RAPORTI TEKNIK

1. Objekti i Veprës

Studim Projektim per shtimin e sasise se furnizimit me uje per qytetin e Krujes (shtese e burimeve te Kepit te Lepurit).

2. Gjëndja Ekzistuese e Furnizimit me uje te qytetit te Krujes

Është e ditur se sigurimi i ujit, që të mbulojë si nga ana sasiore, si dhe, sidomos, nga ana cilësore, kërkesat bashkohore të furnizimit me uje te pijshem, është problematik. Kjo për shkak të disa faktorëve nga të cilët më të rëndësishmit janë ata që paraqiten më poshtë:

3. Llogaritjet nevojave per uje.

Referuar raportit hidrogjeologjik mbi te dhenat e burimeve te Kepit te Lepurit, Njesia Administrative Cudhi ,Bashkia Kruje, prujrja llogaritese e linjes kryesore do te jete:

Burimin Nr 1
Qll=8.2l/sek

Burimin Nr 2
Qll=7.95l/sek

4. Llogaritjet hidraulike te vepres .

Llogaritjet hidraulike te linjes se dergimit jane bere me ante te formules Darsy – Weisbach qe ka formen e meposhtme :

$$Q = S\sqrt{8 \cdot g \frac{R \cdot i}{f}}$$

Q – Prurja qe kalon ne tub
S – Siperfaqja e prerjes terthore te tubit

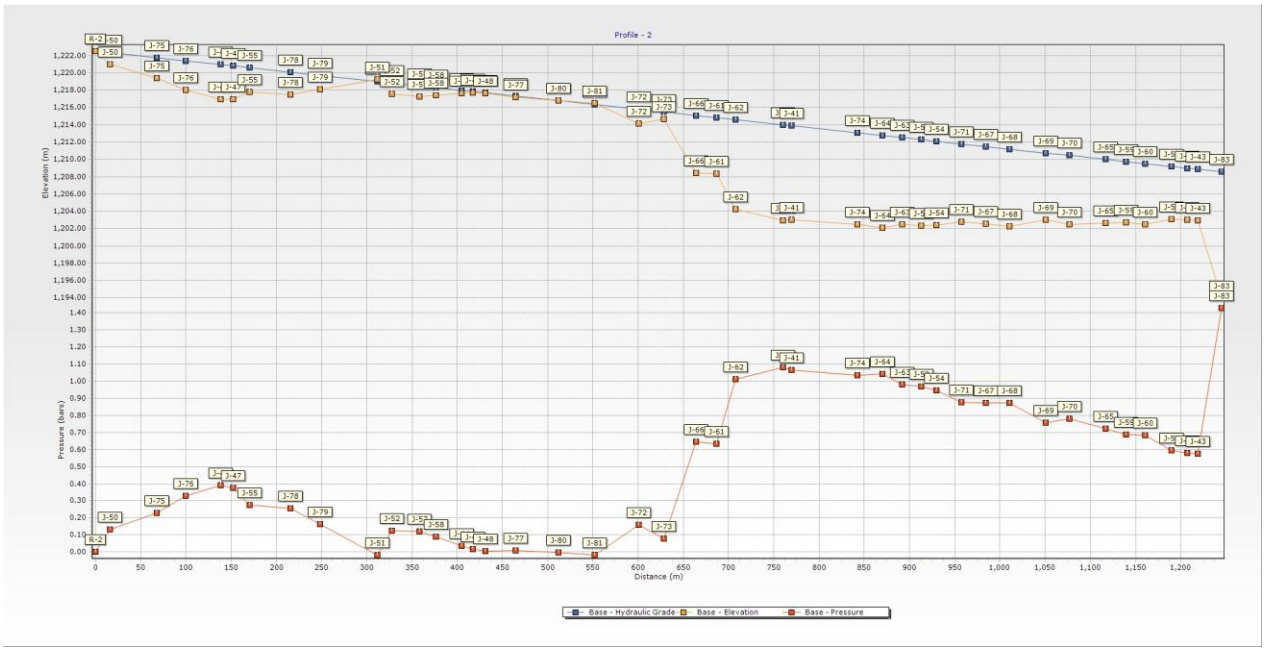
g – Nxitimi i renis se lire
R – Rezja hidraulike e tubacionit
i – Pjerresia hidraulike
f – Koefiçenti i humbjeve hidraulike qe gjendet me formulen :

