

# **WASTEWATER TREATMENT PLANT IN SKENDERAJ/SRBICA, KOSOVO**

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## STATE OF PLAY IN KOSOVO ON REGARD TO WWTP

- Lack of facilities for treating sewage, which results in contaminated rivers and groundwater
- Limited experience and tradition in wastewater technology or trained personnel
- EU is helping Kosovo meet the cost of installing treatment plants and ensuring correct operation, a pilot project in Skenderaj/Srbica has been build





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## **CURRENT STATE OF INFRASTRUCTURE AND DESIGNING PARAMETERS**

- Skenderaj/Srbica is a small town, population 6,100 to 25,000 inhabitants
- Sewerage connection rate 65%
- Two main collector with length 3.7 km, two discharging points
- Combined sewerage system
- No pre-treatment
- No industrial polluters
- Per capita consumption was estimated at 250 litres/capita/day
- Klina River as the receiving water with flow 1m<sup>3</sup>/s



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## **PURPOSE OF THE PROJECT**

- Connection of the existing sewer system for the town of Skenderaj to the site for the WWTP by a 3.5 km long transport sewer
- The sewer shall only transfer the permitted combined wastewater discharge to the wastewater treatment plant, suitable storm water relieve structures were built at connection point of sewer system to transport pipe
- With the works the wastewater load of Skenderaj was to be reduced to levels in line with Council Directive 91/271 ECC concerning urban wastewater treatment and
- The wastewater treatment built for that purpose must allow easy, reliable and sustainable operation by locally available means



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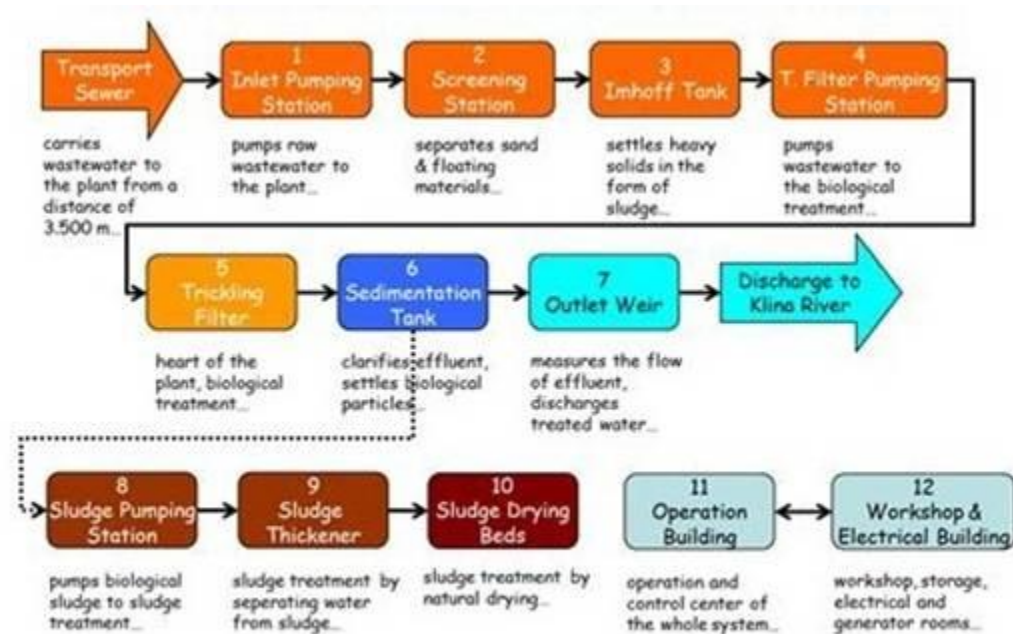
## THE CONSTRAINTS

- The plant shall be as simple as possible with simple applied technology for O&M
- Designed to allow step by step modular extension
- Treatment capacity for 8,000 people equivalent or 1,628 m<sup>3</sup>/d (3,549 m<sup>3</sup>/d - year 2025)
- Plot for construction 10,000 m<sup>2</sup>
- The effluent quality is corresponding to Council Directive of 21 May 1991, concerning urban waste water treatment (91/271/EEC), in particular to the concentrations as:
  - ✓ BOD<sub>5</sub> – 25 mg/L
  - ✓ COD – 125 mg/L
  - ✓ TSS – 35 mg/L
- The sludge due to stabilization and dewatering suitable for agriculture



## REQUIRED PROCESS COMPONENTS

- Screening by fine screen and automatic transport of screenings into containers or waste bins
- Washing of screening
- Grid removal and oil removal
- Primary sedimentation and anaerobic sludge stabilization in Imhoff tank
- Biological treatment in trickling filter
- Final sedimentation
- Sludge thickening and storage in thickener
- Hygienization with  $\text{Ca}(\text{OH})_2$
- De-watering in sludge drying beds



