

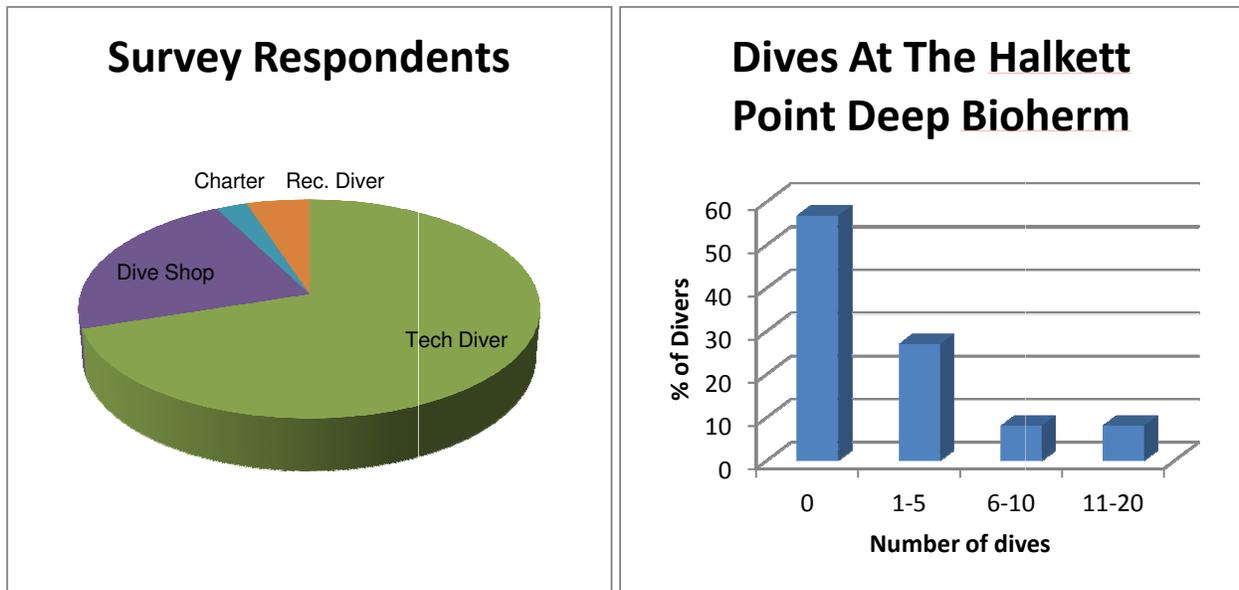
Summary Report of the 2014 UCBC Survey regarding placement of a mooring buoy at the Halkett Point deep reef bioherm and sponge garden.

Background

Glass sponge bioherms (a habitat for rockfish and possible nursery areas for rockfish) are reefs made up entirely of sponge. As sponge dies, new sponge slowly grows on top of it, creating pinnacles hundreds of feet high. Several bioherms have been discovered in Howe Sound that are within recreational diving limits. One such location, currently nicknamed "Sponge Bob" receives regular visits from divers and is consequently taking heavy damage. This is a difficult dive requiring a direct descent to 90 feet and potentially strong current.

Howe Sound is the only known site in the world where humans can air dive on and study the biology of sponge bioherms, hence protection for these unique habitats is highly desirable. Harvesting data and presenting facts about the sponge bioherms would be beneficial to reach this goal of more public awareness and then full protection for the bioherms.

Weighted drop lines that divers use to descend/ascend and poor buoyancy skills are the primary causes damage to the bioherm. As glass sponge grows at a rate of only 2-7cm per year, the damage done on a single dive can easily destroy decades of growth.





