

A panoramic view of the San Diego skyline, featuring numerous high-rise buildings and a clear blue sky, with the city's harbor and water visible in the foreground.

SAN DIEGO SOLUTION

NO TIME TO WASTE

NO WATER TO WASTE



THE NEPSUS SYSTEM

Better – Cleaner – Greener – Faster – Smaller - Economical

CURRENT SAN DIEGO WATER STATUS

- Running Out of Fresh Water
- 185 Million Gallons A Day Wasted
- State Mandated 20% Reduction by 2020

ACHIEVABLE?

SOLUTIONS TO THESE ISSUES

- Water Conservation
- Seawater Desalination
- Water Reclamation

AVERAGE WATER USAGE

Daily use per person – 160 gallons

Irrigation 55%, Household 45%

60,000 GPD Nepsus Wastewater System = 375 people

65 Acre Feet Per Year (50 Football Fields 1 ft deep)

**This achieves the 20% reduction in water consumption
for 2,000 people**

FUTURE REQUIREMENTS = 120 MGD

120 million gallons = 750,000 people

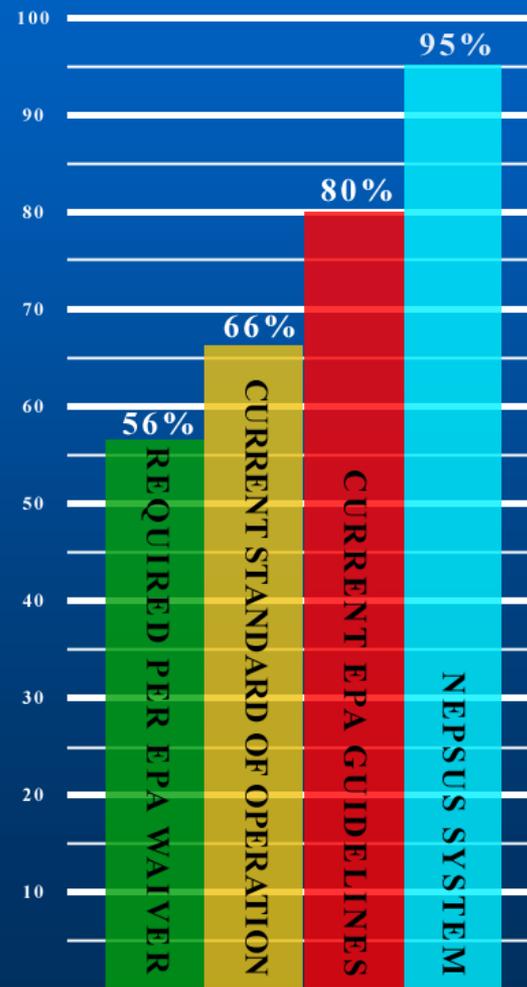
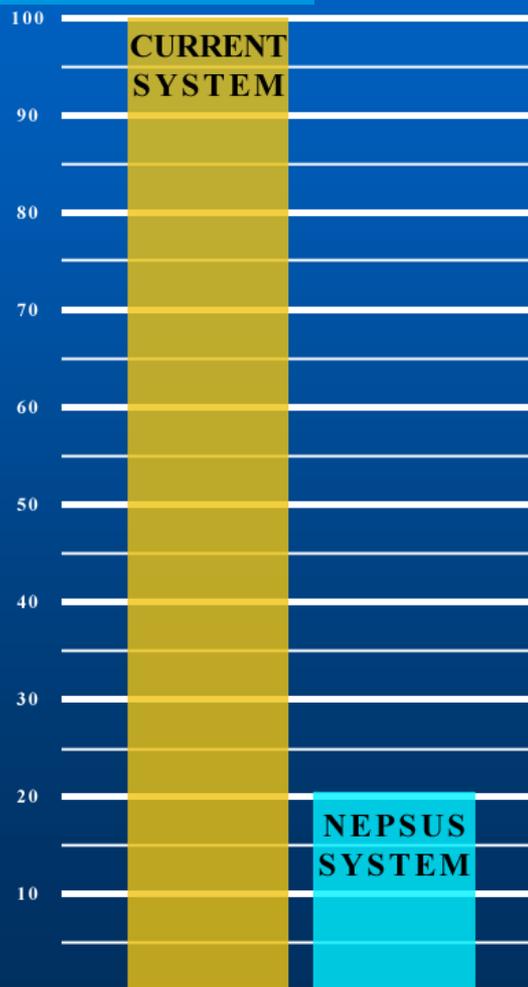
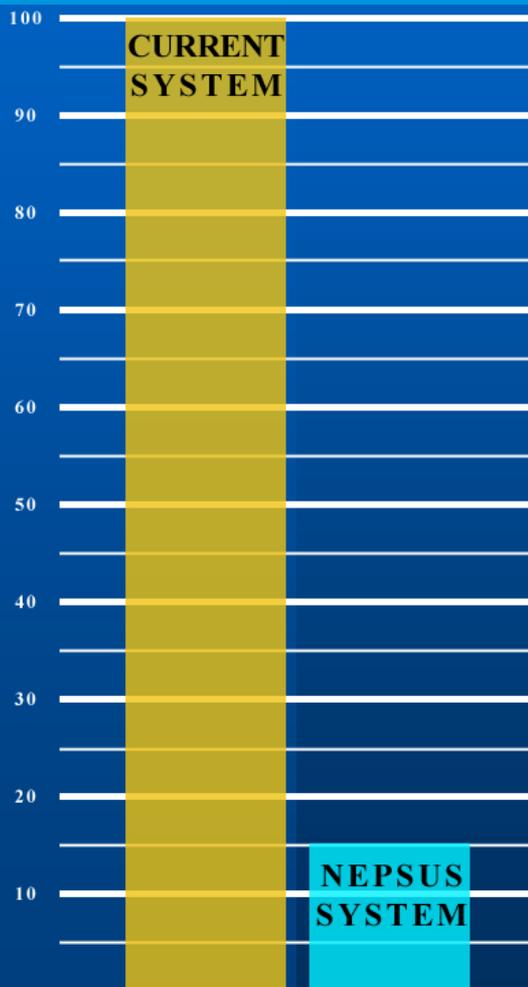
- **Conservation?**
- **Desal – 120 MGD at \$2 - \$3 billion**
- **Reuse – treating sewage anyway.
Minimal additional cost**

