay is the face of Corpus Christi and surrounding towns and is home to most of the area attractions including the Corpus Christi Museum of Science, the Corpus Christi Art Museum, the Texas State Aquarium, and the USS Lexington Museum on the Bay. An individual commented that approving the permit would allow the destruction of history, marine life, the water quality of the bay, and destroy future opportunities for tourism. An individual commented that climate change is worsening and we need to do all that we can to protect and conserve all of the wildlife, natural habitats, and ecosystems that provide so many services to us and all of the organisms that rely on it.

Response to Comment No. 24: The ED acknowledges the comments and responds that TCEQ staff followed applicable requirements in the Texas Water Code and TCEQ's rules in reviewing this application and developing their recommendations. Specifically, staff performed technical reviews for instream uses, hydrology, and water conservation. The ED believes that his proposed draft permit is protective of issues within TCEQ's jurisdiction over water rights permitting.

COMMENT NO. 25: An individual commented that TCEQ should conduct an Environmental Impact Statement. An individual commented that TCEQ should review the application in accordance with federal law, the Endangered Species Act, Marine Mammal Protection Act, Rivers and Harbors Act and Clean Water Act Section 404, and the National Environmental Policy Act.

Response to Comment No. 25: The ED responds that an environmental impact study is not required for this water rights application. The ED further responds that TCEQ staff followed applicable requirements in the Texas Water Code and TCEQ's rules in reviewing this application for a water rights permit and developing their recommendations.

COMMENT NO. 26: An individual commented that the applicant is seeking to take advantage of an ecological subsidy from freshwater inflows for the discharge and diversion and to desalinate low salinity water to save money. This would remove the ecological benefit provided by freshwater inflow.

Response to Comment No. 26: The ED responds that TCEQ staff performed a review of whether the application would affect freshwater inflows to Nueces Bay and Delta and found that the application would not affect freshwater inflows.

COMMENT NO. 27: An individual expressed concerns that the application would impact the ability of people to enjoy the bays and beaches by attracting polluting industry to an environmentally delicate area. An individual expressed concerns about

the environmental degradation that has historically taken place in the Coastal Bend area.

Response to Comment No. 27: The ED responds that TCEQ's role in the process is to evaluate the water rights application pursuant to applicable requirements. The location of industrial facilities is not a factor that was considered in TCEQ staff's review of the application under applicable TCEQ statutes and rules for water rights applications.

COMMENT NO. 28: Individual commenters expressed concerns about use of the diverted water for municipal (drinking water) purposes. An individual asked whether there were water quality requirements for the water being diverted and whether there would be continuous testing of the intake water. The commenter stated that the sediment of the ship channel and Nueces Bay are known to be contaminated with heavy metals and that the myriad of chemicals, current and legacy, will run off in normal rainfalls and catastrophes such as hurricanes, firefighting, and leakage. The commenter expressed concerns about winds moving water existing Nueces Bay towards the intake. The commenter also expressed concerns about ship induced mixing where the displacement caused by large ships will thrust the channel bottom waters outward, prop-wash from ships and tugs will mix it with surface waters, and it will be spread into adjacent critical wildlife habitats.

COMMENT NO. 29: An individual expressed concerns that port industries already discharge wastewater (including brine from one desalination facility already permitted) into the inner harbor; therefore, this intake will be terribly inefficient and may introduce dangerous chemicals into the Corpus Christi public water supply and that the additional brine from the project would further reduce the facility's efficiency.

COMMENT NO. 30: An individual asked whether the water would be safe during algae blooms and asked how the water will be processed after oil and gas and toxic chemical spills.

COMMENT NO. 31: An individual commented that the proposed intake water is not seawater but is estuary water and that the water is contaminated with industrial waste and should not be used for drinking water.

COMMENT NO. 32: An individual expressed concerns about ground contamination around the refineries that would limit use of the water for drinking water.

COMMENT NO. 33: An individual commented that the diverted water will be used for both industrial and municipal uses that includes drinking water for thousands of residents. The water diverted will ultimately result in a supply of drinking water that will amount to approximately 11% of the daily consumption of municipal water. Neither the application or the Draft Permit provide any assurance that the cumulative contaminants from all of these discharges has been properly addressed in the process of taking the diverted water and transforming it into safe drinking water for human consumption.

