Appendix E
Visitor Capacity Analysis

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Shoreline II Project Visitor Capacity Analysis

Hoonah, Juneau, and Sitka Ranger Districts and Admiralty National Monument

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Introduction

This document updates the 2001 visitor capacity analysis developed for the one-half mile shoreline zone of Juneau, Hoonah, and Sitka Ranger Districts and Admiralty National Monument (USDA Forest Service 2001). This update incorporates current information about recreation use within the analysis area, integrates changes that have occurred since 2001 (e.g., 2008 Forest Plan revision), draws from the latest information on visitor capacity methodologies, and learns from other recent Tongass visitor capacity examples. The intent of this document is also to provide rationale to guide decision-making for allocating outfitter/guide use. Therefore, variables used in this analysis (e.g., season dates and group size) were based on current guided use information. Capacities were developed in a manner that will facilitate outfitter/guide permit administration on the Juneau, Hoonah, and Sitka Ranger Districts and Admiralty National Monument; and results of this analysis will be used in a revision of the 2004 Shoreline Outfitter/Guide decision.

In addition to helping with allocation decisions within the guided and unguided sectors, visitor capacities also provide predictability for local businesses and communities, help assess when recreation demand may warrant an expansion of current supply, and can serve as a trigger for increased, area-specific management attention (Haas 2002). This analysis will allow managers to continue to accommodate an economically viable outfitter and guide industry while maintaining the integrity of forest resources to the benefit of all users.

Forest Service regulations and policy do not define what is meant by visitor capacity or prescribe a specific method for estimating a numerical capacity. Forest Service outfitting and guiding policy includes the following direction:

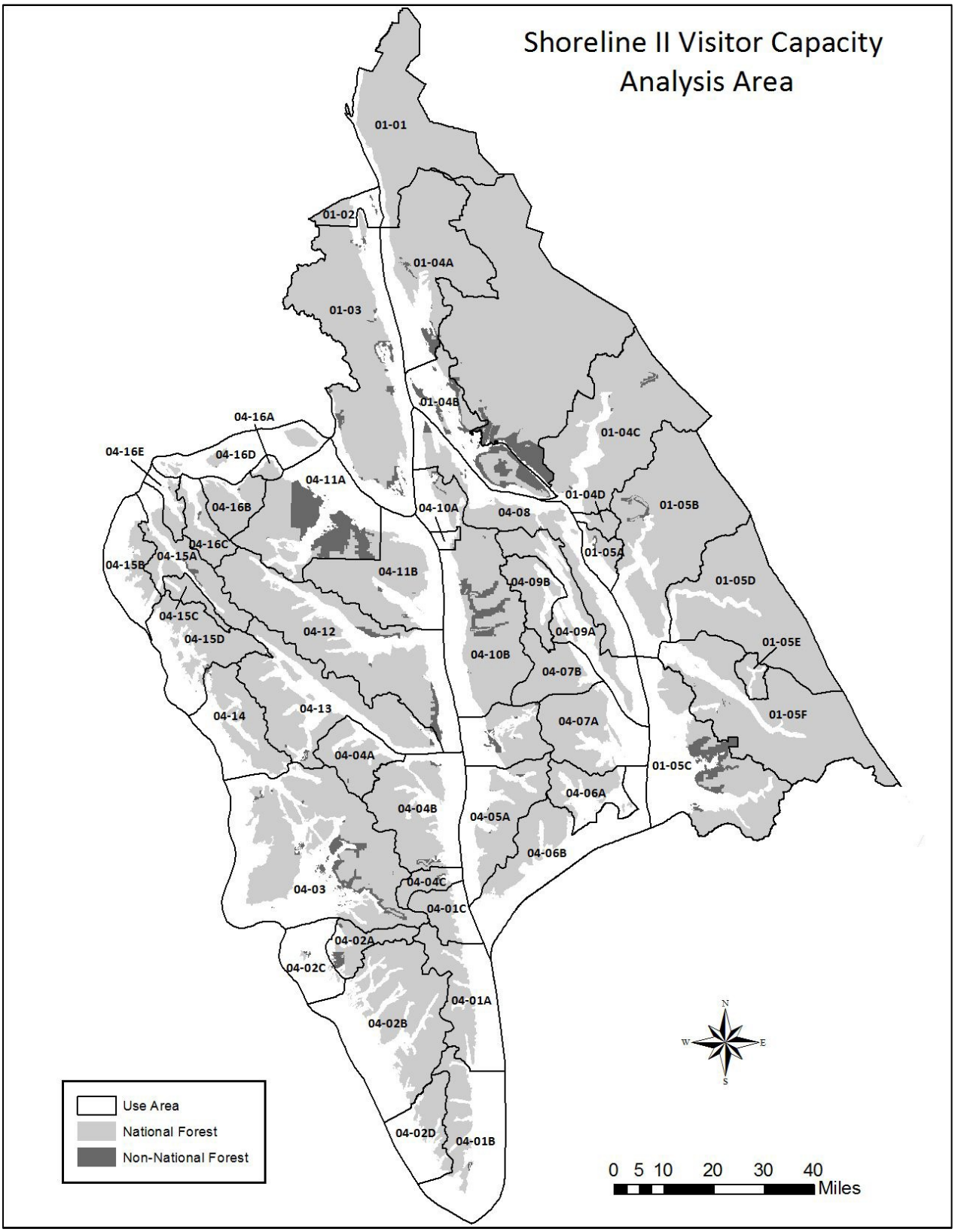
"When monitoring demonstrates that impacts associated with use may exceed desired conditions, conduct a resource capacity analysis to assess the amount of use and types of activities that may be conducted without detrimental environmental and associated impacts." (FSH 2709.14 part 53.1f(2)).

