

Research Memorandum

To: File
From: MVC Transportation Department
Date: September 28, 2007
Subject: **Transportation Seasonality**

Introduction

As a tourist destination, the island's population fluctuates greatly between the peak season (summer) and the off-season (winter). These fluctuations are present in transportation data collected by various island agencies, including the Martha's Vineyard Commission (MVC), Vineyard Transit Authority (VTA), and Steamship Authority (SSA). The goal of this study is to examine seasonal trend factors in order to provide a basis for population estimations.

This document summarizes the findings of a transportation seasonality study. All data used in this study can be found in the appendix.

Data Sources and Methodology:

Four sources of transportation data were collected for this study. Two sources are vehicle data collected year-round at Mill Pond in West Tisbury along Edgartown-West Tisbury Road, and on New York Avenue east of Laurel Avenue in Oak Bluffs. These two traffic monitoring stations are maintained by the MVC. Vehicle data from 1994 to 2006 were included in the study. The monthly average daily traffic (ADT) values were averaged over this time period and normalized by the peak month ADT. The peak month for Mill Pond was found to be July, whereas the peak for New York Ave is August.

The SSA provided ferry ridership data for passengers traveling between Woods Hole and Martha's Vineyard (both ports). The data used in this study spans from 1990 to 2006. The monthly ridership data was normalized by the peak month, which was found to be August.

The last source of data is bus ridership data provided by the VTA. VTA ridership data between 2002 and 2006 was used in this study. Similar to the sources above the monthly averages were normalized by the peak month, which was found to be August. The VTA data was found to have the greatest variation between peak season and off-

season. For this reason two plots were created one including the VTA data, and one excluding it for aesthetic reasons.

Results and Discussion:

Figures 1 and 2 display the seasonal adjustment factors for the data sources described above.

Based on the data plotted in Figure 1, ferry ridership is more seasonal than vehicle traffic, but it does follow a similar trend. The SSA data has a peak seasonal factor of 4.6 in February. The peak for the NY Ave ADT data was found to be 3.0 in January. While the Mill Pond data does not contain data for January through March, the January seasonal factor does match the NY Ave factor of 2.6.

Figure 2 displays the seasonal factors for all four data sources, including the VTA bus data. As one can see, VTA ridership is very seasonal with dramatic differences between winter and summer months. The peak seasonal factor for bus ridership is 37.0 and occurs in January, nearly 8 times greater than the SSA seasonality factor.