Respondent Comments

- Due to depth considerations alone, this is not an open water dive. Access should be limited to divers with adequate experience in deep dives with square profiles and with excellent buoyancy control. Minimum of 50 dives with at least 10 dives to a 100 feet or more might be a good benchmark, however, number of dives does not always indicate good buoyancy control and common sense.
- a minimum of 100 dives in cold water. And a certain amount of education on the site they are going to and what they need to be mindful of.
- 150 dives means a serious diver should have buoyancy by then.
- However, see above comment. Collecting more tickets doesn't establish utter competency.
- Even if a mooring bouy exists at the site, divers should be comfortable with solo free ascents in low vis, high current conditions and they should be able to SAFELY deploy a safety marker without relying on a buddy.
- Divers will have to be educated before heading down on the bioherme there could possibly be a lot of accidental fin damage but this is better than anchor damage. People who dive this should at least be an advanced diver or have at least 30 cold water dives.
- A certified diver should be able to manage buoyancy such that reef damage is not an issue. If the certifying agencies are producing divers that can't control buoyancy then I strongly suggest that the curriculum be improved such that graduating divers have the basic skills that they need. Adding new certifications to teach divers what they should already know doesn't make any sense to me.
- I don't think it is realistic to impose certification limitations. Rather, education of dive operators is key and that they establish check out dives and a standard for when they feel it is responsible to take divers on such sites.

- Advanced +
- There is primarily only one operator delivering divers to these sights. They should ensure that proper protocols are being followed - it's not just about the money.
- Experienced divers with good buoyancy skills and some form of redundancy (not spare air). This could be any diver cert. experience is subjective. Cards are subjective. I don't have a suggestion how you could weed out the shitty divers with bad buoyancy and careless finning. They exist at 100 and 1000 dives.
- 40-50 dives in cold water should be sufficient for most divers. Advanced certification if you are referring to PADI. Stating that the dive is for Advanced divers only with excellent buoyancy skills, weeds out newer divers who are not confident in their buoyancy skills yet.
- I would think it reasonable for dive operators to restrict this site to divers who have at least completed an Advanced Open Water Certification, unless they have 50+ logged dives. That will allow access for (what I would estimate to be) a fairly large percentage of local divers, while excluding only the greenest ones, who shouldn't be out there anyway.
- Too difficult to enforce, and I don't support a rule just so LDS can get more money offering courses. Divers that sign up should have "x" number of dives, and someone/their buddy needs to vouch for each other. If the LDS is organizing the charter, they have a good idea who has done X dives, as they do the tank fills. People who pay and take a course may not necessarily master neutral buoyancy, may not have good situational awareness, may not be comfortable in current, may not be comfortable doing a blue water ascent. Basically, access to the site is restricted as one needs a boat. Most of the dives are conducted off of the commercial charter, Topline. So they need to work with the LDS to vouch for divers ability/experience, not the number of cert cards they have in their wallet.
- Should be absolutely mandatory divers be able to demonstrate advanced buoyancy and propulsion techniques as well as provide proof of experience through logged dives.
- Good buoyancy control...which does not necessarily mean a certification level or number of dives. Pre-screening of divers or only taking divers that you know are capable.
- Profency not "specialty cards"
- No one with less than 100 dives should be allowed on this site. It is high current, poor visibility and extremely delicate. This is no place for newbies.
- Yes, absolutely! Divers should have minimum 100 cold water dives and have advanced certification, be it peak performance buoyancy, or rescue diver certified or higher. They also should have a "check out" dive where they have been observed by charter operator as having sufficient buoyancy skills.
- At least 100 and most in around the 100 ft depth
- enough to suggest buoyancy control
- minimum 50 dives
- Every diver has a different skill set at any particular level of certification. I only have open water but can control myself to stay off the bottom. I have seen instructor level divers and trash the bottom without any regard. And there is every level of competence in between. I think this may be a chance for everyone to pull up their socks on their skills and suggest a series of signs be staged along the buoy line descent to encourage all divers to stay off the bottom, and maybe suggest to new divers to stay up on the sponge garden and out of the bioherm.

