

DANUBE WATER FORUM



International Association
of Water Service Companies
in the Danube River
Catchment Area

THE IMPORTANCE OF WATER SECTOR DATA IN THE DIGITAL AGE

27-29 OCTOBER 2020








**DANUBE
WATER
PROGRAM**

Smart policies, strong utilities, sustainable services

Implementation Program – GIS – Asset Management
2019-2021

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Regional Water Company Prishtina j.s.c
October 2020 - Prishtinë

Project Content

-  First Phase – Database Management – network (GIS)
-  1. Challenges on Implementation – Site surveyes
-  2. Challenges during unification and merging process of existing database with new data
-  3. Challenges during configuration and upload in EDAMS
-  4. Results after configuration of data into EDAMS



First Phase – Water Service Zone of RWC Prishtina



RWC Prishtina	
Number of Units	8 Units – Municipalities
Number of Costumers	145000
Length of Water Network	1830 km
Length of Sewer Network	1300 km
Tanks (Volume)	80000 m ³

Existing Data at Regional Water Company Prishtina (Data before project implementation)

Systems	Description	Status
Billing System	Name of billing system	Billing
	Name of billing database	SQL 2012
	Number of Workstations/terminals	90
Enterprise Resource Planning (ERP)	Accounting system	ERP- Navision 2013
	Human resource (HR) system	ERP- Navision 2013
	Stores system	DB- SQL2012
Technical Systems	Geographical Information System (GIS)	ARGIS
	Drawing System (CAD)	AUTO CAD
	SCADA / Telemetry system	YES
	Maintenance Management	-
	Complaints Management	CRM
	Asset Management	-
	Demand Management	CRM
	Distribution/ NRW Management	-
	Network Analysis	-
Other Information Systems	Water Quality - Laboratory Inf. System (IMS)	YES
	Web Publishing	WEB APP local

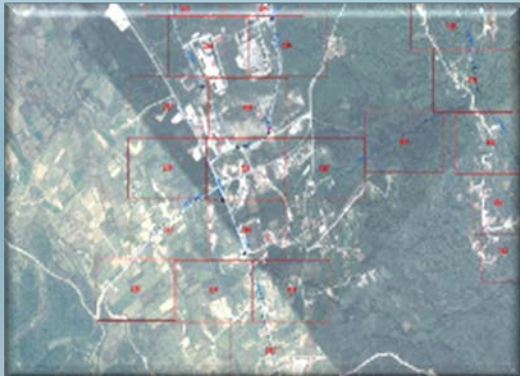
Performance level	Parameter	Value / Response
Utility Indicators	Water Coverage (%)	100.00%
	Sewerage Coverage (%)	95.64%
	Total Water Consumption (liters/person/day)	104.11
	Residential Consumption (liters/person/day)	82
	Staff Water/000 Water pop served (#/000 W pop served)	0.85
	Non Revenue Water (%)	52.69%
	Non Revenue Water (m3/km/day)	34.22
	Water sold that is metered % (%)	96.52%
	Average Revenue W&WW (€m3 water sold)	0.66
	Unit Operational Cost Water and Wastewater (W&WW) (€m3 sold)	0.43
	Collection Period (days)	1,436.66
	Collection ratio (%)	92.38%
	Operating Cost Coverage (ratio)	1.54

Formatting of existing data

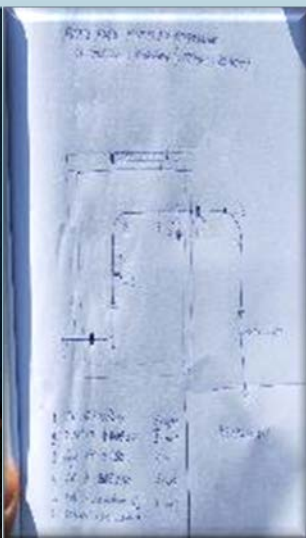
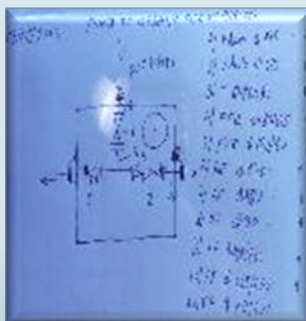
- ➊ Capturing and collecting of existing data's, from different formats and materials-formats ,
- ➋ Analyse of existing data (Network, fittings, chambers, tanks, PS etc.),
- ➌ Geo-referencing of respective data (plans of hard copy maps)
- ➍ Preparing data in format and, ready to convert into EMDAS platform – software
- ➎ Inserting new data into EDMAS – configuration of tanks, PS, Water Sources, main feeding points, fittings etc.

