PUBLIC HEARING ON THE

DRAFT INTEGRATED FEASIBILITY REPORT AND EIS

NEW HAVEN HARBOR NAVIGATION IMPROVEMENT PROJECT

OCTOBER 23, 2018

6:32 P.M.

BAILEY MIDDLE SCHOOL

106 MORGAN LANE

WEST HAVEN, CONNECTICUT

APPEARANCES:

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JUDI SHEIFFELE: EXECUTIVE DIRECTOR, NEW HAVEN PORT AUTHORITY

EVAN MATTHEWS: EXECUTIVE DIRECTOR, CONNECTICUT PORT AUTHORITY

JOHN KENNELLY: CHIEF, PLANNING DIVISION, U.S. ARMY CORPS OF ENGINEERS, NEW ENGLAND DISTRICT

BARBARA BLUMERIS: PROJECT MANAGER, WATER RESOURCES PLANNING SECTION, PLANNING DIVISION, U.S. ARMY CORPS OF ENGINEERS, NEW ENGLAND DISTRICT

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(The hearing commenced at 6:32 p.m.)

MR. HABEL: Good evening, and welcome to the public hearing for the New Haven Harbor Navigation Improvement Project.

My name is Mark Habel. I'm Chief of the Navigation and Environmental Studies Section for the United States Army Corps of Engineers, New England District. I will be your moderator and facilitator tonight.

Before we begin, I would like to thank you for getting involved in this review process for the New Haven Harbor Navigation Improvement Project Study.

The New Haven Harbor deepening study is being undertaken by the Corps of Engineers in partnership with the project sponsor, the New Haven Port Authority, and with the Connecticut Port Authority.

The hearing officer tonight is John Kennelly, on the far left, your far right, Chief of the Planning Division for the Corps in New England.

Also from the Corps New England Program and Project Management Division is Erika Mark, and from New England's Engineering and Planning Divisions are Barbara Blumeris, the Project

Manager, Todd Randall, Lisa Winter, and Caitlyn Bryant, from the Corps' Jacksonville District, who prepared the economic evaluation for this study.

Should you need copies of the public notice, hearing procedures, or other information, it is available at the registration table.

Following this introduction, the project sponsors will give brief remarks. Judy Sheiffele is the Executive Director of the New Haven Port Authority. Following Judy will be Evan Matthews, the Executive Director of the Connecticut Port Authority.

Our hearing officer, John Kennelly, will then address the hearing. John will be followed by Barbara Blumeris, who will provide information on the Draft Integrated Feasibility Report for the New Haven Harbor Navigation Improvement Project Study. Barbara will be followed by Todd Randall, who will provide an overview of the environmental investigations conducted during this study.

At the conclusion of the briefings, I will then review the Corps of Engineers' responsibilities in this process and explain the hearing procedures.

Following that, I will open the floor to

public comment, utilizing the Corps of Engineers' hearing protocol.

One additional reminder: We are here tonight to receive your comments, not to enter into any discussion of those comments or to reach any conclusions. Any questions should be directed to the record and not to the individuals on the panel.

And now, ladies and gentlemen, I would like to call on the representative from our non-federal study sponsor, Judi Sheiffele, Executive Director of the New Haven Port Authority. Judy?

MS. SHEIFFELE: Thanks, Mark. Good evening. Some of you I remember from past hearings. This is the third hearing I think being held on this project. And although it's been long talked about in the Port community in New Haven, the Corps, along with the Connecticut and New Haven Port Authorities, have been acting on this feasibility study for the past three years and assessing the current conditions and determining the feasibility as to whether the channel should be deepened. And tonight we'll see the results of this study.

We look forward to the end of this phase

and looking on to what will probably be a more challenging phase, trying to get a reauthorization and funding. But thank you.

MR. HABEL: Thank you, Judi.

Ladies and gentlemen, I would like to introduce Evan Matthews, Executive Director for the Connecticut Port Authority.

MR. MATTHEWS: Thank you, Mark. My name is Evan Matthews, and I'm the Executive Director of the Connecticut Port Authority. We are headquartered in Old Saybrook, Connecticut. I'm joined by Joe Salvatore, who many of you may recognize. He heads up all of our dredging programs.

We're both here tonight and excited to work with the Corps for conducting this hearing and moving this project forward. We've used the resources of the CPA in recent weeks to try to encourage involvement in the process, and it's good to see the public here tonight. We believe the public input leads to better results.

From the Port Authority's perspective, this project is entirely consistent with our overall goals outlined in the Port Authority's Connecticut Maritime Strategy, which we released in

August.

The strategy puts an emphasis on maximizing the potential of Connecticut's three deepwater ports. New Haven absolutely is one of those important ports. New Haven is particularly important to this strategy and is long overdue for a Navigation Improvement Plan.

I'm sure there are many ideas on how to improve the draft plan you have published. We look forward to hearing the public input in person at these two hearings and online, and I'm confident you will take those public comments into account as your plans finalize. Thank you.

MR. HABEL: Thank you, Evan.

Ladies and gentlemen, John Kennelly.

MR. KENNELLY: Good evening. I would like to welcome you tonight to this public hearing regarding the New Haven Harbor Navigation Improvement Project Study.

I would also like to thank you for your involvement, for involving yourself in this study and for providing us with your views and comments.