Monitoring indicates that although a high amount of use is concentrated in a few areas and locations, existing use levels are generally low and can be accommodated without causing unacceptable impacts to the environment or visitor experience. There is an advantage to addressing visitor capacity proactively, however, before impacts become unacceptable or conflict develops among stakeholders (Haas 2002, Whitaker et al. 2010).

It is important to note that a visitor capacity, in and of itself, does not imply any management action to limit or encourage use. Capacity is one component of a management prescription that also includes management objectives, desired future conditions, resource condition standards, and a plan for monitoring (Stankey and Manning 1986).
While visitor capacities can inform decisions and commitments, they are not themselves commitments (Whitaker et al. 2010).

Visitor capacities will be reviewed periodically to ensure that assumptions made about recreation use trends and impacts still apply, and to incorporate new science, information, policies, trends, plans and other circumstances of importance. If monitoring indicates that the visitor capacities identified in this analysis are incompatible with the desired social conditions or resource conditions identified in the Tongass National Forest Land and Resource Management Plan (USDA Forest Service 2008), then capacities will be adjusted accordingly.

Figure E-1. Shoreline II Visitor Capacity Analysis Area.



Analysis Area

The analysis area comprises National Forest System lands within the Juneau, Hoonah, and Sitka Ranger Districts and Admiralty National Monument; it does not include State, Native, or private lands within or adjacent to the National Forest. The original analysis divided the analysis area into 37 Use Areas to facilitate capacity development. These Use Areas were reviewed and modified to gain administrative efficiencies (e.g., original Use Area overlapped Ranger Districts, the new Use Area is split at the district boundary) and to resolve conflicting resource management goals (e.g., original Use Areas combined designated wilderness and non-wilderness lands, several of the new Use Areas separate designated wilderness lands and non-wilderness lands to allow for a more targeted approach to capacity within those areas). Changes in use patterns also resulted in modifying Use Areas, as well as the additions of the Cross-Admiralty Canoe Route and the Pack Creek Zoological Area (excluding summer season). Modifications resulted in a total of 48 Use Areas (Figure 1). Two Use Areas (04-05B Mitchell Bay and 01-04E Juneau Icefields) continue to be excluded from the analysis area. Mitchell Bay is being analyzed separately, and the Juneau Icefields are outside the scope of this analysis.

Scope of Analysis

The focus of this analysis is on non-motorized land-based activities that originate from the marine shoreline. Recreationists traveling by boat (e.g., sightseeing, fishing) or anchored on the saltwater who do not set foot on the National Forest are not considered in the visitor capacity figures.

Visitor Capacity Methodology

There is no established methodology in Forest Service policy for developing numerical visitor capacities (Cole and Carlson 2010). There is some level of uncertainty in describing and analyzing recreational use. Due to conditions varying from weather to wildlife sightings to the state of financial markets, the location, type, and amount of recreational use in any area changes irregularly, which makes calculating capacity difficult. Different Forest Service districts have used different approaches to setting visitor capacity and allocating between guided and unguided visitors, each district determines what fits best for their area.

Visitor Capacity Definition

The 2004 Shoreline Outfitter/Guide decision defined recreation capacity as “the number of recreation users that can be accommodated in a given area without loss of the quality of the natural environment and/or the visitor experience” (USDA Forest Service, 2004, Appendix F, p. 10). This definition has not changed for this update; however, the terminology has been changed from “recreation” to “visitor” capacity in keeping with current thinking regarding capacity analysis (Cole and Carlson 2010). It should also be noted that visitor capacity is an ***administrative decision*** about a ***reasonable number*** of recreation opportunities that will be managed for, which is consistent with and helps achieve the full management prescription for an area (Whittaker et al. 2010).

