

## **Appendix M**

### **Projects Evaluated in the Cumulative Impact Analysis**



## **APPENDIX M**

### **PROJECTS EVALUATED IN THE CUMULATIVE IMPACT ANALYSIS**

#### **1.0 Introduction**

This appendix provides brief descriptions of selected present and reasonably foreseeable future actions (RFFAs) with the potential to contribute cumulatively to impacts associated with the proposed Navy Base Intermodal Container Transfer Facility (ICTF) Project. This appendix supports the cumulative impacts discussion in Chapter 5 of the ADEIS. Relevant projects, plans, and programs that could interact with the Proposed Project or the alternatives were identified during the environmental analysis for the specific resource areas. To identify RFFAs, a general literature search was conducted and several sources were reviewed. The sources included, but were not limited to:

- Charleston Metro Chamber of Commerce
- South Carolina Department of Commerce
- Berkeley Charleston Dorchester Council of Governments (BCDCOG 2013)
- Navy Base ICTF Scoping Meeting Report
- South Carolina Statewide Transportation Improvement Program (SCDOT 2013a)
- 2040 South Carolina State Multimodal Transportation Plan (SCDOT 2014)
- Corps Permit Records and Public Notices

The information for the projects described in the appendix is current as of March 2016.

#### **2.0 Port and Navigational Projects**

##### **2.1 Hugh K. Leatherman Sr. Terminal (HLT)**

The South Carolina State Ports Authority (SCSPA) is currently constructing a marine container terminal, Hugh K. Leatherman Sr. Terminal (formerly the Navy Base Marine Container Terminal at the Charleston Naval Complex) and access roadway at the former Charleston Naval Complex in North Charleston. The Charleston District U.S. Army Corps of Engineers (Corps) issued a Final Environmental Impact Statement in December 2006 (USACE 2006). In April 2007, the Corps issued a Department of the Army (DA) Permit under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act (USACE 2007a). This project is currently under construction and consists of a wharf, berth and access channel, container yard and support facilities, improvements to Tidewater Road, stormwater management facilities, and a new Port Access Road.

The Record of Decision (ROD) issued on April 24, 2007 (USACE 2007b), determined that the project would have the following impacts:

- **Socioeconomics and Environmental Justice.** The project was determined to have both beneficial and adverse impacts on the adjacent communities and the region. The project keeps with adjacent land uses and was designed to avoid and minimize potential impacts to residents of the adjacent minority and low-income communities. The project is expected to have moderate long term adverse impacts to social characteristics. A mitigation plan was developed to address these long adverse impacts. (USACE 2007b)
- **Transportation.** The construction of the HLT was anticipated to have impacts to local traffic patterns. The closure of I-26 Exit 218 would result in both beneficial and adverse impacts on local traffic patterns. The construction of the related Port Access Road would keep trucks off local roads and have both short term adverse (during construction) and long term beneficial and adverse impacts to local traffic patterns. A projected increase in railway traffic would result in additional impacts to residents and businesses that were already impacted by the operation of existing railways. Likewise, increased delays at existing railway crossings were anticipated. Therefore, the HLT is expected to result in long term adverse impacts associated with the projected increase in railway traffic. In addition, the relocation and expansion of the existing railway crossing at Shipyard Creek Road associated with the construction of the Port Access Road would result in a long term adverse impact to the future operation of the existing CSX Cooper Railyard. Several mitigation measures were incorporated to reduce transportation impacts, including delaying operation of the HLT until the Port Access Road is operational and a commitment to transport at least 75 percent of the fill material to the project site by water. (USACE 2007b)
- **Noise.** The HLT will result in an increase in short term and long term impacts to future noise levels. A variety of construction equipment will be the major noise sources during construction. The Cooper River Marina and the Federal Law Enforcement Training Center (FLETC) will experience long term impacts during normal operation. Intermittent noise sources, such as a dropped container or hatch cover, will likely be audible within the adjacent residential communities. A majority of the residences that will be impacted by the increase in noise levels associated with traffic increases are located in the Rosemont neighborhood. Noise barriers will be constructed to minimize noise impacts to the FLETC and Rosemont neighborhood. (USACE 2007b)
- **Aesthetics/Light.** The overall contribution of light pollution associated with the HLT is expected to be minimal in comparison with the urban lighting within the North Charleston area. The facility will be visible from properties along Shipyard Creek and adjacent properties on the Charleston Naval Complex. Views from the south across the Cooper River will change from an undeveloped, vegetated area to a lighted industrial facility. (USACE 2007b)
- **Air Quality.** The Marine Container Facility will result in long term increases in mobile emissions associated with the combustion of diesel and gasoline fuels. (USACE 2007b)
- **Water Quality.** Adverse stormwater impacts will be managed through the use of stormwater treatment measures and best management practices (BMPs). South Carolina Department of Health and Environmental Control (SCDHEC) determined that the Proposed

