



# Depth Sensor Node Bridge Mounted Replacement Procedure

This guide explains how to replace an Open-Storm bridge-mounted depth sensor node.

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## TOOLS:

- [Adjustable Wrench](#) (1)
- [Cleaning Rag](#) (1)
- [1/2" Socket Wrench](#) (1)
- [3 4" Socket Wrench](#) (1)
- [Tape Measure](#) (1)

*Bringing a weight and means to attach it the tape measure can be useful for the sensor to river bed measurement*



## PARTS:

- [1/2" Hex Nut](#) (4)

*Two nuts for each, the top and bottom, small strut channels connecting the node to the long strut channel*

- [1/2" Hex Head Screw](#) (4)

*Two screws for each, the top and bottom, small strut channels connecting the node to the long strut channel*

- [3/4" Hex Nut](#) (4)

*Two nuts for each of the two U-brackets*

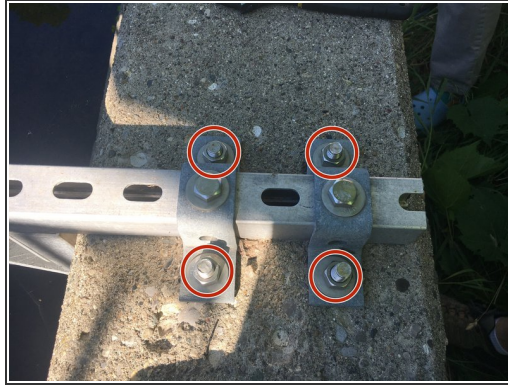
- [316 Stainless Steel Washer](#) (8)

*One for each of the four U-bracket mounts and one for each of the four small strut channel mounts*

- [Open-Storm Depth Sensor Node](#) (1)

- [Padlock](#) (1)

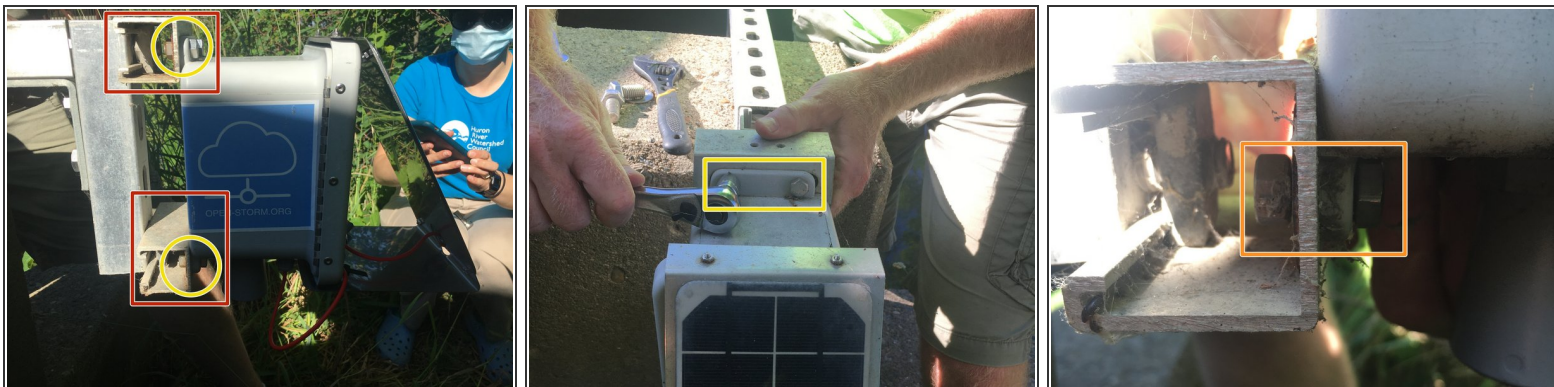
## Step 1 — Removing the U-brackets from the bridge mount



- Using an adjustable or socket wrench, remove the four 3/4" nuts and washers from the U-brackets attaching the long strut channel to the bridge.
- ⓘ Hold the node and long strut channel securely to ensure that they do not fall during this process.
- Note: You do not have to remove the two 3/4" hex head screws and washers attaching the U-brackets to the long strut channel.



