

## MAJOR PROJECTS EXECUTED

### Narmada Valley Development Authority (NVDA) Govt. of Madhya Pradesh

- Survey, Investigation, DPR and Detailed Estimate for Medium and Minor Projects in Narmada Basin covering 12679 Sq Km
- Survey, Investigation, Design, drawings, Estimates & DPR for Morand and Ganjal Complex Project covering 2600 Sq Km
- Project Management Consultancy Services for Punasa Lift Irrigation Scheme (350 Sq Km) and Omkareshwar Lift irrigation Scheme

### Uttar Pradesh Water Sector Restructuring Project, Govt. of Karnataka, Uttar Pradesh

- Survey, Investigation & generation of GIS database for an area of 6,15,658 Ha and 2.50 million parcels (World Bank project)

### Krishna Bhagya Jala Nigam Limited (KBJNL), Govt. of Karnataka

- Survey, Investigation, Design, drawings, Estimates for Indi Lift Canal (30,000 Ha), Chimmalgi LIS (40,000 Ha)
- Detailed Project Report, Design, Estimates for Anachi, Sank & Bhuyar Lift Irrigation Schemes

### Karnataka Neeravari Nigam Limited (KNNL), Govt. of Karnataka

- Survey, Investigation, Detailed Estimates and DPR for Restoration of MI tanks in Kolar, Tarikere, Kadur taluks under Upper Bhadra Project
- Survey, Investigation, Cost Estimates for Chitradurga Branch Canal under Upper Bhadra project
- Modernization and Rectification/Remodeling of existing canal system of Amarja project (100 Km)

### CADA, Irrigation Department, Govt. of Andhra Pradesh

- Micro Network for Sri Sailam Right Bank Canal (7800 Ha) (World Bank project)

### Uttar Pradesh Bhumi Sudhar Nigam, Govt. of Uttar Pradesh

- Project Management and Construction Supervision for Rehabilitation & Resettlement of Drains in 25 districts (World Bank Project)

### Sardar Sarovar Narmada Nigam Limited (SSNNL), Govt. of Gujarat

- Project Management Consultancy services for EPC and Item rate Contracts for construction of Branch canals & Distribution Network

### Water resources Department, Govt. of Madhya Pradesh

- Survey, Investigation, Design, Estimates & DPR for Panchamnagar Project (56,200 Ha) and Bariyarpur Right Bank Canal project (20,500 Ha)

### Central Institute of Coastal Engineering, Bangalore

- Survey, Investigations, Design of Cyclone Protection Bunds, Dykes etc for Brackish Water Shrimp farms (World Bank Project)

### Under Water Leak detection, KIOCL, Govt. of Karnataka

- Arresting leakage at the intake well and exit portal of gravity tunnel Design, Installation and Supervision of Regulating arrangements at Lakya Reservoir

### Narmada Water Resources Water Supply and Kalpsar Dept., Govt. of Gujarat

- Feasibility, Design of Barrage and allied works, Bid document on PPP model across river Narmada, near village Bhadbhut, district Bharuch
- Survey, Investigation, Design and Estimates for Narmada Diversion Canal (34 Km)

## SECON's other Area of Core Competence and Service Offerings

### Investigation and Services

- Engineering, Property and Hydrographic Surveys
- Geotech, Soil Investigation and Foundation Engg
- Photogrammetry, LiDAR and Remote Sensing
- Route Planning, 3D Corridor and GIS Database
- Geological and Geophysical Surveys
- Ground Water and Resistivity Surveys
- Underwater Leak Detection and GPR Surveys
- GIS/CADD Conversion and generation of Database

### Design Consultancy and Engineering Services

- Water, Sewerage, Storm Water and Treatment
- Highway Engineering & Construction Supervision
- Cross Country Pipeline Transportation
- Town Planning, Electrical, Telecom and Utilities
- GIS Driven Software Application Development
- GIS Based Land Information System, Right of Way
- Environment and Social Impact & Management Plan
- Irrigation, Flood Control & Water Management

