

Appendix L
USACE Review of Statement of Need

Growth in Containerized Cargo

An analysis was performed by the U.S. Army Corps of Engineers, Charleston District to verify projections made by the South Carolina State Ports Authority (SCSPA) in September 2002 for growth in containerized cargo in the Port of Charleston to the year 2025. Projections were made using readily available data.

U.S. container trade projections from 2000 to 2025 were obtained from the Institute for Water Resources, Report 00-R-04, *National Dredging Needs Study of U.S. Ports and Harbors: Update 2000*. Total twenty foot equivalent units (TEU) for the U.S. and the Port of Charleston for the years 1997-2001 were obtained from the American Association of Port Authorities and the Department of Transportation, Maritime Administration to compute Charleston's share of the total U.S. market for containerized cargo. Between 1997 and 2001, Charleston's market share was approximately 8.6%. Because of increasing port competition and the uncertainty in projecting future conditions, computations were made assuming both an 8% and a 9% future market share to establish a range of projected TEU for the Port of Charleston.

Table 1 shows the projected volumes of containerized cargo for the Port of Charleston from 2004 to 2025. The first column of projections was based on a compound annual growth rate of 4.28% and a base volume of 1,500,000 TEU in 2002, which were provided by the SCSPA. The second two columns of projections were made by the Corps using information obtained from the IWR report mentioned above. An 8% and a 9% market share were applied to the U.S. container trade projections to determine projected TEU in the Port of Charleston through 2025.

Table 1.

Year	Projected TEUs		
	SCSPA Projections	Charleston @ 8% market share	Charleston @ 9% market share
2004	1,650,000	1,763,680	1,984,140
2005	1,720,620	1,832,395	2,061,444
2006	1,794,263	1,935,467	2,177,400
2007	1,871,057	2,038,539	2,293,357
2008	1,951,138	2,141,611	2,409,313
2009	2,034,647	2,244,684	2,525,269
2010	2,121,730	2,347,756	2,641,225
2011	2,212,540	2,519,543	2,834,486
2012	2,307,237	2,691,330	3,027,746
2013	2,405,986	2,863,117	3,221,006
2014	2,508,962	3,034,904	3,414,267
2015	2,616,346	3,206,691	3,607,527
2016	2,728,326	3,298,311	3,710,599
2017	2,845,098	3,389,930	3,813,672
2018	2,966,868	3,481,550	3,916,744
2019	3,093,850	3,573,170	4,019,816
2020	3,226,267	3,664,790	4,122,888
2021	3,364,351	3,825,124	4,303,265
2022	3,508,345	3,985,459	4,483,641
2023	3,658,503	4,145,793	4,664,017
2024	3,815,087	4,306,128	4,844,394
2025	4,000,000	4,466,462	5,024,770

The difference between the SCSPA's projected rate of growth of 4.28% for the Port of Charleston and the projected national growth rate of 4.52% that is identified in the IWR Report and is also reflected in columns 2 and 3 of Table 1 is 0.24%. While the SCSPA's projected growth rate is considered to be reasonable, there are concerns that the estimate for the base year is too low and subsequently understates the container volumes for future years. Actual data from the SCSPA, indicate that in 2004, the Port of Charleston handled 1,725,000 TEUs, which is greater than the SCSPA's original projection of 1,650,000 TEU in 2004.

As stated previously, there is some degree of uncertainty in forecasting future conditions. However, a three to five year range for accuracy would mean that the need for additional facilities to meet the volume of projected TEU in the Port of Charleston could arise years earlier than expected. For example, the SCSPA has projected that the Port of Charleston will be handling 3.2 million TEU by 2020. However, using 8% of the total U.S. market share to estimate future volumes for containerized cargo indicates that the Port of Charleston will be handling 3.2 million TEU by 2015, 5 years earlier than the SCSPA has projected.

Existing Facilities

According to the SCSPA Needs Statement, the combined Maximum Practical Capacity (MPC) of their three existing container cargo terminals is 2.6 million TEU. This figure includes expansion of existing container storage yards to incorporate undeveloped land that is owned by the SCSPA and operational improvements that are currently being made to enhance throughput capacity. Based on the SCSPA's projections, the MPC of their existing terminals will enable them to meet their needs to 2014. However, if the SCSPA maintains their share of the total U.S. market for containerized cargo as projected by IWR, the MPC of their existing terminals will only enable them to meet their needs to 2012 (8% market share) or 2009 (9% market share). In the event that the SCSPA is unable to obtain the necessary permits to construct a new marine container terminal growth will be limited in the future.

Proposed Port Facility

The proposed marine container terminal has an MPC of 1.4 million TEU. Based on the SCSPA's projections, the development of the proposed facility will enable them to meet their needs to 2025. However, if the SCSPA maintains their share of the total U.S. market for containerized cargo as projected by IWR, the proposed facility will only enable them to meet their needs to 2022 (8% market share) or 2018 (9% market share).

The SCSPA has indicated that the development of the proposed facility will take approximately 6 years. Therefore, a new container terminal would not be operational until 2012. In the event that future growth of containerized cargo is more similar to the IWR projections of 4.52% and the market share of the Port of Charleston is closer to 9% of the national total, the SCSPA will run out of additional capacity for containerized cargo in 2009 (before a new port facility could be constructed).