

WATER QUALITY MONITORING IN THE JUCAR RIVER BASIN

Beirut,
October 2009

THE JUCAR RIVER BASIN DISTRICT



The Júcar RBD is comprised of a group of nine (9) River basins:

- Cenia
- Mijares
- Palancia
- Turia
- **Júcar**
- Serpis
- Marina Alta
- Marina Baja
- Vinalopó

THE JUCAR RIVER BASIN DISTRICT





QUALITY NETWORKS AT JRB

ICA (Physical-chemical and microbiological)

BIOLOGICAL

RESERVOIRS

SAICA (Continuous, real time)

DANGEROUS SUBSTANCES

GROUNDWATER



ICA NETWORK

Integral Water Quality Network or **ICA Network**:

- ☀ Controls surface water quality in the main rivers of the basin.
- ☀ 260 active stations.
- ☀ Analysis, interpretation and diagnosis of physical-chemical and microbiological parameters.
- ☀ Verifies the water quality evolution.
- ☀ The different sub-networks are designed according to the different environmental objectives and uses of the resource

Surface Water Bodies

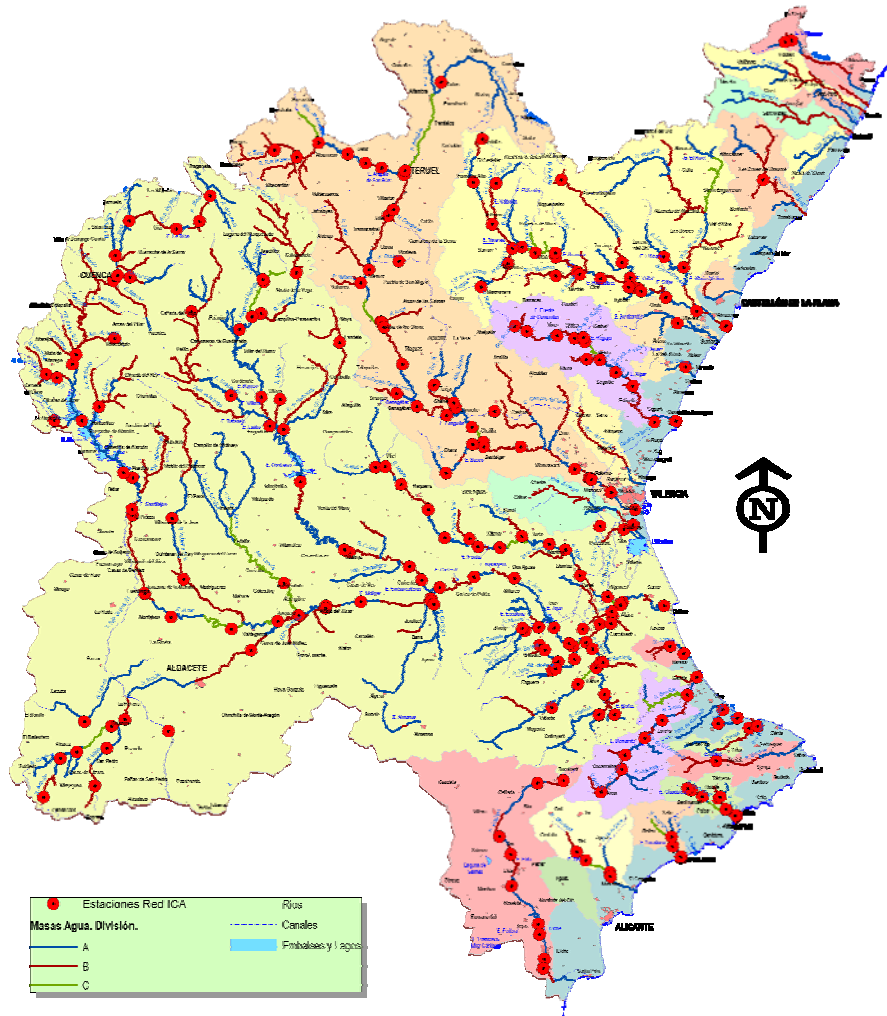
- 297 Water Bodies

- Non Controlled

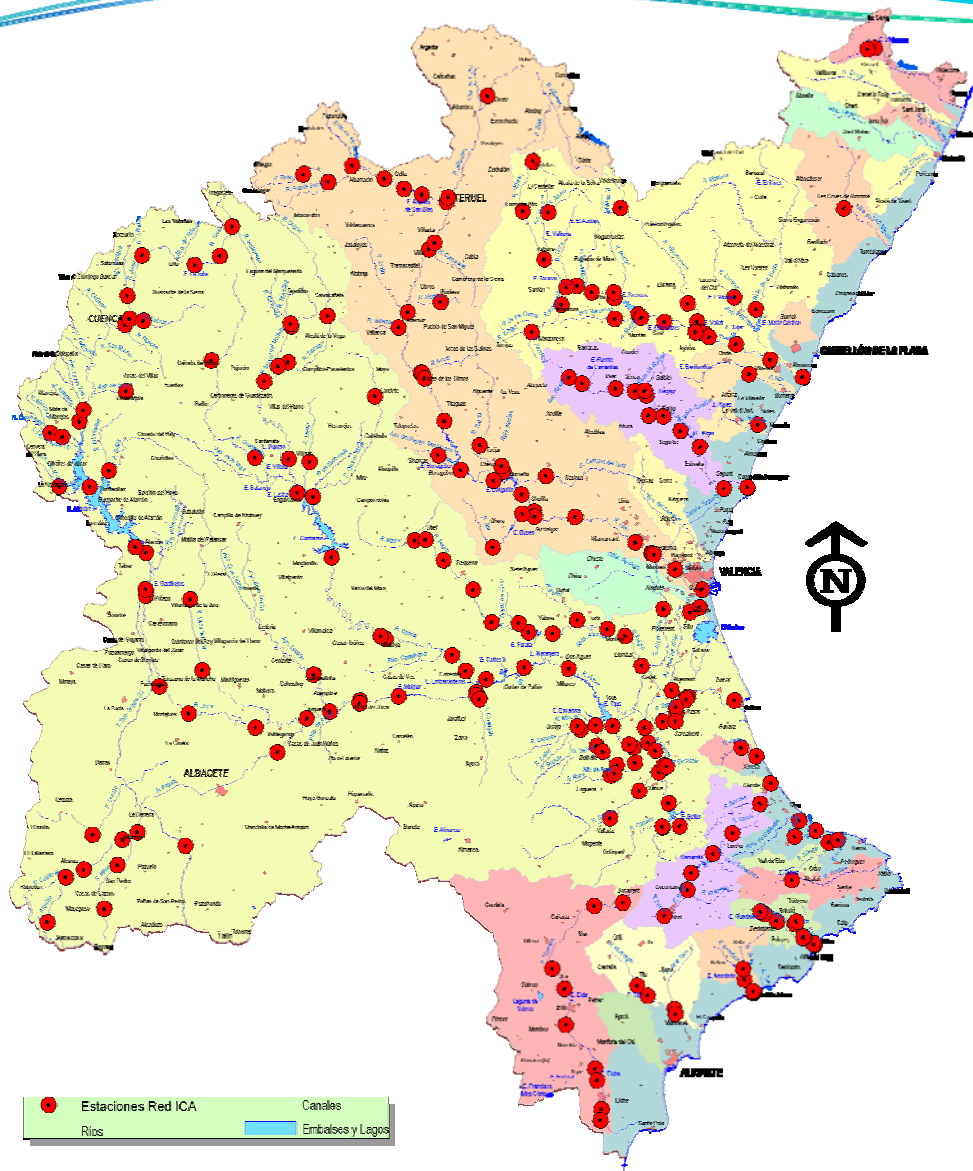
- 63 Dry
- 2 Brackish
- 22 Reservoirs

- 210 Controlled
according to the risk
of not attaining Good
Status

- 108 Water bodies
with HIGH risk
- 55 Water bodies
with MEDIUM risk
- 47 Water bodies
with LOW risk



