

Franklin WRF Project Update

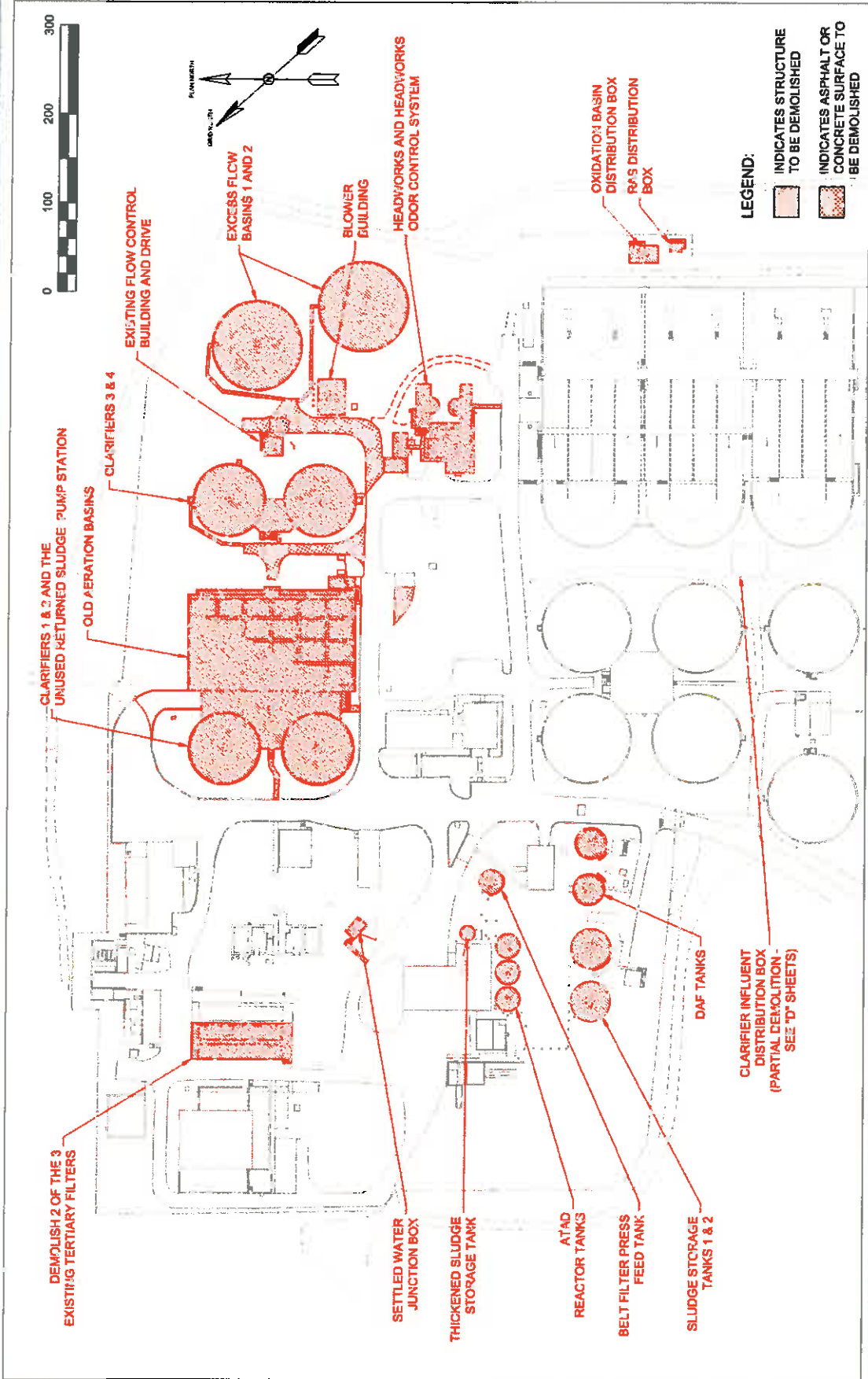
Presented to
Board of Mayor
and Aldermen

