

# Walnut Creek

WASTEWATER TREATMENT PLANT

## Renewal and Expansion Capital Improvements

Austin Water Oversight Committee  
May 9, 2024

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Assistant Director, Engineering Services







# Agenda

1. Project History: Walnut Creek Wastewater Treatment Plant
2. Construction Manager at Risk (CMAR) Projects
  - Expansion and Enhancements
  - Primary Clarifier and Flow Equalization Basin Rehab







# Project History



# Project History

## WALNUT CREEK WWTP Treatment Capacity

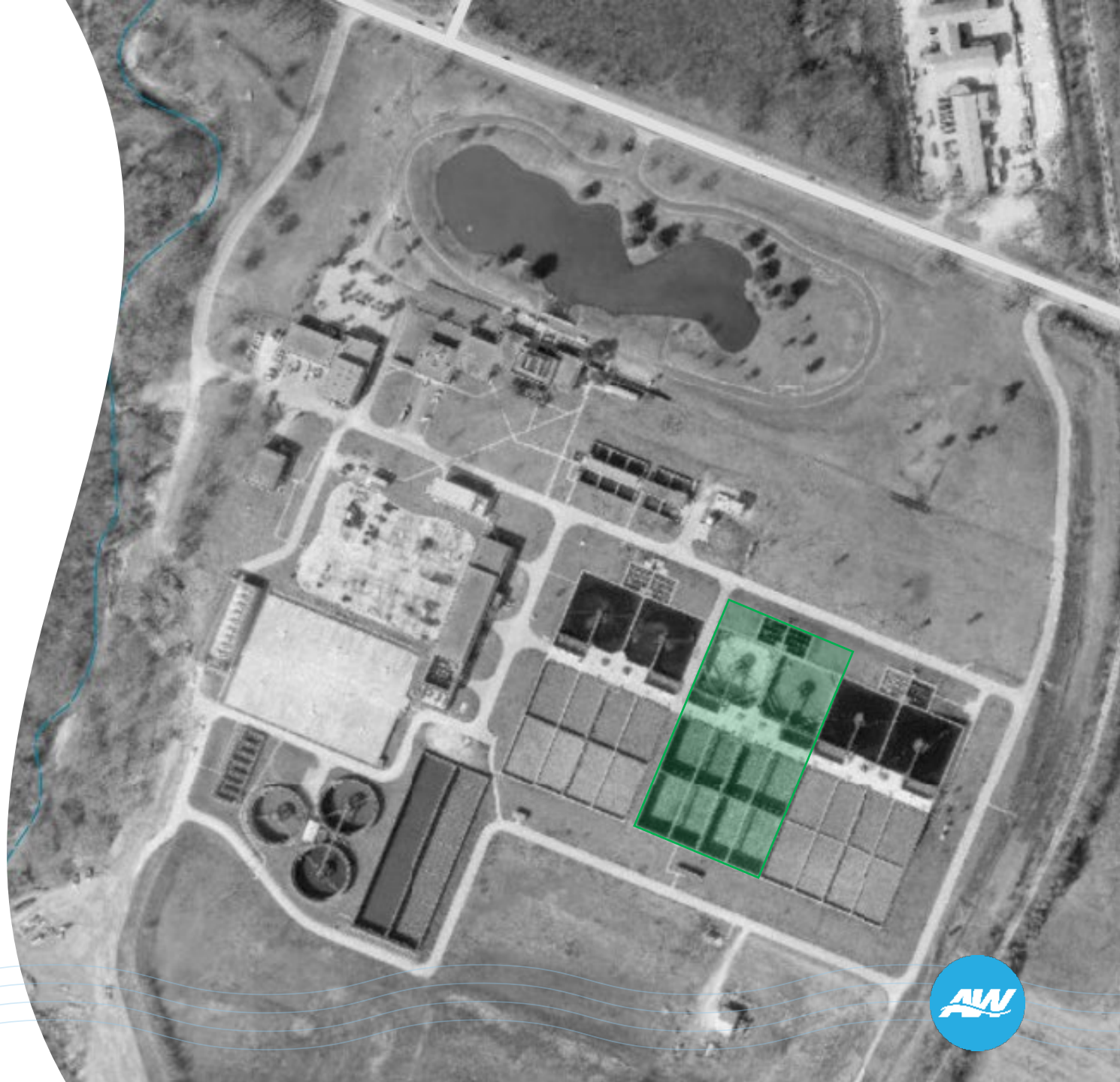
- **1977 – 18** MGD



# Project History

## WALNUT CREEK WWTP Treatment Capacity

- **1977 – 18** MGD
- **1987 – 40** MGD

