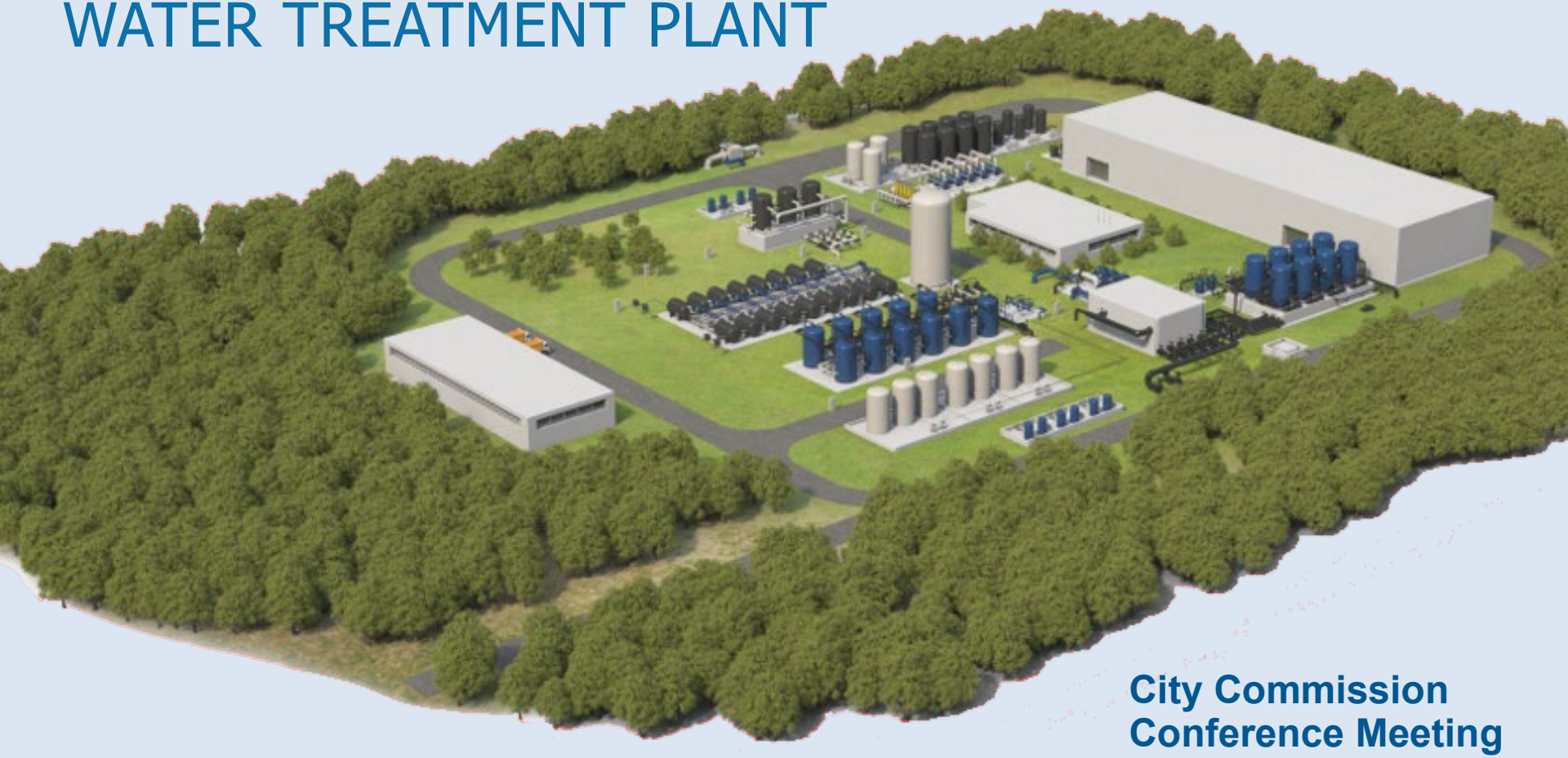
PROSPECT LAKE
WATER TREATMENT PLANT



City Commission Conference Meeting
December 6, 2022

CITY OF FORT LAUDERDALE

Brief overview of the City's existing water treatment infrastructure

Supply
37 wells
Biscayne Aquifer

Fiveash WTP
Lime Softening
Constructed 1954*

Dixie WTP
Nanofiltration
Constructed 2008

Distribution
City owned water mains ≈ 761 miles

City of Fort Lauderdale

OAKLAND PARK FLORIDA

WILTON MANORS Island City

PORT

