UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 1
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Boston, MA 02109-3912

Memorandum

DATE: February 18, 2022
SUBJ: 12/3/2021 inspection of Upper Harbor sediment caps, NBHSS
FROM: D. Dickerson, RPM
To: site file

DAVID DICKERSON Digitally signed by DAVID DICKERSON Date: 2022.02.18 08:13:36 -05'00'

This memo documents the visual shoreline inspection of all Upper Harbor (UH) sediment caps, performed by D. Dickerson and N. Burgo on 12/3/2021. Courtney Cohen from the City of New Bedford also participated in some of the inspections. The inspections took place between approximately one hour before and one hour after an extreme low tide at 12:30 pm that day, since only the intertidal portions of the caps can be seen visually. Note that one cap, 0-711, is completely subtidal and thus could not be seen. At another UH cap, L-114, only a very small portion of the cap was seen at the extreme low tide during the inspection (see Figure 17 below). Bathymetric surveys performed in fall 2021 captured the subtidal conditions/elevations of all the UH sediment caps; the only issue noted was at the L-014 cap (see action items below).

Figure 1 below shows the locations of the seven UH sediment caps installed in 2020. North to south, these caps are: 0-711, Crib, L-014, L-114, pilot CDF shoreline, Cogg-East and Cogg-West. Note that a small, stone-only eighth UH sediment cap, located between the pilot CDF shoreline cap and the Cogg-West cap, was installed in 2015 as part of the Parcel 265 intertidal remedial action. This small cap was visible on this inspection due to the extreme low tide (Figure 22). Not shown on Figure 1 is the Aerovox sediment cap (just to the north of the Figure 1 boundary) that was also inspected on 12/3/2021.

Figures 2 through 26 below are photos of these caps running north to south taken during the inspection.

Based on this inspection the UH sediment caps appear to be in good shape. However, four action items were noted:

1 - At one small (~5 sf) area closer to the landward boundary of the **Crib cap**, the armor stone was missing and the underlying sand layer was visible (Figure 11). Armor stone needs to be placed within this area.

2 – At the **L-014 cap**, stone displacement along the seaward edge of the cap may have occurred, possibly from wave energy during the prolonged pre-Halloween nor'easter (Figure 16).

3 – At the pilot CDF shoreline cap, remove dredging-related cable/turnbuckle/shackle remaining on the armor-stone near the former Area C dock area.

4 – Also at the pilot CDF shoreline cap, remove an empty blue plastic drum near North Dock.

All of these action items except #2 (L-014 cap) have been addressed. As part of the spring 2022 topsoil repair at West Zone 4, additional armor stone will be placed at the L-014 cap to smooth the surface and edges of the cap. This will allow any future erosion/displacement of the stone surface to be readily visible.

Figure 1:
← 0-711 cap

← Crib cap

← L-014 cap
← L-114 cap

← Pilot CDF shoreline cap

← Parcel 265 stone cap
← Cogg-W and Cogg-E caps

Figure 2: **Aerovox cap** looking south from the northern edge. The boom in the background is from the Aerovox 21E work.

Figure 3: **Aerovox cap** looking south showing "capacitor cove." Titleist building in background.

Figure 4: **Aerovox cap** looking east showing the North Trench storm drain (plugged as part of 21E cleanup).

Figure 5: **Aerovox cap** looking north showing the North Trench outfall.

Figure 6: **Aerovox cap** looking south. The 5-gallon bucket is a cement anchor for the 21E silt curtain.

Figure 7: **Aerovox cap** showing the plugged South Trench outfall.