Site works – Organizational aspect

- Prepare of Maps , documents, group organizing
- Survey measures and data entering
- Data Validation process ,

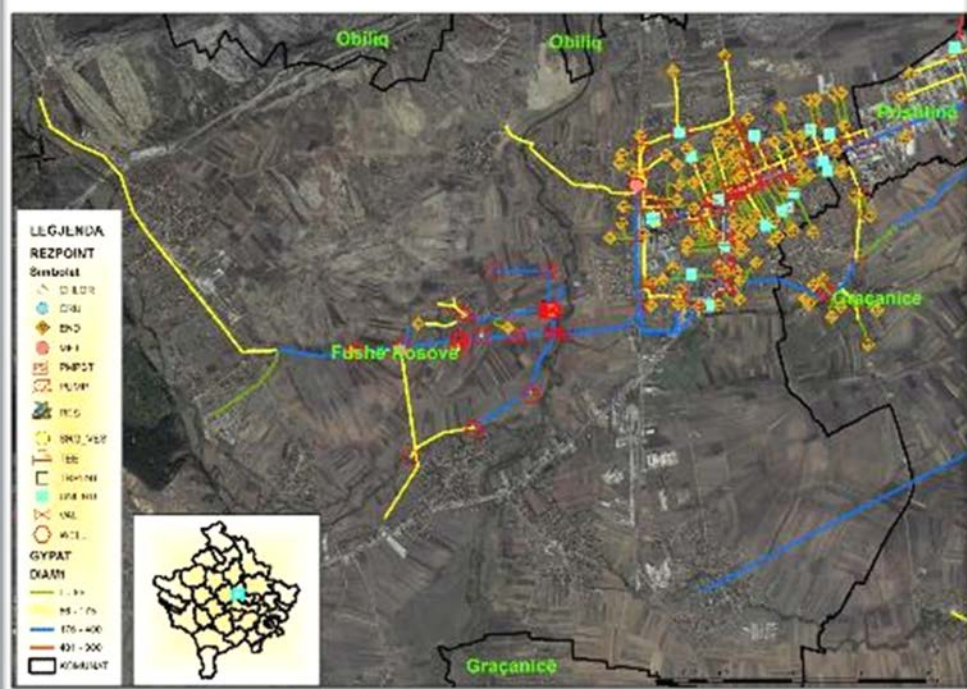


Site works – organization of works on field

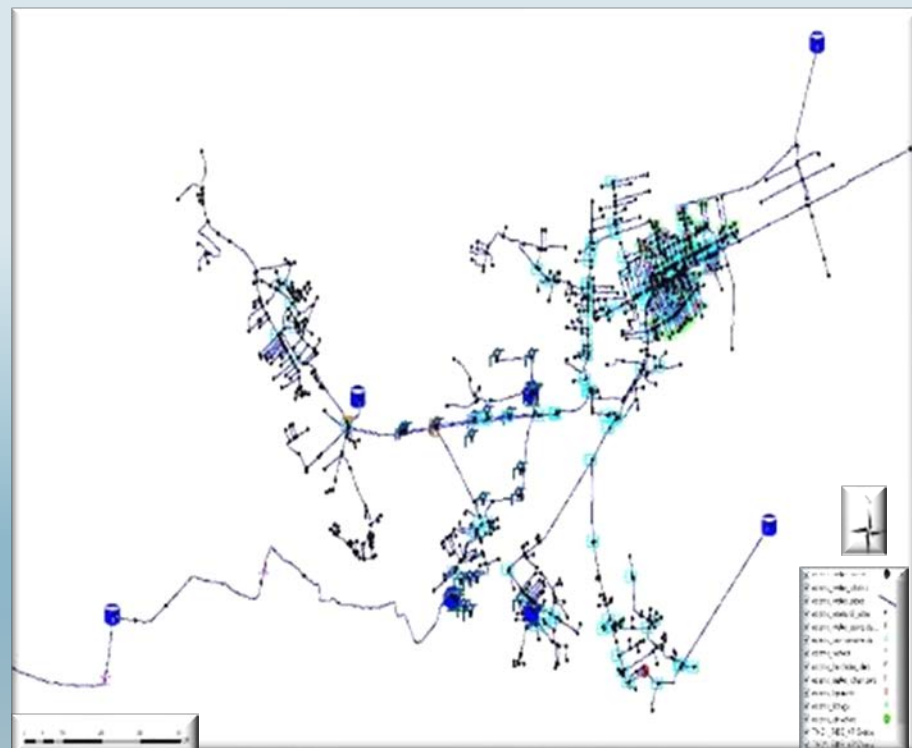


Situation Before and After “MIA” Implementation

Gypat sipas diametrit FUSHË KOSOVË



Before Implementation of MIA

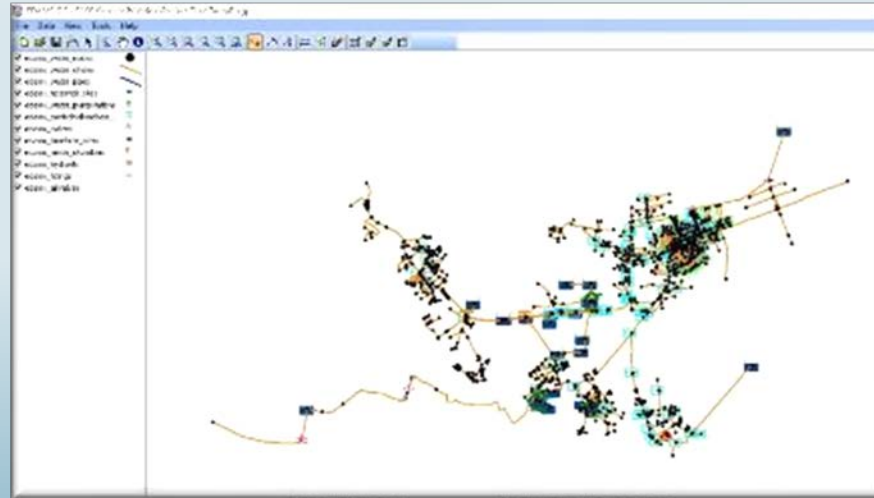


After MIA Implementation

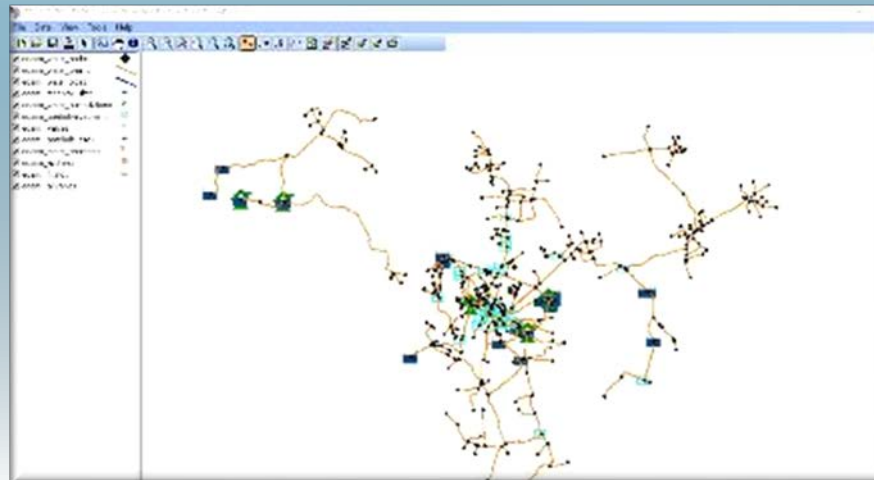
Upgrade of register for Assets in Network

