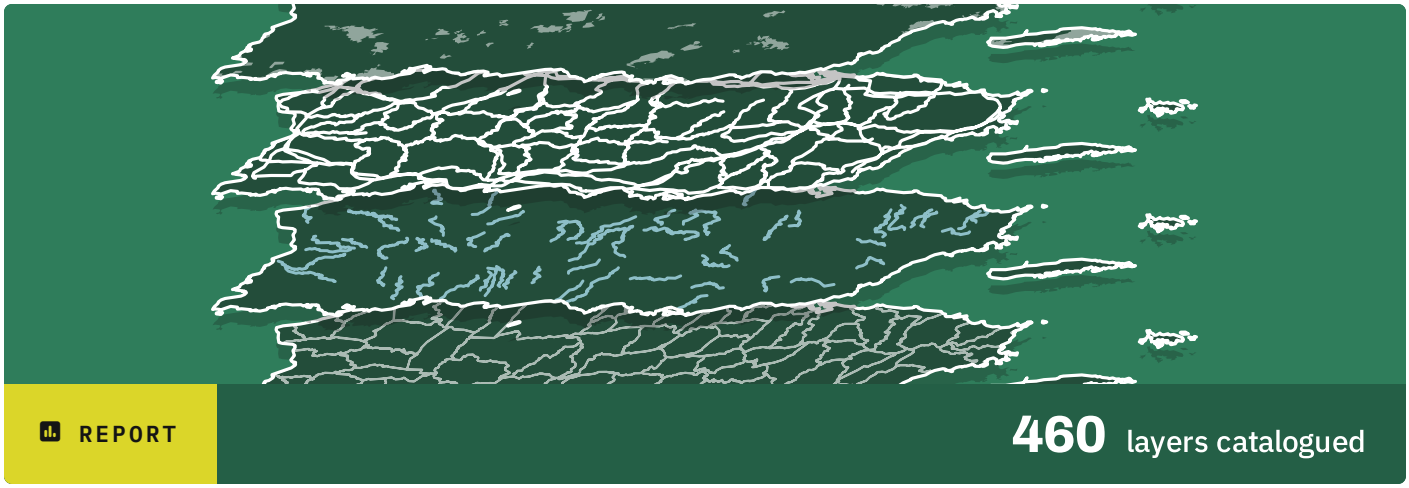
460 map layers and counting: why we keep our own copy of Puerto Rico's geodata

Every environmental review leans on government map services — zoning, flood zones, wetlands, karst, cultural resources. When they move or go down, reviews stall. So we keep our own verified copy.

OCTOBER 10, 2026 · 2 MINUTE READ · BY RICARDO A. CALDERÓN LÓPEZ



The picture: Four of the mirrored layers, stacked over the island: karst and protected areas, state roads, rivers and municipalities.

Map services are infrastructure — and infrastructure fails

An environmental review in Puerto Rico draws on dozens of public map services: the Planning Board's zoning and ecological layers, karst and aquifer maps, cultural-resource inventories, FEMA flood zones, wetlands, the tank registry, the cadastre. Those services change addresses, rename layers, throttle requests or go offline.

In October 2026 the Planning Board retired its old map address and moved its services to a new one; several layers now refuse requests from outside its own viewer. Tools that pointed at the old address simply failed.

What we keep

AVA maintains a local, verified geospatial library in PostGIS:

460	137	1,492,157
Puerto Rico government layers catalogued, with field lists and counts	layers mirrored locally — about 4.7 million features	zoning parcels from the Planning Board

Alongside them: 55 Planning Board layers (ecological value, cultural and archaeological, karst, geology, aquifers, the tank registry), 18,272 wetland polygons from the National Wetlands Inventory, 8,180 EPA-regulated facilities in Puerto Rico and a growing lossless copy of the USGS 1:20,000 topographic maps.

Verified, not just downloaded

A mirror is only useful if it is identical to its source. Each copy is checked against the service it came from, and we capture the official symbology so our maps look like the agency's.

What it powers

- **Exhibits:** 31 map generators draw FEMA, wetlands, topography, karst, critical habitat and land cover from the project boundary — 251 maps for 17 projects so far in 2026.
- **Screenings:** 279 proximity results stored for 20 projects across 25 resource types.
- **Field apps:** the tank registry and EPA facilities appear around the engineer on the phone during a site visit.

> **No AI required.** This is plain, careful data engineering — and it is the foundation every AI feature on our platform stands on.

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