

Coastal Zone Management Program



COASTAL ZONE
INFORMATION CENTER

MASSACHUSETTS OUTDOORS

Statewide Comprehensive Outdoor Recreation Plan

GV
191.42
.M4
M37
1976

Technical Report

MASSACHUSETTS OUTDOORS

The Statewide Comprehensive Outdoor Recreation Plan

Technical Report

U. S. DEPARTMENT OF COMMERCE NOAA
COASTAL SERVICES CENTER
2234 SOUTH HOBSON AVENUE
CHARLESTON, SC 29405-2413

Property of CSC Library

Department of Environmental Management

The preparation of this report was financed in part through a planning grant from the Bureau of Outdoor Recreation, Department of Interior under the provisions of the Land and Water Conservation Fund Act of 1965 (Public Law 88-578; stat. 897). The remainder was financed by state funds.

GV 191.42.M4 M37 1976

3014109

DEC 19 1996

TABLE OF CONTENTS

| | | |
|------------------|--|-----------|
| Section 1 | Regional Distribution Matrices | 1 |
| Section 2 | Tables on Latent Demand | 11 |
| Section 3 | Demand Forecasts by Region | 19 |
| Section 4 | Capacity Standards for Specific Activities | 33 |
| Section 5 | Regional Planning Agency Survey | 47 |

Section 1

Regional Distribution Matrices

The estimates of the demand generated in each of the OSP regions formed the basis for projecting total demand on recreation resources in the SCORP regions. The first step was the allocation of demand generated in Massachusetts to the SCORP regions. This step is clearly necessary to obtain useful demand projections, since only part of the demand generated by residents of the Boston SMSA, is satisfied in this region. Boston residents pursue their outdoor recreation activities in other areas, such as the Berkshires, Cape Cod, or the Islands. Similarly, if only Cape Cod residents were considered in estimating demand for the recreation facilities in that region, serious errors would result. The interregional purposes must therefore be considered in the projections.

The allocation of demand to the SCORP regions was based on the regional recreation patterns reported by Massachusetts Recreation Survey respondents. For their three most frequent activities among the fourteen selected for analysis here, respondents indicated the place in Massachusetts where they "usually" pursue the activity. Since the

question was asked three times, the effective sample size was larger than the actual number of respondents of 400. Even so, the distribution of answers across 14 activities, 11 OSP regions, and 7 SCORP regions (a matrix with 1078 cells) failed to yield cell sizes that would be sufficiently large for a statistical estimation of the parameters of the regional "allocation matrices" by activity. The elements of these matrices were therefore estimated judgmentally. First, the percentage of respondents who indicated that they pursued the activity usually out-of-state was subtracted from the total for each activity. Also subtracted was the percentage of respondents who indicated that they do the activity in their own backyard (such as swimming in their own pools) or "in the streets" (bicycling, hiking). Finally, the available evidence on the regional distribution of outdoor recreation activities from the relative attractiveness and accessibility of the SCORP region vis-a-vis the OSP region for each of the activities was considered. On this basis, the non-zero elements of the distribution matrices were estimated for each activity.

The final step was the introduction of demand generated by out-of-state visitors. No comprehensive data base for this analysis exists. For the total number of tourists coming to Massachusetts for recreational purposes, a study of tourism in Massachusetts* and data from the 1972 National Travel Survey conducted as part of the Census of Transportation were used. These data provide information on various characteristics of the total number of person-trips to Massachusetts. For the study here, the breakdown by trip duration (no. of nights) was deemed most relevant. This information can be used not only to estimate the distribution of tourist-demand across activities, but yields simultaneously, estimates on the number of days.

* N.G. Cournoyer, J.K. Kindahl et al., *The Economic Impact of Tourism on the Commonwealth of Massachusetts*. (Research Report to Department of Commerce and Development). Department of Hotel, Restaurant and Travel Administration, University of Massachusetts at Amherst. December 1974.

Table 1 ESTIMATED REGIONAL DISTRIBUTION OF RECREATION DEMAND
Activity: Swimming (Pool)

| From OSP Region | SCORP Region I | SCORP Region II | SCORP Region III | SCORP Region IV | SCORP Region V | SCORP Region VI | SCORP Region VII |
|----------------------|----------------|-----------------|------------------|-----------------|----------------|-----------------|------------------|
| Berkshire | 82.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Franklin | 0.0 | 82.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lower Pioneer | 0.0 | 0.0 | 82.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Worcester | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 0.0 | 0.0 |
| SRPEDD | 0.0 | 0.0 | 0.0 | 0.0 | 70.6 | 1.9 | 1.9 |
| Cape Cod | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 80.0 | 0.0 |
| Martha's Vineyard | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 80.0 |
| Nantucket | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 80.0 |
| EMMMR: Core City | 0.0 | 0.0 | 0.0 | 59.1 | 0.0 | 3.8 | 3.8 |
| EMMMR: Inner Suburbs | 0.0 | 0.0 | 0.0 | 59.1 | 0.0 | 3.8 | 3.8 |
| EMMMR: Outer Suburbs | 0.0 | 0.0 | 0.0 | 59.1 | 0.0 | 3.8 | 3.8 |

Note: Percentages across each row give the percentage of total demand for the activity generated in the OSP Region estimated to become effective in the SCORP Region. Estimates are based on data from the Massachusetts Recreation Survey. Percentages may not add up because some of the demand is satisfied in personal facilities (e.g., swimming pool in backyard) or out of state (company).

Table 2 ESTIMATED REGIONAL DISTRIBUTION OF RECREATION DEMAND
Activity: Swimming (other)

| From OSP Region | SCORP Region I | SCORP Region II | SCORP Region III | SCORP Region IV | SCORP Region V | SCORP Region VI | SCORP Region VII |
|----------------------|----------------|-----------------|------------------|-----------------|----------------|-----------------|------------------|
| Berkshire | 84.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Franklin | 9.3 | 51.3 | 4.7 | 0.0 | 0.0 | 10.6 | 8.0 |
| Lower Pioneer | 9.3 | 51.3 | 4.7 | 0.0 | 0.0 | 10.6 | 8.0 |
| Worcester | 4.7 | 9.3 | 51.3 | 0.0 | 0.0 | 10.6 | 8.0 |
| SRPEDD | 0.0 | 0.0 | 0.0 | 20.0 | 40.0 | 14.0 | 10.0 |
| Cape Cod | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 84.0 | 0.0 |
| Martha's Vineyard | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 84.0 |
| Nantucket | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 84.0 |
| EMMMR: Core City | 0.0 | 0.0 | 0.6 | 61.1 | 3.5 | 10.4 | 6.0 |
| EMMMR: Inner Suburbs | 0.0 | 0.0 | 0.6 | 61.1 | 3.5 | 10.4 | 6.0 |
| EMMMR: Outer Suburbs | 0.0 | 0.0 | 0.6 | 61.1 | 3.5 | 10.4 | 6.0 |

Note: Percentages across each row give the percentage of total demand for the activity generated in the OSP Region estimated to become effective in the SCORP Region. Estimates are based on data from the Massachusetts Recreation Survey. Percentages may not add up because some of the demand is satisfied in personal facilities (e.g., swimming pool in backyard) or out of state (company).

Table 3 ESTIMATED REGIONAL DISTRIBUTION OF RECREATION DEMAND
Activity: Picnicking

| From OSP Region | SCORP Region I | SCORP Region II | SCORP Region III | SCORP Region IV | SCORP Region V | SCORP Region VI | SCORP Region VII |
|----------------------|----------------|-----------------|------------------|-----------------|----------------|-----------------|------------------|
| Berkshire | 71.0% | 12.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Franklin | 5.0 | 78.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lower Pioneer | 5.0 | 78.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Worcester | 0.0 | 3.0 | 78.0 | 2.0 | 0.0 | 0.0 | 0.0 |
| SRPEDD | 0.0 | 0.0 | 0.0 | 0.0 | 62.0 | 16.0 | 5.0 |
| Cape Cod | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 83.0 | 0.0 |
| Martha's Vineyard | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 83.0 |
| Nantucket | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 83.0 |
| EMMMR: Core City | 2.6 | 0.0 | 1.3 | 61.9 | 2.6 | 7.0 | 4.0 |
| EMMMR: Inner Suburbs | 2.6 | 0.0 | 1.3 | 61.9 | 2.6 | 7.0 | 4.0 |
| EMMMR: Outer Suburbs | 2.6 | 0.0 | 1.3 | 61.9 | 2.6 | 7.0 | 4.0 |

Note: Percentages across each row give the percentage of total demand for the activity generated in the OSP Region estimated to become effective in the SCORP Region. Estimates are based on data from the Massachusetts Recreation Survey. Percentages may not add up because some of the demand is satisfied in personal facilities (e.g., swimming pool in backyard) or out of state (company).

Table 4 ESTIMATED REGIONAL DISTRIBUTION OF RECREATION DEMAND
Activity: Camping

| For OSP Region | SCORP Region I | SCORP Region II | SCORP Region III | SCORP Region IV | SCORP Region V | SCORP Region VI | SCORP Region VII |
|----------------------|----------------|-----------------|------------------|-----------------|----------------|-----------------|------------------|
| Berkshire | 67.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Franklin | 40.0 | 27.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lower Pioneer | 40.0 | 27.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Worcester | 5.0 | 5.0 | 15.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| SRPEDD | 0.0 | 0.0 | 0.0 | 0.0 | 10.0 | 10.0 | 5.0 |
| Cape Cod | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 25.0 | 0.0 |
| Martha's Vineyard | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 25.0 |
| Nantucket | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 25.0 |
| EMMMR: Core City | 0.0 | 0.0 | 0.0 | 10.0 | 0.0 | 10.0 | 5.0 |
| EMMMR: Inner Suburbs | 0.0 | 0.0 | 0.0 | 10.0 | 0.0 | 10.0 | 5.0 |
| EMMMR: Outer Suburbs | 0.0 | 0.0 | 0.0 | 10.0 | 0.0 | 10.0 | 5.0 |

Note: Percentages across each row give the percentage of total demand for the activity generated in the OSP Region estimated to become effective in the SCORP Region. Estimates are based on data from the Massachusetts Recreation Survey. Percentages may not add up because some of the demand is satisfied in personal facilities (e.g., swimming pool in backyard) or out of state (company).

Table 5 ESTIMATED REGIONAL DISTRIBUTION OF RECREATION DEMAND
Activity: Powerboating

| From OSP Region | SCORP Region I | SCORP Region II | SCORP Region III | SCORP Region IV | SCORP Region V | SCORP Region VI | SCORP Region VII |
|----------------------|----------------|-----------------|------------------|-----------------|----------------|-----------------|------------------|
| Berkshire | 75.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Franklin | 0.0 | 75.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lower Pioneer | 0.0 | 75.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Worcester | 0.0 | 0.0 | 75.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| SRPEDD | 0.0 | 0.0 | 0.0 | 0.0 | 47.0 | 18.0 | 10.0 |
| Cape Cod | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 75.0 | 0.0 |
| Martha's Vineyard | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 75.0 |
| Nantucket | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 75.0 |
| EMMMR: Core City | 0.0 | 0.0 | 0.0 | 47.0 | 0.0 | 18.0 | 10.0 |
| EMMMR: Inner Suburbs | 0.0 | 0.0 | 0.0 | 47.0 | 0.0 | 18.0 | 10.0 |
| EMMMR: Outer Suburbs | 0.0 | 0.0 | 0.0 | 47.0 | 0.0 | 18.0 | 10.0 |

Note: Percentages across each row give the percentage of total demand for the activity generated in the OSP Region estimated to become effective in the SCORP Region. Estimates are based on data from the Massachusetts Recreation Survey. Percentages may not add up because some of the demand is satisfied in personal facilities (e.g., swimming pool in backyard) or out of state (company).

Table 6 ESTIMATED REGIONAL DISTRIBUTION OF RECREATION DEMAND
Activity: Bicycling

| From OSP Region | SCORP Region I | SCORP Region II | SCORP Region III | SCORP Region IV | SCORP Region V | SCORP Region VI | SCORP Region VII |
|----------------------|----------------|-----------------|------------------|-----------------|----------------|-----------------|------------------|
| Berkshire | 90.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Franklin | 5.0 | 85.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lower Pioneer | 5.0 | 85.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Worcester | 0.0 | 5.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| SRPEDD | 0.0 | 0.0 | 0.0 | 5.0 | 80.0 | 5.0 | 0.0 |
| Cape Cod | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 90.0 | 0.0 |
| Martha's Vineyard | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 90.0 |
| Nantucket | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 90.0 |
| EMMMR: Core City | 0.0 | 0.0 | 0.0 | 68.5 | 3.2 | 4.6 | 4.0 |
| EMMMR: Inner Suburbs | 0.0 | 0.0 | 0.0 | 68.5 | 3.2 | 4.6 | 4.0 |
| EMMMR: Outer Suburbs | 0.0 | 0.0 | 0.0 | 68.5 | 3.2 | 4.6 | 4.0 |

Note: Percentages across each row give the percentage of total demand for the activity generated in the OSP Region estimated to become effective in the SCORP Region. Estimates are based on data from the Massachusetts Recreation Survey. Percentages may not add up because some of the demand is satisfied in personal facilities, (e.g., swimming pool in backyard) or out of state (company).

Table 7 ESTIMATED DISTRIBUTION OF RECREATION DEMAND
Activity: Hiking

| From OSP Region | SCORP Region I | SCORP Region II | SCORP Region III | SCORP Region IV | SCORP Region V | SCORP Region VI | SCORP Region VII |
|----------------------|----------------|-----------------|------------------|-----------------|----------------|-----------------|------------------|
| Berkshire | 63.0% | 0.0% | 0.0% | 0.0% | 0.0% | 15.0% | 0.0% |
| Franklin | 31.0 | 53.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lower Pioneer | 31.0 | 53.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Worcester | 16.0 | 0.0 | 53.0 | 0.0 | 0.0 | 15.0 | 0.0 |
| SRPEDD | 13.0 | 0.0 | 0.0 | 0.0 | 65.0 | 0.0 | 0.0 |
| Cape Cod | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 78.0 | 0.0 |
| Martha's Vineyard | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 78.0 |
| Nantucket | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 78.0 |
| EMMMR: Core City | 13.0 | 0.0 | 0.0 | 65.0 | 0.0 | 0.0 | 0.0 |
| EMMMR: Inner Suburbs | 13.0 | 0.0 | 0.0 | 65.0 | 0.0 | 0.0 | 0.0 |
| EMMMR: Outer Suburbs | 13.0 | 0.0 | 0.0 | 65.0 | 0.0 | 0.0 | 0.0 |

Note: Percentages across each row give the percentage of total demand for activity generated in the OSP Region estimated to become effective in the SCORP Region. Estimates are based on data from the Massachusetts Recreation Survey. Percentages may not add up because some of the demand is satisfied in personal facilities (e.g., swimming pool in backyard) or out of state (company).

Table 8 ESTIMATED REGIONAL DISTRIBUTION OF RECREATION DEMAND
Activity: Tennis

| From OSP Region | SCORP Region I | SCORP Region II | SCORP Region III | SCORP Region IV | SCORP Region V | SCORP Region VI | SCORP Region VII |
|----------------------|----------------|-----------------|------------------|-----------------|----------------|-----------------|------------------|
| Berkshire | 95.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Franklin | 0.0 | 92.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lower Pioneer | 0.0 | 92.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Worcester | 0.0 | 0.0 | 92.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| SRPEDD | 0.0 | 0.0 | 0.0 | 0.0 | 92.0 | 0.0 | 0.0 |
| Cape Cod | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 92.0 | 0.0 |
| Martha's Vineyard | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 92.0 |
| Nantucket | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 92.0 |
| EMMMR: Core City | 0.0 | 0.0 | 0.0 | 87.0 | 0.0 | 1.8 | 1.0 |
| EMMMR: Inner Suburbs | 0.0 | 0.0 | 0.0 | 87.0 | 0.0 | 1.8 | 1.0 |
| EMMMR: Outer Suburbs | 0.0 | 0.0 | 0.0 | 87.0 | 0.0 | 1.8 | 1.0 |

Note: Percentages across each row give the percentage of total demand for the activity generated in the OSP Region estimated to become effective in the SCORP Region. Estimates are based on data from the Massachusetts Recreation Survey. Percentages may not add up because some of the demand is satisfied in personal facilities (e.g., swimming pool in backyard) or out of state (company).

Table 9 ESTIMATED REGIONAL DISTRIBUTION OF RECREATION DEMAND
Activity: Golf

| From OSP Region | SCORP Region I | SCORP Region II | SCORP Region III | SCORP Region IV | SCORP Region V | SCORP Region VI | SCORP Region VII |
|----------------------|----------------|-----------------|------------------|-----------------|----------------|-----------------|------------------|
| Berkshire | 100.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Franklin | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lower Pioneer | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Worcester | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| SRPEDD | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 |
| Cape Cod | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 |
| Martha's Vineyard | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Nantucket | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| EMMMR: Core City | 0.0 | 0.0 | 0.0 | 87.6 | 0.0 | 10.3 | 3.0 |
| EMMMR: Inner Suburbs | 0.0 | 0.0 | 0.0 | 87.6 | 0.0 | 10.3 | 3.0 |
| EMMMR: Outer Suburbs | 0.0 | 0.0 | 0.0 | 87.6 | 0.0 | 10.3 | 3.0 |

Note: Percentages across each row give the percentage of total demand for the activity generated in the OSP Region estimated to become effective in the SCORP Region. Estimates are based on data from the Massachusetts Recreation Survey. Percentages may not add up because some of the demand is satisfied in personal facilities (e.g., swimming pool in backyard) or out of state (company).

Table 10 ESTIMATED REGIONAL DISTRIBUTION OF RECREATION DEMAND
Activity: Fishing

| From OSP Region | SCORP Region I | SCORP Region II | SCORP Region III | SCORP Region IV | SCORP Region V | SCORP Region VI | SCORP Region VII |
|----------------------|----------------|-----------------|------------------|-----------------|----------------|-----------------|------------------|
| Berkshire | 84.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Franklin | 21.0 | 63.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lower Pioneer | 21.0 | 63.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Worcester | 20.0 | 10.0 | 50.0 | 5.0 | 0.0 | 0.0 | 0.0 |
| SRPEDD | 0.0 | 0.0 | 0.0 | 0.0 | 84.0 | 0.0 | 0.0 |
| Cape Cod | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 84.0 | 0.0 |
| Martha's Vineyard | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 84.0 |
| Nantucket | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 84.0 |
| EMMMR: Core City | 0.0 | 0.0 | 0.0 | 65.4 | 0.0 | 12.6 | 6.0 |
| EMMMR: Inner Suburbs | 0.0 | 0.0 | 0.0 | 65.4 | 0.0 | 12.6 | 6.0 |
| EMMMR: Outer Suburbs | 0.0 | 0.0 | 0.0 | 65.4 | 0.0 | 12.6 | 6.0 |

Note: Percentages across each row give the percentage of total demand for the activity generated in the OSP Region estimated to become effective in the SCORP Region. Estimates are based on data from the Massachusetts Recreation Survey. Percentages may not add up because some of the demand is satisfied in personal facilities (e.g., swimming pool in backyard) or out of state (company).

Table 11 ESTIMATED REGIONAL DISTRIBUTION OF RECREATION DEMAND
Activity: Horseback Riding

| From OSP Region | SCORP Region I | SCORP Region II | SCORP Region III | SCORP Region IV | SCORP Region V | SCORP Region VI | SCORP Region VII |
|----------------------|----------------|-----------------|------------------|-----------------|----------------|-----------------|------------------|
| Berkshire | 100.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Franklin | 25.0 | 75.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lower Pioneer | 25.0 | 75.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Worcester | 25.0 | 0.0 | 75.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| SRPEDD | 0.0 | 0.0 | 0.0 | 15.0 | 60.0 | 20.0 | 5.0 |
| Cape Cod | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 |
| Martha's Vineyard | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Nantucket | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| EMMMR: Core City | 0.0 | 0.0 | 0.0 | 80.0 | 0.0 | 15.0 | 5.0 |
| EMMMR: Inner Suburbs | 0.0 | 0.0 | 0.0 | 80.0 | 0.0 | 15.0 | 5.0 |
| EMMMR: Outer Suburbs | 0.0 | 0.0 | 0.0 | 80.0 | 0.0 | 15.0 | 5.0 |

Note: Percentages across each row give the percentage of total demand for the activity generated in the OSP Region estimated to become effective in the SCORP Region. Estimates are based on data from the Massachusetts Recreation Survey. Percentages may not add up because some of the demand is satisfied in personal facilities (e.g., swimming pool in backyard) or out of state (company).

Table 12 ESTIMATED REGIONAL DISTRIBUTION OF RECREATION DEMAND
Activity: Hunting

| From OSP Region | SCORP Region I | SCORP Region II | SCORP Region III | SCORP Region IV | SCORP Region V | SCORP Region VI | SCORP Region VII |
|----------------------|----------------|-----------------|------------------|-----------------|----------------|-----------------|------------------|
| Berkshire | 90.0% | 0.0% | 0.05% | 0.0% | 0.0% | 0.0% | 0.0% |
| Franklin | 35.0 | 55.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lower Pioneer | 35.0 | 55.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Worcester | 25.0 | 5.0 | 55.0 | 5.0 | 0.0 | 0.0 | 0.0 |
| SRPEDD | 15.0 | 0.0 | 0.0 | 15.0 | 55.0 | 10.0 | 0.0 |
| Cape Cod | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 |
| Martha's Vineyard | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Nantucket | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| EMMMR: Core City | 0.0 | 0.0 | 0.0 | 80.0 | 0.0 | 15.0 | 5.0 |
| EMMMR: Inner Suburbs | 0.0 | 0.0 | 0.0 | 80.0 | 0.0 | 15.0 | 5.0 |
| EMMMR: Outer Suburbs | 0.0 | 0.0 | 0.0 | 80.0 | 0.0 | 15.0 | 5.0 |

Note: Percentages across each row give the percentage of total demand for the activity generated in the OSP Region estimated to become effective in the SCORP Region. Estimates are based on data from the Massachusetts Recreation Survey. Percentages may not add up because some of the demand is satisfied in personal facilities (e.g., swimming pool in backyard) or out of state (company).

Table 13 ESTIMATED REGIONAL DISTRIBUTION OF RECREATION DEMAND
Activity: Canoeing – Sailing

| From OSP Region | SCORP Region I | SCORP Region II | SCORP Region III | SCORP Region IV | SCORP Region V | SCORP Region VI | SCORP Region VII |
|----------------------|----------------|-----------------|------------------|-----------------|----------------|-----------------|------------------|
| Berkshire | 86.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Franklin | 16.0 | 70.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lower Pioneer | 16.0 | 70.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Worcester | 0.0 | 0.0 | 60.0 | 10.0 | 0.0 | 10.0 | 4.0 |
| SRPEDD | 0.0 | 0.0 | 0.0 | 10.0 | 60.0 | 10.0 | 4.0 |
| Cape Cod | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 |
| Martha's Vineyard | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Nantucket | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| EMMMR: Core City | 0.0 | 0.0 | 0.0 | 69.9 | 0.0 | 7.8 | 3.0 |
| EMMMR: Inner Suburbs | 0.0 | 0.0 | 0.0 | 69.9 | 0.0 | 7.8 | 3.0 |
| EMMMR: Outer Suburbs | 0.0 | 0.0 | 0.0 | 69.9 | 0.0 | 7.8 | 3.0 |

Note: Percentages across each row give the percentage of total demand for the activity generated in the OSP Region estimated to become effective in the SCORP Region. Estimates are based on data from the Massachusetts Recreation Survey. Percentages may not add up because some of the demand is satisfied in personal facilities (e.g., swimming pool in backyard) or out of state (company).

Table 14 ESTIMATED REGIONAL DISTRIBUTION OF RECREATION DEMAND
Activity: Canoeing – Sailing

| From OSP Region | SCORP Region I | SCORP Region II | SCORP Region III | SCORP Region IV | SCORP Region V | SCORP Region VI | SCORP Region VII |
|----------------------|----------------|-----------------|------------------|-----------------|----------------|-----------------|------------------|
| Berkshire | 95.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Franklin | 0.0 | 95.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lower Pioneer | 0.0 | 95.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Worcester | 0.0 | 0.0 | 95.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| SRPEDD | 0.0 | 0.0 | 0.0 | 0.0 | 95.0 | 0.0 | 0.0 |
| Cape Cod | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Martha's Vineyard | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 95.0 |
| Nantucket | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 95.0 |
| EMMMR: Core City | 0.0 | 0.0 | 0.0 | 78.1 | 2.1 | 4.4 | 2.0 |
| EMMMR: Inner Suburbs | 0.0 | 0.0 | 0.0 | 78.1 | 2.1 | 4.4 | 2.0 |
| EMMMR: Other Suburbs | 0.0 | 0.0 | 0.0 | 78.1 | 2.1 | 4.4 | 2.0 |

Note: Percentages across each row give the percentage of total demand for the activity generated in the OSP Region estimated to become effective in the SCORP Region. Estimates are based on data from the Massachusetts Recreation Survey. Percentages may not add up because some of the demand is satisfied in personal facilities (e.g., swimming pool in backyard) or out of state (company).

Section 2

Tables on Latent Demand

An important mission of this survey was to obtain some indication of the incidence of latent demand for outdoor recreation activities, its distribution across different activities, and the barriers preventing satisfaction of this demand. The analysis of latent demand for public services is a complex issue which has yet to be resolved methodologically in a satisfactory way. Questions asked regarding what people would like to do and reasons for not doing it generally tend to yield information that reflects desires and rationalizations of "doing nothing about it." This type of information tends to overstate the incidence of latent demand. However, the alternatives that have been developed for translating this kind of "non-commitment" demand into likely utilization of opportunities, e.g. in transportation planning, tend to require in-depth interviews, coupled with complex analysis techniques. Neither of these requirements could be met within the scope of this study. The results concerning "latent demand" and barriers to participation should therefore be treated as indicative, rather than as expressions of the potential participation rates that might be achieved once certain barriers were removed.