Types of Visitor Capacity

In the past, multiple capacities were developed based on physical, facility, ecological, and social resources. Current thinking suggests that managers take a more holistic approach to developing a

numerical visitor capacity (Cole and Carlson, 2010). Visitor capacity has both environmental and social dimensions. Visitor use can affect biophysical resources such as soils, vegetation, water, and wildlife, and it can degrade the quality of visitor experiences through crowding, conflicting uses, or aesthetic effects on the environment (Whittaker et al. 2010). Unfortunately, there is a lack of baseline information about both the natural environment in and around recreational use sites and the environmental impacts of recreational use in the analysis area. Even if there was additional information available, scientists agree that the relationship between visitor use and impacts is often weak (Haas 2007) and poorly understood. Integrating resource and social information into visitor capacity decision-making has always been a challenge for managers and researchers (Newman et al. 2001).

One way that managers can address these challenges is by identifying which resources are most likely to be at risk with high levels of visitor use (Cole and Carlson 2010). For this analysis, the social experience has been determined to be the most limiting factor (meaning that visitor experiences suffer from crowding before the natural resource suffers impacts) to determine the appropriate recreation capacity levels in the analysis area, which is consistent with the 2004 Shoreline Outfitter/Guide analysis and other outfitter/guide capacity analyses on the Tongass.

Calculating Shoreline II Visitor Capacity

The Juneau, Hoonah, and Sitka Ranger Districts and Admiralty National Monument chose a methodology that is **simple** in concept and is **repeatable** to facilitate future capacity updates, as needed. In contrast to the 2001 analysis, visitor service day was chosen as the unit of measure rather than groups-at-one-time. This change will allow more accurate translation to the outfitter/guide permitting process, which authorizes commercial use in service days. A service day is defined as "a day or any part of a day on National Forest System lands for which an outfitter or guide provides services to a client" (FSH 2709.14 part 53.1e).

The formula:

Visitor Capacity = # of capacity locations x # of days in season x average

Capacity Locations

These are defined as locations used to calculate visitor capacities and were identified based on information gathered on current recreational use patterns. The following describes the process used to determine the number of Capacity Locations within each Use Area.

Step 1. A dataset was compiled of known recreation use sites within the analysis area from the following sources:

a. Tongass Outfitter and Guide Database[1] for all known locations used by guides within the analysis
area.
b. Outfitter/guides were asked at annual meetings and information worksheet mailings.
c. The general public was queried using public meetings, information worksheets, newspaper advertisements, radio interviews, and in-person contacts in the field.
d. Forest Service staff was asked at district IDT meetings and informal conversations.

e. Field monitoring was conducted by Forest Service staff, contractors, partners, and volunteers during the summer seasons in 2011, 2012, and 2013.
f. Internal recreation site databases (INFRA Wild and Recreation Use Site GIS layer).

Step 2. Recreation use sites were then grouped together and considered a single location to eliminate double counting of sites that were identified in more than one of the processes listed above. Sites were also grouped together to integrate Recreation Opportunity Spectrum (ROS) social experience standards identified in the Forest Plan Land Use Designations (LUD). Grouping was done using the following criteria:

a. Sites within sight or sound of each other.
b. Sites that met proximity guidelines.

Proximity Guidelines

Three LUD/ROS categories were identified for grouping sites; buffer distances were developed for each based on the ROS Remoteness setting standards in the Forest Plan:

i. Wilderness LUD (Primitive ROS Class with site-specific exceptions): 3-mile buffer for all seasons.
ii. Non-Wilderness LUD (Primitive, Semi-Primitive Non-Motorized, and Semi-Primitive Motorized ROS Classes): 1-mile buffer for summer season; 2-mile buffer for fall-winter- spring seasons.
iii. Non-Wilderness LUD (Roaded Natural, Roaded Modified, and Rural ROS Classes): ½-mile buffer for summer season; 1-mile buffer for fall-winter-spring seasons.

[1] The Tongass Outfitter and Guide Database is used to record and track information about actual guided use across the Tongass National Forest. Use information is submitted annually by outfitters and guides and includes specific data about location, date of use, activity, group size, and duration of stay. Information submitted for use between 2004 and 2012 was included in this analysis.