ICA Network Stations

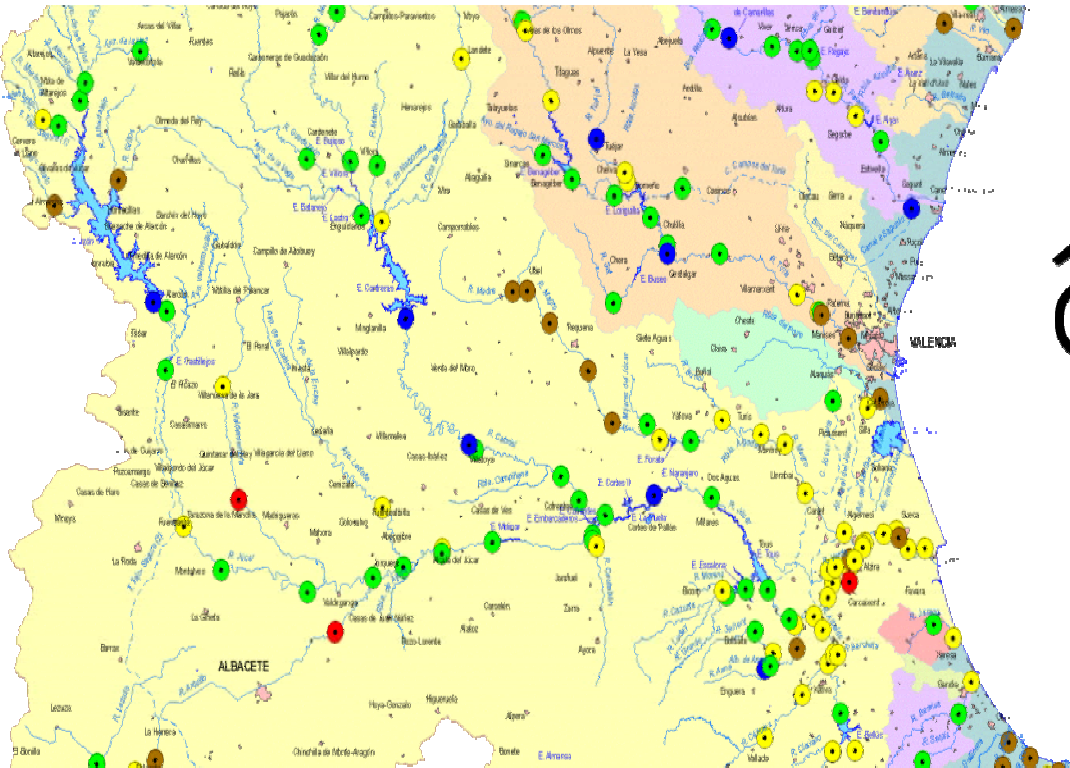




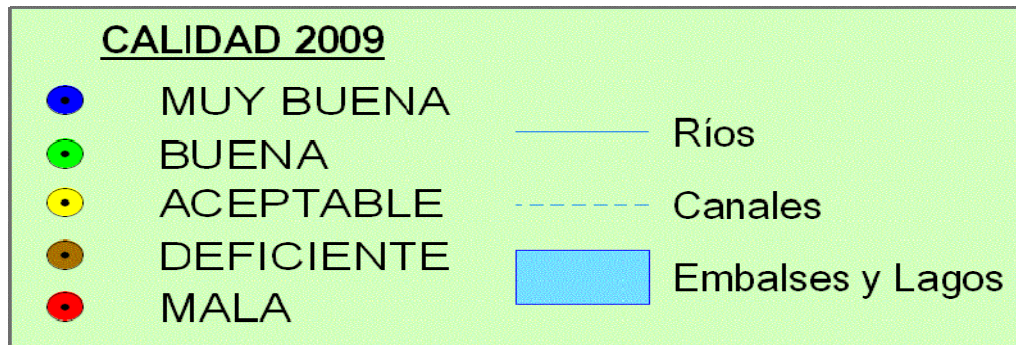
ICA NETWORK

Formed by 260 stations belonging to different sub-networks to control physical-chemical and microbiological status:

