

5.3 IDENTIFICATION OF PAST, PRESENT, AND REASONABLY FORESEEABLE FUTURE ACTIONS

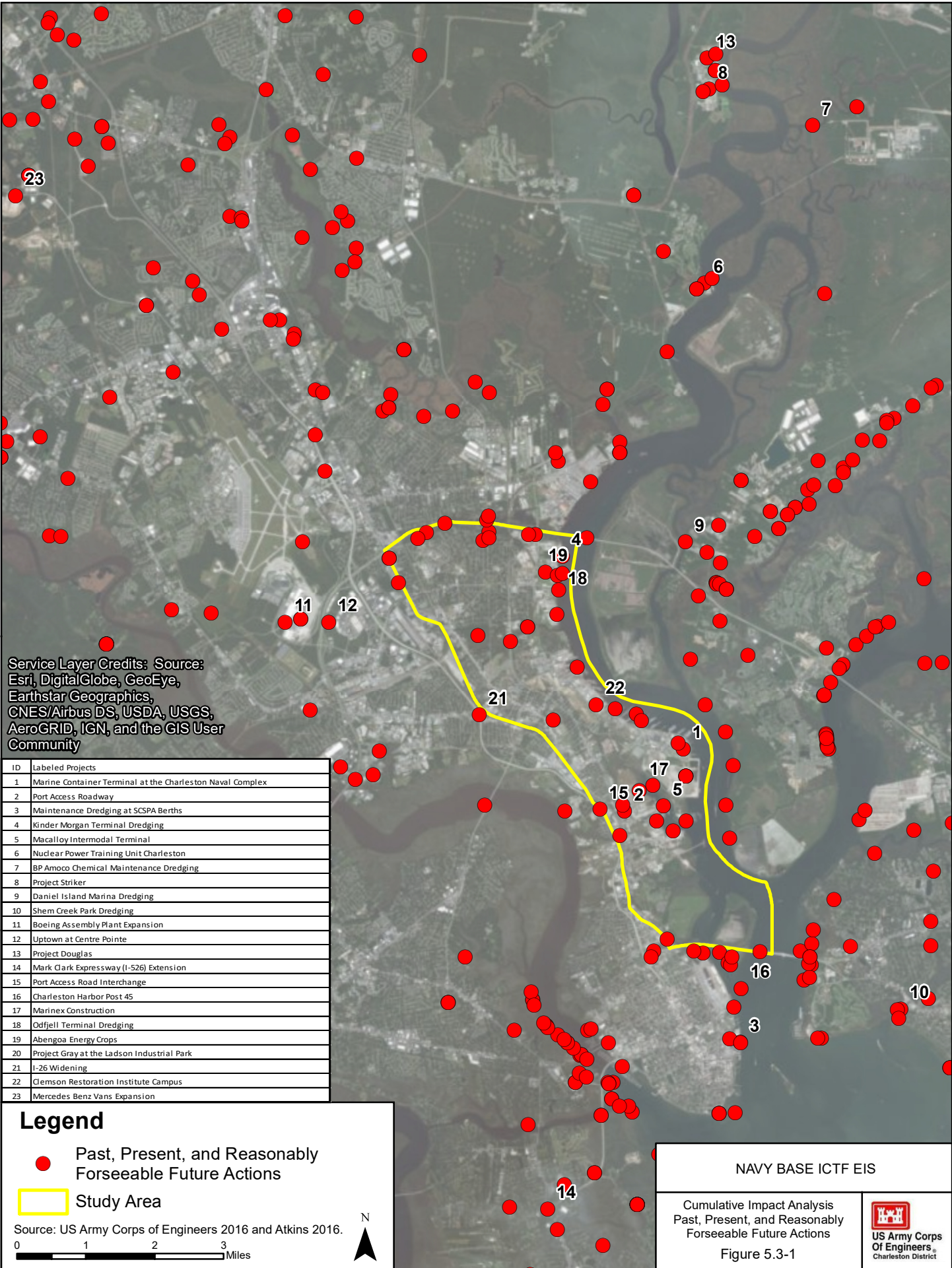
Relevant projects, plans, and programs that could interact with Alternative 1 (Proposed Project) or the alternatives were identified during the environmental analysis for the specific resource areas. To identify Future Actions, a general literature search was conducted. The following entities were consulted:

- Berkeley Charleston Dorchester Council of Governments
- Charleston Metro Chamber of Commerce
- South Carolina Department of Commerce
- ICTF Scoping Report
- South Carolina Statewide Transportation Improvement Program
- South Carolina State Rail Plan
- Corps Permit Records and Public Notices

A review of actions noted in these sources indicates that cumulative impacts would result primarily from port and navigational projects, urban and industrial development, and surface transportation projects. Figure 5.3-1 illustrates the locations of the past, present, and Future Actions in relation to the Navy Base ICTF. Types of actions and specific projects are noted in the following subsections. Appendix M contains detailed descriptions of the projects that have been identified.

5.3.1 Port and Navigational Projects

The Port and industry linked with Charleston's maritime transportation are major components of the greater metro Charleston economy. The widening of the Panama Canal, expected to be complete in 2016, will allow larger vessels to travel directly from Asia and the Indian sub-continent to East Coast ports. A number of projects have been undertaken or are planned in the Port of Charleston area to accommodate these larger vessels and/or to accommodate projected growth in container cargo. Such projects include the deepening of the Charleston Harbor to 52 feet mean low water (MLW) (Charleston Harbor Post 45), construction of the Hugh K. Leatherman Sr. Terminal (HLT) (formerly the Navy Base Marine Container Terminal at CNC), and expansion of commercial, institutional, and industrial facilities. Many of these projects include development of manufacturing, warehousing, and upland transportation facilities in addition to maritime improvements. There are also numerous community dock facilities planned and under construction to support residential developments throughout the area.



