



KERALA WATER AUTHORITY

PH Division Alapuzha

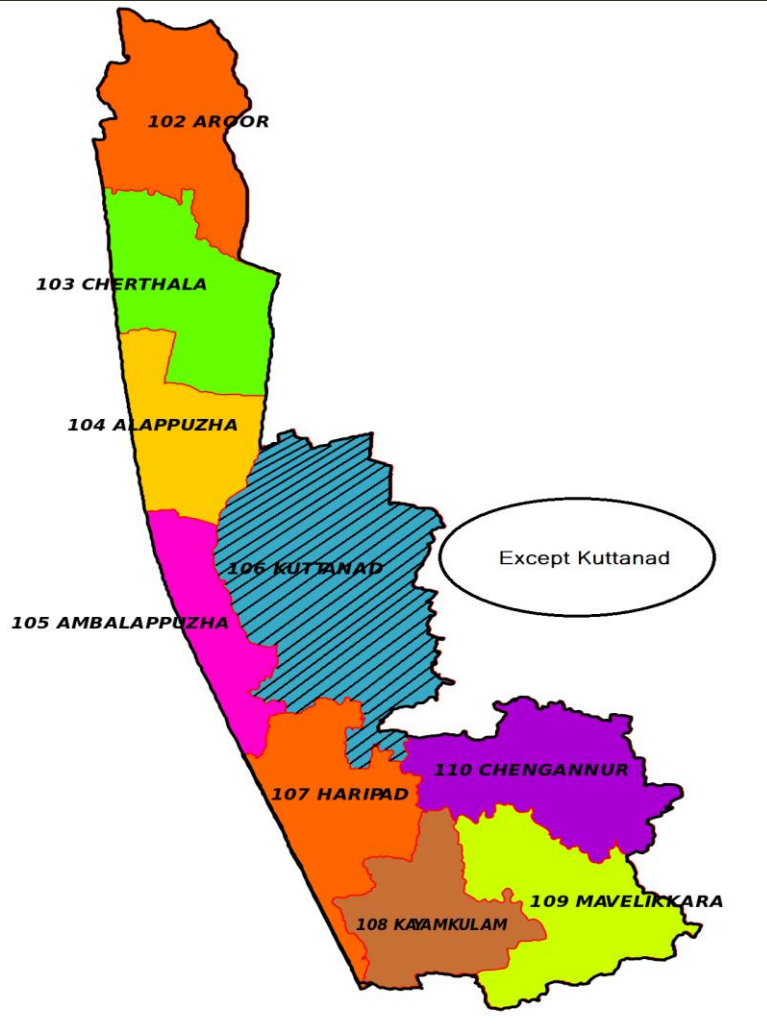
06-12-2021

P.H. Alapuzha

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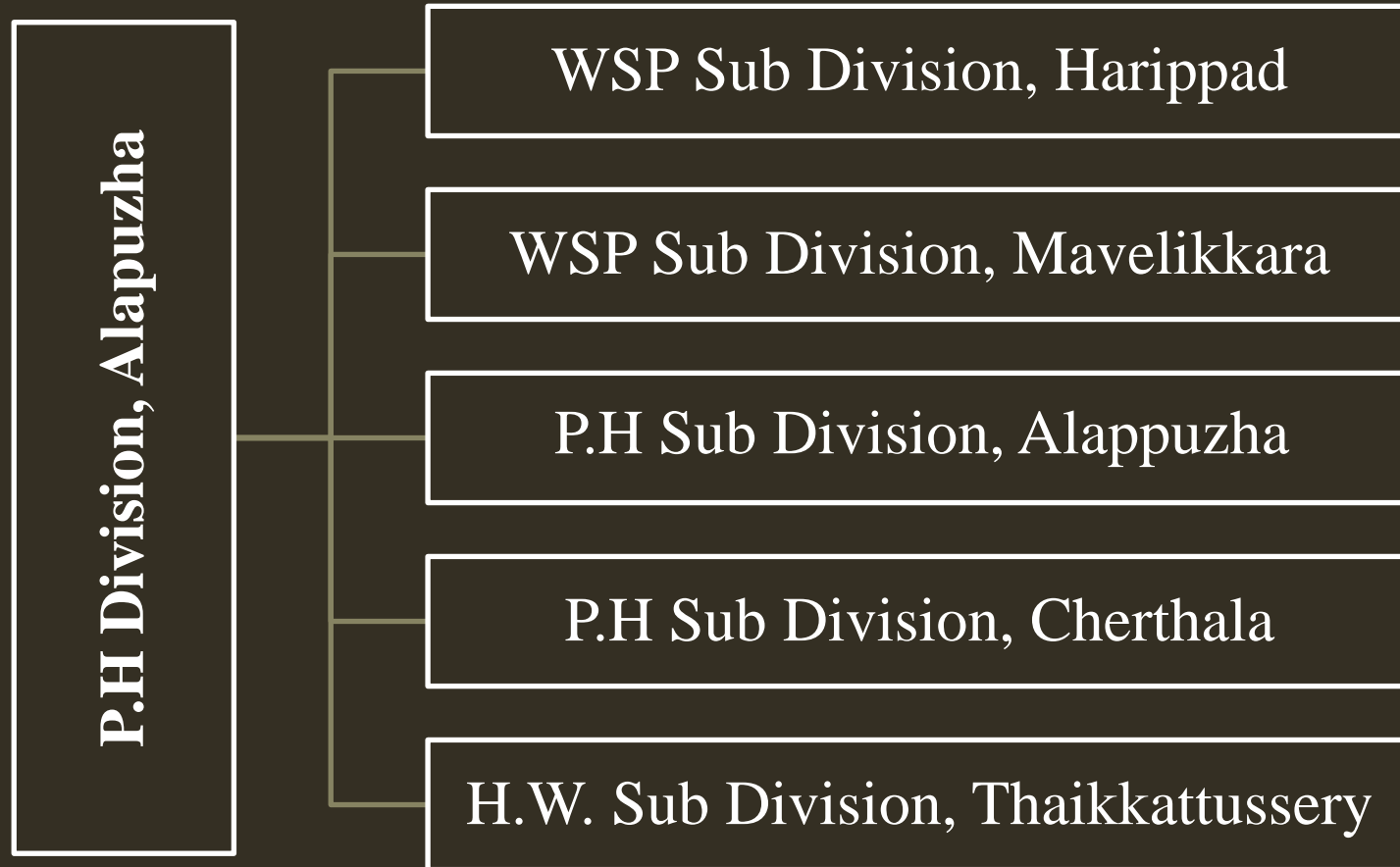
P.H. DIVISION ALAPUZHA

Jurisdiction



Municipalities – 6
GPs – 58
LAC - 8

P.H. DIVISION ALAPUZHA - OFFICES



P.H. DIVISION ALAPUZHA - Statistics

Population => 19.3 Lakhs (Except Kuttanad Thaluk)

Total House holds => 4,25,467 (IMIS Data) (3,70,116)

House connections prior to 4/2020 => 1,72,067 (GPs only)

Proposed FHTCs for full saturation – (FY – 2020-21)

78, 496 (P.H Division) + 1,19,553 (Project Division) [1,98,049]

Total production => 159.5 MLD

Demand => 193 MLD

Shortage => 33.5 MLD (Including losses – 43.55 ++MLD)

Income & Expenditure

Year	Income Lakhs	Expenditure (without power charges)	Profit/ Loss Lakhs	Annual Power Charges (AV) Lakhs
2017-18	3223.21	4103.70	-880.49 (-)	2763
2018-19	3591.85	2678.00	913.85 (+)	2771
2019-20	4846.14	2821.30	2024.84 (+)	2812
2020-21	3299.26	2612.30	686.96 (+)	2885