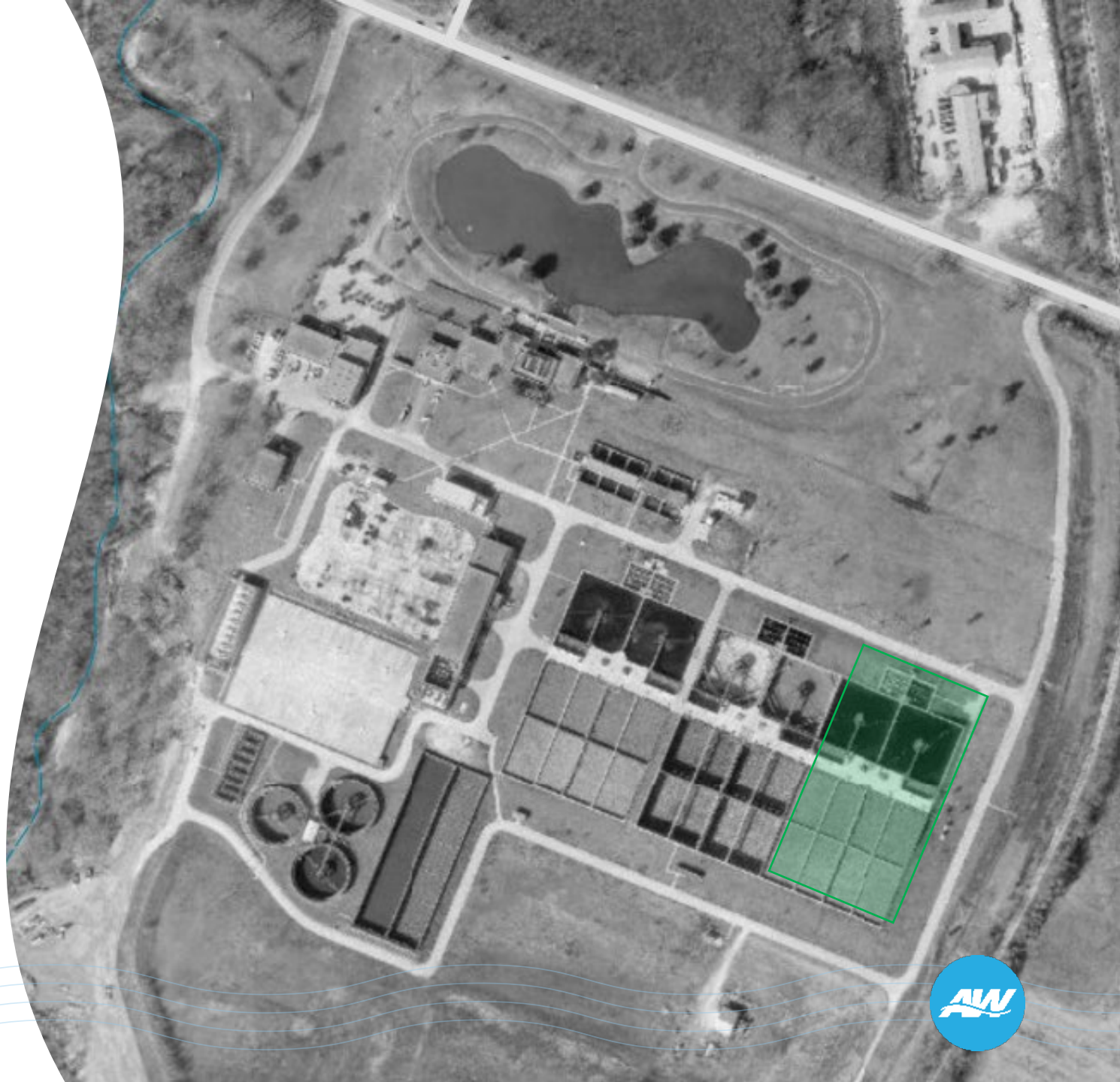




# Project History

## WALNUT CREEK WWTP Treatment Capacity

- **1977 – 18** MGD
- **1987 – 40** MGD
- **1990 – 60** MGD





# Project History

## WALNUT CREEK WWTP Treatment Capacity

- **1977 – 18** MGD
- **1987 – 40** MGD
- **1990 – 60** MGD
- **2005 – 75** MGD





# Project History

## WALNUT CREEK WWTP

Treatment Capacity

- **1977 – 18** MGD
- **1987 – 40** MGD
- **1990 – 60** MGD
- **2005 – 75** MGD
- **2019** – Optimization and Facility Master Plan





# Project History

## WALNUT CREEK WWTP

### Rehabilitation and Renewal Projects

- **2000** – Reclaimed Water
- **2002** – Headworks #2
- **2009** – Electrical Distribution
