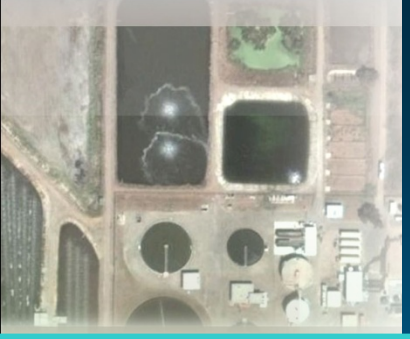

Wastewater Reclamation Plant Facilities and Financial Master Plan

Laguna County Sanitation District

October 11, 2011

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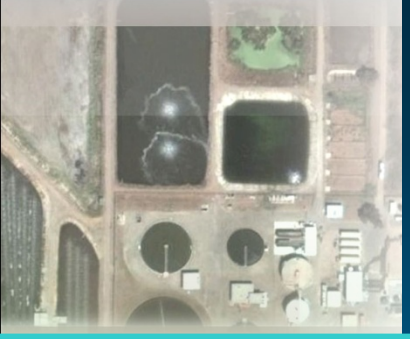

Why Master Plan?

- Age and condition of District's facilities
- Define future facility needs for replacement and expansion
- Regulatory compliance
- Selected CH2M HILL from proposals from qualified firms
- Introductions

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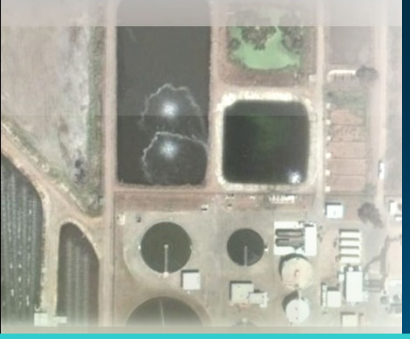

Objectives

- Assessment of the condition and performance of existing facilities
- Identify future regulatory requirements
- Assessment of the District's service area growth rates
- Define future wastewater flows and loads
- Evaluate treatment and discharge alternatives and identify best option(s) for plant upgrades
- Develop an implementation plan for plant upgrades
- Estimate costs, charges and fees

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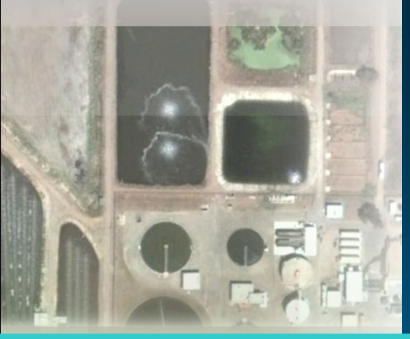

Future Wastewater Criteria

Existing Plant Capacity: 3.7 Million Gallons per day
(3.2 low salt, 0.5 high salt)

Ultimate Plant Capacity: 5 Million Gallons per Day
(4.5 low salt, 0.5 high salt)

