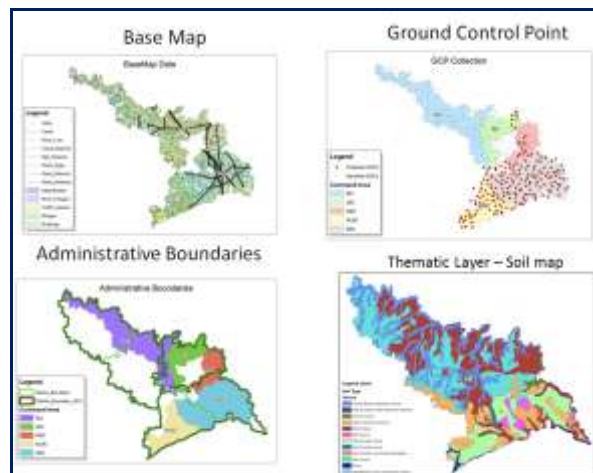


Geographical Information System (GIS)

Area of Applications

- Water Resource Management
- Water Supply Management
- Agriculture



Features

- To specify location base (geo-reference)
- To integrate irrigation related information
- To update the dynamic changes occurring in time & space
- Comprehensive tool for irrigation management
- To provide user friendly information on real time basis
- Open Source application platform
- Compatible with websites of WRD & CWC
- Integrate with SCADA, INMIS & EMIS
- GIS application provides the information interchange platform for Decision Support System and Information Kiosks for farmers



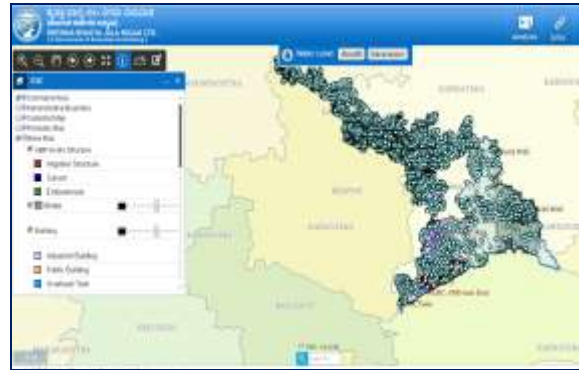
Objectives

This application is developed for

1. Presenting detailed spatial information for various entities involved in Irrigation Projects.
 - i. Water Resources - Canal , River , Dam, Water bodies, ground water etc
 - ii. Land Resources - Soil and its nutrition factors , Farms ,Land Use, Land cover
 - iii. Hydro Met - Geo-morphology, Weather, Rainfall.
 - iv. Others - Bridges , buildings , rail and road network etc
2. Swipe and Blend tool for GIS data analysis.
 - i. WUA , Farmer Information Kiosks data presentation through GIS
 - ii. Soil Survey, Soil Health
 - iii. Water demand and Billing details from MIS to GIS
 - iv. Trend analysis for surface, soil, ground water, Water demand, water supply prospects.
 - v. GIS data and Modeling.



1. Query Builder model for quick access of spatial data results
 - i. Proximity search model for highlighting entities in specific area
 - ii. Atmospheric models for display weather condition
 - iii. Crop Pattern model for year wise crop data and predicting water demand
2. Supporting Irrigation officers with mapping tools for navigation and editing on GIS data. e.g.
 - i. Control Toolbar for easy navigation on Map
 - ii. Edit toolbar for GIS data update
 - iii. Book marking various stages in map for future quick references.



Benefits of GIS

- Improved decision making – decisions are made easier because specific and detailed information is presented about one or more locations
- Reduce costs and increase efficiency – especially regarding maintenance schedules, Canal regulation scheduling
- GIS is served as a powerful resource for planning & management
- Farmer can access soil health, RTC data, Water bill, water demand on GIS through Farmers Information Kiosk
- Integration of GIS with existing Hydraulic, INMIS, SCADA Modules
- Real time Hydro-meteorology Data – Weather information, rainfall data are regularly displayed and updated on GIS
- Water Demand & Crop pattern Analysis

GIS Overall Workflow



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