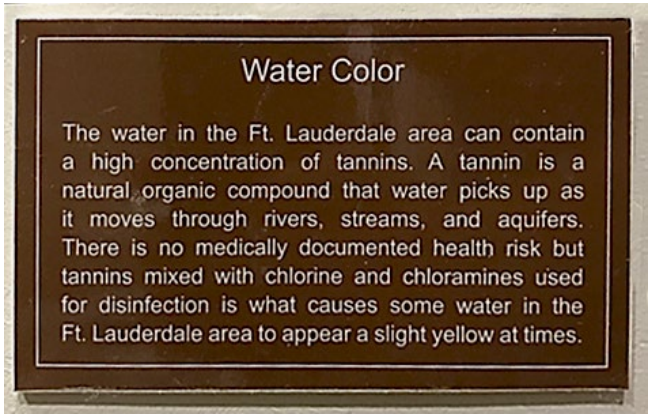
Approximate 2022 population served: **261,000**

*Fiveash WTP was expanded multiple times over the decades

Why is a new water plant needed?

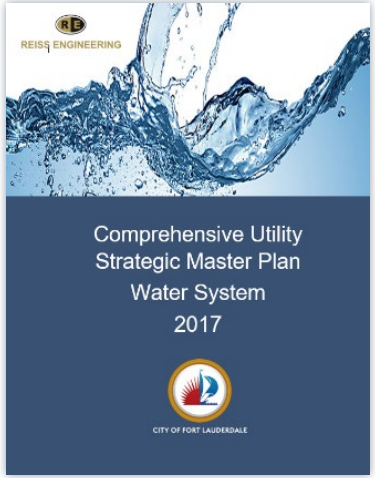
Reason 1:
The existing Fiveash WTP cannot meet the City's goal of clear water

RIVERSIDE HOTEL
ON LAS OLAS BOULEVARD



Reason 2:
The Fiveash WTP, constructed in 1954*, is near the end of its useful life, as documented in the City's Master Plan (a.k.a., "Reiss report")