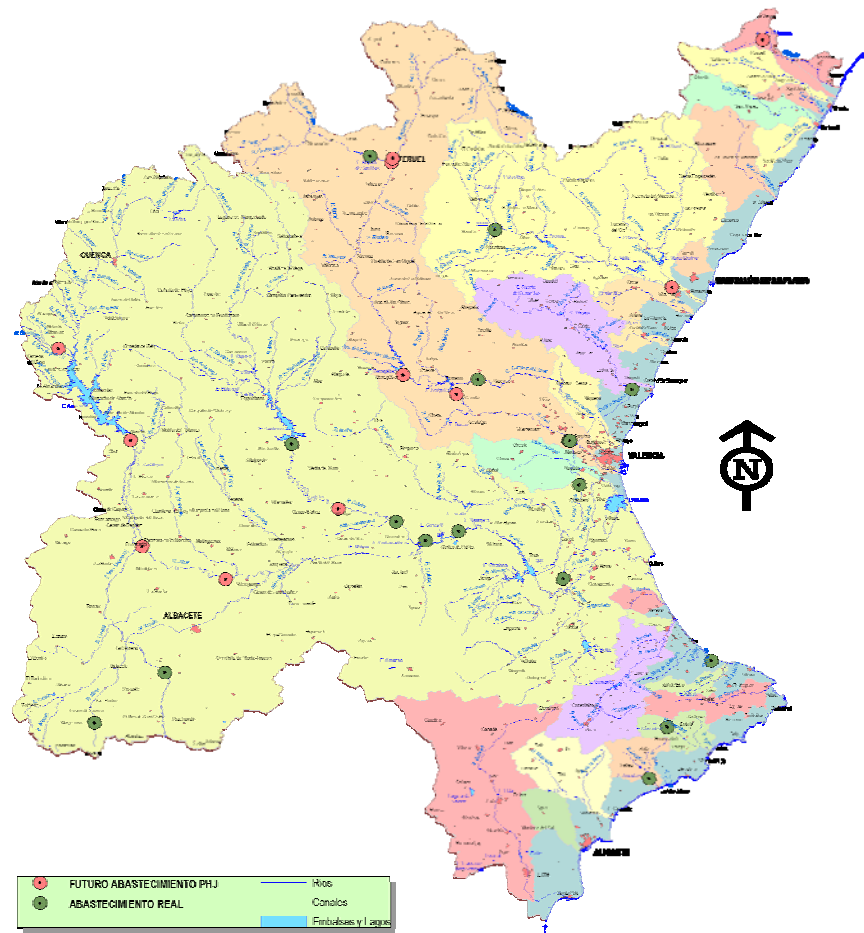
- Drinking water network
- Fish network
- Irrigation network
- Water quality control network for bathing areas
- Control network for areas sensitive to nitrate contamination
- Basic Control network
- Intercalibration network
- Reference network
- Control network for emissions to the Med Sea (Barcelona Agreement)
- EUROWATERNET network