## Step 2 — Removing the old depth sensor node from the small strut channels



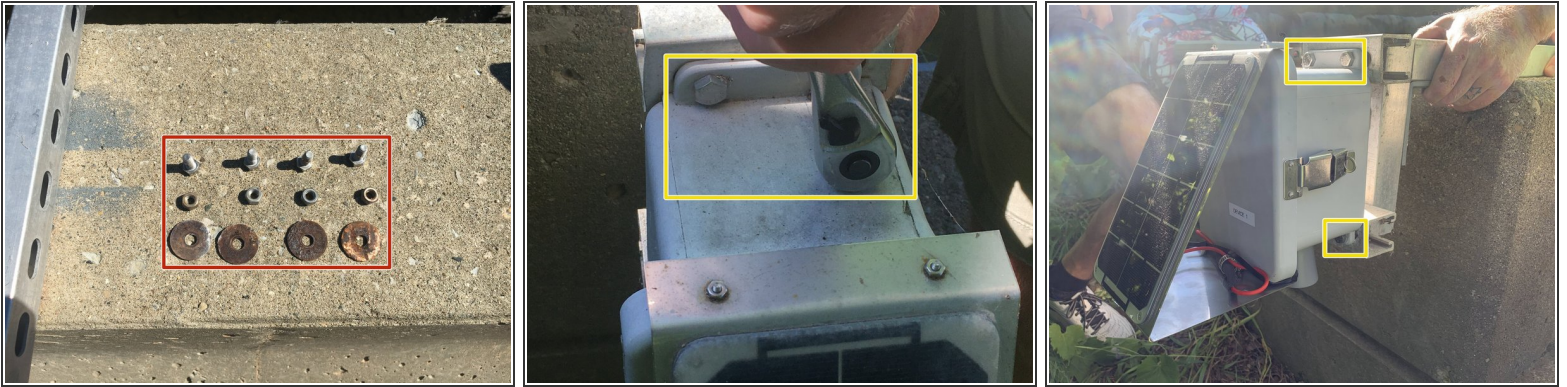
- These are the two small strut channels attaching the node to the long strut channel.
- ⓘ Before removing any parts, rotate the long strut channel (still attached to the node) so that it is no longer over the water.
- Using a 1/2" adjustable or socket wrench, remove the four 1/2" hex head screws attaching the old node to the small strut channels.
- Be sure to remove the nuts and washers on the inside of the small strut channels as well. (Total: Four 1/2" hex head screws, four 1/2" nuts, and four washers)

## Step 3 — Locking the new depth sensor node



- Obtain a new depth sensor node and attach a padlock to the new depth sensor node.
- ⓘ Projects have set lock combinations. Please ask the lab for guidance.