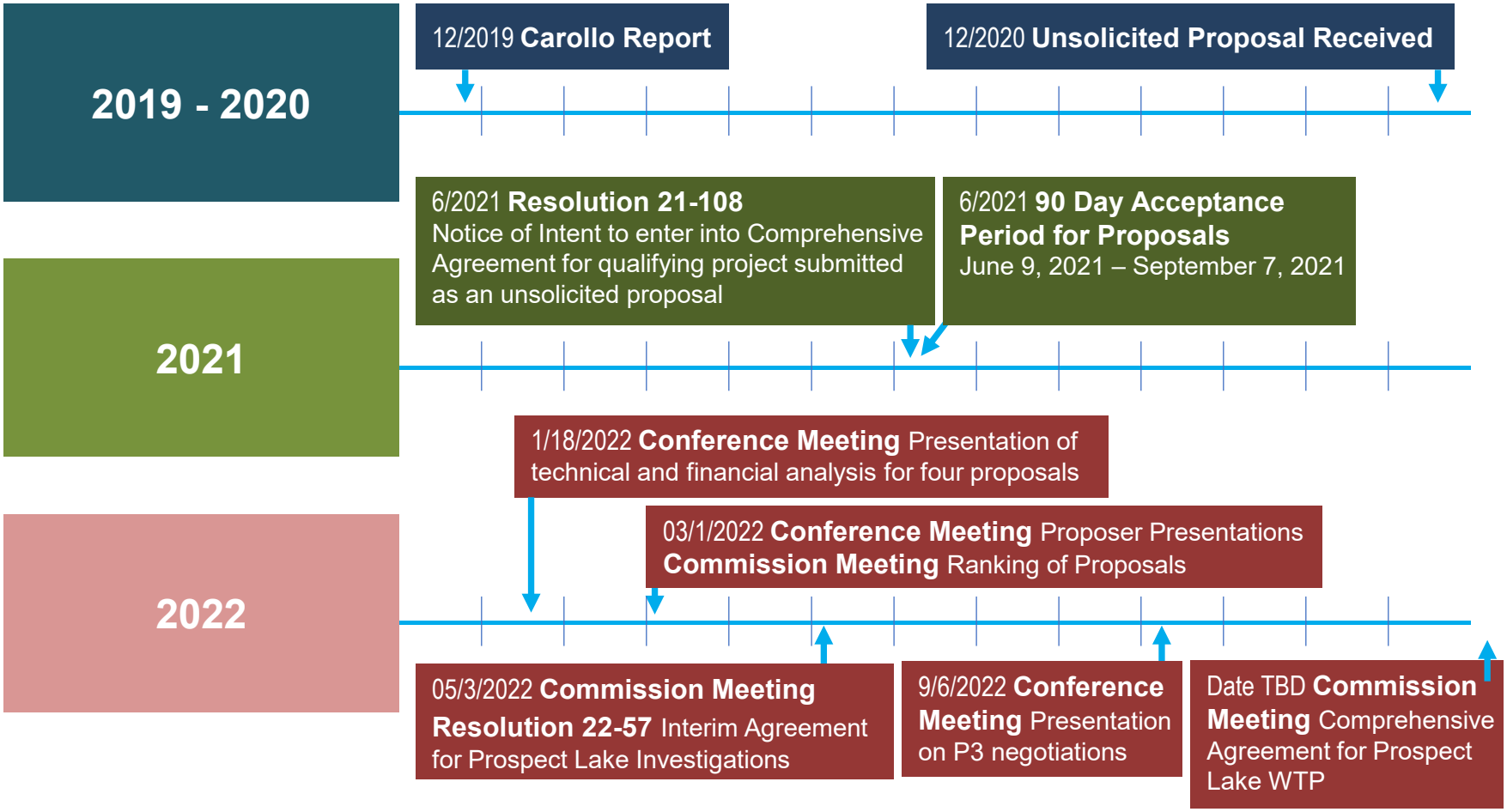
City implements repairs of failing concrete, visual surveillance is ongoing



REISS ENGINEERING

*Fiveash WTP was expanded multiple times over the decades

Timeline


2019 - 2020
12/2019 Carollo Report
12/2020 Unsolicited Proposal Received
2021
6/2021 Resolution 21-108
Notice of Intent to enter into Comprehensive Agreement for qualifying project submitted as an unsolicited proposal
6/2021 90 Day Acceptance Period for Proposals
June 9, 2021 – September 7, 2021
2022
1/18/2022 Conference Meeting Presentation of technical and financial analysis for four proposals
03/1/2022 Conference Meeting Proposer Presentations
Commission Meeting Ranking of Proposals
05/3/2022 Commission Meeting
Resolution 22-57 Interim Agreement for Prospect Lake Investigations
9/6/2022 Conference Meeting Presentation on P3 negotiations
Date TBD Commission Meeting Comprehensive Agreement for Prospect Lake WTP

Project Team to Execute on Delivery and Operations

TEAM & EXPERIENCE

- ✓ Highly cohesive team
- ✓ Depth and breadth within water Treatment
- ✓ Successful track record of project delivery
- ✓ Together IDE and Ridgewood Project Team Members have successfully been involved in the construction and operations of the two largest water P3s in U.S. history

Vista Ridge ***Pipeline***

THE CARLSBAD Desalination Project
Enhancing Water Reliability for San Diego County

- ✓ Additional experience with water utilities and desalination

undine WATER IS OUR ELEMENT

CITY OF SANTA BARBARA
CHARLES MEYER DESALINATION FACILITY

Our Team was specifically formed to replace the Fiveash Regional Water Treatment Plant for the City of Fort Lauderdale

IDE Technologies | Your Water Partners

Ridgewood Infrastructure

Kiewit

ENGINEERING & CONSTRUCTION

- ✓ IDE modular design that exceeds today's water quality goals
- ✓ Construction team lead by Kiewit, consistently ranked as the largest and best treatment plant contractor