Project will not violate state water quality standards and is consistent with the goals and policies of the state Coastal Zone Management Plan. A Total Maximum Daily Load (TMDL) for dissolved oxygen has been established for the Charleston Harbor System. Dredging associated with the HLT was determined to have less than a significant effect on the dissolved oxygen levels and would comply with state water quality standards. Hydraulic dredging over a two year period will result in temporary increases in the turbidity of the Cooper River. (USACE 2007b)

- **Wetlands.** The HLT will result in the loss of 2.7 acres of freshwater wetlands, 12.3 acres of tidal marsh, and 56.6 acres of open water habitat. In addition, approximately 80 acres of open waters will be deepened. (USACE 2007b)

## 2.2 Charleston Harbor Post 45

The Charleston District released the Final Integrated Feasibility Report and Environmental Impact Statement (FR/FEIS) for Post 45 in June 2015. The Final FR/EIS proposes a Recommended Plan (RP) which is a Locally Preferred Plan (LPP) to deepen the major shipping channels within the harbor (USACE 2015a).

The FR/FEIS was completed in June 2015 (USACE 2015a), and determined that the project would have the following impacts:

Public and Agency concerns were expressed throughout the study about the effects of the study alternatives on salinity and associated ecological changes to wetlands and fish habitat; water, air and sediment quality; shoreline erosion; cultural resources; and hardbottom habitat; among others. Numerical models and other analytical tools were used to predict and quantify the potential project related effects.

The RP would indirectly impact about 324 acres of wetlands through increases in salinity, which would require mitigation in the form of preservation of about 665.6 acres of wetlands. The USACE has determined that preservation of land within the Francis Marion National Forest best meets the compensatory mitigation requirements. The proposed preservation of ecologically significant parcels would provide important physical, chemical and biological functions for the Cooper River Basin and would contribute to the sustainability of the watershed by ensuring the functions of bottomland hardwood and emergent wetlands on these properties are sustained in perpetuity. The preservation parcels would also enhance lands already within the Francis Marion National Forest by functioning as a buffer to future development.

About 30 acres of hardbottom habitat would be created using dredged material to compensate for direct impacts to about 29 acres of hardbottom habitat currently occurring within the channel and the indirect impacts to hardbottom habitats near the channel. The new hardbottom habitat would consist of two mitigation reefs (1 required, 1 additional) and six (totaling eight) similar new 33-acre reefs that will be constructed as a beneficial use of dredged material. Prior to construction, the locations of these reefs would be refined and coordinated with resource agencies. At the request of the SCDNR Artificial Reef Program, rock material will also be deposited at the 25-acre Charleston Nearshore Reef site as a beneficial use of dredged material. All proposed rock placement is part of the least cost

disposal plan because all of the reef placement sites are closer to the dredging site than the alternative Ocean Dredged Material Disposal Site.

Construction of the RP would cause temporary and minor adverse impacts to water quality in the areas near dredging activities. The predicted magnitude of project-induced dissolved oxygen reductions are small and would not significantly impact aquatic organisms or require mitigation to comply with state water quality standards. The USACE, Charleston District is committed to monitoring the impacts of the project and ensuring that they are similar to those predicted during the study.

The RP would have no significant effect on any threatened and endangered species. Construction impacts would likely have temporary adverse effects on sea turtles and sturgeon species. However, no long term impacts of the RP would be expected for most threatened and endangered species and it would not likely adversely affect the Atlantic and shortnose sturgeon.