Project Implementation

Minimum Requirements for project implementation

- ✓ Standard Documents for specifications
- ✓ Standard Drawings
- ✓ Established Quality Assurance Plan (QAQC)
- ✓ Shop Drawings
- ✓ Project Planning tools
- ✓ Project Evaluation / Monitoring Techniques
- ✓ Training, Educating, Communication and Motivation
- ✓ *Attitude*

Strategic requirements inevitable for KWA

- ➔ Awareness of material standards — BIS, ISO, ASTM, EN, CEN/TS, etc.
- ➔ Finalization of Successful Venders list
- ➔ Material selection => Approval
- ➔ Manufacturing and site delivery schedule
- ➔ Factory Testing and Acceptance / Rejection
- ➔ Site testing – Acceptance / Rejection
- ➔ Material management and accounting
- ➔ *Cash flow => Confidence of Contractors*
- ➔ *Project monitoring – Look ahead programme
(Post-mortems – MINIMUM)*

Strategic requirements inevitable for KWA

- ☑ Method statements of all site activities.
- ☑ Bedding, back fill - Soil conditions, Overburden, Failure analysis, Change of chemical properties ...
- ☑ HDPE Flanged joints - Stub end with backing ring
- ☑ HDPE pull-on-joints - axially restrained
- ☑ HDPE Electro - fusion couplings for taking water connections
- ☑ Installation of stop cock with locking key.
Prevent damages – change of position
- ☑ Site Stacking of HDPE pipes

Stub end with backing ring– PE pipes

Typical stub end with backing ring



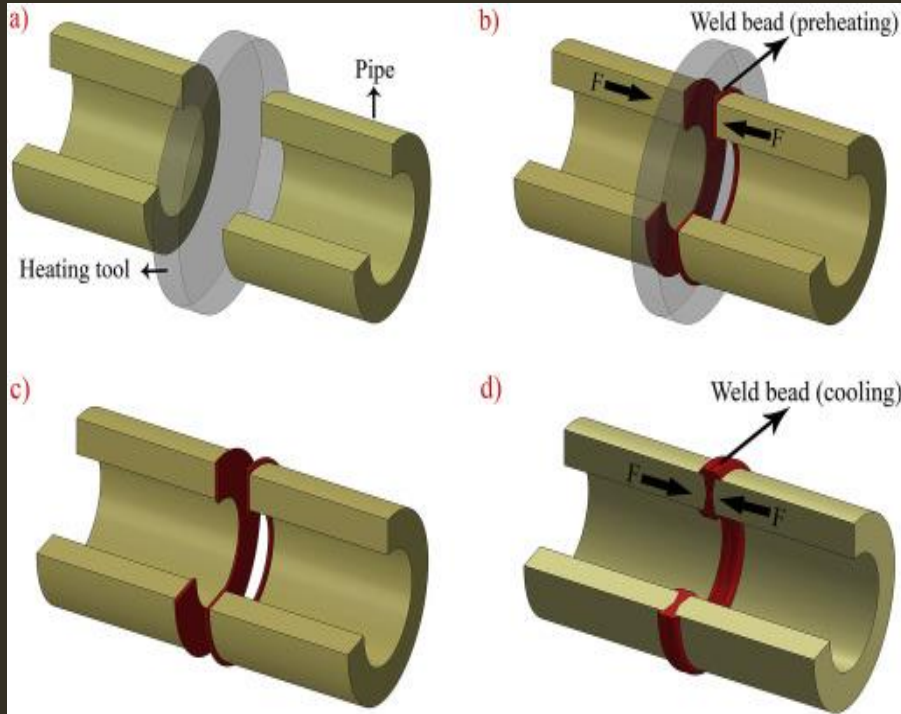
Joints - PE pipes



Electro fusion joint

Joints - PE pipes

Hot melt electro fusion butt joint



Manufacturer trained / certified technicians – is a must

Joints - PE pipes

Various axially restrained joints for HDPE



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22941	22941	28915	33896	27957	27957	26852	3,913.11
8826	18610	28115	29814	26502	26352	24374	5,748.11
0	12738	21705	22823	21049	20677	20677	1,766.23
23593	23593	34797	35419	32968	32278	31881	7,045.48
23640	24781	50559	56129	50499	50499	50190	5,974.16
19520	19520	23676	26151	21882	21882	21882	5,446.96
8734	22542	44847	65928	43876	43876	43876	3,925.63
6896	6896	13251	13879	12296	12151	11211	1,910.59
3444	3444	7713	8676	7219	7177	4782	1,899.30
12112	12112	22168	16312	21221	21167	27128	2,878.16