Full cycle administration of network assets process

Upgrade and setup of network data assets Fushe Kosova Case

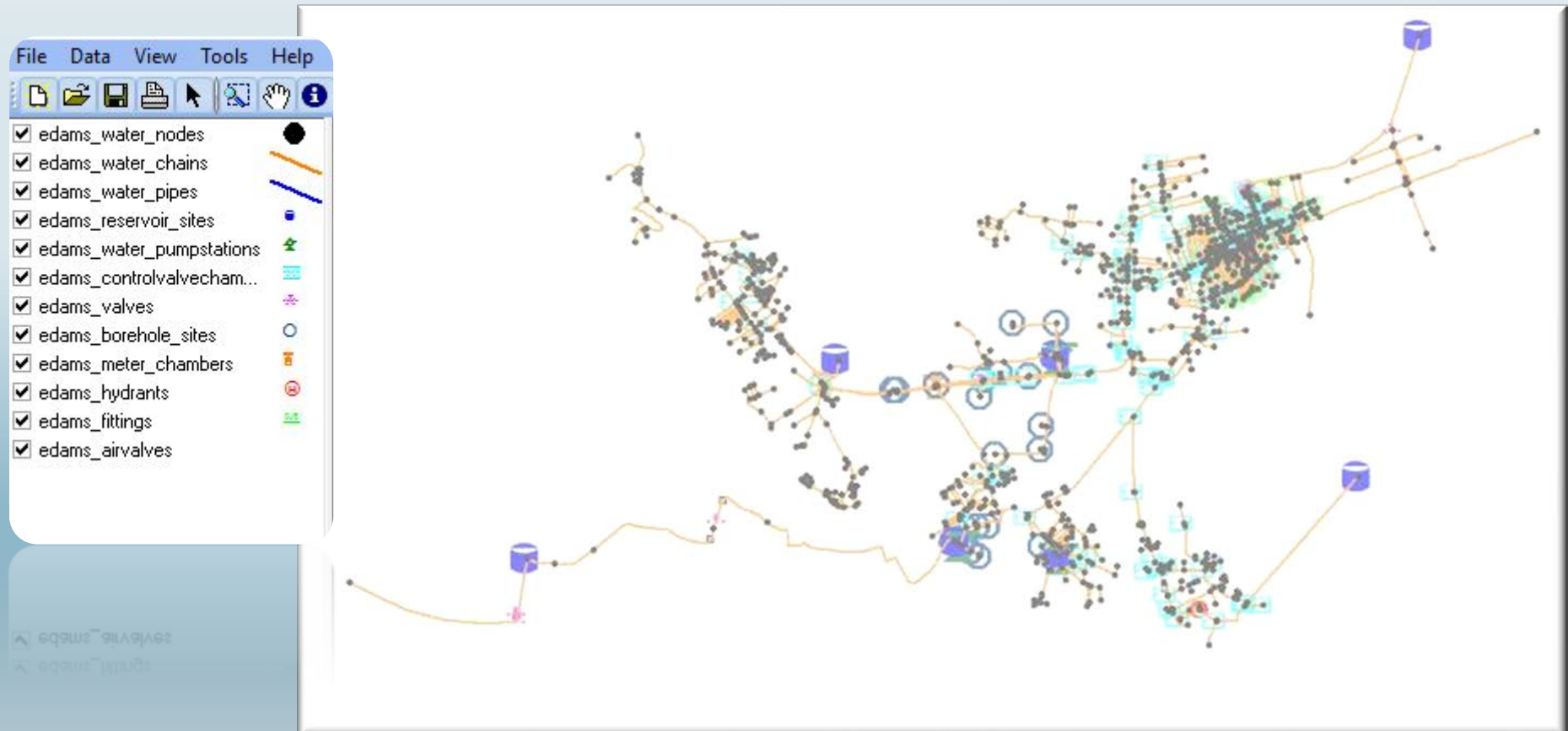