In Section 2 a considerable number of tables are presented which break down the latent demand in detail. The first nine tables address reasons of non-participation by age and income and by season; tables 24 through 26 are concerned with the incidence of latent demand by income, age and type of residence; tables 27 through 30 break down the seasons of other desired activities according to age, sex income and type of residence.

Table 15 REASONS FOR NOT PURSUING DESIRED SUMMER ACTIVITY BY AGE OF RESPONDENT (In %) Statewide Sample

| Possible Reason for Non-Participation | Ages 12 - 17 | Ages 18 - 24 | Ages 25 - 44 | Ages 45 - 64 | Ages 65 & over | TOTAL |
|---------------------------------------|--------------|--------------|--------------|--------------|----------------|-------|
| Too Expensive | 7.1 | 12.5 | 3.4 | 10.7 | 14.3 | 7.6 |
| Equipment Too Expensive | 7.1 | 16.1 | 5.2 | 7.1 | 0.0 | 7.6 |
| No Time | 14.3 | 12.5 | 37.9 | 32.1 | 28.6 | 31.4 |
| No Place Nearby | 28.6 | 37.5 | 36.2 | 35.7 | 42.9 | 35.9 |
| Other | 50.0 | 45.8 | 34.5 | 28.6 | 42.9 | 37.4 |
| Willing to Take Public Transportation | 85.7 | 62.5 | 70.7 | 64.3 | 57.1 | 68.2 |

Note: Percentages refer to persons indicating they would like to do some other activity in the season; percentages may add up to more than 100, since multiple answers are possible.

Table 16 REASONS FOR NOT PURSUING DESIRED FALL ACTIVITY BY AGE OF RESPONDENT (In %) Statewide Sample

| Possible Reason for Non-Participation | Ages 12 - 17 | Ages 18 - 24 | Ages 25 - 44 | Ages 45 - 64 | Ages 65 & over | TOTAL |
|---------------------------------------|--------------|--------------|--------------|--------------|----------------|-------|
| Too Expensive | 25.0 | 12.5 | 13.6 | 10.0 | 0.0 | 10.6 |
| Equipment Too Expensive | 0.0 | 0.0 | 0.0 | 10.0 | 0.0 | 2.1 |
| No Time | 0 | 50.0 | 31.8 | 50.0 | 33.3 | 34.0 |
| No Place Nearby | 75.0 | 37.5 | 50.0 | 40.0 | 33.3 | 46.8 |
| Other | 50.0 | 37.5 | 22.7 | 20.0 | 33.3 | 27.7 |
| Willing to Take Public Transportation | 50.0 | 50.0 | 59.1 | 40.0 | 66.7 | 53.2 |

Note: Percentages refer to persons indicating they would like to do some other activity in the fall; percentages may add up to more than 100 since multiple answers are possible.

Table 17 REASONS FOR NOT PURSUING DESIRED WINTER ACTIVITY BY AGE OF RESPONDENT (In %) Statewide Sample

| Possible Reason for Non-Participation | Ages 12 - 17 | Ages 18 - 24 | Ages 25 - 44 | Ages 45 - 64 | Ages 65 & over | TOTAL |
|---------------------------------------|--------------|--------------|--------------|--------------|----------------|-------|
| Too Expensive | 28.6 | 46.7 | 35.6 | 6.3 | 0.0 | 29.9 |
| Equipment Too Expensive | 28.6 | 26.7 | 13.3 | 6.3 | 0.0 | 14.6 |
| No Time | 14.3 | 13.3 | 28.9 | 18.8 | 25.0 | 22.5 |
| No Place Nearby | 57.1 | 25.0 | 37.8 | 37.5 | 50.0 | 37.1 |
| Other | 14.3 | 20.0 | 15.6 | 50.0 | 25.0 | 22.5 |
| Willing to Take Public Transportation | 100.0 | 86.7 | 77.8 | 43.8 | 50.0 | 71.9 |

Note: Percentages refer to persons indicating they would like to do some other activity in the winter; percentages may add up to more than 100 since multiple answers are possible.

**Table 18 REASONS FOR NOT PURSUING DESIRED SPRING
ACTIVITY BY AGE OF RESPONDENT (In %)
Statewide Sample**

| Possible Reason for Non-Participation | Ages 12 - 17 | Ages 18 - 24 | Ages 25 - 44 | Ages 45 - 64 | Ages 65 & over | TOTAL |
|---------------------------------------|--------------|--------------|--------------|--------------|----------------|-------|
| Too Expensive | 16.7 | 0.0 | 9.5 | 20.0 | 0.0 | 22.7 |
| Equipment Too Expensive | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| No Time | 33.3 | 50.0 | 36.4 | 40.0 | 66.7 | 40.4 |
| No Place Nearby | 50.0 | 16.7 | 36.4 | 40.0 | 33.3 | 36.2 |
| Other | 33.3 | 50.0 | 31.8 | 20.0 | 33.3 | 31.9 |
| Willing to Take Public Transportation | 66.7 | 50.0 | 63.6 | 30.0 | 33.3 | 53.2 |

Note: Percentages refer to persons indicating they would like to do some other activity in the spring; percentages may add up to more than 100 since multiple answers are possible.

**Table 19 REASONS FOR NOT PURSUING DESIRED SUMMER
ACTIVITY BY FAMILY INCOME (In %)
Statewide Sample**

| Possible Reason for Non-Participation | \$2,000 | \$2,000-4,999 | \$5,000-7,999 | \$8,000-9,999 | \$10,000-14,999 | \$15,000-19,999 | \$20,000-24,999 | \$25,000 and over | TOTAL |
|---------------------------------------|---------|---------------|---------------|---------------|-----------------|-----------------|-----------------|-------------------|-------|
| Too Expensive | 20.0 | 22.2 | 18.2 | 10.0 | 7.4 | 0.0 | 0.0 | 0.0 | 8.0 |
| Equipment Too Expensive | 0.0 | 11.1 | 9.1 | 0.0 | 14.8 | 0.0 | 0.0 | 7.7 | 7.0 |
| No Time | 40.0 | 22.2 | 36.4 | 20.0 | 33.3 | 30.8 | 25.0 | 38.5 | 31.0 |
| No Place Nearby | 40.0 | 44.4 | 18.2 | 60.0 | 29.6 | 46.2 | 50.0 | 23.1 | 37.0 |
| Other | 40.0 | 55.6 | 27.3 | 30.0 | 29.6 | 38.5 | 33.3 | 38.5 | 35.0 |
| Willing to Take Public Transportation | 20.0 | 77.8 | 90.9 | 70.0 | 70.4 | 61.5 | 66.7 | 53.8 | 67.0 |

Note: Percentages refer to persons indicating they would like to do some other activity in the summer; percentages may add up to more than 100 since multiple answers are possible.

**Table 20 REASONS FOR NOT PURSUING DESIRED FALL
ACTIVITY BY FAMILY INCOME (In %)
Statewide Sample**

| Possible Reasons for Non-Participation | \$2,000 | \$2,000-4,999 | \$5,000-7,999 | \$8,000-9,999 | \$10,000-14,999 | \$15,000-19,999 | \$20,000-24,000 | \$25,000 and over | TOTAL |
|--|---------|---------------|---------------|---------------|-----------------|-----------------|-----------------|-------------------|-------|
| Too Expensive | 0.0 | 0.0 | 16.7 | 20.0 | 0.0 | 12.5 | 25.0 | 0.0 | 10.3 |
| Equipment Too Expensive | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 12.5 | 0.0 | 33.3 | 5.1 |
| No Time | 25.0 | 66.7 | 50.0 | 60.0 | 66.7 | 12.5 | 25.0 | 66.7 | 43.6 |
| No Place Nearby | 25.0 | 33.3 | 16.7 | 40.0 | 50.0 | 50.0 | 50.0 | 33.3 | 35.9 |
| Other | 100.0 | 0.0 | 16.7 | 20.0 | 16.7 | 37.5 | 25.0 | 33.3 | 30.8 |
| Willing to Take Public Transportation | 50.0 | 100.0 | 50.0 | 20.0 | 50.0 | 62.5 | 100.0 | 33.3 | 56.4 |

Note: Percentages refer to persons indicating they would like to do some other activity in the fall; percentages may add up to more than 100 since multiple answers are possible.

**Table 21 REASONS FOR NOT PURSUING DESIRED WINTER
ACTIVITY BY FAMILY INCOME (In %)
Statewide Sample**

| Possible Reasons for Non-Participation | \$2,000 | \$2,000-4,999 | \$5,000-7,999 | \$8,000-9,999 | \$10,000-14,999 | \$15,000-19,999 | \$20,000-24,000 | \$25,000 and over | TOTAL |
|--|---------|---------------|---------------|---------------|-----------------|-----------------|-----------------|-------------------|-------|
| Too Expensive | 60.0 | 28.6 | 25.0 | 40.0 | 42.1 | 0.0 | 42.9 | 0.0 | 32.4 |
| Equipment Too Expensive | 0.0 | 42.9 | 25.0 | 20.0 | 15.8 | 0.0 | 28.6 | 0.0 | 17.6 |
| No Time | 20.0 | 14.3 | 37.5 | 30.0 | 26.3 | 33.3 | 42.9 | 22.2 | 27.9 |
| No Place Nearby | 0.0 | 42.9 | 62.5 | 10.0 | 36.8 | 100.0 | 28.6 | 55.6 | 38.2 |
| Other | 60.0 | 14.3 | 12.5 | 20.0 | 15.8 | 0.0 | 14.3 | 33.3 | 20.6 |
| Willing to Take Public Transportation | 80.0 | 85.7 | 75.0 | 90.0 | 68.4 | 100.0 | 57.1 | 55.6 | 73.5 |

Note: Percentages refer to persons indicating they would like to do some other activity in the winter; percentages may add up to more than 100 since multiple answers are possible.

**Table 22 REASONS FOR NOT PURSUING DESIRED SPRING
ACTIVITY BY FAMILY INCOME (In %)
Statewide Sample**

| Possible Reasons for Non-Participation | \$2,000 | \$2,000-4,999 | \$5,000-7,999 | \$8,000-9,999 | \$10,000-14,999 | \$15,000-19,999 | \$20,000-24,000 | \$25,000 and over | TOTAL |
|--|---------|---------------|---------------|---------------|-----------------|-----------------|-----------------|-------------------|-------|
| Too Expensive | 0.0 | 0.0 | 0.0 | 0.0 | 14.3 | 0.0 | 14.3 | 0.0 | 5.6 |
| Equipment Too Expensive | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| No Time | 25.0 | 100.0 | 66.7 | 0.0 | 28.6 | 66.7 | 28.6 | 50.0 | 47.2 |
| No Place Nearby | 25.0 | 0.0 | 33.3 | 50.0 | 28.6 | 50.0 | 57.1 | 0.0 | 33.3 |
| Other | 50.0 | 0.0 | 33.3 | 50.0 | 85.7 | 0.0 | 14.3 | 50.0 | 38.9 |
| Willing to Take Public Transportation | 75.0 | 33.3 | 33.3 | 100.0 | 42.9 | 33.3 | 71.4 | 66.7 | 58.3 |

Note: Percentages refer to persons indicating they would like to do some other activity in the spring; percentages may add up to more than 100 since multiple answers are possible.

**Table 23 REASONS FOR NOT DOING DESIRED ACTIVITY
State Sample – Telephone Interviews**

| | Summer | Winter | Fall | Spring |
|---------------------------------------|--------|--------|------|--------|
| Too Expensive to Do | 8.6 | 29.7 | 11.8 | 10.0 |
| Equipment too Expensive | 7.2 | 15.4 | 3.9 | 0.0 |
| No Time | 28.1 | 25.3 | 37.3 | 42.0 |
| No Place Nearby | 37.4 | 38.5 | 47.1 | 36.0 |
| Other | 36.0 | 23.1 | 25.5 | 34.0 |
| Willing to take Public Transportation | 68.3 | 72.5 | 54.9 | 52.0 |

Note: Cell entries give percentage of persons expressing an interest in pursuing some other activity mentioning the respectable reason. Percentages may add up to more than 100%, since multiple responses were possible.

Table 24 INCIDENCE OF LATENT DEMAND BY FAMILY INCOME
Statewide Sample

| Percentage of "Latent Demand" | Under \$2,000 | \$2,000-\$4,999 | \$5,000-\$7,999 | \$8,000-\$9,999 | \$10,000-\$14,999 | \$15,000-\$19,999 | \$20,000-\$24,999 | Over \$25,000 | TOTAL |
|-------------------------------|---------------|-----------------|-----------------|-----------------|-------------------|-------------------|-------------------|---------------|-------|
| Summer | 38.5% | 39.1% | 33.3% | 37.0% | 37.0% | 33.3% | 41.4% | 46.4% | 37.8% |
| Winter | 41.7% | 29.2% | 25.8% | 37.0% | 27.4% | 8.3% | 24.1% | 32.1% | 26.5% |
| Fall | 39.8% | 13.0% | 18.8% | 19.2% | 8.6% | 17.1% | 13.8% | 7.4% | 14.1% |
| Spring | 30.8% | 9.1% | 9.4% | 7.7% | 10.3% | 11.1% | 25.0% | 21.4% | 13.8% |

Percentage of persons indicating they would like to do some other activity in any of the four seasons.

Table 25 INCIDENCE OF LATENT DEMAND BY AGE OF RESPONDENT
Statewide Sample

| "Latent Demand" | Ages 12 - 17 | Ages 18 - 24 | Ages 25 - 44 | Ages 45 - 64 | Ages 65 and over | TOTAL |
|-----------------|--------------|--------------|--------------|--------------|------------------|-------|
| Summer | 52.0% | 57.1% | 37.7% | 28.4% | 14.3% | 35.3% |
| Winter | 28.0% | 35.7% | 29.9% | 17.0% | 8.3% | 24.2% |
| Fall | 15.4% | 17.1% | 13.7% | 9.8% | 6.1% | 12.2% |
| Spring | 24.0% | 14.3% | 12.7% | 10.9% | 6.1% | 12.3% |

Percentage of persons indicating they would like to do some other activity in any of the four seasons.

Table 26 INCIDENCE OF LATENT DEMAND BY TYPE OF RESIDENCE
Statewide Sample

| "Latent Demand" | Urban | Suburban | Rural | TOTAL |
|-----------------|-------|----------|-------|-------|
| Summer | 35.8% | 35.2% | 25.0% | 34.8% |
| Winter | 23.1% | 23.9% | 20.8% | 23.5% |
| Fall | 15.4% | 10.9% | 16.7% | 12.5% |
| Spring | 7.6% | 14.6% | 13.0% | 12.6% |

Percentage of persons indicating they would like to do some other activity in any of the four seasons.

**Table 27 RESIDENCE BY SEASON OF OTHER DESIRED ACTIVITIES
In Percent**

| | Urban | Suburban Rural | TOTAL | |
|--------|-------|----------------|-------|------|
| Summer | 35.8 | 35.2 | 25.0 | 34.0 |
| Winter | 23.1 | 23.9 | 20.8 | 23.5 |
| Fall | 15.4 | 10.9 | 16.7 | 12.5 |
| Spring | 7.6 | 14.6 | 13.0 | 12.6 |

Note: Total season percentages do not agree exactly due to the slightly different numbers of missing observations.

**Table 28 SEASON OF OTHER DESIRED ACTIVITIES
by Sex of Respondent in Percent**

| | Male | Female | TOTAL |
|--------|------|--------|-------|
| Summer | 39.3 | 32.9 | 34.9 |
| Winter | 29.2 | 23.0 | 24.9 |
| Fall | 17.9 | 9.9 | 12.4 |
| Spring | 18.9 | 9.6 | 12.5 |

See note on Table 27

**Table 29 FAMILY INCOME BY SEASON OF OTHER DESIRED ACTIVITIES
In Percent**

| | \$2,000 | \$2,000-4,999 | \$5,000-7,999 | \$8,000-9,999 | \$10,000-14,999 | \$15,000-19,999 | \$20,000-24,999 | \$25,000+ | TOTAL |
|--------|---------|---------------|---------------|---------------|-----------------|-----------------|-----------------|-----------|-------|
| Summer | 38.5 | 39.1 | 33.3 | 37.0 | 37.0 | 33.3 | 41.4 | 46.4 | 37.8 |
| Winter | 34.7 | 29.2 | 25.8 | 37.0 | 27.4 | 8.3 | 24.1 | 32.1 | 26.5 |
| Fall | 30.8 | 13.0 | 18.8 | 19.2 | 8.6 | 17.1 | 13.8 | 7.4 | 14.1 |
| Spring | 30.8 | 9.1 | 9.4 | 7.7 | 10.3 | 11.1 | 25.0 | 21.4 | 13.8 |

See note on Table 27

**Table 30 AGE OF RESPONDENT BY SEASON OF OTHER DESIRED ACTIVITIES
In Percent**

| | Ages 12 - 17 | Ages 18 - 24 | Ages 25 - 44 | Ages 45 - 64 | Ages 65 and over | TOTAL |
|--------|--------------|--------------|--------------|--------------|------------------|-------|
| Summer | 52.0 | 57.1 | 37.7 | 28.4 | 14.3 | 35.3 |
| Winter | 28.0 | 35.7 | 29.9 | 17.0 | 8.3 | 24.2 |
| Fall | 15.4 | 17.1 | 13.7 | 9.8 | 6.1 | 12.2 |
| Spring | 24.0 | 14.3 | 12.7 | 10.9 | 6.1 | 12.3 |

See note on Table 27

Section 3

Demand Forecasts by Region

Note: "Number of Participants" is actually number of state residents pursuing activity in region *plus* number of person-trips from out-of-state into that region.

Section 3 shows the results of the forecasting exercise for the years 1975 to 2000 for the state as a whole in terms of the number of user days by activity. The inspection of these estimates illustrates quite clearly the impact of two factors working in opposite directions. First, the shift in the age distribution of the Massachusetts population lowers the overall participation rate quite noticeably. The extent of this shift emphasizes the relative increase of the older age groups in the total population between 1975 to 2000. Since the participation rates for these age groups are much smaller, the average participation rates go down. This phenomenon is also indicated by the relative stability (or stable growth) of activities that are more evenly distributed across age groups, such as swimming or hunting. However, the differences in terms of the average annual growth rate for the total activity days for the state are small. The most pronounced growth occurs in Fishing—which is partially attributable to the comparatively small base.

The projected growth is most significant in terms of Swimming (Other) – i.e., in natural bodies of water. This activity already accounts for the largest number of activity days, and is projected to grow at an annual rate of .4%. This growth does not account for the possibility of any changes in age-specific participation rates. Such changes may well occur; for example, as the younger age groups who participate at a much higher rate than others now become older, they may continue to enjoy swimming at much higher rates than the preceding generation. Thus, it appears clear that swimming, picnicking and power boating will require additional resources.

Regional recreation resources, in terms of geographical distribution of demand, are demanded quite differently across the SCORP subdivisions. These differentials reflect differences in population size, estimated patterns of regional allocations of recreational activities, and of the distribution of out-of-state visitors. The population distribution for 1970 provides a benchmark measure for assessing to what degree certain regions are importers of recreation services.

Both the westernmost part of the state and Cape Cod/The Islands are exporters of recreation services to other

regions and to other states. The projections yield a high share (in relation to the population share) for the Berkshire region (SCORP Region I) for Camping, Hiking and Horseback Riding. Cape Cod is an exporter primarily in terms of water-related activities, such as Swimming (Other), Power Boating, and Canoeing/Sailing. In addition, the projections also suggest that Camping is an activity frequently pursued on the Cape.

In terms of the overall distribution across regions for all activities, the changes between 1975 and 2000 projected through the procedures are small. This result should be expected in any case, since the only change in the regional distribution could occur as a consequence of shifts in the population distribution, of differential changes in the age-sex composition of the population, since all parameters are assumed to remain constant throughout the forecasting period.

These projections form the basis for the net needs analysis. The individual figures are shown in Section 3 for each region, activity and year of the forecasting period.

TOTAL RECREATION DEMAND PROJECTIONS (BY REGION OF INCIDENCE)

Parameters: BOR modified by MRS

| Activity | No. of Participants (Res. & Non-Res.) | No. of User Days (Res. & Non-Res.) | Activity | No. of Participants (Res. & Non-Res.) | No. of User Days (Res. & Non-Res.) |
|-------------------------------------|---------------------------------------|------------------------------------|---------------------------------------|---------------------------------------|------------------------------------|
| Year: 1975, SCORP Region I | | | Year: 1975, SCORP Region V | | |
| Swim Pool | 69134. | 547414. | Swim Pool | 116003. | 2947406. |
| Swim Other | 231512. | 1919762. | Swim Other | 198829. | 3864165. |
| Picnicking | 176334. | 1572022. | Picnicking | 183424. | 1910737. |
| Camping | 109546. | 850743. | Camping | 14599. | 124707. |
| Power Boat | 38602. | 112031. | Power Boat | 30599. | 327350. |
| Hiking | 314549. | 4889092. | Hiking | 82573. | 1389917. |
| Bicycle | 42848. | 759046. | Bicycle | 181719. | 6264794. |
| Tennis | 53679. | 1139237. | Tennis | 116425. | 3413100. |
| Golf | 27418. | 418747. | Golf | 59765. | 1234715. |
| Fishing | 94975. | 1032069. | Fishing | 82199. | 962365. |
| Horseback | 51547. | 731432. | Horseback | 23568. | 242434. |
| Hunting | 33589. | 357577. | Hunting | 10520. | 113055. |
| Canoeing | 50295. | 370780. | Canoeing | 47738. | 526002. |
| Outside Games | 29152. | 451401. | Outside Games | 142071. | 5505158. |
| Year: 1975, SCORP Region II | | | Year: 1975, SCORP Region VI | | |
| Swim Pool | 280892. | 9440612. | Swim Pool | 159964. | 2428064. |
| Swim Other | 261377. | 3507869. | Swim Other | 663463. | 9176040. |
| Picnicking | 364646. | 4495973. | Picnicking | 289234. | 2277098. |
| Camping | 49247. | 481426. | Camping | 193361. | 1410931. |
| Power Boat | 75301. | 792387. | Power Boat | 165571. | 1663230. |
| Hiking | 143190. | 2002478. | Hiking | 121386. | 1232051. |
| Bicycle | 235568. | 7092502. | Bicycle | 150276. | 4060235. |
| Tennis | 141079. | 4892771. | Tennis | 79855. | 1583165. |
| Golf | 138120. | 3143185. | Golf | 80256. | 1498553. |
| Fishing | 132783. | 1630647. | Fishing | 159734. | 1759856. |
| Horseback | 43165. | 848177. | Horseback | 76010. | 490974. |
| Hunting | 21900. | 281119. | Hunting | 45070. | 533923. |
| Canoeing | 59494. | 314832. | Canoeing | 124685. | 1160649. |
| Outside Games | 229555. | 7014695. | Outside Games | 85282. | 2945369. |
| Year: 1975, SCORP Region III | | | Year: 1975, SCORP Region VII | | |
| Swim Pool | 190500. | 4826913. | Swim Pool | 130820. | 1664823. |
| Swim Other | 247901. | 4541552. | Swim Other | 484435. | 5520850. |
| Picnicking | 267168. | 2783586. | Picnicking | 175605. | 1075644. |
| Camping | 29609. | 258452. | Camping | 148399. | 868306. |
| Power Boat | 130720. | 1445884. | Power Boat | 106374. | 925646. |
| Hiking | 97924. | 1596477. | Hiking | 64931. | 231125. |
| Bicycle | 189417. | 6559667. | Bicycle | 99070. | 2261889. |
| Tennis | 160080. | 4668817. | Tennis | 44885. | 528329. |
| Golf | 85493. | 1750335. | Golf | 31550. | 409876. |
| Fishing | 71646. | 820485. | Fishing | 86376. | 810264. |
| Horseback | 41462. | 431688. | Horseback | 22999. | 134102. |
| Hunting | 15381. | 162236. | Hunting | 23300. | 206393. |
| Canoeing | 68324. | 751837. | Canoeing | 61573. | 460749. |
| Outside Games | 171572. | 6643281. | Outside Games | 33679. | 931634. |
| Year: 1975, SCORP Region IV | | | Year: 1975, SCORP Region Total | | |
| Swim Pool | 764578. | 19084000. | Swim Pool | 1711889. | 40939216. |
| Swim Other | 1483619. | 30069248. | Swim Other | 3571132. | 58599488. |
| Picnicking | 1026490. | 10443457. | Picnicking | 2482898. | 24558464. |
| Camping | 93679. | 940135. | Camping | 638440. | 4934697. |
| Power Boat | 268176. | 3350629. | Power Boat | 815343. | 8617161. |
| Hiking | 619318. | 10830844. | Hiking | 1443868. | 22171936. |
| Bicycle | 1056650. | 34999024. | Bicycle | 1955548. | 61997136. |
| Tennis | 961591. | 30109056. | Tennis | 1557590. | 46334464. |
| Golf | 423119. | 9601425. | Golf | 845720. | 18056816. |
| Fishing | 559925. | 7360352. | Fishing | 1187636. | 14376039. |
| Horseback | 310992. | 1699448. | Horseback | 569743. | 4578253. |
| Hunting | 135113. | 2158255. | Hunting | 284873. | 3812559. |
| Canoeing | 527030. | 5738136. | Canoeing | 939137. | 9322985. |
| Outside Games | 787834. | 31078016. | Outside Games | 1479142. | 54569520. |

RESIDENT RECREATION DEMAND PROJECTIONS (BY REGION OF ORIGIN)

