Beyond the Pavement:

Why Post Construction Oversight and Authority Matters

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Legacy Developments, Legacy Problems

“To undo a mistake is always harder than not to create one originally, but we seldom have the foresight. Therefore we have no choice but to try to correct our past mistakes.”
— Eleanor Roosevelt

Roots

Many properties on Guam were originally constructed without stormwater management provisions, when there was more extensive permeable areas could absorb rainwater

Growth

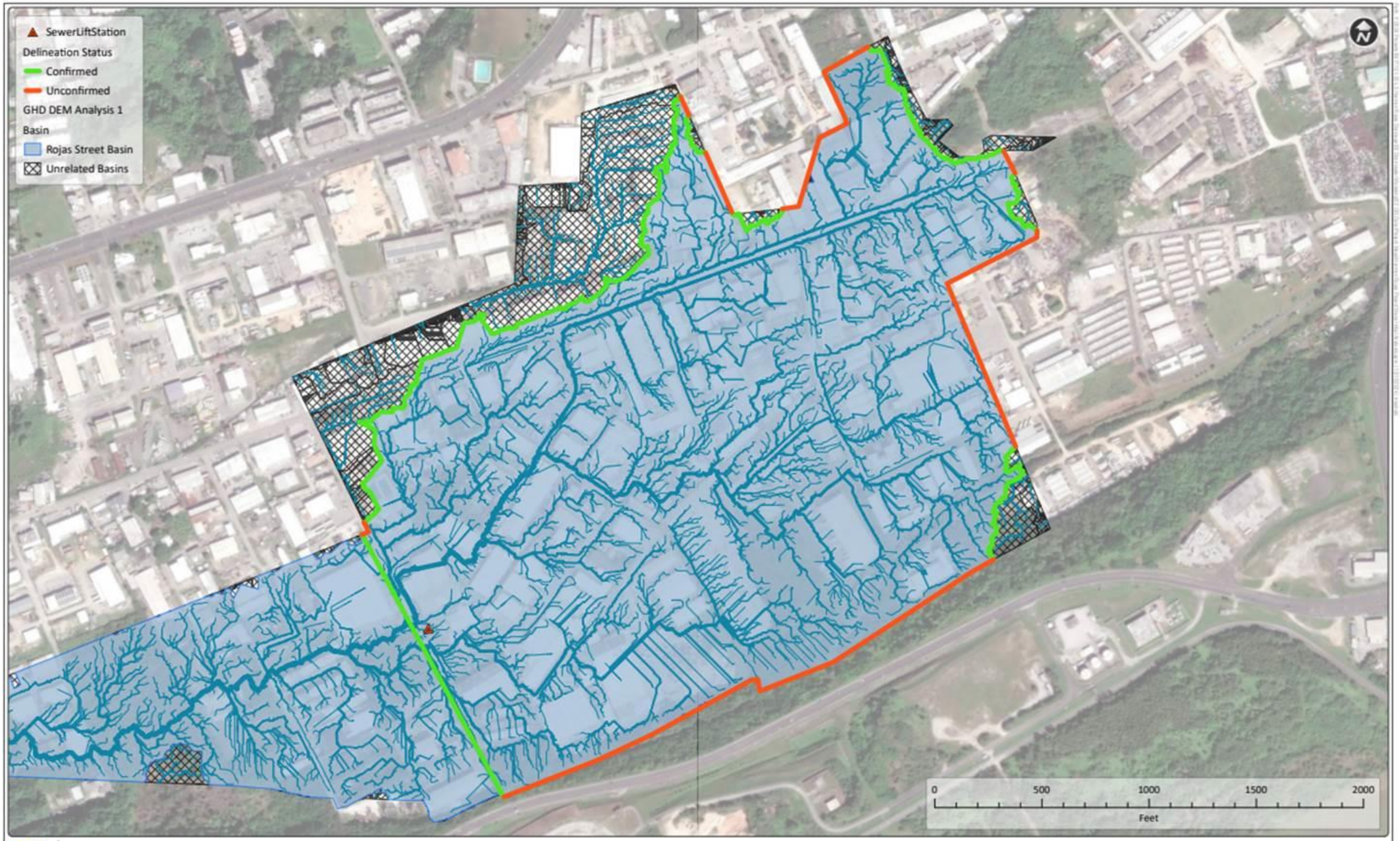
As development expanded across Guam, impervious surfaces replaced natural ground, reducing infiltration and amplifying stormwater runoff