Upgrade and setup of network data assets Shtime Unit - Case



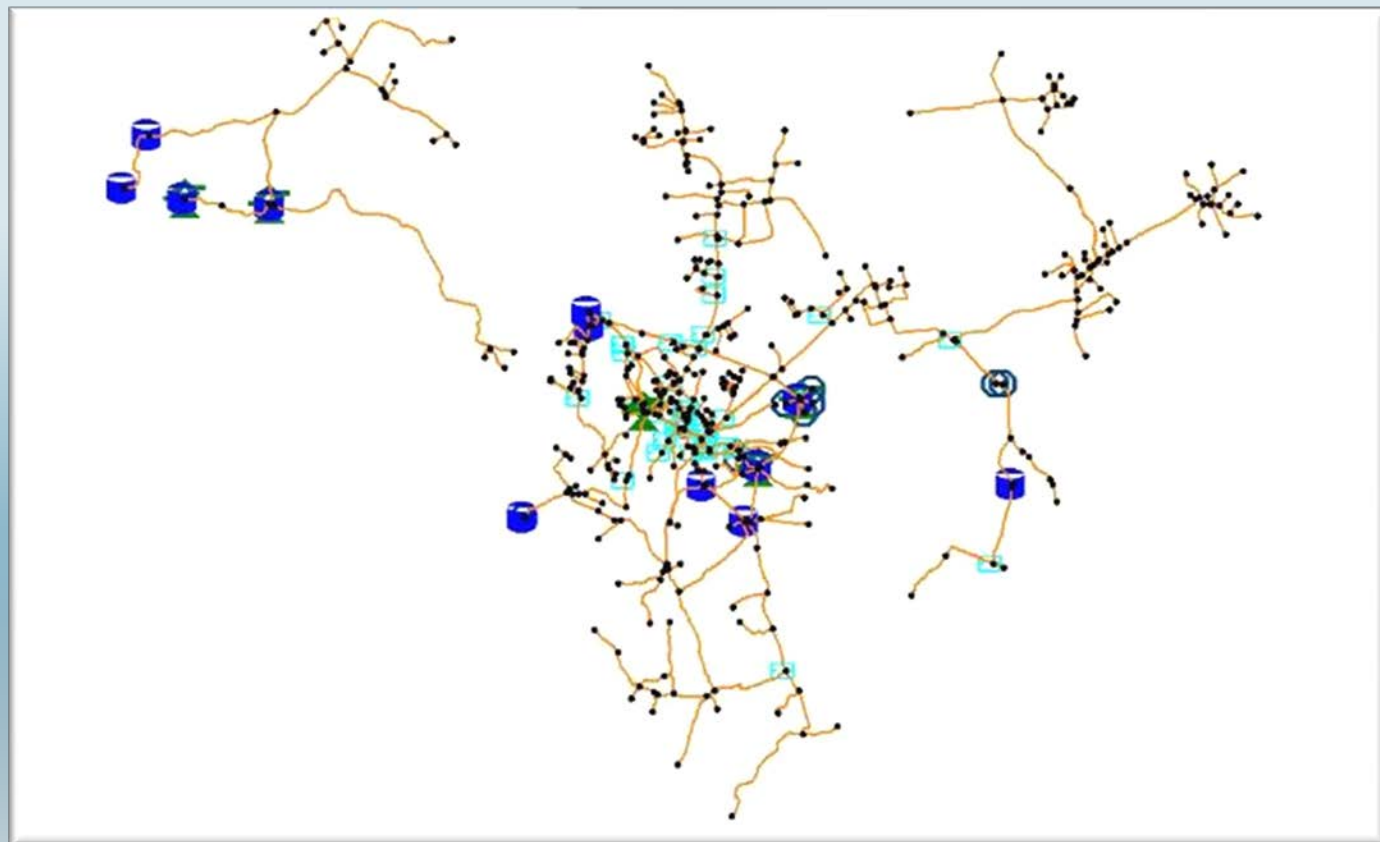
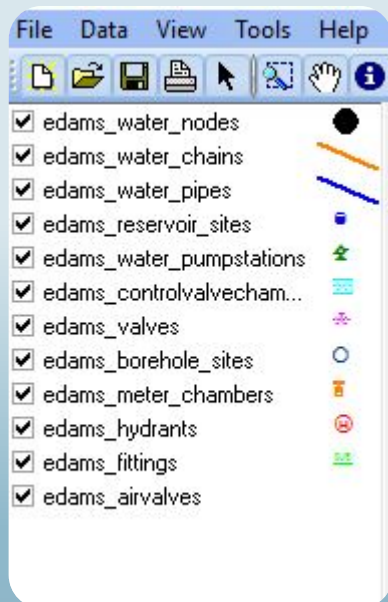
First Phase – Demonstration – Presentation of RWC-P