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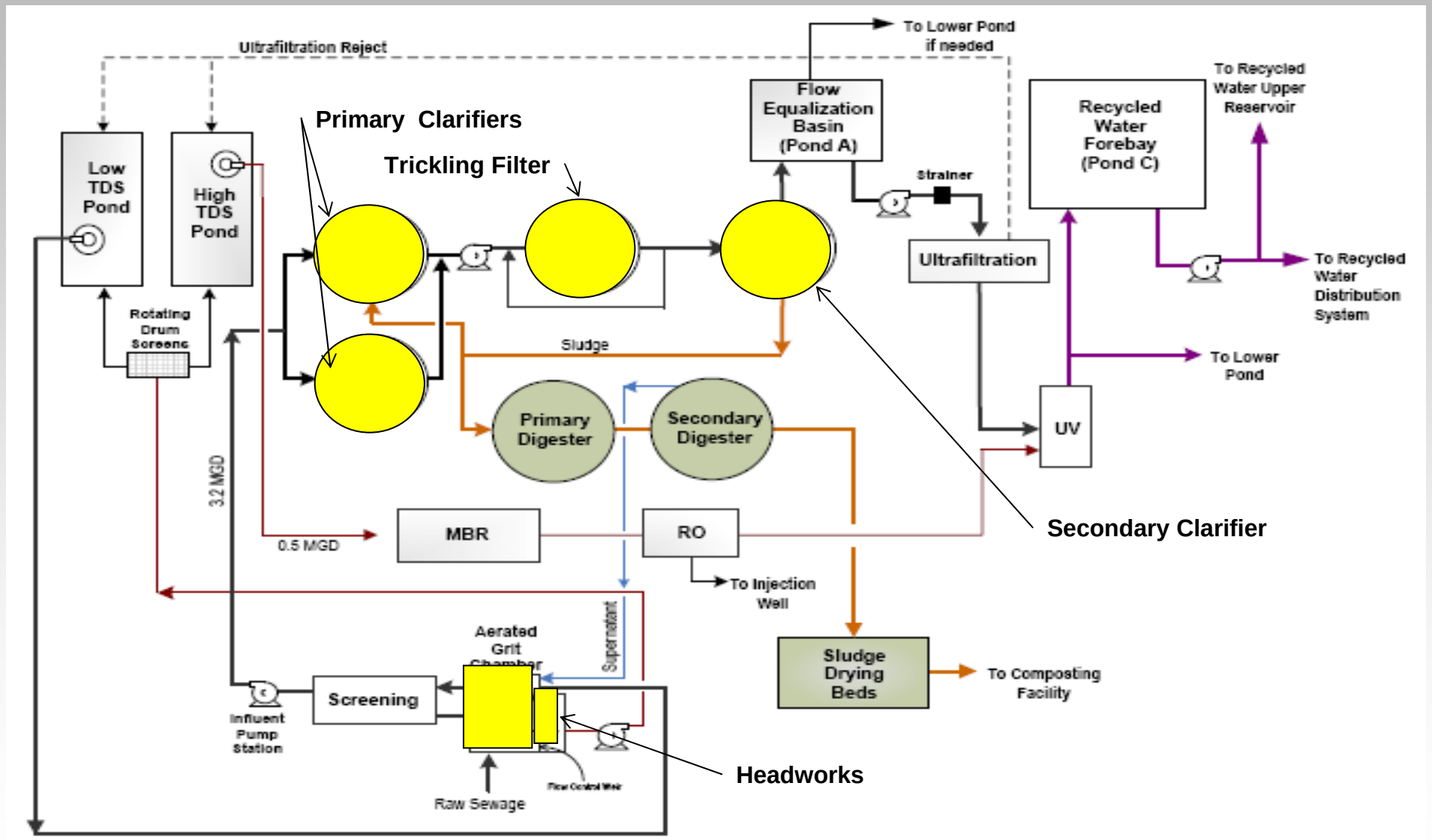
Assessment of Existing Facilities

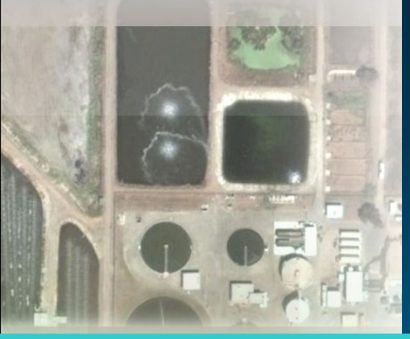
- Assessment of existing condition and capacity

- Evaluate process performance
  - Main plant processes
  - Salt reduction processes
  - Solids treatment