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ID	Labeled Projects
1	Marine Container Terminal at the Charleston Naval Complex
2	Port Access Roadway
3	Maintenance Dredging at SCSPA Berths
4	Kinder Morgan Terminal Dredging
5	Macalloy Intermodal Terminal
6	Nuclear Power Training Unit Charleston
7	BP Amoco Chemical Maintenance Dredging
8	Project Striker
9	Daniel Island Marina Dredging
10	Shem Creek Park Dredging
11	Boeing Assembly Plant Expansion
12	Uptown at Centre Pointe
13	Project Douglas
14	Mark Clark Expressway (I-526) Extension
15	Port Access Road Interchange
16	Charleston Harbor Post 45
17	Marinex Construction
18	Odfjell Terminal Dredging
19	Abengoa Energy Crops
20	Project Gray at the Ladson Industrial Park
21	I-26 Widening
22	Clemson Restoration Institute Campus
23	Mercedes Benz Vans Expansion

Legend

- Past, Present, and Reasonably Forseeable Future Actions
- Study Area

Source: US Army Corps of Engineers 2016 and Atkins 2016.


0 1 2 3 Miles



NAVY BASE ICTF EIS

Cumulative Impact Analysis
 Past, Present, and Reasonably
 Forseeable Future Actions

Figure 5.3-1



**US Army Corps
 Of Engineers**
 Charleston District

Port and navigational projects that have the potential to contribute to cumulative impacts include:

- Hugh K. Leatherman Sr. Terminal (HLT) (formerly the Navy Base Marine Container Terminal at the Charleston Naval Complex)
- Charleston Harbor Post 45
- Maintenance Dredging at SCPA Berths
- Kinder Morgan Terminal Maintenance Dredging
- Kinder Morgan at Shipyard Creek
- Shipyard Creek Associates, LLC
- Odfjell Terminal Dredging
- Nuclear Power Training Unit Charleston
- BP Amoco Chemical Maintenance Dredging
- Marinex Construction
- Project Douglas
- Daniel Island Marina Dredging
- Shem Creek Park Dredging
- Abengoa Energy Crops

5.3.2 Other Urban and Industrial Development

Urban and industrial development that may contribute to cumulative impacts include industrial or manufacturing facilities, commercial and residential development/redevelopment, institutional development, and public works projects. Industrial and manufacturing facilities that also have a port component are included in the previous section. Urban and industrial development projects include:

- Boeing Assembly Plant Expansion
- Uptown at Centre Pointe
- Clemson Restoration Institute Campus

5.3.3 Surface Transportation

Surface transportation projects that may contribute to cumulative impacts include improvements to roadways as well as the rail system. The existing transportation system is discussed in Section 3.8. The South Carolina Statewide Transportation Improvement Program (STIP) covers all federally-funded improvements that are expected to occur within a 6-year period (currently through 2019). The STIP is updated every 3 years and is revised on a continual basis to reflect the latest program and project information (SCDOT 2013). Surface transportation projects include:

- I-26 Port Access Road Interchange
- I-26 widening from Exit 196 to Exit 221 (completed)
- Mark Clark Expressway (I-526) Extension

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

- Charleston Yard Expansion Project
- Navy Base North End Yard
- Cosgrove Yard Operations (FRA recently awarded a \$650,000 grant to the Applicant to upgrade crossing equipment at the Virginia Avenue grade crossing at this location)

5.4 METHODS

The analysis of cumulative impacts related to Alternative 1 (Proposed Project) and alternatives followed the four steps described below.

Step 1: Project-related impacts identified in Chapter 4 were reviewed to determine which environmental resources would likely be affected both by Alternative 1 (Proposed Project) and by other past, present, and Future Actions. The environmental resources not likely to be affected by the Proposed Project and therefore not likely to be affected by cumulative impacts associated with the Proposed Project were screened and then excluded from further consideration (Table 5.5-1). Environmental resources that could be affected by cumulative impacts were analyzed further. The criteria used to assess and identify cumulatively affected resources followed the methodology presented in the CEQ's *Considering Cumulative Effects* (1997).

Step 2: The geographic scope for the cumulative impacts analysis was determined based on the geographic area affected or influenced by the Proposed Project and alternatives. In general, the geographic scope should be consistent with the resources that could reasonably be affected. The temporal scope was established based on the timeframe of the Proposed Project and the Future Actions that were identified and evaluated.

Step 3: Future Actions that fell within both the geographic and temporal scopes were identified and evaluated.

Step 4: Cumulative impacts were evaluated together with the direct impacts of each alternative—including the No-Action Alternative, which serves as a baseline. The range of actions considered in the cumulative impacts analysis included all connected and similar actions that could cumulatively contribute to identified Project-related impacts. Criteria used in identifying cumulatively affected resources included whether (1) the resource is especially vulnerable to incremental impacts; (2) other actions in the same geographic area may result in similar impacts on the resource; (3) impacts have been historically important for the resource; and (4) cumulative impact concerns