

LABORATORIO DE ANALISIS DE MATERIALES (LAM) Materials Analysis Laboratory (LMA)



Mision and vision

Execute the physical and chemical analysis of water and soils samples, supported on current regulations and methodologies, with high quality control, with the purpose to support the production of reliable and timely soil and water information

To be a water and soil test laboratory, recognized for its excellent service and quality of results

Activities for soil analysis

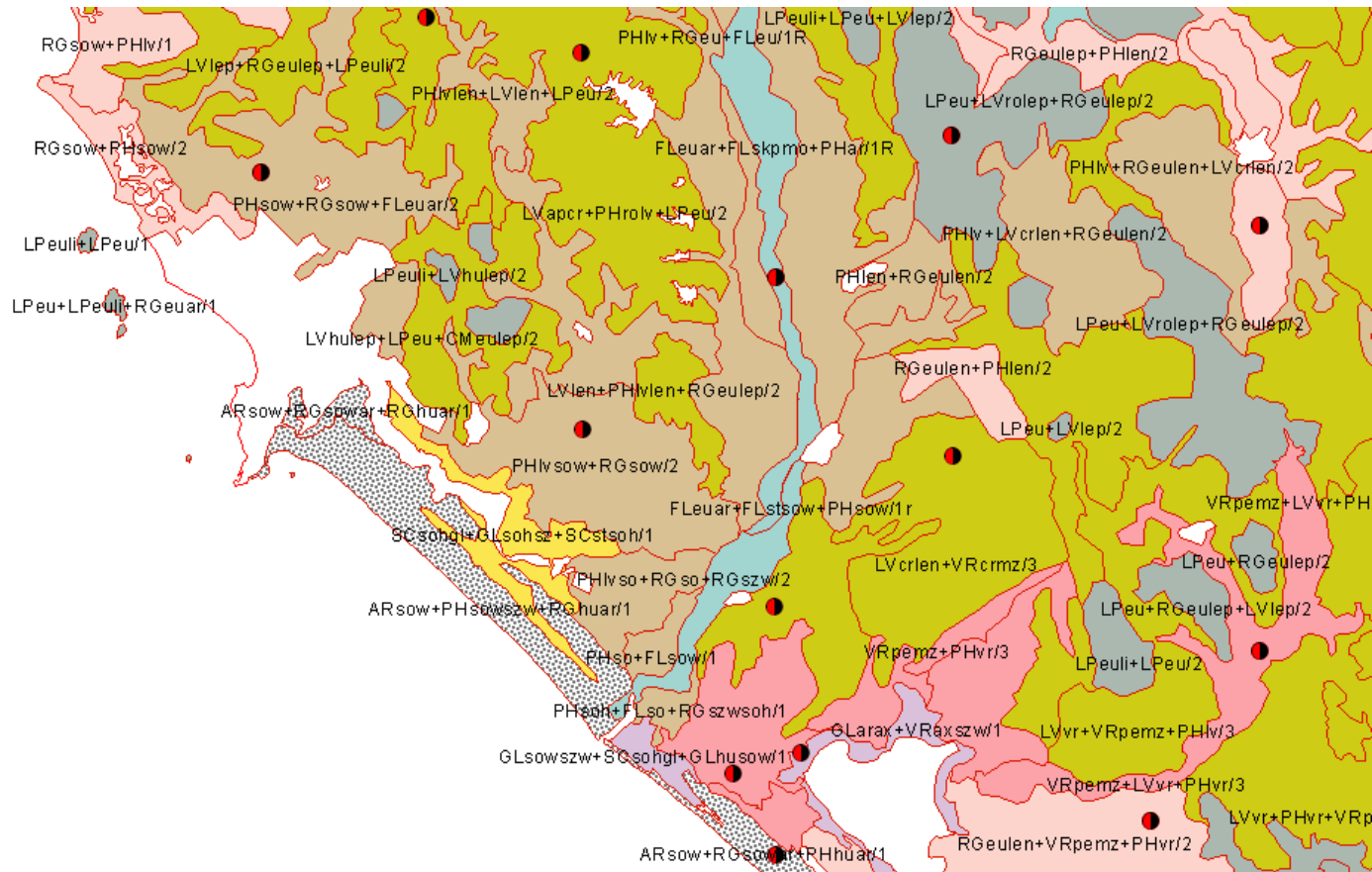
Generate physical and chemical data to update national soils maps