Response to Comment Nos. 28-33: The ED responds that TCEQ staff followed applicable requirements in the Texas Water Code and TCEQ's rules in reviewing

this application for a water rights permit and developing their recommendations. Drinking water quality is not a factor that was considered in TCEQ staff's review of the application under applicable TCEQ statutes and rules for water rights applications. The ED also notes that public drinking water is regulated by the TCEQ's Public Water System Supervision Program pursuant to provisions in the Texas Health and Safety Code and TCEQ rules that are at least as stringent as federal drinking water rules.

COMMENT NO. 34: An individual expressed concerns about the impact of hurricanes on the intake structure. IOBCWA expressed concerns about the use of unproven technology in an enclosed bay system.

Response to Comment No. 34: The ED responds that construction of the facility is not a factor that was considered in TCEQ staff's review of the application under applicable TCEQ statutes and rules for water rights applications.

COMMENT NO. 35: An individual asked the Governor to order TCEQ to have all individuals, including the ED, involved in the writing, preparation, review and approval of the application to present their names, credentials, fields of study, certifications, and qualifications that show they are qualified to be involved in the permit application.

Response to Comment No. 35: The ED responds that the Governor has not issued such an order and notes that water rights program staff are hired pursuant to standard state agency hiring practices, which includes posted qualifications required for specific positions. The ED also notes that agency staff do not write or prepare the application. That task is the responsibility of the applicant.

COMMENT NO. 36: Fenceline Watch commented that the water to be diverted is a public trust to benefit the public and is not a resource to be used to benefit industry at the expense of future generations. Fenceline Watch also expressed concerns about the lack of a substantial review of the needs of future generations or water scarcity. TCEQ does not have the authority to divert a public trust for an industrial use.

Response to Comment No. 36: The ED responds that under the Texas Water Code industrial use is a beneficial use for which water can be appropriated. However, the ED notes that the application requests an appropriation of water for municipal use, which is also a beneficial use of water. TCEQ staff followed applicable requirements in the Texas Water Code and TCEQ's rules in reviewing this application and developing their recommendations. Specifically, staff performed technical reviews for instream uses, hydrology, and water conservation as required by the Texas Water Code and applicable TCEQ rules. The ED believes that his proposed draft permit is protective of issues within TCEQ's jurisdiction over water rights permitting.

TEXAS PARKS AND WILDLIFE

COMMENT NO. 37: TPWD commented that it reviewed the application and recommends that the permit include provisions to limit impingement and entrainment from the diversion of water. The TPWD specifically recommends that:

- diversions of marine seawater should not exceed flow-through velocities of 0.5 feet per second (fps);
- intake structure design should adjust or adaptively manage with varying flows and water quality that may occur at the intake site;
- intake structures should be designed to reduce the flow velocity so that marine organisms may escape being drawn into the intake;
- screens or booms, or both, should be used exclude organisms from the intake;
 and
- a site-specific study of conditions at the proposed intake locations be conducted to identify marine organisms at risk from intake operations and to inform the design planning process.

In addition, when feasible, directional drilling to install piping below the seabed and drawing water down through a sandy bottom will prevent impingement of marine organisms on intake screens exposed to open water and prevent entrainment of other organisms carried with the feedwater through the intake screen. TPWD expressed appreciation for the opportunity to provide comment on this application.

Response to Comment No. 37: The ED responds that this application was not submitted under Texas Water Code Chapter 18. The ED responds that the proposed draft permit has not been revised to include the TPWD recommendations because the ED believes the special conditions included in the draft permit are sufficiently protective of aquatic resources and because requests for a contested case hearing on this application have been filed.

WASTEWATER PERMITTING

COMMENT NO. 38: Individual commenters expressed concerns that the water rights permit and the wastewater discharge permit are considered in two separate processes. Individual commenters expressed concerns about the increases in salinity resulting from the discharges and the effect on the fish and marine life and the ecology of the bay. An individual commented that there is not enough water circulation to properly dispense the brine discharge that will occur, which will result in an even more hypersaline bay. An individual commented that the desalination process requires that water be pretreated with hydrochloride acid and hydrogen peroxide, chemicals that can only be used a limited number of times, and would then be discharged into the areas surrounding the plant.

COMMENT NO. 39: An individual commented that Segment 2484 (referred to as the Inner Harbor) is, in essence, an enclosed body of water with no freshwater intake and the only exchange with Segment 2481 is through the narrow ship channel. Numerous industrial facilities discharge their wastewater and stormwater into the segment. Each of these facilities are allowed to discharge any number of pollutants, large amounts of oil and grease and other contaminants into the Inner Harbor.

