UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Service
Center for Operational Oceanographic Products and Services
Silver Spring, MD 20910

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Mr. Omar Choukeir, P.E.
Manager, Waterways Development
The Port Authority of NY & NJ - Port Commerce Department
4 World Trade Center
150 Greenwich Street - 17th floor
New York, NY 10007

Dear Mr. Choukeir,

Thank you for being an active partner with the National Oceanic and Atmospheric Administration (NOAA) in the Physical Oceanographic Real-Time System, or PORTS®, program. This letter documents the current installation and data dissemination parameters associated with the Bayonne Bridge air gap sensor, included in the New York/New Jersey Harbor PORTS®. It is important that these parameters are clearly understood by those using the air gap data, and to that end, we ask that you assist us in sharing the enclosed information broadly among the local maritime community.

Prior to installation of an air gap sensor and dissemination of the resulting real-time air gap data, NOAA works closely with our partner and other local users to define the point on the bridge from which the distance to the water's surface will be displayed as the air gap measurement on the PORTS® webpage. This "air gap reference point" on the bridge might or might not differ from low steel, as defined by the USCG. It is also important for the community to understand that the real-time air gap measurement on the PORTS® webpage will vary from the fixed vertical bridge clearance value displayed on the associated NOAA Nautical Chart.

The point on the bridge designated as the air gap reference point is not necessarily directly below the location of the air gap sensor, since the sensor's location is often restricted by available bridge infrastructure. If the position of the air gap reference point designated by our partner is not co-located with the sensor, NOAA precisely measures the elevation offset between the two positions and adjusts the air gap value reported on the PORTS® webpage accordingly. The air gap reference point, the sensor location, and the offset parameters specific to the Bayonne Bridge air gap sensor are detailed below.

It is important to note that there may be other non-structural components – such as navigation lights, radar beacons/RACON, etc. – attached to the bridge that extend below the point designated as the air gap reference point. Further, non-structural components may be newly installed, moved,

or adjusted after the time of sensor installation and air gap reference point designation. It is a collective responsibility to be aware of and communicate changes to such non-structural components, so that all users are aware and any necessary changes to the air gap measurement can be discussed, agreed to, and implemented on the New York/New Jersey Harbor PORTS® webpage by NOAA.

NOAA understands that real-time air gap measurements at the Bayonne Bridge are important for marine navigation decisions. In the case of a data outage, NOAA will first work to resolve the issue remotely by calling into the air gap sensor platform. If remote intervention is not successful, NOAA, the partner, and the NOAA maintenance contractor will work to arrange a site visit to the air gap sensor as soon as feasible. Typically, this requires close coordination with the bridge owner/manager to arrange access and any necessary lane closures.

Bayonne Bridge

The PORTS® air gap sensor on the Bayonne Bridge is installed on the east side of the bridge, just north of the bridge's center line, on the maintenance catwalk, 60 feet south of the green center channel navigation light. See Images 1 and 2 for photographs of the air gap sensor installation on the Bayonne Bridge. See Image 3 for the location of the air gap sensor on the Bayonne Bridge.

Following completion of the project to raise the main bridge roadway in 2017, NOAA worked with one of our New York/New Jersey Harbor PORTS® program partners, the Port Authority of New York & New Jersey, and the local maritime community to determine the updated air gap reference point. The air gap reference point is the bottom of the I-beam on the east side of the Bayonne Bridge at the air gap sensor. NOAA determined the offset value by measuring the vertical distance from the air gap sensor leveling plate to the bottom of I-beam at the air gap sensor using levels and a steel measuring tape. The offset was determined to be 1.198 meters. See Image 4 for a schematic of the air gap sensor elevation offset for at the Bayonne Bridge.

Therefore, the PORTS® air gap sensor measurement on the east side of Bayonne Bridge currently displayed on the NOAA PORTS® New York/New Jersey Harbor website (https://tidesandcurrents.noaa.gov/ports/index.html?port=ny) represents the distance between the surface of the Kill Van Kull and the bottom of the I-beam at the air gap sensor. This measurement does not account for other non-structural components hanging below the bridge.

Please reach out to our Maritime Services Program Manager, Christopher DiVeglio, at christopher.diveglio@noaa.gov or 240-533-0571, with questions about the present state of the Bayonne Bridge air gap sensor included in the New York/New Jersey Harbor PORTS®, or if adjustments to the data dissemination parameters will better suit the needs of the pilots and local maritime community.

