

Study Area: Hydrology and Drainage

Hydrology and drainage are important natural processes centered on **how water moves across the surface of the island** and where it ends up. Without proper study, infrastructure projects have the potential to disrupt this natural flow.

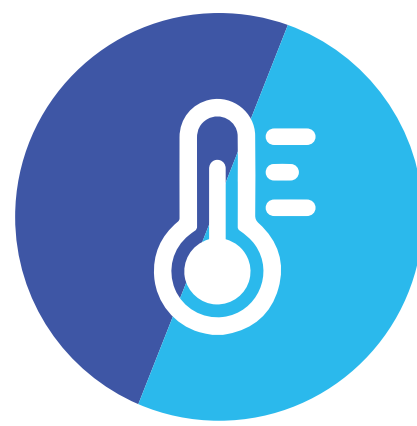
The EIA will study hydrology and draining to help make sure the EWA is designed and built in a way that delivers benefits to Caymanians while minimizing disruptions to daily life and keeping our natural spaces healthy.

The movement and drainage of water on Grand Cayman are critical to the health and safety of residents and natural resources. The EIA will evaluate the current hydrology and drainage on Grand Cayman, model how it could be impacted by the EWA extension, and recommend actions to avoid or minimize those impacts.

To evaluate hydrology and draining, the EIA will assess:



Topography



Climate



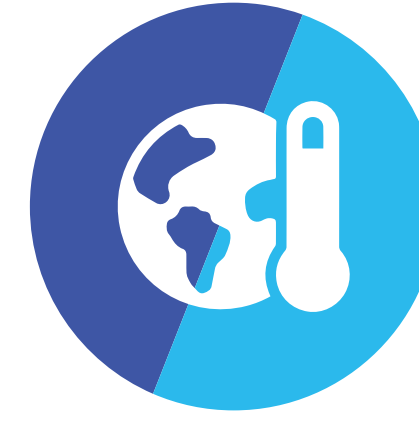
Tropical storms and hurricanes



Storm surge and flood risk

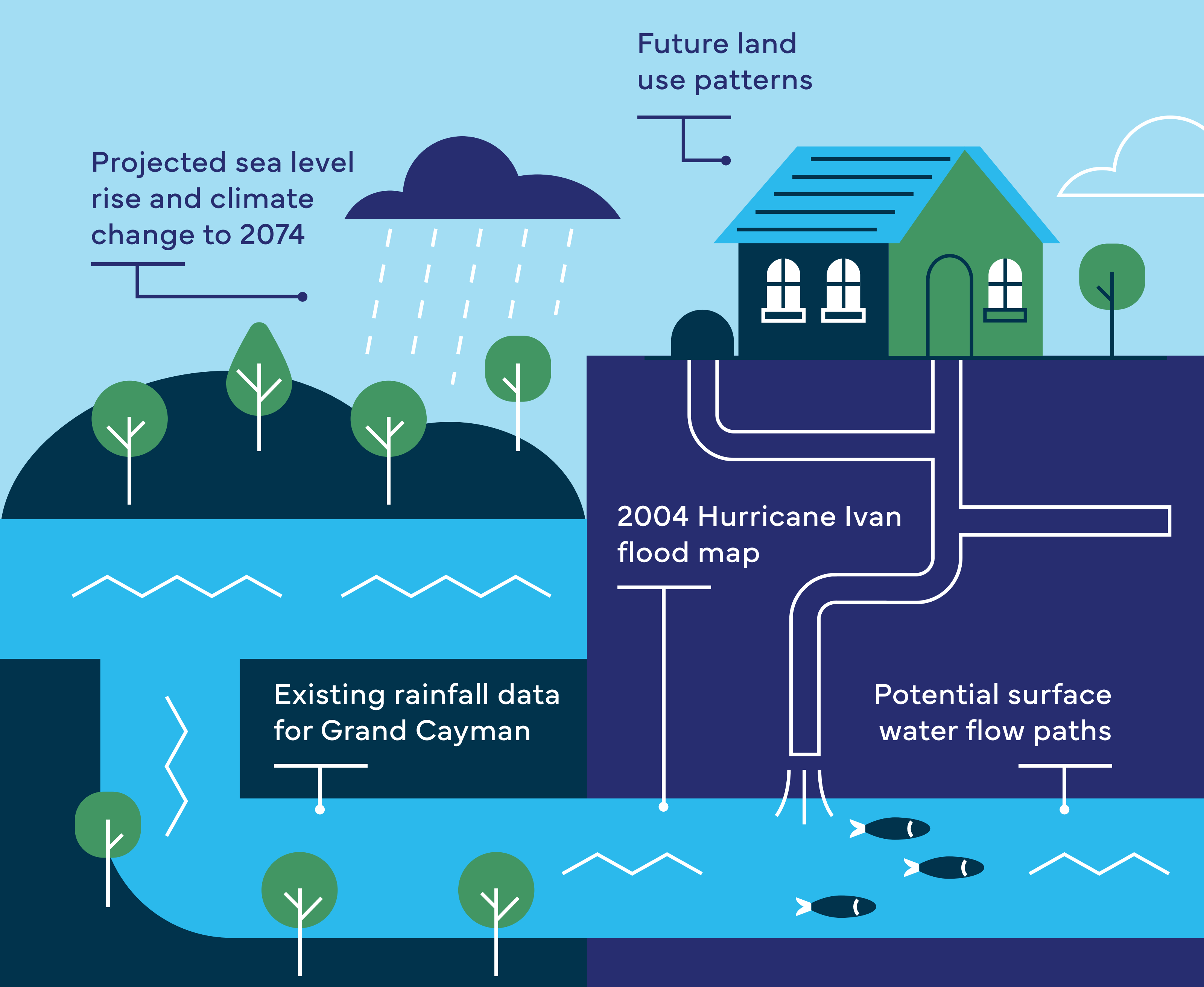


Mangroves



Climate and land use changes

The EIA will analyse a wide range of data to fully understand the hydrology, drainage, hydrogeology, and geology characteristics and the potential impacts of the proposed EWA construction:



- /// Drainage infrastructure mapping
- /// Inland conveyances and watersheds hydrology
- /// Flood water level/design water level
- /// Soils and geology information to determine the runoff curve
- /// Satellite imagery/geographical information

A leading priority for the EIA is to recommend a roadway design that will be accessible during intense rainfall events, not increase flood risk to surrounding properties or infrastructure now or in the future, and provide greater resiliency to the effects of climate change.