Wilderness LUD

The Wilderness Act of 1964 establishes standards that must be met when determining the capacity for commercial use in designated wilderness. The law mandates the preservation of wilderness character and that wilderness character must be upheld for any uses for which wilderness is administered. The legal definition of wilderness defines hallmark qualities of wilderness: natural, undeveloped, untrammeled and outstanding opportunities for solitude or a primitive and unconfined type of recreation. The law also checks unwilding agents, prohibiting commercial enterprise with a conditional and optional allowance for limited commercial services.

Commercial use can only be authorized to the extent that it does not impair wilderness character. Since this analysis is focusing on the social experience as the limiting factor, this means that Outstanding Opportunities for Solitude is the most sensitive indicator for wilderness character and that protecting it should ensure that the other qualities fare well. In order to uphold Outstanding Opportunities for Solitude in wilderness, this analysis applies a three-mile buffer around recreation use sites, for all seasons, to provide adequate spacing between groups. Three miles is used as the buffer distance because:

- It represents the ROS Remoteness setting standard of being beyond the sights and sounds of other human activity.
- It is the approximate distance at which kayaking groups lose sight of one another (David

Burch, Fundamentals of Kayak Navigation); kayaking is a common wilderness recreation experience sought within and/or adjacent to the analysis area.

In providing an optional and conditional allowance for commercial services, the Wilderness Act authorizes such uses "to the extent necessary." Visitor capacity and commercial allocation can be framed quantitatively (how many), spatially (where) and temporally (when) and these parameters must be applied to ensure that any commercial authorization only occurs to the extent necessary.

This analysis establishes overall recreation visitor capacity across the analysis area. Wilderness Commercial Needs Assessments were completed for all six wilderness areas within the analysis area and are additionally used as a basis for this capacity analysis (USDA Forest Service, 2014a-d and 2013). This analysis further applies the extent necessary parameters to visitor capacity by using the three-mile buffer zones for focal locations within Use Areas. The extent necessary will also be taken into account in ascribing use levels in the next phase of the Shoreline II project (environmental analysis) by assessing the relationship between management goals, resource concerns, historic commercial use levels and capacity determinations.

More refined extent necessary measures should be considered at local administrative levels, such as environmental assessments, prospectus competitive bid processes and permit authorizations. Additional quantitative, spatial and temporal considerations could include prohibiting commercial use in areas popular for local or subsistence use, limiting commercial numbers during times of high local use such as holidays or opening days of hunting/fishing seasons and further limiting commercial allocation numbers should such use impact wilderness character before Shoreline II maximum allocation levels are reached.