Parameters: BOR modified by MRS

| Activity | No. of Participants (State Residents) | No. of User Days (State Residents) | Activity | No. of Participants (State Residents) | No. of User Days (State Residents) | Activity | No. of Participants (State Residents) | No. of User Days (State Residents) |
|---|---------------------------------------|------------------------------------|---|---------------------------------------|------------------------------------|---|---------------------------------------|------------------------------------|
| Year: 1980, Region: Berkshire | | | Year: 1980, Region: S.R.P.E.D.D. | | | Year: 1980, Region: Emmmr - Core | | |
| Swim Pool | 32674. | 469189. | Swim Pool | 162808. | 4184086. | Swim Pool | 482051. | 10135892. |
| Swim Other | 45607. | 623689. | Swim Other | 274136. | 5584202. | Swim Other | 1062286. | 23754848. |
| Picnicking | 87026. | 1063055. | Picnicking | 227882. | 2470168. | Picnicking | 772350. | 7472008. |
| Camping | 12221. | 93505. | Camping | 86204. | 1065577. | Camping | 382404. | 5032552. |
| Power Boat | 19291. | 49201. | Power Boat | 62701. | 720747. | Power Boat | 217490. | 2662624. |
| Hiking | 60065. | 1113154. | Hiking | 124568. | 2125111. | Hiking | 414849. | 2766393. |
| Bicycle | 11444. | 311765. | Bicycle | 164958. | 5657617. | Bicycle | 674268. | 23757584. |
| Tennis | 39498. | 1153751. | Tennis | 127976. | 3737331. | Tennis | 575796. | 12469346. |
| Golf | 19088. | 396149. | Golf | 61627. | 1282590. | Golf | 185444. | 2914445. |
| Fishing | 13637. | 194980. | Fishing | 100753. | 1201082. | Fishing | 365152. | 3341359. |
| Horseback | 22346. | 285937. | Horseback | 39513. | 392353. | Horseback | 124417. | 1114611. |
| Hunting | 5630. | 64311. | Hunting | 18189. | 208171. | Hunting | 100710. | 2164316. |
| Canoeing | 24634. | 272024. | Canoeing | 79896. | 878295. | Canoeing | 348701. | 5314648. |
| Outside Games | 24694. | 448142. | Outside Games | 131369. | 4877260. | Outside Games | 570804. | 26580432. |
| Year: 1980, Region: Franklin | | | Year: 1980, Region: Cape Cod | | | Year: 1980, Region: Emmmr - Innr | | |
| Swim Pool | 29503. | 675410. | Swim Pool | 46052. | 1178914. | Swim Pool | 444664. | 13408928. |
| Swim Other | 23216. | 708790. | Swim Other | 77370. | 1567431. | Swim Other | 683413. | 14903574. |
| Picnicking | 44250. | 834872. | Picnicking | 64694. | 700191. | Picnicking | 438918. | 5618788. |
| Camping | 8307. | 158609. | Camping | 24176. | 301168. | Camping | 201813. | 2949310. |
| Power Boat | 7590. | 18698. | Power Boat | 17686. | 204013. | Power Boat | 184646. | 3155327. |
| Hiking | 8164. | 276448. | Hiking | 34958. | 603063. | Hiking | 310432. | 10538704. |
| Bicycle | 15545. | 634647. | Bicycle | 46424. | 1598590. | Bicycle | 307107. | 14808963. |
| Tennis | 25021. | 320115. | Tennis | 35850. | 1046348. | Tennis | 278553. | 15095390. |
| Golf | 8962. | 183452. | Golf | 17126. | 358681. | Golf | 149874. | 4211595. |
| Fishing | 9282. | 106150. | Fishing | 28073. | 335043. | Fishing | 197019. | 2741821. |
| Horseback | 5250. | 52722. | Horseback | 11150. | 108880. | Horseback | 115322. | 402520. |
| Hunting | 2439. | 27838. | Hunting | 5063. | 58187. | Hunting | 27828. | 121226. |
| Canoeing | 7893. | 43062. | Canoeing | 22431. | 224105. | Canoeing | 263728. | 1989273. |
| Outside Games | 17557. | 654550. | Outside Games | 36753. | 1356052. | Outside Games | 229375. | 6613343. |
| Year: 1980, Region: Lowr Pioneer | | | Year: 1980, Region: Martha's Vyd | | | Year: 1980, Region: Emmmr - Outr | | |
| Swim Pool | 306927. | 10878304. | Swim Pool | 2806. | 72203. | Swim Pool | 380584. | 8861189. |
| Swim Other | 347914. | 4588695. | Swim Other | 4728. | 96453. | Swim Other | 612751. | 9512378. |
| Picnicking | 401581. | 4942141. | Picnicking | 3924. | 42548. | Picnicking | 497899. | 4573586. |
| Camping | 86138. | 1162903. | Camping | 1489. | 18370. | Camping | 163979. | 752796. |
| Power Boat | 87218. | 1068976. | Power Boat | 1081. | 12419. | Power Boat | 180505. | 1611336. |
| Hiking | 247972. | 3448813. | Hiking | 2152. | 36601. | Hiking | 225836. | 3148856. |
| Bicycle | 241725. | 6989790. | Bicycle | 2848. | 97566. | Bicycle | 539056. | 9349890. |
| Tennis | 126534. | 5033496. | Tennis | 2212. | 64607. | Tennis | 264054. | 6942049. |
| Golf | 132961. | 3083793. | Golf | 1067. | 22174. | Golf | 176536. | 4583850. |
| Fishing | 180534. | 2324013. | Fishing | 1744. | 20779. | Fishing | 329696. | 6002401. |
| Horseback | 52606. | 1046760. | Horseback | 682. | 6800. | Horseback | 149924. | 453523. |
| Hunting | 31595. | 459437. | Hunting | 315. | 3599. | Hunting | 35801. | 408955. |
| Canoeing | 72794. | 383655. | Canoeing | 1380. | 15211. | Canoeing | 125001. | 417972. |
| Outside Games | 231304. | 6678646. | Outside Games | 2271. | 84480. | Outside Games | 232104. | 5368069. |
| Year: 1980, Region: Worcester | | | Year: 1980, Region: Nantucket | | | Year: 1980, Region: State Total | | |
| Swim Pool | 225964. | 5823256. | Swim Pool | 1739. | 44688. | Swim Pool | 2049592. | 52592720. |
| Swim Other | 381079. | 7792838. | Swim Other | 2928. | 59635. | Swim Other | 3451947. | 70463408. |
| Picnicking | 315456. | 3423199. | Picnicking | 2435. | 26390. | Picnicking | 2923990. | 31635872. |
| Camping | 120372. | 1479774. | Camping | 921. | 11382. | Camping | 1093051. | 13481375. |
| Power Boat | 174389. | 1999669. | Power Boat | 670. | 7701. | Power Boat | 796101. | 9169813. |
| Hiking | 173863. | 2942618. | Hiking | 1330. | 22702. | Hiking | 1564326. | 26714288. |
| Bicycle | 229775. | 7858294. | Bicycle | 1762. | 60425. | Bicycle | 2085837. | 71204032. |
| Tennis | 172741. | 5046583. | Tennis | 1367. | 39911. | Tennis | 1613432. | 46356032. |
| Golf | 86605. | 1794531. | Golf | 658. | 13700. | Golf | 792083. | 16899728. |
| Fishing | 141328. | 1683450. | Fishing | 1076. | 12828. | Fishing | 1313359. | 15976661. |
| Horseback | 54934. | 551910. | Horseback | 422. | 4189. | Horseback | 494769. | 4928343. |
| Hunting | 25533. | 291362. | Hunting | 194. | 2223. | Hunting | 229672. | 2710111. |
| Canoeing | 111478. | 1234166. | Canoeing | 853. | 9379. | Canoeing | 1018146. | 11100376. |
| Outside Games | 183753. | 6851658. | Outside Games | 1403. | 52074. | Outside Games | 1661055. | 61778752. |

TOTAL RECREATION DEMAND PROJECTIONS (BY REGION OF INCIDENCE)

Parameters: BOR modified by MRS

| Activity | No. of Participants (Res. & Non-Res.) | No. of User Days (Res. & Non-Res.) | Activity | No. of Participants (Res. & Non-Res.) | No. of User Days (Res. & Non-Res.) |
|----------|--|---------------------------------------|----------|--|---------------------------------------|
|----------|--|---------------------------------------|----------|--|---------------------------------------|

Year: 1980, SCORP Region I

| | | |
|---------------|---------|----------|
| Swim Pool | 69077. | 537659. |
| Swim Other | 234434. | 1947827. |
| Picnicking | 181393. | 1636930. |
| Camping | 111575. | 874575. |
| Power Boat | 38869. | 113002. |
| Hiking | 319494. | 4846436. |
| Bicycle | 42593. | 730753. |
| Tennis | 53462. | 1113418. |
| Golf | 27662. | 421578. |
| Fishing | 98502. | 1077109. |
| Horseback | 51077. | 699319. |
| Hunting | 34300. | 371230. |
| Canoeing | 51058. | 367626. |
| Outside Games | 29233. | 433638. |

Year: 1980, SCORP Region V

| | | |
|---------------|---------|----------|
| Swim Pool | 119458. | 2970294. |
| Swim Other | 207547. | 3979996. |
| Picnicking | 193651. | 2029791. |
| Camping | 14984. | 128914. |
| Power Boat | 32075. | 346878. |
| Hiking | 84664. | 1392451. |
| Bicycle | 182695. | 6066779. |
| Tennis | 119566. | 3443893. |
| Golf | 62543. | 1285304. |
| Fishing | 86653. | 1015990. |
| Horseback | 23765. | 235469. |
| Hunting | 10881. | 118631. |
| Canoeing | 49749. | 533962. |
| Outside Games | 147095. | 5444037. |

Year: 1980, SCORP Region II

| | | |
|---------------|---------|----------|
| Swim Pool | 289419. | 9523038. |
| Swim Other | 271869. | 3623361. |
| Picnicking | 384595. | 4779273. |
| Camping | 50611. | 497865. |
| Power Boat | 78923. | 840138. |
| Hiking | 146835. | 2007778. |
| Bicycle | 236393. | 6895772. |
| Tennis | 144917. | 4941970. |
| Golf | 144670. | 3275391. |
| Fishing | 139779. | 1720588. |
| Horseback | 43563. | 824783. |
| Hunting | 22626. | 294981. |
| Canoeing | 61915. | 319658. |
| Outside Games | 238263. | 6969067. |

Year: 1980, SCORP Region VI

| | | |
|---------------|---------|----------|
| Swim Pool | 165970. | 2530207. |
| Swim Other | 687877. | 9516056. |
| Picnicking | 305282. | 2454940. |
| Camping | 197094. | 1433333. |
| Power Boat | 173490. | 1757439. |
| Hiking | 124827. | 1266968. |
| Bicycle | 155057. | 4050261. |
| Tennis | 84036. | 1677616. |
| Golf | 85330. | 1610717. |
| Fishing | 170122. | 1923947. |
| Horseback | 78466. | 483913. |
| Hunting | 46358. | 553133. |
| Canoeing | 129720. | 1175776. |
| Outside Games | 90763. | 2999241. |

Year: 1980, SCORP Region III

| | | |
|---------------|---------|----------|
| Swim Pool | 193912. | 4806246. |
| Swim Other | 256385. | 4650923. |
| Picnicking | 279055. | 2927059. |
| Camping | 30205. | 264646. |
| Power Boat | 135767. | 1515265. |
| Hiking | 99201. | 1580836. |
| Bicycle | 187781. | 6300689. |
| Tennis | 162413. | 4653451. |
| Golf | 88353. | 1799713. |
| Fishing | 74521. | 855243. |
| Horseback | 41310. | 414041. |
| Hunting | 15717. | 168147. |
| Canoeing | 70345. | 753836. |
| Outside Games | 175742. | 6510685. |

Year: 1980, SCORP Region VII

| | | |
|---------------|---------|----------|
| Swim Pool | 132765. | 1680589. |
| Swim Other | 495022. | 5647297. |
| Picnicking | 180522. | 1129354. |
| Camping | 149932. | 875470. |
| Power Boat | 109911. | 967519. |
| Hiking | 65187. | 234470. |
| Bicycle | 100054. | 2183345. |
| Tennis | 45399. | 535077. |
| Golf | 32564. | 433091. |
| Fishing | 90046. | 873096. |
| Horseback | 23527. | 130103. |
| Hunting | 23552. | 210502. |
| Canoeing | 62643. | 458865. |
| Outside Games | 34563. | 915236. |

Year: 1980, SCORP Region IV

| | | |
|---------------|----------|-----------|
| Swim Pool | 787803. | 19206848. |
| Swim Other | 1547458. | 30752096. |
| Picnicking | 1083275. | 11050861. |
| Camping | 96226. | 948663. |
| Power Boat | 282606. | 3519099. |
| Hiking | 630653. | 10732507. |
| Bicycle | 1068209. | 33523280. |
| Tennis | 979162. | 30039952. |
| Golf | 446857. | 10161605. |
| Fishing | 597143. | 8011956. |
| Horseback | 317848. | 1635566. |
| Hunting | 138425. | 2215302. |
| Canoeing | 540694. | 5632341. |
| Outside Games | 808287. | 30119600. |

Year: 1980, SCORP Region Total

| | | |
|---------------|----------|-----------|
| Swim Pool | 1758401. | 41254848. |
| Swim Other | 3700588. | 60117552. |
| Picnicking | 2607771. | 26008160. |
| Camping | 650628. | 5023464. |
| Power Boat | 851642. | 9059343. |
| Hiking | 1470858. | 22061408. |
| Bicycle | 1972780. | 59750864. |
| Tennis | 1588951. | 46405360. |
| Golf | 887979. | 18987360. |
| Fishing | 1256764. | 15477931. |
| Horseback | 579557. | 4423192. |
| Hunting | 291858. | 3931925. |
| Canoeing | 966124. | 9242066. |
| Outside Games | 1523949. | 53391472. |

RESIDENT RECREATION DEMAND PROJECTIONS (BY REGION OF ORIGIN)

Parameters: BOR modified by MRS

| Activity | No. of Participants (State Residents) | No. of User Days (State Residents) | Activity | No. of Participants (State Residents) | No. of User Days (State Residents) | Activity | No. of Participants (State Residents) | No. of User Days (State Residents) |
|---|---------------------------------------|------------------------------------|---|---------------------------------------|------------------------------------|---|---------------------------------------|------------------------------------|
| Year: 1985, Region: Berkshire | | | Year: 1985, Region: S.R.P.E.D.D. | | | Year: 1985, Region: Emmmr - Core | | |
| Swim Pool | 32214. | 455539. | Swim Pool | 163479. | 4138187. | Swim Pool | 475980. | 9857809. |
| Swim Other | 45758. | 624781. | Swim Other | 280153. | 5700538. | Swim Other | 1067478. | 23839280. |
| Picnicking | 88227. | 1089978. | Picnicking | 235246. | 2579169. | Picnicking | 784039. | 7672020. |
| Camping | 12266. | 94208. | Camping | 88154. | 1093455. | Camping | 384508. | 5078381. |
| Power Boat | 19476. | 50445. | Power Boat | 64479. | 752616. | Power Boat | 219928. | 2733955. |
| Hiking | 58614. | 1053442. | Hiking | 123853. | 2047913. | Hiking | 405543. | 2621720. |
| Bicycle | 10979. | 291781. | Bicycle | 161226. | 5393086. | Bicycle | 648007. | 22272432. |
| Tennis | 38140. | 1105197. | Tennis | 125918. | 3648038. | Tennis | 556983. | 11966939. |
| Golf | 19060. | 393924. | Golf | 62729. | 1299672. | Golf | 185585. | 2903727. |
| Fishing | 13823. | 197995. | Fishing | 104098. | 1243034. | Fishing | 370930. | 3400152. |
| Horseback | 21239. | 259221. | Horseback | 38255. | 362610. | Horseback | 118438. | 1012449. |
| Hunting | 5514. | 64003. | Hunting | 18159. | 211125. | Hunting | 98836. | 2158088. |
| Canoeing | 24399. | 263361. | Canoeing | 80626. | 866777. | Canoeing | 345983. | 5156349. |
| Outside Games | 24491. | 427208. | Outside Games | 132767. | 4739420. | Outside Games | 567186. | 25391632. |
| Year: 1985, Region: Franklin | | | Year: 1985, Region: Cape Cod | | | Year: 1985, Region: Emmmr - Innr | | |
| Swim Pool | 29571. | 666719. | Swim Pool | 48130. | 1213519. | Swim Pool | 433224. | 12867620. |
| Swim Other | 23682. | 721880. | Swim Other | 82293. | 1666020. | Swim Other | 677620. | 14757660. |
| Picnicking | 45603. | 870202. | Picnicking | 69515. | 760957. | Picnicking | 439636. | 5692477. |
| Camping | 8478. | 162461. | Camping | 25728. | 321665. | Camping | 200225. | 2936592. |
| Power Boat | 7791. | 19489. | Power Boat | 18930. | 221764. | Power Boat | 184233. | 3196780. |
| Hiking | 8101. | 265944. | Hiking | 36171. | 604931. | Hiking | 299433. | 9854737. |
| Bicycle | 15163. | 603852. | Bicycle | 47223. | 1586069. | Bicycle | 291222. | 13698589. |
| Tennis | 24568. | 311817. | Tennis | 36706. | 1062860. | Tennis | 265869. | 14293951. |
| Golf | 9103. | 185510. | Golf | 18138. | 378222. | Golf | 147994. | 4140318. |
| Fishing | 9569. | 109621. | Fishing | 30184. | 360817. | Fishing | 197476. | 2752967. |
| Horseback | 5073. | 48614. | Horseback | 11235. | 104699. | Horseback | 108321. | 360764. |
| Hunting | 2430. | 28174. | Hunting | 5260. | 61410. | Hunting | 26947. | 119270. |
| Canoeing | 7949. | 42403. | Canoeing | 23557. | 250656. | Canoeing | 258193. | 1904358. |
| Outside Games | 17707. | 634606. | Outside Games | 38653. | 1371137. | Outside Games | 224890. | 6233552. |
| Year: 1985, Region: Lowr Pioneer | | | Year: 1985, Region: Martha's Vyd | | | Year: 1985, Region: Emmmr - Outr | | |
| Swim Pool | 310069. | 10825614. | Swim Pool | 2871. | 72733. | Swim Pool | 409564. | 9392599. |
| Swim Other | 357737. | 4713504. | Swim Other | 4923. | 100288. | Swim Other | 671085. | 10404132. |
| Picnicking | 417041. | 5191365. | Picnicking | 4127. | 45268. | Picnicking | 550859. | 5118058. |
| Camping | 88645. | 1200621. | Camping | 1552. | 19205. | Camping | 179700. | 827923. |
| Power Boat | 90245. | 1122999. | Power Boat | 1133. | 13213. | Power Boat | 198933. | 1803202. |
| Hiking | 248105. | 3343449. | Hiking | 2179. | 35926. | Hiking | 240612. | 3252372. |
| Bicycle | 237729. | 6703689. | Bicycle | 2835. | 94703. | Bicycle | 564620. | 9553162. |
| Tennis | 125292. | 4944551. | Tennis | 2217. | 64229. | Tennis | 278383. | 7260812. |
| Golf | 136230. | 3144900. | Golf | 1107. | 22895. | Golf | 192548. | 4977442. |
| Fishing | 187739. | 2420775. | Fishing | 1835. | 21910. | Fishing | 365013. | 6656966. |
| Horseback | 51244. | 973812. | Horseback | 672. | 6398. | Horseback | 155546. | 448977. |
| Hunting | 31748. | 468951. | Hunting | 320. | 3720. | Hunting | 38293. | 444427. |
| Canoeing | 73922. | 381116. | Canoeing | 1419. | 15293. | Canoeing | 135173. | 441967. |
| Outside Games | 235261. | 6532472. | Outside Games | 2338. | 83587. | Outside Games | 251361. | 5588847. |
| Year: 1985, Region: Worcester | | | Year: 1985, Region: Nantucket | | | Year: 1985, Region: State Total | | |
| Swim Pool | 225611. | 5725985. | Swim Pool | 1795. | 45447. | Swim Pool | 2035797. | 51608064. |
| Swim Other | 387212. | 7905606. | Swim Other | 3077. | 62616. | Swim Other | 3491659. | 71182064. |
| Picnicking | 323848. | 3554300. | Picnicking | 2583. | 28324. | Picnicking | 2925452. | 32092528. |
| Camping | 122366. | 1509841. | Camping | 968. | 12009. | Camping | 1101335. | 13620802. |
| Power Boat | 178308. | 2076128. | Power Boat | 708. | 8266. | Power Boat | 803804. | 9369302. |
| Hiking | 171844. | 2819933. | Hiking | 1360. | 22485. | Hiking | 1546953. | 25470768. |
| Bicycle | 223266. | 7448049. | Bicycle | 1771. | 59225. | Bicycle | 2011579. | 67186048. |
| Tennis | 168951. | 4896504. | Tennis | 1383. | 40064. | Tennis | 1573806. | 45604704. |
| Golf | 87607. | 1807491. | Golf | 689. | 14275. | Golf | 786376. | 16254443. |
| Fishing | 145116. | 1731621. | Fishing | 1144. | 13655. | Fishing | 1303635. | 15560668. |
| Horseback | 52879. | 506880. | Horseback | 420. | 3982. | Horseback | 476808. | 4548002. |
| Hunting | 25331. | 293714. | Hunting | 199. | 2319. | Hunting | 227492. | 2640929. |
| Canoeing | 111835. | 1210432. | Canoeing | 886. | 9521. | Canoeing | 1006878. | 10865445. |
| Outside Games | 184592. | 6616592. | Outside Games | 1458. | 52056. | Outside Games | 1660202. | 59401104. |

TOTAL RECREATION DEMAND PROJECTIONS (BY REGION OF INCIDENCE)

Parameters: BOR modified by MRS

| Activity | No. of Participants (Res. & Non-Res.) | No. of User Days (Res. & Non-Res.) | Activity | No. of Participants (Res. & Non-Res.) | No. of User Days (Res. & Non-Res.) |
|-------------------------------------|---------------------------------------|------------------------------------|---------------------------------------|---------------------------------------|------------------------------------|
| Year: 1985, SCORP Region I | | | Year: 1985, SCORP Region V | | |
| Swim Pool | 68700. | 526466. | Swim Pool | 119932. | 2937889. |
| Swim Other | 235806. | 1966869. | Swim Other | 211974. | 4055590. |
| Picnicking | 184787. | 1691544. | Picnicking | 199989. | 2119734. |
| Camping | 112776. | 893178. | Camping | 15179. | 131701. |
| Power Boat | 39008. | 113935. | Power Boat | 32911. | 361857. |
| Hiking | 317467. | 4648967. | Hiking | 84199. | 1342272. |
| Bicycle | 41956. | 696923. | Bicycle | 179179. | 5778602. |
| Tennis | 52212. | 1068750. | Tennis | 117673. | 3361743. |
| Golf | 27634. | 419353. | Golf | 63645. | 1302386. |
| Fishing | 100989. | 1110324. | Fishing | 89463. | 1051229. |
| Horseback | 49072. | 642081. | Horseback | 23010. | 217623. |
| Hunting | 34191. | 375432. | Hunting | 10864. | 120256. |
| Canoeing | 51046. | 359664. | Canoeing | 50187. | 527052. |
| Outside Games | 29040. | 413751. | Outside Games | 148658. | 5284784. |
| Year: 1985, SCORP Region II | | | Year: 1985, SCORP Region VI | | |
| Swim Pool | 292052. | 9472705. | Swim Pool | 168081. | 2546074. |
| Swim Other | 277718. | 3704591. | Swim Other | 700599. | 9728077. |
| Picnicking | 398105. | 5008389. | Picnicking | 315037. | 2580089. |
| Camping | 51433. | 510592. | Camping | 199301. | 1452069. |
| Power Boat | 81345. | 881248. | Power Boat | 178424. | 1831325. |
| Hiking | 146872. | 1946368. | Hiking | 125253. | 1241065. |
| Bicycle | 232347. | 6605899. | Bicycle | 154827. | 3915724. |
| Tennis | 143357. | 4852506. | Tennis | 84515. | 1675067. |
| Golf | 148080. | 3338556. | Golf | 87812. | 1662352. |
| Fishing | 144878. | 1788553. | Fishing | 177131. | 2036884. |
| Horseback | 42409. | 766990. | Horseback | 77196. | 451514. |
| Hunting | 22695. | 300515. | Hunting | 46513. | 560744. |
| Canoeing | 62745. | 317420. | Canoeing | 131104. | 1161704. |
| Outside Games | 242169. | 6811255. | Outside Games | 93059. | 2954267. |
| Year: 1985, SCORP Region III | | | Year: 1985, SCORP Region VII | | |
| Swim Pool | 193622. | 4726484. | Swim Pool | 133310. | 1669805. |
| Swim Other | 260361. | 4720234. | Swim Other | 500690. | 5734525. |
| Picnicking | 286451. | 3039953. | Picnicking | 183797. | 1171393. |
| Camping | 30504. | 269156. | Camping | 150869. | 882642. |
| Power Boat | 138706. | 1572610. | Power Boat | 112202. | 1002190. |
| Hiking | 98130. | 1515813. | Hiking | 65232. | 233775. |
| Bicycle | 182574. | 5972493. | Bicycle | 99387. | 2083998. |
| Tennis | 158926. | 4515378. | Tennis | 45247. | 525015. |
| Golf | 89355. | 1812673. | Golf | 33063. | 443734. |
| Fishing | 76416. | 879329. | Fishing | 92673. | 918211. |
| Horseback | 39768. | 380269. | Horseback | 23084. | 120585. |
| Hunting | 15606. | 169441. | Hunting | 23549. | 212082. |
| Canoeing | 70559. | 739595. | Canoeing | 62815. | 451103. |
| Outside Games | 176539. | 6287372. | Outside Games | 34903. | 887413. |
| Year: 1985, SCORP Region IV | | | Year: 1985, SCORP Region Total | | |
| Swim Pool | 794581. | 19036656. | Swim Pool | 1770275. | 40916064. |
| Swim Other | 1583936. | 31282672. | Swim Other | 3771081. | 61192560. |
| Picnicking | 1123905. | 11559933. | Picnicking | 2692069. | 27170976. |
| Camping | 97849. | 959487. | Camping | 657913. | 5098824. |
| Power Boat | 292219. | 3662284. | Power Boat | 874815. | 9425452. |
| Hiking | 627059. | 10261175. | Hiking | 1464209. | 21189408. |
| Bicycle | 1056338. | 31850848. | Bicycle | 1946606. | 56904448. |
| Tennis | 964225. | 29182496. | Tennis | 1566153. | 45180944. |
| Golf | 459232. | 10431761. | Golf | 908820. | 19410784. |
| Fishing | 624508. | 8488191. | Fishing | 1306054. | 16272723. |
| Horseback | 311774. | 1512334. | Horseback | 566313. | 4091395. |
| Hunting | 138201. | 2237694. | Hunting | 291619. | 3976162. |
| Canoeing | 542145. | 5475583. | Canoeing | 970601. | 9032121. |
| Outside Games | 816998. | 29066960. | Outside Games | 1541363. | 51705760. |

