Regional Profile

Survey respondents selected Pine Island Sound, San Carlos Bay, and Charlotte Harbor Lower as favorite boating regions. A smaller percentage of survey respondents favored Charlotte Harbor Middle, the Caloosahatchee River, and Lower and Upper portions of Charlotte Harbor. The least selected areas were Matlacha Pass, and the Peace and Myakka rivers.

Boating in all regions is strongly associated with winter, spring, and early summer months. Some seasonal variation is identified within specific regions. For example, Gasparilla Sound and Matlacha Pass are also associated with boating during the fall. The regional breakdown for preferred boating months follows:

<table>
<thead>
<tr>
<th>Location</th>
<th>Preferred Season(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Myakka River</td>
<td>Insufficient Survey Responses for Seasonal Evaluation</td>
</tr>
<tr>
<td>Charlotte Harbor Upper</td>
<td>Summer</td>
</tr>
<tr>
<td>Peace River</td>
<td>Summer</td>
</tr>
<tr>
<td>Charlotte Harbor Middle</td>
<td>Winter and Summer</td>
</tr>
<tr>
<td>Charlotte Harbor Lower</td>
<td>Winter</td>
</tr>
<tr>
<td>Gasparilla Sound</td>
<td>Summer and Fall</td>
</tr>
<tr>
<td>Pine Island Sound</td>
<td>Winter and Spring</td>
</tr>
<tr>
<td>San Carlos Bay</td>
<td>Spring and Summer</td>
</tr>
<tr>
<td>Caloosahatchee River</td>
<td>Spring</td>
</tr>
<tr>
<td>Matlacha</td>
<td>Spring and Fall</td>
</tr>
</tbody>
</table>

Cluster analysis revealed an equal association of several favorite boating seasons (i.e., winter and summer) for some regions.

Perceived Crowding

A significant proportion (33 percent) of boaters indicated that they had, in the past year, avoided their favorite areas because there were too many boats there, left their favorite areas because there were too many boats there, or tolerated too many boats in their favorite area. However, 67 percent of survey respondents indicated that they had neither avoided nor left their favorite areas due to too many boats, or tolerated too many boats in any identified region within the Charlotte Harbor study area. Moreover, few survey respondents indicated that they experienced discourteous or reckless boating behavior. Gramman and Burdge (1984) found that crowding perceptions of water-based recreationists relate directly to their reports of encountering reckless boating. Notwithstanding, Boca Grande Pass, and the confluence of San Carlos Bay, Matlacha Pass and the Caloosahatchee River were cited as the most congested areas (Figure 7). A smaller proportion of boaters listed the Peace River, Turtle Bay, and Captiva Pass as being the most congested area. The lowest levels of perceived congestion were associated with Matlacha Pass; the Upper, Middle, and Lower portions of Charlotte Harbor; Gasparilla Sound; Tarpon Bay; and Ding Darling.
Potential crowding hotspots (Figure 8) can be identified by combining areas of perceived congestion (Figure 7) with an estimation of proximate activity diversity (Figure 3). Darker shades of red reflect potential crowding hotspots near Boca Grande Pass, Pelican Bay, and Shell Point; near spoil areas in San Carlos Bay; and near the Sanibel Lighthouse Pier Park (Point Ybel). In sum, a significant proportion (33 percent) of boaters are affected, in some way, by concurrent activities. Nevertheless, most boaters (67 percent) did not alter their behavior due to the presence of "more boaters than they would prefer." This suggests that most boaters do not perceive crowding (more boats than they would prefer) to be an issue at their favorite places. Nevertheless, boaters did identify San Carlos Bay, the Caloosahatchee River and the Intracoastal Waterway, within Pine Island Sound, as the most congested areas. Those areas also experience the greatest potential for activity diversity. This suggests that many boaters experience crowding and congestion at specific intermediate locales (restricted channels, passes) that are traversed en route to favorite destinations. Congestion is most often experienced on weekend afternoons during the late-spring and early-summer months (March through June). There does seem to be some regional differentiation in Charlotte Harbor with respect to seasonal peak-use periods and congestion. For example, in general, Charlotte County portions experience the greatest perceived congestion during the winter and summer months. Lee County portions experience the greatest perceived congestion during the spring.
Charlotte Harbor Boating Characterization
Crowding Potential By Region

Crowding is mapped as a function of the standard deviation from the mean number of survey respondents who selected a region as being the most or second most congested.

Regions are identified in Appendix B, Map B

Figure 7. Crowding Mapped as a Function of Perceived Congestion
Charlotte Harbor Boating Characterization
Potential Crowding Hotspots

Activity Diversity
(See Figure 3)

Number of Proximate Activities
- Two
- Three
- Four

Congested Areas
(See Figure 7)

St. Dev. From Mean
- 0 - 1
- 1 - 2
- 2 - 3
- >3

Darker shaded areas reflect greater potential for crowding. Hotspots are identified by integrating activity diversity with areas that survey respondents considered to be most crowded.

Crowding Potential
- Slight
- Moderate
- Highest
- Land

Figure 8. Potential Crowding Hotspots.