### Awards

- **Best Professionally Managed Company 2014** - Construction Industry Development Council (CIDC)
- **Geospatial Company of the Year 2013** - India Geospatial Forum 2014
- **Best Project for Urban Infrastructure 2011** - Construction Industry Development Council (CIDC)
- **Export Excellence Award (Gold) 2010** - Federation of Karnataka Chambers of Commerce & Industry (FKCCI)
- **Export Excellence Award (Silver) 2008** - Federation of Karnataka Chambers of Commerce & Industry (FKCCI)
- **Certificate of Appreciation 2012** - Gas Authority of India Limited (GAIL)
- **Woman Consultant of the Year 2012** - Consulting Engineers Association of India (CEAI)
- **Woman Consultant of the Year 2009** - Consulting Engineers Association of India (CEAI)

### Corporate Office

147, 7B Road, EPIP, Whitefield, Bangalore - 560 066, INDIA

Tel: +91-80-41197778, Fax: +91-80-41194277, E-mail: [feedback@secon.in](mailto:feedback@secon.in)

Offices: Mumbai, New Delhi, Vadodara, Hyderabad, Jaipur, Lucknow, Bhopal, Guwahati, Tripoli (Libya)

<http://www.secon.in>

# SECON

(CMMI Level 3, ISO 9001: 2008, NABL Accredited)



## GIS Driven Multidiscipline Engineering Consultancy



## IRRIGATION, FLOOD CONTROL AND WATER RESOURCES

### Survey and Investigation

- Topographic and Hydrographic Survey
- Hydraulic and Hydrological Investigations
- Reservoir Capacity Survey
- Submergence and Land Acquisition Survey
- Rehabilitation and Re-settlement Survey
- Socio Economic Survey
- Geotechnical Investigation
- Construction Material Survey and Soil Survey

### Irrigation and Flood Control

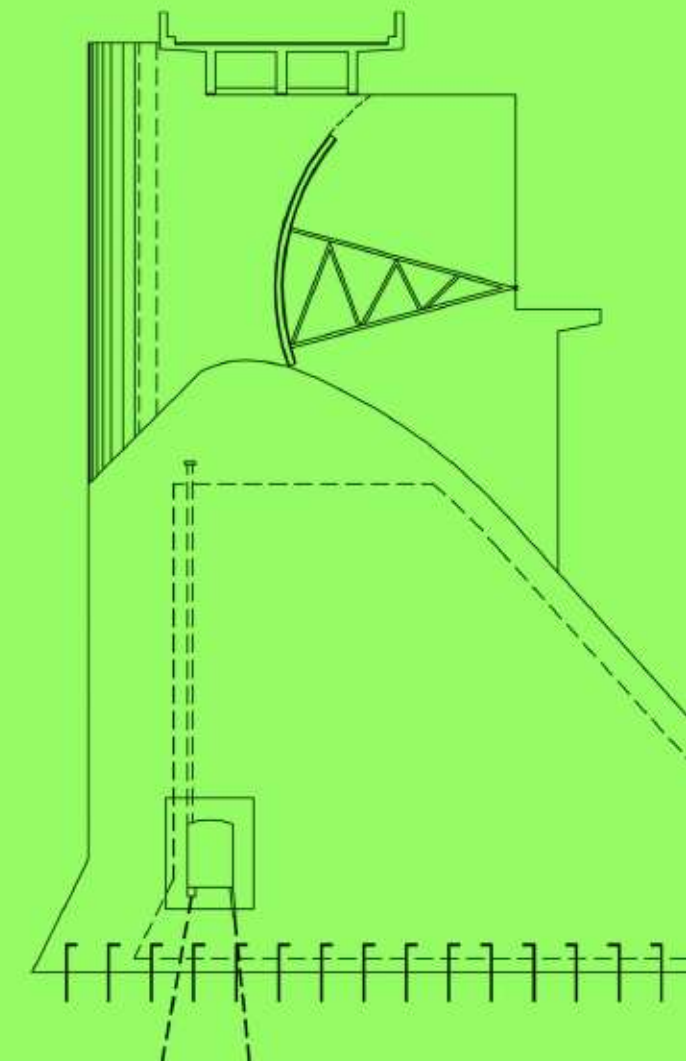
- Integrated River Basin Planning
- Feasibility Reports and Detailed Project Reports
- Compendium Planning for Irrigation Command Area
- Design of Hydraulic Structures
- Modernization and Restructuring, Rehabilitation and Re-settlement plans
- Water Management and On Farm Development works
- Leak detection and turnkey solution