By conducting this public hearing, we, the Corps of Engineers, continue to fulfill our requirement to seek public comment and input

relative to the New Haven Harbor Navigation Improvement Study.

While no decision will be made tonight, we welcome your comments on the New Haven Harbor Navigation Improvement Project Study. Your comments will be considered in our development of the Final Integrated Feasibility Report and Environmental Impact Statement.

Please feel free to provide comments that you would like to enter into the record.

Additionally, we will receive written comments tonight and through November 15th, 2018. I assure you that all of your comments, written or oral, will be addressed during this process, will be treated equally on the record, and will be considered in the development of the final report.

It is crucial to the public process that your voice be heard, and we're here to listen to your comments, to understand your concerns, and to provide you an opportunity to put your thoughts on the record should you care to do so.

The primary purpose of this hearing is to solicit the public's comments and input. However, the hearing will begin with the project team providing background information on the Integrated

Feasibility Report and Environmental Impact Statement, including details on the existing deep-draft navigation problems, alternatives evaluated, information on the Tentatively Selected Plan, and information on the dredge material and placement sites.

These presentations, at the beginning of each public hearing, will assist the public and agency reviewers in understanding the documents and the evaluation process which was followed; thus, aiding the public as they review the draft report.

In addition to providing comments at the public hearing, the public may provide written comments at any time during the public review period. I would like to emphasize this is your hearing, and we need you to assist us in this public review process.

We want your comments on the draft report so that we can consider all of the comments that we receive, those made here tonight, as well as those submitted during the public review process in the preparation of the Final Integrated Feasibility Report and the EIS. Thank you.

MR. HABEL: Thank you, John.

Ladies and gentlemen, Barbara Blumeris.

MS. BLUMERIS: Good evening. Tonight Todd and I will present summary information on the planning process to reach the Tentatively Selected Plan for the improvements at New Haven Harbor. The slides that we share tonight will be posted on our project website on Thursday. The project website is located -- you can find the location link on that Fact Sheet that's at the front.

This slide illustrates the Corps' civil works planning process. New Haven Harbor study has now reached, as I mentioned, the Tentatively Selected Plan milestone. The hour shows we are here. So we are about -- a little over halfway through the process. A Draft Integrated Feasibility Report and Environmental Impact Statement was issued in September, and we'll be taking comments, as mentioned, through November 15th from the public.

Concurrent with public review, we are also conducting Corps Agency Technical Review and Independent External Peer Review.

Following these concurrent reviews, there will be an internal Agency Decision Milestone, near the number 3 on the slide. And that's when we have a buy-in from headquarters office on the plan, and

we move into the completion of efforts and to optimize the selected plan.

Next slide, please. The New Haven Port Authority is the non-federal sponsor for the study. The Connecticut Port Authority is working in partnership with New Haven and provided the non-federal funding for the study. The study is cost shared 50 percent federal and 50 percent non-federal.

Legislative authority for the study came from a congressional resolution passed in July 2007. The cost share agreement for the study was signed with the Port Authority in December 2015, and work began in earnest in 2016 on site.

The purpose of the study is to investigate improvements needed to provide a safe, reliable, efficient, and environmentally sustainable waterborne transportation system at the New Haven Port, and also determine whether the improvements we identify are warranted and in the federal interest.

New Haven Harbor is centrally located on the north shore of Long Island Sound, as shown in the small insert map on the right. And the Harbor is an extremely important maritime commercial

resource for the state of Connecticut.

There is an existing federal channel authorized within New Haven Harbor. And this federal navigation project is shown in the middle of this diagram. This consists of several features, a deep-draft channel, turning basin and maneuver area, authorizing a depth of minus 35 feet mean lower low water.

That main channel, which the commercial ships deep-draft, are shown in the center of the drawing.

In addition, there are three shallow-draft channels, several anchorages, and three breakwaters. The breakwaters are at the entrance of the Harbor. There is also a training dike at Sandy Point.

This study focuses on the deep-draft main channel, turning basin, and maneuvering area, as these are the areas requiring improvements.

The deep-draft channel was authorized in 1946 and constructed in 1950. In 2018, the channel is now 68 years old and due for an improvement as ship sizes have increased over the last 60 years.

Next slide. In terms of total tonnage shipped and received, the Port of New Haven is the

largest port in Connecticut, and the second largest port in New England in 2016, ranking only behind the Port of Boston.

The total freight into the port is 8.8 million metric tons, and represented about 24 percent of all waterborne commerce in New England, and about 81 percent of all commerce in Connecticut.

The Northeast maintains a large refinery production/demand deficit, and must rely heavily on imported volumes of petroleum products in order to meet demand.

The port is a crucial import location for refined petroleum products, which supplies demand within Connecticut and the broader Northeast region.

The majority of the landside acreage in the Port of New Haven is devoted to energy-related uses. And this represents a long-term land use and economic asset for the state.

Next slide. Petroleum products imports have historically constituted about 70 percent of the channel tonnage. Data from 2016 is shown in the pie chart with the petroleum products in blue. You can see that. As I mentioned, that is a

significant commodity coming into the Port.

New Haven also provides dry bulk and break bulk services, including commodities such as salt, sand, cement imports. Virtually all of these volumes are used locally.

Steel is also imported, and includes steel rail, rebar, and steel billets.

There's approximately 1 million tons of scrap metal produced annually within the state, and about half of that amount is exported through the Port of New Haven. Driving to the hearing tonight, we saw a very large pile of scrap metal right along the harborfront.

