REGION 5
CHICAGO, IL 60604

August 2, 2024

Mr. Aaron Lammers, E.I.T
SME-USA
882 40th Street SE
Grand Rapids, Michigan 49508
Sent to: Aaron.Lammers@sme-usa.com

RE: Disapproval and Request for Modifications
SME Serial Letter #90, Conceptual Site Model for the Former Tecumseh Products Company Site
Sheboygan Harbor & River Superfund Site
WID980996367

Dear Mr. Lammers:

In accordance with the Consent Decree for Civil Action No. 1:03-CV-0041-WCG, filed January 9, 2006, for the Sheboygan Harbor & River Superfund Site (Site) in Sheboygan, Wisconsin, the U.S Environmental Protection Agency (EPA) has completed its review of the *SME Serial Letter #90, Conceptual Site Model for the Former Tecumseh Products Company Site (CSM)*, dated June 28, 2024, submitted by SME on behalf of Pollution Risk Services, LLC (PRS). The CSM was submitted following our February 16, 2024, meeting to discuss site conditions and the anticipated work needed to delineate the extent of contamination under an anticipated Sampling and Analysis Plan.

The *SME Serial Letter #90, CSM* is disapproved and must be modified to address the deficiencies outlined herein, pursuant to Paragraph 41.iv. of the 2006 CD. Please **revise and resubmit** the report within 30 days of receipt of this letter, i.e., by **September 1, 2024**.

EPA Comments:

- **Comment 1.** On Page 1, the fifth paragraph, reads: "A topographic survey showing the current condition of the Site is on Figure 4".
    - EPA Comment: Add the month and year for the topographic survey.
- **Comment 2.** On Page 2, the first paragraph, third sentence, reads: "Separately, a portion of Rochester Park is within the river's floodplain".

- EPA Comment: Revise the language based on the attached FEMA map, which shows that both the former Tecumseh Products property, and a *majority* of Rochester Park appear to be within the river's floodplain.

- **Comment 3.** On Page 2, the first paragraph, fourth sentence, reads: "EPA determined that the floodplain soil at the park did not present a health-based risk to human or ecological receptors".
  - EPA Comment: Revise the report and cite the document that provides this determination for the park, including the PCB concentrations upon which risks at the park were based at that time, to substantiate whether this conclusion remains accurate. In April 2020, SME indicated that "Limited assessment has been completed on the east-adjoining Rochester Park […][…and] PCBs were detected at concentrations above the laboratory reporting limits in each of the soil samples collected from Rochester Park at concentrations ranging from 0.246 ppm to 8 ppm"[1]. This suggests that all known PCB concentrations were less than 8 ppm at the time of any prior referenced determination. Please clarify whether the prior determination regarding health-based risk to human or ecological receptors at the park was derived from known PCB concentrations at the park at that time being less than the sitewide cleanup level identified in the ROD for floodplain areas (which were based on ecological risks). Please clarify that the data from the park collected after that time documents much higher PCB concentrations, up to 3,430 ppm.
- **Comment 4.** On Page 2, the first paragraph, fifth and sixth sentences, read: " Another portion of Rochester Park is outside of the floodplain. This area contains a reported former landfill and a ridge of debris. This portion of Rochester Park is not part of the Site designated in the ROD".
  - EPA Comment: These sentences do not provide a sufficient level of detail or accuracy to properly develop the CSM. Revise the language to indicate:
    1) Based on the attached FEMA map, the majority of Rochester Park including the referenced area in the floodplain.
    2) The central portion of Rochester Park was the former location of a city sewage/wastewater treatment facility (documented in aerial photographs dated from 1950 to 1973), and the northern portion and southeastern portion previously contained areas used as a landfill for sewage disposal (documented on a 1974 USGS topographic map). Please call these areas out on a figure and cite the figure in text.
    3) The earliest landfilling operations on the northern quarter of the park started immediately adjacent to the northeast corner of the former Tecumseh Products property and extended to the east and then to the south over time.
    4) The sewage treatment facility on the central portion of the park received wastewater from Tecumseh Products, among others, and that Tecumseh's wastewater was documented on April 4, 1978[2] to contain PCBs.
    5) Industrial wastes were documented to have been "used as fill and dike materials deposited in the river's floodplain[2]"; that the berm/dike along the Sheboygan River south of the Tecumseh property is owned by Tecumseh

[1] Serial Letter #62, dated April 23, 2020, by SME.

[2] Final Report on the Investigation of PCBs in the Sheboygan River System, dated July 12, 1978, by the Technical Committee for the Sheboygan River PCB Investigation.

