



William E. Dunn Water Reclamation Facility

Facility Overview & Information



Facility Highlights

General

Area Served: Northern Pinellas County
St. Joseph Sound to East Lake Road (E/W)
Tampa Road to Keystone Road (N/S)

Owner: Pinellas County Utilities
Operator: Pinellas County Utilities

Plant History

- 1973 – 3.0 Million Gallons per Day (MGD) Extended Aeration wastewater treatment facility, utilizing reclaimed water distribution for effluent disposal.
- 1985 – Construction of new 9.0 MGD 5-stage Bardenpho Advanced Wastewater Treatment Water Reclamation Facility, with expanded utilization of reclaimed water distribution. Old 3.0 MGD facility taken out of service.
- 1993 - Existing facility enhanced by construction of Center Oxidation Ditch, for improved process stability.
- Mid-1990's - East Lake Tarpon area PCU package wastewater treatment facilities phased out and flows diverted to William E. Dunn Wastewater Reclamation Facility (WED WRF) for treatment.
- 2002 - Construction of new Facility Administration Building, with adjacent open public park area and education kiosk.
- 2004 - Phase 2 & 3 construction upgrades and modernization of the WED WRF.

Facility Operation

- Average Daily Flow – 6.5 MGD
- Operating Schedule – 24 hours per day, 365 days per year
- Number of Collection System pump stations – approximately 150+
- Number of staff – 24 positions (Administration, Operation & Maintenance)
- Type of Process – Activated Sludge
- Process Mode – 5-stage Bardenpho Advanced Wastewater Treatment Process
- Flow Distribution – 100% reclaimed water distribution for irrigation purposes
- Biosolids Production – about 1,500 dry tons per year (375+ semi-trailers)
- Biosolids Reuse – dried sludge is used as a soil amending agent (fertilizer)
- Annual Budget - \$5 million
- Average Treatment Cost per Million Gallons - \$2000

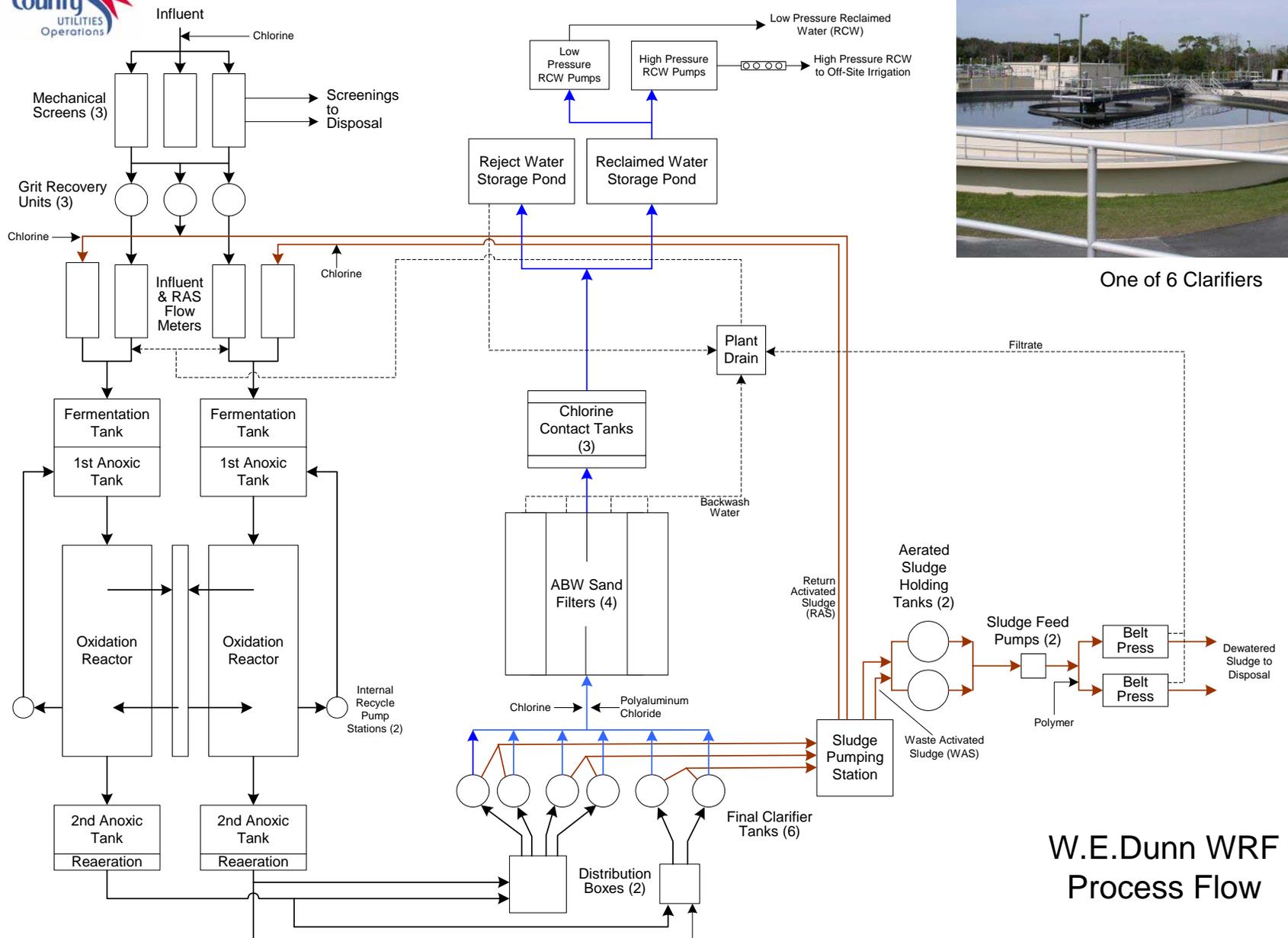
North County –
Collection System Area
(crosshatched area)