Export volumes of scrap metal in New Haven have demonstrated sustained growth with volumes destined primarily to Turkey, Peru, Egypt, and Saudi Arabia.

Next slide. There are several terminals in New Haven Harbor, and all of these except for the PSEG Terminal provide berths to accommodate deep-draft commercial ships.

This slide shows the location of the various terminals: Magellan, Gulf, Gateway, Motiva, and New Haven Harbor Terminal.

Gulf Oil, Magellan, and Motiva handle

primary petroleum products, chemicals, and related products.

Gateway handles petroleum products, dry bulk, such as salt, asphalt, cement, stone, sand, scrap metal, and steel. So Gateway has a terminal shown close to the bridge. They also lease the facilities at Harbor Terminal.

Next slide. Navigation transportation delays and inefficiencies occur today due to inadequate federal project depth for the main channel and the turning basin.

So, as I mentioned, it's at minus 35 feet mean lower low water. A lot of ships that draft greater than 31 feet are delayed and need to transit the channel only at high tide. They also may have to light-load or offload cargo onto barges before they can come into the port.

Lightering operations can be adversely affected by weather, and this can cause additional delays. Lightering of liquid petroleum products also carries the risk of spills and environmental impacts in Long Island Sound.

The large ships coming in on the high tide are also an issue. As the ships come in from Long Island Sound in through the breakwaters, the

larger ships coming in on the flood are set further to the west, because the current runs east to west. This pushes them toward the steep outer bank of the curve.

To compensate for this, the pilots approach the bend on the far right side of the channel. As they come out of the bend, they go hard full ahead to make the turn and not have the stern hit the west bank.

This makes straightening the ship toward the next set of buoys ahead difficult since moving forward and turning at a high speed at the same time. This leaves little to no room to respond to changes in conditions that they may experience in bringing in these larger ships.

Next slide. So that was explaining the different problems at the existing channel.

Now, this is a slide of the ships that are constrained due to the 35-foot channel.

The authorized depth is 35 feet at low tide. And this provides insufficient depth for larger ships. So basically, the ships require 4 foot of underkeel. That is 4 foot of water under the ship when it comes in. So a 31-foot ship can come in unconstrained with 4 foot of underkeel

clearance, but anything that drafts greater than 31 feet cannot come in.

This shows a diagram of ships that are increasingly coming in at larger drafts.

Without an improvement project, ships would continue to be limited in the size of vessel they could use to call on the port, leaving them unable to achieve the economies of scale of larger vessels.

Many shippers prefer to use larger vessels, which has a lower overall cost per ton, particularly for the trips that come over long distances, such as from South America or Europe.

Without a project, the degree to which commodities brought to the port can be shipped on the most cost-effective vessels would be limited by the 35-foot authorized channel.

Next slide. This slide illustrates the alternative depths and widths considered for the improvement project. Alternatives were developed to address vessel delays and inefficient vessel loading. We looked at depths ranging from 37 to 42.

Next slide. This slide shows the quantity estimates developed for each of the

alternatives. Along with the increase in depth, there would also be incidental widening to accommodate the larger ships, which was shown on the previous slide.

These quantities and widths were estimated for each of the depths, and were used to derive cost estimates for the project. The cost estimates were accurate for the conditions expected in each of the alternatives. And they include a contingency of about 20 percent. So these quantities were used to drive the cost estimates for dredging the improvement.

In addition to the federal base plan for our placement sites, we also looked at a beneficial use plan for the placement of dredge material. And Todd will talk later on in this presentation about the alternatives developed for placement of the dredge material.

Basically, for the 40-foot, we have about 4.2 million cubic yards in the alternatives analysis, with a good portion of that in rock.

Next slide. This is the slide that talks about the economic analysis done by our Mobile Deep-Draft Navigation Center. So they're the primary production center for navigation, economic

analysis for the Corps of Engineers.

There are three primary effects from channel deepening that lead to changes in the future fleet at the Port of New Haven. The first is an increase in a vessel's maximum practical loading capacity.

Deepening the channel reduces the constraint of the size ship that can come in, as well as the loading of that ship. This increase in vessel has the result of fewer required vessel trips to transport forecasted cargo, improving the transportation into the Harbor.

The second effect with increased channel depth is the reliability of the water depth, which encourages the shippers to move -- as you can see in that trends slide of trips per draft, they'll continue to bring in ships that have deeper draft 'cause of the economies of scale of the larger ship. So that trend will continue and, with the improvement, be efficient.

So transportation costs were estimated for a lookout project condition, that is, as it is today, what does it cost to bring the cargo into the port. And then we looked at that through a 50-year period of analysis, so through 2072, from

2023, assuming the project would be constructed in 2023, through 2072 for the width project condition, and basically compared the cost to bring that amount of cargo in without the new project and with the new project.

We use a model called a HarborSym model that's done at the Mobile center. It includes a range of variables in running the model. HarborSym is a Monte Carlo simulation model of vessel movement at the port, and it generates costs for that operation.

The model calculated costs for all the project years, so that is for all the 50 years going forward, and then produces an average annual equivalent cost. So this can then be compared against the construction costs that I talked about, analyzing both and comparing them.

Next slide. So the project team used specific economic decision criteria to evaluate and compare plans against each other.

The 1983 Principles and Guidelines for Water Resources Planning within the Corps dictates that the NED plan be the plan that maximizes net economic benefits.