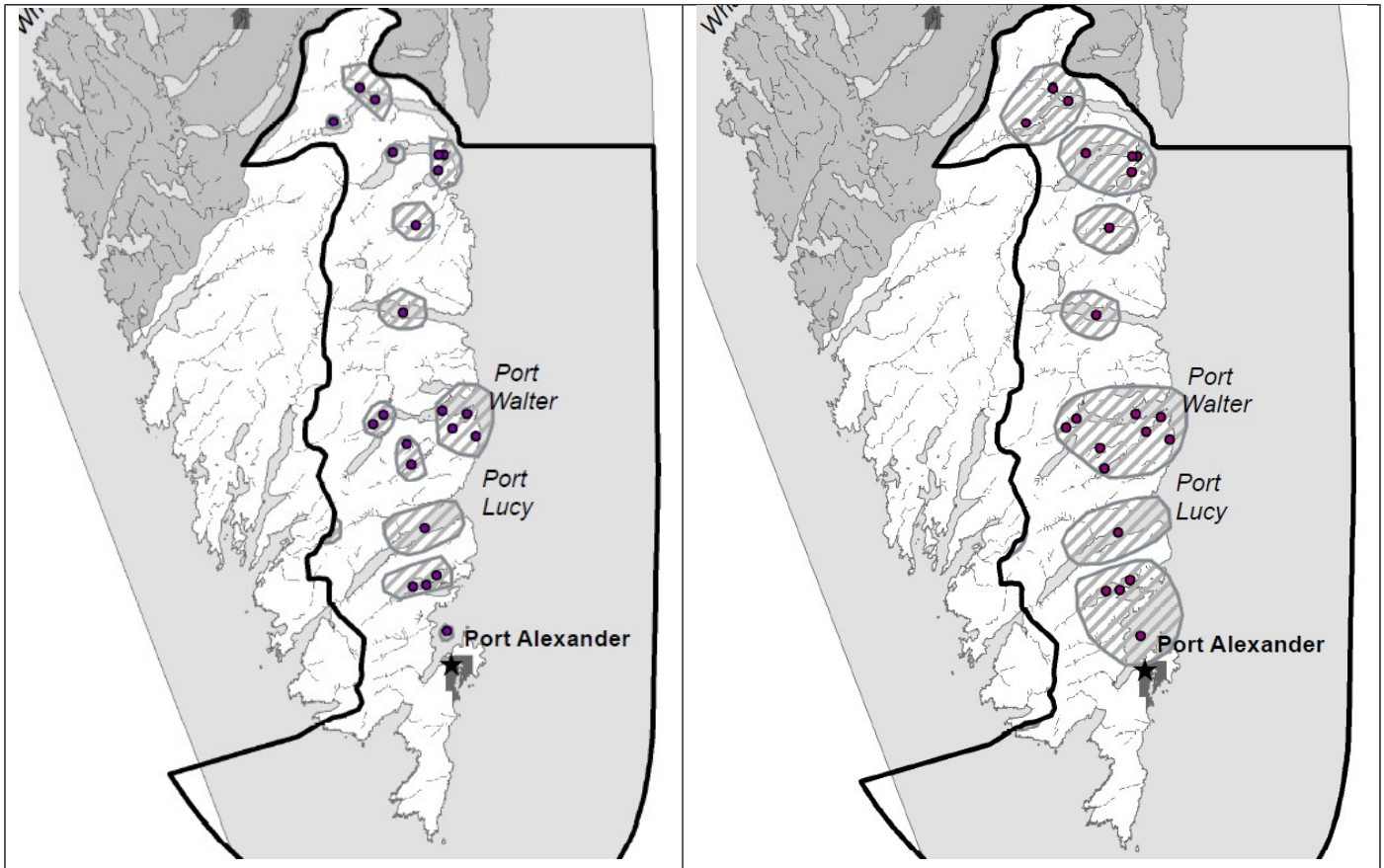
Non-Wilderness LUDs

The ROS Remoteness setting standard for the more developed LUD category (Roaded Natural to Rural) has the expectation of being <u>within one-half mile or less</u> of human activity. The standard for the less developed Non- Wilderness LUD category (Semi-Primitive to Primitive) has the expectation of being <u>no closer than one-half mile</u> (depending on terrain) to human activity. One-half mile was used as a starting point for the more developed LUD for the summer season buffer distance; this was then doubled to one mile for the Semi-Primitive to Primitive category for the summer season to take into account the more remote setting expectations.

For the fall-winter-spring seasons, the buffer sizes were doubled based on the general assumption that parties recreating in the "off-season" have the expectation of fewer encounters with other parties. The larger buffers during the fall, winter, and spring seasons encompassed more sites (grouping more sites together), which translates into a smaller total number of Capacity Locations. This in turn, results in a lower overall visitor capacity. Figure 2 illustrates the difference between the seasons after sites were grouped.

Appendix A provides a map for each Use Area for the summer and fall-winter-spring seasons that illustrate Capacity Locations.

Figure E-2. Example of site grouping between the summer and fall-winter-spring seasons.



Summer Season = 12 Capacity Locations | Fall-Winter-Spring Seasons = 7 Capacity Locations

Seasons

This variable was defined as the number of calendar days in each season. Dates of each season were determined by the 2004 Shoreline Outfitter/Guide decision with some modifications based on current use patterns. Seasons were defined as follows and Table 1 lists the actual tally of days for each Use Area:

1. **Spring: March 15 to May 20/May 31**. Season start date was extended to earlier in the year to accommodate demand for guided activities and align with the start of brown bear hunting season. There was no change to the season end dates, which are determined by the brown bear hunting season closure.
2. **Summer: May 21/June 1 to September 14**. Season start date for each Use Area was determined by the brown bear hunting season closure. There is no change in summer dates from the 2004 decision.
3. **Fall: September 15 to December 31**. There was no change to the season start date. Season end date was extended to accommodate demand for guide activities and align with the brown bear hunting season closure.
4. **Winter: January 1 to March 14**. Although not included in the 2004 decision, a winter season was included in this analysis to provide opportunities for winter guiding. There is currently a limited demand for guide activities in the winter season.

Average Group Size

This was determined for each Use Area using current actual use data from the Tongass Outfitter and Guide Database for each season. A five year average was calculated based on data from 2008-2012. For those Use Areas that adequate data did not exist, the average across all Use Areas for the pertinent season was used. For the purposes of this analysis, adequate data was defined as 20 or more groups using the area during the five year period; and use occurred at least three out of the five years. In a few cases where there was lack of data, the adjacent use area average was determined more representative of the use patterns and was used in lieu of the project-wide seasonal average. For example, 04-15B and 04-15C in the West Chichagof-Yakobi Wilderness receives little use in the summer season. The adjacent use area (04-15D), which also encompasses wilderness lands, receives enough use to generate an average group size of 4.7. Rather than using the project-wide summer average of 6.8, the lower average group size was used.