Products Company and was maintained by Tecumseh Products Company and/or the City of Sheboygan Falls and "had apparently been built from waste products of the company and used as fill material[2]".

6) The Tecumseh Products Company and the City of Sheboygan Falls[3] were issued a WDNR order in May 1978 to collect and contain PCB wastes discovered on the property, to "cease any disposal of PCB materials in the river area[2]", and to excavate and collect "all *visible* materials which are likely to be contaminated with PCB on the dike bordering the Sheboygan River[2]".
7) The "ridge of debris" referenced in the CSM consists of a dike/berm located along the Sheboygan River in the southeast quarter of Rochester Park, and that the source of materials used for the construction of both dikes are unknown[4]. Indicate that "absorbent materials stored in on-site pits [at the Tecumseh property] were removed and disposed at the Sheboygan Falls demolition fill landfill (located in the area of the east-adjoining Rochester Park[2])", and that "during plant expansion, some contaminated soil was moved to fill low spots on the [Tecumseh property] site and used for flood control along the Sheboygan River[2]" which suggests the flood control berm in Rochester Park may be composed of similar material as the berm located south of the former Tecumseh Products property.
8) "This [referenced, "ridge of debris"] portion of Rochester Park is not part of the Site designated in the ROD, but that one of the five components of the ROD is Tecumseh's Sheboygan Falls Plant groundwater, which includes "Contamination of Ground-water and <u>Additional Source</u> Identification[5]" and that "samples taken near the Tecumseh plant in 1999 indicated that additional PCB sources on <u>*or near*</u> the Tecumseh Products Company property likely exist".[3]

- **Comment 5.** On Page 2, the first paragraph, seventh sentence, reads: "As stated in the Consent Decree […]"
  - EPA Comment: Add a reference for Consent Decree.
- **Comment 6.** On Page 2, the first paragraph, last sentences, reads: " The PCB impacts to the Tecumseh property, the river sediments, and floodplains were not the result from a release at the park".
  - EPA Comment: This sentence seems incomplete. While we concur that impacts at the park would not likely affect the Tecumseh property, the CSM abstract, provided as Figure 18b (see additional comments that follow), depicts contradictory information, with the migration arrows between the Park Uplands and Tecumseh Property traveling in both directions. It is not clear there is enough information to indicate whether impacts at the Park Uplands may affect the floodplains and sediments because the majority of Rochester Park is in the floodplain. As such, those related arrows may be accurately depicted in the figure.

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[3] An August 2, 1978, letter from the City of Sheboygan Falls to Tecumseh Products conveyed an understanding had been reached that the "parts of the Order [that require] positive action will be assumed by Tecumseh Products Company".

[4] The 1981 aerial photograph included in the SME Serial Letter #62, dated April 23, 2020, identifies soil disturbances only on the central and southern portion of Rochester Park, southeast and downgradient in elevation from the Tecumseh Products property.

[5] Record of Decision, Sheboygan River & Harbor, May 2000, by US EPA

- **Comment 7.** On Page 2, the second bullet of the Site Investigation/Assessment Activities section mentions that potential preferential pathways were assessed.
    - EPA Comment: Be more specific about what pathways are referred to here (pathways for contamination migration/transport or contaminant exposure pathways).
    - In the same bullet, Figure 8 is not needed as the location of monitoring wells is already shown on Figure 7a.
    - Add an additional bullet after the second bullet that discusses the 2004 investigations, and reference to Figures 9a, 9b, 9c and 10 in the text.
- **Comment 8.** On Page 3, the first sentence reads: "Soil boring locations during the 2016 and 2018 assessment are shown on Figure 12".
    - EPA Comment: The sentence should be referring to "2021 assessment as shown on Figure 12" (instead of 2016 and 2018).
- **Comment 9.** On Page 3, the second paragraph, first sentence reads: "The 2021 investigation included Rochester Park to further assess if surface water run-off from the Tecumseh property had impacted the park".
    - EPA Comment: Revise this language to indicate the purpose of the Data Gap analysis was to assess the adequacy of past investigations, conduct a detailed evaluation of past surface and subsurface sampling, and outline the horizontal and vertical extent of any soil removal actions, with the overall goal of characterizing the nature and extent of contamination.
- **Comment 10.** On Page 3, second paragraph, second sentence reads: "Within the floodplain portion of the park, the results were similar to the historical findings, and the PCBs in the floodplains do not present a risk to park receptors".
    - EPA Comment: EPA disagrees that PCBs in the floodplains do not present a risk to park receptors. Revise this language to indicate that the risk to park receptors was evaluated by the Wisconsin Department of Health Services in 2023[6]. Wisconsin DHS concluded that PCB levels represent a health hazard at the soccer field, baseball diamond and both dog parks.
- **Comment 11.** On Page 3, second paragraph, third sentence reads: "Much higher levels of PCBs were found on the upland portion of the park within the former landfill and a ridge of debris".
    - EPA noted the attached FEMA map indicates that most of the park is a floodplain, and previously indicated the berm/dike/"ridge of debris" within the former landfill may contain wastes, in part, from the former Tecumseh Products property; revise the language accordingly.
    - EPA Comment: Discussion regarding PCB sampling in the upland area and former landfill should reference a figure on which these areas are shown; EPA suggests showing the expanded areas in Figure 13.
- **Comment 12.** On Page 3, second paragraph, fourth sentence reads: "In addition, forensic analysis indicates the sources of PCBs in the floodplains are different than the upland area of the park".
    - EPA Comment: Revise this language to include a citation to the document that discusses the forensic analysis of PCBs from different areas of the park, and the basis for that determination.