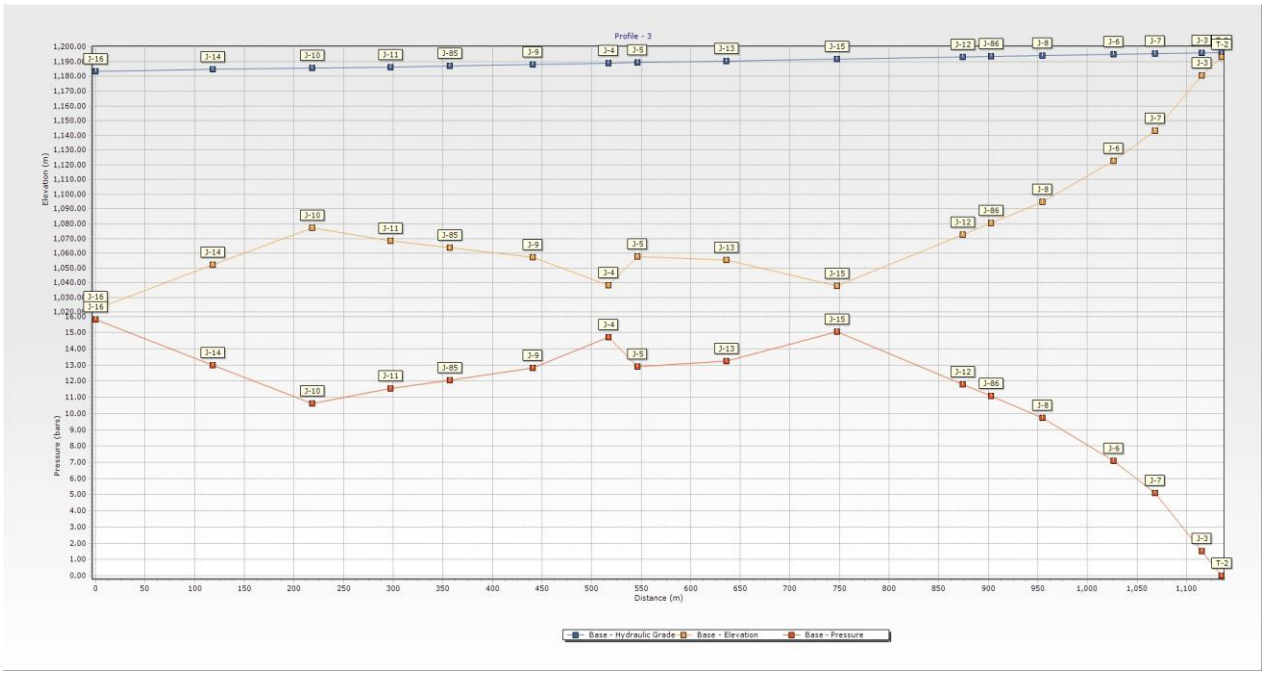
$$\frac{1}{f} = -2 \cdot \log\left(\frac{k}{12 \cdot R} + \frac{2.51}{R_e \sqrt{f}}\right)$$

Re – numri i Reynoldsit
k – Koefiçenti i ashpersise qe per tubacionet plastike eshte k = 0.0015 m .

Me ane te perafrimeve te njepasnjeshme gjejme vleren e f per tubacionin tone per prurjen e dhene .

Llogaritjet e metejshme te rrjetit jane bere me ne te programit WaterCAD dhe rezultatet jane e prurjeve dhe shpejtesive si dhe presioneve jane te paraqitura me poshte:





Label (**Emertimi**)	Elevation **(Kuota e Tokes)** (m)	Pressure **(Presioni)** (bars)	Hydraulic Grade **(Gradienti Hidraulik)** (m)
J-3	1,180.49	1.5	1,195.81
J-4	1,038.44	14.74	1,189.00
J-5	1,057.60	12.89	1,189.36
J-6	1,122.67	7.07	1,194.95
J-7	1,143.02	5.12	1,195.36
J-8	1,094.68	9.75	1,194.27
J-9	1,057.27	12.8	1,188.06
J-10	1,077.05	10.63	1,185.69