### Construction Phase Services

- Project Management and Construction Supervision
- Detailed Estimations, BOQ and Tender Documents

### Web enabled GIS

- GIS Asset Management Systems



**Total Solution from a Single Window**

**SECON**, established in 1981, is a CMMI LEVEL-3, ISO 9001:2008 and NABL Accredited Firm of over 700 personnel. The HQ in Bangalore, India, has an aesthetically designed 105,000 sft company owned office. Regional Offices at Mumbai, New Delhi, Vadodara, Bhopal, Lucknow and Tripoli, Libya augment SECON's range and reach. SECON is the only company that offers in-house multitask / skill solutions for Design Engineering, Related Investigations including Software Development, Testing & R&D Services. SECON also renders services on Onshore - Offshore Model.



SECON HQ, Bangalore, India

**Over 26,00,000 Hectares (26,000 sq. km) of Surveying and Mapping for Irrigation projects**

**Over 700,000 Hectares (7,000 sq. km) of Irrigation and Water Management design projects**

### Survey and Investigation

- Topographical Survey for Sub Basins, Command area, Submergence area
- Detailed Survey along Dam alignment, Canal network etc
- Hydrographic Survey across rivers for Hydraulic structures and other crossings
- Socio Economic Survey, Rehabilitation and Re-settlement Survey

### Geotechnical Investigation and testing

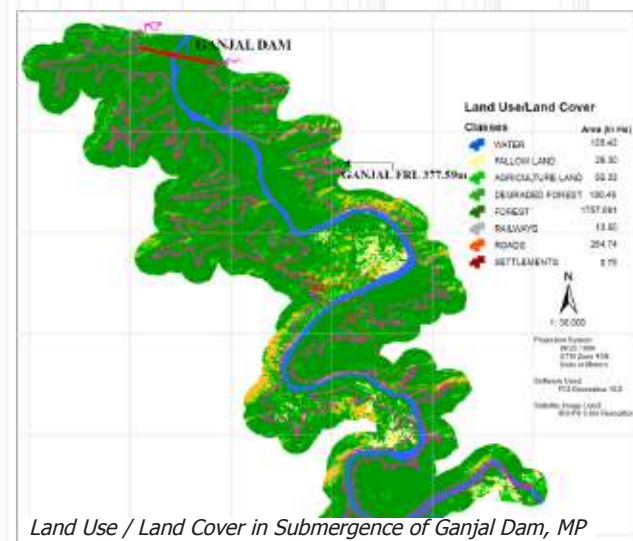
- Boring for Hydraulic structures, Canals, Bridges etc
- Collection and testing of soil and rock samples, analysis with recommendations
- Identifying Quarries, Borrow areas and Material Investigation



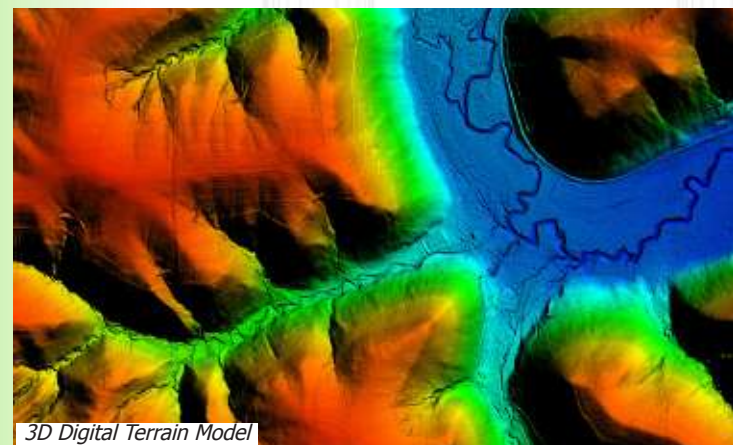
Geotech Investigation

### Compendium Planning, Water Availability Studies, Flood Estimation and Capacity assessment

- Data Collection (SOI maps, Revenue maps, Cadastral, Forest maps etc)
- Planning, alignment of primary and secondary canal systems
- Assessment of Command area from revenue records
- Collection of Rainfall discharge data, Flood history, Estimation of PMP, PMF, SPS and flood for different frequencies
- Study existing utilization, purposes, use and commitments
- River Basin Characteristics
- Contour study, capacity assessment of flood prone areas
- Assessment of Flood and Flood Hazard
- Flood Routing studies