Impact

Excess runoff overwhelms drainage systems, inundating public roadways and stressing critical infrastructure with frequent flooding and accelerated deterioration

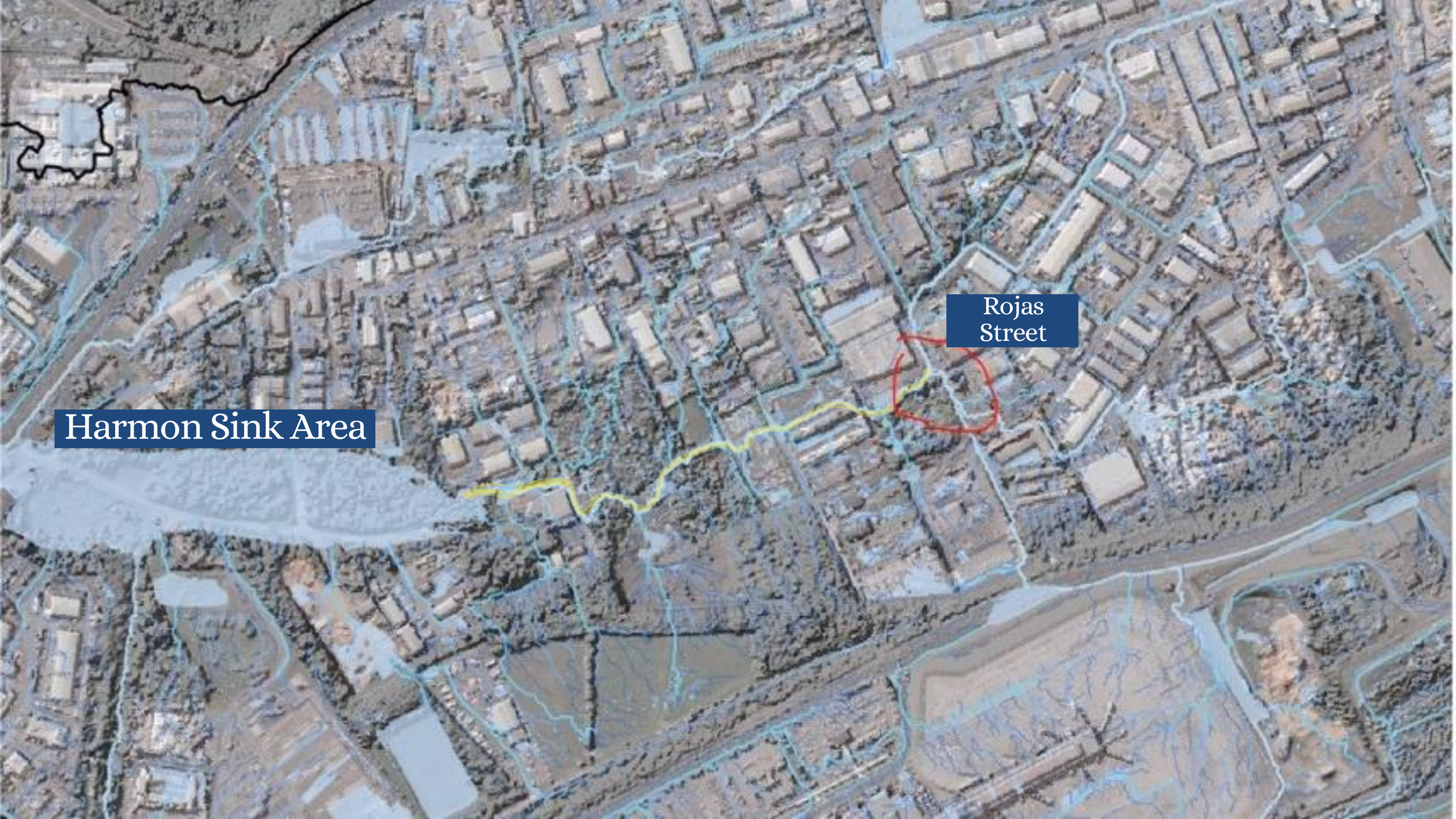
Case Study: Harmon Industrial Park

- Chronic flooding from a vast industrial watershed overwhelms the area.
- Overland flow is directed to Rojas Street, which lacks any dedicated drainage system.
- Stormwater causes the GWA sewer pump station on Rojas Street to back up and overflow.
- Heavy trucks and equipment worsen erosion along these unprotected roadways.



Harmon Rojas Basin Overview

Figure 1


Rojas
Street
Harmon Sink Area

Case Study: Harmon Industrial Park

- 210-acre watershed with 174 actively contributing acres
- Water volumes impacting Rojas St. would be significantly reduced if surrounding properties managed own water
- Drainage options limited due to potential for pollutants
- Initial drainage solution estimates totaled roughly $30 million
- Untreated stormwater ends up in the Harmon Sink

Current Legal Authority

Authority	Section	Relevance to Stormwater / Flood Control
Title 10 GCA, Ch. 47	Water Pollution Control Act	Authority to regulate pollutant discharges, indirectly covers runoff
Title 21 GCA, Ch. 62	Subdivision Law	Requires designation of drainage areas; capacity-based planning
Title 21 GCA, Ch. 66	The Building Law	Requires ESC/BMP compliance for construction activities
Title 22 GAR, Ch. 10	Soil Erosion & Sediment Control Regulations	Mandatory BMPs for construction runoff control

Our current legal authority primarily regulates stormwater-related issues at the permit stage, especially during and immediately following construction.

Why Existing Codes Fall Short

1. 10 GCA Chapter 47: Water Pollution Control- GEPA regulates new discharges, lacks retrofit enforcement authority.

2. 21 GCA Chapter 62: Land Use/Zoning- governs on site drainage for initial permitting, but parceling loopholes bypass infrastructure requirements.