J-11	1,068.54	11.54	1,186.45
J-12	1,072.71	11.81	1,193.42
J-13	1,055.27	13.23	1,190.47
J-14	1,052.00	12.99	1,184.73
J-15	1,037.85	15.07	1,191.85
J-16	1,022.00	15.82	1,183.59
J-17	1,225.00	3.75	1,263.33
J-18	1,224.74	3.76	1,263.19
J-20	1,266.16	0.06	1,266.79
J-21	1,222.87	3.79	1,261.60
J-22	1,221.82	3.87	1,261.40
J-23	1,266.53	-0.05	1,265.98
J-24	1,266.35	-0.06	1,265.76
J-25	1,220.00	3.99	1,260.75
J-26	1,220.00	3.97	1,260.53
J-27	1,217.49	4.1	1,259.42
J-28	1,217.68	4.06	1,259.19
J-29	1,219.61	3.98	1,260.29
J-30	1,259.90	0.49	1,264.90
J-31	1,255.74	0.87	1,264.63
J-32	1,220.86	3.94	1,261.12
J-33	1,217.24	4.16	1,259.72
J-34	1,265.00	0.04	1,265.41
J-35	1,266.04	0.04	1,266.44
J-36	1,225.00	3.8	1,263.78
J-37	1,216.67	4.11	1,258.70
J-38	1,222.84	3.85	1,262.15
J-39	1,215.60	4.16	1,258.10
J-40	1,202.93	1.08	1,213.98
J-41	1,202.98	1.07	1,213.88
J-42	1,203.04	0.58	1,208.98
J-43	1,202.96	0.58	1,208.85
J-44	1,217.60	0.04	1,217.96
J-45	1,217.67	0.02	1,217.83
J-46	1,216.97	0.39	1,220.95
J-47	1,216.95	0.38	1,220.79
J-48	1,217.63	0	1,217.67
J-50	1,220.97	0.13	1,222.32
J-51	1,219.20	-0.02	1,219.01
J-52	1,217.56	0.12	1,218.83
J-53	1,202.36	0.97	1,212.27
J-54	1,202.42	0.95	1,212.08
J-55	1,217.79	0.27	1,220.60
J-56	1,203.09	0.6	1,209.18
J-57	1,217.24	0.12	1,218.49

J-58	1,217.37	0.09	1,218.29
J-59	1,202.72	0.69	1,209.74
J-60	1,202.50	0.69	1,209.51
J-61	1,208.33	0.63	1,214.81
J-62	1,204.23	1.01	1,214.58
J-63	1,202.50	0.98	1,212.51
J-64	1,202.12	1.04	1,212.75
J-65	1,202.60	0.72	1,209.99
J-66	1,208.45	0.65	1,215.06
J-67	1,202.55	0.87	1,211.47
J-68	1,202.28	0.87	1,211.19
J-69	1,203.01	0.76	1,210.73
J-70	1,202.45	0.78	1,210.44
J-71	1,202.81	0.88	1,211.78
J-72	1,214.16	0.16	1,215.78
J-73	1,214.65	0.08	1,215.47
J-74	1,202.50	1.03	1,213.07
J-75	1,219.39	0.23	1,221.74
J-76	1,218.04	0.33	1,221.38
J-77	1,217.20	0.01	1,217.30
J-78	1,217.48	0.26	1,220.09
J-79	1,218.06	0.16	1,219.72
J-80	1,216.80	0	1,216.77
J-81	1,216.50	-0.02	1,216.32
J-83	1,193.96	1.43	1,208.56
J-84	1,193.68	6.2	1,257.01
J-85	1,063.87	12.05	1,187.02
J-86	1,080.39	11.1	1,193.77

Start Node	Stop Node	Diameter (mm)	Material	Hazen-Williams C	Flow (L/s)	Velocity (m/s)	Headloss Gradient (m/m)	Length (3D) (m)
J-3	T-2	130.8	PE100RC	150	-16.15	1.2	0.01	24
J-4	J-5	124.2	PE100RC	150	-16.15	1.33	0.012	35
J-6	J-7	130.8	PE100RC	150	-16.15	1.2	0.01	47
J-7	J-3	130.8	PE100RC	150	-16.15	1.2	0.01	60
J-8	J-6	130.8	PE100RC	150	-16.15	1.2	0.01	76
J-9	J-4	124.2	PE100RC	150	-16.15	1.33	0.012	79
J-10	J-11	130.8	PE100RC	150	-	1.2	0.01	80