COMMENT NO. 40: An individual commented that fish, shrimp, and oysters feeding, breeding, resting, and the growing grounds of Corpus Christi's Estuary nurseries are already fragile from high salinity. They already need enough freshwater inflows from the Nueces to balance. Desal discharge will imbalance that and make the water unlivable for those creatures that give our bay life.

Response to Comment Nos. 38 - 40: The ED acknowledges the comments and reiterates that issues related to the City's wastewater application and any associated discharge were not considered in TCEQ staff's review of the water right application under applicable TCEQ statutes and rules for water rights. The ED also notes that a TCEQ wastewater permit application is a separate authorization and will be processed separately from this pending water rights application.

WATER PLANNING

COMMENT NO. 41: HRA and individual commenters commented that the application is not consistent with the State and Regional Water Plans. Individuals commented that there are no future needs for municipal water in the Coastal Bend Region.

COMMENT NO. 42: An individual commented that, according to the City, desalination is the only recommended strategy that adds sufficient quantity to meet the projected needs in Nueces and San Patricio Counties.

COMMENT NO. 43: An individual commented that in Attachment 2 of the City's application, the Coastal Bend Regional Water Planning Group acknowledges that "...the Region N 2021 Water Plan...shows manufacturing needs within the 2020-2070 planning period which the project can be shown to address, but does not identify municipal needs for the City of Corpus Christi or their customers." Figure ES.3 in the Water Plan projects only a modest population increase over the next 50 years, with Aransas County and San Patricio County, two of the four counties covered by this permit, growing by only 3% and 12%, respectively. However, as shown in Table 2.3 of the Water Plan, "total water use for the region is projected to increase [by] 47.2 percent ..., primarily attributable to projected industrial growth." An individual commented that all 93,148-acre feet of bay water requested per year is for municipal use, but according to the 2021 Region and Water Plan, municipal demand over the next 50 years will only grow marginally and the projected growth rate for the Coastal Bend from 2010-2070 is 0.46%.

COMMENT NO. 44: An individual commented that the water is needed to provide for future use in the Corpus Christi region, which includes seven counties.

COMMENT NO. 45: An individual commented that the application references the Region N Water Plan from 2016 as recommending this project. However, being a "recommended water strategy" by virtue of placement on the Region N Water Plan does not include any assessment of the merits of a project but is a set of options that are not inconsistent with the Water Plan.

COMMENT NO. 46: An individual commented that the Region N Water Plan states that "The City of Corpus Christi, after meeting demands and/or contracts with its customers, has raw water supply shortages from 2030 through 2070, indicating a need

for increased source water supplies." But letters from city officials in 2017 show where they assured both Exxon-SABIC and Steel Dynamics that their water needs could be met – with no mention of desalination.

COMMENT NO. 47: An individual commented that members of the public spoke out in opposition to desalination projects, both in writing and at virtual meetings, during the comment period for the 2021 Region N Water Plan.

Response to Comment Nos. 41 – 47: The ED acknowledges the comments and notes that Regional Water Planning Groups and the Texas Water Development Board are responsible for developing Texas' Regional and State Water Plans. TCEQ staff performed a water conservation review pursuant to applicable TCEQ requirements and determined that the application is consistent with the 2016 Region N Water Plan and the 2017 State Water Plan. In addition, TCEQ staff also reviewed the draft 2021 State Water Plan and considered information provided by the Region N Planning Group in making its consistency decision. TCEQ has no role in or jurisdiction over the recommendations or decisions of the Regional Planning groups.

ALTERNATIVES TO THE APPLICATION

COMMENT NO. 48: IOBCWA and individual commenters expressed concerns about the application and commented that the intake location should be in the Gulf of Mexico. An individual commented that researchers from the Harte Research Institute and TAMU Corpus Christi have stated that the safest placement for intake and discharge is in the Gulf.

COMMENT NO. 49: IOBCWA and individual commenters suggested alternatives to the application including conservation and recycling programs (low flow toilets and shower heads, xeriscaping, and grey water and rainwater collection), groundwater in the Evangeline Aquifer, reuse, evaporation capture and floodwater and rainwater collection. An individual commented that the project is not needed since alternative sources of water were not duly considered. An individual commented that an average annual reduction in water consumption of one percent would be sufficient to meet the City's needs. IOBCWA commented that desalination within Corpus Christi Bay should not be considered given the multiple water resources available to the City. Individuals commented that the City has not implemented conservation measures. An individual commented about initiatives in other cities such as classes on greywater and rainwater collection, landscaping, and low flow fixtures. An individual commented that alternative cooling strategies such as solar or wind power should be explored since the water is for industrial use.