RESIDENT RECREATION DEMAND PROJECTIONS (BY REGION OF ORIGIN)

Parameters: BOR modified by MRS

| Activity | No. of Participants (State Residents) | No. of User Days (State Residents) | Activity | No. of Participants (State Residents) | No. of User Days (State Residents) | Activity | No. of Participants (State Residents) | No. of User Days (State Residents) |
|---|---------------------------------------|------------------------------------|---|---------------------------------------|------------------------------------|---|---------------------------------------|------------------------------------|
| Year: 1990, Region: Berkshire | | | Year: 1990, Region: S.R.P.E.D.D. | | | Year: 1990, Region: Emmmr - Core | | |
| Swim Pool | 32090. | 453060. | Swim Pool | 163605. | 4135437. | Swim Pool | 470237. | 9720987. |
| Swim Other | 45851. | 630616. | Swim Other | 282048. | 5783350. | Swim Other | 1060793. | 23855296. |
| Picnicking | 89276. | 1110320. | Picnicking | 239106. | 2639223. | Picnicking | 786940. | 7751364. |
| Camping | 12333. | 95492. | Camping | 89078. | 1113528. | Camping | 383318. | 5104713. |
| Power Boat | 19662. | 51630. | Power Boat | 65401. | 773873. | Power Boat | 220176. | 2775121. |
| Hiking | 57856. | 1021195. | Hiking | 122859. | 1994174. | Hiking | 396900. | 2520704. |
| Bicycle | 10818. | 286341. | Bicycle | 159629. | 5317415. | Bicycle | 633062. | 21671040. |
| Tennis | 37169. | 1080683. | Tennis | 123331. | 3585201. | Tennis | 538195. | 11600744. |
| Golf | 19194. | 396362. | Golf | 63508. | 1314377. | Golf | 185257. | 2896642. |
| Fishing | 14008. | 201001. | Fishing | 106043. | 1268481. | Fishing | 372596. | 3421760. |
| Horseback | 20602. | 245482. | Horseback | 37283. | 345263. | Horseback | 113930. | 950250. |
| Hunting | 5439. | 63822. | Hunting | 18007. | 211605. | Hunting | 96647. | 2133589. |
| Canoeing | 24248. | 261664. | Canoeing | 80521. | 865808. | Canoeing | 340933. | 5078088. |
| Outside Games | 24423. | 420678. | Outside Games | 133076. | 4692022. | Outside Games | 560755. | 24780144. |
| Year: 1990, Region: Franklin | | | Year: 1990, Region: Cape Cod | | | Year: 1990, Region: Emmmr - Innr | | |
| Swim Pool | 29412. | 662009. | Swim Pool | 47065. | 1185346. | Swim Pool | 430955. | 12776704. |
| Swim Other | 23692. | 727277. | Swim Other | 80969. | 1653354. | Swim Other | 678030. | 14869637. |
| Picnicking | 46074. | 885068. | Picnicking | 69020. | 760744. | Picnicking | 444312. | 5791092. |
| Camping | 8509. | 164414. | Camping | 25420. | 320103. | Camping | 200985. | 2972217. |
| Power Boat | 7852. | 19911. | Power Boat | 18765. | 222825. | Power Boat | 185715. | 3267334. |
| Hiking | 7982. | 257425. | Hiking | 35081. | 575456. | Hiking | 295077. | 9540519. |
| Bicycle | 14916. | 591665. | Bicycle | 45704. | 1528218. | Bicycle | 286471. | 13420809. |
| Tennis | 23900. | 304359. | Tennis | 35156. | 1021480. | Tennis | 258676. | 13952288. |
| Golf | 9148. | 186305. | Golf | 17967. | 374074. | Golf | 148753. | 4158753. |
| Fishing | 9677. | 111068. | Fishing | 30082. | 360170. | Fishing | 199733. | 2789603. |
| Horseback | 4913. | 45946. | Horseback | 10702. | 97555. | Horseback | 104918. | 340939. |
| Hunting | 2392. | 28041. | Hunting | 5103. | 60196. | Hunting | 26533. | 118731. |
| Canoeing | 7886. | 42046. | Canoeing | 23001. | 244981. | Canoeing | 256183. | 1888411. |
| Outside Games | 17626. | 623680. | Outside Games | 37890. | 1328189. | Outside Games | 223877. | 6125453. |
| Year: 1990, Region: Lowr Pioneer | | | Year: 1990, Region: Martha's Vyd | | | Year: 1990, Region: Emmmr - Outr | | |
| Swim Pool | 313343. | 10924867. | Swim Pool | 2776. | 70260. | Swim Pool | 436469. | 9991245. |
| Swim Other | 363693. | 4828837. | Swim Other | 4790. | 98365. | Swim Other | 719370. | 11230568. |
| Picnicking | 428008. | 5364038. | Picnicking | 4053. | 44764. | Picnicking | 596412. | 5577969. |
| Camping | 94061. | 1234633. | Camping | 1516. | 18902. | Camping | 193243. | 897716. |
| Power Boat | 92435. | 1165971. | Power Boat | 1111. | 13131. | Power Boat | 214832. | 1974412. |
| Hiking | 248549. | 3287395. | Hiking | 2090. | 33800. | Hiking | 254018. | 3373190. |
| Bicycle | 237693. | 6674377. | Bicycle | 2713. | 90236. | Bicycle | 595014. | 10026827. |
| Tennis | 123936. | 4907653. | Tennis | 2100. | 61045. | Tennis | 290164. | 7592634. |
| Golf | 139306. | 3212129. | Golf | 1084. | 22394. | Golf | 207335. | 5356091. |
| Fishing | 193157. | 2494995. | Fishing | 1809. | 21629. | Fishing | 395511. | 7226554. |
| Horseback | 50432. | 936552. | Horseback | 633. | 5895. | Horseback | 161403. | 454562. |
| Hunting | 31799. | 474697. | Hunting | 307. | 3606. | Hunting | 40392. | 473964. |
| Canoeing | 74555. | 384512. | Canoeing | 1370. | 14780. | Canoeing | 143684. | 469517. |
| Outside Games | 238152. | 6532007. | Outside Games | 2267. | 80061. | Outside Games | 268071. | 5883553. |
| Year: 1990, Region: Worcester | | | Year: 1990, Region: Nantucket | | | Year: 1990, Region: State Total | | |
| Swim Pool | 225840. | 5722932. | Swim Pool | 1770. | 44753. | Swim Pool | 2046490. | 51804176. |
| Swim Other | 389904. | 8017869. | Swim Other | 3052. | 62591. | Swim Other | 3531014. | 72522816. |
| Picnicking | 329279. | 3638186. | Picnicking | 2587. | 28554. | Picnicking | 2986816. | 32987120. |
| Camping | 123647. | 1537891. | Camping | 964. | 12049. | Camping | 1117830. | 13932885. |
| Power Boat | 180888. | 2135167. | Power Boat | 708. | 8373. | Power Boat | 818943. | 9676652. |
| Hiking | 170466. | 2746842. | Hiking | 1330. | 21572. | Hiking | 1541365. | 24913680. |
| Bicycle | 221074. | 7345073. | Bicycle | 1728. | 57535. | Bicycle | 2000531. | 66539760. |
| Tennis | 165474. | 4811888. | Tennis | 1335. | 38807. | Tennis | 1548332. | 45018352. |
| Golf | 88672. | 1827791. | Golf | 688. | 14230. | Golf | 799657. | 16511378. |
| Fishing | 147791. | 1766772. | Fishing | 1148. | 13733. | Fishing | 1333829. | 15949484. |
| Horseback | 51544. | 482478. | Horseback | 403. | 3739. | Horseback | 466773. | 4349530. |
| Hunting | 25114. | 294351. | Hunting | 195. | 2291. | Hunting | 226589. | 2658680. |
| Canoeing | 111691. | 1208755. | Canoeing | 872. | 9376. | Canoeing | 1010037. | 10901234. |
| Outside Games | 185006. | 6548653. | Outside Games | 1441. | 50804. | Outside Games | 1671445. | 59066512. |

TOTAL RECREATION DEMAND PROJECTIONS (BY REGION OF INCIDENCE)

Parameters: BOR modified by MRS

| Activity | No. of Participants (Res. & Non-Res.) | No. of User Days (Res. & Non-Res.) | Activity | No. of Participants (Res. & Non-Res.) | No. of User Days (Res. & Non-Res.) |
|----------|---------------------------------------|------------------------------------|----------|---------------------------------------|------------------------------------|
|----------|---------------------------------------|------------------------------------|----------|---------------------------------------|------------------------------------|

Year: 1990, SCORP Region I

| | | |
|---------------|---------|----------|
| Swim Pool | 68598. | 524432. |
| Swim Other | 236565. | 1988275. |
| Picnicking | 187484. | 1731949. |
| Camping | 113624. | 909826. |
| Power Boat | 39147. | 114824. |
| Hiking | 316793. | 4551679. |
| Bicycle | 41797. | 689951. |
| Tennis | 51319. | 1046198. |
| Golf | 27768. | 421791. |
| Fishing | 102839. | 1135769. |
| Horseback | 47858. | 612260. |
| Hunting | 34051. | 377465. |
| Canoeing | 51006. | 358690. |
| Outside Games | 28976. | 407547. |

Year: 1990, SCORP Region V

| | | |
|---------------|---------|----------|
| Swim Pool | 120021. | 2935948. |
| Swim Other | 214202. | 4122119. |
| Picnicking | 203803. | 2174153. |
| Camping | 15272. | 133709. |
| Power Boat | 33344. | 371848. |
| Hiking | 83553. | 1307342. |
| Bicycle | 178244. | 5705089. |
| Tennis | 115293. | 3303933. |
| Golf | 64423. | 1317091. |
| Fishing | 91096. | 1072604. |
| Horseback | 22427. | 207215. |
| Hunting | 10781. | 120520. |
| Canoeing | 50124. | 526470. |
| Outside Games | 149145. | 5230833. |

Year: 1990, SCORP Region II

| | | |
|---------------|---------|----------|
| Swim Pool | 294606. | 9550229. |
| Swim Other | 281029. | 3776966. |
| Picnicking | 407316. | 5159628. |
| Camping | 51996. | 521705. |
| Power Boat | 83033. | 913793. |
| Hiking | 147045. | 1912145. |
| Bicycle | 231996. | 6565476. |
| Tennis | 141496. | 4811699. |
| Golf | 151201. | 3406580. |
| Fishing | 148626. | 1839737. |
| Horseback | 41680. | 737045. |
| Hunting | 22691. | 303635. |
| Canoeing | 63144. | 319547. |
| Outside Games | 244839. | 6800433. |

Year: 1990, SCORP Region VI

| | | |
|---------------|---------|----------|
| Swim Pool | 167949. | 2537579. |
| Swim Other | 705039. | 9852987. |
| Picnicking | 318963. | 2634170. |
| Camping | 200627. | 1466861. |
| Power Boat | 181639. | 1886875. |
| Hiking | 124082. | 1202274. |
| Bicycle | 153872. | 3841221. |
| Tennis | 82833. | 1630228. |
| Golf | 89208. | 1698374. |
| Fishing | 181382. | 2115448. |
| Horseback | 76160. | 429434. |
| Hunting | 46265. | 560253. |
| Canoeing | 130637. | 1150565. |
| Outside Games | 92741. | 2894771. |

Year: 1990, SCORP Region III

| | | |
|---------------|---------|----------|
| Swim Pool | 193810. | 4723981. |
| Swim Other | 262274. | 4789227. |
| Picnicking | 291378. | 3113676. |
| Camping | 30697. | 273363. |
| Power Boat | 140641. | 1616889. |
| Hiking | 97400. | 1477075. |
| Bicycle | 180821. | 5890113. |
| Tennis | 155727. | 4437531. |
| Golf | 90419. | 1832973. |
| Fishing | 77753. | 896904. |
| Horseback | 38767. | 361967. |
| Hunting | 15486. | 169791. |
| Canoeing | 70473. | 738589. |
| Outside Games | 176933. | 6222830. |

Year: 1990, SCORP Region VII

| | | |
|---------------|---------|----------|
| Swim Pool | 133934. | 1681313. |
| Swim Other | 503961. | 5817075. |
| Picnicking | 186056. | 1199683. |
| Camping | 151561. | 890167. |
| Power Boat | 114040. | 1032627. |
| Hiking | 65138. | 231404. |
| Bicycle | 99666. | 2062237. |
| Tennis | 44953. | 517168. |
| Golf | 33495. | 454888. |
| Fishing | 94720. | 955710. |
| Horseback | 22878. | 115149. |
| Hunting | 23506. | 212165. |
| Canoeing | 62786. | 448339. |
| Outside Games | 35003. | 874377. |

Year: 1990, SCORP Region IV

| | | |
|---------------|----------|-----------|
| Swim Pool | 805747. | 19255856. |
| Swim Other | 1609983. | 31882400. |
| Picnicking | 1156901. | 11956451. |
| Camping | 99161. | 972662. |
| Power Boat | 300505. | 3795261. |
| Hiking | 627323. | 10069806. |
| Bicycle | 1063477. | 31564144. |
| Tennis | 951871. | 28855344. |
| Golf | 472425. | 10769889. |
| Fishing | 647153. | 8900550. |
| Horseback | 309985. | 1448580. |
| Hunting | 137763. | 2241398. |
| Canoeing | 543133. | 5428725. |
| Outside Games | 824234. | 28735120. |

Year: 1990, SCORP Region Total

| | | |
|---------------|----------|-----------|
| Swim Pool | 1784663. | 41209312. |
| Swim Other | 3813051. | 62229040. |
| Picnicking | 2751902. | 27969664. |
| Camping | 662939. | 5168291. |
| Power Boat | 892350. | 9732120. |
| Hiking | 1461332. | 20751696. |
| Bicycle | 1949871. | 56318192. |
| Tennis | 1543489. | 44602096. |
| Golf | 928941. | 19901552. |
| Fishing | 1343568. | 16916720. |
| Horseback | 559754. | 3911648. |
| Hunting | 290544. | 3985226. |
| Canoeing | 971302. | 8970925. |
| Outside Games | 1551868. | 51165872. |

RESIDENT RECREATION DEMAND PROJECTIONS (BY REGION OF ORIGIN)

Parameters: BOR modified by MRS

| Activity | No. of Participants (State Residents) | No. of User Days (State Residents) | Activity | No. of Participants (State Residents) | No. of User Days (State Residents) | Activity | No. of Participants (State Residents) | No. of User Days (State Residents) |
|---|---------------------------------------|------------------------------------|---|---------------------------------------|------------------------------------|---|---------------------------------------|------------------------------------|
| Year: 1995, Region: Berkshire | | | Year: 1995, Region: S.R.P.E.D.D. | | | Year: 1995, Region: Emmmr - Core | | |
| Swim Pool | 32253. | 456700. | Swim Pool | 165155. | 4187349. | Swim Pool | 469208. | 9726913. |
| Swim Other | 45838. | 634160. | Swim Other | 283225. | 5842996. | Swim Other | 1052711. | 23809616. |
| Picnicking | 90217. | 1117911. | Picnicking | 242656. | 2668741. | Picnicking | 789663. | 7749122. |
| Camping | 12383. | 96406. | Camping | 89857. | 1129148. | Camping | 381938. | 5116354. |
| Power Boat | 19826. | 52292. | Power Boat | 66244. | 787215. | Power Boat | 220388. | 2790756. |
| Hiking | 57862. | 1019438. | Hiking | 123440. | 1999219. | Hiking | 393923. | 2498433. |
| Bicycle | 10901. | 290761. | Bicycle | 161584. | 5423243. | Bicycle | 633184. | 21846480. |
| Tennis | 36965. | 1079235. | Tennis | 123229. | 3597271. | Tennis | 531116. | 11496421. |
| Golf | 19663. | 406211. | Golf | 65381. | 1353408. | Golf | 188235. | 2945488. |
| Fishing | 14139. | 203400. | Fishing | 107557. | 1289826. | Fishing | 373104. | 3435299. |
| Horseback | 20565. | 246865. | Horseback | 37381. | 348940. | Horseback | 112888. | 948030. |
| Hunting | 5457. | 64453. | Hunting | 18154. | 214713. | Hunting | 96184. | 2137792. |
| Canoeing | 24320. | 268468. | Canoeing | 81135. | 892720. | Canoeing | 339354. | 5168155. |
| Outside Games | 24402. | 422867. | Outside Games | 133591. | 4739777. | Outside Games | 555941. | 24713664. |
| Year: 1995, Region: Franklin | | | Year: 1995, Region: Cape Cod | | | Year: 1995, Region: Emmmr - Innr | | |
| Swim Pool | 29481. | 665427. | Swim Pool | 46554. | 1176657. | Swim Pool | 444475. | 13214486. |
| Swim Other | 23619. | 729214. | Swim Other | 79691. | 1638394. | Swim Other | 695495. | 15340313. |
| Picnicking | 46443. | 888831. | Picnicking | 68603. | 753564. | Picnicking | 460345. | 5984131. |
| Camping | 8518. | 165539. | Camping | 25153. | 318088. | Camping | 206997. | 3079188. |
| Power Boat | 7896. | 20117. | Power Boat | 18630. | 222080. | Power Boat | 192147. | 3396253. |
| Hiking | 7959. | 256307. | Hiking | 34572. | 565082. | Hiking | 302714. | 9774274. |
| Bicycle | 14987. | 599133. | Bicycle | 45361. | 1527472. | Bicycle | 296163. | 13984500. |
| Tennis | 23697. | 303019. | Tennis | 34461. | 1005582. | Tennis | 263859. | 14291877. |
| Golf | 9341. | 190362. | Golf | 18164. | 377941. | Golf | 156228. | 4371113. |
| Fishing | 9738. | 112047. | Fishing | 29953. | 359474. | Fishing | 206732. | 2894839. |
| Horseback | 4891. | 46049. | Horseback | 10517. | 96842. | Horseback | 107455. | 351584. |
| Hunting | 2392. | 28232. | Hunting | 5051. | 59938. | Hunting | 27294. | 122965. |
| Canoeing | 7886. | 42998. | Canoeing | 22731. | 248053. | Canoeing | 263572. | 1986546. |
| Outside Games | 17557. | 624869. | Outside Games | 37322. | 1317549. | Outside Games | 229420. | 6314505. |
| Year: 1995, Region: Lowr Pioneer | | | Year: 1995, Region: Martha's Vyd | | | Year: 1995, Region: Emmmr - Outr | | |
| Swim Pool | 318222. | 11128350. | Swim Pool | 2724. | 691776. | Swim Pool | 451393. | 10361806. |
| Swim Other | 367402. | 4907408. | Swim Other | 4676. | 96635. | Swim Other | 739917. | 11617712. |
| Picnicking | 437014. | 5456986. | Picnicking | 3996. | 43981. | Picnicking | 620298. | 5779679. |
| Camping | 91790. | 1259496. | Camping | 1487. | 18630. | Camping | 199568. | 932569. |
| Power Boat | 94187. | 1193252. | Power Boat | 1094. | 12979. | Power Boat | 222880. | 2057928. |
| Hiking | 251200. | 3315803. | Hiking | 2043. | 32928. | Hiking | 261304. | 3465269. |
| Bicycle | 242037. | 6848222. | Bicycle | 2671. | 89481. | Bicycle | 616825. | 10476481. |
| Tennis | 124561. | 4953070. | Tennis | 2041. | 59583. | Tennis | 296787. | 7798648. |
| Golf | 144240. | 3326900. | Golf | 1086. | 22429. | Golf | 218349. | 5644987. |
| Fishing | 197050. | 2551716. | Fishing | 1785. | 21397. | Fishing | 410489. | 7519654. |
| Horseback | 50869. | 951945. | Horseback | 617. | 5800. | Horseback | 165757. | 470031. |
| Hunting | 32243. | 484485. | Hunting | 301. | 3559. | Hunting | 41664. | 492212. |
| Canoeing | 75568. | 398743. | Canoeing | 1342. | 14831. | Canoeing | 148232. | 495266. |
| Outside Games | 240474. | 6636450. | Outside Games | 2213. | 78724. | Outside Games | 275458. | 6081677. |
| Year: 1995, Region: Worcester | | | Year: 1995, Region: Nantucket | | | Year: 1995, Region: State Total | | |
| Swim Pool | 228062. | 5796339. | Swim Pool | 1766. | 44784. | Swim Pool | 2071376. | 52590112. |
| Swim Other | 391646. | 8100943. | Swim Other | 3029. | 62510. | Swim Other | 3554981. | 73448432. |
| Picnicking | 334325. | 3680402. | Picnicking | 2595. | 28545. | Picnicking | 3039523. | 33446624. |
| Camping | 124743. | 1559981. | Camping | 961. | 12077. | Camping | 1130363. | 14165634. |
| Power Boat | 183273. | 2172778. | Power Boat | 709. | 8421. | Power Boat | 831653. | 9869838. |
| Hiking | 171297. | 2755007. | Hiking | 1320. | 21373. | Hiking | 1552480. | 25045088. |
| Bicycle | 223831. | 7493692. | Bicycle | 1728. | 57982. | Bicycle | 2030169. | 68042832. |
| Tennis | 165354. | 4828456. | Tennis | 1318. | 38481. | Tennis | 1550306. | 45278656. |
| Golf | 91280. | 1882248. | Golf | 700. | 14481. | Golf | 825095. | 17042624. |
| Fishing | 149894. | 1796486. | Fishing | 1151. | 13802. | Fishing | 1355982. | 16255699. |
| Horseback | 51696. | 487543. | Horseback | 400. | 3733. | Horseback | 469227. | 4405517. |
| Hunting | 25317. | 298692. | Hunting | 194. | 2298. | Hunting | 228957. | 2704157. |
| Canoeing | 112560. | 1246196. | Canoeing | 868. | 9553. | Canoeing | 1020262. | 11265224. |
| Outside Games | 185732. | 6614534. | Outside Games | 1429. | 50711. | Outside Games | 1681926. | 59801072. |

TOTAL RECREATION DEMAND PROJECTIONS (BY REGION OF INCIDENCE)

Parameters: BOR modified by MRS

| Activity | No. of Participants (Res. & Non-Res.) | No. of User Days (Res. & Non-Res.) | Activity | No. of Participants (Res. & Non-Res.) | No. of User Days (Res. & Non-Res.) |
|-------------------------------------|---------------------------------------|------------------------------------|---------------------------------------|---------------------------------------|------------------------------------|
| Year: 1995, SCORP Region I | | | Year: 1995, SCORP Region V | | |
| Swim Pool | 68732. | 527417. | Swim Pool | 121115. | 2972661. |
| Swim Other | 236974. | 2002643. | Swim Other | 215720. | 4174402. |
| Picnicking | 189743. | 1752379. | Picnicking | 207161. | 2202954. |
| Camping | 114248. | 921938. | Camping | 15350. | 135271. |
| Power Boat | 39271. | 115320. | Power Boat | 33740. | 378118. |
| Hiking | 319373. | 4600458. | Hiking | 83931. | 1310621. |
| Bicycle | 42092. | 702995. | Bicycle | 180819. | 5827793. |
| Tennis | 51131. | 1044866. | Tennis | 115199. | 3315038. |
| Golf | 28237. | 431639. | Golf | 66296. | 1356122. |
| Fishing | 104200. | 1155844. | Fishing | 92369. | 1090533. |
| Horseback | 47963. | 618784. | Horseback | 22486. | 209421. |
| Hunting | 34295. | 383076. | Hunting | 10861. | 122229. |
| Canoeing | 51231. | 366971. | Canoeing | 50492. | 542617. |
| Outside Games | 28956. | 409627. | Outside Games | 149805. | 5282936. |
| Year: 1995, SCORP Region II | | | Year: 1995, SCORP Region VI | | |
| Swim Pool | 298663. | 9719889. | Swim Pool | 168612. | 2562558. |
| Swim Other | 283056. | 3825992. | Swim Other | 707813. | 9950574. |
| Picnicking | 414893. | 5237240. | Picnicking | 322205. | 2660410. |
| Camping | 52413. | 529826. | Camping | 201734. | 1483266. |
| Power Boat | 84380. | 934498. | Power Boat | 184335. | 1929769. |
| Hiking | 148438. | 1926608. | Hiking | 123811. | 1195143. |
| Bicycle | 235887. | 6727022. | Bicycle | 155116. | 3900525. |
| Tennis | 141884. | 4852250. | Tennis | 82279. | 1623544. |
| Golf | 156329. | 3525407. | Golf | 91616. | 1758901. |
| Fishing | 151327. | 1879060. | Fishing | 184107. | 2166760. |
| Horseback | 41991. | 748667. | Horseback | 76872. | 433041. |
| Hunting | 22945. | 309340. | Hunting | 46463. | 564308. |
| Canoeing | 63853. | 330176. | Canoeing | 131323. | 1176759. |
| Outside Games | 246979. | 6900784. | Outside Games | 92559. | 2898774. |
| Year: 1995, SCORP Region III | | | Year: 1995, SCORP Region VII | | |
| Swim Pool | 195631. | 4784174. | Swim Pool | 134961. | 1712401. |
| Swim Other | 263519. | 4840501. | Swim Other | 506189. | 5883332. |
| Picnicking | 295874. | 3151707. | Picnicking | 187919. | 1216202. |
| Camping | 30861. | 276677. | Camping | 152140. | 898560. |
| Power Boat | 142430. | 1645097. | Power Boat | 115581. | 1056690. |
| Hiking | 97841. | 1481402. | Hiking | 65094. | 230569. |
| Bicycle | 183026. | 6009008. | Bicycle | 100894. | 2109511. |
| Tennis | 155617. | 4452774. | Tennis | 44931. | 519935. |
| Golf | 93028. | 1887430. | Golf | 34153. | 471678. |
| Fishing | 78805. | 911761. | Fishing | 96051. | 980286. |
| Horseback | 38881. | 365766. | Horseback | 23155. | 116427. |
| Hunting | 15598. | 172179. | Hunting | 23578. | 213459. |
| Canoeing | 70995. | 761054. | Canoeing | 63125. | 457560. |
| Outside Games | 177623. | 6285417. | Outside Games | 35104. | 879432. |
| Year: 1995, SCORP Region IV | | | Year: 1995, SCORP Region Total | | |
| Swim Pool | 821949. | 19737088. | Swim Pool - | 1809661. | 42016160. |
| Swim Other | 1628506. | 32390544. | Swim Other | 3841776. | 63067984. |
| Picnicking | 1183707. | 12200259. | Picnicking | 2801501. | 28421104. |
| Camping | 100256. | 988008. | Camping | 667002. | 5233544. |
| Power Boat | 307410. | 3902455. | Power Boat | 907147. | 9961862. |
| Hiking | 635089. | 10267121. | Hiking | 1473574. | 21011904. |
| Bicycle | 1085376. | 32391200. | Bicycle | 1983208. | 57668016. |
| Tennis | 955984. | 29239264. | Tennis | 1547021. | 45047680. |
| Golf | 491038. | 11246828. | Golf | 960697. | 20677968. |
| Fishing | 661963. | 9171402. | Fishing | 1368819. | 17355616. |
| Horseback | 314679. | 1468246. | Horseback | 566026. | 3960350. |
| Hunting | 139051. | 2263429. | Hunting | 292793. | 4028020. |
| Canoeing | 550522. | 5584711. | Canoeing | 981541. | 9219849. |
| Outside Games | 830574. | 28985584. | Outside Games | 1561598. | 51642512. |