ENVIRONMENTAL CONSIDERATIONS

ENERGY CONSUMPTION

GREEN HOUSE GAS EMISSIONS

CONTAMINANT DISCHARGE



BENEFITS

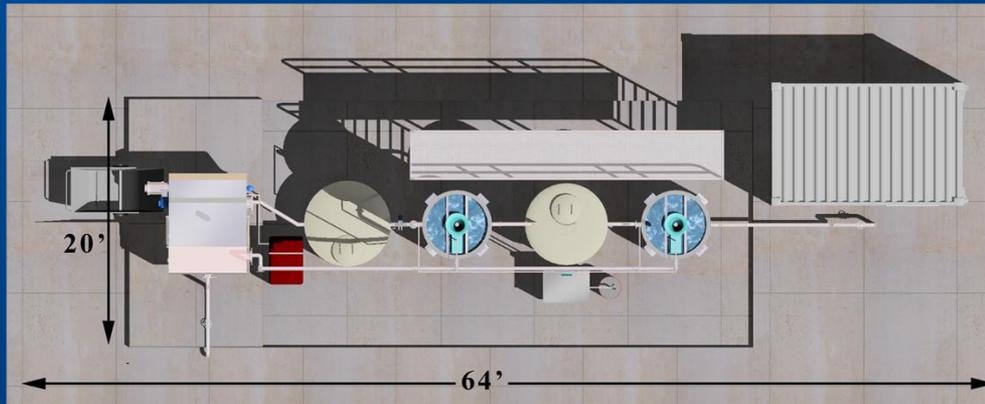
Sewer mining to create recycled water substantially reduces:

- 1. Purple pipe**
- 2. Road construction**
- 3. Traffic congestion**
- 4. Citizen complaints**
- 5. Ocean pollutants**
- 6. Greenhouse gas emissions**