COMMENT NO. 50: An individual expressed concerns about Pages 47-48 of the City's application, which address whether or not conservation can meet the area's needs and whether or not alternative forms of water development exist. The City's 2020 Water Conservation Plan states on Page 13 that "a more aggressive conservation program could help municipal demand level off or decrease even with an increase in population. A goal of 1% annual reduction in municipal consumption would defer the need for additional supplies."

Response to Comment Nos. 48 - 50: The ED responds that staff's review of a water rights application is limited to specific requirements under applicable statutes, rules, and the specific requests in the application. Staff's conservation review also found that desalination is a recommended water management strategy in the 2016 Region N Water Plan and the draft 2021 Region N Water Plan to meet the future water supply needs for the City.

COST OF THE PROJECT

COMMENT NO. 51: Fenceline, IOBCWA, and individuals expressed concerns about the high cost of the project. Individuals expressed concerns about the burden of loan repayment commitments and impacts to water ratepayers, residential water bills, and taxpayers. An individual commented that the location makes the diverted water harder to clean, which in turn makes it more expensive. An individual commented that the total cost of desalination including the cost of planning, permitting, and concentrate management are high compared to other alternatives. An individual commented that desalination plants raise the cost of water for working families. The commenter cited a 2019 UCLA study on the impacts of a proposed desalination plant in Orange County concluded that such a facility would raise water costs for residents by an estimated 5%-11%. The cost increase passed on to consumers by desalination plants would mean that for a family of four that live below the poverty level up to 3% of pre-tax income would be taken solely by water costs.

COMMENT NO. 52: An individual commented that the City has not disclosed indirect or operating costs and that the City might not know what the costs will be.

COMMENT NO. 53: An individual commented that the City does not appear to be inclined to build or operate any of the proposed facilities and wants the taxpayers to support and bear ultimate responsibility for a loan of \$222 million dollars from the Texas Water Development Board.

COMMENT NO. 54: An individual asked why industry is not paying for this permit.

COMMENT NO. 55: An individual commented that the City is in violation of Article III, Section 52 and Article XI, Section 3 of Texas Constitution because the \$220M loan is for benefit of private industries while leaving taxpayers responsible.

COMMENT NO. 56: IOBCWA and individuals commented that, although the City has stated that this project is a municipal facility which serves the public, it is actually an industrial facility which is profit driven, serves private industries, and harms the public. Therefore, the industry, not the City, should be paying. Individuals commented that public citizens shouldn't subsidize private industrial users and expressed concerns about how the City would pay for the project.

COMMENT NO. 57: An individual expressed concerns about the energy costs for desalination and that energy is reported to be the highest single expense for desalination plants accounting for as much as half of the cost to make drinking water from the sea viable. According to a report from Pacific Institute, "Desalination plants on average use about 15,000 kilowatts hours of energy for every million gallons of fresh water that's produced."

Response to Comment Nos. 51 – 57: The ED acknowledges these comments but responds that the cost of the project was not considered in TCEQ staff's review of the application under applicable TCEQ statutes and rules. The ED notes that issues related to project costs are presented during the regional planning process, and that desalination is a recommended water management strategy in the 2021 Region N Water Plan.

ECONOMIC IMPACTS

COMMENT NO. 58: HRA and individuals expressed concerns about negative effects on the economy including tourism, fisheries, and local business. An individual was specifically concerned about negative effects on their guided kayaking business. An individual expressed concerns about the loss of the recreational fishing and tourism industry from the project. An individual commented that three of the highlights in the City of Corpus Christi are driving over the harbor bridge, being on the USS Lexington, or being in the museum. The project will cause dead fish, dead turtles, dead birds, and dead plants at these locations, and the sight and smell is going to cost billions of dollars in lost tourism.

Response to Comment No. 58: The ED acknowledges these comments. The TCEQ does not have the authority to address these types of issues as part of the water rights permitting process. Texas Water Code (TWC) Chapter 11 and other applicable water rights regulations do not authorize the TCEQ to consider issues such as the local economy and tourism.

WATER RIGHTS PERMIT APPLICATION

COMMENT NO. 59: HRA and individuals expressed concerns about errors, discrepancies, and omissions in the application submittal.