Geophysical, bathymetric and diver investigations of three potential cultural resource targets revealed no culturally significant objects within the project footprint. Dredging in one channel reach in the lower harbor will be monitored by an archaeologist due to one anomaly nearby the channel.

### **2.3 Maintenance Dredging at SCSPA Berths**

The SCSPA conducts regular maintenance dredging at the five SCSPA terminals. A maintenance dredging permit for the Union Terminal was placed on public notice on May 7, 2013 (USACE 2013a).

### **2.4 Kinder Morgan Terminal Maintenance Dredging**

Kinder Morgan submitted a permit application to the Corps for maintenance dredging at the Kinder Morgan Terminals at 5165 Virginia Avenue, North Charleston. The project was placed on public notice on March 7, 2014 (USACE 2014c).

### **2.5 Macalloy Intermodal Terminal**

This property is located on Shipyard Creek and is being considered by the owners for a future “on dock” intermodal facility with rail and truck distribution. A permit application has been submitted for dredging and the construction of a new wharf. A total of 0.28 acre of salt marsh is expected to be impacted due to potential sloughing from the channel widening (USACE 2013b).

### **2.6 Odfjell Terminal Dredging**

This project is located on the Cooper River at 1003 Virginia Avenue, North Charleston. Wharf reconstruction involves new dolphins, anchor buoy, decking, and catwalks. Dredging will also be conducted to increase depths. The project was placed on public notice on April 3, 2013 (USACE 2013c). A total of 0.15 acre of shading impacts on estuarine substrates and emergent wetlands would result from construction.

## **2.7 Nuclear Power Training Unit Charleston**

This work consists of constructing improvements to the existing infrastructure at the Nuclear Power Training Unit Charleston, located along the Cooper River at the Naval Weapons Station-Charleston in Berkeley County. The work includes the replacement of an existing pier with a wharf, construction of a pile supported utility platform, installation of mooring dolphins and hurricane survival mooring systems, and extending the existing Port Security Barrier. Dredging will occur to accommodate a new Moored Training Ship. Work within the upland portion will include relocated roadways, additional parking areas, stormwater outfall structures, and new security fences and light poles. The work will impact 6.48 acres of freshwater wetlands and 0.4 acre of estuarine substrates and emergent wetlands (USACE 2013d). A DA permit was issued for this work on April 30, 2014.

## **2.8 BP Amoco Chemical Maintenance Dredging**

BP Amoco Chemical Company will be conducting maintenance dredging at their facility located on Grove Creek, a tributary of the Cooper River. The Corps placed the project on public notice on March 13, 2013 (USACE 2013e), and issued a permit on September 27, 2013.

## **2.9 Marinex Construction**

Mooring dolphins are proposed within the upper turning basin of Shipyard Creek. The proposed mooring dolphins comply with the 125-foot federal channel offset while also providing adequate depth for scow mooring. No dredging is proposed and this work is outside of the proposed dredging for the Macalloy Terminal (SAC#2013-00202-2R). The Corps placed the project on public notice on May 23, 2014 (USACE 2013f).

## **2.10 Project Striker**

This proposed project is for a new manufacturing facility to be located at the Bushy Park Industrial Complex in Berkeley County. The proposed manufacturing facility will produce approximately 1,200 tons per day of consumer grade polyethylene terephthalate (PET). The work will involve impacts to 10.48 acres of freshwater wetlands, as well as construction of a wharf, water intake, and dredging and maintenance dredging over an area approximately 93 acres within the Cooper River (USACE 2014d). A rail spur will also be constructed to service the manufacturing facility. The Corps placed the project on public notice on March 25, 2014 (USACE 2014d).

## **2.11 Daniel Island Marina Dredging**

Dredging is proposed over a 0.69-acre area at the Daniel Island Marina located off Clouter Creek, a tributary of the Cooper River, in Berkeley County (USACE 2013g). The Corps placed the project on public notice on March 27, 2013 (USACE 2013g).

## **2.12 Shem Creek Park Dredging**

The Town of Mount Pleasant proposes to conduct dredging adjacent to the Federal Channel at Shem Creek Park, in Mount Pleasant. Dredging will occur over a 0.67-acre area (USACE 2013h). The Corps placed the project on public notice on April 25, 2013 (USACE 2013h).