May 13, 2014

**CDM
Smith**[®]

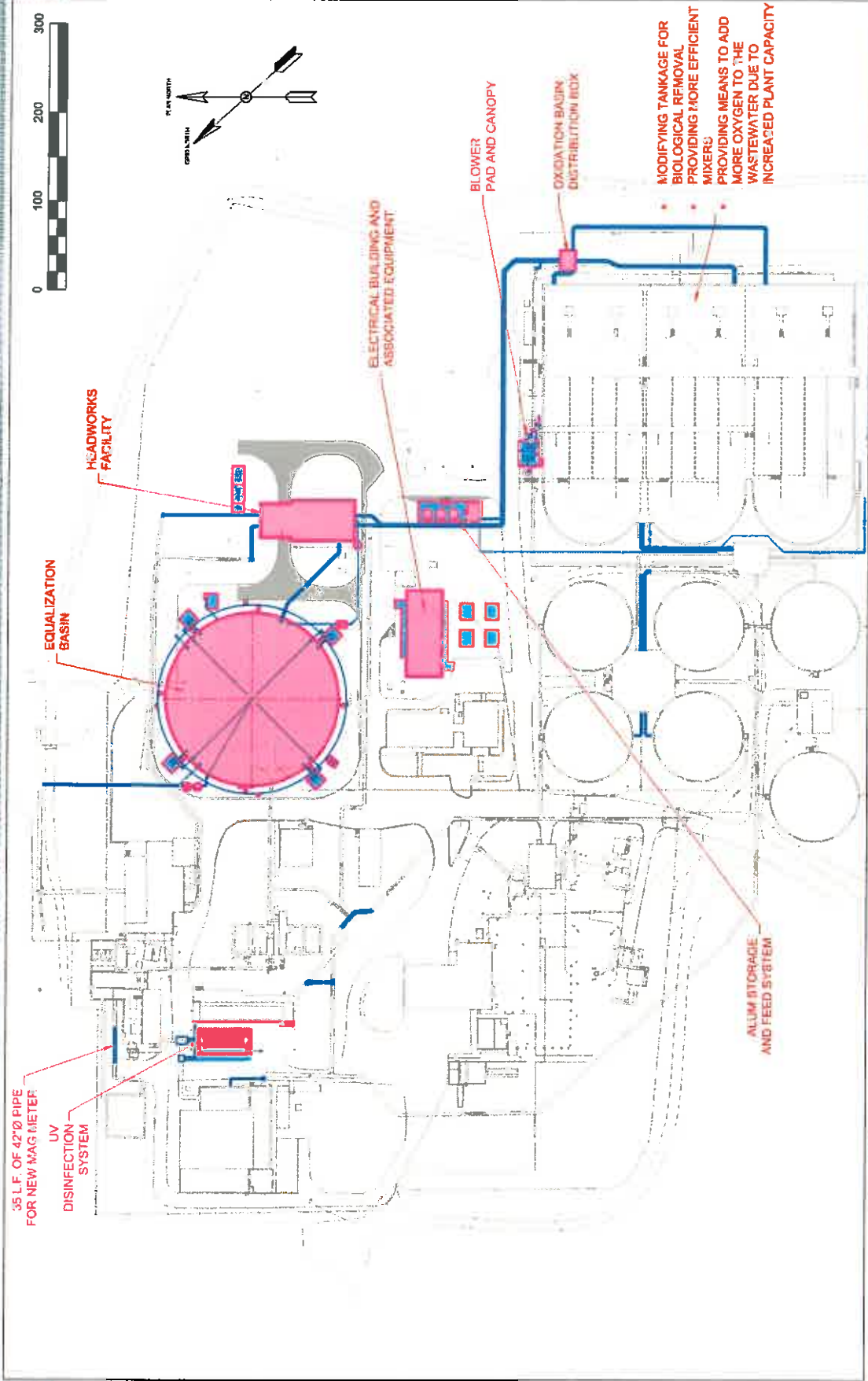
BACKGROUND & PROGRESS UPDATE

Existing Plant Demolition

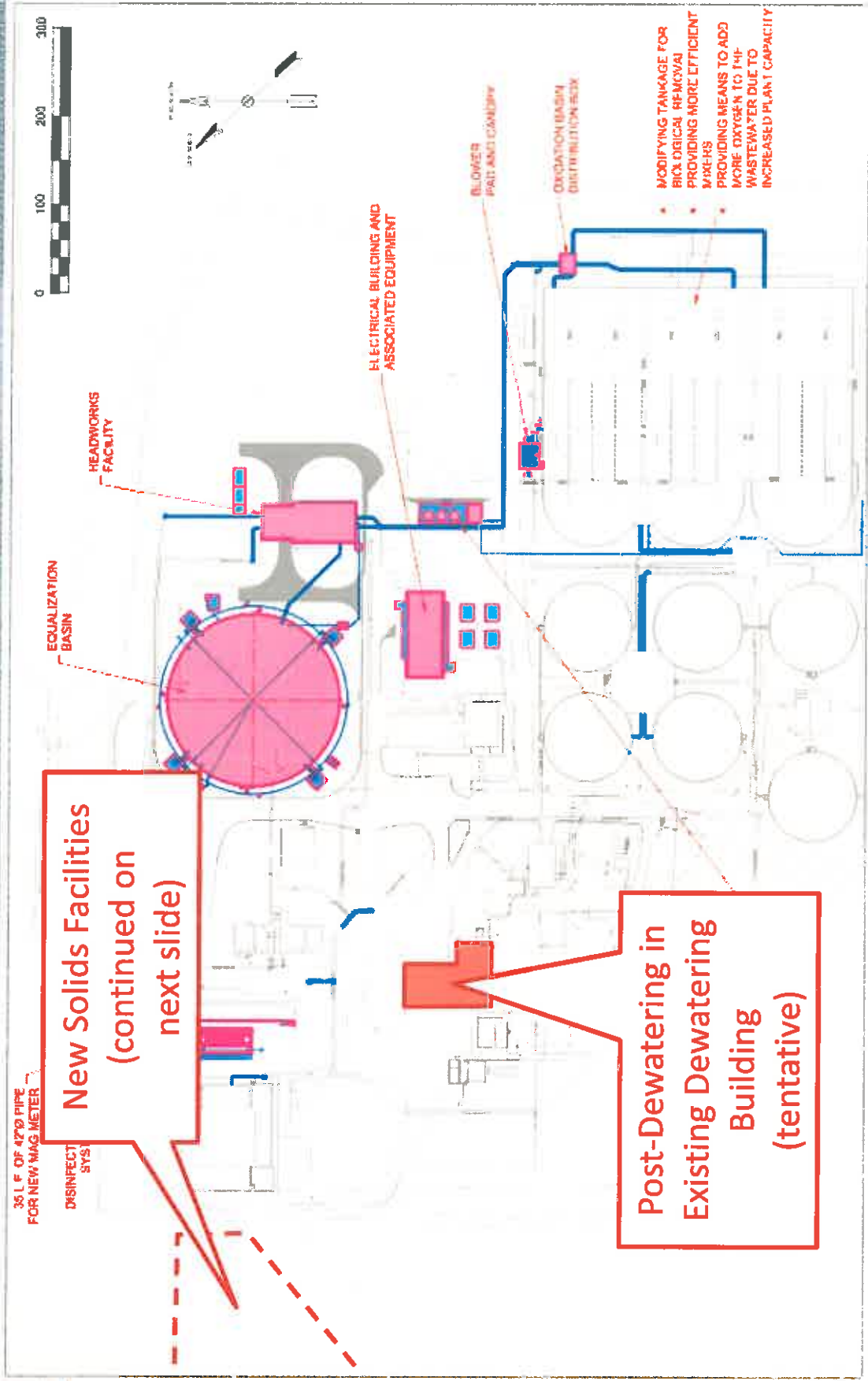


Franklin WRF Project Update, May 12, 2014

Liquids Process Improvements



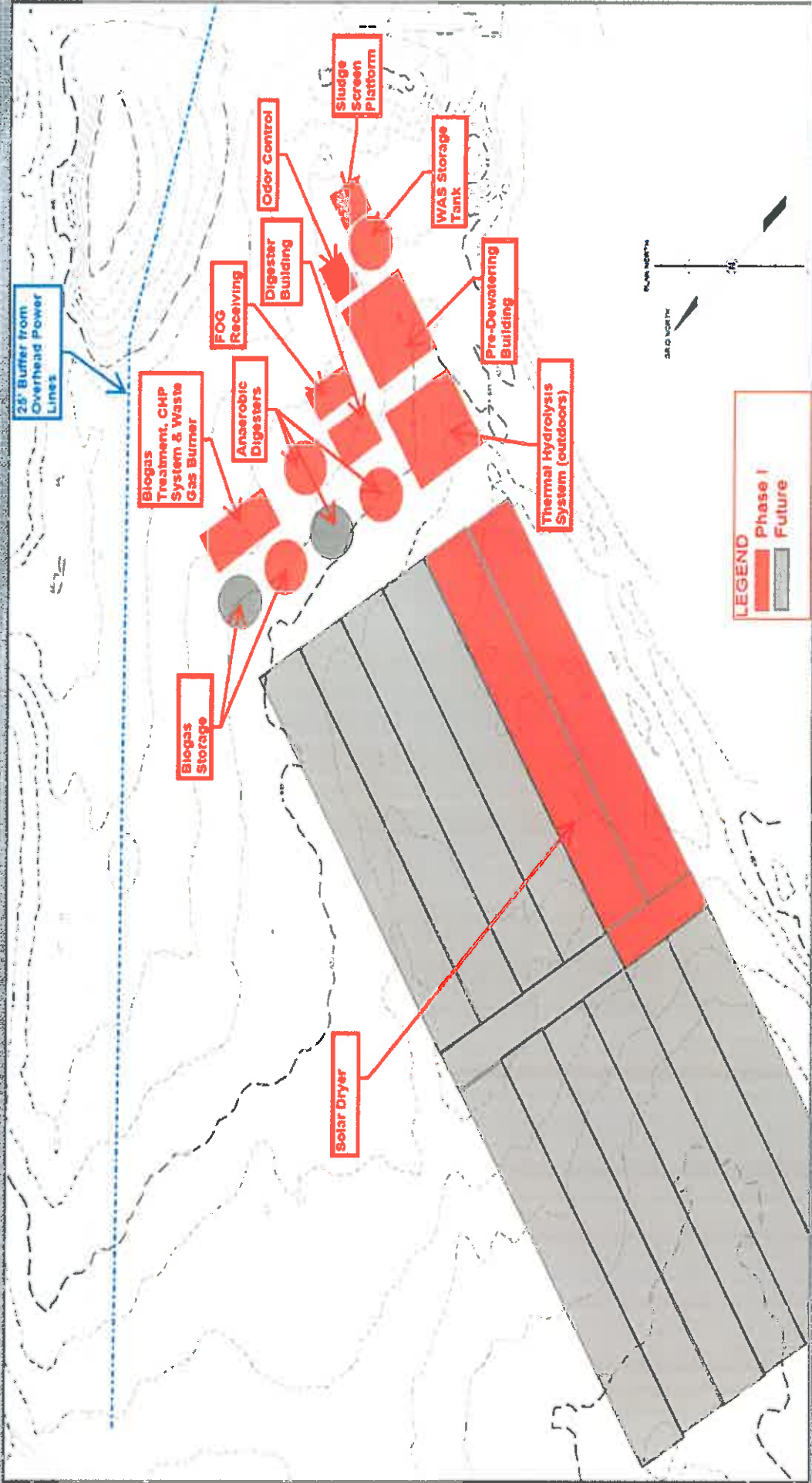
Biosolids Process Improvements



**New Solids Facilities
(continued on
next slide)**

**Post-Dewatering in
Existing Dewatering
Building
(tentative)**

Biosolids Process Improvements



SCHEDULE

Anticipated Project Schedule

| Project Tasks | Months | | | | | | | | | | | | | | | | | | | | |
|--------------------------|--------|---|---|------|---|---|------|---|---|------|---|---|----|---|---|---|---|---|---|---|---|
| | 2014 | | | 2015 | | | 2016 | | | 2017 | | | 18 | | | | | | | | |
| | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J |
| Final Design | | | | | | | | | | | | | | | | | | | | | |
| Bidding & Procurement | | | | | | | | | | | | | | | | | | | | | |
| Construction | | | | | | | | | | | | | | | | | | | | | |
| Start-up & Commissioning | | | | | | | | | | | | | | | | | | | | | |