Considerations and Assumptions

The decision to include known recreation use sites in the analysis, versus all accessible acreage, is consistent with the definition of visitor capacity as a “reasonable use level” for Forest Plan standards and guidelines. The decision is based on the assumption that certain locations are attractive to visitors because of the types of recreation opportunities available (e.g. salmon streams for fishing, hiking trails, camping locations, and public use cabins), ease of access, and unique scenic qualities. Large portions of the district are inaccessible and/or less desirable for recreational use, which tends to be concentrated over time (e.g. during a particular hunting or fishing season) and space, rather than evenly distributed.

This analysis is based on the assumption that recreation activities and impacts will continue to be concentrated in areas where access is feasible and desirable recreational opportunities exist (e.g. fishing and hunting). A calculation of visitor capacity based on overall acreage of the Use Area may exceed the “reasonable use level” that can be accommodated without unacceptable

impacts to resources, wilderness character, and visitor experiences in the areas of actual use. It is important to note that when this capacity analysis is revisited, additional monitoring information will be available and new capacity locations may be included or excluded based on changes in guided and unguided use and impacts, and Forest Service policies.

For each Use Area, the number of Capacity Locations was multiplied by the number of days in each season to calculate visitor capacity in groups. In order to calculate visitor capacity in number of visitor service days, which is the unit used in outfitter and guide permit administration, the capacity expressed as the number of groups was multiplied by average guided group size for each Use Area.

The decision to use average guided group size was based on the following considerations and assumptions:

- Little information exists about the size of unguided groups visiting the analysis area, and monitoring and experience show that guided and unguided group sizes tend to be similar.
- Similar types of guided and unguided activities occur in many areas. Guided and unguided visitors are drawn to similar areas for similar experiences and unguided group sizes are determined by the type of activity and experience being sought by the visitor.

The visitor capacity calculation is based on the conservative assumption that only one group can be accommodated at each Capacity Location each day during the season. In reality, a location may be able to accommodate several groups in one day without negative impacts to visitor experience. For example, a group may spend two hours hiking a trail in the morning and then depart, and other groups may arrive to hike the trail throughout the remainder of the same day. Conversely, the visitor capacity calculation is also based on the assumption that each location can be used each day of the spring, summer, fall, and winter seasons. In reality, many locations are not used regularly; factors such as weather, snow cover, and availability of desired recreation opportunities (e.g., fish runs) influence the amount of use that occurs, or does not occur, in a particular location each day. As a result, a balance is created by including both liberal and conservative assumptions in the visitor capacity calculations. The formula described results in a ***reasonable*** number of people that can be accommodated in a given Use Area and season, without detriment to the resource or visitor experience.

Shoreline II Visitor Capacities

The following table lists the visitor capacity estimates (expressed in service days) for the analysis area based on the new Use Areas. The Use Areas with designated wilderness are shaded in the table below.

Table E-1. Visitor capacity estimates for the Juneau, Hoonah, and Sitka Ranger Districts and Admiralty National Monument.

Use Area	# of Capacity Locations Fall-Winter-Spring	# of Capacity Locations Summer	Spring (March 15 – May 20 or 31)			Summer (May 21 or June 1– Sept 14)			Fall (Sept 15 – Dec 31)			Winter (Jan 1 – March 14)		
			# of Calendar Days	Avg. Group Size	Visitor Capacity	# of Calendar Days	Avg. Group Size	Visitor Capacity	# of Calendar Days	Avg. Group Size	Visitor Capacity	# of Calendar Days	Avg. Group Size	Visitor Capacity
01-01	6	7	78	4.0	1,872	106	6.0	4,452	108	4.0	2,592	73	4.0	1,752
01-02	2	3	78	2.0	312	106	4.0	1,272	108	2.0	432	73	2.0	292
01-03	9	13	78	3.1	2,206	106	5.4	7,472	108	3.2	3,110	73	3.2	2,102
01-04A	3	4	78	4.3	1,006	106	6.8	2,886	108	3.2	1,037	73	3.2	701
01-04B	4	8	78	4.3	1,342	106	8.9	7,516	108	3.2	1,382	73	3.2	934
01-04C	10	16	78	4.3	3,354	106	6.8	11,533	108	3.2	3,456	73	3.2	2,336
01-04D	1	1	78	4.3	335	106	5.8	617	108	3.2	346	73	3.2	234
01-05A	1	2	78	4.8	373	106	5.7	1,200	108	3.2	346	73	3.2	234
01-05B	10	20	78	8.8	6,864	106	12.1	25,652	108	3.2	3,456	73	3.2	2,336
01-05C	9	19	78	6.0	4,212	106	11.4	22,960	108	3.2	3,110	73	3.2	2,102
01-05D	3	3	78	4.3	1,006	106	6.8	2,162	108	3.6	1,168	73	3.2	701
01-05E	2	2	78	4.3	671	106	7.2	1,526	108	3.2	691	73	3.2	467
01-05F	7	7	78	4.7	2,540	106	8.2	6,119	108	2.0	1,512	73	3.2	1,635
04-01A	5	5	78	4.6	1,785	106	6.0	3,199	108	2.5	1,362	73	3.2	1,168
04-01B	7	12	78	5.7	3,125	106	6.3	7,950	108	3.2	2,419	73	3.2	1,635
04-01C	3	4	67	4.3	864	117	6.8	3,182	108	3.2	1,037	73	3.2	701
04-02A	6	12	78	4.3	2,012	106	10.4	14,602	108	3.2	2,074	73	3.2	1,402
04-02B	14	14	78	3.3	3,572	106	3.9	5,829	108	1.7	2,576	73	3.2	3,270