Currently physical and chemical determinations are:

- pH relation 1:2:5
- Electric conductivity 1:5
- Total organic carbon
- Phosphorus for acid and alkaline pH soils
- Percentage of sand, clay and silt with textural classification
- Cations: sodium, potassium, calcium and magnesium
- Cation exchange capacity
- Percentage of saturation of sodium
- Percentage of saturation, as percentage of carbonates and percentage of sulphates
- Color in dry and wet samples
- Apparent density



Final products: Soil map, field and laboratory reports



Identificador: 42101 | Perfil de campo: 1

(1) Datos generales | (2) Descripción del perfil del suelo | (3) Datos de laboratorio | (4) Complemento y observaciones

Datos de laboratorio

Simb.	L. sup.	L. inf.	%R	%L	%A	Text.	Color Seco	Color Húmedo	C.E.	pH	%CO	ClC	PSB	Na	PSNa	K	Ca	Mg	P205	ClC arc.	%CaCO3	%CaSO4		
0	0	10	16	8	76	Ca	10YR	3	4	10YR	2	3	0.1	4.4	4.9	18.4	65.2	0.2	0.9	0.9	7.9	3	2.7	38.4
A	10	35	20	18	62	Ca	10YR	4	4	10YR	3	3	0	4.4	1.1	17.6	42.2	0.2	0.9	0.5	4.8	2	0.9	74.5
B21t	35	52	24	20	56	Cra	10YR	5	4	10YR	5	4	0	6	0.4	15.2	39.9	0.2	1.1	0.8	3.7	1.4		59.6
B22t	52	67	32	24	44	Cra	10YR	7	4	10YR	5	8	0	6.1	0.3	14.9	43.4	0.2	1.3	0.6	4.1	1.6		44.2
C1	67	85	24	18	58	Cra	10YR	6.5	4	10YR	5	6	0	6.2	0.3	16.6	38.3	0.2	1.2	0.5	4.1	1.6		66.5
BC	85	100	22	20	58	Cra	10YR	5	4	10YR	5	6	0	6.3	0.2	13.6	33.1	0.2	1.5	0.5	2.7	1.1		59.5

Activities for water analysis

Generate data of physical and chemical analysis to update water (Surface and ground) maps

Surface water information (analysis of watersheds)