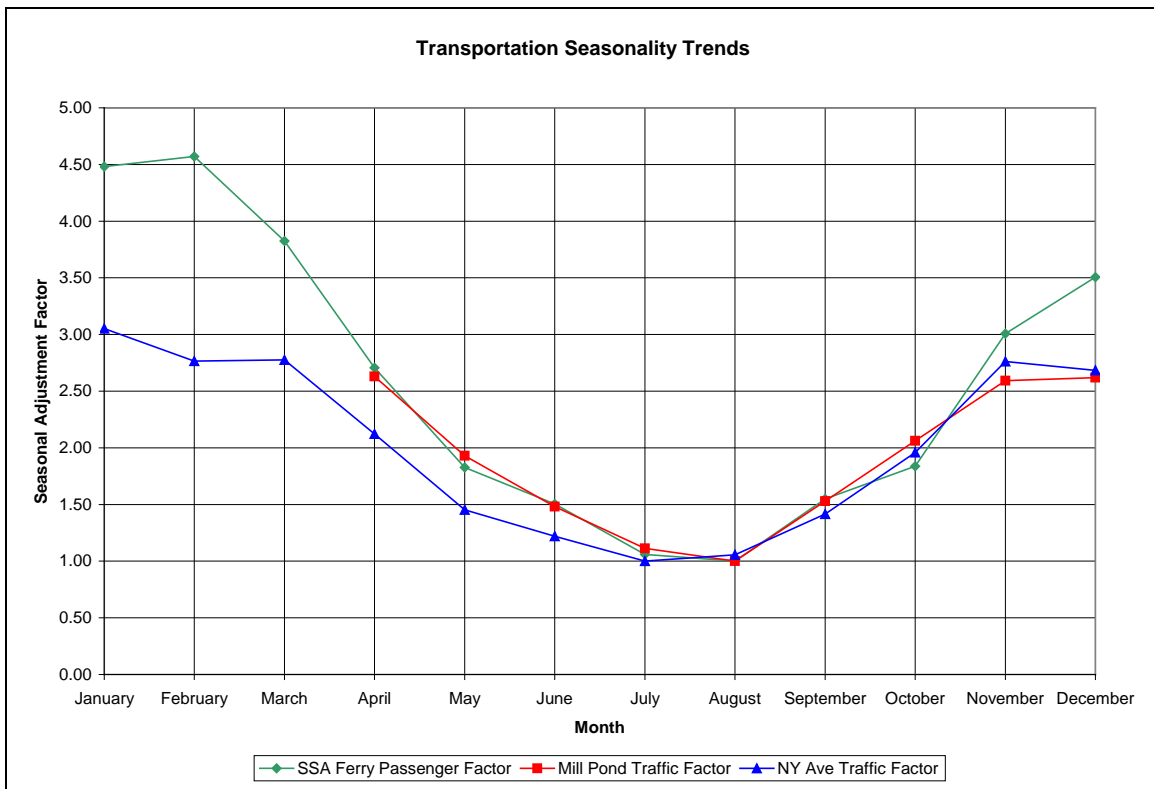


Figure 1: Transportation Seasonality Trends (Excluding VTA data)

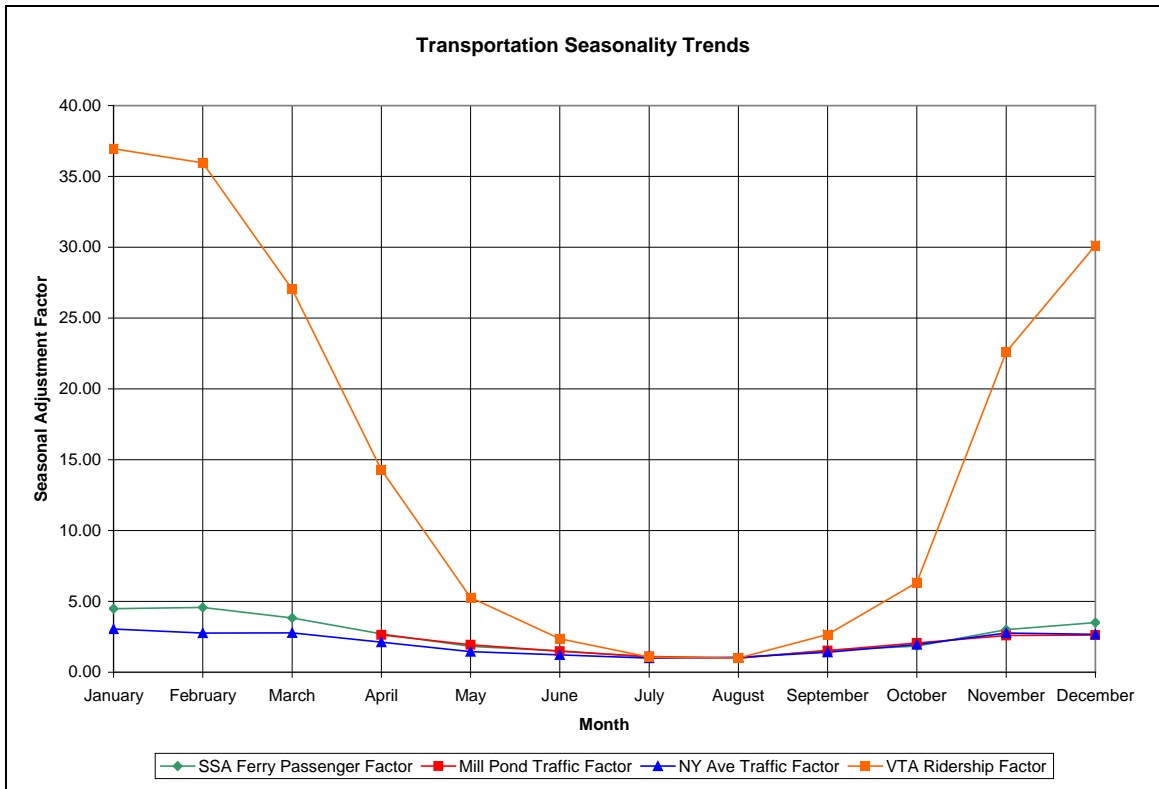


Figure 2: Transportation Seasonality Trends (Including VTA data)