Surface water status assessment



Prepotable water networks



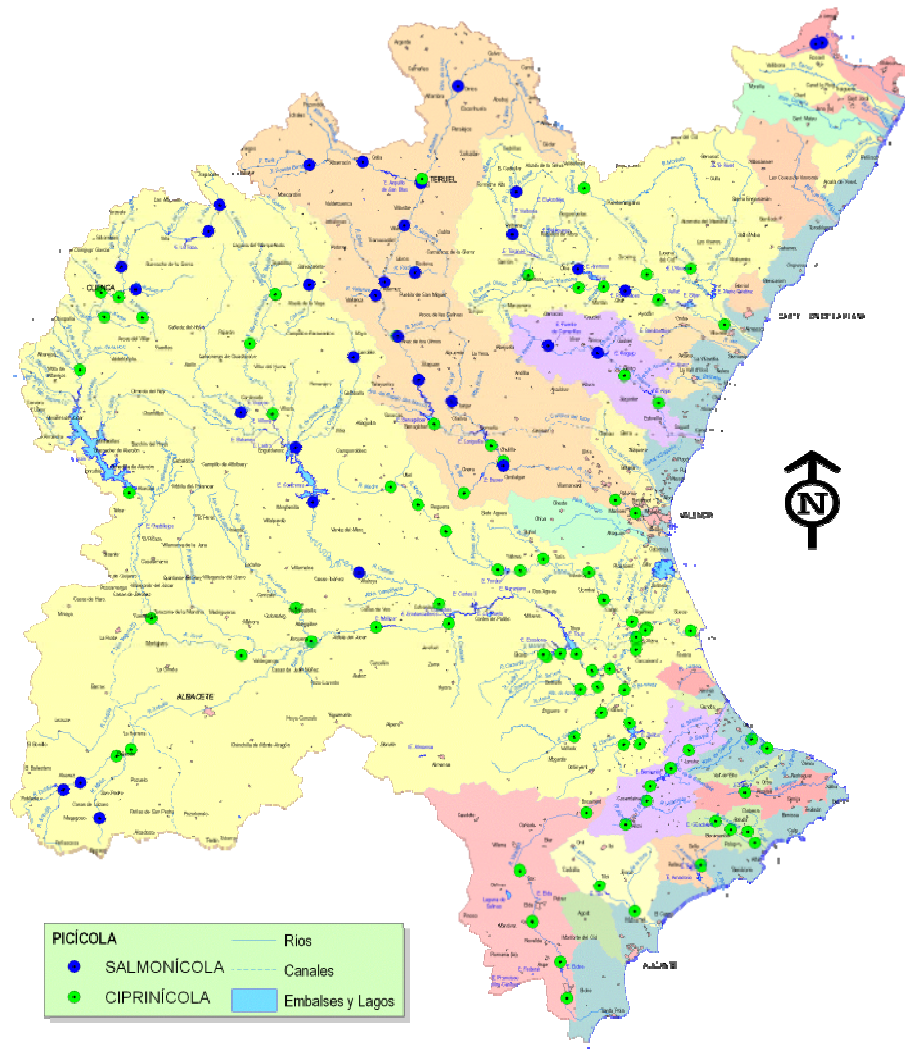
11 control stations in pre-potable sections, defined in article 63 of JHP

17 control stations upstream of the diversions for urban supply

Determination and follow-up of controlled parameters according to Prepotable Directive and WFD

Frequency depending on town size and obtained Quality

Fish network



Types of control according to ecological requirements:

- 33 Salmonid stations (in upper rivers and small basins).
- 88 Cyprinid stations (in middle/lower and anthropised basins).

Determination and follow-up of limiting parameters for fish life:

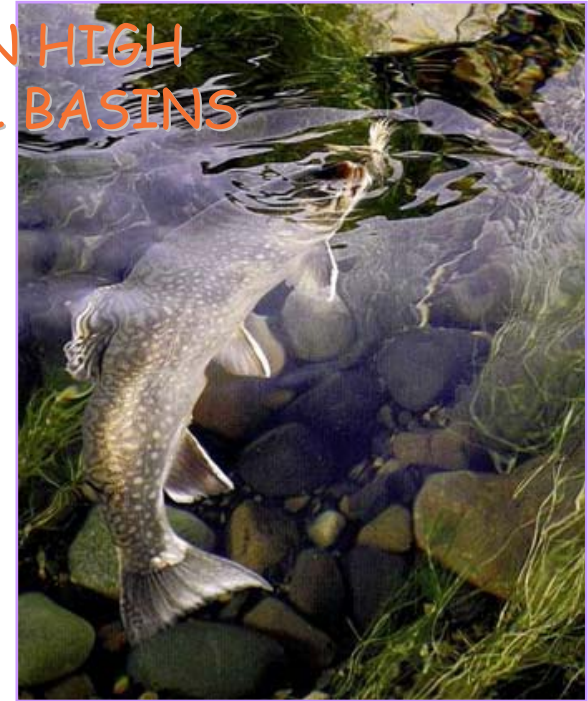
- nitrites, dissolved oxygen, chlorine...

