

# HMSC Nature Trail Quest

**Established:** July 2012 by Oregon Coast Quests

**Box Monitor:** HMSC Visitor Center

This Quest covers about 1/2 mile on a paved pathway, and takes approximately 45 minutes to complete. Dogs are not permitted on the estuary nature trail. Bring binoculars for birdwatching, and boots if you want to explore the mud flats.

The trailhead for the HMSC Estuary Nature Trail is located between the Oregon Coast Aquarium and the Hatfield Marine Science Center (HMSC) complex. To get there from Newport, drive south on Hwy 101, cross the Yaquina Bay Bridge, get off at the first exit after the bridge, and follow signs to the Oregon Coast Aquarium. Park in or near the Oregon Coast Aquarium's SEA LION LOT, located at the northernmost end of the facility. Walk away from the aquarium entrance and follow the NATURE TRAIL sign, which will take you east on a short, paved, access road. Begin your Quest at the HMSC back entrance gate.

## Let's begin!

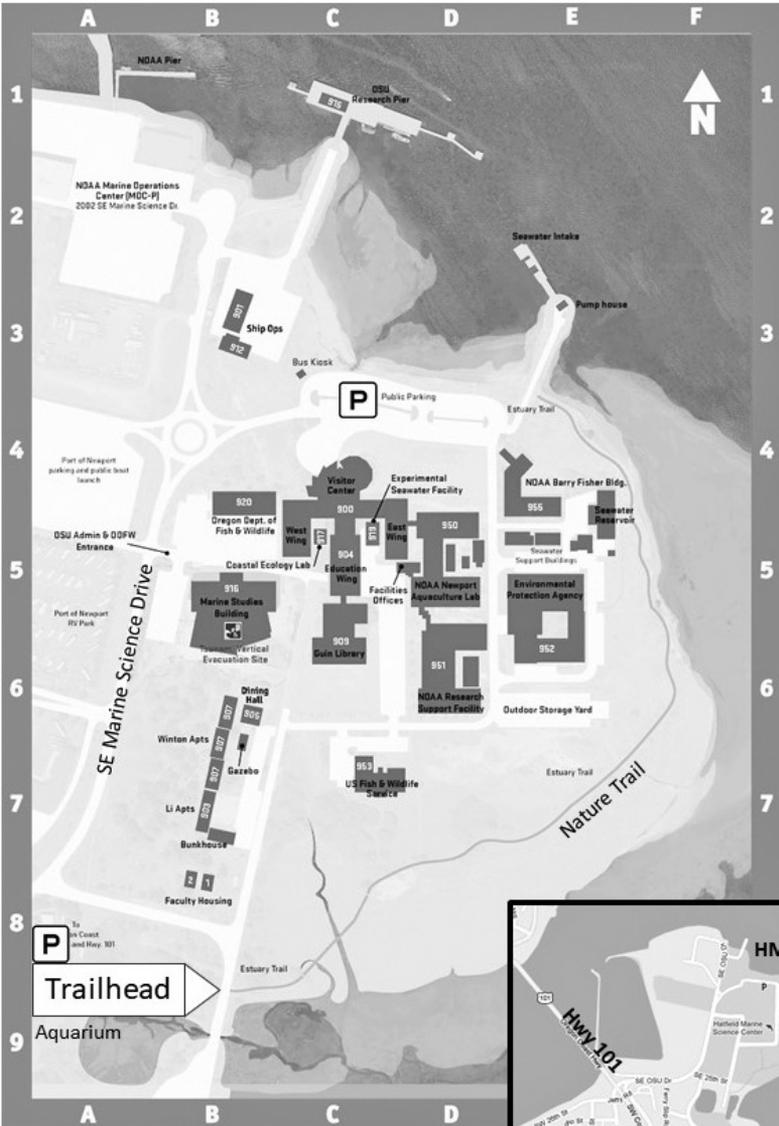
In this place of constant change  
Between the river and the sea,  
Freshwater and saltwater meet  
In the Yaquina ESTUARY.

To the west, in the distance,  
The Yaquina Bridge shows  
The location of the sea  
From which saltwater flows.

From the east, past the marsh  
The Yaquina River runs,  
Bringing freshwater runoff  
From inland mountains.

To begin, find the trail  
Near a colorful sign (not white).  
At the bottom of the post,  
A clue hides out of sight.

Use this map to help you solve the Quest. Follow the directions and collect the letter clues to fill the numbered squares on the last page of this Quest. The message you complete will help you find the hidden Quest box.