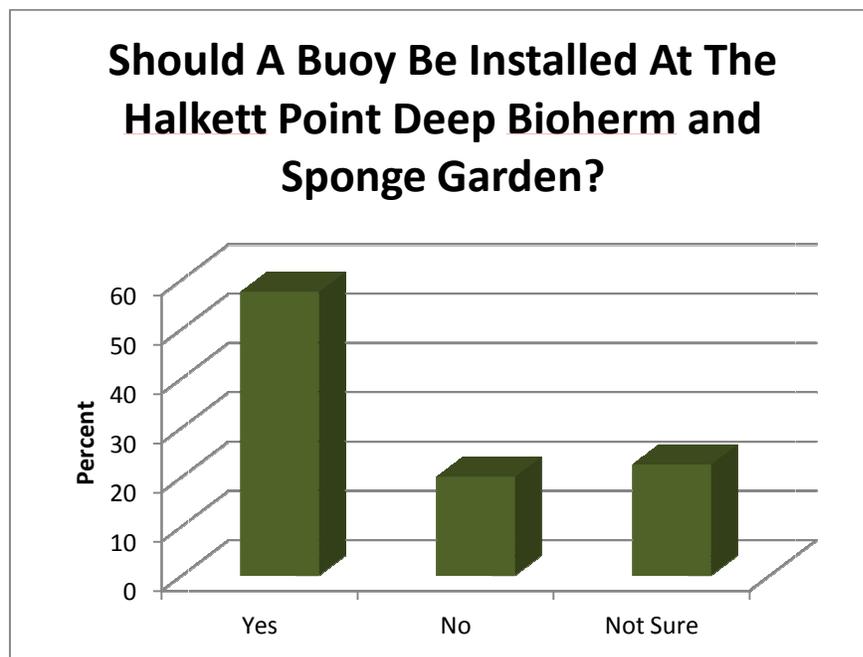
Should A Buoy Be Installed At The Halkett Point Deep Bioherm and Sponge Garden?

The Halkett Point Deep Reef Bioherm is unique, as it is the only known bioherm with a sponge garden beside it. Both have different eco-systems attached to them and neither is well understood by marine biologists.

Typically, UCBC Mooring Buoys use existing geology to anchor everything in place. The geology at the Halkett Point Deep Reef Bioherm does not allow for a natural anchor. Something will need to be installed, which will add to the project costs, compared to other UCBC mooring buoys.

If we proceed, anchoring blocks would be placed on the top of the peak at, 75 - 80 ft, in the sponge garden. For a while after installation, there are going to be blocks that, do not look natural. (i.e. we have changed the natural wild appearance of the site.)

The UCBC is open to ideas of mitigation of the look of the blocks, by piling rocks around them or other methods.



Respondent Comments

- If the placement of a mooring bouy results in more than anticipated diver caused damage to the bioherm/garden -at which point would it be removed? Who would decide?
- I'm not so sure putting a buoy is a good idea as compared to having the top line continue to be a live boat. Also with the buoy, then anyone with a boat can tie up, i.e. newly open water cert diver, and do their first dive on sponge bob. Not a pleasant thought. Just my 2 cents.
- the charter operators who will profit from the mooring buoys should bear the installation cost

- Adding a buoy will result in the destruction of the fragile ecosystem, rather than protect it.
- I am a director of the UCBC but I tried to set that aside in answering this questionnaire. Foremost, I am a diver who appreciates the abundance of natural beauty underwater, and the importance of maintaining this environment against man's imposing damages (including divers). I truly believe the mooring buoy program best accomplishes those goals.
- Consider hiring a commercial dive company to drill in anchor 'eye' bolts directly to the bedrock. If a barge or log boom catches the buoy it could potentially drag the buoy AND anchor block through the sponge garden or bioherm destroying what we are trying to protect.

Conclusions

Although the majority of respondents are in support of the installation of a mooring buoy at the Halkett Point deep reef bioherm, this remains a contentious issue which should not be decided upon lightly. The hazards associated with diving this site as well as potential damage to the sponge from increased diver traffic must be carefully considered. Additional site surveys and consultation with experts at the Vancouver Aquarium will be required before a final decision can be made. Whether a buoy is installed or not, it is clear that training beyond Open Water certification is indicated. We have already begun discussion with local dive training centres to determine the most appropriate course of action.

We would like to thank all respondents for their time and input. All comments will be taken into account as we move forward with this project.