Land Use / Land Cover in Submergence of Ganjal Dam, MP



3D Digital Terrain Model

### Integrated River Basin Planning

- Soil Land, Land Classification and Land Use
- Water availability studies & Yield computation
- Surface water and ground water study
- Conjunctive use of ground water and Surface water
- Water Harvesting
- Asset management

### Feasibility Reports and Detailed Project Reports

- Techno Economic Feasibility/viability of the projects
- Detailed Project Reports as per CWC guidelines
- Reports for MoEF Clearances, Forest Clearance and Grant from NABARD, AIBP
- Assistance in obtaining Clearances from CWC, MoEF, Planning Commission, MoTA

### Design of Hydraulic Structures

- Dams, Barrages, Weirs and Tunnels
- Intakes structures, Jack well and Pumping Stations
- Design of Cross Drainage works
- Water conveyance systems - Flow Canals, Pressure Irrigation (Micro Irrigation)
- Cyclone protection works



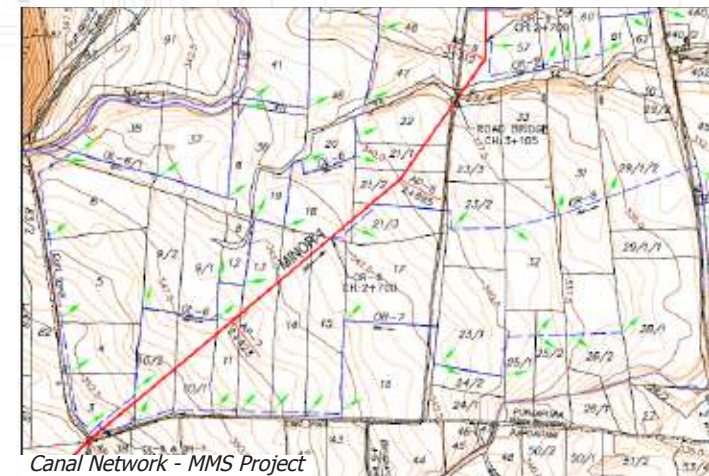
Chikodi Branch Canal

### Water Management and On Farm Development works

- Interstate Water Disputes
- Environment Impact Assessment of Water Resource Projects
- Command Area Development
- Watershed Management
- Risk and uncertainty analysis

### Leak Detection and Turnkey Solutions for Dams and Underwater Structures

- Field Reconnaissance, Data Collection and Identification / Locate the problems
- Suggest Remedial Measures
- Construction Drawings and Turnkey Solutions



Canal Network - MMS Project

### Web enabled GIS

- Field Survey and Data Collection
- GIS Data Development (Converting Hardcopy / CAD Plans / As built Drawings into GIS Database for Water resource projects)
- Development of Enterprise GIS applications for Irrigation Management, Asset Management and Environmental Monitoring



Bridge cum Barrage - River Bhima

### Modernization and Restructuring, Rehabilitation and Re-settlement plans

- Systematic diagnostic study for identification of deficiencies in dams, canal, drainage problems from the considerations of operation and management
- Identify Constraints in existing design features
- Joint walkthrough survey
- Survey and redesign of the existing Water storage and Carrier system
- Redesigning and Reconstruction / Rehabilitation of infrastructure



Underwater Leak Detection

### Project Management and Construction Supervision

- Review of Design, Drawings, Estimates & Reports
- Construction Supervision and Monitoring
- Review the suitability of sources of materials and their quality
- Tender Evaluation
- Quality Assurance Plan
- Measurements and Certifications

### Detailed Estimations, BOQ and Tender Documents

- Rate Analysis, Quarry and Lead identification
- Quantity Survey, Preparation of Cost estimates
- Draft Tender Papers, Bid Document
- Cost Benefit Analysis
- Financial Viability of projects



GIS Web based Application