So in this case, you see the annual

equivalent cost -- you have the alternatives, your annual equivalent cost, and then your annual equivalent benefit. And then the net is the difference between those numbers.

And then you can see here that the maximum total net benefits occurs at the 40-foot plan. And this carries a BCR of 1.9. So the 40-foot plan is the NED plan. That would be the plan that we've selected, along with consideration of other factors, environmental, social, and regional economics. But that 40-foot plan is the selected plan.

Following the selection of the TSP, we refined the TSP design. So basically once we selected the 40-foot alternative, we did a ship simulation study at our center down in Vicksburg, Mississippi, where we have a computer simulation of the ships coming in and a computer simulation of the Harbor.

So the two pilots familiar with the ships came down to drive the ships in in the computer model. So here we have two of the pilots from Connecticut in Vicksburg running the ship simulation model.

So based on the ship simulation study of

the 40-foot plan, we had a few design refinements of that plan. So we found that we needed to widen the bend of the breakwaters slightly greater than we had, and also that we would relocate -- we had planned to move the turning basin more to the north, but when we did the ship simulation study, we found that actually its current location is best, and if we just widened it slightly to the north by 200 feet, we would be able to turn the ships sufficiently. So that basically had our refined design.

And the ship simulation also verified the widths of the channels that we had chosen of extending 50 feet on either side.

Next slide. Here are the features of our Tentatively Selected Plan. Now, as we talked about, had a refined design, so the cost went up slightly due to increased rock at the ledge. At the breakwaters is ledge.

And so when we refined the design, we were actually widening that bend a little bit more, so the cost of the project went up a little bit. So that's the TSP. We have 4.27 million cubic yards of ordinary material, a little bit more rock, 43 versus 35.

Next slide. This is the summary of the TSP. So you could see now the BCR went down slightly. It's 1.6 instead of 1.9. And we'll continue to refine the design as we move forward, as I mentioned, during the optimization phase. So we'll be looking at ways to be more efficient on the costs and also looking at benefits. So these numbers could change again before you see the final.

And then also this talks here a little bit about the salt marsh creation, which is a beneficial use site. So that would be an additional cost above the base plan. And we would be able to use some material from the project to create a salt marsh at the Sandy Point Dike.

Next slide. So this is a summary of the costs and proportionment of those costs between the federal and non-federal share.

So for the first cost for the project, including the beneficial use, the federal cost would be 52 million, and the non-federal cost would be about 18 million.

So that summarizes the project that we propose at this time, the Tentatively Selected Plan.

And now I'd like to invite Todd to come up and talk about the placement.

MR. RANDALL: Thank you, Barbara.

I will now talk about the placement alternatives for the New Haven project. In our last meeting back in January, we presented portions of this list as possible placement alternatives.

The first six alternatives listed here, which we presented in January, have been identified as feasible alternatives. The West River borrow pit was one that was identified in January. And we've taken a look at it, and it is a feasible placement alternative.

The bottom three, beach placement, bidding some kind of resiliency project, or using material and structure fill have been deemed unfeasible because of the nature of the material from New Haven. It's all silt, very difficult to do anything with.

And then the fourth from the bottom, a confined aquatic disposal cell may be required. I'm going to talk a lot about that in just a couple minutes. So we'll come back to that.

Next slide, please. Before we go into detail on the individual placement sites, I will go

through a brief discussion of how the sediments to be dredged can be characterized.

Using the study's initial design, a sampling and analysis plan was developed in coordination with the US EPA and the Connecticut Department of Energy and Environmental Protection.

The sampling plan was intended to characterize the sediments to be dredged, using at the time the largest footprint that we were looking at for our alternatives. So this included samples at depths of the deepest dredged depth, which was 42 feet, and also looking at the width increases of 100 and 200 feet.

And we also, as Barbara noted, had in our initial design a large turning basin feature in our initial design, different from what's there now and what we're ultimately going to be proposing.

But when we had to do our sampling, we used that biggest footprint 'cause we didn't want to miss anything.

Next slide, please. Sediment classification and determining suitability for alternative placement options is determined by a tiered process. That's sampling, testing, evaluating, and modeling. These processes are all

aimed at determining the risk of contaminants to human health and ecological health. This process is detailed in testing manuals that are jointly authored by the US EPA and Army Corps of Engineers.

Next slide, please. The sediment classification is basically a tiered process. The first tier, the top of the pyramid, is examining the history of the Harbor testing, spills and industry in the area. So basically you're evaluating existing data, existing conditions.

The second tier is sampling and testing to determine the physical and chemical characteristics of the material. This tier is a screening tool that's based on chemical concentrations of contaminants in the dredge materials. And it should be noted that chemical concentrations alone are not reliable tools for determining a sediment's actual toxicity. For this, we move into tier 3.

Tier 3 involves performing water column testing of the sediments, the water column chemistry, performing toxicity tests on benthic organisms, and performing bioaccumulation tests on organisms that are exposed to the sediment.

These are the real drivers to determine

sediment toxicity.

And finally, tier 4, performing sub-lethal bioaccumulation tests. And that's basically exposing a critter to the sediment, letting it live for 30 days, and then taking a look at the amount of contaminants it could uptake in the tissue.

And then those tests basically culminate in a risk assessment model that determines the potential for risk to human health and ecological health.