## **2.13 Abengoa Energy Crops**

Abengoa Energy Crops proposes to conduct new work and maintenance dredging over a 3.11-acre area, removing two existing dolphins, and constructing a new wharf in the Cooper River. The proposed project also consists of the construction of industrial facilities to include storage and warehouse facilities, office buildings, maintenance building, fuel storage facilities, a conveyor system, a receiving facility, and associated infrastructure, to include the construction of a rail spur with three tracks. The applicant has indicated that the proposed work would permanently impact 0.82 acre of jurisdictional freshwater wetlands. The applicant has proposed to purchase 4.8 wetland mitigation credits from the Pigeon Pond Mitigation Bank for unavoidable impacts to jurisdictional wetlands. The Corps placed the project on public notice on January 12, 2015 (USACE 2015).

## **2.14 Numerous Community and Commercial Pier Projects**

Numerous community and commercial pier projects are proposed within the Cooper River watershed in the Charleston Metro area. Many of these projects are reconstructions of existing piers.

## **2.15 Project Gray at the Ladson Industrial Park**

A new manufacturing facility is proposed, consisting of 550,000 square feet of manufacturing space, 8 acres of container storage space, a rail spur and space for 264 rail cars, truck docks, parking and stormwater retention basins. Expansions and additional phases could include 700,000 additional square feet of manufacturing space. The applicant has proposed purchasing 97 wetland credits to offset the 11.995 acres of permanent freshwater wetland impacts. Credits would come from Congaree Carton, Pigeon Pond, and/or Swallow Savannah Mitigation Banks (USACE 2016a).

## **3.0 Other Urban and Industrial Development**

### **3.1 Boeing Assembly Plant Expansion**

Supporting a 30-year plan of expansion, Boeing has permitted a large property adjacent to their existing manufacturing facility at the Charleston International Airport, parts of which are currently under construction (Seattle Times 2016). The project will add 468 acres to the existing 232-acre aerospace manufacturing facility. This project will result in the excavation and/or placement of fill material within a total of 153.71 acres of waters of the U.S, including 150.99 acres of wetlands (USACE 2013i).

### **3.2 Uptown at Centre Pointe**

A mixed-use town center is proposed within the Filbin Creek watershed in North Charleston. If built as proposed, the project would include roads and infrastructure, a transit facility, retail shops, restaurants, municipal office space, commercial facilities, residential housing, and a sports field. Additionally, the project would include modifying an existing weir structure and installing a subsurface flow wetland filtration system. The project would result in the placement of fill material in 33.66 acres of wetlands and clearing of 4.55 acres of wetlands (USACE 2014e).

### **3.3 Project Douglas**

A new manufacturing facility is proposed at the Bushy Park Industrial Complex in Berkeley County. No information was provided in the public notice concerning the nature of the manufacturing facility. No wetland impacts would result from the footprint of the manufacturing facility; however, a railroad spur would be constructed to provide transportation of goods to and from the facility, resulting in 2.53 acres of impact to freshwater wetlands. This project has been permitted (USACE 2014f) but it is unclear whether any construction has begun.

### **3.4 Clemson Restoration Institute Campus**

Construction for the current facilities involved the redevelopment of Building 69, an existing 82,264-square-foot former Navy warehouse adjacent to existing rail and ship-handling infrastructure. Environmental assessments and construction work began in 2010. Construction involved approximately six months of site cleanup, asbestos and lead paint remediation. Older buildings on site were demolished & foundation work began in the fall of 2011. The redesign of the existing building and foundations were completed in 2012. In 2013, concrete for the foundation of the world's largest wind turbine drivetrain rig was poured on the site. This task involved pouring 1,900 cubic yards of concrete into a pit 50 feet wide by 100 feet long by 15 feet deep, resting on 115 70-foot-deep piles. Construction on the new rig was completed in 2013, and the SCE&G Energy Innovation Center was dedicated November 21, 2013.