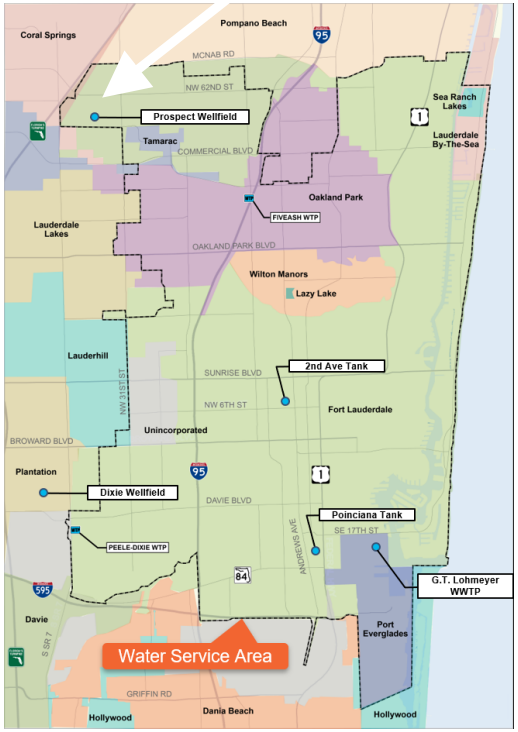
OPERATIONS

- ✓ IDE is a world-class operator with a track-record of success
- ✓ Leverages its global organization to ensure solutions are readily-available

Brief overview of the proposed water plant

- Design based on 2020 Carollo study findings:
  - Concluded Fiveash has reached/exceeded useful life
  - Evaluated 17 treatment options and concluded the most "state of the art"/robust treatment system would consist of nanofiltration (35 MGD) and ion exchange system (15 MGD)
- Enhanced design provided by the IDE-Ridgewood Project Team includes several features:
  - Modifications in base design to guarantee that the plant can treat a wider range of feedstock water quality and deliver a higher product water quality
  - New administrative building with lab
  - State of the art physical and cyber security measures
- Key project delivery guarantees:
  - Fully operational plant delivered to the City within 42 months of Notice to Proceed (Q2 2026) (original proposal was 36 months)
  - Fixed price of $485M (price risk assumed by IDE-Ridgewood Project Team)

The proposed WTP would be constructed at the **Prospect Wellfield** as identified in the Carollo Study



Enabling Works

- Necessary City obligations to provide enabling services and infrastructure to integrate the proposed new WTP into the City's water system
  - Estimated price increased from $150M to $181M, fully funded by City (price risk assumed by City)

Cost (Sept 6, 2022 presentation)	$150M
Worst-case Pretreament Contingency	$23M
Other WTP Modifications to Site Adapt	$8M

$181M*

- City to Construct:
  - Fiveash high service pump upgrades
  - 54" distribution pipe from Prospect to Fiveash
  - Wellfield modifications / Potable water distribution main
  - FPL primary power feed and electrical building
  - Wastewater lift station and forcemain
  - Communications network with Fiveash and wellfield
- Project Company to Construct:
  - 2nd Injection Well (FDEP regulatory requirement)
  - Plant Modifications to Comply with Water Standards Based on Existing Conditions
  - Wellfield Pretreatment Facility and Feed Water Booster Work ($30M with $23M contingency cap)
  - Optimal Corrosion Control Treatment (OCCT) Work (FDEP regulatory requirement)

* The increase of $31M in enabling works is a direct result of adapting the plant to feedstock water conditions and City product water quality standards and to provide a cap for pretreatment work

Operations following Commercial Operation Date (Q2, 2026)

- Operations and Maintenance
  - Facility owned by City; operated and managed by IDE
  - City provides feedstock water, electricity, and chemicals
  - IDE responsible for all maintenance, repair, and replacements
  - City identifies daily water demand (up to 50 MGD) in advance; monitors production water to ensure compliance with city standards
  - Deductions established for failure to deliver daily quantities or non-conforming water
  - Agreement contains defined relief events and procedures to make changes to operational requirements due to changing conditions (ie, new regulatory requirements)

- Labor Services Agreement
  - City employees will staff facility to meet daily operations and maintenance requirements under the operational control of IDE
  - Project Team will provide upper management and supervisory positions with City appointed onsite liaison to serve as single POC for labor issues
  - Employees remain under City collective bargaining agreements
  - The City will make all decisions regarding benefits, hiring, termination, discipline, and assignments