Sincerely,

Rich Edwing, Director
NOAA Center for Operational Oceanographic Products and Services

cc: Mr. Steven Martimucci, Project Manager, PANYNJ
Captain Andrew McGovern, Sandy Hook Pilots
Christopher Maglin, Sandy Hook Pilots
Mr. Edward J. Kelly, Executive Director, Maritime Association of Port of NYNJ
Ms. Genevieve Clifton, NJDOT Office of Maritime Resources
Mr. Greg Hitchen, Vessel Traffic Service Director, USCG Sector New York
Captain Jason Tama, USCG Sector Commander
Mr. Jeff Yunker, USCG Sector NY Waterways Management Division
Ms. Judy Leung-Yee, USCG First Coast Guard District Bridge Branch
LCDR Josh Buck, USCG Waterways Management
Amanda Regan, USACE, Eastern Section
Randall Hintz, USACE, Chief NY District, Operations Support Branch Thomas
Creamer, USACE, Deputy Supervisor of NY & NJ Harbor
Colleen Roche, Regional NOAA OCS Navigation Manager
Chris Metzger, NOAA CO-OPS Field Division

Images 1 and 2. Air Gap Sensor Installation on the Bayonne Bridge.





Image 3. Location of the Air Gap Sensor Installation on the Bayonne Bridge.

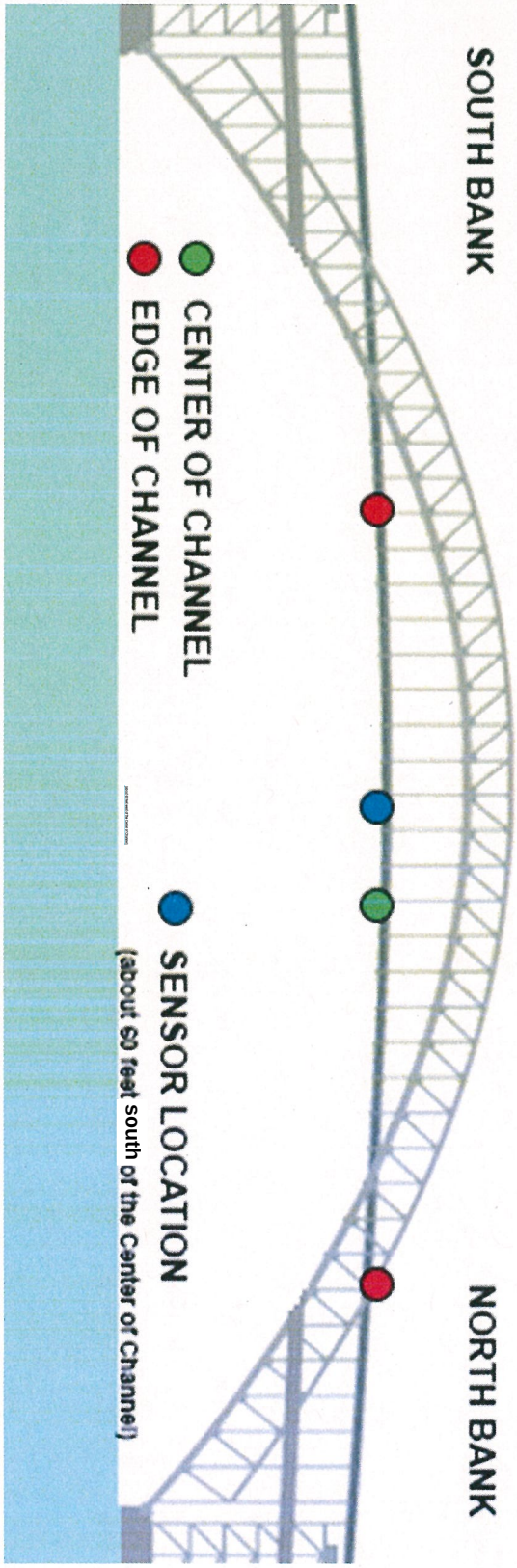


Image 4. Schematic of the Air Gap Sensor Elevation Offset at the Bayonne Bridge.