Water Supply Network for urban zone of Fushe Kosove – Implemented into EDAMS Platform



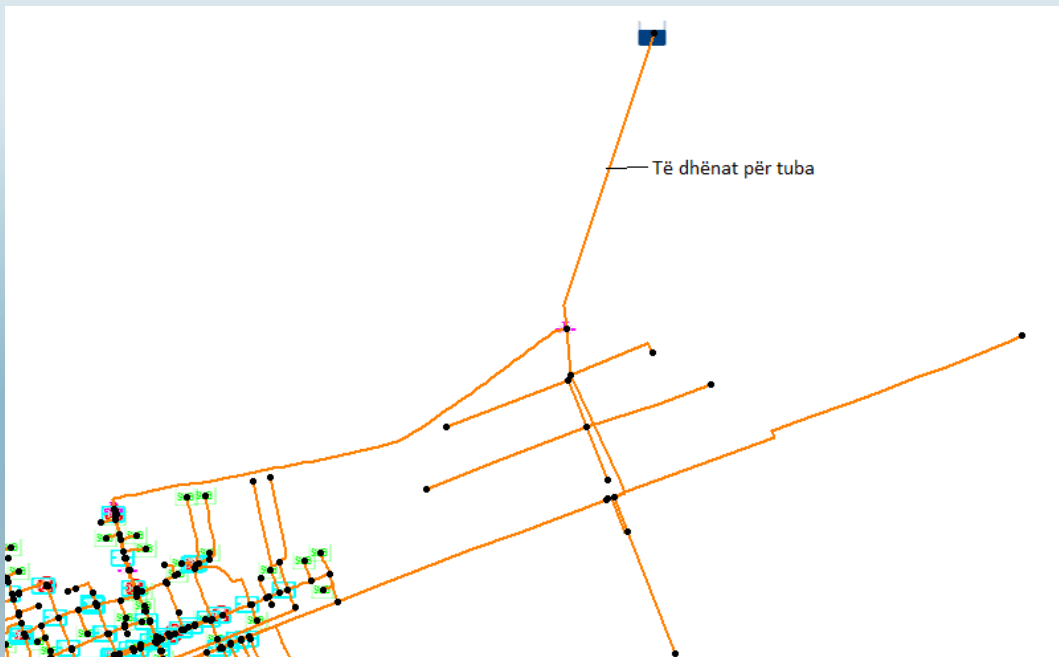
First Phase – Demonstration – Presentation of RWC-P

Water Supply Network for urban/rural zone of Shtime Unit– Implemented into EDAMS



First Phase – Demonstration – Presentation of RWC-P

Water Supply Network data configuration Implemented into EDAMS



Identify

Call layers

- edams_water_chains
 - 837
- edams_water_pipes
 - 258

[7510146.465274, 4724479.222463]

DATA	837
Label	
Angle	0

Water Pipe 258 - Water Pipe 258

Log | Maintenance | Images | Condition Assessment | Valuation Information | Hyperlinks

History | Data Origin | Editing History | Characteristics

Main | Graphical | Connections | Spatial isolate | Gridview | Layers | Location

Material Type: Steel-B

Diameter: 500 mm

Nominal Diam.: 500 mm

Thickness: 10.0 mm

Pressure: 0.000 m

Pipe Class: Default

Lining Thickness: 0.0 mm

Mass per Length: 100.00 kg

Cost per Length: 100.00 \$

Pipe age: 0.00 years

Select From GIS Pipe

Select From Library...

