

ABSTRAK

Zainurrahman, 2022. Perencanaan Sistem Jaringan Distribusi Air Bersih Di Desa Karduluk Kecamatan Pragaan. Skripsi, Program Studi Teknik Sipil, Fakultas Teknik Universitas Wiraraja.

Kebutuhan air bersih terus meningkat dengan jumlah penduduk yang terus bertambah. Saat ini Desa Karduluk terdapat 8.200 Jiwa dari 3.500 Kepala Keluarga, sedangkan di Dusun Bapele terdapat 998 jiwa dari 200 Kepala Keluarga. Meskipun ketersediaan air cukup memadai tetapi cara menyalurkan dari sumber air masih relative terbatas sehingga belum dapat memenuhi semua kebutuhan air.

Tujuan penelitian 1) Mengetahui berapa perencanaan debit air yang dibutuhkan di Dusun Bapelle, Dusun Berruh, Dusun Muralas dan Dusun Topaar Desa Karduluk Kecamatan Pragaan Kabupaten Sumenep, 2) Mengetahui bagaimana sistem perencanaan pengaliran yang akan direncanakan di Dusun Bapelle, Dusun Berruh, Dusun Muralas dan Dusun Topaar Desa Karduluk Kecamatan Pragaan Kabupaten Sumenep, dan 3) Mengetahui perencanaan jaringan perpipaan yang sesuai analisis menggunakan software *EPANET 2.0*. Dalam menjawab permasalahan tersebut, penelitian menggunakan penelitian kuantitatif dengan Exponensial, Elevasi Distribusi Air dan E-Panet.

Hasil penelitian menunjukkan 1) Kebutuhan air bersih domestik dan non domestik di Dusun Bapelle untuk domestik dan non domestik sebesar 92100 ltr/hr, Dusun Berruh untuk domestik dan non domestik sebesar 124750 ltr/hr, Dusun Muralas untuk domestik dan non domestik sebesar 154800 ltr/hr, sedangkan Dusun Topaar untuk domestik dan non domestik sebesar 115900 ltr/hr, 2) Volume air yang dihasilkan dari reservoir 18.299 liter di Dusun Bapelle, Dusun Berru 15.498 liter, Dusun Moralas 19.240 liter serta dusun Topaar 73.440 liter, dan dapat disimpulkan bahwa mampu memenuhi kebutuhan. 3) Pendistribusian air bersih menggunakan metode sistem pengaliran transmisi dengan pompa dan distribusi menggunakan sistem secara gravitasi, sehingga dapat terdeteksi keadaan air yang dipergunakan oleh masyarakat dan Pendistribusian untuk dapatnya menggunakan sistem bergilir selama 12 jam/hari.

Kata Kunci : Distribusi Air, Kebutuhan Air dan Debit Air.

ABSTRACT

Zainurrahman, 2022, Distribution Network systems planning Fresh Water At Silvan Karduluk Pragaan district . Paper, Studi's program Civil Tech, Universities Tech Faculty Wiraraja.

Fresh water requirement ever increasing with population that continually increases. Now Village Karduluk exists 8.200 Souls of 3.500 patriarches, meanwhile at Bapele's Orchard exists 998 souls of 200 family coconuts. Even enough water accessibility is equal to but trick channel from water source be still circumscribed relative so can't yet accomplish all amount of water required.

To the effect research 1) Know to get whats planning needed water debit at Bapelle's Orchard, berruh's orchard, Muralas's orchard and Topaar's Orchard Karduluk's Village Pragaan's district Sumenep's Regency, 2) Knows bagaimana perencanaan's systems debouncing who will be plotted at Bapelle's Orchard, berruh's orchard, Muralas's orchard and Topaar's Orchard Karduluk's Village Pragaan's district Sumenep's Regency, and 3) Knowing perencanaan network about pipe suitably analisis utilizes software EPANET 2.0 . In answers about problem that, research utilizes quantitative research with Exponensial, Water distribution elevation and e Panet.

Result observationaling to point out 1) Domestic fresh water requirement and non domestic at Bapelle's Orchard to domestic and non domestic as big as 92100 ltr / hr, berruh's orchard to domestic and non domestic as big as 124750 ltr / hr, Muralas's orchard to domestic and non domestic as big as 154800 ltr / hr, meanwhile Topaar's Orchard to domestic and non domestic as big as 115900 ltr / hr, 2) resulting water Volume of reservoir 18.299 liters at Bapelle's Orchard, berru's orchard 15.498 liters, Moralas's orchard 19.240 Topaar's liter and orchard 73.440 liters, and gets to be concluded that can meet the need. 3) Pendistribusian fresh water utilizes to methodic transmission debouncing systems by pumps and distribution utilize gravitational ala systems, so gets to be detected by water situation that used by society and Pendistribusian for gets it utilizes system get innings up to 12 hours / days.

Key word : Water distribution, Amount of water required and Water Debit.