Response to Comment No. 59: The ED responds that TCEQ staff followed the applicable requirements in the Texas Water Code and TCEQ's rules in reviewing the application. TCEQ staff performed an administrative review of the application and determined that the application submittal included the information required by the Texas Water Code and TCEQ's rules and declared the application administratively complete.

COMMENT NO. 60: Individuals expressed concerns that the purpose of use for the diverted water was characterized as municipal use when the use should have been for industrial use. An individual commented that Texas Water Code Section 11.023 defines municipal use as including "water for sustaining human life and the life of domestic animals", while industrial use includes "processes designed to convert materials of a lower order of value into forms having greater usability and commercial value".

COMMENT NO. 61: An individual asked what percentage of the water will be used for industrial cooling and other industrial purposes.

COMMENT NO. 62: An individual commented that the application and the application review are inaccurately based on municipal use and conservation instead of industrial use and conservation.

Response to Comment Nos. 60 – 62: The ED responds that TCEQ's rules in Title 30 Texas Administrative Code Section 297.1(34) define municipal use as "The use of potable water within a community or municipality and its environs for domestic, recreational, commercial, or industrial purposes or for the watering of golf courses, parks and parkways, other public or recreational spaces." The City is responsible for how water is used under the permit in accordance with the terms and conditions of the permit.

COMMENT NO. 63: An individual expressed concerns about the lack of standardization on the meters tracking the diversions and the lack of clarity about aquatic protection designed for the intake structure.

Response to Comment No. 63: The ED responds that this proposed draft permit would require a meter that accurately measures diversions to within 5% and that the permittee take reasonable measures to avoid impingement and entrainment of aquatic organisms including installation of screens at the diversion structure. The ED believes that this proposed draft permit is protective of issues within TCEQ's jurisdiction.

COMMENT NO. 64: Individuals expressed concerns about the Water Conservation Plan and Drought Contingency Plans submitted with the application because industrial users do not have to conserve water until later drought stages.

Response to Comment No. 64: The ED responds that TCEQ staff performed a water conservation review of the application pursuant to applicable requirements. Staff's review found that the City's Water Conservation Plan and Drought Contingency Plan, which were submitted with the application, met the requirements in TCEQ's Chapter 288 rules.

COMMENT NO. 65: An individual commented that no map was submitted with the application.

Response to Comment No. 65: The ED responds that a map was included in Attachment 4 of the application.

ENVIRONMENTAL CONCERNS

COMMENT NO. 66: An individual commented that desalination has an environmental cost. Individuals commented that there have not been enough studies on how the project will affect the bays and marine life in the area. An individual commented that the project will destroy habitat, damage aesthetic beauty and be detrimental to humans, wildlife and fisheries habitat and requested that TCEQ get independent experts in the area of wildlife and fisheries to complete studies before any permit is issued.

COMMENT NO. 68: An individual provided a copy of the Coastal Bend Bays & Estuaries Program (CBBEP) report, CBBEP Publication 153, Project 2120, entitled "Vulnerability Assessment of Coastal Bend Bays": https://www.cbbep.org/manager/wp-content/uploads/2120-Final-Report_FINAL.pdf, which was written by a team of scientists from TAMUCC's Harte Research Institute for Gulf of Mexico Studies. The

report noted that there is concern about rising salinities in the Coastal Bend region of Texas. Salinities could rise due to several long-term changes, such as, increasing temperature that increases evaporation, reduced freshwater inflow that provides less seawater dilution potential, or industrial brine discharges. The purpose of this project is to identify and map areas of particular ecological importance and/or vulnerability in the Corpus Christi Bay region based on seasonal salinity modeling, living marine resources distribution and abundance, and species-specific salinity tolerances. The result of the project contributes to achieving Coastal Bend Bays Plan objectives FW-1, BTR-3, MC-1, HLR-1, and WSO-1 (CBBEP 2020). The Corpus Christi Bay region has high annual average wind speeds, temperatures, and salinities, and circulation in the region is sluggish. In combination, this means that the region is sensitive to changes in water borne materials because they are easily concentrated by the high evaporation rates and hard to disperse because of low flushing rates. Overall community diversity is related to salinity, and as salinity increases past the optimal range, species diversity declines. The optimal salinity to maintain high diversity in bag seine samples that were collected along the shorelines of Corpus Christi Bay is between 22 and 24. However, the average salinity in the whole Corpus Christi Bay system is 28.5. In fact, the average salinity in the whole system is only about 25.5 in wet years, so on average, the system is already suffering from high salinity stress. For Corpus Christi Bay alone, the salinity is much higher, averaging 31.4 from 1987 to 2016. Salinity changes affect various species differently. The most sensitive species to salinity increases were blue crab, Atlantic croaker, and white shrimp. Because the average salinities are already at levels that could impact species abundance and diversity, small increases in salinity could add additional pressure to a system that is already experiencing salinity stress.