Final Design: Completed March 2015

Bidding & Procurement: March 2015 – July 2015

Construction: August 2015 – October 2017

Start-up & Commissioning: November 2017 – January 2018

PROJECT COSTS

Evolution of Project Capital Costs

Wastewater Recommendations from IWRP

Total (WRF and SCADA Upgrades) \$ 89.4 M

Current Wastewater Design

WRF and SCADA Upgrades \$ 50.5 M (30% Design)

Biosolids Upgrades \$ 52.0 M (10% Design)

Total \$ 102.5 M

Detail of Cost Breakdown

| Liquids Phase | |
|---|---------------------|
| SCADA (WRF and Collection/Distribution System) | \$1,700,000 |
| Site Work & Demolition | \$4,300,000 |
| Headworks | \$8,000,000 |
| Equalization | \$7,300,000 |
| Biological Treatment | \$5,300,000 |
| Filter Gallery | \$1,000,000 |
| UV System | \$1,900,000 |
| Reclaimed Water PS | \$300,000 |
| Electrical Improvements | \$9,400,000 |
| Maintenance of Plant Operations | \$300,000 |
| Painting & Caulking Allowance | \$300,000 |
| Subtotal | \$39,800,000 |
| Contingency (20%) | \$7,900,000 |
| Subtotal | \$47,700,000 |
| Escalation to July 2015 (6%) | \$2,800,000 |
| Grand Total (Liquids Phase Improvements) | \$50,500,000 |

| Biosolids Phase | |
|---|---------------------|
| Screening & Pre-Dewatering | \$4,700,000 |
| Anaerobic Digestion, Thermal Hydrolysis & Combined Heat and Power Co-Generation | \$7,000,000 |
| Post-Dewatering | \$500,000 |
| Solar Dryer | \$2,600,000 |
| Manufacturer's Equipment | \$23,000,000 |
| Subtotal | \$37,800,000 |
| Contingency (30%) | \$11,300,000 |
| Subtotal | \$49,100,000 |
| Escalation to July 2015 (6%) | \$2,900,000 |
| Grand Total (Biosolids Phase Improvements) | \$52,000,000 |

Impacts on Project Costs (Estimated Construction and Design)

- New Headworks Facility
- Expanded Wet Weather Equalization Capacity
- Site-wide Electrical Modifications (Reliability/Redundancy)
- Expanded Biosolids System to include Thermal Hydrolysis Process (THP)