Frequency

- monthly -UE
- quarterly



SALMONID SPECIES IN HIGH SECTIONS AND SMALL BASINS

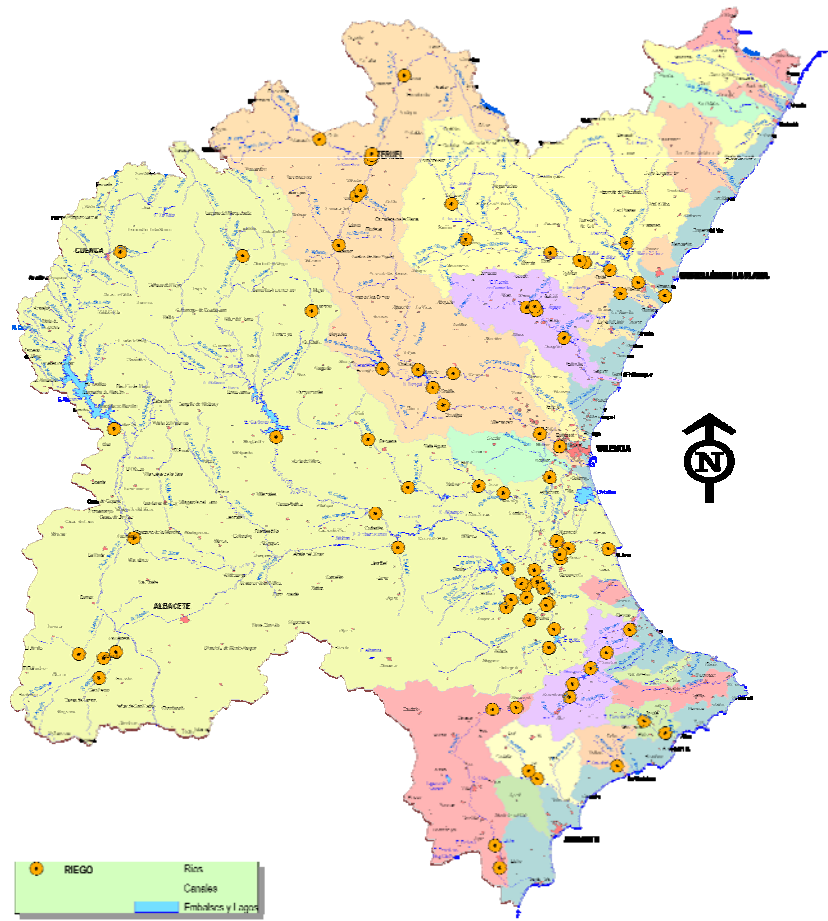


Fish Network

CYPRINID SPECIES IN MIDDLE/LOW SECTIONS AND ANTROPHISED BASINS



Irrigation Network

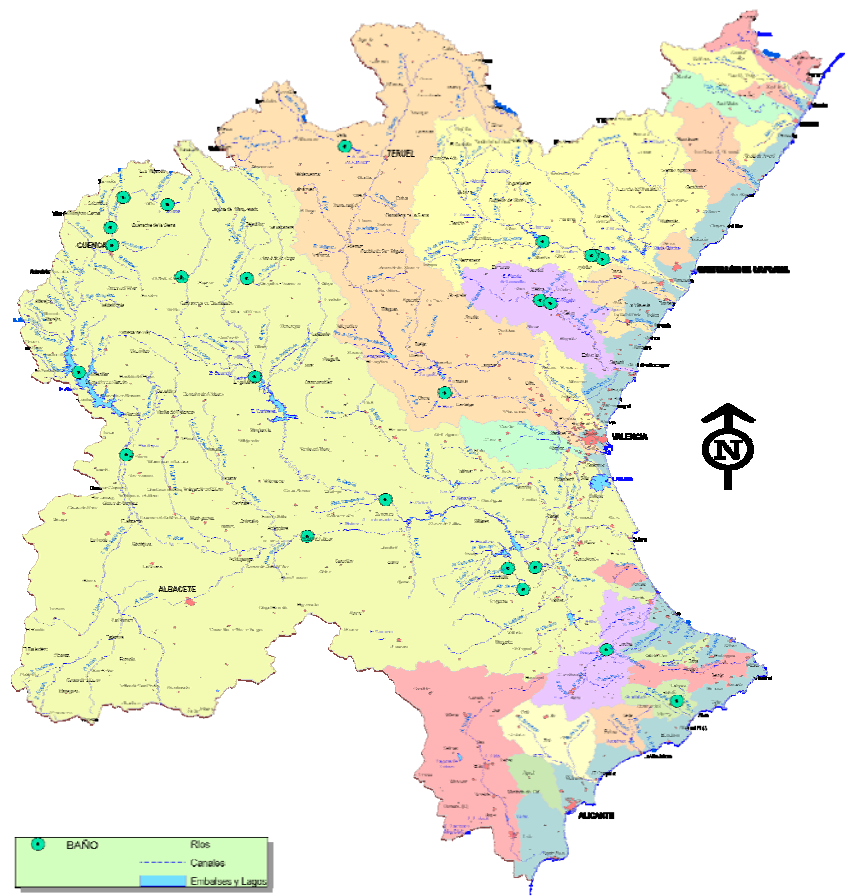


Surfaced (or mixed) water quality in superficial in agricultural demand units (ADU) with 81 control stations.

Determination and follow-up of parameters defining water quality for irrigation: Chlorides, DBO₅, Boron, Coliform, pH, permeability.

Quarterly Frequency

Water Quality control network for bathing areas