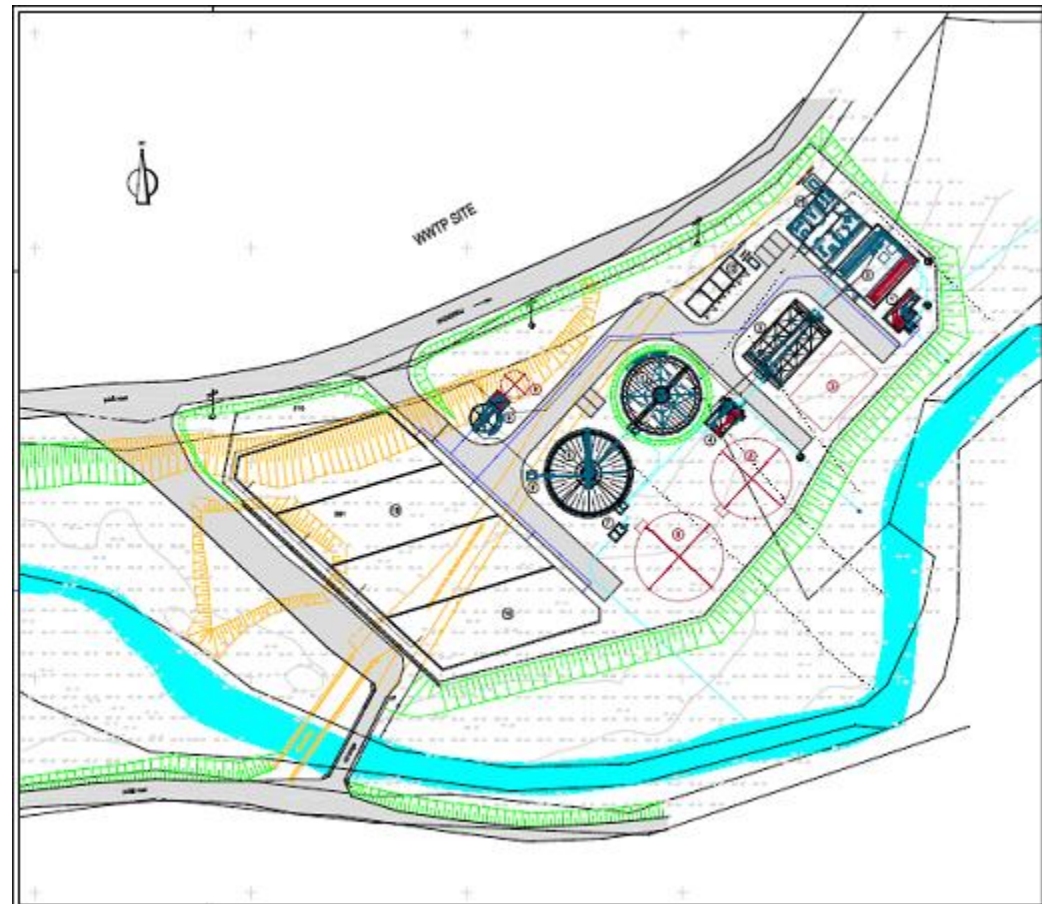


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## RESULTS OF THE EU INVESTMENT

- The first WWTP in Kosovo was built in Skenderaj/Srbica, put into operation in 2012
- Seven staff members were hired and trained
- The effluent quality is compliant with EU directives
- The river Klina is not polluted from sewerage of the upstream settlements
- The Skenderaj/Srbica plant in water utilities is used as model for planning of costs and capacities for extension of services in the future
- Cost of investment approximately EUR 3.0mill





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## **EU ACTIVITIES IN KOSOVO SUPPORTING THE WATER SECTOR**

- Basic services like clean water and sanitation are legitimate expectations of the people of Kosovo and wider
- from CARDS and IPA around EUR100mill has spent in water sector: investments and capacity building
- Connection rates before and after the conflict:
  - ✓ drinking water: 60% - 74%
  - ✓ sewerage network: 35% - 67%
  - ✓ no treatment of the wastewater at all, now is 8%
- The EU through IPA is funding the construction of four other wastewater treatments for small settlements with capacity of 1,500 – 3,500 p.e.
- Supporting the regulatory and management systems for an acceptable standard and at fair prices
- EU supported preparation of water strategy for the whole of Kosovo
- The Skenderaj/Srbica project is making a real improvement in people's lives and showing the way to many other similar improvements.



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# Thank you for your attention

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