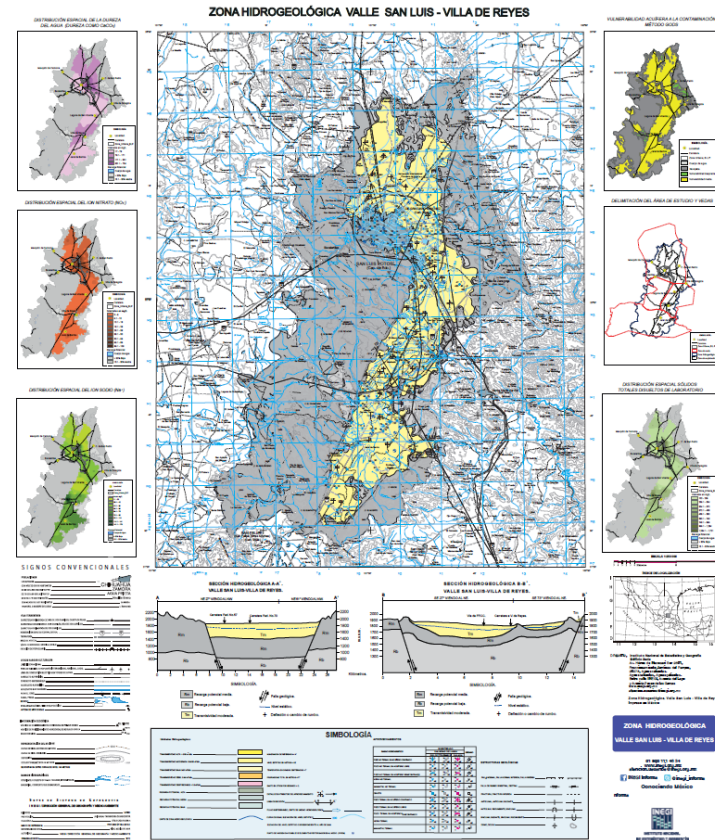
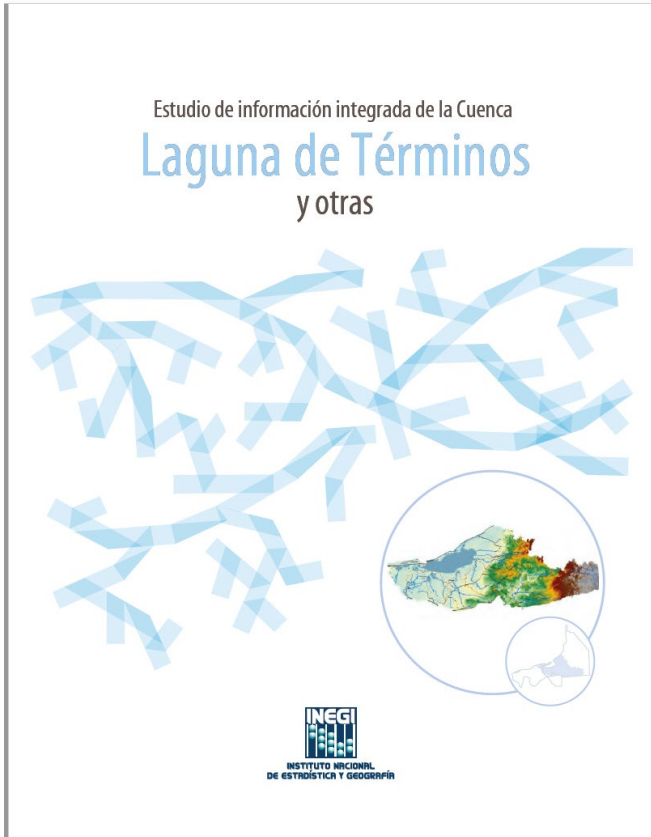
Groundwater (hydrogeological zones - aquifers)

Physical and chemical analysis of water include the following determinations

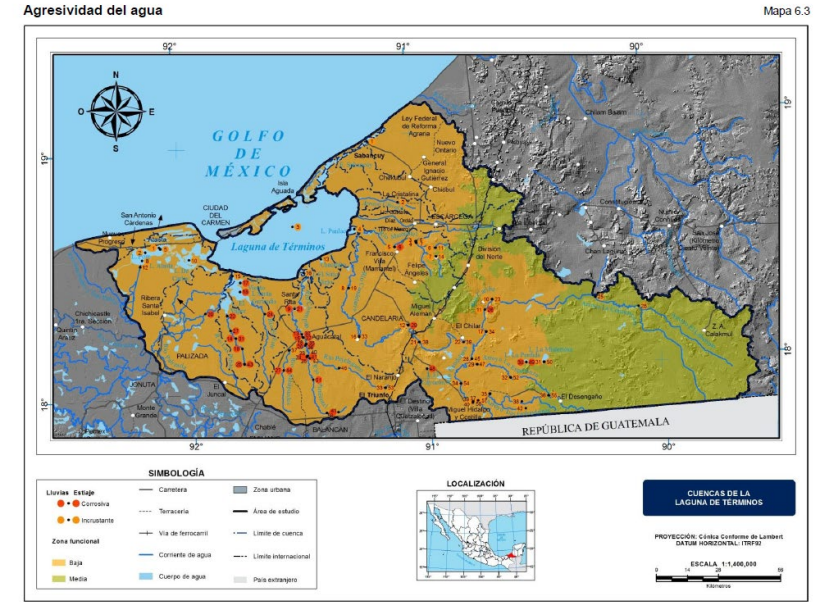
- pH
- Electric conductivity
- Total dissolved solids
- Nitrates
- Sulphates
- Total alkalinity
- Total chlorine
- Phosphates