COMMENT NO. 67: An individual commented that they have watched the whooping cranes come back from the brink of extinction and that too much work has gone into improving the wildlife and fisheries habitat in that region for a desalination plant to come in and ruin the work that has been achieved.

COMMENT NO. 68: An individual commented that microscopic marine life is the foundation of the bay ecosystem and asks how its protection can be guaranteed.

Response to Comment Nos. 66 – 68: The ED acknowledges these concerns and responds that TCEQ staff's review of the application included an evaluation of environmental impacts associated with the application. TCEQ staff's environmental review was performed in accordance with applicable Texas statutes and TCEQ's rules related to water rights permitting. The ED's proposed draft permit includes special conditions to protect the environment, including a provision requiring screens on the intake structure. The ED believes that the proposed draft permit is protective of the environment.

IMPINGEMENT AND ENTRAINMENT

COMMENT NO. 69: HRA and an individual commented that TCEQ did not adopt rules for impingement and entrainment as required by statute and that processing of the application should be halted until rules are adopted. Individuals commented that the plan does not abide by House Bill 2031. HRA further commented that TCEQ has failed to meet the statutory requirement of the governing statute for permitting desalination projects, TWC § 18.003(h), which provides that "[TCEQ] by rule shall prescribe

reasonable measures to minimize the impingement and entrainment. An individual commented that none of the proposed desalination strategies in the Regional Water Plan for Region N took advantage of the TCEQ expedited rules process.

Response to Comment No. 69: The ED responds that House Bill 2031 (84th Legislative Session) created an alternative expedited process in Texas Water Code, Chapter 18 for obtaining an authorization to divert marine seawater and did not affect the authority of a person to divert marine seawater from a bay or estuary under Texas Water Code, Chapter 11. The ED has no role in an applicant's decision to submit an application under the expedited process in Chapter 18 or under TCEQ's authority to issue a water right under Chapter 11. TCEQ has no role in or jurisdiction over the recommendations or decisions of the Regional Planning groups. The ED further responds that the TCEQ commissioners considered a petition for rulemaking on impingement and entrainment on June 30, 2021 and ordered that the petition be denied because TCEQ's existing rules on impingement and entrainment at desalination facilities under Texas Water Code, Chapter 18 are sufficient and new rules under Texas Water Code, Chapter 11 are unnecessary.

COMMENT NO. 70: An individual expressed concerns about impingement and entrainment of sea life, specifically, fry, larvae, and plankton; thereby upsetting the food chain. Individual commenters expressed concerns that the intake would kill fish and other marine animals and organisms, which would change the balance of life in the bay and cause fish kills because the intake would kill the food source of larger fish. An individual commented that locating this desalination facility's water intake in the inner harbor will be problematic because of impingement and entrainment of organisms, particularly benthic organisms, in the ship channel. The threat to benthic organisms would consequently threaten the sporting fish in the ship channel and adjoining Corpus Christi Bay which feed on these organisms. An individual commented that even if they are not in the immediate vicinity of this intake the ecology of the region could be threatened by the killing of the microscopic animals that are part of the web of life that these endangered and many other species depend on.

COMMENT NO. 71: Individuals expressed concerns that the requirements of 316(b) of the Clean Water Act should apply as this is a cooling intake structure and not a domestic water source.

COMMENT NO. 72: Individuals expressed concerns over the lack of clarity, rules, or guidelines for protection of aquatic protection from the intake structure. An individual commented that the draft permit does not define what reasonable measures to prevent impingement and entrainment are and therefore does not provide for any protection to aquatic life and asks how TCEQ would enforce the permit provision.