This tiered method allows us to assess the actual effects of the sediment's chemistry to biological organisms and, through modeling, to human health and ecological health.

For the New Haven Harbor project, all of the testing results that I will discuss can be found in Technical Supporting Document 1, which is on our website. And at the end of the presentation, we'll have a link to that. That has all the chemistry and biotesting that you may ever want to see.

But if you are looking for a simpler version, a simple table of just the chemistry data, a summary of the biological tests and toxicity

tests can be found in the suitability determination, which is in Appendix J of the Draft Environmental Impact Statement.

Links to all these documents are on the website that we will leave up at the very end of the presentation.

Next slide, please. Dredge material which is found to be toxic or pose significant risk to the environment or the human health is deemed unsuitable. That's the term that we use.

Such materials must be managed to isolate them from the environment, or they must undergo some kind of treatment to reduce their level of contamination to the point that other uses or placement options become available.

Only materials determined to be nontoxic and low risk, or suitable, as opposed to unsuitable, may be placed in unconfined open water sites.

This slide basically shows the decision-making process in a flowchart form. Sediment proposed for dredging is tested. If it fails testing, the toxicity testing -- not that tier 3 testing I was talking about in the earlier slide -- it's deemed unsuitable.

If the material passes the toxicity testing, you move into water column testing. If it passes that -- I mean if it fails that, it's considered unsuitable.

And then finally, the bioaccumulation tests can be done and risk models prepared. And that also is the final test that would determine suitable versus unsuitable.

Next slide. So here's the New Haven Harbor and the samples that we tested in our initial project footprint in 2017.

In the inner harbor, there were 17 stations sampled. As you can see here, we kind of set them up in transect form. So in the inner harbor, there were six transects.

These transects, or groups of samples, covered the areas that included channel deepening as well as the widening alternatives.

In addition, they covered that shifted and expanded turning basin that's up at the head of the project. In just a second I'm going to show you a slide so you can see where it is now versus what it looks like.

The proposed expanded alignment again placed the turning basin further to the north and

to the west of where it's currently located.

Next slide. In the outer harbor, we had six samples, we had two different transects. Again, we were looking at maximum depth, 42 feet, and then the width of a hundred feet.

Next slide, please. Just a little cartoon. This is a graphic that illustrates how samples were obtained. Basically, a coring device is vibrated down through the sediment to the proposed depth that we want to get to. The core is then sampled for chemical and physical parameters.

And then additionally gallons of the sediment are collected to prepare those water column tests, toxicity tests, bioaccumulation tests.

For this project, the cores sampled through a layer of maintenance material on top. That's stuff that's been kind of laid down since the Harbor was last dredged. And since we're going deeper, you can see it's into that glacial marine sediment or, you know, sediments that were deposited, we'll leave it at a long time ago.

Next slide. So the chemistry data for each sample can be found in Technical Supporting Document 1 and Appendix J.

I also noted that the chemical analysis is a screening that kind of dictates whether you move to biological testing or not. So the chemistry of New Haven Harbor dictated that we move into the bioaccumulation and biotoxicity testing.

So these are the results of the biological testing for New Haven. Using the tiered testing approach, the first decision point is the toxicity test.

The toxicity test uses two different species of critters that are representative of native fauna. That's the first -- so the composites, those are the transects that I was talking about earlier, the eight transects throughout the inner harbor and outer harbor.

The second and third column are the toxicity tests using two critters that are native to this area. And as you can see, all of the transects passed the amphipod Leptocheirus plumulosus. That's the first one.

However, the second one, Americamysis bahia, it's a mysid, it's a little shrimp, composite 6 failed. So if we go back to our flowchart, at the moment composite 6 would fail and be deemed unsuitable.

The elutriate test, which is a water column test, which is the 7th column there, water column modeling, that passed for everything with the exception of composite 6 and composite 7. And again, back to our flowchart, that kicks it into unsuitable.

So as it stands today, transects 1 and 2, which are in the outer harbor, are suitable. Transects 3, 4, 5, and 8, which are in the inner harbor, are all considered suitable. And then 6 and 7, based on this testing, are unsuitable. So there's a little diagram of where they are at the moment. In the next slide I'll talk to you a little more about the unsuitable stuff.

So this next slide, if we zoom in and look at the two transects that are currently unsuitable, we see they encompass both the channel area to the east and that relocated or expanded turning basin in our footprint design that was expanded to the west and to the north.

The map on the right shows the existing location of the current turning basin. Essentially it's right here. That's the existing turning basin. The map on the left shows that expanded turning basin.

The reason I'm bringing this to your attention is that as the project progressed, we had discussions with the Harbor pilots. We went through the ship simulation model that Barbara talked about just a few minutes ago, and we basically determined that a significantly larger and wider turning basin wasn't needed for the ships that call into New Haven.

So as a result, the footprint of the turning basin is being reduced. And in light of the design change, we are currently resampling and retesting the sediment in the areas around these two transects to basically better define the material.

Next slide. I'll show you what I mean.

With the additional sampling, here's an overlay of the reduced turning basin footprint and the additional sampling that we're currently performing.

The green sample locations are the ones that are being evaluated. These sediments will be re-evaluated the same way with the tiered testing process to determine their suitability. It should be noted that -- can you go back one slide, Barbara? I apologize. I forgot. That expanded

turning basin actually kind of encroached into this area here, which is an existing 16-foot anchorage basin that hasn't really been dredged since 1950.