**Quest Partners**

HMSC Visitor Center • Oregon Sea Grant

Write the letter that you find  
In the square number 1.  
Now continue your Quest  
And let's have some fun!

Check out the small cove  
Right next to the trailhead.  
Is it filled with water now?  
Or is it drained instead?

The semidiurnal tides  
Of the mighty Pacific  
Means water ebbs and flows  
On a schedule quite specific.

Walk quietly down the path  
Toward a pole as tall as a tree.  
Sometimes ospreys nest on top.  
What other birds do you see?

You may see great blue herons,  
Great egrets, gulls, or ducks.  
Many species migrate,  
So their numbers are in flux.



### ***QUESTION for the Curious***

*Is the tide coming in or going  
out right now?*

*How can you tell?*

*The answer to this and other  
questions are in the Quest Box  
at the end of your journey!*

On the wooden bridge,  
Tree swallows may be  
Peeking out from nest boxes.  
How many do you see?  
Is there life down there  
In the muddy, narrow trench?  
What sounds can you hear  
When you stop near the bench?

Check under the bench  
For your next hidden clue.  
Write the letter you find  
In square number 2.

This is the salt marsh.  
Note the plants living below.  
These are halophytes, which  
Means "salt-plant," you know.

Jaumea, pickleweed,  
Saltgrass, owl's clover...  
These plants do just fine  
When the tide washes over.

At the end of the bridge  
Stands an evergreen tree.  
It's a Sitka \_\_\_\_\_;  
Its first letter is clue 3.



This tree stands in the upland  
So it skips a salty soak.  
“Shake hands” to feel its needles. But  
carefully—they poke!

***Did You Know?***

*The Oregon coast experiences semidiurnal tides, which means we have two high tides and two low tides each day. The sea level rises over several hours (flood tide) until it reaches high tide, and then falls over several hours (ebb tide) until it reaches the low tide.*

Unlike the plants of the marsh,  
The plants here in the upland  
Don't need to be halophytic—  
Though they still must tolerate sand.

Ahead the trail divides,  
But stay straight, careful readers.  
Going left would lead to  
HMSC buildings and bird feeders.

But before proceeding on,  
Check the two pine trees.  
Clue 4 is hiding low  
Near the trunk of one of these.

Go forth, find a sign with terms  
Like “benthic” and “anadromous.”  
Does the second letter on the sign  
Fit space 5? Yes, it does!

Some species spend just  
Part of their lives here.  
But without this estuary  
Their future would be unclear.

Lots of food, shallow water,  
Plenty of hiding places...  
Estuaries serve as “nurseries”;  
We must protect these spaces.

At the next sign,  
You get a better view.  
Eyes closed, take a breath.  
What's the air smell like to you?

Check the sign. Clue six  
Of your mystery word  
Is the second letter in the name  
Of the crab-holding bird.

Are there birds outside today?  
Are they flying? Are they still?  
Do you see any birds  
Holding food in their bill?

Birdwatching, crabbing, fishing...  
This is a place for recreation.  
Many people live here;  
Others come on vacation.

Who makes a living  
Here in the bay?  
Try your hand at "I Spy."  
What can you find today?

After the brown wooden shelter,  
The paving may come to an end.  
Erosion reclaiming the path  
Requires making amends.  
A dynamic revetment  
Has been placed along the shore  
In an attempt to stop the sea  
From taking any more.

**Check off all that you can see**

- Channel marker  
(red triangle)*
- Liquid natural gas tank*
- Sailboat*
- Residential homes*
- Power boat*
- Oregon Coast Aquarium*
- Weather instruments*
- Someone fishing*

The smooth river rocks  
And snags chained in place  
Were brought here on purpose  
To transform the space.

**QUESTION for the Curious**  
*What is a dynamic revetment?*

Turn around, go back to the shelter,  
Where a sign waits for you.  
The seventh letter of its title  
Is your 7th clue.

Though you now have all the letters,  
They look a little strange.  
To find out where to look next,  
They must be rearranged:  
3 – 6 – 5 – 2 – 7 – 1 – 4

The resulting word tells you  
Where the Quest Box hides!  
Search low under a circle  
Near its outsides.

Explore the box's contents.  
Put it back when you're done.  
Then explore the marsh and mud  
And continue to have fun.



*Fill in the boxes with the answers to the clues to solve the Quest.*

<input type="text"/>						
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>

*When you've found the Quest Box, sign your name and stamp the back of your book to mark your accomplishment. Don't forget to seal the box tightly and return it to its hiding place for the next person to find!*