Lining

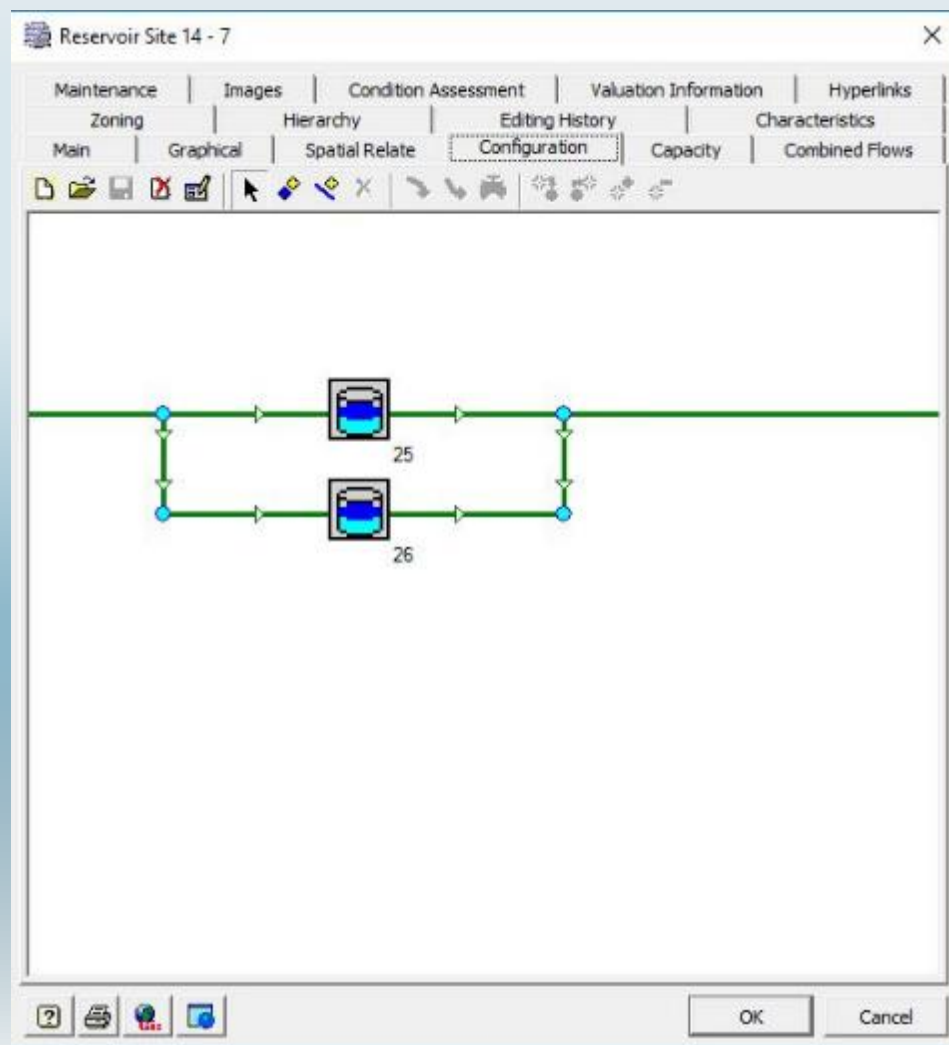
Lining type: no lining

Lining material:

Data origin: Unknown

OK Cancel

First Phase – data configuration – Rashince Tank



Reservoir Site 14 - 7

Maintenance | Images | Condition Assessment | Valuation Information | Hyperlinks
 Zoning | Hierarchy | Editing History | Characteristics
 Main | Graphical | Spatial Relate | **Configuration** | Capacity | Combined Flows

Reservoir Site Capacity: 250.253 m³
 Top Water Level: 1187.370 m

Reservoir 25 - Reservoir 25

Condition Assessment | Valuation Information | Hierarchy | Editing History
 Main | Dimensions | General | Identification | Logs