View of Reclaimed Water Storage Pond

William E. Dunn WRF
Plan Drawing



One of 6 Clarifiers

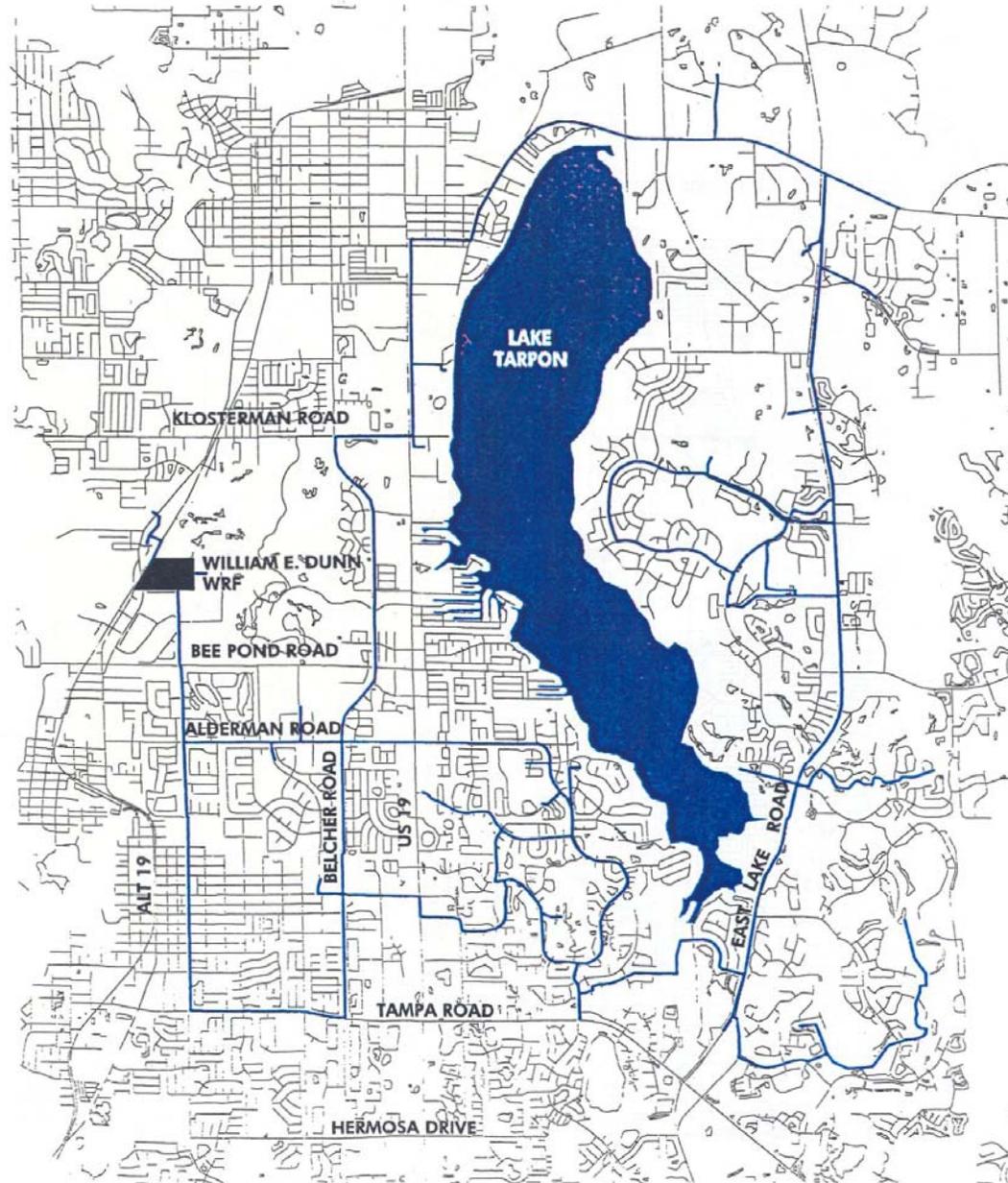
W.E. Dunn WRF Process Flow

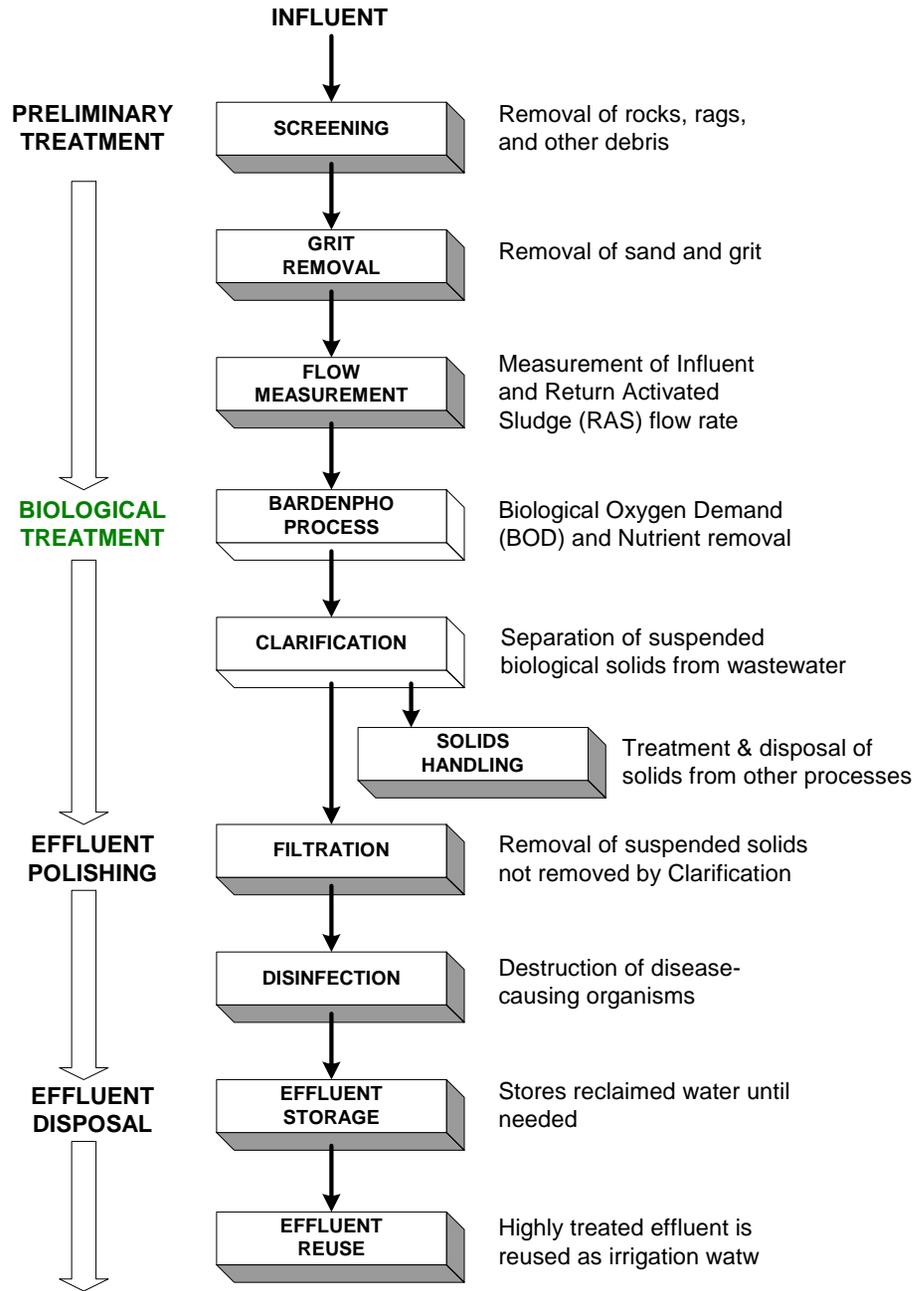


William E. Dunn WRF RCW Storage Pond Levels

RCW WW Elevation (Feet)	Storage Gallons (Millions)	Usable RCW		Operational Alarm Levels
		Wet Well Level	Volume (mg)	
22.45	78.517	22.45	70.82	
		21.95	68.30	
21.45	73.483	21.45	65.79	
		20.95	63.29	
20.45	68.494	20.45	60.80	
		19.95	58.32	
19.45	63.549	19.45	55.85	
		18.95	53.40	
18.45	58.648	18.45	50.95	
		17.95	48.52	
17.45	53.793	17.45	46.10	
		16.95	43.69	
16.45	48.981	16.45	41.29	
		15.95	38.90	
15.45	44.215	15.45	36.52	
		14.95	34.16	
14.45	39.492	14.45	31.80	
		13.95	29.46	
13.45	34.815	13.45	27.12	
		12.95	24.80	
12.45	30.182	12.45	22.49	
		11.95	20.19	
11.45	25.593	11.45	17.90	
		10.95	15.62	
10.45	21.049	10.45	13.35	
		9.95	11.10	
9.45	16.550	9.45	8.86	
		8.95	6.63	
8.45	12.095	8.45	4.40	
		7.95	2.20	
7.45	7.685	7.45	0.00	

Reclaimed Water Distribution System North County Area





**W.E. Dunn WRF
Process Flow Chart**