RESIDENT RECREATION DEMAND PROJECTIONS (BY REGION OF ORIGIN)

Parameters: BOR modified by MRS

| Activity | No. of Participants (State Residents) | No. of User Days (State Residents) | Activity | No. of Participants (State Residents) | No. of User Days (State Residents) | Activity | No. of Participants (State Residents) | No. of User Days (State Residents) |
|---|---------------------------------------|------------------------------------|---|---------------------------------------|------------------------------------|---|---------------------------------------|------------------------------------|
| Year: 2000, Region: Berkshire | | | Year: 2000, Region: S.R.P.E.D.D. | | | Year: 2000, Region: Emmmr - Core | | |
| Swim Pool | 32663. | 463411. | Swim Pool | 167883. | 4265386. | Swim Pool | 470882. | 9776306. |
| Swim Other | 46021. | 637811. | Swim Other | 285444. | 5899562. | Swim Other | 1047469. | 23721392. |
| Picnicking | 91422. | 1123084. | Picnicking | 246801. | 2691033. | Picnicking | 793393. | 7717684. |
| Camping | 12484. | 97339. | Camping | 90949. | 1144394. | Camping | 381493. | 5119205. |
| Power Boat | 20069. | 52683. | Power Boat | 67314. | 796038. | Power Boat | 221108. | 2787311. |
| Hiking | 58511. | 1034316. | Hiking | 125321. | 2035888. | Hiking | 394637. | 2511398. |
| Bicycle | 11108. | 298577. | Bicycle | 165288. | 5590175. | Bicycle | 639077. | 22212592. |
| Tennis | 37373. | 1092691. | Tennis | 125091. | 3656795. | Tennis | 532004. | 11528798. |
| Golf | 20366. | 420320. | Golf | 68004. | 1406114. | Golf | 193125. | 3019789. |
| Fishing | 14286. | 206053. | Fishing | 109129. | 1312033. | Fishing | 373463. | 3447543. |
| Horseback | 20898. | 255721. | Horseback | 38132. | 362996. | Horseback | 113652. | 972419. |
| Hunting | 5551. | 65809. | Hunting | 18545. | 220126. | Hunting | 96929. | 2162804. |
| Canoeing | 24637. | 279816. | Canoeing | 82519. | 934405. | Canoeing | 340655. | 5335148. |
| Outside Games | 24523. | 429260. | Outside Games | 134795. | 4831601. | Outside Games | 553449. | 24839712. |
| Year: 2000, Region: Franklin | | | Year: 2000, Region: Cape Cod | | | Year: 2000, Region: Emmmr - Innr | | |
| Swim Pool | 29812. | 674157. | Swim Pool | 46722. | 1184044. | Swim Pool | 461540. | 13747065. |
| Swim Other | 23678. | 732185. | Swim Other | 79323. | 1634821. | Swim Other | 715829. | 15812660. |
| Picnicking | 47001. | 891705. | Picnicking | 68850. | 749959. | Picnicking | 478838. | 6163534. |
| Camping | 8572. | 166895. | Camping | 25169. | 318326. | Camping | 213836. | 3187301. |
| Power Boat | 7981. | 20239. | Power Boat | 18699. | 211664. | Power Boat | 199369. | 3507659. |
| Hiking | 8035. | 259715. | Hiking | 34696. | 567833. | Hiking | 313743. | 10174149. |
| Bicycle | 15247. | 614373. | Bicycle | 45848. | 1554712. | Bicycle | 309386. | 14729167. |
| Tennis | 23916. | 306249. | Tennis | 34591. | 1010861. | Tennis | 273413. | 14830373. |
| Golf | 9655. | 196608. | Golf | 18706. | 388385. | Golf | 165708. | 4633569. |
| Fishing | 9820. | 113287. | Fishing | 30075. | 361819. | Fishing | 213952. | 3003759. |
| Horseback | 4963. | 47602. | Horseback | 10596. | 99766. | Horseback | 111978. | 373126. |
| Hunting | 2429. | 28772. | Hunting | 5107. | 60784. | Hunting | 28443. | 128628. |
| Canoeing | 7975. | 44723. | Canoeing | 22853. | 257071. | Canoeing | 273642. | 2120708. |
| Outside Games | 17611. | 633039. | Outside Games | 37244. | 1329598. | Outside Games | 236239. | 6566443. |
| Year: 2000, Region: Lowr Pioneer | | | Year: 2000, Region: Martha's Vyd | | | Year: 2000, Region: Emmmr - Outr | | |
| Swim Pool | 325177. | 11393894. | Swim Pool | 2712. | 69035. | Swim Pool | 470443. | 10818972. |
| Swim Other | 372205. | 4980171. | Swim Other | 4616. | 95606. | Swim Other | 764342. | 12019361. |
| Picnicking | 446855. | 5531786. | Picnicking | 3979. | 43416. | Picnicking | 646879. | 5974771. |
| Camping | 93372. | 1283183. | Camping | 1476. | 18491. | Camping | 206917. | 968852. |
| Power Boat | 96205. | 1213014. | Power Boat | 1089. | 12852. | Power Boat | 232105. | 2133226. |
| Hiking | 256315. | 3394634. | Hiking | 2033. | 32827. | Hiking | 271818. | 3620278. |
| Bicycle | 248854. | 7095872. | Bicycle | 2677. | 90346. | Bicycle | 646729. | 11074870. |
| Tennis | 127077. | 5050141. | Tennis | 2031. | 59382. | Tennis | 308661. | 8122187. |
| Golf | 150746. | 3473590. | Golf | 1108. | 22847. | Golf | 232448. | 6005871. |
| Fishing | 200905. | 2608358. | Fishing | 1776. | 21345. | Fishing | 426382. | 7831192. |
| Horseback | 52160. | 995004. | Horseback | 617. | 5922. | Horseback | 173367. | 500661. |
| Hunting | 33097. | 499155. | Hunting | 302. | 3577. | Hunting | 43577. | 516765. |
| Canoeing | 77246. | 419361. | Canoeing | 1338. | 15230. | Canoeing | 154459. | 530653. |
| Outside Games | 243848. | 6797565. | Outside Games | 2190. | 78744. | Outside Games | 284686. | 6347531. |
| Year: 2000, Region: Worcester | | | Year: 2000, Region: Nantucket | | | Year: 2000, Region: State Total | | |
| Swim Pool | 232020. | 5908515. | Swim Pool | 1781. | 45256. | Swim Pool | 2112789. | 53746176. |
| Swim Other | 395021. | 8185141. | Swim Other | 3029. | 62604. | Swim Other | 3594872. | 74401088. |
| Picnicking | 340349. | 3714451. | Picnicking | 2618. | 28548. | Picnicking | 3102342. | 33843584. |
| Camping | 126334. | 1582322. | Camping | 965. | 12141. | Camping | 1147717. | 14405695. |
| Power Boat | 186374. | 2199179. | Power Boat | 714. | 8445. | Power Boat | 847911. | 10015309. |
| Hiking | 174014. | 2808084. | Hiking | 1330. | 21597. | Hiking | 1581157. | 25594048. |
| Bicycle | 229122. | 7730442. | Bicycle | 1754. | 59296. | Bicycle | 2083511. | 70374400. |
| Tennis | 167950. | 4911078. | Tennis | 1328. | 38814. | Tennis | 1579184. | 46171440. |
| Golf | 94973. | 1956563. | Golf | 722. | 14927. | Golf | 860677. | 17760896. |
| Fishing | 152156. | 1828265. | Fishing | 1159. | 13929. | Fishing | 1379932. | 16585366. |
| Horseback | 52775. | 507334. | Horseback | 405. | 3854. | Horseback | 480256. | 4596039. |
| Hunting | 25874. | 306378. | Hunting | 197. | 2337. | Hunting | 234586. | 2780841. |
| Canoeing | 114552. | 1304790. | Canoeing | 876. | 9922. | Canoeing | 1040985. | 11825183. |
| Outside Games | 187508. | 6745188. | Outside Games | 1431. | 51291. | Outside Games | 1702354. | 61137536. |

TOTAL RECREATION DEMAND PROJECTIONS (BY REGION OF INCIDENCE)

Parameters: BOR modified by MRS

| Activity | No. of Participants (Res. & Non-Res.) | No. of User Days (Res. & Non-Res.) | Activity | No. of Participants (Res. & Non-Res.) | No. of User Days (Res. & Non-Res.) |
|-------------------------------------|---------------------------------------|------------------------------------|---------------------------------------|---------------------------------------|------------------------------------|
| Year: 2000, SCORP Region I | | | Year: 2000, SCORP Region V | | |
| Swim Pool | 69067. | 532920. | Swim Pool | 123041. | 3027692. |
| Swim Other | 237739. | 2016710. | Swim Other | 217991. | 4224531. |
| Picnicking | 192374. | 1768855. | Picnicking | 211028. | 2225917. |
| Camping | 115049. | 933698. | Camping | 15459. | 136795. |
| Power Boat | 39453. | 115614. | Power Boat | 34244. | 382265. |
| Hiking | 324964. | 4722405. | Hiking | 85153. | 1334456. |
| Bicycle | 42632. | 723174. | Bicycle | 185352. | 6016031. |
| Tennis | 51507. | 1057245. | Tennis | 116912. | 3369800. |
| Golf | 28940. | 445749. | Golf | 68919. | 1408828. |
| Fishing | 105603. | 1176583. | Fishing | 93689. | 1109187. |
| Horseback | 48906. | 643740. | Horseback | 22936. | 217855. |
| Hunting | 34890. | 392354. | Hunting | 11076. | 125206. |
| Canoeing | 51786. | 380305. | Canoeing | 51323. | 567629. |
| Outside Games | 29071. | 415700. | Outside Games | 151234. | 5383689. |
| Year: 2000, SCORP Region II | | | Year: 2000, SCORP Region VI | | |
| Swim Pool | 304638. | 9944793. | Swim Pool | 170234. | 2609436. |
| Swim Other | 285864. | 3872674. | Swim Other | 712797. | 10054165. |
| Picnicking | 423329. | 5299468. | Picnicking | 326454. | 2684998. |
| Camping | 52934. | 537705. | Camping | 203222. | 1499575. |
| Power Boat | 85957. | 949321. | Power Boat | 187669. | 1964033. |
| Hiking | 151189. | 1970195. | Hiking | 124412. | 1207483. |
| Bicycle | 242167. | 6962316. | Bicycle | 157994. | 4012008. |
| Tennis | 144399. | 4953727. | Tennis | 82799. | 1644501. |
| Golf | 163147. | 3678343. | Golf | 95091. | 1841202. |
| Fishing | 154033. | 1918703. | Fishing | 187166. | 2223251. |
| Horseback | 43013. | 782126. | Horseback | 79036. | 450260. |
| Hunting | 23463. | 318090. | Hunting | 47129. | 573980. |
| Canoeing | 65090. | 345815. | Canoeing | 133155. | 1222054. |
| Outside Games | 250236. | 7061604. | Outside Games | 93082. | 2938550. |
| Year: 2000, SCORP Region III | | | Year: 2000, SCORP Region VII | | |
| Swim Pool | 198877. | 4876159. | Swim Pool | 136450. | 1753634. |
| Swim Other | 265715. | 4891968. | Swim Other | 509390. | 5948145. |
| Picnicking | 301201. | 3182725. | Picnicking | 190063. | 1230572. |
| Camping | 31100. | 280028. | Camping | 152880. | 906666. |
| Power Boat | 144756. | 1664898. | Power Boat | 117406. | 1075821. |
| Hiking | 99281. | 1509533. | Hiking | 65093. | 230664. |
| Bicycle | 187259. | 6198408. | Bicycle | 102883. | 2179838. |
| Tennis | 158005. | 4528786. | Tennis | 45154. | 529001. |
| Golf | 96721. | 1961745. | Golf | 35052. | 493470. |
| Fishing | 79935. | 927651. | Fishing | 97459. | 1006312. |
| Horseback | 39690. | 380610. | Horseback | 23842. | 121200. |
| Hunting | 15905. | 176406. | Hunting | 23772. | 216278. |
| Canoeing | 72189. | 796210. | Canoeing | 63791. | 472434. |
| Outside Games | 179310. | 6409538. | Outside Games | 35354. | 892879. |
| Year: 2000, SCORP Region IV | | | Year: 2000, SCORP Region Total | | |
| Swim Pool | 844282. | 20351232. | Swim Pool | 1846588. | 43095840. |
| Swim Other | 1653094. | 32881952. | Swim Other | 3882588. | 63890144. |
| Picnicking | 1213727. | 12413292. | Picnicking | 2858175. | 28805776. |
| Camping | 101631. | 1002733. | Camping | 672274. | 5297199. |
| Power Boat | 315478. | 3988587. | Power Boat | 924962. | 10140543. |
| Hiking | 649555. | 10636223. | Hiking | 1499644. | 21610928. |
| Bicycle | 1119404. | 33582144. | Bicycle | 2037689. | 59673872. |
| Tennis | 975399. | 30017392. | Tennis | 1574173. | 46100448. |
| Golf | 515719. | 11851684. | Golf | 1003590. | 21680976. |
| Fishing | 677427. | 9455979. | Fishing | 1395311. | 17817632. |
| Horseback | 325109. | 1531605. | Horseback | 582532. | 4127392. |
| Hunting | 142183. | 2308807. | Hunting | 298419. | 4111121. |
| Canoeing | 563161. | 5829982. | Canoeing | 1000495. | 9614432. |
| Outside Games | 841160. | 29488432. | Outside Games | 1579444. | 52590336. |

Section 4

Capacity Standards

The following activities have had capacity standards developed:

- bicycling
- boating
- camping
- canoeing/sailing
- fishing
- golf
- hiking
- horseback riding
- hunting
- picnicking
- swimming (other)
- swimming (pool)
- tennis

The format with which we have presented each of these activity standards can be best explained by referring to Diagram 1. Each of the inputs in determining the annual capacity for picnicking is presented and defined.

Narrative explanation

^a Here, *Massachusetts Outdoors* has generated capacity guidelines for persons per mile bicycle trail per year. This analysis of regionalized standards for bicycling assumes that all of the facility demanders have their own bicycles. In the future, *Massachusetts Outdoors* will attempt to explore the rental supply in each of the SCORP regions. Note that the standards here

apply to miles of developed trail only. Street bike riding cannot be computed into supply and thus, has not been analyzed in a capacity sense.

^b (persons/trail mile) The instant capacity figures of a mile of bicycle trail for urban and non-urban areas appear as 20 and 10 persons/mi., respectively. These have been derived using a prototypical trail with a width of 12 feet, allowing enough maneuverability for dual-directional bicycle and pedestrian traffic (Nat'l Recreation and Parks Assoc., "Bikeways," 1974, p. 51). This represents a one-directional frequency of a bicyclist every 264 feet for urban areas, and one every 528 feet for non-urban paths. The urban capacity is larger than the non-urban figure because, in the judgment of SCORP planners, the bicycling experience in heavily populated areas is not so much concerned with solitude as it is with exercise and "exploring" the city. In non-urban areas, however, a large part of bicycling is the enjoyment of the natural surroundings and possibly even an escape from contact with people. Both capacity figures adhere to minimum safety spacing standards.

^c (/day) The average length of use for a recreational bicycling trail in Boston differs from that of a rural or natural area in western Massachusetts. The

turnover rates reflect a judgment of the number of times during a peak use day that different "sets" of users could be suitably accommodated. By use of the turnover calculation explained earlier, 6 hrs. (10 a.m.-4 p.m.) has been substituted as the numerator for both urban and non-urban areas; .1 and .166 have been used for the respective denominators (these duration of use figures are the number of hours that it takes a bicyclist to use one mile of trail in urban and non-urban areas, using 6 mph and 10 mph, respectively — Boston Bicentennial Commission, bicycle paths).

^d Each mile of bicycle trail in urban and non-urban areas can handle *daily* capacity loads of 1200 and 360 persons, respectively.

^e The region-by-region design day figures for bicycling come from a variety of sources. The method that was used consisted of surveying several recreational authorities in each of the SCORP regions to ascertain the contiguous time period during the year when at least 80% of the participation in bicycling occurs. The respondent was asked to reply with: "At least 80% of bicycling in this region takes place between (date) and (date)." The answers of beginning and ending dates were averaged for each region so as to determine an effective length of season for bicycling in each region. Design days were then computed by applying the methodology explained previously. The resultant figures appear in the table below.

^f Not applicable.

^g (persons/trail mile/year) These all-important figures tell planners how many people can be annually accommodated on a mile of bicycle trail in a particular SCORP region. Each region has been given both an urban and non-urban area standard with the figures listed in the table below.

| SCORP | BICYCLING DESIGN DAYS (days/year) | ANNUAL CAPACITY STANDARDS (persons/mile/year) | |
|------------|--------------------------------------|--|-----------|
| | | Urban | Non-urban |
| Region I | 55.7 | 66840 | 20052 |
| Region II | 53.6 | 64320 | 19296 |
| Region III | 46.9 | 56280 | 16884 |
| Region IV | 67.9 | 81480 | 24444 |
| Region V | 68.8 | 82560 | 24768 |
| Region VI | 35.6 | 42720 | 12816 |
| Region VII | 29.6 | 35520 | 10656 |

BICYCLING^a

| DENSITY SUBGROUP | INSTANT CAPACITY ^b | x | TURNOVER RATE ^c | = | DAILY CAPACITY ^d | x | DESIGN DAYS ^e | = | ANNUAL CAPACITY ^g |
|------------------|-------------------------------|---|----------------------------|---|-----------------------------|---|--------------------------|---|------------------------------|
| Urban | 20 | | 60 | | 1200 | | * | | ** |
| Non-urban | 10 | | 36 | | 360 | | * | | ** |

Narrative explanation

^a Boating, here, includes power boating only. The capacity standards generated here apply to the availability of surface water for the activity. The analysis assumes that everyone who demands power boating use either owns or has access to a boat. Future studies will consider rental facilities as well.

^b (persons/acre of water) The urban and non-urban instant capacity figures are based on 2.5 persons per boat; 1 boat per 20 acres of surface water (see B.O.R., *Outdoor Recreation Space Standards*, 1967, page 28).

^c (/day) The turnover rate =
 available hours of use
 during a favorable day
 average hours of
 use by one user

Both urban and non-urban computations use 12 hours in the numerator. The denominator uses 2 and 3 hours for urban and non-urban, respectively.

^d (persons/acre/day) Each acre of water in urban and non-urban areas has

been found to be capable of handling daily capacity loads for motor boating of .5 and .3325, respectively.

^e (days/year) The design day figures result from the surveying of various recreation authorities in each region to ascertain the specific time period during the years when most participation in the activity occurs. The respondent was asked to reply with: "Most boating participation occurs in this region between (date and date)." For each region, answers were tabulated and averaged so as to determine an effective regionalized length of season for boating. Design days were then computed using the methodology stated previously in this text. The design day figures that resulted appear in the table below.

^f Not applicable.

^g Regionalized annual boating capacities represent the ability of an acre of water to suitably accommodate a certain amount of boaters during the course of a given year. The figures for each of the seven SCORP Regions appear below.

| SCORP | BOATING DESIGN DAYS (days/year) | ANNUAL CAPACITY STANDARDS (persons/water acre/year) | |
|------------|------------------------------------|--|-----------|
| | | Urban | Non-urban |
| Region I | 35.6 | 17.8 | 11.7 |
| Region II | 43.4 | 21.7 | 14.3 |
| Region III | 42.1 | 21.0 | 13.9 |
| Region IV | 38.1 | 19.0 | 12.6 |
| Region V | 59.2 | 29.6 | 19.5 |
| Region VI | 35.6 | 17.8 | 11.7 |
| Region VII | 29.6 | 14.8 | 9.8 |

BOATING^a

| DENSITY SUBGROUP | INSTANT CAPACITY ^b | x | TURNOVER RATE ^c | = | DAILY CAPACITY ^d | x | DESIGN DAYS ^e | x | CONVERT FACTOR ^f | = | ANNUAL CAPACITY ^g |
|------------------|-------------------------------|---|----------------------------|---|-----------------------------|---|--------------------------|---|-----------------------------|---|------------------------------|
| Urban | .125 | | 4.0 | | .5 | | * | | NA | | ** |
| Non-urban | .125 | | 2.66 | | .33 | | * | | NA | | ** |

Narrative explanation

- ^a Camping has been thought of in two functional frameworks: camping that is mainly devoted to experiencing a natural environment; and camping that provides many conveniences, such as electricity and hot water, accessibility to main highways/cities, and other such amenities. The latter type of camping can, and does exist in and around urban areas; the former type, by definition, would not be found in the urban setting. Both types of camping occur in non-urban areas. Here, however, the camping experience is less transient and, thus, would be expected to function in a "less dense" setting than the urban experience.
- ^b (persons/campsite) See B.O.R., *Outdoor Recreation Space Standards*, 1967, page 47.
- ^c (/ day) It was determined that a camping experience is almost always for at least one full day (overnight). Whereas most urban camping might be either "en route" situations or short one-nighters, non-urban camping is often a few days in duration. The numerator for the turnover rate is 24 hours for both urban and non-urban. The denominator (average length of use) for both is the maximum possible — 24 hours.
- ^d (person/site/day) The number of persons suitably accommodated by one

campsite in both urban and non-urban areas during the course of a given day is 4.

- ^e (days/year) There are certain times of the year when camping yields the greatest participation. Snow, cold, rain, and other unfavorable conditions limit the natural environment experience. Urban camping, which often utilizes trailers or other shelter, might not be as adversely affected. In an effort to determine this, we informally surveyed regional recreational authorities to determine the season of use in their particular region. Respondents were asked to reply with: "At least 80% of camping participation in this region occurs between the contiguous period (date) and (date)." Answers for each region were tabulated and averaged to determine effective lengths of season for camping. Design days were computed using the methodology described earlier in the text. These design day figures appear in the table below.
- ^f (campsite/acre) Although individual campsites in urban and non-urban areas have equal capacities, the ability of an acre of camping land to accommodate users is much greater in urban areas. The expectation of campers in non-urban areas is to have less contact with people; the expectation in urban areas is basically to have a legal place to park and sleep overnight (with

adequate facilities). Both urban and non-urban conversion factors (campsites/acre) were drawn from the camping information contained in B.O.R., *Outdoor Recreation Space Standards*, pages 47-54.

- ^g The following regional capacity standards were thus derived for camping in urban and non-urban areas of our SCORP regions.

| SCORP | CAMPING DESIGN DAYS (days/year) | ANNUAL CAPACITY STANDARDS (persons/acre/year) | |
|------------|------------------------------------|--|-----------|
| | | Urban | Non-urban |
| Region I | 46.8 | 2246 | 749 |
| Region II | 47.0 | 2256 | 752 |
| Region III | 55.4 | 2659 | 886 |
| Region IV | 50.9 | 2443 | 814 |
| Region V | 69.2 | 3322 | 1107 |
| Region VI | 44.0 | 2112 | 704 |
| Region VII | 29.6 | 1421 | 474 |

CAMPING^a

| DENSITY SUBGROUP | INSTANT CAPACITY ^b | x | TURNOVER RATE ^c | = | DAILY CAPACITY ^d | x | DESIGN DAYS ^e | x | CONVERT FACTOR ^f | = | ANNUAL CAPACITY ^g |
|------------------|-------------------------------|---|----------------------------|---|-----------------------------|---|--------------------------|---|-----------------------------|---|------------------------------|
| Urban | 4 | | 1 | | 4 | | * | | 12 | | ** |
| Non-urban | 4 | | 1 | | 4 | | * | | 4 | | ** |

Narrative explanation

^a The standards generated here apply to canoeing, and small craft sailing. Like boating, the analysis measures the capacity of the water surface, and assumes that the demander owns or has access to equipment. The capacity of rental facilities, therefore is not included as part of this analysis, but will be considered in future studies. In addition, future studies will separate the two activities of sailing and canoeing. Canoeing will be calculated for miles of stream rather than acres of water.

