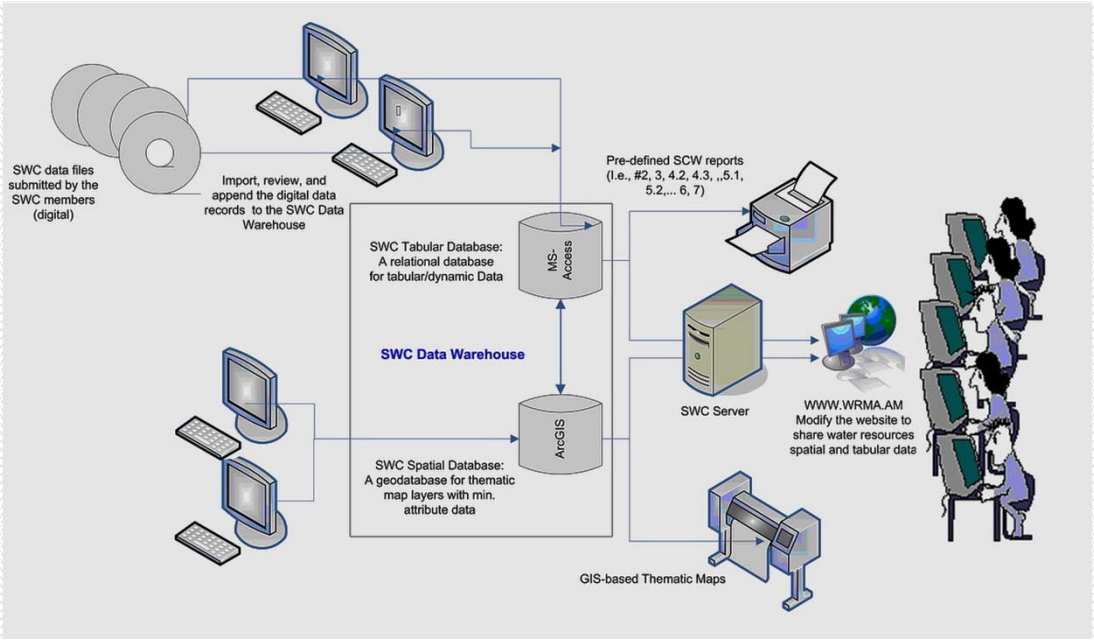
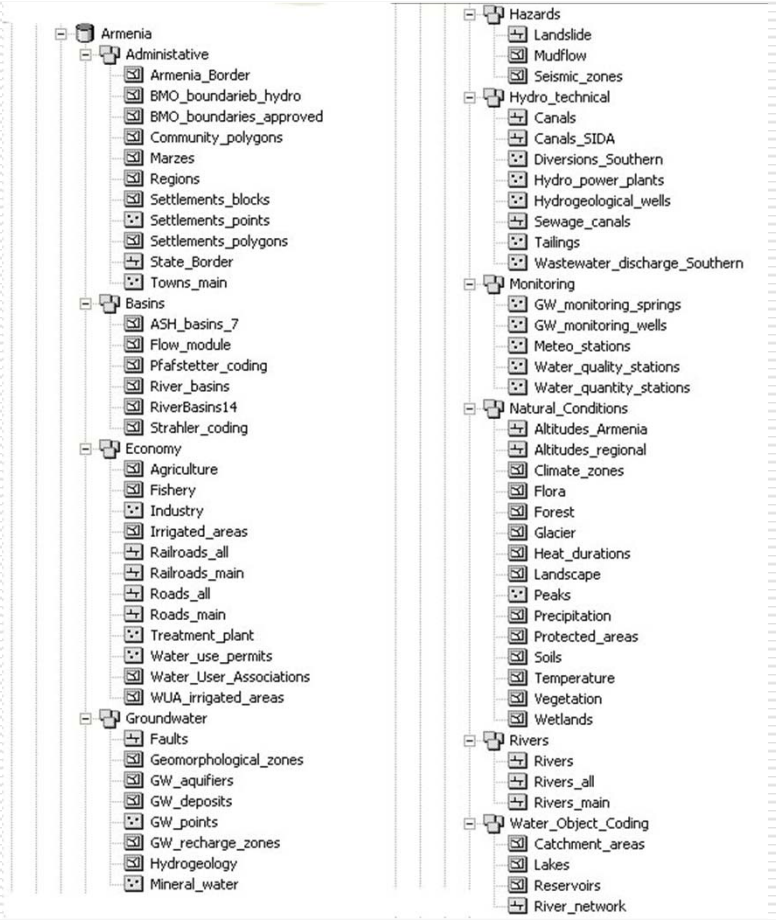
STATE WATER CADASTRE INFORMATION SYSTEM OF THE REPUBLIC OF ARMENIA