[6] Evaluation of Health Concerns Associated with Rochester Park, Sheboygan County, Wisconsin, dated July 13, 2023, by Wisconsin Department of Health Services

- **Comment 13.** On Page 3, second paragraph, fifth sentence reads: "The City of Sheboygan Falls conducted an additional investigation of the park in 2022, with similar results to SME; the only PCB impact presenting a risk to park receptors is in the upland area of the former landfill."
    - EPA Comment: Delete the conclusion that the only risk to park receptors is in the Park Upland area, based on the risks identified by the Wisconsin Department of Health Services in 2023[6].
- **Comment 14.** On Page 3, paragraphs five and six reference remedial activities completed in 2005.
    - EPA Comment: Cite remedial action work plan, and the 2005 Upper River Phase I Completion Report for additional information.
- **Comment 15.** On Page 5, paragraph two identifies likely receptors based on the Conceptual Exposure Model and references the Conceptual Site Model Abstract presented as Figure 18b. Figure 18b identifies the potential for impacts from the Tecumseh property and park to the river.
    - EPA Comment: Please revise the language under the "Surface Water Pathway" to indicate the potential for sediments to also be impacted if contaminant migration via groundwater or runoff to surface water is not controlled and indicate potential for ecological receptors.
- **Comment 16.** On Page 5, the second to last paragraph states: "The WDNR guidance provides a direct contact with soil point of compliance (POC) depth of 4 feet bgs although publication RR-709 states 2 feet of clean fill is an acceptable cap. This was approved as the final soil sample collection interval in the USEPA and WDNR-approved sampling plans for the 2016 and 2018 investigations. SME considered 4 feet bgs as the point of compliance for the direct contact pathway for all receptor types at the Site".
    - EPA Comment: EPA provided comments on the 2020 SAP (EPA Response to SME Serial Letter #67, FIELDS Team Recommendations Sheboygan River and Harbor Superfund Site, dated December 11, 2020), and for SME Comment #2, specific to the park, EPA responded that "In terms of subsurface sampling, if contamination is found to be present, the full depth of the impact will need to be investigated" and requested that SME propose a sampling protocol to achieve this objective. Revise the language to indicate that a point of compliance and remedial design that includes the use of a cap as a means of pathway exclusion for direct contact can only be considered after the nature and extent of contamination has been adequately characterized.
- **Comment 17.** On Page 5, the last paragraph discusses the drinking water pathway.
    - EPA Comment: Provide a figure identifying the location of potable wells within 05-miles of the Tecumseh Property and Park. State whether any residential wells are present within the area of impacted groundwater on the Tecumseh Property.
- **Comment 18.** On Page 6, the second paragraph states: "The GMIT [groundwater monitoring/interceptor trench] and groundwater flow direction eliminates exposure to off-site receptors. The Institutional Control, Implementation, and Assurance Plan [ICIAP] prevents exposure to on-site receptors".
    - EPA Comment: If the GMIT is not currently being used, it is unclear how an inactive trench eliminates exposure to off-site receptors. Revise the language to explain how the GMIT eliminates offsite exposures. Provide additional details on the GMIT; include details on the width/depth of the trench; the groundwater zone captured by the trench