RATE IMPACTS

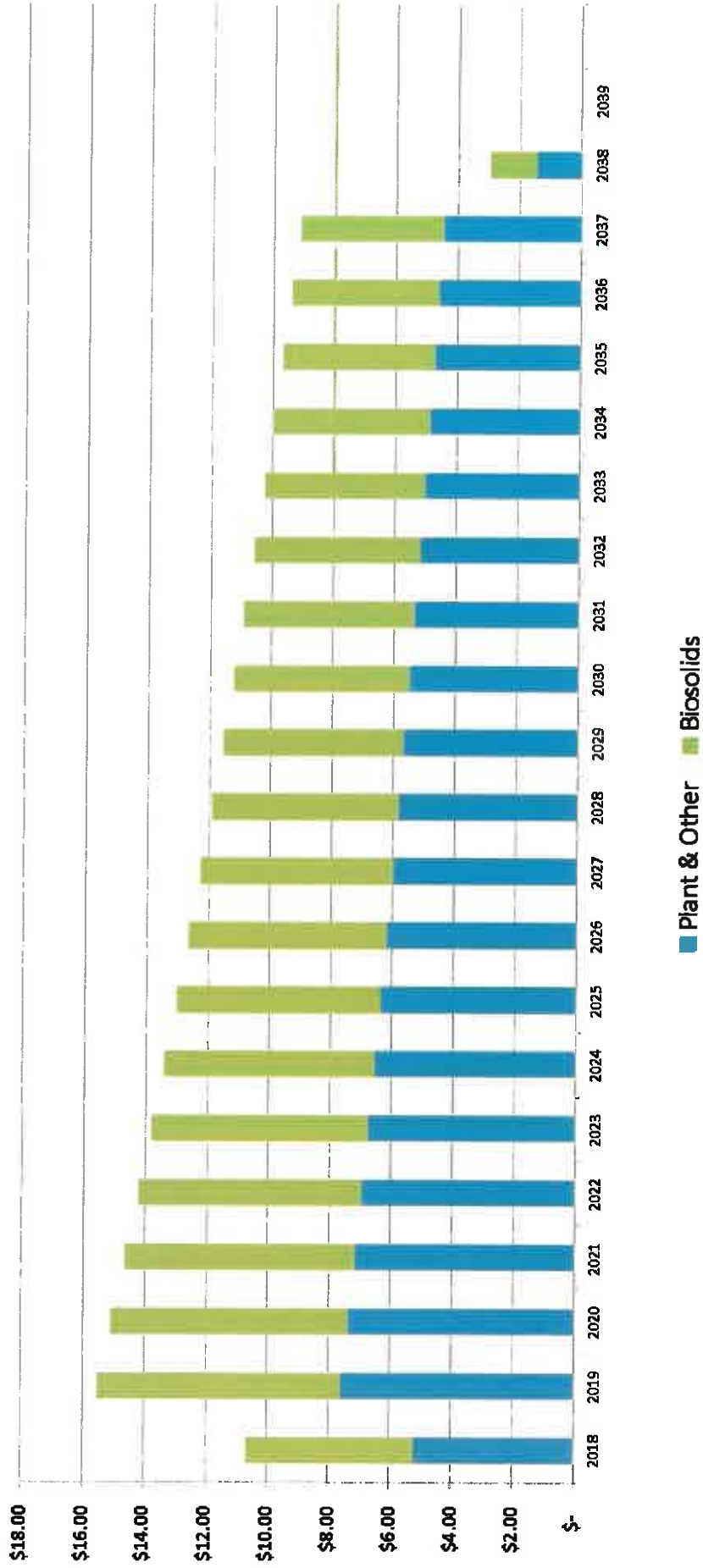
Rate Criteria/Assumptions

- Anticipated costs of improvements is \$102.5 M
- All improvements are funded with debt
- Initial 16-mgd facility (75% existing rate payer funded/25% development funded/growth related)
- 2.82% Interest rate amortized over 20 years (per SRF letter)
- 3.0% growth rate
- Based on an average 7,000 gallons/month residential customer
- Assumes the estimated O&M costs for the current operation continue for the increasing demands

Estimated Rate Impacts

(Associated only with WRF Expansion)

Initial Plant Improvements - Impact of Debt Service on Residential Inside Rates



■ Plant & Other ■ Biosolids

Estimated Rate Impacts

- Based on the current estimated project cost, the effect on the average user would be:

Average User Inside City Limits (7,000 gallons)