Dr. Volodya Narimanyan
Deputy Head of Water resources Management Agency
April 7, 2011
Yerevan

CONTENTS

- Definitions
- Purpose of the SWC
- Stakeholder Institutions
- SWC Tabular Database
- SWC Spatial Database
- Stakeholder Institution Databases
- Recommendations

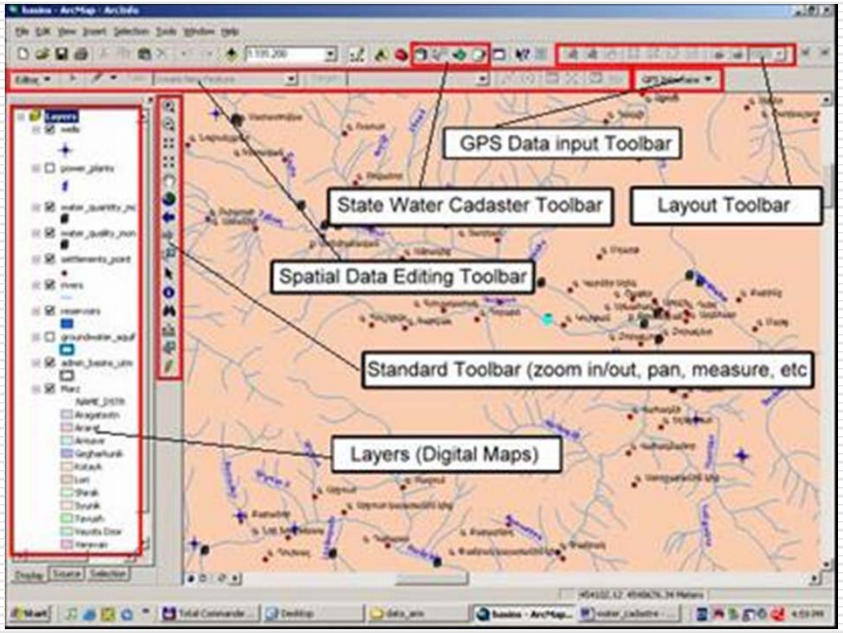


DEFINITIONS

- State Water Cadastre (SWC) – A permanent operating system to keep comprehensive records of quantitative and qualitative indices on water resources, water intakes, watersheds, and composition and quantities of materials and biological resources, which are extracted from water basins beds and coasts, as well as records of water users, water use permits, and water system use permits.
- State Water Cadastre Information System (SWCIS) - A system of inter-linked electronic databases and geo-databases to facilitate the maintenance and use of the SWC.
- Date Warehouse (DW) – The core database of the SWCIS with the user interface allowing data transfer to/from other database components of the SWCIS both at tabular and spatial levels.

PURPOSE OF THE SWC

- State Water Cadastre
  - Establishment of data warehouse related to water sector,
  - Registration of documentation in the cadastre and provision of corresponding information,
  - Formation of tasks for water resources monitoring
  - Planning of the implementation of monitoring, and inclusion of monitoring results into the management process,
  - Inventory of hydro-technical structures related to water resources
  - Composition of water resources balance and water-economic balance