and details of any pipes or groundwater collection systems that were installed to capture/pump groundwater captured by the trench.
    - Modify the language regarding the ICIAP to indicate any restrictions that may be implemented onsite will be in the form of an Environmental Restrictive Covenant, or equivalent recorded property restriction, that will be used to prevent the potential for exposure to residual contamination, which would be monitored through implementation of the ICIAP, once finalized.
- **Comment 19**. Figure 4:
    - EPA recommends removing the survey shot locations and only showing 1 or 2 ft contour lines developed from the topographic survey.
- **Comment 20.** Figure 13:
    - Two sample locations from the 1999 sampling event in Rochester Park are missing from the map (NB-COMP-9 and NB-COMP-10). Add these locations to the figure.
    - This Figure 13 appears to show all historical soil sampling locations that are still relevant (soil remains in that location). Please confirm this is the case, and if so, consider shading back sample locations that no longer exist to simplify the figure set and avoid confusion.
- **Comment 21.** Figure 15:
    - The arrow depicting groundwater flow be drawn perpendicular to the contour lines (at 90 degrees).
- **Comment 22.** Figure 18a, Conceptual Exposure Model: EPA requests the following changes:
    - Primary Source Areas column:
        1) The former Tecumseh site parking lot (EU-2) is an exposure area and should not be shown as a primary source area.
        2) The preferential pathways to the Sheboygan River (EU-3) is an exposure area and should not be shown as a primary source area.
    - Release Mechanisms column (2nd column on the figure):
        1) In the Release Mechanisms column from EU-1, include subsurface placement in the dump at Rochester Park.
        2) The “Release to the Sheboygan River though migration of groundwater” box should be linked to groundwater as an exposure medium, not to a separate primary source area.
        3) The “Release to the Sheboygan River through drain lines direct discharge to River” box should be shown as a release mechanism from the former manufacturing area. The line from this release mechanism should be stopped before the “Exposure Medium” box, with an explanation added to the Notes section indicating that the drain lines were removed in 2005.
    - Release Mechanisms column (4th column on the figure):

1) Add runoff erosion from surface soil to offsite.

    - Exposure Medium column:
        1) The “Potable Water Supply” and “Bedrock Aquifer” boxes should be the same box and not separated, with ingestion, dermal, and inhalation being the routes of exposure.
        2) The “Remediated (2005)” box should be deleted, and its associated “Ingestion” box and receptor scenario.
    - Add a separate column for exposure points and indicate the specific Exposure Unit # for

each (where applicable).
    - Indicate if each receptor population is current, future, or current/future.
    - For the potable water scenarios, do not incorporate a groundwater use restriction since it has not yet been implemented.
    - The off-property construction/excavation worker could have subsurface soil exposures (ingestion, dermal, and inhalation) in Rochester Park, where wastes were placed from the Tecumseh site; explain why these exposure pathways are shown as having insubstantial exposure or update the report accordingly.
    - Explain why potable water supply scenarios in the Lower Unconsolidated Saturated Zone are not shown for off-property receptors or update the report accordingly.
    - Additional Notes:
        1) For each potentially complete pathway that is shown to have potentially insubstantial exposure, provide the rationale for this conclusion.
        2) Add a note regarding the presence of the GMIT and when and how it will be used.
        3) Add a note indicating the specific types of wells (e.g., residential, industrial, agricultural) currently present within the area of site-impacted groundwater.
- **Comment 23.** Figure 18b, Conceptual Site Model Abstract:
    - Please identify how the directional arrows were determined. The double-sided arrow between the Park and the Property conflicts with the Regulatory Background section in the text "The PCB impact to the Tecumseh property, the river sediments, and floodplains were not the result from a release at the park." Revise the arrow based on the statement to show the migration arrow going only from the Tecumseh property to the Park.
    - The key on Figure 18b also depicts an "Area included in Superfund Site and Cost Cap Insurance"; remove this designation because insurance coverage is not relevant for this CSM.
- **Comment 24.** On figures depicting Rochester Park, the soccer field is depicted in the wrong location. The correct location is northwest of the park shelter.

EPA expects that these comments will be considered/incorporated when developing the Sampling and Analysis Plan for further contaminant delineation at the Tecumseh Products property and Rochester Park. If you have any questions, please contact me at your convenience at kelly.joseph@epa.gov or 312-353-2111.