So with our -- next slide, please -- with our reduced design of just the existing turning basin, with a slight 200-foot increase to the north, we're trying to pull out of that area that hasn't been dredged in a long time.

So today our conclusions indicate that we have some unsuitable material. So with such, we've included a CAD cell in the placement alternatives that I'll discuss in just a second.

But it should be noted that data from the sampling of the reduced footprint may show the material is suitable due to removing the material out of that whole existing 16-foot anchorage. But that process is basically still ongoing.

Next slide. What is a CAD cell? A CAD cell is basically a confined aquatic disposal site, a hole in the ocean, if you will. The CAD cell is required.

This schematic shows you the general process behind the creation of one. Suitable material is removed. And that's what's happening in the first graphic.

And then the second one, the cell is filled with unsuitable material. That's what's happening in the second.

And then in the third picture, the unsuitable material is capped with suitable material.

So with that in mind, we'll go ahead and go into the alternative placement slides now. So here are the placement alternatives that are carried forward in the study and documented in the Draft IFR/EIS.

The baseline plan consists of the two borrow pits, the Morris Cove borrow pit and the West River borrow pit.

These pits will be filled to elevations that are within 1 and 2 feet of their surrounding areas. These pits were dredged for material to create the 95 embankment.

The material from the outer harbor, which is -- it's a silty sand. It's not sandy enough to put it on the beach or use as a structural fill. But we do plan to take that material and place it behind the east breakwater to raise the bottom elevation and change the bottom sediments a little bit, so it's a little bit sandier sediment for

shellfish habitat. So that's where our plan for the outer harbor material is.

All the blasted rock that comes out of that bend that Barbara talked about expanding would be placed south of the west breakwater to create a rock reef, some habitat for Long Island Sound organisms.

And then the remaining suitable material, mostly silts, would be placed at the central Long Island Sound disposal site. It's not shown in this map, but it's a few miles south of the entrance to New Haven Harbor.

There's an additional beneficial use alternative with the plan that's beyond the federal base plan. This alternative involves using the silty material to create approximately 70 acres of salt marsh and tidal creeks in the vicinity of Sandy Point in West Haven.

As noted in the draft EIS, since the late 1800s, the New Haven Harbor ecosystem has lost over 60 percent of its historical wetlands through filling for residential and commercial property development. So the creation of 70 acres of salt marsh would restore some of the functions and values that marsh systems provide to the New Haven

Harbor ecosystem.

Also, as I just noted, during the sediment characterization CAD cell discussion, a potential CAD cell has been planned in the event that we need to manage any kind of unsuitable material. And the proposed CAD cell location is just to the west of the channel in the vicinity of Sandy Point. So it's that purple box just southeast of Sandy Point.

Next slide, please. This slide shows the base plan placement sites, about a million cubic yards. So basically, the inner harbor sites total about a million cubic yards for the placement. The rock will be placed, like I said, to the west of -- south of the west breakwater. And then the rest of the material would go to central Long Island Sound.

Should a CAD cell be required, the material, the suitable material that would come out of a CAD cell would kind of take the place of one of those other options. And unsuitable material would be placed in the CAD cell.

Next slide. Here's just a quick look at the beneficial use placement site above the base plan. It involves creating salt marsh in the vicinity of Sandy Point. This option would place

approximately 840,000 cubic yards of suitable silt just to the north of Sandy Point, in the area that's shown in the green box in the little inset. This area would be designed as salt marsh, tidal creek, and it would retain the sandy beach habitat.

Next slide: This slide is just a summary of the projected measures that, following project review, authorization, and design, would be used to protect resources in New Haven Harbor.

Construction windows for dredging and blasting would be used to minimize impacts to potential fish habitat, shellfish, anadromous fish, endangered species.

The Corps also performed a series of culture resource studies in the area and did not identify the need to -- we didn't find anything that was in need of protection.

Next slide, please. This slide documents the coordination efforts that are ongoing for the project. These are all detailed in the EIS.

In terms of our public involvement with the project, we had scoping meetings in January of 2017. We had the alternatives briefing in January 2018. And now we're into the public review and public hearing process for the Draft Feasibility

Report and EIS.

The website with all the information we presented is over there in green. But the next slide -- well, the last slide will have that -- we'll leave it up in case you'd like to -- next slide, please.

And then finally here's the project schedule. As I just noted, we are currently in the 45-day review period for the IFR and the EIS. Comments on the draft are due by November 15th, again, written, email, here tonight. We listen to them all.

Once we get to that date, we will take a look at all the comments, hopefully get to them by January of this year -- of next year, and with responses make an agency decision on which plan to move forward with. And then we will move towards finalizing the IFR and the EIS, which will, again, come out for public review and public comment. Our time frame for that right now is September of 2019.

So on behalf of Barbara and all of the New Haven Harbor team members, thanks for your interest, and thanks in advance for looking at the documents and providing the comments.

I'll now hand the microphone back over to

Mr. Habel. He can walk you through the commenting process. Thank you.

MR. HABEL: Thank you, Todd.

The hearing tonight will be conducted in a manner so that all who desire to express their views will be given an opportunity to speak.

To preserve the right of all to express their views, I ask that there be no interruptions. When you came in, copies of the Fact Sheet and procedures to be followed at this hearing were available. If you did not receive these, both are still available at the registration table. I will not read either of them, but they will be entered into the record.