Location: 7

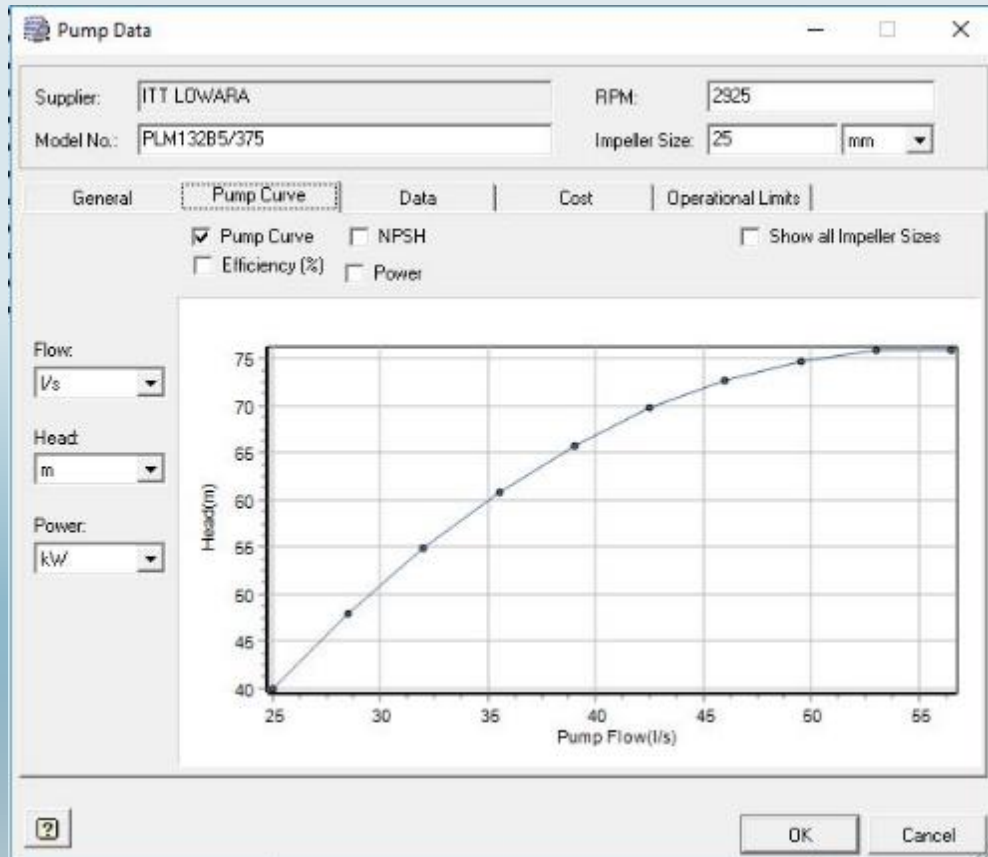
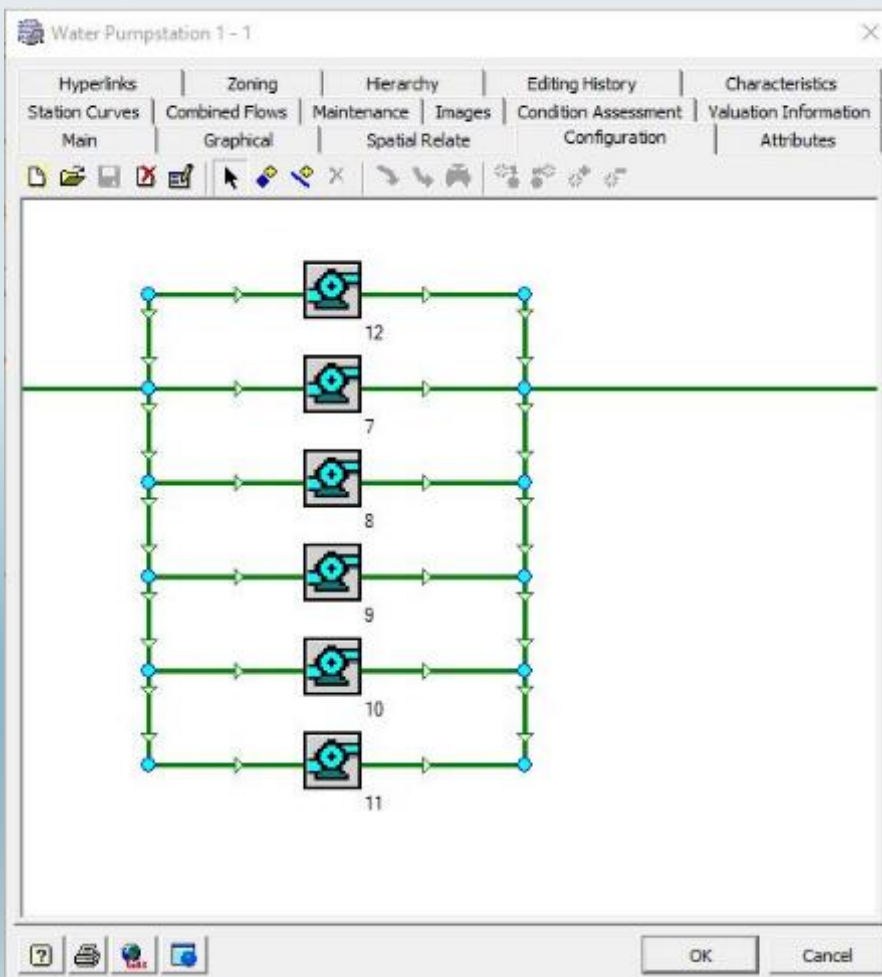
Ground Elevation at Reservoir: 592.500 m
 Height of Bottom of Reservoir from Ground: 592.210 m
 Height from Bottom of Reservoir to TWL: 2.650 m
 Reservoir Capacity: 125.126 m³
 Top Water Level: 1187.370 m

Apply

Conversion of Reservoir Levels to Volume Readings (inflow/outflow)
 Conversion Factor: 0.00
 Update Volume Readings

OK Cancel

First Phase – data configuration – PS Miradi – F. Kosova Unit



First Phase – operations on CLOUD – Monitoring & Reporting



Asset Management Advisory Services to Water Utilities in South-Eastern Europe (SEEAM)