### **3.5 Mercedes Benz Vans Expansion**

Construction of the expansion site is currently ongoing (Forbes 2016) at the nearly 220-acre site. Mercedes Benz is expanding their current site to add the van manufacturing and storage yards. The resulting facility will impact 18.38 acres of freshwater non-tidal wetlands and has been permitted (USACE 2016b).

## **4.0 Surface Transportation**

### **4.1 I-26 Port Access Road Interchange**

While the Port Access Road itself was included within the HLT project, SCDOT will be constructing the new interchange. The project will involve the demolition of the existing interchange with Spruill

Avenue (Exit 218) and construction of a new interchange for the proposed Port Access Road. The environmental assessment prepared for the project found that beneficial or minimal impacts to water quality, socioeconomics, transportation, noise, aesthetics, air quality and wetlands would occur. A total of 0.057 acre of freshwater wetlands will be impacted by this project (SCDOT 2013b).

#### 4.2 I-26 Widening

SCDOT has widened I-26 from six to eight lanes from Exit 196 to Exit 221. The widening occurred within the existing right-of-way of I-26 (SCDOT 2013a).

#### 4.3 Mark Clark Expressway (I-526) Extension

SCDOT plans to construct approximately 7 miles of new roadway, from the existing endpoint of I-526 at US 17 (Savannah Highway) to the James Island Connector at Folly Road. Two sections have been developed for the roadway: an interstate facility and a parkway facility. The interstate facility will have:

- Four lanes, divided with a concrete barrier median;
- Fully controlled access;
- Right-of-way width of 250 feet; and
- A posted speed of 55 mph.

The parkway facility will have:

- Four lanes, divided by a 15-foot center median;
- Limited access on James Island with at-grade intersections and two at-grade, T-intersections on Johns Island provided by two connector roads to River Road;
- A posted speed of 35 to 45 mph; and
- A multi-use path for its entire length.

A DEIS was completed in July 2010. Relevant impacts associated with this project that may interact cumulatively with the ICTF include (FHWA et al. 2010):

- **Socioeconomic/Environmental Justice.** There are no disproportionately high and adverse human health or environmental impacts on minorities and/or low income populations.
- **Transportation.** The project will result in increased capacity of regional transportation system.
- **Air Quality.** The DEIS found that the preferred alternative would result in reduced Mobile Source Air Toxic (MSAT) emissions in the immediate area of the project due to the reduced vehicle miles of travel (VMTs) relative to the No-build alternative.
- **Water Quality.** Most of the project would be located within the South Carolina Coastal watershed and outside of the ICTF watershed of the Cooper River. Both point source and non-point source pollution could potentially impact the surface water resources within the

study area as a result of the clearing of vegetation, land grading, and other road construction activities. Increased erosion and sedimentation, altered drainage patterns, increased surface water temperatures and decreased clarity could result from these construction activities. Post-construction impacts in the area of the proposed new roadway could result from the increased opportunity for petroleum discharges, the use of herbicides/pesticides along the roadside, mowing and maintaining the roadsides and roadway striping and resurfacing.

- **Wetlands.** Most of the project would be located within the South Carolina Coastal watershed and outside of the ICTF watershed of the Cooper River. A total of 3.32 acres of saltwater wetlands and 14.11 acres of freshwater wetlands would be impacted by the preferred alternative, for a total of 17.43 acres of wetland impact.

#### 4.4 Palmetto Railways Projects

The following rail projects have been recently completed or are proposed by Palmetto Railways:

- **Charleston Yard Expansion Project** – additional 3,700 track feet of storage track to create capacity for projected growth from BMW Manufacturing. Completed in second quarter of 2014.
- **Navy Base North End Yard** – expansion of existing interchange to create storage capacity for the surrounding industry along Virginia Ave as well as potential growth in volumes from industry located on the former Navy Base. This storage facility will have an approximately 100-car capacity in its current design.
- **Cosgrove Yard Operations** – Palmetto Railways owns the property and currently leases Cosgrove Yard to the North Charleston Terminal Company (NCTC). Palmetto Railways has put the NCTC on notice that it will not renew that lease in 2015. Palmetto Railways intends to establish operations and become the switching provider to the connected industry.
- **Camp Hall Rail** – new industrial rail line connecting Camp Hall Commerce Park in Berkeley County, South Carolina, to existing rail near Santee Cooper Cross Generating Station. Project is in early planning phases with approximate impacts unknown.