^b (persons/acre water) The sailing program conducted each season on the Charles River Basin in Boston is one that is thoroughly enjoyed by many. There are times when the river is literally dotted with the small craft of the Community Sailing, Inc. program. From questioning authorities and urban sailing enthusiasts, we have found that sailing with several other boats around (but at safe distance intervals) does not greatly detract from the enjoyment of the experience. In non-urban areas, on the other hand, an essential part of sailing is the tranquility and feeling of being in a reasonably sylvan setting. Canoeing can be reasoned in a similar way. The urban instant capacity represents 2 persons per boat; 1 boat per every

1.75 acres. The non-urban instant capacity represents 2 persons per boat; 1 boat per every 4 acres.

^c (/day) The turnover rate numerators are different because sailing clubs in both urban and non-urban areas thought that a peak-use available day in Boston, for example, would be longer than that of an outlying region. The numerators were calculated as 9 and 7 hours respectively. The denominators (average duration of use by one user) was determined to be 1.25 hours for urban sailing/canoeing, and 1.75 hours for non-urban sailing/canoeing.

^d (persons/acre/day) Due to the nature of the activity, the result and daily capacity for an urban body of water is approximately three times that of a non-urban facility.

^e (days/year) Like most other activities, canoeing/sailing is affected by climatological conditions. The design day figures constitute the mechanism that converts daily capacity for each region into the all-important figures telling us how many people can be annually accommodated for canoeing/sailing in a particular region. Regional design days were determined by surveying recreational authorities as to the contiguous period during the year when at least 80% of canoeing/sailing

participation takes place. The responses were averaged for each region as to determine an effective regionalized length of season for the activity. The design day methodology was then applied to arrive at the figures in the table below.

^f Not applicable.

^g The ability of a body of water to accommodate canoes and sailboats during a given year is reflected in the annual capacity standards below. Urban and non-urban areas within the seven SCORP regions each have their own computed standards.

| SCORP | CANOE/SAILING DESIGN DAYS (days/year) | ANNUAL CAPACITY STANDARDS (persons/water acre/year) | |
|------------|---------------------------------------|---|-----------|
| | | Urban | Non-urban |
| Region I | 35.6 | 292 | 72.2 |
| Region II | 45.1 | 370 | 90.2 |
| Region III | 39.1 | 321 | 78.2 |
| Region IV | 46.3 | 380 | 92.6 |
| Region V | 54.9 | 450 | 109.8 |
| Region VI | 37.7 | 309 | 75.4 |
| Region VII | 29.6 | 243 | 59.2 |

CANOEING/SAILING^a

| DENSITY SUBGROUP | INSTANT CAPACITY ^b | x | TURNOVER RATE ^c | = | DAILY CAPACITY ^d | x | DESIGN DAYS ^e | x | CONVERT FACTOR ^f | = | ANNUAL CAPACITY ^g |
|------------------|-------------------------------|---|----------------------------|---|-----------------------------|---|--------------------------|---|-----------------------------|---|------------------------------|
| Urban | 1.14 | | 7.2 | | 8.2 | | * | | NA | | ** |
| Non-urban | .5 | | 4.0 | | 2.8 | | * | | NA | | ** |

Narrative explanation

^a This applies to fresh water fishing only. Fresh water fishing in the state occurs on standing water bodies (ponds, lakes, reservoirs), and on flowing water (rivers and streams). Since the Massachusetts recreational supply inventory is coded for both these types of water bodies (in acres and miles of stream), our standards reflect this distinction. The capacity standards also took both standing fishing and the use of small boats into consideration. *B.O.R. Outdoor Recreation Space Standards* were used extensively as a source for these figures.

^b (persons/) Instant capacity standards that have been generated by other states for the "ponds, lakes, reservoir" category range between .125 and 1.5 persons/acre of water (see *B.O.R. ORSS*, pp. 29-30). Notice that the ability of urban bodies of water to accommodate fishermen without seriously impacting on the experience was judged to be at the upper limit of those figures. Non-urban fishing, however, seemed to be much more sensitive to the amount of people in the direct vicinity of a particular fisherman. In computing capacity of linear miles of stream fishing, these considerations have also been made for the urban/non-urban subgroups.

^c (/day) The turnover rate denominator (average duration of a fishing experience) was determined to be 2 hours for urban areas and 3 hours for non-urban areas. Thus, in a 12 hour available day, the turnover rates were 6 for urban, and 4 for non-urban. (Division of Wildlife and Fisheries of Massachusetts).

^d (persons/—/ day) The daily capacities for fishing reflect the varied abilities of the different bodies of water to suitably accommodate participants during peak-use days.

^e (days/year) Unlike many of the other activities that have seasons as long as the favorable weather prevails, fresh water fishing is controlled by law. The basic fishing season in Massachusetts extends from "the Saturday before Patriot's Day to the Sunday following the third Saturday in October" (approximately April 18-October 22). The design day methodology was used and the statewide figure of 66.1 days/yr. was attained.

^f Not applicable.

^g (persons/—/yr.) Due to the fact that design days were dictated by law, there was no regional variation in standards. There was, however, a distinction made between urban and non-urban standards. These are reflected in the table on the previous page.

FISHING^a

| DENSITY SUBGROUP | INSTANT CAPACITY ^b | x | TURNOVER RATE ^c | = | DAILY CAPACITY ^d | x | DESIGN DAYS ^e | x | CONVERT FACTOR ^f | = | ANNUAL CAPACITY ^g |
|---|-------------------------------|---|----------------------------|---|-----------------------------|---|--------------------------|---|-----------------------------|---|------------------------------|
| URBAN: Ponds, lakes, etc. (acres) | 1.5 | | 6 | | 9 | | 66.1 | | NA | | 594.9 |
| River, stream (miles) | 12 | | 6 | | 42 | | 66.1 | | NA | | 4759.2 |
| NON-URBAN: Ponds, lakes, etc. (acres) | .25 | | 4 | | 1.0 | | 66.1 | | NA | | 66.1 |
| River, stream (miles) | 2 | | 4 | | 8 | | 66.1 | | NA | | 528.8 |

Narrative explanation

^a The activity of golf, for our planning guideline purposes, constitutes participation on a regulation 9 or 18 hole course with P.G.A. ratings of at least 32 and 67, respectively. Miniature golf and chip-and-putt courses are not covered by these standards due to their much smaller scale. It should be noted that there has been no urban/non-urban distinction made for golf capacity standards. Although some golfers would prefer playing the game by themselves, there are many more who thrive on playing within the traditional foursome. One does not normally venture out into the country to play golf in solitude; it would be done more so to avoid preround waiting times. Therefore, the on-course capacity standards for both urban and non-urban areas do not vary.

^b (persons/course) From inquiring at several golf courses, we found that the instant capacity/hole depends on the par rating of the hole: par 3 holes can handle 1 foursome (4 persons) at a time; par 4 = 2 foursomes (8 people); par 5 = 3 foursomes (12 persons). Since most games average out to par 4/hole, the instant capacity per hole was set at 8 persons. This was then multiplied by the number of holes on the course to get the instant capacity/course.

^c (/day) The turnover rate/course was calculated by using an equation *12 hours potential use day (7 a.m. - 7 p.m.)*. The denominator used 2 hours length of a round of golf for a 9-hole round and 4 hours for an 18-hole round of golf.

^d (persons/course/day) It may seem surprising, at first, to see that a 9-hole course has as much daily capacity as an 18-hole course. If we think for a moment about the nature of the sport, we begin to get a clearer understanding. Golf is not played by the hole; it is played by the round. The smallest round that one usually plays is 9 holes, starting at hole #1 and finishing with hole #9. Although 18-hole courses have twice as many holes, it takes twice as long to play a round as it does on a 9-hole course. Starting foursomes on the tenth tee and letting them play the "back nine" first does not expand capacity, since these same golfers will eventually want to play the "front nine" of the 18 hole course.

^e (days/yr.) The design days were arrived at by finding the effective length of season for each region, then applying the design day methodology. The regional design days were computed and appear in the table on the following page.

^f (course/acre) In order to arrive at

persons/acre figures, we need to convert courses into acres (course/acre). To do this we used the equation:

$$\frac{\# \text{ of holes}}{\text{minimum \# of acres}}$$

When the numerator is 18 holes, the denominator is 120 acres. When the numerator is 9 holes, the denominator is 60 acres. The resultant conversion factors are the same. (B. O. R. *ORSS*, April 1967, p. 20)

^g (persons/acre/yr.) The regional capacity standards for golf constitute the number of people that can be suitably accommodated annually on an acre of golf course land. The figures appear below:

| SCORP | GOLF DESIGN DAYS (days/year) | ANNUAL CAPACITY STANDARDS (persons/acre/year) | |
|------------|---------------------------------|--|---------|
| | | 9 Hole | 18 Hole |
| Region I | 63.2 | 4095 | 4095 |
| Region II | 71.8 | 4653 | 4653 |
| Region III | 67.2 | 4355 | 4355 |
| Region IV | 68.0 | 4406 | 4406 |
| Region V | 74.1 | 4802 | 4802 |
| Region VI | 44.0 | 2851 | 2851 |
| Region VII | 29.6 | 1918 | 1918 |

GOLF^a

| DENSITY SUBGROUP | INSTANT CAPACITY ^b | x | TURNOVER RATE ^c | = | DAILY CAPACITY ^d | x | DESIGN DAYS ^e | = | ANNUAL CAPACITY ^g |
|------------------|-------------------------------|---|----------------------------|---|-----------------------------|---|--------------------------|---|------------------------------|
| 9 Holes | 72 | x | 6 | = | 432 | x | * | = | ** |
| 18 Holes | 144 | x | 3 | = | 432 | x | * | = | ** |

Narrative explanation

- ^a These capacity standards apply to developed walking, hiking, and climbing trails throughout the Commonwealth of Massachusetts. Walking for exercise, observation of wildlife and/or plant material, or just plain enjoyment of the outdoors — all constitute hiking experiences.
- ^b (persons/mile) The nature of hiking in urban areas is distinctly different than that of non-urban, natural areas. In the former, participants expect either a casual walk or jog along a path that is possibly surrounded by interesting urban scenery (river, park, historical trail, etc.). These users seldom expect solitude or complete tranquility from the noise or population of the city. In non-urban areas, however, this solitude is an essential ingredient of the hiking experience. This is the justification for such varied instant capacity figures.
- ^c (/day) The numerator of the turnover rate was established as 8 hours of available use for both urban and non-urban hiking days. The denominator (average length of use per mile of trail) was determined to be approximately 1 hour for both density subgroups.
- ^d (persons/mile/day) As mentioned earlier, the intent of the hiking experience is somewhat different, depending on

where it's being done. In urban areas it is largely for exercise, scenic views of the city, and to get out of the confinement of one's apartment. In these cases, a stroll down some tree-lined path along the river becomes desirable. In non-urban areas, the emphasis of hiking seems to be on experiencing the natural environment, and in being somewhat alone in doing so. For these reasons, a mile of hiking trail in an urban area can accommodate 400 persons daily without detracting from the experience of an individual, while the more sensitive non-urban trails can accommodate only 40 persons/day.

- ^e (days/yr.) The effective lengths of season for hiking in each region were determined by those techniques discussed earlier in the section on design days (see "Methodology-Design Days"). The resultant design days are listed on the following page.
- ^f Not applicable.
- ^g The regional capacity standards tell one how many people can be reasonably accommodated annually on a mile of hiking trail in a particular region. The regions are broken down by urban/non-urban areas so as to account for density subgroup differences.

| SCORP | HIKING DESIGN DAYS (days/year) | ANNUAL CAPACITY STANDARDS (person/trail mile/year) | |
|------------|-----------------------------------|---|-----------|
| | | Urban | Non-urban |
| Region I | 63.8 | 25,520 | 2,552 |
| Region II | 68.0 | 27,200 | 2,720 |
| Region III | 71.9 | 28,760 | 2,876 |
| Region IV | 64.2 | 25,680 | 2,568 |
| Region V | 74.1 | 29,640 | 2,964 |
| Region VI | 35.6 | 14,240 | 1,424 |
| Region VII | 29.6 | 11,840 | 1,184 |

HIKING^a

| DENSITY SUBGROUP | INSTANT CAPACITY ^b | x | TURNOVER RATE ^c | = | DAILY CAPACITY ^d | x | DESIGN DAYS ^e | x | CONVERT FACTOR ^f | = | ANNUAL CAPACITY ^g |
|------------------|-------------------------------|---|----------------------------|---|-----------------------------|---|--------------------------|---|-----------------------------|---|------------------------------|
| Urban | 50 | | 8 | | 400 | | * | | NA | | ** |
| Non-urban | 5 | | 8 | | 40 | | * | | NA | | ** |

Narrative explanation

- ^a The capacity guidelines generated here for horseback riding represent the ability of a bridle trail mile to accommodate a number of horses with riders. This analysis does not delve into standards for horse rental facilities, however, turnover rates developed here will be helpful in the future analysis of such facilities.
- ^b (persons/mile) Like hiking, the ability of urban trails to accommodate horseback riders without seriously affecting the experience seems to be much greater than non-urban trails. This is due mainly to the different expectations of the participant in the two areas.
- ^c (/day) The average horseback riding experience was found to be 1 hour for urban participants, and 2 hours for participants in non-urban areas. A figure of 8 hours was used as the potential use day.
- ^d (persons/mile/day) The daily capacity

of a mile of bridle trail in an urban area is 120 persons/day; in a non-urban area capacity is 30 persons/day.

- ^e (days/yr.) The design day figures for horseback riding were computed using the previously discussed techniques (see "Methodology — Design Days"). The region-by-region figures appear in the table below.

^f Not applicable.

- ^g (persons/mile/yr.) The regionalized annual capacity standards for horseback riding tell us how many horses and riders can be suitably accommodated by a mile of bridle trail in a particular region.

Narrative explanation

- ^a Massachusetts has a wide range of hunting opportunities, from duck and goose hunting in the marsh lands to small game tracking and deer hunting in the wooded parts of the state. In developing capacity standards for

hunting in general, we have tried as much as possible to consider all of these key hunting activities. There is no urban/non-urban distinction here because hunting capacities are based primarily on minimum areas of safe hunting, rather than any personal preferences of hunters to get away from crowds.

- ^b (hunters/acre) The figures here represent 8 acres of land for small game hunting, 15 acres for big game, and 50 acres of range for each trapper to be suitably accommodated (B.O.R., ORSS, 1967, p. 57).

- ^c (/day) All turnover rates used 12 hours as the numerator. For the denominator, small game average length of use was 2 hours, big game was 12 hours, and trapping was 4 hours. (Division of Wildlife and Fisheries).

- ^d (hunters/acre/day) It takes about 1.5 acres of land to accommodate one small game hunter on a peak-use day. In contrast, it takes about 15 acres for accommodation of a big game hunter and 18 acres to accommodate a trapper.

- ^e (days/yr.) The hunting season in the Commonwealth of Massachusetts is controlled by law. The following seasons exist for the different types of hunting: small game — October 20 to November 20; big game — November 15 to November 20, December 6 to December 11; trapping — September 20 to December 31. With the aid of the Division of Wildlife and Fisheries, a special method of design day calcula-

| SCORP | HORSEBACK RIDING DESIGN DAYS (days/year) | ANNUAL CAPACITY STANDARDS (persons/trail mile/year) | |
|------------|--|---|-----------|
| | | Urban | Non-urban |
| Region I | 59.8 | 7,176 | 1,196 |
| Region II | 66.1 | 7,932 | 1,322 |
| Region III | 56.5 | 6,780 | 1,130 |
| Region IV | 69.1 | 8,292 | 1,382 |
| Region V | 74.1 | 8,892 | 1,482 |
| Region VI | 35.6 | 4,272 | 712 |
| Region VII | 29.6 | 3,552 | 592 |

HORSEBACK RIDING^a

| DENSITY SUBGROUP | INSTANT CAPACITY ^b | x | TURNOVER RATE ^c | = | DAILY CAPACITY ^d | x | DESIGN DAYS ^e | x | CONVERT FACTOR ^f | = | ANNUAL CAPACITY ^g |
|------------------|-------------------------------|---|----------------------------|---|-----------------------------|---|--------------------------|---|-----------------------------|---|------------------------------|
| Urban | 15 | | 8 | | 120 | | * | | NA | | ** |
| Non-urban | 5 | | 4 | | 20 | | * | | NA | | ** |

HUNTING^a

| DENSITY SUBGROUP | INSTANT CAPACITY ^b | x | TURNOVER RATE ^c | = | DAILY CAPACITY ^d | x | DESIGN DAYS ^e | x | CONVERT FACTOR ^f | = | ANNUAL CAPACITY ^g |
|------------------|-------------------------------|---|----------------------------|---|-----------------------------|---|--------------------------|---|-----------------------------|---|------------------------------|
| Small Game | .125 | | 6 | | .75 | | 17.4 | | NA | | 13.05 |
| Big Game | .066 | | 1 | | .066 | | 7.0 | | NA | | 0.46 |
| Trapping | .02 | | 3 | | .06 | | 34.8 | | NA | | 2.09 |

tion was derived so as to give special consideration to the unique hunting season (i.e. the "opening day phenomenon"). The number of peak-use design days were, thus, determined. (see table).

^f Not applicable.

^d (hunters/acre/yr.) The statewide capacity standards for the three types of hunting signify the number of hunters that can be safely and suitably accommodated on an acre of land in the course of any given year. These are presented in the table above.

Narrative explanation

^a Picnicking, of course, can take place on land that was never specifically developed for that reason. Informal picnics at the beach, in state parks, alongside rivers and other such places constitute an important supply of recreational activity for residents of Massachusetts. The analysis here, however, applies to developed picnic areas only. The capacity standards generated here can be used for sites whose specific use is picnicking.

^b (persons/table) The instant capacity for a site is the number of people that can be suitably accommodated at a picnic table at one time, without detracting from the experience (B.O.R., ORSS, p. 41). The higher capacity for urban areas is a judgement based on

several aforementioned assumptions dealing with urban/non-urban activity intents. Although the actual number of people per table may not, in fact, differ between the two density subgroups, the number of tables/acre does vary. We have chosen to show this density variance in persons/table because of the fact that the inventory unit is tables rather than acres of picnic land.

^c (/day) The length of the average picnic for urban and non-urban areas was estimated at 4 and 6 hours, respectively. Dividing this length of use into the length of the potential use day (6 hours) yields the respective turnover rates.

^d (persons/table/day) Urban sites can suitably accommodate 15 persons/day; non-urban sites can accommodate 10 persons/day.

^e (days/yr.) The effective length of season for picnicking in each of the SCORP regions was computed using the same surveying techniques as employed with the earlier activities. The design day methodology was then applied to arrive at the figures in the table.

^f Not applicable.

^g (persons/table/yr.) The regional capacity standards in the table below tell us how many people may be reasonably accommodated at a picnic table

in an urban or non-urban area of a region during the course of a year.

| SCORP | PICNICKING DESIGN DAYS (days/year) | ANNUAL CAPACITY STANDARDS (persons/table/year) | |
|------------|---------------------------------------|---|-----------|
| | | Urban | Non-urban |
| Region I | 40.2 | 603 | 398 |
| Region II | 43.2 | 648 | 428 |
| Region III | 35.6 | 534 | 352 |
| Region IV | 43.2 | 648 | 428 |
| Region V | 46.3 | 695 | 458 |
| Region VI | 35.6 | 534 | 352 |
| Region VII | 29.6 | 444 | 293 |

PICNICKING^a

| DENSITY SUBGROUP | INSTANT CAPACITY ^b | x | TURNOVER RATE ^c | = | DAILY CAPACITY ^d | x | DESIGN DAYS ^e | x | CONVERT FACTOR ^f | = | ANNUAL CAPACITY ^g |
|------------------|-------------------------------|---|----------------------------|---|-----------------------------|---|--------------------------|---|-----------------------------|---|------------------------------|
| Urban | 6 | | 1.5 | | 15 | | * | | NA | | ** |
| Non-urban | 5 | | 1 | | 10 | | * | | NA | | ** |

Narrative explanation

^a The activity of swimming (other) includes outdoor fresh and salt water swimming other than in pool facilities. For this reason, the unit of measurement is linear footage of beachfront (beachfront ft.), rather than square footage or acres of water (ocean swimming would confound the use of such a measurement).

^b (persons/beachfront ft.) B.O.R., *Outdoor Recreation Space Standards*, April 1967, p. 35. Note the distinction for "beach, urban area" and "beach, rural area".

^c (/day) The numerator in the turnover rate calculation was 6 hours for both urban and non-urban swimming. The denominators for urban and non-urban average beach use were 2

hours and 3 hours, respectively.

^d (persons/ft./day) The daily capacity signified that, on a peak-use day, 1 linear foot of beach front can accommodate 6 persons in urban areas, and 3 persons in non-urban.

^e The table on the following page presents the effective lengths of season for swimming (other) in each of the SCORP Regions.

^f Not applicable.

^g The amount of swimming (other) occasions that can be suitably accommodated during a given year in a particular region is presented in the table below:

| SCORP | SWIMMING (OTHER) DESIGN DAYS (days/year) | ANNUAL CAPACITY STANDARDS (persons/beachfront ft./year) | |
|------------|--|---|-----------|
| | | Urban | Non-urban |
| Region I | 31.5 | 189 | 94.5 |
| Region II | 29.6 | 178 | 88.8 |
| Region III | 29.6 | 178 | 88.8 |
| Region IV | 29.6 | 178 | 88.8 |
| Region V | 37.0 | 222 | 111.2 |
| Region VI | 35.6 | 214 | 106.8 |
| Region VII | 29.6 | 178 | 88.8 |

Narrative explanation

^a Pool swimming includes the use of man-made or modified bodies of fresh or salt water, no greater than 2 acres in water surface area. Although land surface areas are extremely important, since almost 75% of the people

SWIMMING (OTHER)^a

| DENSITY SUBGROUP | INSTANT CAPACITY ^b | x | TURNOVER RATE ^c | = | DAILY CAPACITY ^d | x | DESIGN DAYS ^e | x | CONVERT FACTOR ^f | = | ANNUAL CAPACITY |
|------------------|-------------------------------|---|----------------------------|---|-----------------------------|---|--------------------------|---|-----------------------------|---|-----------------|
| Urban | 2.0 | | 3 | | 6 | | * | | NA | | ** |
| Non-urban | 1.5 | | 2 | | 3 | | * | | NA | | ** |

| SCORP | SWIMMING (POOL) DESIGN DAYS | ANNUAL CAPACITY STANDARDS (persons/sq. ft. water /year) | |
|------------|-----------------------------|---|-----------|
| | | Urban | Non-urban |
| Region I | 31.5 | 1.89 | 1.25 |
| Region II | 29.6 | 1.78 | 1.17 |
| Region III | 26.7 | 1.60 | 1.05 |
| Region IV | 32.3 | 1.94 | 1.28 |
| Region V | 35.6 | 2.13 | 1.41 |
| Region VI | 35.6 | 2.13 | 1.41 |
| Region VII | 29.6 | 1.78 | 1.17 |

using a swimming facility are out of the water at one time, it was determined that the amount of actual swimming area available would be a good indicator of capacity.

^b (persons/sq. ft. water) This is equivalent to 50 square feet of surface water area for each person in the water (B.O.R., *Outdoor Recreation Space Standards*, 1967).

^c (/day) The numerator for both urban and non-urban pool swimming was set at 6 hours. The denominators (av-

SWIMMING (POOL)^a

| DENSITY SUBGROUP | INSTANT CAPACITY ^b | x | TURNOVER RATE ^c | = | DAILY CAPACITY ^d | x | DESIGN DAYS ^e | x | CONVERT FACTOR ^f | = | ANNUAL CAPACITY |
|------------------|-------------------------------|---|----------------------------|---|-----------------------------|---|--------------------------|---|-----------------------------|---|-----------------|
| Urban | .02 | | 3 | | .06 | | * | | NA | | ** |
| Non-urban | .02 | | 2 | | .04 | | * | | NA | | ** |

average duration of use) were 2 hours and 3 hours, respectively.

^d (persons/sq. ft./day) It takes approximately 17 square feet of water surface to support occasions of swimming per day in urban areas, and 25 square feet to support 2 occasions per day in non-urban areas.

^e (days/yr.) The table below presents the region-by-region design day figures for pool swimming. This effective length of season data was gathered and computed using the design day methodology discussed earlier.

^f Not applicable.

^g (persons/sq. ft. water/yr.) The regionalized annual capacity standards in the table below signify the amount of persons that can be suitably accommodated on a square foot of water in each of the seven SCORP Regions.

Narrative explanation

^a Tennis capacity standards have been generated using much of the literature available, as well as surveying of authorities that was mentioned earlier in this document.

^b (persons/court) The capacity for one court at any given point in time is 4 (playing doubles).

^c (/day) The numerator in calculating

turnover rates for both urban and non-urban areas is 8 hours. The denominators (average duration of use) were 1 hour and 115 hours, respectively.

^d (persons/court/day) One tennis court in urban areas can suitably accommodate 32 persons daily. The same facility in non-urban areas can be expected to handle no more than 23 persons on a peak-use day.

^e (days/yr.) The tennis design day figures appear in the table on the following page. They represent the effective lengths of season for tennis in each of the seven SCORP Regions.

^f Not applicable.