Weekly Discrepancies Report

Utility: **PRISHTINA**

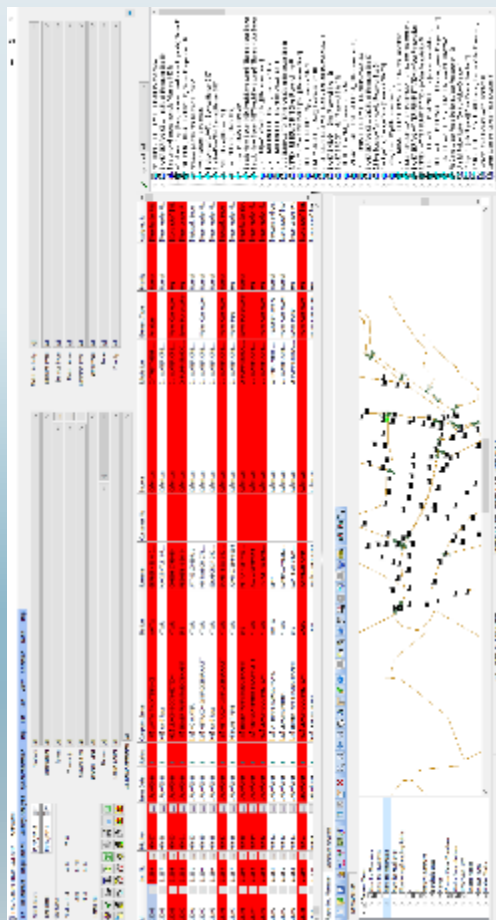
Water Elements Summary

Date	Length of pipes (km)	Reservoir sites	Pump stations	Borehole sites	Valves	Hydrants	Control valve chambers	Supply points	Air valves	Relief devices	Meter chambers	Geowater connections
14/10/2019	164.63	7	3	23	15	20	210	0	8	0	2	0
08/10/2019	164.73	7	3	25	14	20	210	0	8	0	2	0
30/09/2019	164.73	7	3	25	13	20	210	0	8	0	2	0
23/09/2019	164.73	7	3	25	13	20	210	0	8	0	2	0
16/09/2019	164.73	7	3	25	13	20	210	0	8	0	2	0
09/09/2019	164.73	7	3	25	13	20	210	0	8	0	2	0
02/09/2019	164.73	7	3	25	13	20	210	0	8	0	2	0
19/08/2019	163.06	6	3	23	6	19	173	0	5	0	1	0
12/08/2019	163.06	6	3	23	6	19	173	0	5	0	1	0
05/08/2019	163.06	6	3	23	6	19	173	0	5	0	1	0
29/07/2019	163.06	6	3	23	6	19	173	0	5	0	1	0

Water Network Summary

Date	Water connectivity errors	Water connectivity warnings	Water connectivity hints	Water static errors	Water static warnings	Water static hints	Water design/ planning errors	Water design/ planning warnings	Water design/ planning hints	Total Water Network Errors	Total Water Network Warnings
14/10/2019	40	240	0	168	1,350	0	0	25	62	208	1,615
08/10/2019	39	243	0	167	1,351	0	0	29	61	206	1,623
30/09/2019	39	249	0	165	1,353	0	0	25	61	204	1,627
23/09/2019	39	249	0	165	1,353	0	0	25	61	204	1,627
16/09/2019	38	249	0	165	1,351	0	0	25	61	203	1,625
09/09/2019	38	249	0	165	1,351	0	0	25	61	203	1,625
02/09/2019	38	249	0	165	1,351	0	0	25	59	203	1,625
19/08/2019	24	208	0	161	1,300	0	0	24	59	185	1,532
12/08/2019	24	208	0	161	1,300	0	0	24	59	185	1,532
05/08/2019	24	208	0	161	1,300	0	0	24	59	185	1,532
29/07/2019	24	208	0	161	1,300	0	0	24	59	185	1,532

Second Phase, Maintenance Operation Management



ID	Name	Type	Status	Location	Notes
1	Node A	Valve	Open	10.000	Regular maintenance
2	Node B	Pipe	Blocked	20.000	Leak detected
3	Node C	Manhole	Open	30.000	Inspection scheduled
4	Node D	Valve	Open	40.000	Regular maintenance
5	Node E	Pipe	Blocked	50.000	Leak detected
6	Node F	Manhole	Open	60.000	Inspection scheduled
7	Node G	Valve	Open	70.000	Regular maintenance
8	Node H	Pipe	Blocked	80.000	Leak detected
9	Node I	Manhole	Open	90.000	Inspection scheduled
10	Node J	Valve	Open	100.000	Regular maintenance



Claim - Call

1- Call Center



2- Verification & distribution



3-Examination /diagnosis



Verification

Immediate Action



4- Planned works



Maintenance Request

Other Cases



5- Work in progress



Work Order Card

Refuse

If needs more work and examination process

END

6- Job completed



THANK YOU!