Illustrative Water Plant Rate Impact Summary

- Revised P3 with IDE-Ridgewood Remains Consistent with City's Goals

Description	Key Terms	Details	Average Water Bill 2032(1)	10-Year % Increase(2)	Ongoing Inflation Protection	Construction & Operations Risk Transfer	Timeline for Delivery of Plant	Time in Months
P3 Proposed December 2020	• $3.30 Initial Rate • 1% Change Per Year	• $385 million capex	$66	116%				36 Months
P3 Revised with Enabling Works	• $1.61 Initial Rate • 5% Change Per Years 1-5 • 2.5% Change Per Year Thereafter	• $485 million capex • $150 million enabling works • City Financing 75% of capex and 100% enabling works • City direct pay chemicals	$73	139%	☑	☑	☑	42 Months
City Project Alone (i.e., no P3)	• City Owned and Operated	• $485 million capex • $150 million enabling works • City Financing 100% of capex and enabling works • City direct pay chemicals	$71	133%				66+ Months
P3 Revised with Enabling Works	• $1.61 Initial Rate • 5% Change Per Years 1-5 • 2.5% Change Per Year Thereafter	• $485 million capex • $181 million enabling works • City Financing 75% of capex and 100% enabling works • City direct pay chemicals	$75	143%	☑	☑	☑	42 Months

(1) Assumes 5,000 gallon average – compared to $31 in 2022

(2) Includes regularly scheduled 3.6% annual increases which equal 37% over 10 years

Illustrative Water Plant Rate Impact Summary

Rate Model Includes:

- No change to 10 year projected budgeted line items
- Add:
  - Annual Payment to P3 Provider (+5% years 1-5; +2.5% thereafter)
  - Cost of City Debt Service (assumes level debt service)
    - 75% of $485 Million
    - 100% of Enabling Works of $150 Million (adjusted to $181 Million*)
    - Assumes 30 year level debt service with TIC of 4.10%
  - Additional Chemical Costs
- Rate structure to be in place at time of debt issuance (approx. 6 months after Comprehensive Agreement)

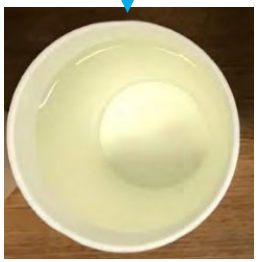
	-3	-2	-1	1	2	3	4	5	6	7
Price Per Million Gallons				1.61	1.69	1.78	1.86	1.96	2.055	2.11
Guarantee				50,000	50,000	50,000	50,000	50,000	50,000	50,000
Days				365	365	365	365	365	365	365
				29,382,500	30,851,625	32,394,206	34,013,917	35,714,612	37,500,343	38,437,852
Add Additional Chemicals				6,150,000	6,334,500	6,524,535	6,720,271	6,921,879	7,129,536	7,343,422
City Debt Service *	19,221,788	24,684,400	24,688,600	31,157,075	31,159,275	31,155,475	31,156,975	31,157,975	31,160,375	31,155,975
(75%) Level Debt Service	19,221,788	24,684,400	24,688,600	66,689,575	68,345,400	70,074,216	71,891,163	73,794,467	75,790,254	76,937,248

* including $150M Enabling Works

How will a new plant benefit the City?

Color reduction
while continuing to meet all regulatory standards

- **Prospect WTP:** Expected color below visual detection 90% of time
- **Fiveash WTP:** Finished water average color = 17



Improved reliability
and storm resistance

State-of-the-art treatment technology
will be better able to comply with future regulations

Risk transfer to IDE-Ridgewood
protects the City from inflation and ensures on-time delivery

Risk Elements	Transferred to IDE-Ridgewood?
Design	✓
Construction	✓
On-time Delivery	✓
Operations	✓
O&M Cost Overruns	✓
Capital Maintenance	✓
Maintain AWWA Standards	✓

Next Steps

City of Fort Lauderdale

IDE Technologies | Your Water Partners

Ridgewood

Kiewit

- Continue review of Comprehensive Agreement with all Annexes and Labor Services Agreement
- City to meet with Teamsters
- City Town Hall presentation for the public
- Public website with all documents and presentations
- Comprehensive Agreement and Labor Services Agreement tentatively scheduled for City Commission consideration on December 20, 2022