

Project Update: November 2012

We have located 36 interior lagoons in Sabinal Key. The lagoons are more or less grouped forming cores.

Bearing their geomorphologic origin and other morphological criteria in mind, we find three types of lagoons in Sabinal Key:

- Natural lagoons formed in the bed of former tidelands: in this set we found the major natural lagoons of Sabinal Key, they are characterised by a lengthened form in the sense of the former bed of the tideland so that the maximum length is very much larger than the maximum width.
- Natural lagoons with origin in the dilution of limestone: in this type we find the great majority of the interior lagoons. With very much minor dimensions to the first type, generally lower than 200 m in diameter, these lagoons present a regular form near the circumference
- Artificial lagoons: these lagoons have it origin in the extraction of materials for the landfill of roads and buildings of the key. The dimensions are very variable. This zone of extraction can take more than 500 meters of length and width or be considerably minor.

Salinity

Lagoons	Salinity (‰)	Lagoons	Salinity (‰)
1	3	19	0
2	0	20	0
3	6	21	6
4	0	22	0
5	0	23	0
6	8	24	0
7	7	25	0
8	0	26	0
9	0	27	0
10	0	28	0
11	4	29	0
12	0	30	0
13	0	31	0
14	13	32	0
15	0	33	0
16	2	34	0
17	0	35	0
18	2	36	0

The values of salinity were, in the majority of the lagoons, near 0 (‰) what explains on the basis of the existence of a phreatic mantle formed by water of rainfall. This contribution of freshwater is mixed to a diverse degree with the saline wedge from the nearby sea and accounts for the differences between lagoons depending on the distance to the coast. In

every lagoon there are temporary variations depending on the rainfall. So, the lagoons near the sea or in the bed of former tidelands present major temporary variations in salinity and have, on average, high levels of salinity.