Sincerely,

Digitally signed by JOSEPH KELLY
Date: 2024.08.02 14:10:42 -05'00'

Joseph C. Kelly
Remedial Project Manager

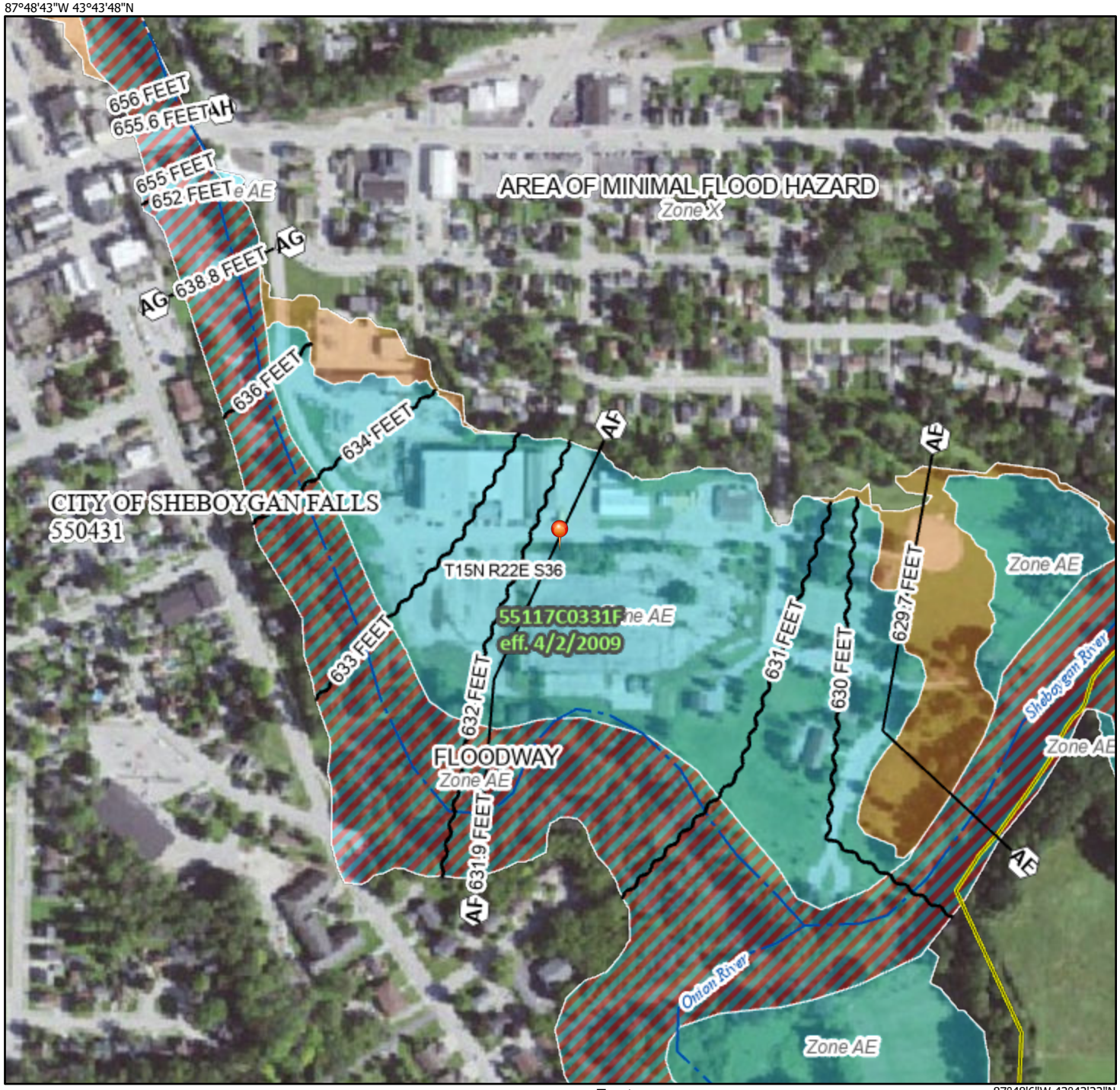
Attachment: FEMA National Flood Hazard map, dated July 29, 2024

cc: Susan Prout, EPA
Gwen Saliares & Christopher Dietrich, WDNR
Jason Smith, Tecumseh Products Company
Peter Johnson, Johnson Wright, Inc.
Bret Stuntz, SME
Keith Egan
Sara Maihofer Emily Forthaus, Barrie Selcoe, OCH, JV
Mark Mather, PRS

National Flood Hazard Layer FIRMette

FEMA

87°48'43"W 43°43'48"N



87°48'6"W 43°43'22"N

Feet

0 250 500 1,000 1,500 2,000

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD

- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS

- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES

- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES

- B 20.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- 8 Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS

- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/29/2024 at 11:29 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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