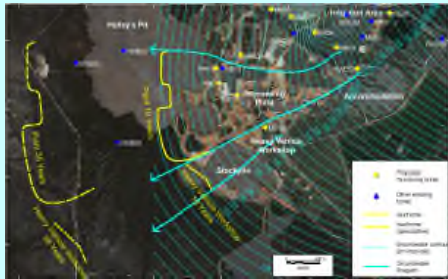


# Geographic Information Systems (GIS) Capabilities



**HYDROSOLUTIONS**  
PTY LTD  
Hydrogeological & Environmental Consultants

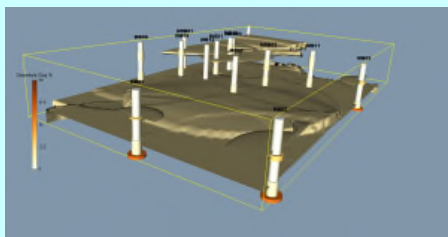
Western Australia's independent groundwater & environmental consultancy, with a proven track record in groundwater, surface water, environment, risk assessment, contaminated land management & auditing. We combine reliable expertise with regulatory knowledge, delivering high-quality output on time & on budget.



## SPATIAL ANALYSIS

Our GIS group is an integrated, multi-disciplinary team, supported by in-house geology, hydrogeology and modelling specialists. We specialise in high-level spatial analysis and conceptualisation:

- ◆ Geospatial thematic map creation
- ◆ Conceptual Site Models (CSM) for input to surface & groundwater numerical models
- ◆ 3D borehole visualisation/correlation
- ◆ Spatial optimisations for site selections
- ◆ Geochemical correlation and yield analysis
- ◆ Geospatial statistical analysis
- ◆ 3D spatial interpolation, kriging, cluster & hotspot analysis
- ◆ Streamflow and watershed analysis for Urban Water Management Plans (UWMPs)
- ◆ Network & connectivity analysis for transport flow & shortest path design
- ◆ Geocoding & georeferencing of datasets



## TECHNICAL CAPABILITIES

Our spatial scientists are experienced in the following in-house tools :

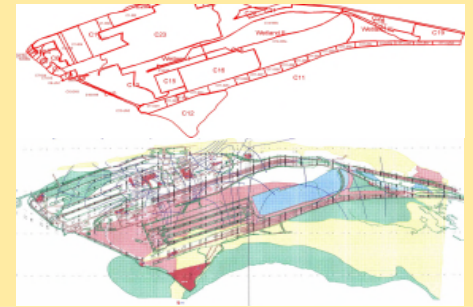
- ◆ MapInfo Professional & Discover
- ◆ ArcGIS shapefile import/exports
- ◆ QGIS & GRASS open source GIS
- ◆ Surfer/Didger/Voxler/Strater
- ◆ Advanced query design with SQLPlus and Python 2.7-3.2
- ◆ Full file translation to numerical models & Leapfrog

Access to online WebMap Servers (WMS/WFS) :

- ◆ Landgate SLIP WA Atlas & TGDB
- ◆ Department of Mines & Petroleum (DMP) Tengraph tenements and Data Centre
- ◆ Department of Water (DoW) Water Information Reporting & Water Register
- ◆ Geoscience Australia Open Geoscience Consortium (OGC) Databases

We interface fully with client spatial databases:

- ◆ Oracle Spatial
- ◆ MySQL Spatial geometry types
- ◆ PostgreSQL PostGIS extensions



## OUR PROJECTS

**Chlor-alkali plant:**

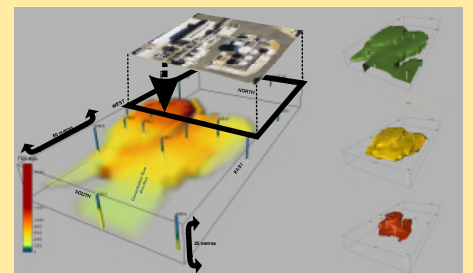
- ◆ 3D spatial analysis of hydraulic environment & saline groundwater plume recovery in response to targeted abstraction.

**Department of Environmental Regulation:**

- ◆ Identification of suitable sites for development of a Class IV secure landfill for the Perth metropolitan region based on the weighted siting criteria of an intergovernmental advisory panel.

**BHP Billiton Iron Ore:**

- ◆ Development of an interactive GIS database for land use, investigation and contaminant impacts around a railcamp with potable groundwater abstraction.
- ◆ Stormwater runoff modelling of the Nelson Point and Finucane Island ore processing sites.



Hydrosolutions Pty Ltd

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