

Sound Sounds

Listening to the Undersea Noise in Puget Sound

Narrator:

Puget Sound from above – a picture of serenity and quiet beauty. But under the surface – a different story.

Researchers from the Applied Physics Laboratory of the University of Washington have “bugged” the Sound with underwater listening devices since mid-2009.

Chris Bassett:

By all objective measures, Puget Sound is a noisy place. And this is due to the amount of vessel traffic in the area.

Narrator:

APL’s Chris Bassett says what he hears is coming through loud and clear. One ship passing by overhead as it sounds underwater.

Bassett:

A ship is generally very loud and covers a broad range of frequencies or pitches.

Narrator:

Bassett says vessel traffic is the most significant noise source. . . . Breaking waves, precipitation, biology, and sediment moving on the seabed are other common underwater noise sources.

In spots, the Sound sounds like a maritime Times Square. Admiralty Inlet is a major traffic choke point.

Bassett:

. . . due to the local ferry routes going all over Puget Sound and up to Victoria... due to the ports of Seattle and Tacoma... due to Navy facilities as well as a large amount of recreational traffic.

Narrator:

Chris Bassett’s underwater listening project began as part of the Snohomish Public Utility tidal energy project in Admiralty Inlet.

Bassett:

Our basic listening tool is a stand-alone hydrophone. And by stand-alone, what I mean is this is a system that contains the power source or the batteries, an internal data acquisition system and storage device, which is an SD card, and then a hydrophone, which is just the equivalent of an underwater microphone.

And those are deployed on a mooring that goes on the seabed for three-month deployments. We recover the tripod, put in new batteries, download the data, and replace them over and over again to build these long time series.

The noise that humans cause in Puget Sound – we’re interested in pulling out the patterns and just how significant the noise levels created by humans in Puget Sound are.

Narrator:

Bassett is concerned that noise made by humans could be hard on marine life in the Sound.

Bassett:

Noise has the ability to interfere with their ability to communicate with themselves or to forage and hunt for prey. Essentially, all of the complex tasks that marine mammals perform, they perform with sound. So if we limit their ability to hear, we’re limiting their ability to perform.