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## Long term trends in phytoplankton productivity in McMurdo Dry Valley (Antarctica) lakes

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The McMurdo Dry Valley lakes are highly responsive to changes in climate. More than 20 years of phytoplankton productivity data reveal that these lakes produce up to 9000 kg of new carbon per year. The rate of carbon production is strongly influenced by available light, which is controlled to a large extent by the thickness of the permanent ice cover. In addition, the diffusive flux of inorganic nitrogen and phosphorus from deep aphotic waters exerts a continuous control on primary productivity, whereas large temporal changes in productivity are related to stream input during warm, high flow years.