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3. 21 GCA Chapter 66: Building Law- building permits for existing developments are required only when renovations or additions exceed a specified cost threshold

4. Existing regulations focus on new construction, offering little oversight or enforcement for older developments

Public resources bear the burden of fixing private runoff issues.

Current Constraints

- Limited right-of-way and fully built-out industrial parcels leave little room for drainage infrastructure.
- Acquiring easements or undeveloped land drives up project costs and extends timelines.
- High remediation expenses (soil stabilization, pollutant pretreatment) quickly exhaust budgets.
- Complex underground utilities restrict space and add coordination challenges.
- Without available land, costly underground or vertical solutions become the only options.
- Prohibitive costs forces project delays or cancellation.

In the absence of viable stormwater controls, contaminated runoff degrades water quality.

What Post-Construction Regulations Could Do

1 **Enforce**

Enable inspections and BMP enforcement for high-risk sites.

2 **Retrofit**

Require retrofitting in critical flood-prone or pollutant sensitive areas.

3 **Cost Sharing**

Establish a stormwater utility fee for parcels discharging to the road, scaled to impervious area, to fund watershed-wide drainage improvements and subsidize retrofits where necessary.

Roadmap to Resolution

- Work with policy makers to amend the GCA to grant post construction authority.
- Develop framework to mandate stormwater retrofits in hotspot areas
- Fund and incentivize stormwater planning, low-impact development, and green infrastructure
- Develop and Improve collaboration between the regulatory agencies
- Educate the public to cultivate a culture that values long-term runoff management

Together, we can close the gap, protect Guam's roadways and water resources, and build a resilient island for generations to come.

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