					16.15			
J-5	J-13	124.2	PE100RC	150	-16.15	1.33	0.012	90
J-14	J-10	130.8	PE100RC	150	-16.15	1.2	0.01	103
J-13	J-15	124.2	PE100RC	150	-16.15	1.33	0.012	113
J-16	J-14	130.8	PE100RC	150	-16.15	1.2	0.01	122
J-15	J-12	124.2	PE100RC	150	-16.15	1.33	0.012	132
J-17	J-18	96.8	PE100RC	150	8.2	1.11	0.012	12
R-1	J-20	96.8	PE100RC	150	8.2	1.11	0.012	13
J-21	J-22	96.8	PE100RC	150	8.2	1.11	0.012	18
J-23	J-24	96.8	PE100RC	150	8.2	1.11	0.012	18
J-25	J-26	96.8	PE100RC	150	8.2	1.11	0.012	18
J-27	J-28	96.8	PE100RC	150	8.2	1.11	0.012	19
J-26	J-29	96.8	PE100RC	150	8.2	1.11	0.012	20
J-30	J-31	96.8	PE100RC	150	8.2	1.11	0.012	23
J-22	J-32	96.8	PE100RC	150	8.2	1.11	0.012	23
J-33	J-27	96.8	PE100RC	150	8.2	1.11	0.012	26
J-24	J-34	96.8	PE100RC	150	8.2	1.11	0.012	30
J-20	J-35	96.8	PE100RC	150	8.2	1.11	0.012	30
J-32	J-25	96.8	PE100RC	150	8.2	1.11	0.012	32
J-36	J-17	96.8	PE100RC	150	8.2	1.11	0.012	38
J-35	J-23	96.8	PE100RC	150	8.2	1.11	0.012	39
J-28	J-37	96.8	PE100RC	150	8.2	1.11	0.012	41
J-34	J-30	96.8	PE100RC	150	8.2	1.11	0.012	44
J-38	J-21	96.8	PE100RC	150	8.2	1.11	0.012	46
J-29	J-33	96.8	PE100RC	150	8.2	1.11	0.012	48
J-37	J-39	96.8	PE100RC	150	8.2	1.11	0.012	51
J-31	J-36	96.8	PE100RC	150	8.2	1.11	0.012	78
J-18	J-38	96.8	PE100RC	150	8.2	1.11	0.012	88
J-40	J-41	96.8	PE100RC	150	7.95	1.08	0.011	9
J-42	J-43	96.8	PE100RC	150	7.95	1.08	0.011	12
J-44	J-45	96.8	PE100RC	150	7.95	1.08	0.011	12
J-46	J-47	96.8	PE100RC	150	7.95	1.08	0.011	14
J-45	J-48	96.8	PE100RC	150	7.95	1.08	0.011	14
R-2	J-50	96.8	PE100RC	150	7.95	1.08	0.011	16
J-51	J-52	96.8	PE100RC	150	7.95	1.08	0.011	17
J-53	J-54	96.8	PE100RC	150	7.95	1.08	0.011	17
J-47	J-55	96.8	PE100RC	150	7.95	1.08	0.011	18
J-56	J-42	96.8	PE100RC	150	7.95	1.08	0.011	18
J-57	J-58	96.8	PE100RC	150	7.95	1.08	0.011	18
J-59	J-60	96.8	PE100RC	150	7.95	1.08	0.011	21
J-61	J-62	96.8	PE100RC	150	7.95	1.08	0.011	21