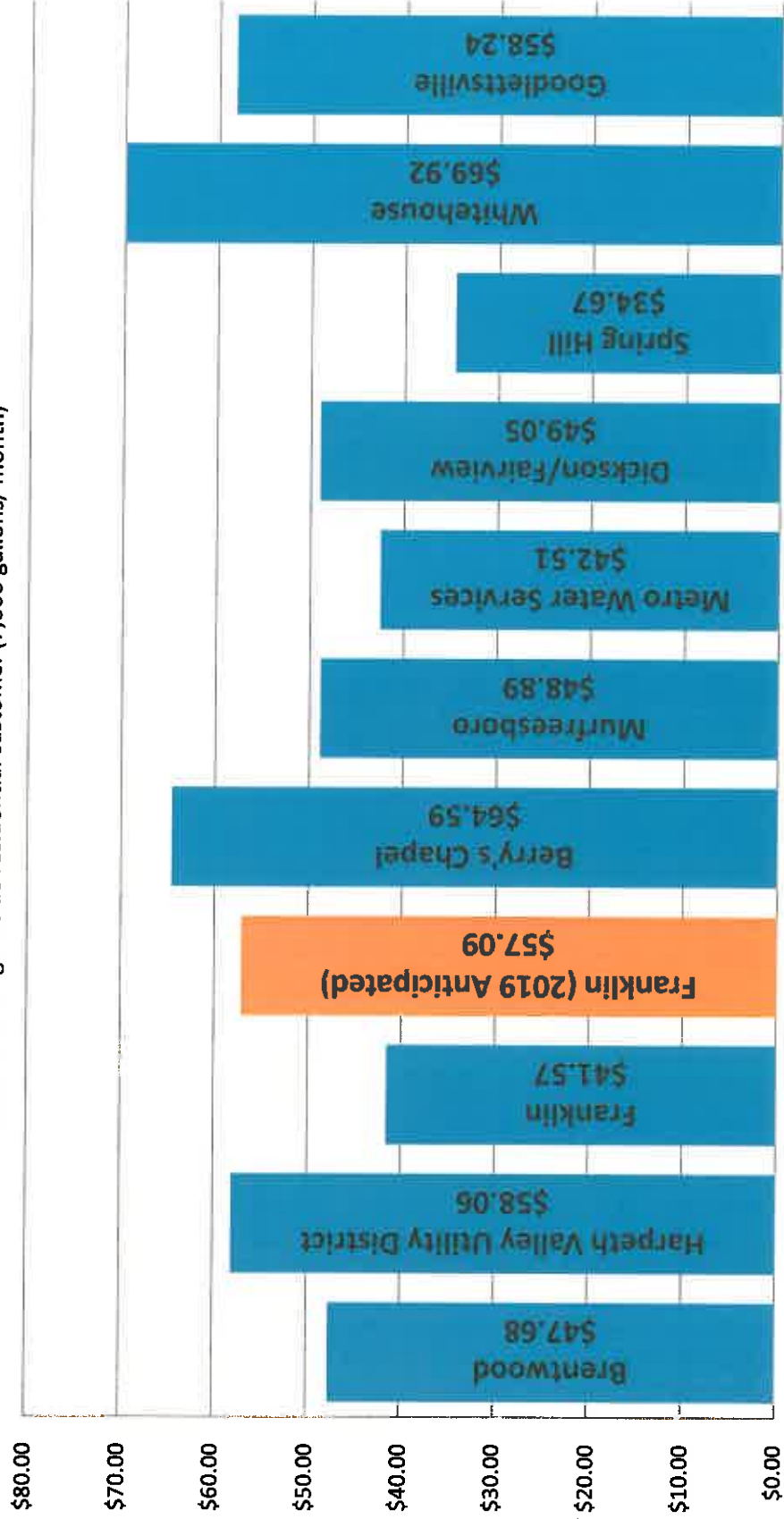
Current User Fee: \$41.57 (2014 Wastewater Rate Schedule)

Anticipated User Fee: \$57.09 (\$15.52 increase by 2019)

Comparison of Rates with Surrounding Communities

Comparison of Current Wastewater Rates

Based on average inside residential customer (7,000 gallons/ month)