Our status – as on 04.12.2021

78,496 FHTC target – 51,436 completed, 50,599 geo-tagged, 50,499 billed

187 CC Bills –

Excluding other bills –

30% release, Road restoration, Connection fee, Automation, Volunteers, TPIA bills etc.

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Dedicated and trained Division staffs up to OA level

- ✓ AB – Sri. Suresh Kumar - UDC
- ✓ DB – Sri. Aloysius – 1st Grade D'man
- ✓ DAO – Smt. Ani Alex
- ✓ TA – Sri. Suresh Kumar
- ✓ Other Hard working staffs

JJM bills directly accepted by EE himself and listed - data entry
- avoided misplacing, delay in processing

- ✓ Prompt Bill submission – Contractors seem to be happy – cash flow maintained – reflected uninterrupted material supply and quantum of works in field.

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Dedicated Field Engineers, Overseers, other staffs

- ➔ They have accepted the mission project and its urgency
- ➔ Proper communication and guidance
- ➔ Daily reporting and monitoring
- ➔ Resolving the issues at the source itself
- ➔ Transparent and continuous communication / follow-ups / guidance to Contractors and their staffs
- ➔ Esteemed support from District Admn and from Higher ups
- ➔ **Team work**

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Field execution plan –

- ⇒ Constant liaison with GP authorities
- ⇒ Target fixed for all AEs , AEEs - Easiest works attended first
- ⇒ Material availability closely monitored – delay in testing and site delivery forecasted
- ⇒ Water meter testing units established – Minimum 10% of water meters tested by KWA in addition to factory test
- ⇒ Early booking for PWD road cutting sanctions
- ⇒ Conflict between target and achievement – regular on-line meeting at initial stage – re allocation of works jurisdictions
- ⇒ *Pre- assembled units used in water logged area*

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Pre- assembled units used in water logged area