04-02C	6	13	78	4.3	2,012	106	6.8	9,370	108	3.2	2,074	73	3.2	1,402
04-02D	7	11	78	2.5	1,340	106	3.6	4,172	108	3.2	2,419	73	3.2	1,635
04-03	33	50	78	4.8	12,355	106	5.6	29,680	108	3.7	13,187	73	3.2	7,709
04-04A	4	8	67	4.3	1,152	117	11.4	10,670	108	3.2	1,382	73	3.2	934
o4-04B	10	22	67	4.3	2,881	117	10.3	26,512	108	3.9	4,253	73	3.2	2,336
04-04C	1	4	67	4.3	288	117	3.6	1,675	108	3.2	346	73	3.2	234
04-05A	5	5	67	2.0	660	117	4.1	2,425	108	3.2	1,728	73	3.2	1,168
04-06A	4	4	67	3.8	1,018	117	7.2	3,370	108	3.2	1,382	73	3.2	934
04-06B	4	4	67	3.8	1,011	117	7.3	3,436	108	3.2	1,382	73	3.2	934
04-07A	4	4	67	4.3	1,152	117	5.9	2,765	108	3.2	1,382	73	3.2	934
04-07B	5	5	67	4.3	1,452	117	5.2	3,036	108	3.2	1,728	73	3.2	1,168
04-08	8	8	67	4.3	2,305	117	6.8	6,365	108	3.2	2,765	73	3.2	1,869
04-09A	5	5	67	4.3	1,441	117	6.8	3,978	108	3.2	1,728	73	3.2	1,168
04-09B	5	*	67	4.3	1,441	*	*	*	108	3.2	1,728	73	3.2	1,168
04-10A	1	1	67	4.3	288	117	8.5	999	108	5.3	572	73	3.2	234
04-10B	11	12	67	4.3	3,169	117	4.0	5,148	108	3.2	3,802	73	3.2	2,570
04-11A	8	12	67	4.3	2,305	117	5.4	7,582	108	3.2	2,765	73	3.2	1,869
04-11B	8	13	67	4.3	2,305	117	6.5	9,887	108	11.0	9,504	73	3.2	1,869
04-12	12	20	67	2.0	1,608	117	4.3	9,954	108	3.2	4,147	73	3.2	2,803
04-13	14	24	67	4.3	4,033	117	7.2	20,218	108	2.9	4,385	73	3.2	3,270
04-14	7	7	78	2.3	1,245	106	4.2	3,145	108	3.2	2,419	73	3.2	1,635
04-15A	10	17	78	4.3	3,354	106	2.6	4,755	108	3.2	3,456	73	3.2	2,336
04-15B	9	9	78	4.3	3,019	106	4.7	4,484	108	3.2	3,110	73	3.2	2,102
04-15C	3	3	78	4.3	1,006	106	4.7	1,495	108	3.2	1,037	73	3.2	701
04-15D	7	7	78	4.3	2,348	106	4.7	3,487	108	3.2	2,419	73	3.2	1,635
04-16A	4	7	78	4.3	1,342	106	4.9	3,650	108	3.2	1,382	73	3.2	934
04-16B	5	10	78	2.1	814	106	4.6	4,888	108	3.2	1,728	73	3.2	1,168
04-16C	6	9	78	11.7	5,476	106	11.0	10,494	108	3.2	2,074	73	3.2	1,402
04-16D	4	4	78	4.3	1,342	106	4.2	1,769	108	3.2	1,382	73	3.2	934
04-16E	6	7	78	11.9	5,569	106	12.7	9,423	108	3.2	2,074	73	3.2	1,402

***04-09B Pack Creek Zoological Area – The summer season from June 1 to September 10 is covered under a separate environmental analysis, and will not be covered under Shoreline II. The period from September 11 – 14 will be amended into the existing Pack Creek Zoological Area NEPA at the next available opportunity.**

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Appendix A. Capacity Location Maps

Figure E-3. Southeast Admiralty capacity locations, summer season.