The record of this hearing will remain open, and written comments may be submitted tonight, sent by mail or by email through November 15th.

All written comments will receive equal consideration with oral comments made this evening, and both oral and written comments will be considered in the development of the Final Integrated Feasibility Report and Environmental Impact Statement.

We need your participation throughout the

entire process, and I thank you for contributing your comments and thoughts tonight.

A transcript of this hearing is being made to assure a detailed review of all comments. A copy of the transcript will be available at the Corps' Concord, Massachusetts headquarters for review, posted on the Corps' website for your use, or you may make arrangements with the stenographer for a copy at your own expense.

Anyone who does not comment tonight but wishes to send written comments may do so. Please forward those comments to the Corps' project manager, Barbara Blumeris, at the Corps' New England District office located in Concord, Massachusetts.

When making a statement tonight, please come forward to the microphone and state your name. If you are speaking for or representing a position of an organization, please say so.

There are only about four people who have filled out speaker cards tonight, so we won't use the typical three-minute clock, but I ask you to please summarize your comments. If you have more detailed comments, please make those in writing by email or by letter to the Corps.

Again, oral and written statements will receive equal consideration in making decisions. Also, any written comments you may have brought with you tonight may be submitted to the stenographer.

The first individual to provide comment for the record tonight is Michael Pimer.

MR. PIMER: Good evening. My name is Mike Pimer, ex-harbormaster, ex-business owner. I'm 80-plus years old. That's what makes me ex. Nobody wants me, but I've got a big mouth. And I've been around a long time. And I've got a few questions for you.

I represent the West Haven's harbor management. That I am still part of. Also, I'm like a deputy harbormaster still, 'cause my son is now the West Haven harbormaster. Okay. Here we go.

Initially, when I went to the hearings, you had the straightening of the approach to the breakwater. That's been scrapped?

The straightening of the channel, it's now been widened on the bend, and not so much as moving the channel to the west, the outer channel, making it straighter. Is this correct?

MR. HABEL: Sir, this is a hearing tonight. It's not a dialogue.

MR. PIMER: Well, I'm just asking. Because according to what I'm seeing up there tonight is the channel is the same place it was before. It just got a little wider.

MR. HABEL: It's been widened, yes.

MR. PIMER: Is that basically wider and deeper?

MR. HABEL: Yes.

MR. PIMER: Okay. You're going to blast between the breakwater, correct?

MR. HABEL: Where the rock is.

MR. PIMER: That's where the rock is. It's granite.

I had suggested at the last hearing that we take the material from that blast, instead of putting it on the outside of the west wall, that we might consider putting it on the breakwater at Sandy Point, the little jetty opposite the Coast Guard station.

We've had so many boats run over that because of the rising tide and the fact that it's not -- you can't see it anymore. Government boats have run over it, come right out of the Coast Guard

station and run over it. Not a good thing.

But that was my reasoning for building that up with material which you had to move. I'd just like you to consider that in the future.

Now, you're going to make a marsh to the north of Sandy Point? Is that going to shut off the West Haven Yacht Club channel, basically out to the main channel? They're located inboard on the shore. Are you going to -- I didn't see how far this was going to go. Is it going to hug the Sandy Point break -- beach there, or is it going to move away from the beach? And how far?

So you might consider putting that out on the next hearing you're going to have, showing us exactly how far out you're going to move it. Because West Haven Yacht Club is located inboard of that. And they normally run alongside that sand bar to get out.

West River. You're going to fill in the borrow pit there now. Not a bad idea. It was used for sailboat anchorage. It was part of the harbormaster's domain to put sailboats. They'll find another spot.

But we would like to -- I say we -- the 350 members of the City Point Yacht Club and I

think The Havens, which is a multimillion-dollar investment going into West Haven in the West River, needs to have some water.

While you're doing the outer channel, I would like you to consider doing the West River up to I-95. 12 feet would be desirable. You have 12 feet halfway in that channel and then it suddenly jumps up to 6. And that's a killer.

Half the boats are dragging their tails coming out of that river. And you can't expect people with yachts to come in and go shopping in a big mall when they don't have water. So I just want to throw that out at you.

I think everybody's in agreement here that we ought to deepen the West River. It was deep at one time. We had tugboats and barges that went all the way up to the river tracks past where I-95 is now. We had a brick company up there. We had coal barges going in there.

We had tugboats going into -- just the side of the old Kimberly Avenue Bridge was nonexistent, which used to open up. And we have asked before to have this done. And we've heard that we have to have commercial vessels up there. Well, unless we've got water, we can't have

commercial vessels because they throw more than what we have in depth. You can't tell a commercial boat, oh, I can't go out now. It's low tide.

So we had maybe half a dozen commercial vessels up beyond the bridge. But they're small. We did have bigger boats. Nonexistent.

The Army Corps decided to build a bridge, get rid of an open-and-closing bridge, and turn around and make a permanent bridge. And that was the end of that.

So since that time, it's been getting shallower and shallower and shallower. And when you go to take your samples, you'll notice it's 6 foot, and minus 6 foot is what you're going to find in the West River from Pequonnock Yacht Club up the river.

We would like to see -- we've got a fire training center, New Haven fire boat. We'd like to see that be able to go there. West Haven is getting a very large fire boat. We'd like to see that be able to operate.