Condition Assessment

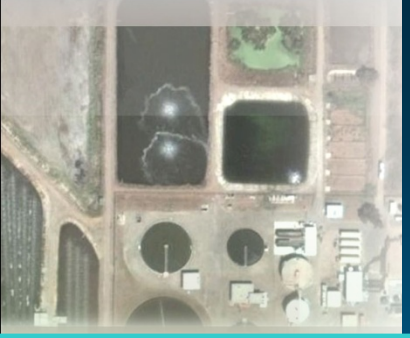
Performance Evaluation



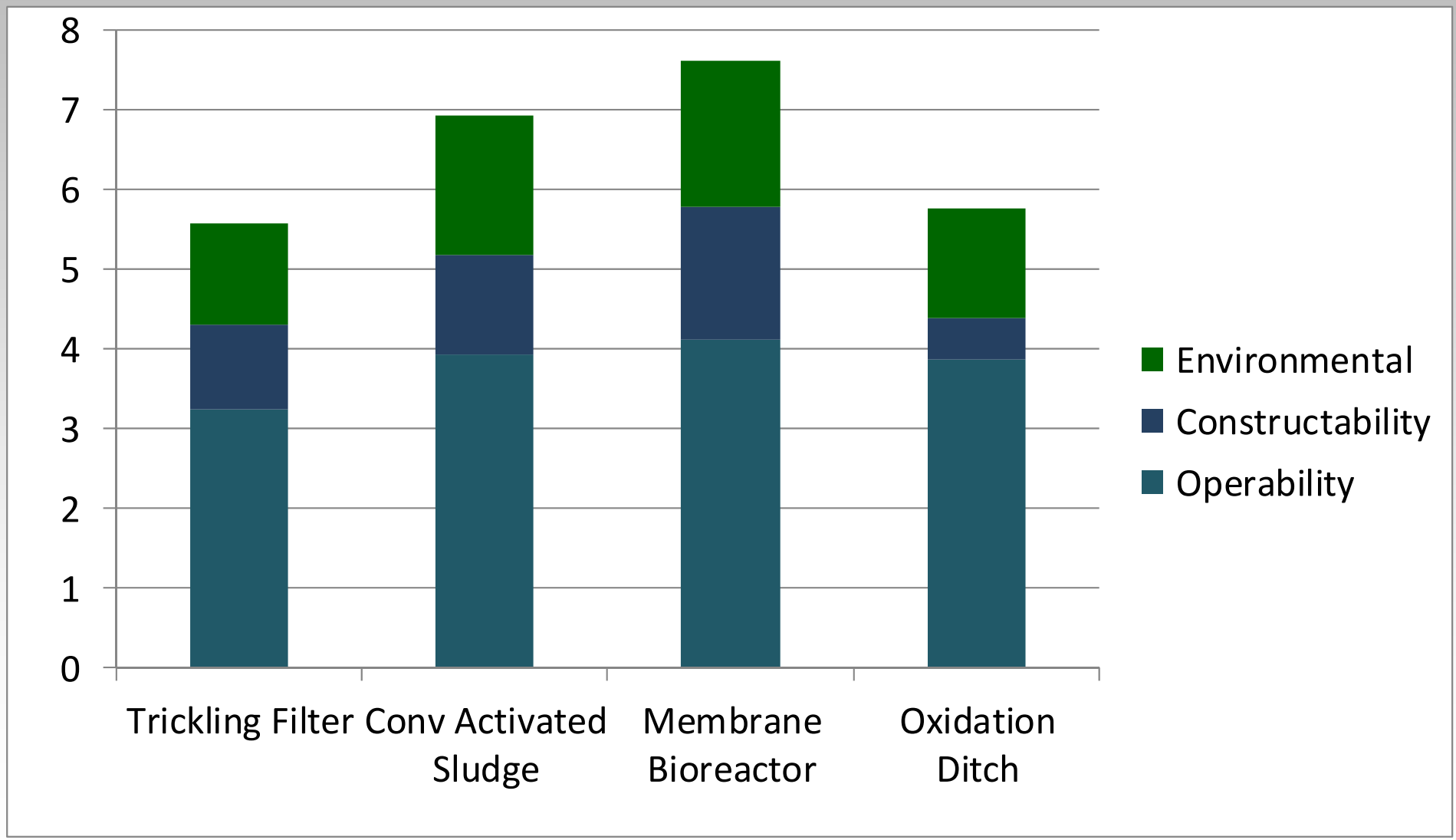


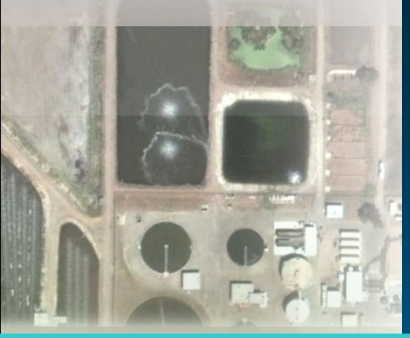
Evaluate Options for Plant Upgrades

- Screening and short listing of alternatives
  - Operational benefits
  - Environmental benefits
  - Constructability benefits
- Benefit score
  - Secondary treatment
  - Tertiary treatment
  - Solid treatment
- Cost benefit ratios (16 combinations)
- Recommendations



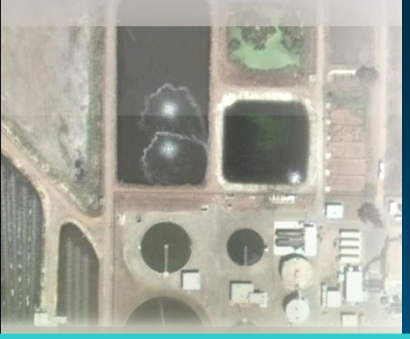
Example Process Screening





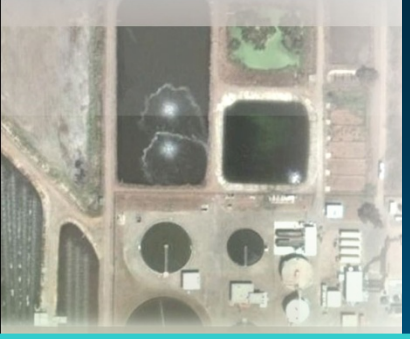
Alternative Selection

- Alternative ranking based on lifecycle costs and benefit to cost ratios
- Top three alternatives were further analyzed by staff and CH2M HILL
- The most cost effective alternative that meets current and future needs is recommended
  - Expandable using:
    - Activated sludge basins in rectangular clarifiers (3.7 mgd)
    - Existing membranes



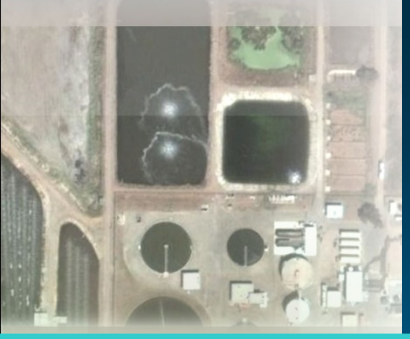
Implementation Upgrades in Two Phases