## 5.0 References Cited

- Berkeley Charleston Dorchester Council of Governments (BCDCOG). 2013. Partnership for Prosperity, A Master Plan for the Neck Area of Charleston and North Charleston. Final Report. Draft June 11, 2013.
- Federal Highway Administration (FHWA), South Carolina Department of Transportation (SCDOT), and Charleston County. 2010. Mark Clark Expressway Draft Environmental Impact Statement and Section 4(f) Evaluation. July 2010.
- Forbes*. 2016. Mercedes Breaks Ground on its \$500 Million Sprinter Van Plant in South Carolina. <http://www.forbes.com/sites/jaclyntrop/2016/07/27/mercedes-breaks-ground-on-its-500-million-sprinter-van-plant-in-south-carolina/#15c57f3d7290>. Published July 27, 2016.
- Seattle Times*. 2016. Inside-Boeing-South-Carolina-Puget-Sound-Plants-Rival-No-Longer-Playing-Catch-Up. <http://www.seattletimes.com/business/boeing-aerospace/inside-boeing-south-carolina-puget-sound-plants-rival-no-longer-playing-catch-up/>. Published March 5, 2016.
- South Carolina Department of Transportation (SCDOT). 2013a. Statewide Transportation Improvement Program 2014–2019. August 15, 2013.
- . 2013b. Environmental Assessment Interstate 26 and Port Access Road Interchange Project Charleston County, South Carolina. Approved by Federal Highway Administration on April 17, 2013.
- . 2014. Draft 2040 South Carolina State Multimodal Transportation Plan. <http://www.scdot.org/Multimodal/default.aspx> Accessed October 15, 2014.
- U.S. Army Corps of Engineers (USACE). 2006. Final Environmental Impact Statement Proposed Marine Container Terminal at the Charleston Naval Complex. Charleston District. December 2007.
- . 2007a. Department of the Army Permit No. 2003-1T-016. Charleston District. Signed April 26, 2007.
- . 2007b. Record of Decision Department of the Army Permit Application No. 2003-1T-016 South Carolina State Ports Authority's Proposed Marine Container Terminal at the Charleston Naval Complex and Permit Application No. 2005-1N-440 South Carolina Department of Transportation's Proposed Port Access Roadway. Charleston District. Dated April 24, 2007.
- . 2013a. P/N SAC#2003-13026-2R (FKA P/N#2003-1W-007). Charleston District. May 7, 2013.
- . 2013b. P/N SAC#2013-00202-2R. Charleston District. April 12, 2013.
- . 2013c. P/N SAC#2010-01308-2IR (Revised). Charleston District. April 3, 2013.
- . 2013d. P/N SAC#2011-00715. Charleston District. October 25, 2013.
- . 2013e. P/N SAC#2013-00138-2R. Charleston District. March 13, 2013.
- . 2013f. P/N SAC#2013-00592-2R. Charleston District. May 23, 2013.

- . 2013g. P/N SAC#2013-00346-2R. Charleston District. March 27, 2013.
- . 2013h. P/N SAC#2013-00412-2R. Charleston District. April 25, 2013.
- . 2013i. P/N SAC#2004-13767. Charleston District. December 20, 2013.
- . 2014c. P/N SAC#2008-01871-2IR. Charleston District. March 7, 2014.
- . 2014d. P/N SAC#2013-01331-2G. Charleston District. March 25, 2014.
- . 2014e. P/N SAC#2009-00052. Charleston District. May 23, 2014.
- . 2014f. P/N SAC#2014-00533-2G. Charleston District. September 5, 2014.
- . 2015a. National Environmental Policy Act Final Integrated Feasibility Report and Environmental Impact Statement for Charleston Harbor Navigation Improvement Project (Post 45). Charleston District. June 2015.
- . 2015b. P/N SAC#2013-01087-2JU. Charleston District. January 12, 2015.
- . 2016a. P/N SAC-2014-00979-SIF. Charleston District. January 28, 2016.
- . 2016b. P/N SAC#2016-00231. Charleston District. December 20, 2016.