We've got to tell them, well, you've got to put it over at City Point because we don't have enough water. We had enough water. I would like to see us get it back. Thank you.

MR. HABEL: Thank you, sir.

Next up is Bill Marazzi.

MR. MARAZZI: Thank you for giving me this opportunity to speak tonight. I don't want to reiterate what Mike Pimer had just given you. But our club is 350 people, City Point Yacht Club. We're one of the oldest clubs around, 1896.

I joined 30, 40 years ago, right after I got out of the Army. If we didn't have water and boating, I probably wouldn't be here today. I fell onto the City Point Yacht Club, and I use it as my falling stone. Instead of going to the VA to get help, I got help from the members of the City Point Yacht Club, which in turn I have used my boat there for therapy, camaraderie. And the depth of the water was much greater, as Michael said.

By giving us a little help up that end of the river, the West River, would be much welcomed. And I think it is much needed for the both yacht clubs that use that channel. Thank you.

MR. HABEL: Thank you. Next is Joe Gilbert.

MR. GILBERT: Hi. My name is Joe Gilbert. I represent Empire Fisheries. I'm here speaking on behalf of Briarpatch Enterprises.

This is an important project for New Haven. Keeping the channel deep and keeping businesses up there competitive is important to all of us.

There are some impacts, though, outside of the actual navigation channel that concern us. I just want to go on record that I will be submitting some written comments to that effect. Thank you.

MR. HABEL: Thank you, sir.

Kathy Hebert.

MS. HEBERT: Hi. I'm Kathy Hebert, and I represent two different watersheds: West River Watershed Coalition and West Haven Watershed Restoration Committee.

In reference to the West River watershed, we have been concerned about the dredging and the sand dumping at the mouth of West River. And you pretty much covered it, where the CAD, if there's any contaminated removal from somewhere else, you're going to fill the West River borrow pit and then cover it up -- no? Okay. That's what I'm not understanding. And I guess we don't get answers tonight.

MR. HABEL: Well, I'll just provide a

quick clarification.

The Morris Cove borrow pit and the West River borrow pit, the holes that are already there, we would be filling those in with suitable dredge material.

MS. HEBERT: Okay.

MR. HABEL: And the unsuitable material from wherever in the Harbor, we would dig a separate confined aquatic disposal cell in the outer harbor to place that in and then cover that.

MS. HEBERT: That's good. That answers that question.

And it was brought to the West River Coalition that there's an old oyster bed on the New Haven side of the West River. And we didn't know about it, and we didn't know if you knew about it.

And in your plans, 'cause you did say you were going to protect the sea life, is there any plan to protect that? Is the dredging going to damage that? Or do you not even know? Did you not know about it? So that's a comment.

And for the West Haven watershed, we're concerned about any changes to Sandy Point bird sanctuary. And I saw the pictures up there.

So, again, a question. Because the outlay pipe from the West Haven Treatment Center pretty much goes alongside or through Sandy Point, and I've heard they're going to be replacing that. Who, I don't know. I don't know if it's you or West Haven. But we just want to make sure that there's no damage to that when you're doing that. Because we don't want any of the sewage in the Sandy Point bird sanctuary and the salt marshes. And I think that was it. Thank you.

MR. HABEL: Okay. Thank you, ma'am.

That was the last of the individuals who filled out speaker cards. Is there anyone else in the audience who did not fill out a card but wishes to speak?

Sir, please come up and state your name.

MR. FLYNN: My name is Dennis Flynn. I'm also a member West Haven Harbor Management Commission.

My two comments are as big as this dredging project is, I can't understand why you're not doing the rest of the federal navigation channel, which I think should be done. It's cost-effective while you've got everything there to do the rest of the dredging.

And the other thing is your slides showing -- and the woman before me commented -- where you're talking about marsh restoration, it doesn't show far enough and exactly how far away you're going to be from an outflow pipe, which is very important to us. We need to know that.

So if we could get, you know, an estimate, is it going to be a hundred feet away, a thousand feet away, that's very important. Thank you.

MR. HABEL: Okay. Is there anyone else?

All right. John, the floor is yours.

MR. KENNELLY: Thank you, Mark. We have heard many thoughtful statements this evening. All of the comments received tonight, as well as written comments we receive during the review period, will be considered in the development of the Integrated Feasibility Report and EIS.

Written statements may be submitted to the Corps of Engineers until November 15, 2018. They will receive equal consideration with those presented tonight.

We, the Army Corps of Engineers, extend our appreciation to all who took the time to involve themselves in this public review process

and the Bailey Middle School for the use of their fine facility tonight.

I'd like to thank all for taking the time to provide us with your thoughts, your comments, and your concerns. Goodnight.

(Whereupon, this public hearing was concluded at 7:42 p.m.)

C E R T I F I C A T E

I hereby certify that I am a Notary Public, in and for the State of Connecticut, duly commissioned and qualified to administer oaths.

I further certify that the record of the proceedings held in the matter was taken by me stenographically in the presence of counsel and reduced to typewriting under my direction, and the foregoing is a true and accurate transcript of said proceedings.

I further certify that I am neither of counsel nor attorney to either of the parties to said matter, nor am I an employee of either party to said matter, nor of either counsel in said matter, nor am I interested in the outcome of said cause.

Witness my hand and seal as Notary Public this 4th day of November 2018.

_____

Janet C. Phillips
Notary Public

My Commission expires:
October 31, 2021

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