

Nazareth – Ancient City Wastewater Treatment Plant



Site is situated to the south of the Sea of Galilee above main regional aquifer.

Plant Description:

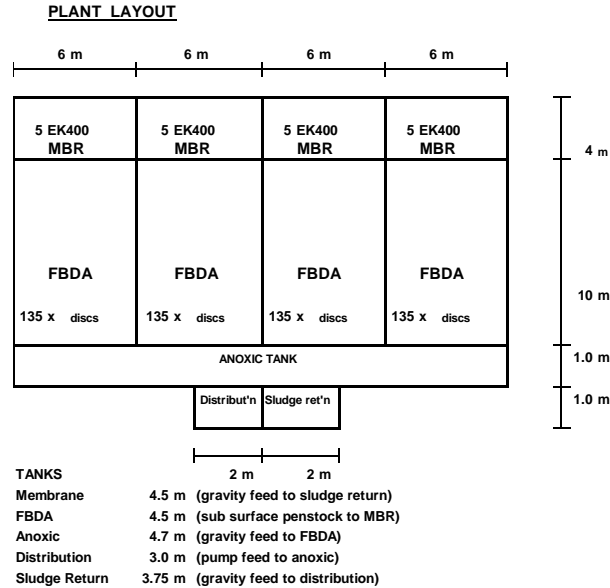
- Quality effluent needed for irrigation without compromising aquifer.
- The contract agreement provided for the process design, supply and delivery of 20 x EK400 membrane units.
- Additional services were provided in the nature of detailed design assistance, inspections during installation, assistance to start-up, commissioning and membrane maintenance.

Current Status:	Plant in operation since 2008
Client:	Municipality
Discharge Consent:	10mg/l BOD; 1mg/l P; 5mg/l Ammonia; 10mg/l SS
Brief Description:	Extended aeration Membrane Bioreactor System

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Sketch – tank layout



Process Description:

Tanks are of concrete construction.
 Balance tank feeds process via fine 3mm bi-directional screen.
 Treated effluent flows by gravity to the clean water storage tank for reuse.
 Plant designed to operate automatically with minimal supervision.

Design Requirements

Influent average loadings:

BOD	550mg/l
COD.	1,100mg/l
TKN	65mg/l
NH ₃ – N	60mg/l
SS	400mg/l
Total P	6.5mg/l

Effluent standards

BOD	10 mg/l
Total N	10 mg/l
Total P	1 mg/l
NH ₃ – N	5 mg/l
SS	5 mg/l

Plant Data

Maximum daily volume	3,500m ³ /d
Average Daily flow	4,800m ³ /d
Peak flow	121.5l/sec
MLSS membrane tank	12,000mg/l
Membrane units	20 x EK400
Sludge age	>25days

Performance

BOD	<5 mg/l
Ammonia	<4 mg/l
Total N	7 mg/l
Total P	<1 mg/l

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