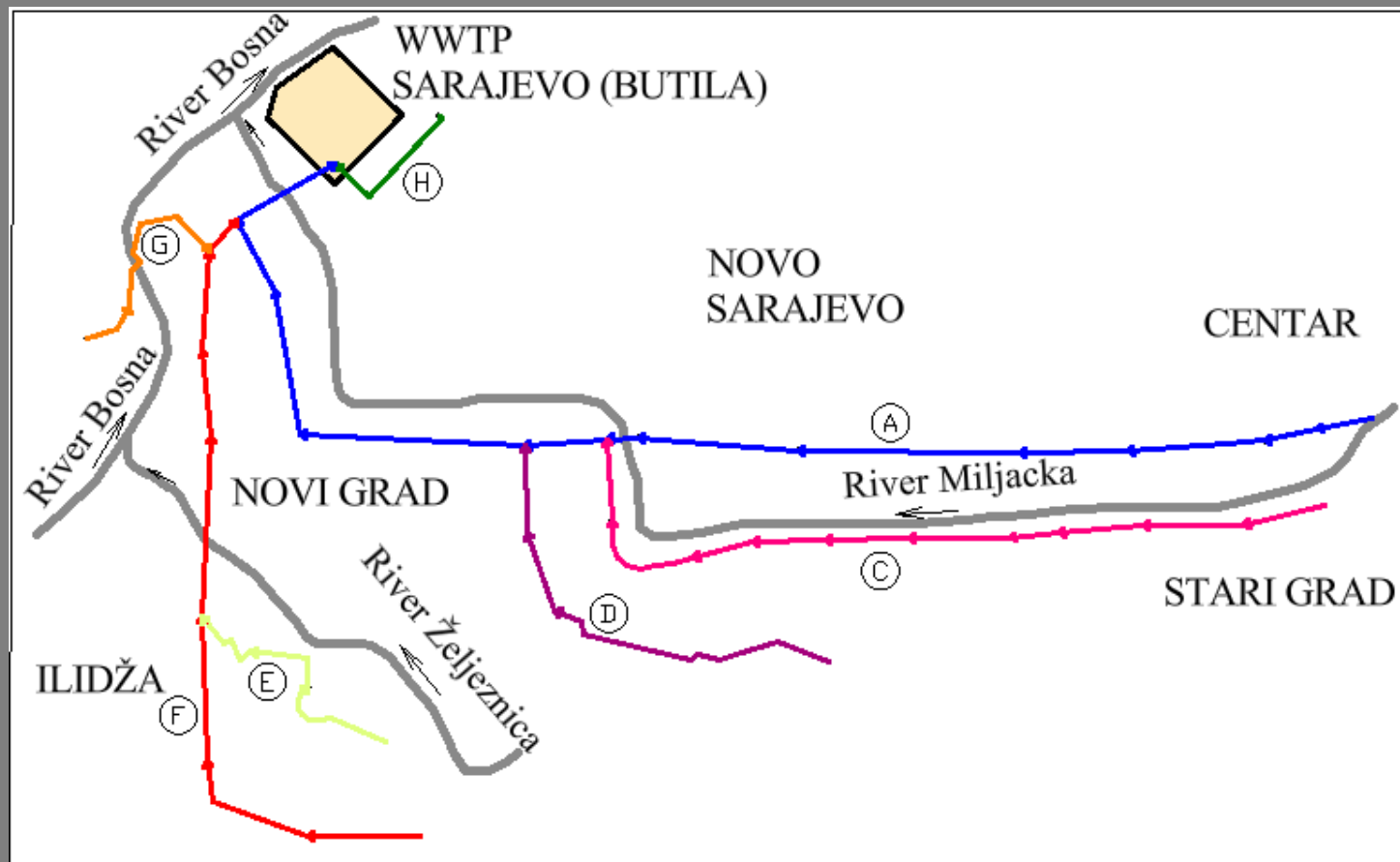


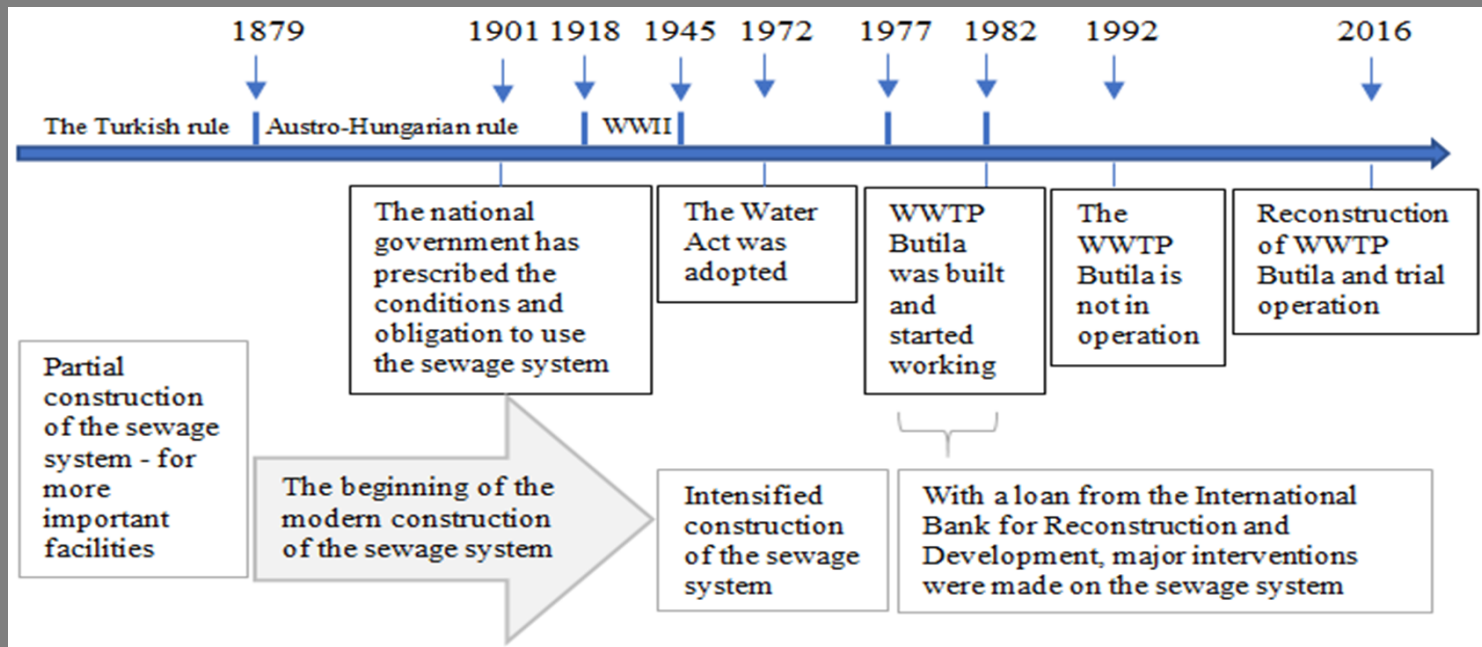
DRAINAGE AND TREATMENT OF WASTEWATER IN THE AREA OF SARAJEVO CANTON

- * Current issues in the field of waste water sewage and treatment - Situation in Bosnia and Herzegovina
- * Theoretical basics when visiting WWTP Butila



SEWAGE SYSTEM IN SARAJEVO CANTON

- * The central sewage system of Sarajevo: serves about 90% of the population of Canton Sarajevo
- * 413.593 people (2013)
- * It covers the area of 8 municipalities: Stari Grad, Centar, Novo Sarajevo, Novi Grad, Ilidža and part of Vogošća, Hadžića and Trnovo. It also covers parts of the inhabited towns of Lukavica and East Ilidža, which administratively belong to East Sarajevo.
- * 7 main collectors (L=approx. 50 km) connected to WWTP Butila
- * 50% of the sewage network is of a separate type
- * Some parts of the system are over 100 years old



WASTE WATER TREATMENT PLANT BUTILA SARAJEVO

- * WWTP Butila (Sarajevo) was built in 1982.
- * During the war in B&H (1992-1995), the plant was devastated and in 2016 it was reconstructed to a capacity in the first phase of 600.000 PE including mechanical and biological treatment.
- * In the future, the plant will require expansion to 650.000 PE with upgrades and inclusion of tertiary treatment.