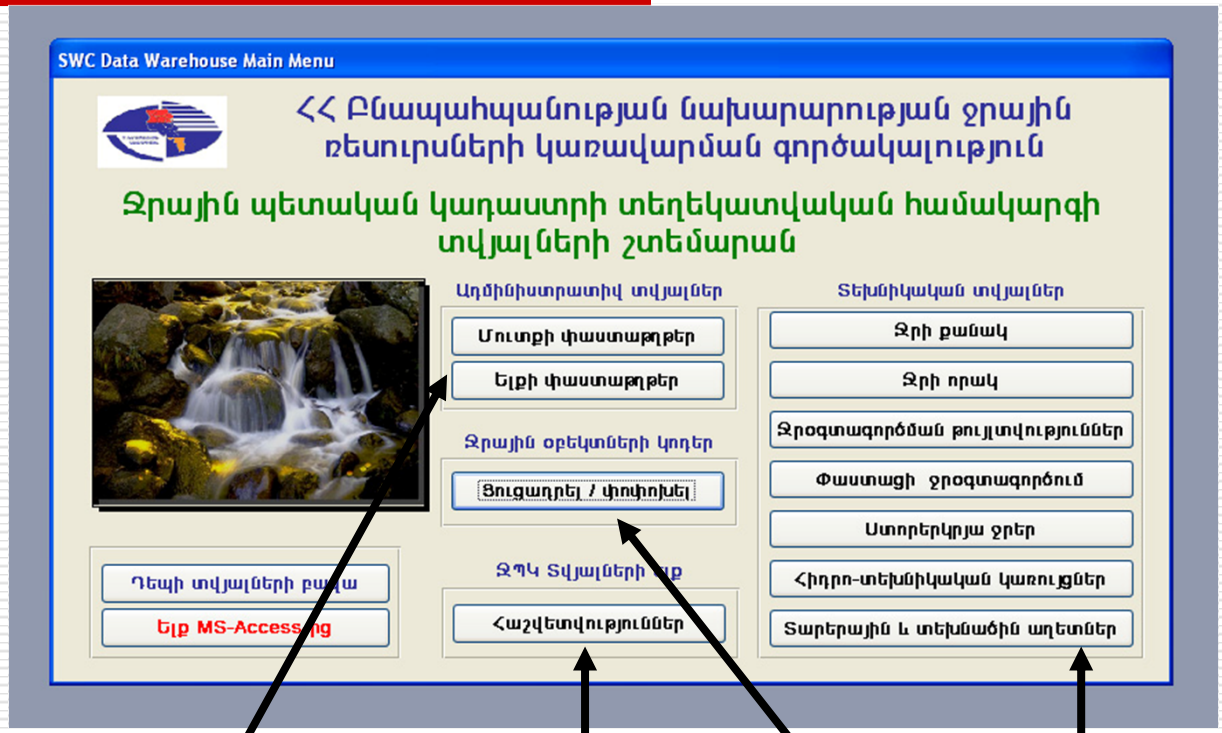


STAKEHOLDER INSTITUTIONS

Stakeholder institution	Acronym	Available Data
Water Resources Management Agency, MNP	WRMA	Water use and wastewater discharge
Armenian State Hydro-Meteorological Service, MEA	ASH	Surface water quantity
Environmental Impact Monitoring Center, MNP	EIMC	Surface water quality
Hydro-geological Monitoring Center, WRMA, MNP	HMC	Inventory of groundwater resources, groundwater quantity and quality
State Committee on Water Systems, MTA	SCWS	Water systems and WUAs
State Hygiene and Anti-Epidemiological Inspectorate, MH	SHAEI	Drinking water-related sanitary violations