^g (persons/court/yr.) Regional annual capacity standards for tennis represent the number of occasions of tennis that can suitably be accommodated by one court in a particular region. These figures appear in the table below.

| SCORP | TENNIS DESIGN DAYS (days/year) | ANNUAL CAPACITY STANDARDS (persons/court/year) | |
|------------|-----------------------------------|---|-----------|
| | | Urban | Non-urban |
| Region I | 59.8 | 1,914 | 1,375 |
| Region II | 68.8 | 2,202 | 1,582 |
| Region III | 71.5 | 2,288 | 1,647 |
| Region IV | 68.0 | 2,176 | 1,567 |
| Region V | 71.4 | 2,371 | 1,707 |
| Region VI | 39.4 | 1,261 | 908 |
| Region VII | 29.6 | 947 | 682 |

TENNIS^a

| DENSITY SUBGROUP | INSTANT CAPACITY ^b | x | TURNOVER RATE ^c | = | DAILY CAPACITY ^d | x | DESIGN DAYS ^e | x | CONVERT FACTOR ^f | = | ANNUAL CAPACITY ^g |
|------------------|-------------------------------|---|----------------------------|---|-----------------------------|---|--------------------------|---|-----------------------------|---|------------------------------|
| Urban | 4 | | 8 | | 32 | | * | | NA | | ** |
| Non-urban | 4 | | 5.75 | | 23 | | * | | NA | | ** |

Section 5

Regional Planning Agency Survey

BERKSHIRE COUNTY REGIONAL PLANNING COMMISSION

Goals and Objectives

Among the goals, objectives and policy recommendations of the Berkshire County Regional Planning Commission with respect to open space and recreation are:

1. To provide simple recreation opportunities close to where people live.
2. To encourage the development of those outdoor recreation facilities needed to meet anticipated demands of residential growth and increased tourism.
3. To preserve open spaces and natural areas in the path of urban expansion. This may include small parks with easy access interspersed throughout suburban developments.
4. To encourage preservation and enhancement of major scenic and historic sites.
5. To improve wildlife resources.
6. To develop regional resources designed to increase recreation, vacationing and tourism.

Plan Status

The Berkshire County Regional Planning Commission has been considering open space and outdoor recreation for the past several years. A draft prepared in 1971 and designed for internal purposes provides a base for on-going planning.

An up-to-date open space outdoor recreation plan is scheduled for completion in 1978 and will be based in part on a Regional Land Use Plan, a Water Quality Plan and a Transportation Plan; all of which it is anticipated will be completed by mid-1977.

The Commission has prepared an inventory of public recreation areas and private recreation areas. Additionally, the inventory indicates the number of acres according to owner (private, municipal, state, federal, etc.) and by density group (dense, less dense, open). Among the recreation resources surveyed were land resources, water resources such as ponds, rivers, fishing and water quality, picknicking facilities, swimming, camping, boating and potential recreation sites containing 50 acres or more.

The standards used by the Commission to relate supply, demand and needs were:

1. 10-15 acres of open space per 1000 population in very dense and extremely dense areas.
2. 85 acres per 1000 population in dense areas.
3. 287 acres per 1000 population for less dense areas.
4. 2987 acres per 1000 population for "Open" areas.

Additional outdoor recreation and open space planning since the Commission's last effort include:

1. Agreement with a power company to provide areas to supplement state improvement of State Parks.
2. Review of recreation plans for Mt. Greylock.
3. Assistance to communities with land-use and recreational plans.
4. Assistance in reviewing environmental impact statements. Recently working on impact of use of insecticides in state parks.

CENTRAL MASSACHUSETTS REGIONAL PLANNING COMMISSION

Goals and Objectives

The Central Massachusetts Regional Planning Commission considers its goals, objectives and policy recommendations for recreation and open space as follows:

1. To prevent premature and needless destruction of resources.
2. To achieve an ecologically related, socially, economically vibrant, politically responsive and well-directed environment for all people in the region.

Plan Status

The Central Massachusetts Regional Planning Commission completed a Regional Open Space and Recreation Plan in April, 1972. This plan which was incorporated into the regional spatial policy, is fairly current and no full scale updating is contemplated in the near future.

The regional inventory includes both public and private recreation areas.

Basically it is organized by the type of open space, with open space defined as "land characterized by an absence of intensive urban development."

In 1967 the regional agency conducted a rather intensive inventory survey and, as conditions change, the survey is updated. Among the types of recreational facilities surveyed are the following:

Swimming, boating and canoeing, fishing and hunting, camping, winter sports, hiking and pleasure driving. The region has prepared a rather lengthy and comprehensive list of items to be considered under "Evaluation of Open Space", and another under "Analysis of Recreational Activities". These lists may be obtained by contacting the Commission.

A previous Massachusetts Statewide Comprehensive Outdoor Recreation Plan contained data relative to recreational supply, demand and need. The CMPRC consider standards contained in the plan a reasonable guideline for their predictions.

The CMPRC's action plan is basically site specific and involves a descriptive testing of sites which have been proposed for first priority acquisition. Long range plans for implementing the action program include a program of mapping lands which have been designated as first, second and third priority lands. Priority lands are described in the following manner:

1st priority

Open space of *highest value* — land in existing public or semi-public ownership. Including major orchard areas, mountain ridges, areas of tallest best stocked trees, outstanding scenic quality, highest values wetlands, water bodies with recreational potential.

2nd priority

Substantial Value — should remain permanently open but may have limited development of low intensity, non-urban uses.

3rd priority

Limited value to the region — land which may be eventually, urbanized but which should be kept free until more suitable areas have been utilized.

The implementation plan also calls for the development of a short range financial and administrative program and a long range plan for land acquisition,

protection, and development, an analysis of standards and criteria for local open space plans to supplement the regional plan, and a preservation program covering methods of open space preservation and the allocation of future responsibilities among agencies.

The action plan considers a ten year time frame.

FRANKLIN COUNTY REGIONAL PLANNING COMMISSION

Goals and Objectives

Among its goals and objectives for open space and recreation, Franklin County considers the following:

1. To make provision for servicing local residents' recreation facility needs — including special needs of low-income and minority groups and those with little mobility.
2. To respond to service requirements of a border region.
3. To protect the natural environment and historical heritage
 - (a) Prevent/remedy water pollution
 - (b) Reduce flooding losses and control erosion citing particular rivers
 - (c) Preserve wildlife habitats
 - (d) Preserve instructive examples (geological, archaeological, paleontological)
 - (e) Preserve historic sites and artifacts.
 - (f) Translate these concerns into action.
4. To capitalize on leisure orientation as a potential basic industry. Suggests development of leisure and retirement homes and camping facilities.
5. To accomplish these goals in a way that is supportive of other county goals.

The Planning Commission's policy recommendations have been cited as:

1. Emphasize public investments in development rather than acquisition. Release acreage within state lands for private development and taxation to offset any additional acquisitions.
2. Rely on private development as much as possible; use regulation easements rather than ownership.
3. Give priority to actions leading to development of second homes

within the county.

4. Give highest functional priority to water based recreation.
5. Give priority to actions leading to development of tourism in areas of greatest tax strain, areas of least growth, greatest job deficiency and least conflict with agricultural industry.
6. Coordination with DEM. The county wishes to review DEM applications for funding within county to cut down on conflicts.
7. County should make effort to provide technical assistance to municipalities on regulation of land for open space purposes and locally-sponsored acquisition and development.
8. Study development possibilities of new leisure communities.

Plan Status

The Franklin County Regional Planning Commission uses a draft report, "Open Space and Recreation" prepared by Philip B. Herr and Associates in March 1971. This report still appears to be serving reasonably well and at the moment there are no firm plans for a major updating. This document was issued as a separate report but is considered part of the comprehensive regional plan for Franklin County.

Funding by HUD 701 was the base money for the plan although certain other recreational projects and county (regional) taxation money played a part. As implementation of proposed projects surfaces, the Bureau of Outdoor Recreation becomes a hopeful source for funding.

Inventory information in the plan includes public recreation areas, private recreation areas and semi-public recreation areas. The inventory data is organized by the various towns within the County, by the site within the town and by the "region" within the RPA. The Commission used the Department of Environmental Management's survey of reserved open space area and recreational facilities as a basis for the inventory and since have added to and revised the data with additional information collected by the Franklin County Planning Department, DEM Service Forester, Department of Fisheries and Games, Trustees of Reservations and the Connecticut River Watershed Association.

Recreational facilities are divided into four categories; Playgrounds and Ballfields with Public Access; Other Developed Recreation Areas for Public Use; Reserved Open Space with Public Access; Reserved Open Space with Restricted Access. For each of these four categories there is a listing according to town, major recreational facilities, controlling agencies, and total acreage. The listing of recreational facilities includes:

Playgrounds and Ballfields with Public Access: ball fields, playgrounds.

Other Development Recreation Areas for Public Use: swimming facilities/beaches; picnicking; youth camps, scout camps and health camps; boating/marinas; golf; camping; fairgrounds; skiing; fishing; basketball; sailing; ice skating, coasting, play and sports areas, parachuting, tennis, gym sports, *Reserved Open Space w/Public Access:* fishing; hunting; snow shoeing; skiing; snowmobiling; conservation area; wildlife sanctuary; picnicking; boating; viewing; guard dog field trails; tennis; archery; nature study; forestry practice; horseback riding; fish propagation; look out tower; *Reserved Open Space w/Restricted Access:* water and power supply.

Standards used by the Franklin County Regional Planning Commission include those given in the Edwards and Kelcey report. *Massachusetts Outdoor Recreation Plan, 1966:*

- | | |
|----------------|--|
| 1. Swimming | 1.5 linear ft/person 140 persons/acre |
| 2. Picnicking | 20 persons/acre |
| 3. Boating | 10 persons/acre 90 persons/land acre |
| 4. Camping | 20 persons/acre |
| 5. Ice Skating | 400 persons/acre |

Other standards applied by the Commission include:

1. Outdoor play areas — within a ½ mile of people to be served.
2. Parks/Playgrounds/Ballfields — at least 3 acres to contain a home run.
3. Fully developed medium density areas — 1½ acres/1000 residents.
4. Areas developed at 2 families/acre — within ½ mile of playground
5. Public open space — 5 acres/1000 residents within a short drive.

The Commission maintains that acquisition of extensive open space is most damaging in towns characterized by

either tax problems or a planned rate of growth or where larger public land holdings already exist. The Commission also maintains that vacation/tourist industry development best serves county goals when it is located in towns having the greatest tax strain, the least growth and the greatest job deficiency and where there is the least conflict with agricultural uses.

The Franklin County Regional Planning Commission action plan is both site specific and general. The Commission believes that present acquisition and development proposals made by the state, the county, and the municipalities should be studied further before adoption or implementation.

The Regional Planning Agency has worked within the context of earlier and concurrent recreation/open space studies. These include: reports issued by Connecticut River Basin Coordinating Committee, the Corps of Engineers; plan for the Connecticut Valley, and a critique of the Corps of Engineers plan by a Citizens Review Committee; BOR recommendations for the Connecticut Valley, New England Heritage, 1966 DNR SCORP, 1970 Berkshire-Franklin Resource Conservation and Development Project, 1970 Franklin County Goals and Objectives, 1970 Land-Use, Circulation and Utilities Plan.

Since the original open space and outdoor recreation plan the agency has been doing a special study on the River-Trails System in the County which has been basically designed but not costed or funded. It is currently in draft form. There are many old ferry roads along and to the Connecticut and Deerfield rivers which are public right-of-ways. Some of the adjacent land is owned by the county and some is privately owned. The Commission wants to use this area as a canoe/boat launch area and put in facilities such as picnicking.

The degree of difficulty of developing the area has been ascertained, sites have been located on a map, and many of the adjacent land-owners have been identified. Possibly BOR funding may be obtained for the project.

The Commission is currently developing Sugarloaf County Park which consists of 30 acres of class 1 farm land below Sugarloaf mountain. The county

is developing the park so as not to interfere with the quality of the soil. Picnic tables, fire/barbeque pits, and a baseball field have been built. Plans have been made for group picnic facilities and small playground.

LOWER PIONEER VALLEY REGIONAL PLANNING COMMISSION

Goals and Objectives

Among the goals and objectives of the Lower Pioneer Valley Regional Planning Commission with respect to open space and recreation are the following:

1. To provide abundant open space and outdoor recreation in pleasant, safe and healthy surroundings for all regional residents.
2. To acquire, develop and administer land for open space and outdoor recreation, using adequate and regionally acceptable standards.
3. To locate open space and outdoor recreational facilities in areas accessible to the region's population centers with public transportation services as required.
4. To fully use municipal water supply areas for recreation consistent with public health standards.
5. To rigorously enforce established water pollution controls.
6. To open rivers, water bodies and wetlands for recreation.
7. To fully preserve the region's scenic, and natural amenities, along with their development as a major social resource.

The Lower Pioneer Valley Regional Planning Commission policies are:

1. To develop effective and acceptable standards of open space and recreational needs for all sectors of the population.
2. To help develop and support effective mechanisms for coordinating the administrative actions and funding programs of federal, state, municipal, and private organizations dealing with open space and related programs.
3. To develop equitable formulas for distributing open space costs and responsibilities.

4. To determine accessible locations for regional open space and outdoor recreation, served by adequate public transportation, and a comprehensive, integrated system of linking trails.
5. To promote the preservation of historic, scenic and natural amenities in the region, and their effective use as cultural and recreational assets.

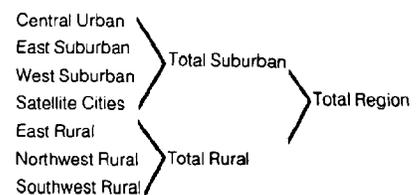
Plan Status

The Lower Pioneer Valley Regional Planning Commission prepared a comprehensive Outdoor Recreation and Open Space Plan in 1970. The plan is considered a part of the comprehensive regional plan — but in itself is a separate entity. Updated data is recorded, but there are no current plans for a complete rewrite.

The funding base was HUD 701. State Regional Planning Assistance grants administered by the Department of Community Development augmented by contributions from member municipalities of the Regional Planning Agency also played a part.

The Commission's inventory information includes data on public recreation areas (some 78% of the available open space), as well as private recreation areas. Additionally, they considered quasi-public open space such as areas administered by community centers, scouts, private conservation groups, local universities, associations for the handicapped, etc. The inventory is organized into the public/private/quasi-public sectors.

The regional inventory is organized by the type of recreation facility and by the following sub-areas:



To obtain pertinent data the region consulted many sources. Data was compiled from records of owner, by interviews, and through field observation.

Much of the inventory was an updating of previous surveys by the University of Massachusetts, Department of Agriculture and Food Economics for the private

sector, and surveys of the public sector by the U.S. Soil Conservation Service and the inventory of the Massachusetts Department of Environmental Management for the state and nationwide plans. Data was compiled for each recreation area on an inventory sheet.

A rather full grouping of possible recreational facilities was surveyed. The main recreational facilities surveyed included swimming, fishing, picnicking, boating, hunting, bicycling, camping (tent and trailers), competitive outdoor sports, water skiing, ice skating, sledding and horseback riding. Also surveyed were attendance at outdoor sports and concerts, pleasure driving, walking, sight-seeing, golf, summer camps, fairgrounds and amusement parks.

Inventory information which was mapped in 1966 is identified by the titles "Environment Classification" and "Outdoor Recreation Areas." Mapped categories (scale: 1 inch = 12,000 feet) in the "Environment Classification" are:

Natural Environment — Little development, suitable only for low-density recreation, often in combination with other uses.

General Outdoor — medium density development for a wide variety of uses.
High Density — intensive development managed for mass use.

Unique Natural — outstanding scenic splendor, natural wonder, or scientific importance.

Historic & Cultural Sites — sites of major local or national significance.

Mapped categories (scale: 1 inch = 6,000 feet) in the "Outdoor Recreation Areas" are:

Massachusetts Division of Forests and Parks
Massachusetts Division of Fisheries and Game
Trustees of Reservations
Mt. Tom State Reservation
University of Massachusetts
Massachusetts Audubon Society
Quasi-Public Areas
Municipal Parks, Forests and Conservation Lands
U.S. Corps of Engineers Flood Control Reservoirs
Water Supply Reservoirs
Great Ponds
Private Recreation Areas, Members only
Private Recreation Areas, open to public

Massachusetts Tourist Route System Historic & Cultural Sites

Both mapping endeavors identify recreation uses within the designated areas (swimming, fishing, boating, picnicking, skiing, hunting, camping, horseback riding).

The inventory information is retrievable, i.e. index cards by owner, by recreation activity, and by resource classification.

The Commission has capitalized upon available relevant material in relating to standards used with respect to supply/demand/needs. Mentioned as sources were the *1966 Massachusetts Outdoor Recreation and Open Space Inventory* and *Outdoor Recreation Space Standards* issued by the Bureau of Outdoor Recreation in the Department of Interior. Additional recommendations by the National Recreation and Park Association were cited — i.e. Neighborhood Recreational Parks, 2.5 acres/1000 population; District Recreational Parks, 2.5 acres/1000 population; Local Urban Parks, 5.0/1000 population.

The Commission searched for reputable sources of surveys and preference statements to be used in determining demand. Among these sources were:

1. The BOR estimate that by year 2000 participation in major forms of summer time outdoor recreation will be 4 times greater than in 1960.
2. Attendance records which indicate recreational use increasing by 10% per year.
3. Massachusetts SCORP demand projections with necessary adjustments.
4. Demand estimates based on population projections (U.S. Census) which indicate increasingly high levels of education, income, mobility and urbanization.
5. Population projections and distribution by William Smith, *Springfield Urbanized Area Comprehensive Transportation Study* (9/69, Vol. 111)
6. Chilton Research Services Company report on *The Economic Impact of Recreation — Tourism in the Connecticut River Basin*.

The action plan is site specific as well as general and the Commission states it intends to spare no effort to carry this program through to completion by using its administrative mechanisms and educational methods.

The Commission has been involved in several planning activities related to Open Space and Outdoor Recreation since the last effort. For example, *A Future for the Past*, their most recent publication, encourages the municipalities to use historic preservation techniques as a means of broadening their open space options. The Commission's multi-model transportation-related program includes "analysis and studies of the needs and impacts of bike paths, scenic routes and roads, rest areas/information centers, pedestrian and hiking paths and facilities, fringe area parking facilities, and other types of needs related to the environment and transportation system for the LPVRPD."

Additionally, the Commission's "Land Use" item in this year's "Overall Program Design" is geared to the establishment of land use development controls with reference to environmentally critical areas. The designation of these critical areas will directly affect their open space policies.

MONTACHUSETTS REGIONAL PLANNING COMMISSION

Goals and Objectives

The Montachusets Regional Planning Commission is striving toward the following goals and objectives related to recreation and open space.

1. To integrate the plan with other MRPC studies and municipal master plans.
2. To support the Nashua River Watershed Association and the Miller's River Watershed Council and to integrate the Commission's efforts with their work.
3. To conserve the Region's agricultural/activities.
4. To serve as an environmental information clearing house for the region.
5. To provide commission review of MEPA environmental impact referrals.
6. To encourage, support and assist efforts by communities to protect environmentally sensitive areas.
7. To protect wetlands, steep hillsides, aquifers, flood plains and water supply.
8. To coordinate regional open space proposals with the open space plans

of surrounding regions.

Plan Status

The Massachusetts Regional Planning Commission has prepared a Conservation and Open Space Plan and has an in-house version of an inventory and analysis for recreation and open space. Pertinent information is updated as part of an on-going process. At the present time there is no firm date set for the presentation of this material in the form of a Comprehensive Plan. The primary source of funding to date has been the HUD 701 program.

Inventory information includes both public and private recreation areas and is organized on a town basis. State lands were surveyed or inventoried in 1973, municipal lands and public and private recreation areas in 1974.

One of the Commission's on-going activities is maintenance of a map and overlay project on which certain available and relevant data are plotted. This material may be viewed in the Commission office. Mapped conservation and open space elements include rivers and streams, flood plains, wetlands, aquifer areas, well fields, surface reservoirs, sanitary land fills, sewerage treatment plants, steep slopes, dirt roads, utility lines, camping areas, state forests, town lands, sanctuary lands, forest management lands, prime agricultural land, including orchards, trail systems, proposed open space sites and recreation areas.

The action plan, which is not yet fully developed, is based in part on the Commission's analysis and identification of sensitive areas. This information on sensitive areas, as well as that obtained through past and current conservation and open space-recreation planning efforts is used in conducting A-95 and MEPA reviews and in 208 planning. The Commission feels that open space should serve to protect natural drainage patterns and water supply.

Other planning activity related to open space and recreation undertaken by the Commission includes the review of various plans and policy statements.

Included among the reviewed documents are Municipal Master Plans, the Greenway proposal and the plan for the Nashua River prepared by the Nashua

River Watershed Association, policy statements prepared by the Miller's River Watershed Council, as well as other regional and state plans related to open space and outdoor recreation and growth policy.

NORTHERN MIDDLESEX AREA COMMISSION

Goals and Objectives

The Northern Middlesex Area Commission cites the following among its goals, objectives and policy recommendations with respect to open space and recreation:

1. To establish a balance among natural processes through proper design and location of open space facilities, considering the ecological roles of wetlands and forests and woodlands.
2. To provide recreational opportunities for a wide range of leisure time experiences in convenient locations.
3. To utilize recreation and open space land as breaks in urban density and to help establish an orderly and rational pattern for future urban development.
4. To maximize the contribution to the overall pattern of open space while minimizing public expenditures by encouraging retention and expansion of private and semi-public recreation and open space use.
5. To derive the maximum benefit from the open space system through concepts of multi-purpose uses of open and recreation areas while keeping the primary purpose of these areas in mind.
6. To protect and enhance natural scenic resources and historic features.
7. To provide for continuity in the open space system.
8. To expand public awareness in environmental matters, stimulate involvement and participation in leisure time activities and increase educational programs and information services.
9. To expedite as quickly as possible public control of the open space system at a minimum public expense and to encourage at all

levels of government the use of new methods and the enactment of new legislation for this purpose.

10. To achieve a comprehensive open space system which meets the needs and objectives of the towns, the region, the state, and the adjacent New Hampshire towns, through the cooperation of public and private agencies and individual citizens.

Plan Status

In 1970 the NMAC prepared an Open Space and Recreation Plan and in 1972 completed a second phase report, "Recreation Core Study". A "Report to the Governor's Task Force" was prepared in 1974. Funding for these reports was provided by the Federal Department of Housing and Urban Development.

The Open Space and Recreation Plan makes reference to some Municipal Master Plans, such as the Dracut Master Plan report "Recreational Facilities" prepared by Community Planning Services in 1966 and the "Project Plan for Proposed Nashua Reservoir". The 1974 report, which focuses on the Urban Cultural Park, relies heavily on the 1972 Eastern Massachusetts Supplement Plan for analyzing recreation supply and demand.

The inventory base used was prepared by the Northern Middlesex Area Commission VI in 1969 and appears in *Recreation and Open Space*, Vol. I, "Inventory". It includes rather small and non-detailed maps showing existing and proposed conservation land and recreation areas, institutional lands, and semi-public and private lands for each town in the region. A water management study survey undertaken with 208 funds will include an updated version of the recreational land use inventory. The expected completion date of this inventory is the spring of 1976.

Site specific considerations of the NMAC Action Plan concern the Recreation Core Plan, which focuses on the Northern Middlesex Canal Quarter which is planned to extend from Billerica and Chelmsford through the city of Lowell and be used for biking and hiking etc., and the Urban Cultural Park. A larger portion of the Action Plan consists of recommendations to all towns in the RPA to help achieve a regional framework of open space facilities that

will require regional cooperation and serve regional needs. The Action Plan also gives for each town in the RPA a general summary of present and potential needs and future actions.

The "Action Plan" still requires funding from such sources as HUD or BOR, although the region has established priorities to help in determining the order in which available land should be acquired. Emphasis is directed to the Urban Cultural Park.

The Commission is currently participating in a Water Management Study, using 208 funds. A bikeway study and report is also underway.

MERRIMACK VALLEY PLANNING COMMISSION

Goals and Objectives

Included among the Merrimack Valley Planning Commission goals and objectives related to open space and recreation are:

1. To conserve natural features and points of interest.
2. To shape the urban development.
3. To use open space to meet the need for recreation.

Plan Status

The Merrimack Valley Planning Commission prepared in 1970 an Open Space Study as part of their Comprehensive Plan and in 1973 completed an "Outdoor Recreation Study — A Preliminary Determination of Recreation Need". The HUD 701 program provided the principal sources of funding. In July 1975 the Commission completed a "Preliminary Bikeway Planning Report" funded by the Federal Highway Administration and the Urban Mass Transportation Administration.

Inventory data was updated by the Commission in 1975. The information is organized by town and by type of recreation, open space land and facility. Inventoried data include Reservation and Conservation lands, playgrounds, playfields, parks, cemeteries, watershed areas, boating and fishing areas, skiing and/or skating areas, and golf courses. The inventory information is on maps and the 1972 base Land Use map

is in the process of being updated.

Sources of information for the inventory include Municipal Master Plans and Open Space studies, the 1970 DNR SCORP, studies prepared by the New England River Basins Commission and the Army Corps of Engineers, as well as telephone conversations concerning most recent data.

Standards used by the Commission to relate recreational supply, demand and need are given in terms of specific sizes and facilities appropriate to different types of recreation centers and area parks, based on the population to be served.

In addition to updating the Land Use map, recreation and open space activities planned by the Commission include assisting communities in implementing recreation plans specified in the regional plan, helping with the provision of state parks and recreation facilities and providing for the protection of north shore beaches.

METROPOLITAN AREA PLANNING COUNCIL

Goals and Objectives and Policies

Among the goals and objectives of the MAPC open space plan are:

1. To alleviate discrepancies between distribution of regions population and open space/recreation opportunities.
2. To satisfy active and passive recreation needs of present and future residents.
3. To help coordinate open space decisions of local, regional, state federal agencies responsible for implementation.
4. To develop plans which complement diversity of landscape in the MAPC region.
5. To include redevelopment proposals for landscapes defaced by the effects of careless development.
6. To propose guidelines for use of significant water bodies, watershed and natural drainage areas, shoreline wildlife resources and other ecologically sensitive elements.
7. To provide mechanisms to preclude

development on areas best suited for open space and recreation purposes.