DISCUSSION

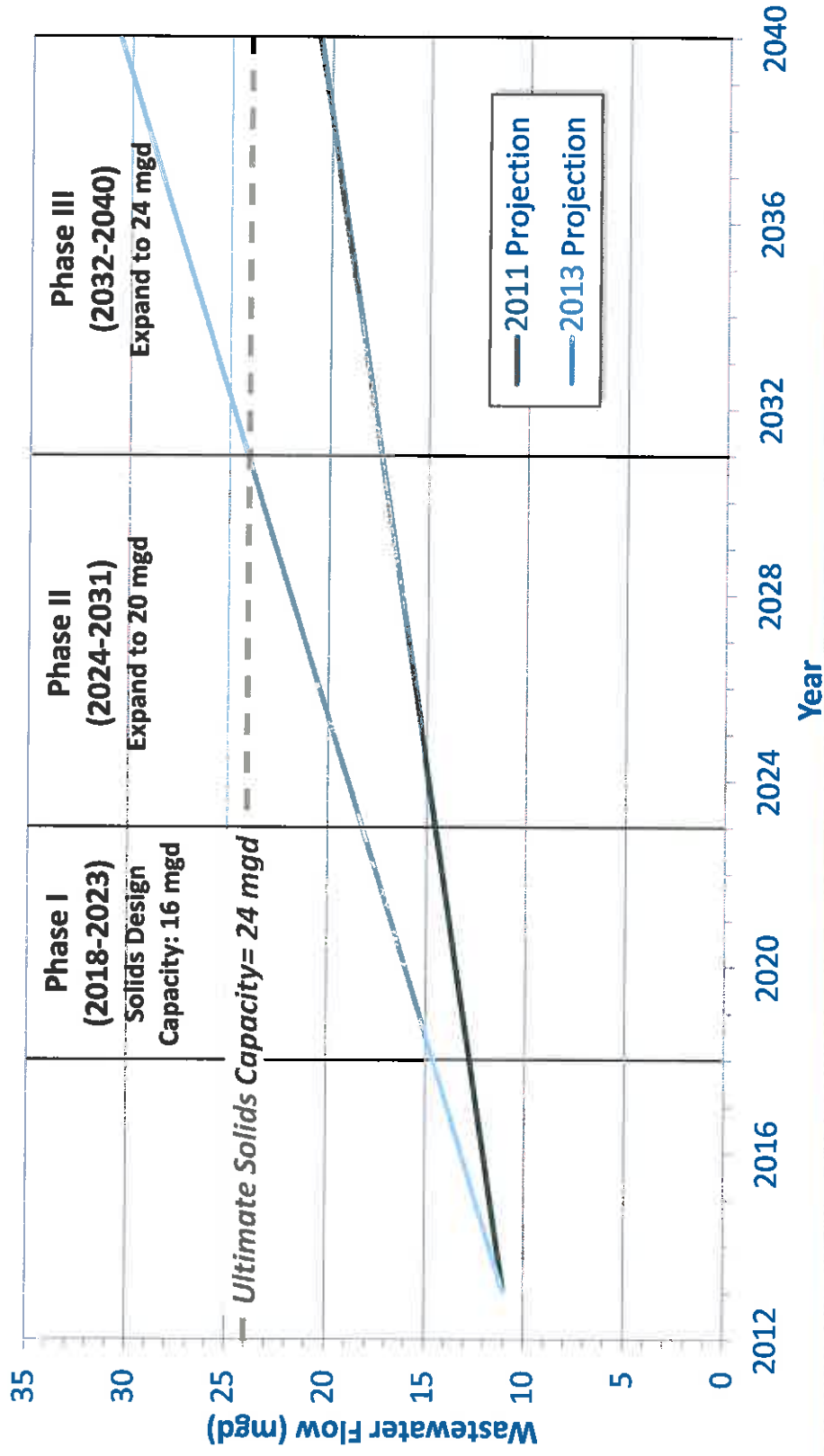
FLOW PROJECTIONS

Potential Flow Growth

| WWTP | Drainage Basin | 2010 adf, gpd | 2040 adf, gpd |
|-------|-------------------------|---------------|---------------|
| North | Watson Branch | 2,850,000 | 7,620,440 |
| North | Spencer Creek | 2,700,000 | 6,250,000 |
| North | West | 430,500 | 3,913,650 |
| North | Central Franklin | 1,842,000 | 1,842,000 |
| North | Fieldstone & Monticello | 821,000 | 821,000 |
| North | Meadowgreen | 160,000 | 160,000 |
| | North plant subtotal | 8,803,500 | 20,607,090 |
| South | Mayes Creek | 0 | 4,450,600 |
| South | Goose Creek | 695,000 | 4,300,000 |
| South | Southwest Basins | 0 | 1,250,000 |
| | South plant subtotal | 695,000 | 10,000,600 |
| | total | 9,498,500 | 30,607,690 |

Ultimate Capacity

- Recent wastewater flow projections have increased



Ultimate Capacity

- Higher flow projection increases loads to solids process