SWC TABULAR DATABASE

- Overall design



Administrative data

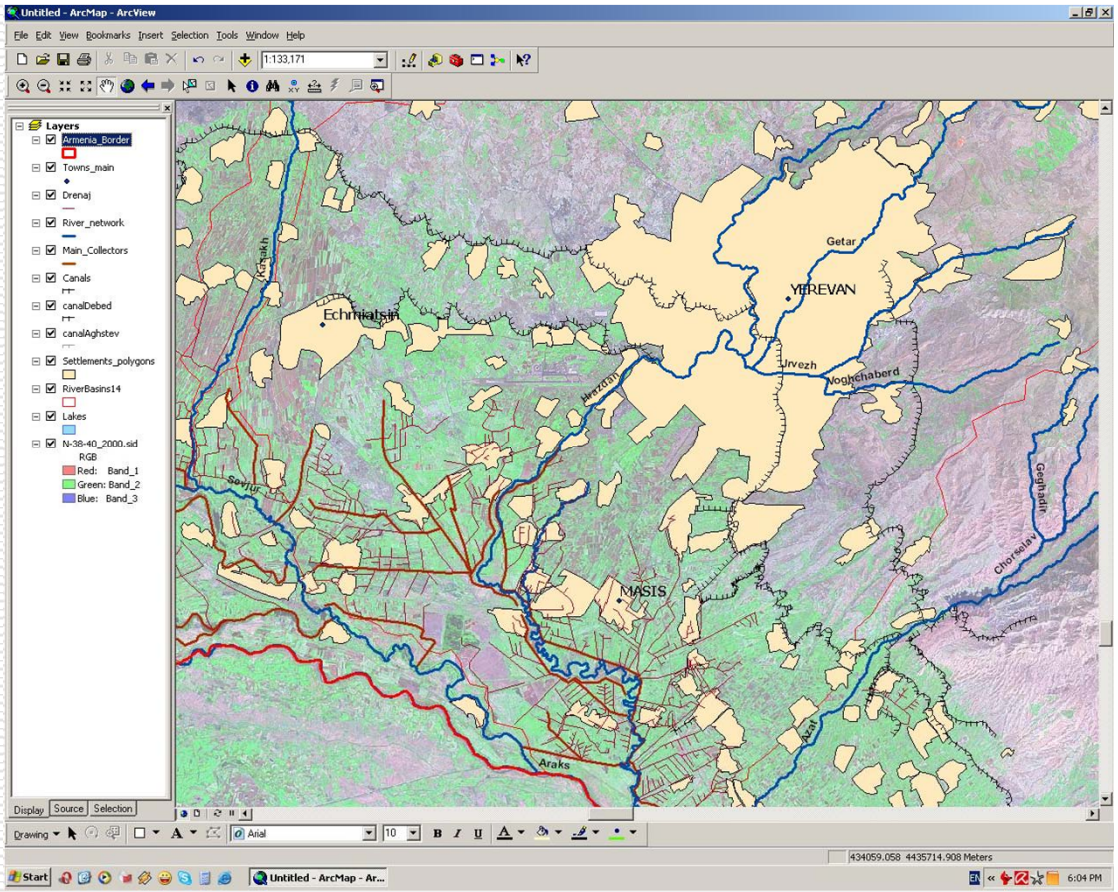
34 reports

Water object codes

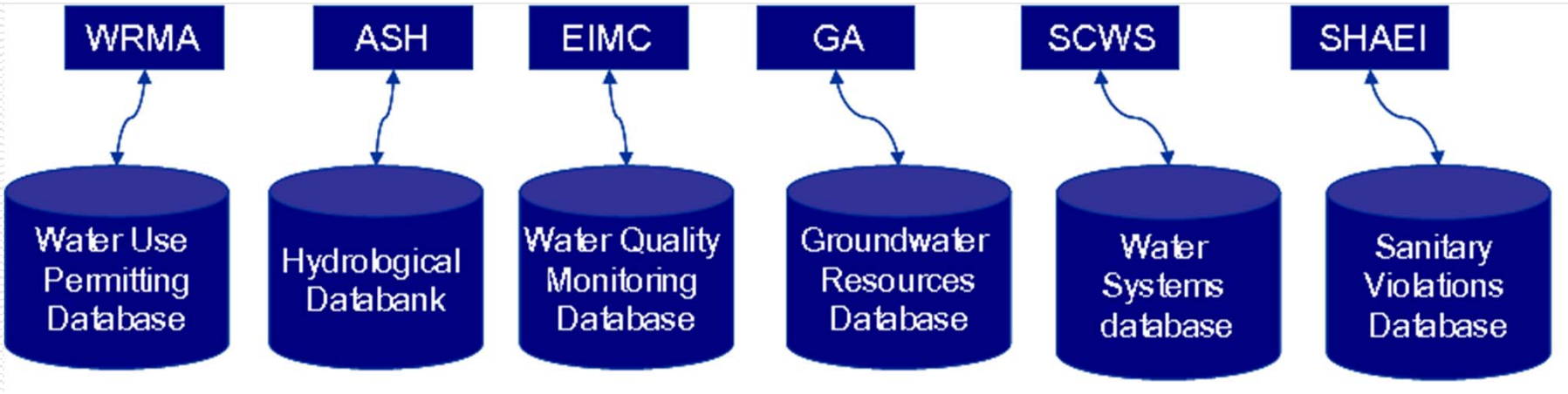
Technical data

SWC SPATIAL DATABASE

- SWC Geo-database
  - Coding of rivers, lakes, canals, reservoirs and catchments
- 75 feature classes (layers)
- First Water Resources Atlas (80 pages) was printed in 2008



STAKEHOLDER INSTITUTION DATABASES



STAKEHOLDER INSTITUTION DATABASES

Database	Data populated
Water Use Permitting	WUP information from 2002 to present. 1620 WUP, 1050 und.water, 550 surface water, 20 discharge
Hydrological Databank	Water level and discharge data from 2000 to present. Data before 2000 are kept in MS-Excel worksheets. 100 hydrological observation posts
Water Quality Monitoring	Water quality data from 1978 to present. Data before 1978 are kept in MS-Excel worksheets. 131 permanent and 90 temporary observation posts
Groundwater Resources	Inventory data on 49 springs and 24 wells
Water Systems	Summary information on water systems grouped by 52 WUAs
Sanitary Violations	Summary information on violations from 2000 to present

RECOMMENDATIONS

- Data and information sharing
  - At the moment “open access of data” is not general practice
  - Urgent need to adopt and implement new procedures on data flow and information exchange among the SWC stakeholder institutions
  - The frequency of data exchange should be changed from annually to quarterly

RECOMMENDATIONS

- Decentralize data and information management
  - Basic data and information that BMOs need for WUPs should be housed in a localized water information system managed by BMOs
  - BMOs need to continue collect and stoder local data not included in the SWCIS into a Basin Information Management System
  - Enhance the SWCIS by providing on-line interactive services to perform ad-hoc tabular and spatial queries, and generate customized maps and reports via the WRMA website

Thank you for attention!

State Water Cadastre Design for the Short Term