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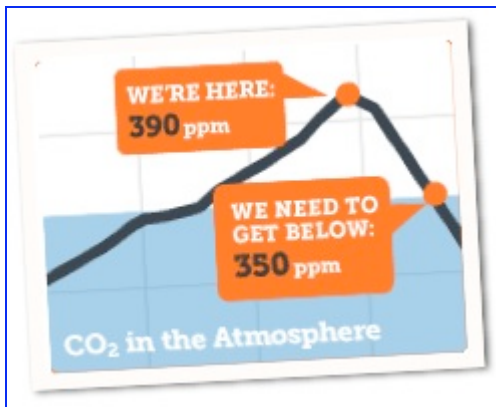


Beam Reach

- [Home](#)
- [About the 10-week program](#)
 - [What will you study?](#)
 - [Who will you meet?](#)
 - [Where will you live?](#)
 - [Dates, credits, costs](#)
- [Sights & sounds](#)
 - [Photo gallery](#)
 - [Sound library](#)
 - [Maps](#)
 - [Videos](#)
- [Get in touch](#)
 - [Ask a question](#)
 - [Follow Beam Reach](#)
- [Apply](#)

- [2010 fall](#)
- [Homepage](#)
- [Sustainability](#)
- [The boat - Gato Verde](#)
- October 4th, 2010 by [Scott Veirs](#)

[From 350 ppm to 350 orcas?](#)



This Sunday (10/10/10) Beam Reach will be joining thousands of other 350.org activists around the globe to *do something* about global warming. If you'd like to help reduce the concentration of carbon dioxide in the atmosphere from its current level, 390 parts per million (ppm), back down to what scientists say is a safe limit (350 ppm), then [type your zip code into this search engine](#).

If you can't find an inspiring action to join this weekend, we recommend that you [use this cool website to make your home more efficient](#). Not only does the site provide a prioritized list of actions you can take to reduce your carbon footprint, but also it shows you how you can save money through conservation. It turns out green is gold!

We who live in Washington State have a special obligation to reduce our energy use. Not only do many of us contribute to global warming by burning natural gas or fuel oil to get through the cold months, but our electricity use is directly impacting the hunger level of one of our most cherished regional icons: the killer whale. You might think that because Washington Public Utility Districts get 82% of our electricity from hydropower, that we're pioneers of sustainable energy use in America.

The problem is that we've recently learned that our local orcas love eating chinook salmon, particularly the big fish that return to the Columbia and Fraser Rivers. Unfortunately, the same dams that provide our power are preventing the recovery of chinook populations on the Columbia and Snake Rivers. Reducing our energy use in Washington is a direct way to allow more water to be spilled over dams in the short term (increasing smolt survival) and more dams to be removed in the long term (giving adult salmon easier access to pristine habitat). With plenty of salmon to power them through the winter, perhaps our orcas could recover from their current ~85 animals to their historic 150, bringing the combined (southern and northern) resident killer whale population to 350 itself!

On land at Beam Reach headquarters in Seattle, we're always humbled when the students at sea report their water and energy use levels. Their typical daily water usage is only 2.5 gallons/person/day! In comparison, in our typical residential house we use 40 gallons/person/day. All energy on the Beam Reach boat comes from biodiesel, and the students' usage is about 0.5 gallons/person/day.

At sea, we'll be continuing our efforts to practice sustainability science. We'll be powering our studies of endangered killer whales with biodiesel bought from local supplier [Island Petroleum Services](#). We'll also be discussing the science and ethics of deriving liquid fuels from oceanic plants while filtering some plankton and taking a first stab at extracting their oil for conversion to biodiesel.

x

There are many paths forward and many questions yet to answer, but we hope you'll join us in taking a few practical steps this weekend.

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- [2010 fall](#)
- [Alumni news](#)
 - [Jobs and further study](#)



- [Homepage](#)
- [Past voyages](#)
 - [2005 fall](#)
 - [2006 fall](#)
 - [2007 fall](#)
 - [2008 spring](#)
 - [2009 spring](#)
 - [2010 spring](#)
- [Research](#)
- [Science Blogbook](#)
- [Sustainability](#)
- [The boat – Gato Verde](#)
- [Uncategorized](#)

• **Posts Calendar**

October 2010

S	M	T	W	T	F	S
				1	2	
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

[« Sep](#)

• **Tags**

[acoustic tag](#) [aquarium](#) [array](#) [BC](#) [big waves](#) [boat](#) [brett](#) [calibration](#) [ceremony](#) [courtney](#) [dalls](#) [dinghy](#) [education](#) [ferry](#) [fish](#) [fish tag](#) [fort](#)
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- [Michael H Boulton](#) on [Photos from the first 2 weeks](#)
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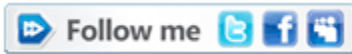
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