60,000 GPD PLANT SIZE EXAMPLE



SAMPLE NEPSUS CBUM PLANT

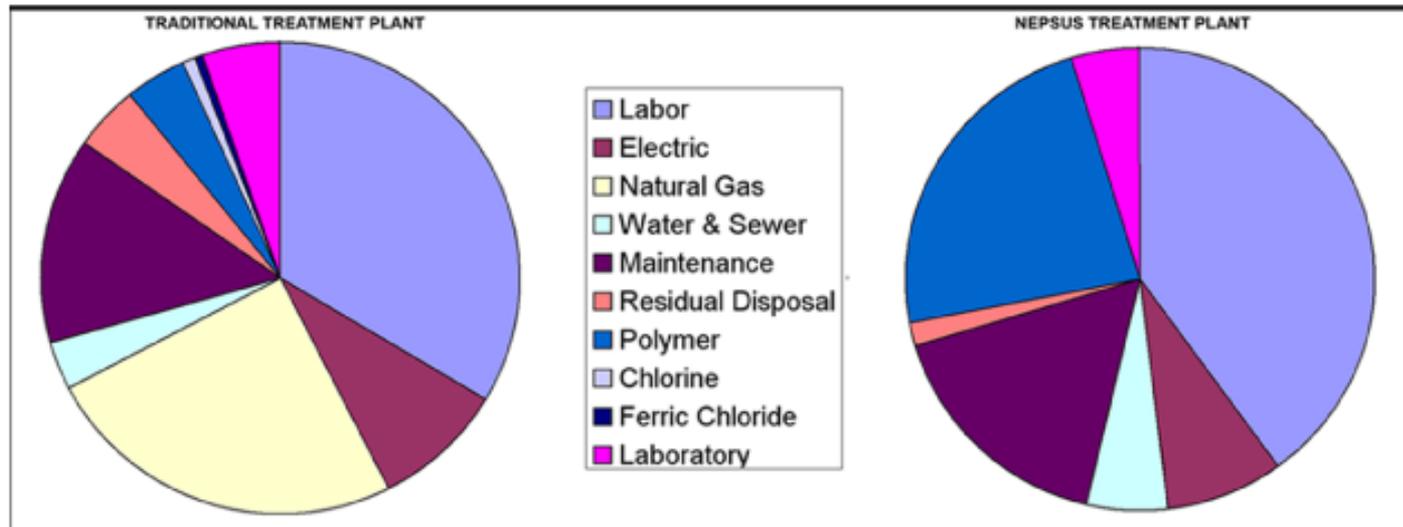


ECONOMICS

- **Lease financing available**
- **Overall operating cost 40% less than conventional system**

COMPARISON OF ANNUAL COSTS FOR A 1 MGD FACILITY BASED ON BARSTOW, CA. WWTP

	Current Plant Operation	\$/1 MGD Capacity	% Total Expenses	Nepsus Operating Plant	\$/1 MGD Capacity	% Total Expenses
Labor	\$ 361,797.00	0.362	29.49%	\$ 250,000.00	0.250	34.58%
Electric	\$ 95,458.00	0.095	7.78%	\$ 50,000.00	0.050	6.92%
Natural Gas	\$ 267,564.00	0.268	21.81%		0.000	0.00%
Water & Sewer	\$ 34,460.00	0.034	2.81%	\$ 34,460.00	0.034	4.77%
Maintenance	\$ 153,974.00	0.154	12.55%	\$ 103,974.00	0.104	14.38%
Residual Disposal	\$ 48,000.00	0.048	3.91%	\$ 10,000.00	0.010	1.38%
Polymer	\$ 44,897.00	0.045	3.66%	\$ 146,000.00	0.146	20.19%
Chlorine	\$ 8,903.00	0.009	0.73%		0.000	0.00%
Ferric Chloride	\$ 4,690.00	0.005	0.38%		0.000	0.00%
Laboratory	\$ 57,165.00	0.057	4.66%	\$ 28,582.00	0.029	3.95%
Total Operating Costs	\$ 1,076,908.00	1.077	87.77%	\$ 623,016.00	0.623	86.17%
Replacement Reserve	\$ 150,000.00	0.150	12.23%	\$ 100,000.00	0.100	13.83%
Total Annual Costs	\$ 1,226,908.00	1.227	100.00%	\$ 723,016.00	0.723	100.00%



60,000 GPD PLANT SIZE EXAMPLE

