

COASTAL PROCESSES ALONG SCARBOROUGH BLUFFS

Coastal aspects of Scarborough Bluffs include:

- Cohesive shoreline subject to ongoing erosion.
- Historical man-induced changes in the nearshore conditions.
- Bi-nodal wave distribution.
- Historical water level fluctuations in excess of 2 metres.
- Ice formations along the shore in the winter time.
- Supply limited sediment transport.

Coastal designs incorporate:

- Gravel and cobble beaches that are perpendicular to dominant waves.
- Armoured headlands of various types that anchor gravel beaches.
- Improvements to nearshore aquatic habitat.

HOW IT RELATES TO THIS PROJECT:

Why is shoreline protection required for properties that should never have been built so close to the bluffs?

- SWP is considering shoreline protection as it relates to risk to public safety and public property (infrastructure).

Erosion is not a big concern in the Study Area and it's a natural process; why are we stopping it?

- The shoreline is constantly eroding along unprotected sections of the Study Area. Erosion and subsequent landslides pose a risk to people and structures. In areas with existing shoreline protection, bluff migration will continue until a stable slope is reached.

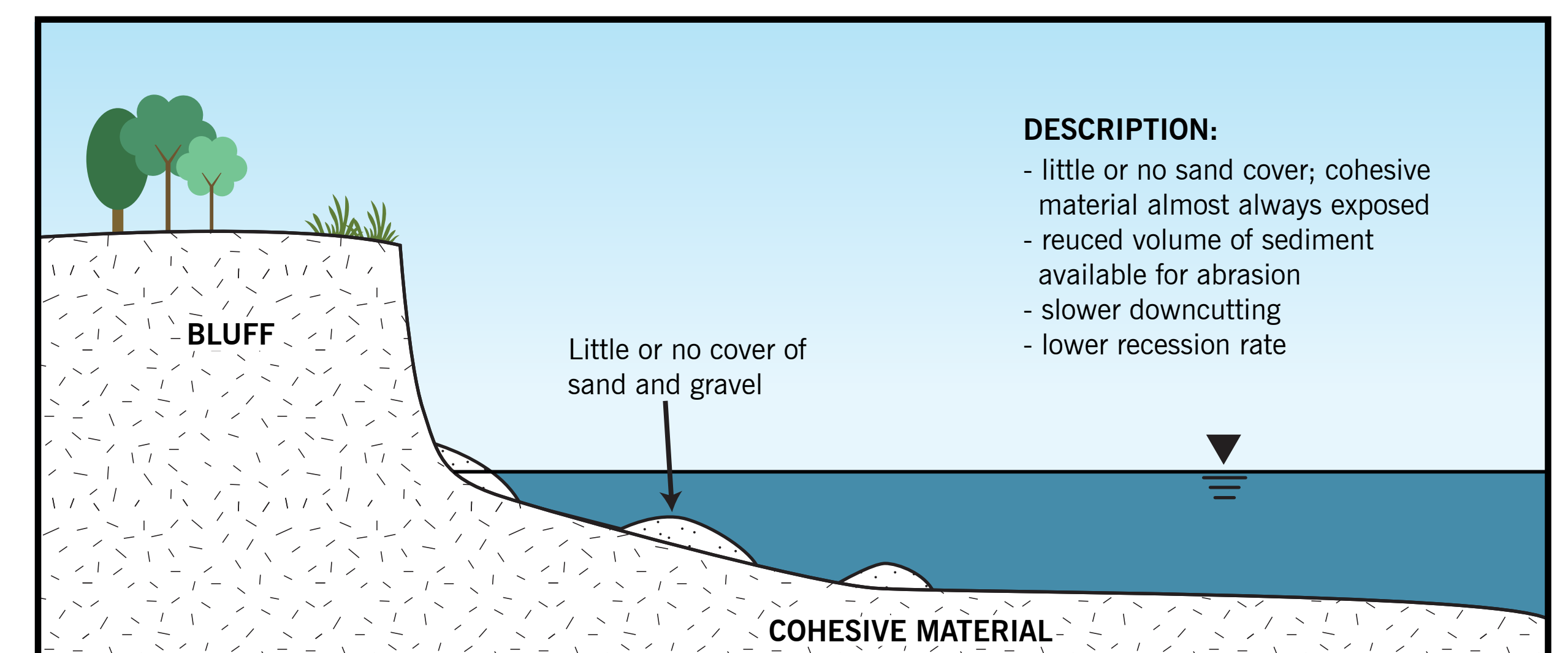
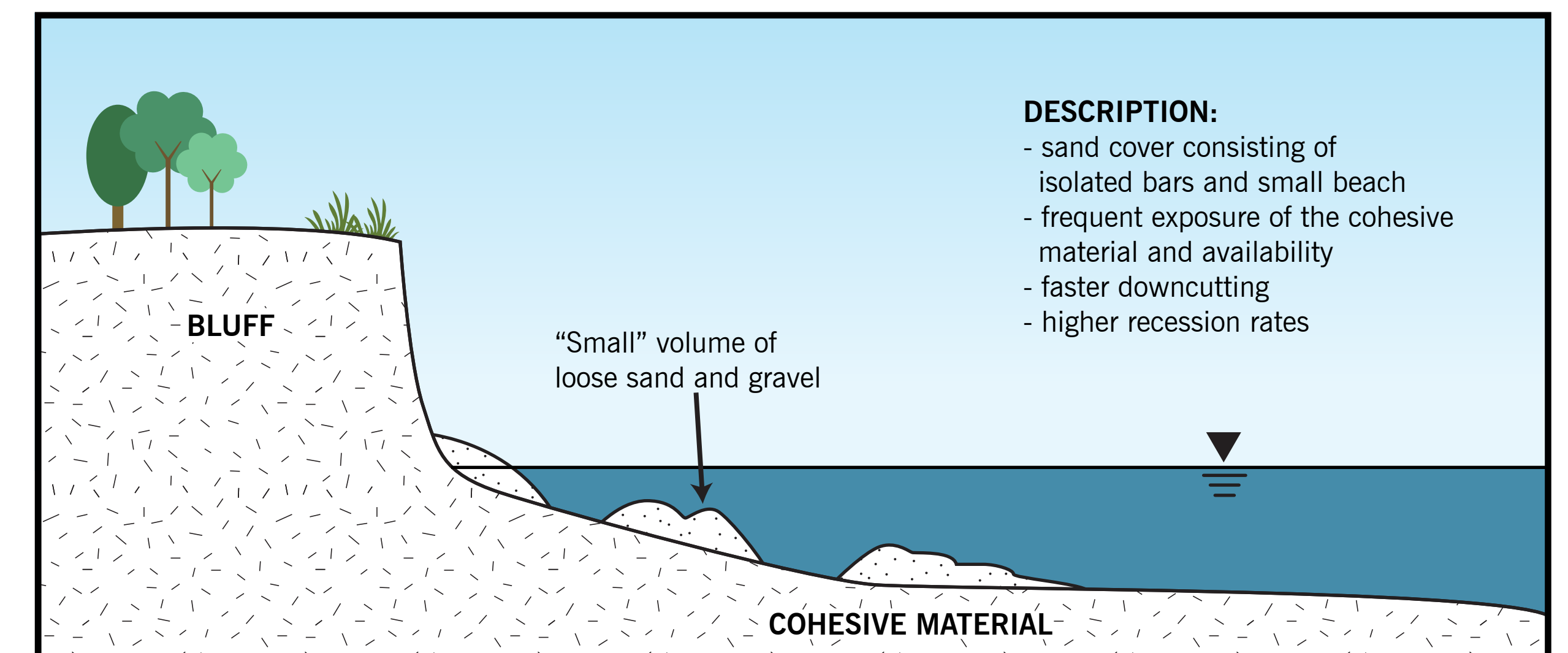
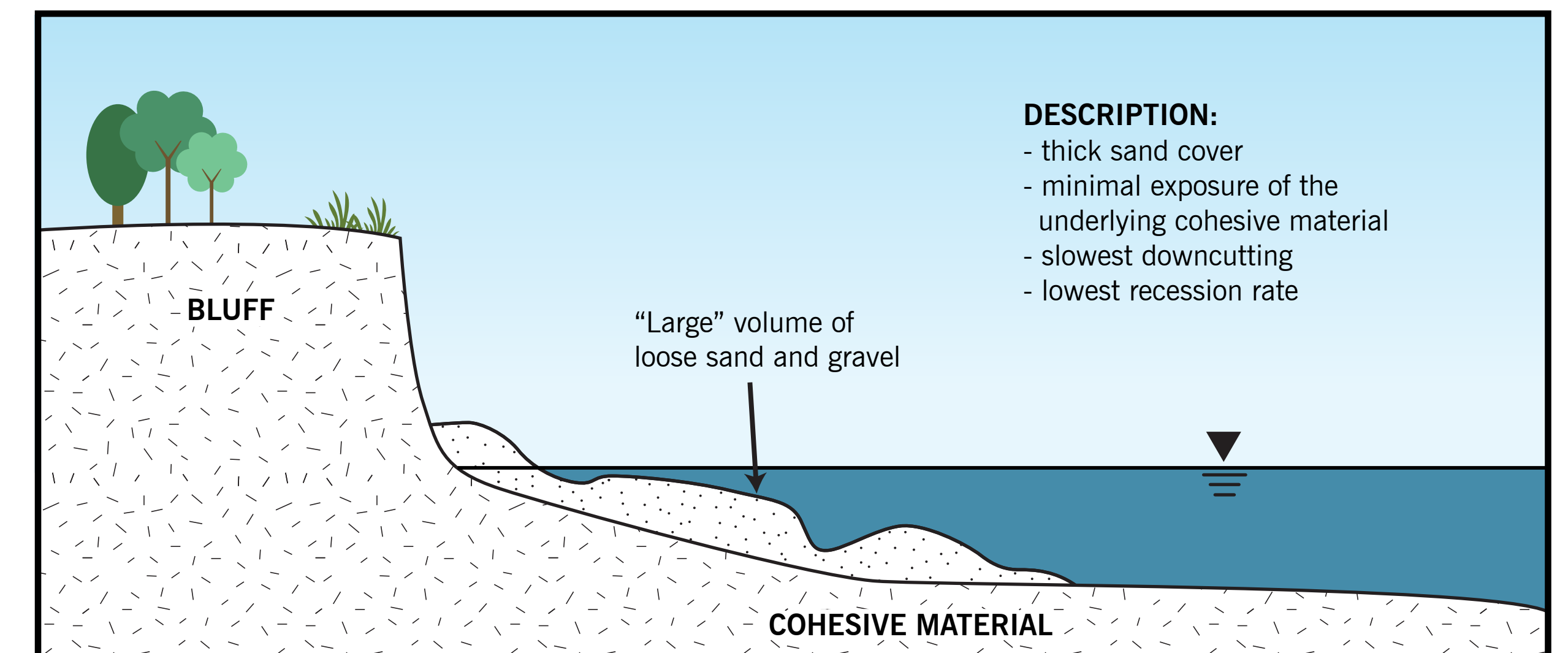


Image modified from: Ontario Ministry of Natural Resources. 2001. Understanding Natural Hazards.