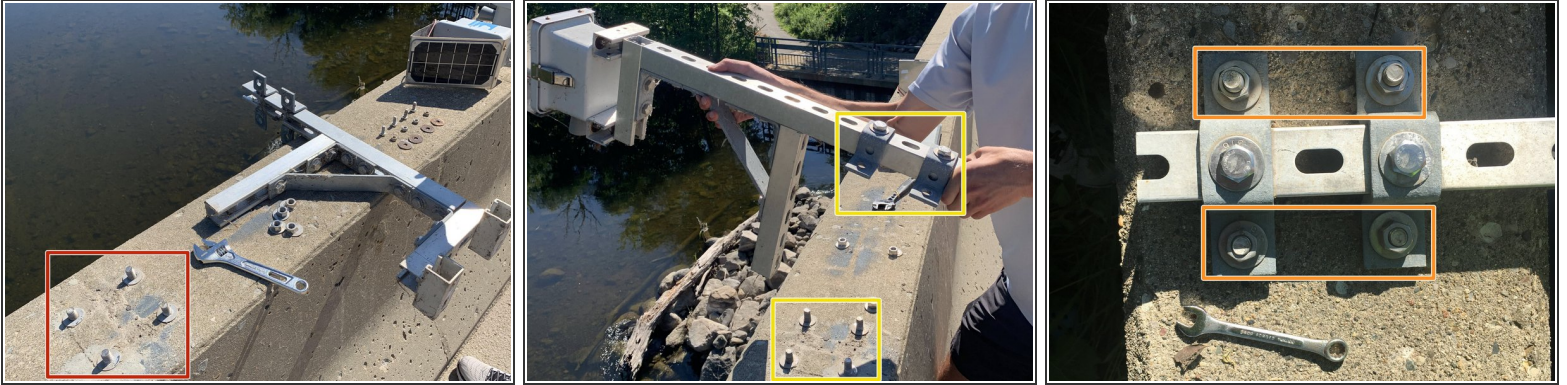
## Step 4 — Attaching the new depth sensor node to the small strut channels



- This step will use the same 1/2" hex head screws, 1/2" nuts, and washers from the removal of the old depth sensor node.
- ⓘ Using a rag (if handy), clean any dirt or debris off of all screws, nuts, washers, strut channels, etc. before attaching the new depth sensor node.
- Using a 1/2" adjustable or socket wrench, attach the new depth sensor node to the small strut channels with four 1/2" hex head screws, 1/2" nuts, and washers. Tighten and secure.

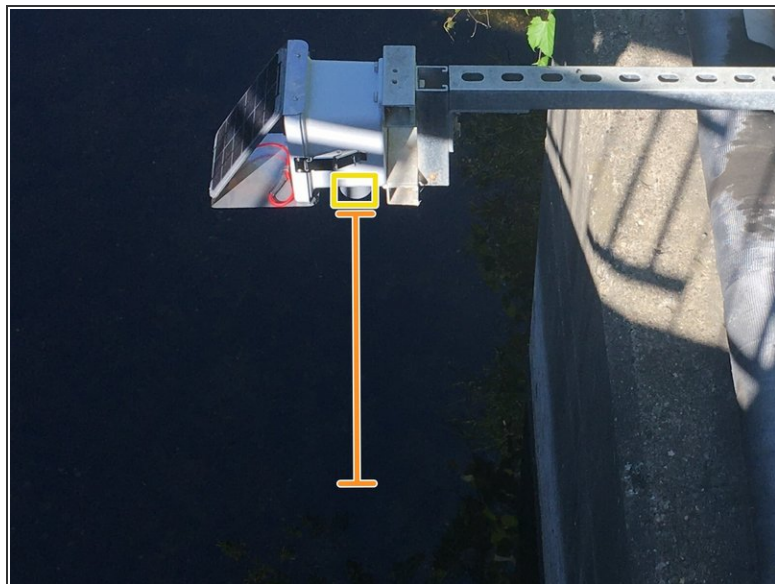


## Step 5 — Attaching the U-brackets to the bridge mount



- This is what the bridge mount looks like before reattaching the long strut channel with the new depth sensor node.
- Line up and place the U-brackets, still attached to the long strut channel, onto the bridge mount.
- ⓘ Once again, hold the node securely to ensure it does not fall while the U-brackets are being attached to the bridge mount.
- ⓘ This step will use the same 3/4" nuts and washers from the first step.
- Using a 3/4" adjustable or socket wrench, secure the long strut channel and U-brackets to the bridge with the 3/4" nuts and washers. Tighten and secure.

## Step 6 — Measure and record the distance from the bottom of the depth sensor node to the bottom of the river



- Using a (weighted) tape measure, measure and record the distance from the bottom of the depth sensor node to the bottom of the river.
- The bottom of the depth sensor node is defined as the bottom of the sensor cone.

To reassemble your device, follow these instructions in reverse order.