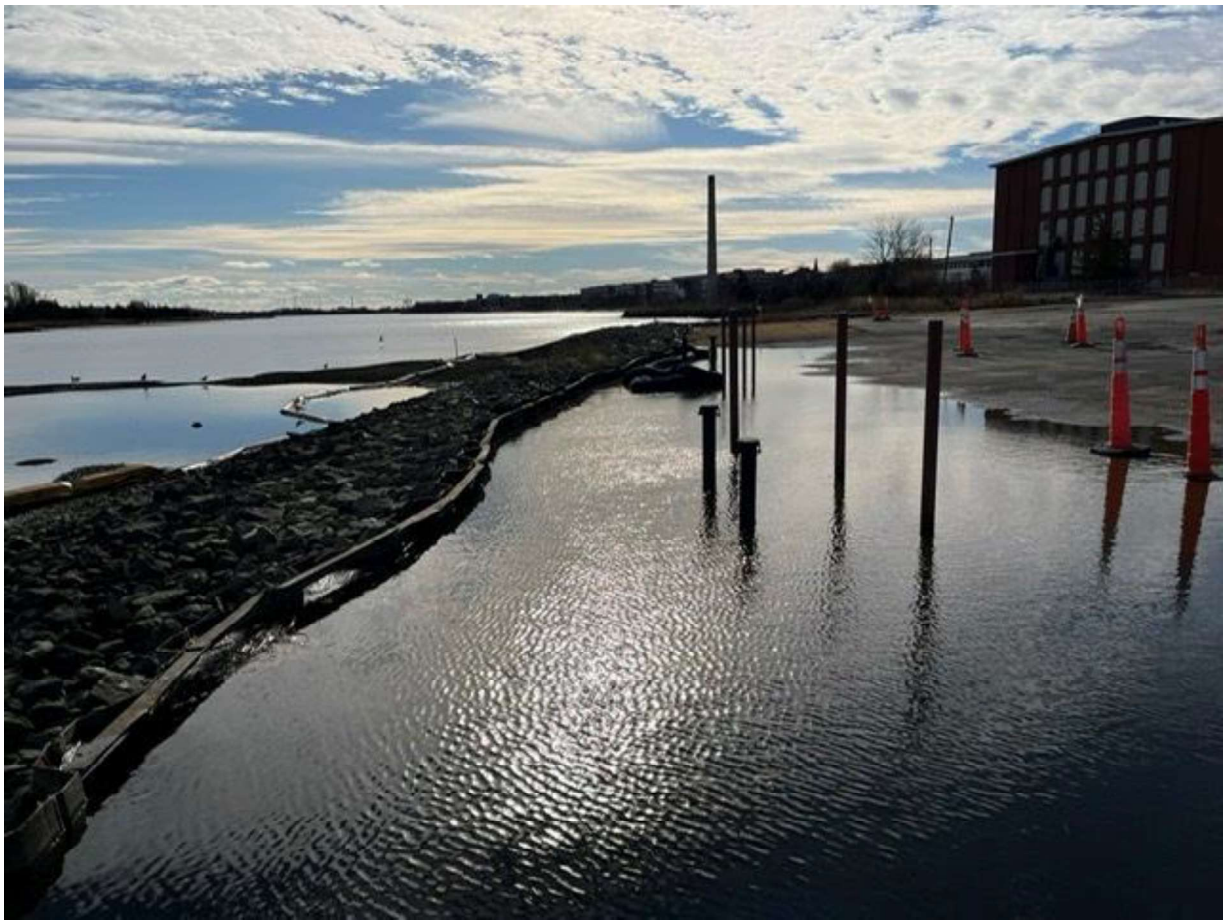

Figure 8: **Aerovox cap,** looking south. Ponded runoff is due to the storm drains and scuppers being plugged for the 21E cleanup. (Water gets pumped through an on-site treatment plant prior to discharge to the City sanitary sewer.)

Figure 9: **Aerovox cap**, southern E/W leg, looking east. Note the serrated pattern at the lower edge of the bank armor stone.

Figure 10: **Crib cap** looking north. White stake in middle is a stormwater outfall (see Figure 12).

Figure 11: **Crib cap** showing the small area in need of armor stone.

Figure 12: **Crib cap** looking SE showing storm drain outfall.

Figure 13: **Crib cap.** Looking west along northern edge of the cap.

Figure 14: **L-014 cap** looking south. Bare soil is WZ-4 backfill waiting to be planted as saltmarsh in spring 2022 (after replacement of topsoil lost in October 2021 nor'easter).

Figure 15: **L-014 cap** looking SE. Swale in foreground was installed as part of WZ-4 restoration.

Figure 16: **L-014** cap, looking north.

Figure 17: **L-114** cap, looking north. Only a small area of emerging armor stone can be seen at extreme low tide.

Figure 18: **Pilot CDF shoreline cap**, southern end, looking north. Parcel 265 saltmarsh replanting in fore-ground.

Figure 19: **Pilot CDF shoreline cap**, looking north.

Figure 20: **Pilot CDF shoreline cap**, looking south.

Figure 21: **Pilot CDF shoreline cap.** Northern E/W leg looking west.

Figure 22: **Parcel 265 stone cap** looking NE.

Figure 23: **Cogg-West cap** looking east along bridge embankment. City storm drain in fore-ground.

Figure 24: **Cogg-West cap** looking NW. Bridge opening in fore-ground.

Figure 25: **Cogg-East cap** looking east. Bridge opening in fore-ground.

Figure 26: **Cogg-East cap,** eastern end, looking north.