8. To take into account special needs and problems inherent in open space planning for densely settled urban areas.
9. To incorporate historical areas into recreation and open space.

Among the policies for the Coastal Areas are:

1. The coastline should be used for open space, recreation, research and aesthetic purposes only.
2. Access to the coast must be recognized as "natural heritage of every citizen".
3. There should be alternative modes of access to public areas along the coast.
4. Waterfront districts should be established as part of local zoning and subdivision ordinances.
5. Features along the coast which symbolize region's historic and cultural relationship to area must be made available for public education and enjoyment.

Additional policy matters effecting implementation include:

Education and Interpretation

Public education and interpretation programs that expose people to the natural history of the region as well as the recreational opportunities available to them, should be encouraged. This policy also extends to encouraging public volunteer efforts to maintain and restore public open spaces.

Maximum Use

Where there is a scarcity of public open space, more extensive use of existing public open space should be considered. This may involve night use (lighting) of some facilities and more on-site supervision.

Access

Regional open space/recreation areas should be more accessible by various forms of mass transportation, i.e., rail rapid transit, suburban rail, regularly scheduled buses and chartered buses. The use of the bicycle as an alternative mode of travel to recreation areas should be encouraged with proper

planning and facilities. Access to reservations should be limited to controlled points from the major road system.

Acquisition

Fee simple acquisition and conservation restrictions should be the basic methods utilized to implement the proposals set forth in the report.

Wetlands

Those areas defined in state laws and regulations as inland wetlands and coastal wetlands should be publicly regulated through orders of zoning and where necessary, acquired either in fee or under a conservation restriction.

Maximization of Potential

Areas such as power line rights of way, large commercial and public parking lots, ski slopes, watershed lands and water supply areas should be considered for recreation use.

Multiple Use and Water Supply

The multiple use of all existing public open spaces related to water supply areas should be encouraged wherever possible.

In the short term, multiple use of water supply areas should be considered only for the land surrounding the water area. If, in the future, water supply areas are fully treated and it can be shown that water quality will not be adversely impacted, water contact recreation should be considered. In all cases, where watershed or water resource areas are used for recreation purposes they should be supervised by local or state agencies.

Dense Urban Areas

Because of the level of population density and the accompanying lack of open space land, the special needs of densely settled urban areas should be emphasized. Rehabilitation of existing urban parks and playgrounds must be seen as important parts of the regional open space system. In conjunction with this policy, special attention should also be given to those suburban areas under strong development pressure; so that the mismanagement of open space/recreation areas which has occurred in the urban areas will not be repeated in the suburbs.

Private, Charitable and Religious Holdings

Existing private open space which can be classified as a recreationally or ecologically critical area should be included as part of the regional open space plan. If and when resale or reuse of these areas will result in a non-open space and recreation use, owners of these properties should consider the use of conservation restrictions and/or planned unit development zoning in an attempt to maintain the general character of the area.

Gardening

Activities such as gardening should be encouraged by all local and regional groups as a means of educating the citizenry about natural processes, and as a form of recreation that can be enjoyed by many people for minimal costs.

Historic Areas

Historic buildings and locations throughout the region should be protected and integrated with the regional open space plan. The formation of local historic districts under general laws Chapter 40C should be encouraged by all government agencies. Also, the efforts of the Massachusetts Historic Commission should be supported by all local historic groups.

Rehabilitation

In an effort to enhance the urban physical environment, the MAPC supports urban design techniques such as sign laws, architectural review boards, off-street parking and restrictions on outdoor advertising.

Pollution Abatement

In order to meet increasing recreation needs, a program to reduce pollution in inland and coastal waters must be developed. Additional protection measures are necessary along river banks, coastal marshes and harbor fronts.

Maintenance

Strong and effective maintenance programs should be developed at the local, state and regional levels. The regional open space/recreation plan must have appropriate funding from state and local agencies to allow it to maintain

standards of excellence and physical attractiveness.

Watershed Associations

The establishment and further development of private watershed associations with participation of public agencies should be encouraged within each watershed of the region. The associations should work with local, state and federal agencies on all matters affecting water resources in their watershed. Also, they should strive to inform and educate the general public concerning water resources.

The whole watershed is the natural and logical unit for management of water resources. Water removed from and returned to a river or stream should be monitored and controlled by one organization or cooperative group of municipalities.

Dump Sites

All dump and sanitary landfills presently abutting riverfront and wetland areas should be closed as soon as alternative sites can be found; and no new developments of this nature should be allowed on soils associated with a river's 100 year floodplain.

Pollution

Considering that many of the most polluted rivers and ponds are those directly adjacent to the greatest number of potential recreation users, it is imperative that pollution problems be eliminated. It is essential, in most instances, to raise and maintain the standard of quality of the region's water to a general B level of classification. This standard means that the water is suitable for bathing and other water contact sports; acceptable for public water supply with appropriate treatment; suitable for agricultural and certain industrial cooling and process uses; usable as an excellent fish and wildlife habitat; and contributes aesthetic value. It should also be stressed that where A quality water exists, it should be the policies of all agencies and groups to maintain this level of water quality.

Wetland Zoning

Coordinated efforts by the conservation commissions and the planning boards should be initiated on a formal basis in

every community to develop local wetland policies. The major goal of these efforts should be strict wetland zoning amendments for each community in the region where they would apply.

Filling and Dredging

The filling and/or dredging of any wetland should not be allowed unless it can be determined by all levels of government that the action is necessary for the public's health, safety and welfare.

Development

Alterations to wetlands should be designed and monitored so to insure that it will not have adverse ecological impacts on the inland wetland in question. This policy includes the monitoring of run-off and pesticide damage.

Policies for Reservations

The following policy guidelines are intended to apply to all government agencies and private organizations involved in the preservation and expansion of reservations.

Large Areas

The areas considered for reservations, except in heavily urbanized areas, should be large enough to completely insulate the users from the sights, scenes and sounds of development, and to guarantee a predominately natural character within their bounds. In some instances, these areas should be used for active and passive recreation pursuits, but in cases where the area in question is environmentally sensitive, such as a water supply area, wildlife refuge or wetland, recreation use should be limited or not allowed.

Natural Features

The reservation system should incorporate examples of distinctive natural features of the region's topography and cover, i.e., hills, ridges, stands of trees, rock outcroppings, wetlands, streams, and water bodies.

Diversity

When possible, reservations should be acquired that provide a diversity of topographic and other natural features, so that the entire reservation system will be able to provide a variety of recreational experiences.

Capacity for Use

The designed capacity of a reservation for active and passive recreation should be consistent with the ability of the area to withstand use without significantly altering its natural characteristics.

Activities

Reservations should provide a range of those recreational activities that are not usually available in the urban and suburban parks and open spaces, such as horseback riding, hiking, picnicking and contemplative areas.

Intensity of Use

Reservations should be developed to accommodate varying intensities of use. Selected areas on the periphery of the reservations (and not in the center) should be designed to serve large numbers of people involved in active or intensive use recreation, so as to insure that the total impact of the reservation remains distinctly rural or natural.

Local Impact

The impacts (environmental, social, economic, traffic) due to the creation of a reservation in any town should be analyzed before the opening of any new reservation. Also, any action necessary to alleviate any legitimate local problem, such as traffic flow and parking, should be completed before the reservation is opened for public use.

Plan Status

The Metropolitan Area Planning Council is the largest RPA, covering 101 cities and towns with metropolitan Boston as the core, is in the final stages prior to publication of the 1976 edition of the "Open Space and Recreation Plan and Program for Metropolitan Boston" (Volume I). This new version may be considered an update of a viable 1969 plan, but it goes beyond its predecessor in that the area of influence is now 101 cities and towns while previous plans considered 79. The soon-to-be published plan will reflect the expanded number of communities and the plan is a culmination of some three years cooperative effort involving both the staff of the Metropolitan Area Planning Council and a Technical Advisory Committee selected for their expertise in such matters. It is somewhat significant that the former Massachusetts De-

partment of Natural Resources and currently the Massachusetts Department of Environmental Management have, over the past three years been a member of and have provided appropriate contributions to the Technical Advisory Committee associated with the soon-to-be published Open Space and Recreation Plan and Program for Metropolitan Boston.

It is generally considered the MAPC is a leader in Open Space and Outdoor Recreation Planning. Currently, the Council is in the final phase of an expanded River Systems Study. New volumes are being prepared for the Ipswich River System, the North and South Rivers Systems, and the Sudbury, Assabet and Concord Rivers System.

The inventory information contains data appropriate to both public and private recreation areas although it does not include the lesser significant and smaller playground or school areas that serve exclusively local recreation needs.

An appendix denotes state parks, state forests, Metropolitan District Commission land, National Parks, Department of Interior land as well as private ownerships.

The current Open Space plan provides an extensive listing or inventory of sites, indicating acreage in the respective sites.

The soon-to-be published plan will be complete with maps. Prior plans included existing and proposed expressways and other transit modes, as well as intensive and moderate use areas, natural features and historic areas etc. The current plan will not deviate essentially from past procedures.

Standards used to relate supply, demands and needs are, of necessity, somewhat different from other RPA's. MAPC considers 25 acres of regional parks an acceptable figure—and that dependent on the specific locality considered. The figure varies with locality and anticipated demand and needs.

MAPC, which helped immeasurably in formation of the Commonwealth's 1969 plan, relies heavily on its predictions in determining demand. They cite the *Massachusetts 1966 State Comprehensive Outdoor Recreation Plan*, some 5,000 telephone interview survey, attendance at local recreational areas,

etc. — as well as a New England River Basins Commission study — as a basis for determining demand.

MAPC's action plan is oriented to site specific and general areas as contrasted to a 101 city and town situation. They are particularly concerned with four (4) major areas — i.e., Coastal Resources, Fresh Water Resources, Reservations and Urban Needs. A synopsis of policy and action recommendations are detailed in other volumes (i.e., Rivers Systems Studies) this time including the Ipswich River Watershed, the North and South River Watershed and the Sudbury, Assebet and Concord River Watersheds.

In order to implement the action program, the MAPC has a list of criteria by which projects should be measured. Their "bias" is towards areas with regional significance and areas that are relatively unique.

Criteria

1. Regional U.S. local significance
2. Linkage with other open areas
3. Danger of being developed
4. Unique natural features
5. Easily accessible
6. In urban or densely populated areas
7. Historic value
8. Relevance to quantity and quality of fresh water supply
9. Reservation of a unique or attractive vegetation grouping
10. Presence of significant wildlife habitats or populations
11. Consistencies with local, regional and state recreation and open space
12. Are benefits to be derived from proposal consistent with expenditure?
13. Can proposal be properly managed?

Suggest seven implementation techniques:

- a. creation of a Metropolitan Service Commission to unite under single operating agency many of the existing public agencies now serving the MAPC region
- b. urge federal government to increase annual BOR Land & Water Conservation Funding
- c. increase annual funding of state Self-Help Program
- d. state should establish coastline ac-

quisition fund similar to Self-Help Program

- e. local governments should encourage volunteer programs for helping with open space problems and maintenance
- f. all private projects affecting inland or tidal wetlands and all private projects which are one or more acres in size should be required to submit a full environmental assessment form
- g. study the feasibility of utilizing all public right of ways for linear park purposes.

OLD COLONY PLANNING COUNCIL

Goals and Objectives

The Old Colony Planning Council has devised the following goals, objectives and policy recommendations with respect to open space and recreation:

1. To control urban sprawl and to prevent basic conflicts in land uses within communities and at municipal borders.
2. To maintain outstanding physical features and meaningful amounts of open space for the benefit of all.
3. To make use of natural features as the framework of a land use plan.
4. To maintain wetlands for ground water storage, flood control and wildlife habitats.
5. To provide for the primary sources of ground water supply.
6. To distribute equitably recreational and open spaces to inner city as well as suburban areas.
7. To provide both active and passive recreational facilities and to expand those facilities as the need arises.
8. To preserve public rights-of-way along the region's waterways, water bodies, and highways to interconnect these with public greenbelts.
9. To maintain ecological balance by connecting natural features and physical facilities into conservation areas.
10. To coordinate all open spaces and recreation activities with appropriate federal, state, regional, private, quasi-public organizations.

Plan Status

The Old Colony Planning Council prepared an Open Space Plan in June, 1972. Although current plans do not anticipate a near-term updating, specific pieces of information, when available, are "data-banked" for the future. The funding source has been the HUD 701 allocation.

The inventory information available to the Old Colony Planning Council includes both public and private recreation areas. They are identified by towns and the type of recreation facility within the town.

The region, in obtaining relevant data, searched or contacted the National Register of Historic Places, Historic American Buildings Survey, Massachusetts Historical Commission, U.S. Soil Conservation, soil and site studies and maps, Conservation Commission ownerships, potential ownerships, maps, etc.

A large number and type of recreational facilities were surveyed to obtain data for the Open Space and Outdoor Recreation Plan. These included school recreation areas, community facilities, private facilities, public reservations, historic sites, institutional holdings, key agricultural holdings, tot lots, playgrounds, playfields, skating rinks, tennis courts, sailing, canoeing, bicycling, picnicking, golf, hiking, beach areas, swimming pools, camping, horseback riding, winter sports, etc.

Certain portions of the inventory are mapped. Included are: 1. A map of undevelopable land, residential clusters and major water bodies; 2. A map showing public open space, semi-public open space, significant private open space, and cranberry bogs; 3. A map of proposed open space acquisitions.

Standards were considered in relation to supply/demand/need. The Bureau of Outdoor Recreation manuals applicable to the planning council's density served as a guideline. The agency made its own projection looking forward to 1990 population forecasts. Full consideration was given to land considered "unsuitable for development". Qualitative rather than quantitative standards were used for conservation areas.

There is a plan for action which is both site specific and general. In the site specific area some 11 proposed site

acquisition areas are denoted as "first" priority. Certain lands among first priority areas are scheduled for acquisition by the State. The Plymouth County Commissioners suggested that if insufficient acquisitions were made, then the OCPC communities should reach agreement to purchase necessary parcels on a regional basis through the Old Colony Planning Council Open Space Coordinating Committee. The OCPC believed decisions for acquisition according to priorities should be based on future studies in areas such as determining a legal engineering basis for flood plain zoning and finding locations of ground water aquifer to determine which sites would best accommodate future water needs.

The latest edition of the Massachusetts Comprehensive Outdoor Recreation Plan is an important guideline to the OCPC, particularly the section forecasting expanding population in the towns making up the Council's zone of influence and the section listing the recreational activities which are increasing at the fastest rate in terms of desirability among Massachusetts residents. OCPC is alert to and responding to procedures advocated by the Massachusetts Historical Commission and the Historical American Buildings Survey. Additionally, the Council, as is common practice, receives from other similar Planning Agencies in Massachusetts, pertinent information and publications which it uses. The Council cites in particular a portion of the Regional Open Space and Recreational Plan, Central Massachusetts Regional Planning Commission for its helpful information regarding easements.

SOUTHEASTERN REGIONAL PLANNING AND ECONOMIC DEVELOPMENT DISTRICT

Goals and Objectives

The Southeastern Regional Planning and Economic Development District considers the following its goals and objectives related to recreation and open space:

1. To bring each municipality's per capita public open space up to the 1970 regional median, i.e., 75 acres per 1000 population.

2. To assure that recreation and open space are given their proper places as prime land uses.
3. To provide for open spaces and recreation needs of all Massachusetts citizens.
4. To provide programs to insure delivery of outdoor recreation opportunities for handicapped, elderly, disadvantaged, and residents of extremely dense urban areas.
5. To identify and protect unique natural and cultural features.
6. To insure public access to all resources.
7. To promote effective communication and coordination among all levels of government to meet total recreation needs.
8. To establish adequate information programs to publicize outdoor recreation resources within the State.
9. To establish or promote conservation programs and environmental education.
10. To work in coordinated manner to meet recreation needs of citizens; involving them in planning, development and administration of open space programs.
11. To research special needs in recreation and develop standards criteria and programs to meet needs.

Plan Status

The Recreation and Open Space Plan prepared by the Southeastern Regional Planning and Economic Development District was completed in March, 1972. It is considered primarily as an analysis of needs and demands and it sets targets for open space acquisitions for communities. Although at the present time there are no firm plans for a complete updating, certain information is recorded and mapped and will be used at the time of the update.

Funding sources cited by the District include HUD 701, The Economic Development Administration (Department of Commerce) and The Public Works and Economic Development Act of 1965. The Massachusetts Self-Help program and Federal funding through the Bureau of Outdoor Recreation are the main sources of funding for present open space and recreation projects.

The District inventory includes both public recreation areas and private recreation areas. Material is organized and

listed by site under each town. Inventories are updated in conjunction with other planning activities such as water quality and coastal zone planning. Earlier inventory data relied rather heavily on material gathered jointly with assistance from the Department of Natural Resources. The inventory did not include quantified data on type of facility, except as implicit in the ownership data or location (e.g., beach).

The recreation facilities surveyed are classified according to ownership type. Types included are: municipal control, town parks, school sites, Conservation Commission lands, town forests, Municipal Water Department lands, State forests and parks, other state controlled lands, federal lands, private recreation, and private non-recreation.

Consideration was given to recreational opportunities associated with such things as: swimming, boating and fishing, waterskiing, camping, picnicking, outdoor sports and games, hunting, hiking and horseback riding, winter sports, sightseeing, pleasure driving, public water supply, wetlands, flood plains, forest lands, rural land, service areas.

Several sources have been used to determine standards applicable to the District's supply, demand, and needs. Sources cited include:

1. American Society of Planning Officials, *Standards for Outdoor Recreation Areas*, Report No. 194, Planning Advisory Service, Chicago, January, 1965
2. Mass. SCORP, 1966
3. Outdoor Recreation Resources Review Commission, *Public Outdoor Recreation Areas - Acreage, Use, Potential*, ORRRC Study Report 1, Washington D.C., 1962; ORRRC Study Report 26: *Prospective Demand for Outdoor Recreation*, 1962, Washington D.C.; ORRRC Study Report 20: *Participation in Outdoor Recreation Factors Affecting Demand Among American Adults*, 1962, Washington, D.C.
4. Bureau of the Census, *Projected Family Income Data*
5. SRPEDD, *Average Activity Days Per Person in SRPEDD Region*, 1970, 1980, 1990.

Additionally the District considered the following standards for recreational pursuits:

Swimming: 100 persons/acre of beach, buffer zone and parking
 Boating and Fishing: 40 persons/acre for land facilities
 Water Skiing: 1 person/acre
 Camping: 15 persons/ (sites at 75 ft. intervals)
 Picnicking: 40 persons/acre
 Outdoor Sports and Games: 35 persons/acre

The action plan is site specific, town specific and general in scope. Action plan priorities are described as follows:

1st priority: provision of adequate recreational facilities for all densely populated neighborhoods.

2nd priority: dispersion of open spaces to provide each neighborhood with convenient recreational facilities, especially for those with limited transportation resources (i.e., the young and the elderly).

Recommended development programs address projected severe open space deficiencies in Bristol County adjacent to major urban regional centers, unique natural features vulnerable to development pressures, and densely populated urban neighborhoods.

Other than more comprehensive planning efforts, open space and recreation planning has not received high priority at this agency recently. This reflects, in part, the elimination of the Open Space Certification requirement by HUD. The agency has however assisted communities in the region in local open space and recreation planning in regard to local master plans and categorical and block grant applications. During a recent 24 man/month span spent on Municipal Assistance the District estimated that 10% of the assistance to the local communities was devoted to recreation and open space planning.

CAPE COD PLANNING AND ECONOMIC DEVELOPMENT COMMISSION

Goals and Objectives

Goals and objectives related to recreation and open space planning expressed by the Cape Cod Planning and Economic Development Commission are:

1. To support multiple uses of land without conflicting with the preservation of wildlife and open space.
2. To protect wetlands in their natural state in order to preserve the rural seaside atmosphere and wildlife habitat on the Cape and to protect the marine environment.

Plan Status

In mid 1970 the Cape Cod Planning and Economic Development Commission prepared "An Inventory of Existing Public and Semi-Public Open Space and Recreation Areas". The inventory is updated annually. Other notations are made frequently and maps are kept reasonably current. The inventory is considered as a part of the Commission's comprehensive planning and economic development program. At the present time there are no plans to expand the inventory into a more specific outdoor recreation and open space plan. The Commission's work has been funded through HUD and local sources.

Inventory information includes both public recreation areas and private recreation areas. The inventory is organized by towns and within the town by the type of recreational facility. The inventory indicates the number of each type of facility in the regional planning area, the number of acres of each facility, and the type and location of the respective areas.

Included among the recreation facilities surveyed are parks, playfields, pools, camping facilities, school complexes, cemeteries, forests, wildlife and fishing management areas, conservation areas, golf courses, camps, beaches, boat ramps, and landings, watershed areas, rod and gun clubs, riding stables.

The Commission's report includes maps showing state, federal, local and private conservation land, golf courses, marinas, beaches, forests, parks, playgrounds, schools, camps, cemeteries and wildlife reserves for six quadrants within the regional planning area. These maps are used for display purposes, and are suitable for mailing purposes.

Inventory data sources uses include:

1. Lists of tax-exempt property as shown in town files.
2. Chamber of Commerce records.

3. Conservation Commission records.
4. Personal field surveys with town officials and Coastal Zone Management advisory committee.
5. Existing land use maps.

The Commission's consideration of recreational demand and need relies on a traffic survey conducted by the Massachusetts Department of Public Works which indicates the place of origin of Cape Cod visitors, the types of recreation sought, and the intended destination on the Cape.

The Commission recently has been active on some other phases of outdoor recreation and open space planning and currently, is working with State personnel concerned with Coastal Zone Management. The Commission has also prepared an analysis of vacant land which considers the rate of consumption of such land on the Cape.

MARTHA'S VINEYARD COMMISSION

Goals and Objectives

The Martha's Vineyard Commission considers the following among its goals and objectives related to recreation and open space:

1. To encourage a carefully controlled development which respects and complements the natural landscape and ecology.
2. To endorse and aid efforts to preserve the pattern of open spaces punctuated by uniquely differing villages.
3. To work to eliminate or prevent all sources of water pollution, including the prohibition of development in areas of fragile ecology, such as wetlands, steep slopes, cliffs, beaches and dunes and any other types of delicate land or waterscape.
4. To minimize visual pollution both in the natural and man-made landscape.
5. To protect and preserve the habitats of both land and marine wildlife.
6. To actively urge the creation and/or improvement of both passive and active public and private recreational facilities, as a means of serv-

ing both year-round and summer residents.

7. To establish the fiscal and environmental costs and benefits generated by the coming of additional persons in all categories, including new year-round residents, seasonal home-owners, full summer visitors, short-term transient visitors and "day trippers".
8. To define to the most specific degree possible areas with fragile, natural resources where development should be minimized or prohibited, including important aquatic and terrestrial wildlife habitats.
9. To survey, assess and take needed steps to help preserve both natural and man-made scenic and aesthetic resources.
10. To monitor sources of water and air pollution and institute remedial actions aimed toward a regional policy for combating all sources of environmental toxification.

Plan Status

The Martha's Vineyard Commission has been functioning as such for only a relatively short time during which it has been carrying on the work of the Dukes County Planning and Economic Commission. There exists a 1973 Recreation and Open Space Plan applicable to Martha's Vineyard which is reasonably current. At the present time there are no firm plans for updating the report; however as data becomes antiquated or new data surfaces, notes are made for future use.

Within the recent past, the Martha's Vineyard Commission has prepared position papers related to the area. These include "Goals for the Martha's Vineyard Commission", April 10, 1975, which discusses growth and change on the Vineyard; and "Martha's Vineyard Commission Policies to be Used in Considering Development Proposals Whose Impacts are of a Regional Nature", June 5, 1975, which outlines in some detail constraints on development and the desire to preserve a rural environment.

Other papers which have been prepared by the Commission are: "Natural Scientific and Ecological Resources"; "Economic Development"; "Cultural and Historic Resources"; "Social Services and General Welfare".

NANTUCKET PLANNING AND ECONOMIC DEVELOPMENT COMMISSION

Goals and Objectives

The Nantucket Planning and Economic Development Commission cites the following among its goals and objectives related to recreation and open space:

1. To monitor, on a continuing basis, the quality and quantity of the Island's unique natural and man-made environment through a regular updating of Nantucket's Environmental Quality (EQ) Study.
2. To plan and recommend land use control and other measures for areas of critical planning concerns such as: wetlands, moors, flood prone areas, wildlife areas, scenic areas, dunes and beaches, woodlands, aquifer recharge areas, agricultural land, and land susceptible to soil transport.
3. To develop an Action Program for acquisition, development and management of significant conservation/recreation areas, particularly areas of critical planning concern.
4. To administer the Massachusetts Wetlands Protection Act, as amended.
5. To provide for balanced opportunity for passive and active recreation which would include the needs of all ages, geographic areas and socio-economic groups.
6. To provide suitable public access to certain key water resources on the Island.
7. To establish and maintain an active conservation/recreation education program through work with the media, local schools and individuals in the community.
8. To periodically revise goals and objectives for conservation/recreation.
9. To identify, evaluate and develop management strategies for dealing effectively with Nantucket's unique natural environment while providing for reasonable expansion of the man-made environment, including recreational uses, in areas suitable therefor.

Plan Status

During the past year the Nantucket

Planning and Economic Development Commission prepared a "1974 Residential Growth Impact Study" and completed a series of eight Environmental Quality maps. These maps include: Agricultural Land; Municipal Water; Recreation Land; Recreation Water; Urban Land; Wildlife Land; Wildlife Wetland; and Woodland. The Commission has also prepared a map of flood prone areas and a series of ten interpretive soils maps.

Currently, the Commission is working on a policy statement concerning growth goals and objectives to be discussed and presented at the town meeting.

