

Wave propagation reports examples

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English bay beaches

Since there is no curvey wave line on the shoreline, we concluded that there are no big waves. The waves present were characteristic of a combination of both transverse and longitudinal motions. When we stood at the beaches and watched the waves, we guessed that the water moved towards the shore. However, after careful examination, we discovered that water was not piling up on the beach. When we watched carefully at some debris on the water, we noticed that a crest of a wave moved it towards the shore, but it moved back the same distance with the wave' s trough.

Since the waves are smaller, we conclude that they are surface waves, which according to oceanography are a distortion of the surface of the sea. We concluded that such a wave resulted from wind, and the waves carry energy from the offshore wind towards the shore. This means that energy moves towards the shore. From what we had learnt in class, water molecules remain at the same position, while distortions of the sea surface propagate with the wave speed.

Shoreline hardening Vs Beach Loss

Coastal erosion, like in any other beach across the world poses the main problem. The beaches in English bay derive sediments from the reefs surrounding, therefore, factors affecting the reefs including storms or decline in water quality have adverse effects on the beaches. Beach loss through erosion would definitely have a great impact on Vancouver's economy since the English Bay attracts several tourists who come for sunbathing and sunset watching.

However, it seems the authorities have taken all measures to try to counter the situation. The authorities have taken shoreline-hardening measures aimed at protecting the economic, social and wildlife sustainability. We inquired with a marine officer, one Mr. Hernandez and he confirmed that the province of British Columbia has jurisdiction over a given radius off shore. He added that the local municipal make decisions related to waterfront property. One of the major shoreline hardening measures that the municipal has implemented is the seawall, which we could see ourselves. Mr. Hernandez added that because sometimes Stanley Park and English Bay experience flooding resulting from increased sea level. This wall was mainly constructed to withstand such a natural disaster. This wall can be able to prevent flooding resulting from the concurrent storm and high tide. The seawall prevents damage, flooding, and erosion to the beach because it creates new land that can be used for public walkaways along the park.

Conclusion

Clearly, English bay can be an attractive site to any visitor. The beach has shallow waves, which bring the sand from the southern part to the Northern side. This can only mean that long shore drift direction of English Bay beach is from South to North. English Bay suffers beach loss like all other beaches in the world, and the main cause results from erosion. It seems Vancouver authorities are aware of this treasure and they have ensured shoreline hardening to ensure they counter beach loss. The authorities have responded appropriately to construct a seawall that is tall enough to prevent damage from over topping by high tide and storm wave. English bays has a nice weather and is located on the West Coast of the Pacific ocean, just like

Los Angeles, meaning in case there is an earthquake in Los Angeles, a tsunami may hit Vancouver and cause destruction to the beaches. From our research, the sand could have resulted from the accumulation of unconsolidated sediment or sediments on one side could have been eroded by waves forming sand. This sand is then carried to the other side by the long shore drift.

Work Cited

Vancouver Beaches. S. I.: General Books, 2010. Print.

Leadem, Tim. Hiking the West Coast of Vancouver Island. Vancouver [B. C.: Greystone Books, 2008. Internet resource.