- Phase 1
  - Priority was given for upgrading:
    - Processes that are at or approaching their useful life
    - Processes that can handle current flows and loads but can not reliably handle flow rates in near future
    - Key unit treatment processes without redundancy
  - Initiate planning 2014
  - Cost $34.8 Million



Develop an implementation plan for plant upgrades

- Phase 2
  - Objective for upgrading:
    - Capacity for future growth
  - Treatment Recommendation
    - Convert Activated Sludge Basins to MBR (5 mgd)
  - Planning based on growth
  - Cost $23.2 Million



Rate Model

- Projected rate structure for Phase 1

FY	11-12	12-13	13-14	14-15	15-16
Monthly Charge	$49.10	$54.50	$60.50	$67.76	$75.89
Change	7%	11%	11%	12%	12%

  - Debt service included in rates. Typical rate adjustments after FY 15-16

- Connection fee structure for Phase 2
  - $5,996 per RUE

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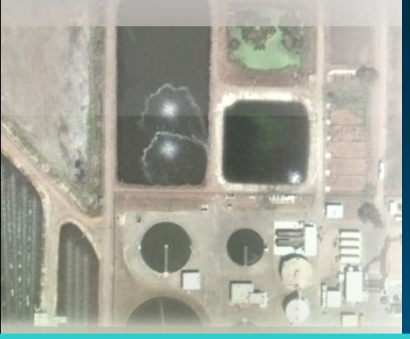

Conclusion

- Receive and file the plan
- Direct staff to implement plan