J-63	J-53	96.8	PE100RC	150	7.95	1.08	0.011	21
J-64	J-63	96.8	PE100RC	150	7.95	1.08	0.011	21
J-65	J-59	96.8	PE100RC	150	7.95	1.08	0.011	22
J-66	J-61	96.8	PE100RC	150	7.95	1.08	0.011	23
J-67	J-68	96.8	PE100RC	150	7.95	1.08	0.011	26
J-69	J-70	96.8	PE100RC	150	7.95	1.08	0.011	26
J-54	J-71	96.8	PE100RC	150	7.95	1.08	0.011	27
J-71	J-67	96.8	PE100RC	150	7.95	1.08	0.011	28
J-72	J-73	96.8	PE100RC	150	7.95	1.08	0.011	28
J-74	J-64	96.8	PE100RC	150	7.95	1.08	0.011	28
J-58	J-44	96.8	PE100RC	150	7.95	1.08	0.011	29
J-60	J-56	96.8	PE100RC	150	7.95	1.08	0.011	29
J-52	J-57	96.8	PE100RC	150	7.95	1.08	0.011	30
J-75	J-76	96.8	PE100RC	150	7.95	1.08	0.011	32
J-48	J-77	96.8	PE100RC	150	7.95	1.08	0.011	33
J-78	J-79	96.8	PE100RC	150	7.95	1.08	0.011	33
J-73	J-66	96.8	PE100RC	150	7.95	1.08	0.011	36
J-76	J-46	96.8	PE100RC	150	7.95	1.08	0.011	38
J-80	J-81	96.8	PE100RC	150	7.95	1.08	0.011	40
J-70	J-65	96.8	PE100RC	150	7.95	1.08	0.011	40
J-68	J-69	96.8	PE100RC	150	7.95	1.08	0.011	41
J-55	J-78	96.8	PE100RC	150	7.95	1.08	0.011	45
J-77	J-80	96.8	PE100RC	150	7.95	1.08	0.011	48
J-81	J-72	96.8	PE100RC	150	7.95	1.08	0.011	48
J-50	J-75	96.8	PE100RC	150	7.95	1.08	0.011	52
J-62	J-40	96.8	PE100RC	150	7.95	1.08	0.011	53
J-79	J-51	96.8	PE100RC	150	7.95	1.08	0.011	63
J-41	J-74	96.8	PE100RC	150	7.95	1.08	0.011	72
J-43	J-83	96.8	PE100RC	150	7.95	1.08	0.011	28
J-39	J-84	96.8	PE100RC	150	8.2	1.11	0.012	94
J-11	J-85	130.8	PE100RC	150	-16.15	1.2	0.01	60
J-85	J-9	124.2	PE100RC	150	-16.15	1.33	0.012	84
J-12	J-86	124.2	PE100RC	150	-16.15	1.33	0.012	29
J-86	J-8	130.8	PE100RC	150	-16.15	1.2	0.01	54

5. Përshkrim i Shkurtër i Veprave

Volumet kryesore te punimeve jane si me poshte:

1.	Germime dheu me makineri	m^3	458.5
2.	Mbushje ngjeshje dheu	m^3	395.5
3.	Tubacion shpendarje PE 100 PN10 ø-63mm	ml	185
4.	Tubacion shpendarje PE 100 PN10 ø-50mm	ml	335
5.	Tubacion shpendarje PE 100 PN10 ø-32mm	ml	51
6.	Tubacion shpendarje PE 100 PN10 ø-25mm	ml	316
7.	Mbushje me rere	m^3	63
8.	Pusete komandimi +shpernadrje	cop	15

6. Mbi organizimin e punimeve

Per ndertimin e tubacionet e linjes kryesore te ujesjellesit kruje eshte menduar qe puna te organizohet si me poshte :

1. Germimet per vendosjen e tubacioneve ne projekt do te behen kryesisht paralel me rruget egzistuese bujqesore ose ne rruget e fshatit.
2. Kanali per shtrirjen e tubit do te jete I thelle mesatarisht 1 m ,mbi tub
3. Shrimi I tubit ne kanal behet me shume kujdes per te mos e demtuar ate.Mbulimi behet ne pjese te vecanta deri sa te behet prova
4. Prova e tubit behet sipas kushteve teknike dhe kur te jemi te sigurt se nuk kemi difekte vetem atehere fillojme shtrimin definitiv te tubit ne kanal.
   Punimet jane parashikuar ne pergjithesi me makineri por edhe me krahe sipas kushteve konkrete.
5. Mbulimi i tubit do te behet me material te perzgjedhur nga material ii germuar me pare. Te vendoset shirit paralajmerues gjate gjithe gjatesise se tubacionit.

Te kihen parasysh kushtet teknike te zbatimit te punimeve per te gjitha punimet e parashikuara ne projekt dhe ne vecanti per punimet me tubacione plastike dhe kushtet teknike per provat me ngarkese te tubacioneve.