Ecuador

Limite internacional
Limite provincial
Capital nacional
Centros poblados

Escala Approximada 1:2,500,000

0 25 50 75 100 Millas Ordinarias

0 25 50 75 100 Kilometros

RECURSOS DE AGUA SUBTERRANEA

REGIONES HIDROGEOLOGICOS

I Costa
II Sierra
III Oriente
IV Islas Galápagos
Límite de cuenca/Divisoria Continental

AGUA DULCE GENERALMENTE ABUNDANTE

Unidad

1 Pequeñas a grandes cantidades disponibles del aluvión a profundidades <30 m.

2 Moderadas cantidades disponibles de sedimentos clásticos consolidados y no consolidados.

AGUA DULCE LOCALMENTE ABUNDANTE

3 Pequeñas a moderadas cantidades disponibles de sedimentos clásticos consolidados y no consolidados a profundidades <60 m; salobre en ciertas localidades costeras; manantiales concentrados en la region de la Sierra; salobre en ciertas localidades.

4 Muy pequeñas a pequeñas cantidades disponibles de volcánicos recientes, y de rocas cataclásticas, porfiríticas, y sedimentarias localizadas en fracturas aisladas, a profundidades generalmente <60 m; salobre en ciertas localidades costeras; manantiales concentrados en la region de la Sierra.

AGUA DULCE ESCASA O DEFICIENTE

5 Minúsculas a pequeñas cantidades disponibles de fracturas aisladas dentro de rocas impermeables ígneas y metamórficas, a profundidades generalmente <60 m; hay manantiales ocasionales.

6 Minúsculas a grandes cantidades de agua salobre o salina disponibles de aluviónes a profundidades <30 m y de depósitos volcánicos en las Islas Galápagos.

Términos Cuantitativos:

Enormes	=	>400,000 litros por minuto (L/min) (100,000 galones por minuto (gal/min)
Muy grandes	=	>40,000 a 400,000 L/min (10,000 a 100,000 gal/min)
Grandes	=	>4,000 a 40,000 L/min (1,000 a 10,000 gal/min)
Moderadas	=	>400 a 4,000 L/min (100 a 1,000 gal/min)
Pequeñas	=	>40 a 400 L/min (10 a 100 gal/min)
Muy pequeñas	=	>4 a 40 L/min (1 a 10 gal/min)
Escasas	=	<4 L/min (1 gal/min)

Términos Cualitativos:

Agua dulce	=	maximo de totalidad de sólidos disueltos (TDS) <1,000 miligramos por litro (mg/L); maximo de cloruros <600 mg/L; y maximo de sulfatos <300 mg/L
Agua salobre	=	maximo TDS >1,000 mg/L pero <15,000 mg/L
Agua salina	=	TDS >15,000 mg/L

Términos de Dureza:

Suave	= 0 to 60 mg/L CaCO3
Moderadamente dura	= 60 to 120 mg/L CaCO3
Dura	= 121 to 180 mg/L CaCO3
Muy dura	= >180 mg/L CaCO3

Tabla de Conversión:

Para Convertir	Multiplicar Por	Para Obtener
m	3.280	pies
L/min	0.264	galones por minuto
L/min	15.852	galones por hora
L/min	380.517	galones por día

Nota: Véase Cuadro No. A-2.

Ecuador

International boundary
Province boundary
National capital
Populated places

Approximate Scale 1:2,500,000

0 25 50 75 100 Statute Miles

0 25 50 75 100 Kilometers

GROUND WATER RESOURCES

HYDROGEOLOGIC REGIONS

I Costa
II Sierra
III Oriente
IV Galapagos Islands
Region boundary

FRESH WATER GENERALLY PLENTIFUL

Map Unit

1 Small to large quantities from alluvium <30 m deep.

2 Moderate quantities from unconsolidated and consolidated clastic sediments with large quantities locally available.

FRESH WATER LOCALLY PLENTIFUL

3 Small to moderate quantities from unconsolidated and consolidated clastic sediments <60 m deep; sources may be locally brackish near coast; springs are common in the Sierra region.

4 Very small to small quantities from recent volcanics, cataclastic rocks, porphyritic rocks, and sedimentary rocks in isolated fracture zones, generally <60 m deep; and in the higher elevations on larger islands in the Galapagos Islands; locally springs are common in the Sierra region; sources may be locally brackish, especially near coast.

FRESH WATER SCARCE OR LACKING

5 Meager to small quantities locally available from fracture zones, generally <60 m deep in impervious igneous and metamorphic rocks; isolated springs may be found.

6 Small to large quantities of brackish to saline water are available from alluvium <30 m deep and from volcanic deposits in the Galapagos Islands.

QUANTITATIVE TERMS:

Enormous	= >400,000 liters per minute (L/min) (100,000 gallons per minute (gal/min))
Very large	= >40,000 to 400,000 L/min (10,000 to 100,000 gal/min)
Large	= >4,000 to 40,000 L/min (1,000 to 10,000 gal/min)
Moderate	= >400 to 4,000 L/min (100 to 1,000 gal/min)
Small	= >40 to 400 L/min (10 to 100 gal/min)
Very small	= >4 to 40 L/min (1 to 10 gal/min)
Meager	= <4 L/min (1 gal/min)

QUALITATIVE TERMS:

Fresh water	= maximum total dissolved solids (TDS) <1,000 milligrams per liter (mg/L); maximum chlorides <600 mg/L; and maximum sulfates <300 mg/L maximum
Brackish water	= TDS >1,000 mg/L but <15,000 mg/L
Saline water	= TDS >15,000 mg/L

CONVERSION CHART:

To Convert	Multiply By	To Obtain
m	3.280	feet
L/min	0.264	gallons per minute
L/min	15.852	gallons per hour
L/min	380.517	gallons per day

Note: See table A-2.

Figura A-2. Recursos de Agua Subterranea