- **2013** – Reclaimed Water
- **2017** – Tertiary Filter
- **2019** – Secondary Treatment
- **2020** – Sludge Thickener
- **2020** – Pump Replacements
- **2021** – Plant Control & Network
- **2022** – Gas Scrubber





# Current Projects

## WALNUT CREEK WWTP

- Primary & FEB Clarifiers
- Headworks #1
- Influent Lift Station
- Expansion to 100 MGD







# Construction Manager at Risk (CMAR) Projects



# Collaborative Delivery

Design → Bid → Build

**Owner**

**Engineer**

Design 100%

**Contractor**

Competitive Low Bid

Construction Manager  
at Risk (CMAR)

**Owner**

**Engineer**

Design 60-90%

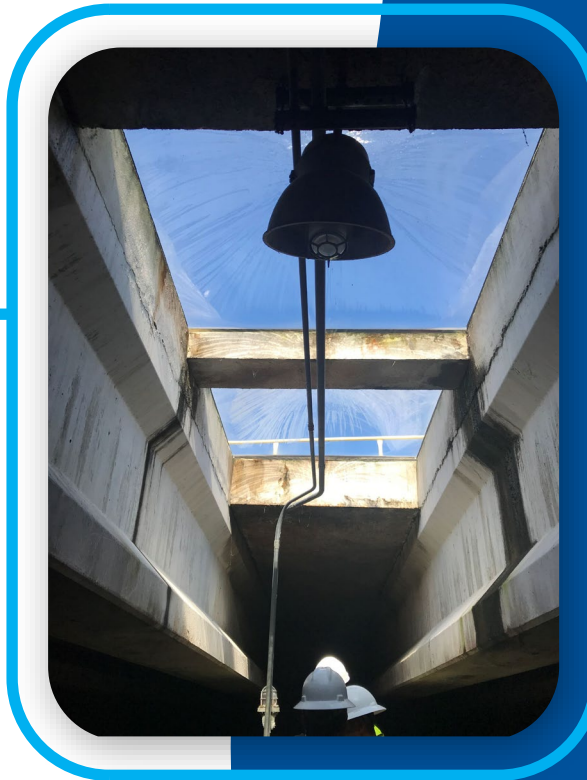
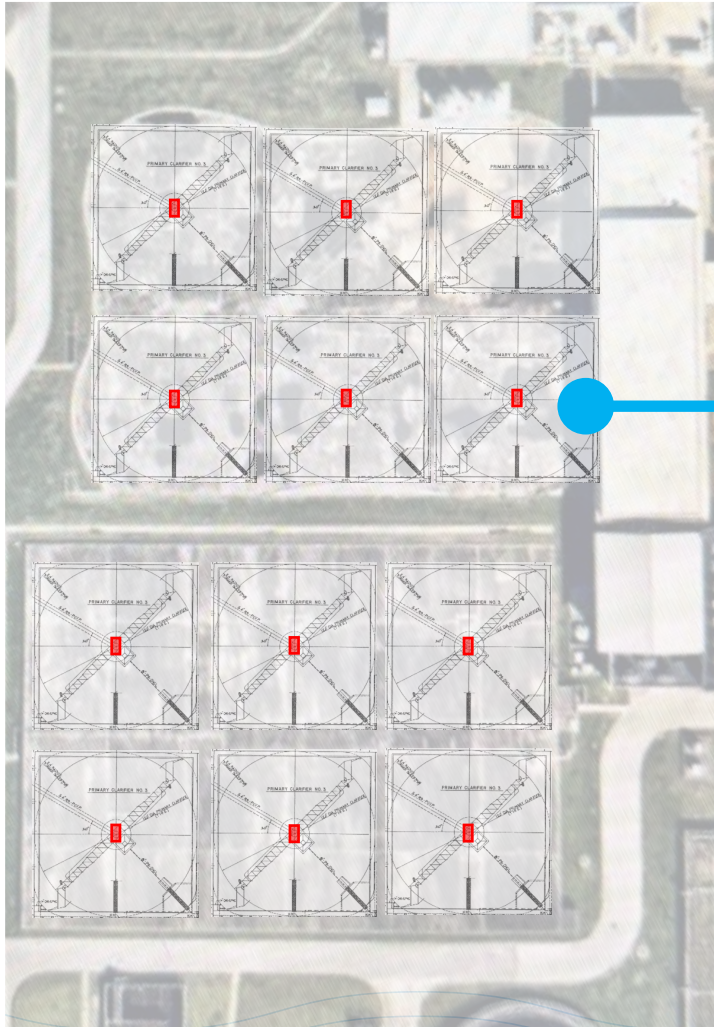
**Contractor**