- 7 stations in bathing areas declared to the EU and designated by the Regional Authorities (coordination between Administrations)

- 16 in fresh water spots for recreational use according to art. 63 of JHP.

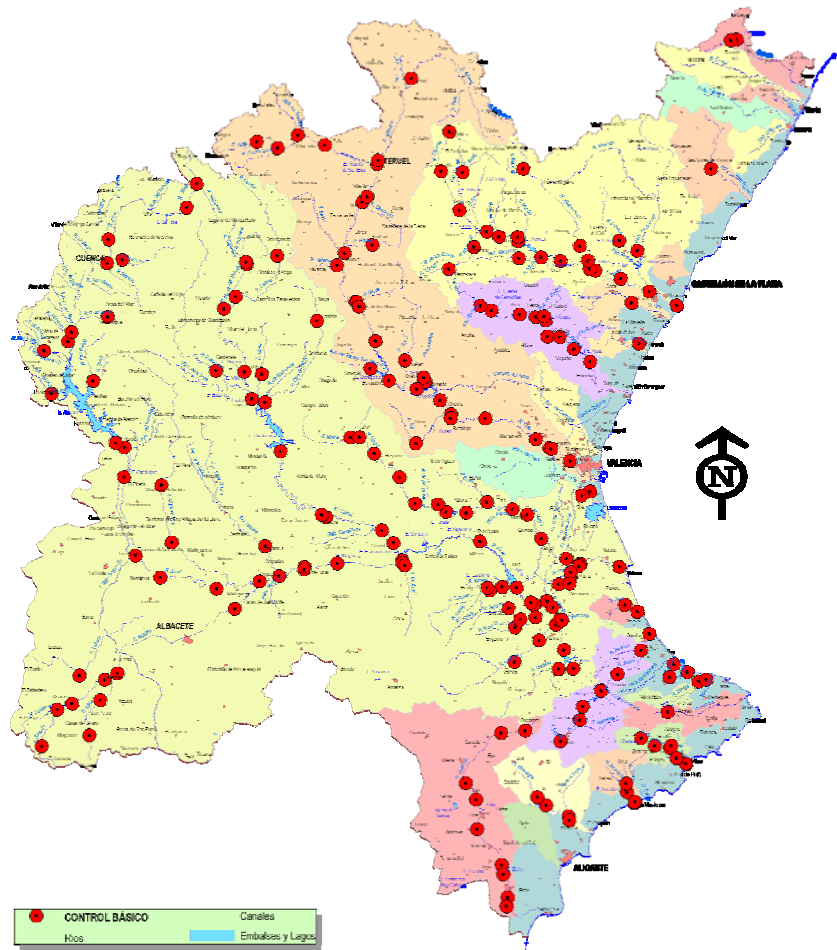
Determination and follow-up of parameters

Microbiological and physical-chemical.

Frequency from May -Sept.
Fortnightly - EU

- Monthly -Rest

Basic Control Network



- Control of 210 water bodies with 215 stations

- Will result in the Surveillance and Operative networks of WFD.

- Determination and follow-up of general parameters:

nutrients, salinity, oxygen balances...

Quarterly Frequency