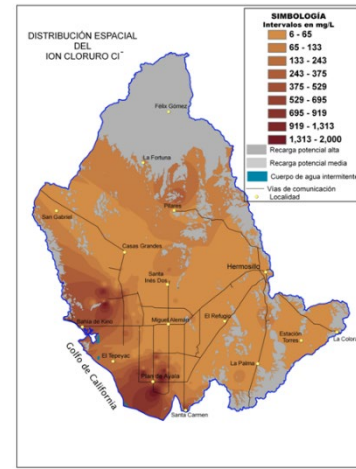
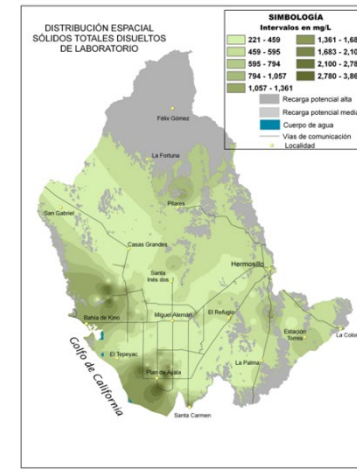
Final products: Groundwater maps, integrated information of the watersheds studies for Mexico



INEGI. Estudio de información integrada de la Cuenca Laguna de Términos y otras. Año 2017.



Fuente: INEGI-DGGYMA. Información derivada de los resultados fisicoquímicos de muestras de agua, Departamento de Análisis de Materiales, 2011-2012



Quality assurance on physical and chemical analysis of water and soil samples

LMA is working with the standard requirements of ISO 17025:2005 (NMX 17025:2006)

Also on transition to the standard, version 2017



El Programa de Calidad e Intercomparación de Análisis de Suelos y Plantas



Otorga la presente

CONSTANCIA

A: DEPARTAMENTO DE ANÁLISIS DE MATERIALES
INEGI - AGUASCALIENTES, AGUASCALIENTES

Por su participación en el

EJERCICIO DE INTERCOMPARACIÓN 2016

H. Cárdenas, Tabasco, 3 de noviembre de 2014.

Dr. Armando Guerrero Peña
Director del ISP



Servicios de Ensayos de Aptitud

ENTREGA Y RECEPCIÓN DE LOS ELEMENTOS DE ENSAYO

Elementos de Ensayo entregados por SENA

REFERENCIA DEL PROGRAMA DE ENSAYO DE APTITUD	ELEMENTO DE ENSAYO	DESCRIPCIÓN	No. DE BOTELLA	CÓDIGO
SENA-AGUA-03-2017	Cloruros	Botella HDPE con aproximadamente 60 mL de disolución acuosa.	027	2768
	Nitrógeno de Nitratos	Vial de vidrio ámbar con aproximadamente 40 mL de disolución acuosa.	012	
	Potencial de Hidrógeno	Botella HDPE, boca ancha, con aproximadamente 100 mL de disolución acuosa.	009	
	Conductividad Eléctrica	Botella HDPE, boca ancha, con aproximadamente 100 mL de disolución acuosa.	028	

Nombre: Ma. Genoveva Moreno Ramirez Firma:  Fecha: Julio 10, 2017

Recepción o Envío de los elementos de ensayo

Nombre del Laboratorio y/o Empresa:
INSTITUTO NACIONAL DE GEOGRAFÍA Y ESTADÍSTICA (INEGI)

Dirección:



Other activities

Environmental management system

1. Participation in internal and external environmental audits
2. PROFEPA certification (Federal government agency for environment protection)
3. Participation in the “national day for chemical emergencies” (DINAPREQ)
4. Application of Globally Harmonized System, according to the new versión of the NOM-018-STPS



Other activities

- **Soil erosion project under collaboration agreement**
- CONAFOR-INEGI agreement for laboratory analysis of soil samples and plant material from the national forest and soil inventory (INFyS).
- This project emerged from a memorandum of understanding between Norway and Mexico in the context of REDD plus (Reducing emissions from deforestation and forest degradation) activities, includes technical support from CONAFOR, administrative help from United Nations Development Program (UNDP) and financing from Norwegian government.
- 109 conglomerates (sampling sites) were received with a total of 2 445 samples, 1 170 of them were analyzed, they come from the states of Durango, Zacatecas and Aguascalientes.