COMMENT NO. 73: An individual expressed concerns about aquatic life that will be killed by the intake and stated that the purpose of the screens is not to protect aquatic life, it is to protect the membranes in the reverse osmosis process. Fish are going to die or get hurt on the screens that are going to be quarter inch/half inch with holes that are going to be quarter inch/half inch. Fish and small fish are going to die there by impingement or entrainment and whatever is smaller than that is going to go right through. The intake velocity might be a half foot per second but once aquatic life gets inside the suction pipe to the pump the velocity is no longer a half a foot per second,

it's going to be five to six feet per second on the suction on the pump. Inside the pump you have impellers, which will affect eggs and aquatic life. Whatever doesn't get chopped off coming out of the pump is going to be at a velocity of 9 feet per second.

COMMENT NO. 74: An individual commented that spotted sea trout, blue crab and eastern oysters are all NOAA trust resources and are some of the most important marine animals in the ocean. The juvenile and larvae of these valuable species will be killed when they are sucked in to the desal intake pipe. The juvenile fish and plankton that will be killed through the desal intake pipes are food sources for these important marine resources.

COMMENT NO. 75: An individual commented that the designated uses of Segments 2484 and 2481 include recreational contact, oyster waters and exceptional aquatic life. Segment 2481 is also designated as an Essential Fish Habitat (EFH) that includes a number of EFH species. Species in the segment include Lightning Whelk, Blue Crab, Stone Crab, Fiddler Crab, American Alligator, oysters, red drum, spotted seatrout, black drum, striped mullet, southern flounder, hardhead catfish, bottlenose dolphins, pinfish, pigfish, silver perch, smooth puffer, sand seatrout, and numerous others. In addition, the Green Sea Turtle, a threatened species, is known to be present in both segments. The proposed diversion rate of 57,708 gallons per minute will expose the aforementioned aquatic life to impingement of marine organisms when trapped on the intake screen. Marine organisms are further exposed to entrainment when organisms small enough to pass through the intake screens, such as plankton, fish eggs, and larvae are killed during processing of the salt water. Entrainment organisms are killed by pressure and velocity changes caused by circulating pumps in the plant, chlorine and other chemicals used to prevent corrosion and fouling, and predation by filter feeders like mussels and barnacles that line intake pipes and themselves are considered a fouling nuisance. The impacts of impingement and entrainment from desalination plants on the marine environment are not well understood.

Response to Comment Nos. 70 – 75: The ED responds that TCEQ staff's review of the application included an evaluation of environmental impacts associated with the application in accordance with applicable Texas statutes and TCEQ's rules related to water rights permitting. The ED's draft permit includes a special condition requiring the City to implement reasonable measures to reduce impacts to aquatic resources due to impingement and entrainment, and requires those measures to include, but not be limited to, screens on the diversion structure.

RECREATION

COMMENT NO. 76: Individual commentors expressed concerns about negative impacts on recreation such as fishing, boating/sailing, swimming, kite surfing, kayaking, birding, holiday boat parades, runs such as 5Ks and marathons, Fourth of July fireworks, sailing regattas, and museums. An individual commented that there are two beaches in the area of the application. An individual commented that families can swim, surf, kayak, and fish at North Beach, which is free. The breakwater at the mouth of the Inner Harbor is just one mile from the intake and just upstream from where families fish.

Response to Comment No. 76: The ED responds that program staff evaluated recreational uses in their review of the application. Staff concluded that the application would not adversely impact any potential recreational uses.

CULTURAL RESOURCES

COMMENT NO. 77: Individuals commented that the facility would destroy one of the only remaining historical Karankawa sacred sites where historical artifacts have been found.

Response to Comment No. 77: The ED acknowledges the comments and responds that when reviewing water rights applications, the TCEQ considers only the criteria within its jurisdiction as set forth in applicable statutes and rules governing water rights.

Respectfully submitted,

TEXAS COMMISSION ON ENVIRONMENTAL OUALITY

Toby Baker Executive Director

Erin E. Chancellor, Director Office of Legal Services

Charmaine Backens, Deputy Director Environmental Law Division

Ruth Ann Takeda

State Bar of Texas No. 24053592

TCEO, Environmental Law Division MC 173

P.O. Box 13087

Austin, Texas 78711-3087

Ruth.Takeda@tceq.texas.gov

Phone: 512-239-6635 Fax: 512-239-0606

CERTIFICATE OF SERVICE

I certify that on the 14th day of September 2022, a true and correct copy of the foregoing *Executive Director's Response to Comments* was filed with the Chief Clerk of the Texas Commission on Environmental Quality in Austin, Texas.

Ruth Ann Takeda, Staff Attorney TCEQ, Environmental Law Division