Plan of Action

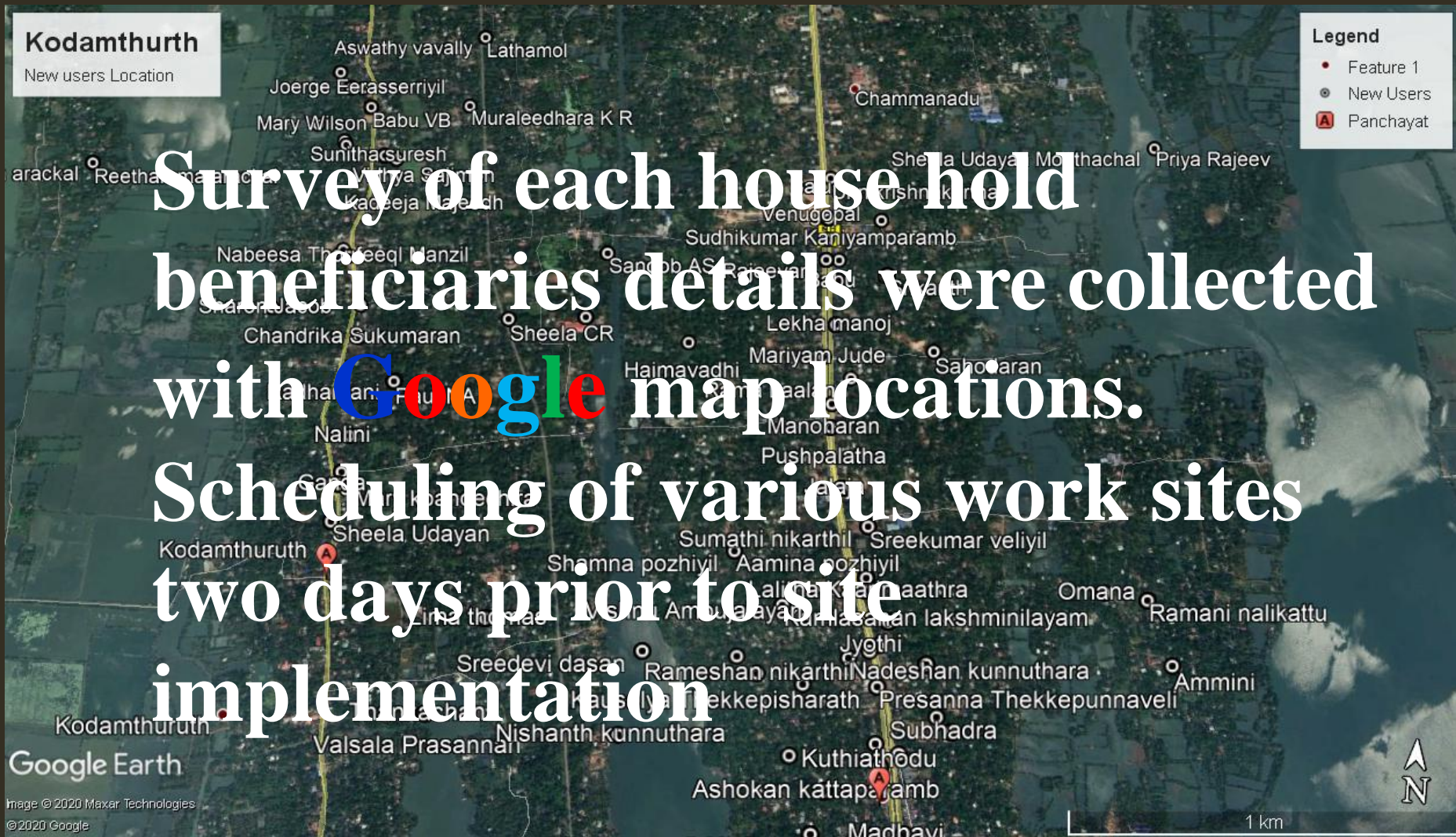
- Field survey and data collection
- Material assurance
- Training and preparation
- Site mobilizing
- Implementation and completion

Freedom from drudgery



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Field Survey and data collection



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Material Quality assurance



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Material Quality assurance



Water meter accuracy tested minimum 10% of meter supplied in addition to manufacturer's factory test



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Training / preparation

Locally Employed

- Surveying and data collection – 4-5 Unemployed contractual volunteers were employed in every panchayat.
- Fabricating of Meter sets – 3-4 Women for each panchayat
- Local Licenced Plumbers – 3-4 Licenced Plumbers were engaged with sufficient migrant labour in Each panchayat.
- Others Employed – ITI interns and students were employed as supervisors and administrative staffs as per their availability,
- Many Local House wives were employed in various aspects of the project.



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Pre assembling possible units



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Pre assembling possible units



Pre assembled units tested

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Pre assembling possible units



Ready to site

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Site works **Some of the water logged area**



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Site works



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Benefits

- ✓ **Speedy nature in works**
- ✓ **No leaks in assembled portion – Level of confidence increased**
- ✓ **Re- doing of works – avoided considerably**
- ✓ **Women empowerment – women employment**

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Drawbacks / failure analysis - Abstract

- ✓ **Communication failure – 55 %**
- ✓ **Holding on Conventional methods – 72%**
- ✓ **Lack of constant enthusiasm – 53 %**
- ✓ **Awareness to specification / project requirements/ self initiative / pro-activeness**

Thank you

Prepared and presented
Sunil, EE, P.H Division, Alapuzha