

## Coastal Upwelling <sup>[1]</sup>

Submitted by Dwight Owens Mon, 2012-10-15 00:00

Upwelling is an important phenomenon that affects weather and ocean current patterns. In coastal regions, upwelling draws cold, nutrient-rich water upward to replace warm, sometimes nutrient-depleted surface waters that are blown offshore by wind. These cool, nutrient-rich waters often trigger blooms of phytoplankton, the primary producers in the world's oceans. When phytoplankton grow and reproduce rapidly in the nutrient-rich water, they can reach such high concentrations that their colour is visible in the water. Diatoms and dinoflagellates are phytoplankton typically responsible for large blooms off the coast of Vancouver Island.



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[2]

Certain dinoflagellate species and some diatoms are capable of producing biotoxins. Algal blooms in which these species are highly concentrated can be toxic to some organisms, including humans. Toxins from phytoplankton consumed by shellfish and small planktivorous fish, can be passed up the food chain to larger fish, marine mammals, and humans.

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document.getElementById("breadcrumb"); if (ONC_breadcrumb) { var ONC_innerHTML =  
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- [Newsletters](#)
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- [Images](#)
- [State of the Ocean](#)

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(function () { var d = new Date; var year = d.getFullYear();  
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