- * Plant area: 41,4 ha
- * Location: Municipality of Novi Grad Sarajevo, on the right bank of the river Miljacka, about 0,5 km from its confluence with the river Bosna
- * Plant capacity: 5,2 m³/s

WASTE WATER TREATMENT PLANT BUTILA SARAJEVO

- * Functional division of WWTP: Wastewater treatment, sludge treatment and energy utilization (biogas).
- * Wastewater treatment: Mechanical treatment and biological treatment
- * Mechanical treatment: coarse gravel pit, coarse grids (100 mm), fine grids (6 mm), aerated sand trap/oil trap, primary clarifier (2 pcs.)
- * Biological treatment: Aeration basins (2 units, total volume 23.400 m³); diffuse aeration and secondary clarifier (4 units, diameter 52 m)
- * Sludge treatment: Sludge thickening (mixed sludge tank, sludge presses, gravity thickening 5% SM), sludge digestion (2 digesters, total volume 19.000 m³; alkaline mesophilic digestion, retention time 21 days) and final dehydration (3 decanters, cationic polymer, 25% SM) and temporary disposal at the plant location (2 lagoons).
- * Energy utilization: 1 MW energy/month CHP (1/3 of total electricity demand)
- * Quality control of the technological process (operational laboratory): T, pH, electrical conductivity, BOD, COD, SS, MLSS, TS, TSS, SVI, TOC, NH₄-N, PO₄-P/TP, NO₂-N, NO₃-N and TN.