Qualifications & Cost





# Primary Clarifier & Flow Equalization Basin





# Primary Clarifier and Flow Equalization Basin

## ◆ CMAR Project Development Findings

- ❖ Constructability Challenges
- ❖ Project duration increased from 2 years to 5 years
- ❖ Temporary wet weather bypass for continuous plant operation
- ❖ Temporary and permanent heating, ventilation & cooling (confined space)
- ❖ Rising costs for key electrical and mechanical equipment
- ❖ Grout replacement
- ❖ Structural crack repair

## ◆ Increased Scope to Advance Expansion Project

- ❖ Meter vault for plant continuous operation
- ❖ Headworks #2 slide gates to isolate treatment trains and complexes
- ❖ Odor control demolition for coordination with other plant improvements



# Primary Clarifier and Flow Equalization Basin

## Requests for Council Action

RCA	CIP Project	RCA Scope	RCA Amount
1	Walnut Creek WWTP Primary Clarifier and Flow Equalization Basin Rehab	An amendment to <b>Black &amp; Veatch</b> consulting engineering contract	\$17,000,000
2	Walnut Creek WWTP Primary Clarifier and Flow Equalization Basin Rehab	An amendment to <b>MGC Contractors</b> CMAR construction contract	\$127,300,000



# Expansion to 100 MGD and Enhancement

## ❖ Renewal Projects

- Headworks #1 renewal
- Influent lift station

## ❖ Expansion Projects

- New 25 MGD with nutrient removal
- Influent pipe
- Outfall pipe

## ❖ Treatment Conversion

- 75 MGD with nutrient removal
- UV disinfection

## ❖ Protection of Plant

- Wet weather treatment facility
- Flood wall





# Expansion to 100 MGD and Enhancement Requests for Council Action

RCA	CIP Project	RCA Scope	RCA Amount
1	Walnut Creek WWTP Headworks Improvements	An amendment to <b>Carollo</b> consulting engineering contract	\$9,000,000
2	Walnut Creek WWTP Influent Lift Station	An amendment to <b>CDM Smith</b> consulting engineering contract	\$2,850,000
3	Walnut Creek WWTP 100MGD Expansion and Enhancement	An amendment to <b>AECOM</b> consulting engineering contract	\$71,000,000
4	Walnut Creek WWTP 100MGD Expansion and Enhancement	Selection of <b>MWH Contractors</b> to be the CMAR Contractor	\$900,000,000



# Questions?

Austin  
**WATER**