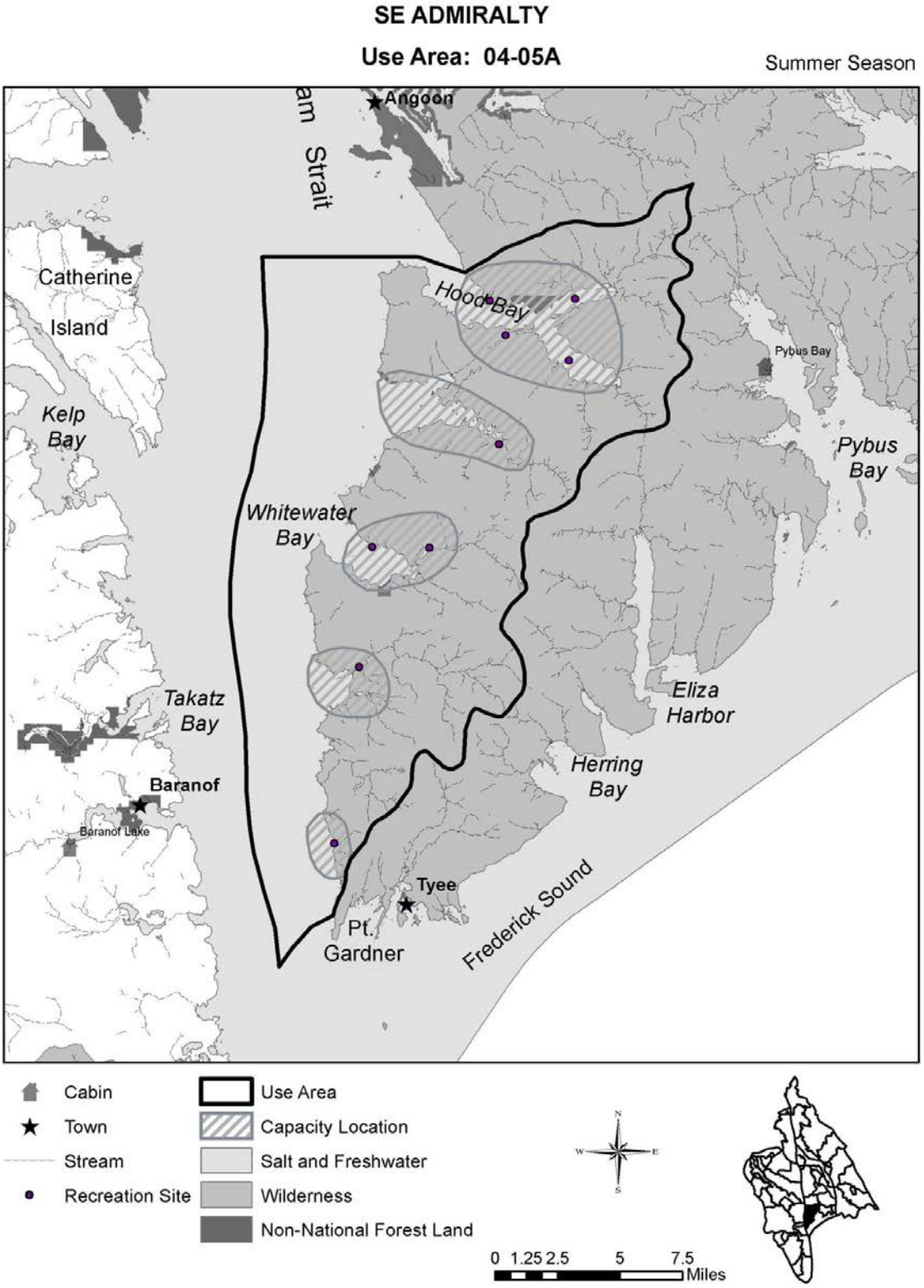

Figure E-4. Southeast Admiralty capacity locations, Fall, Winter, and Spring seasons.

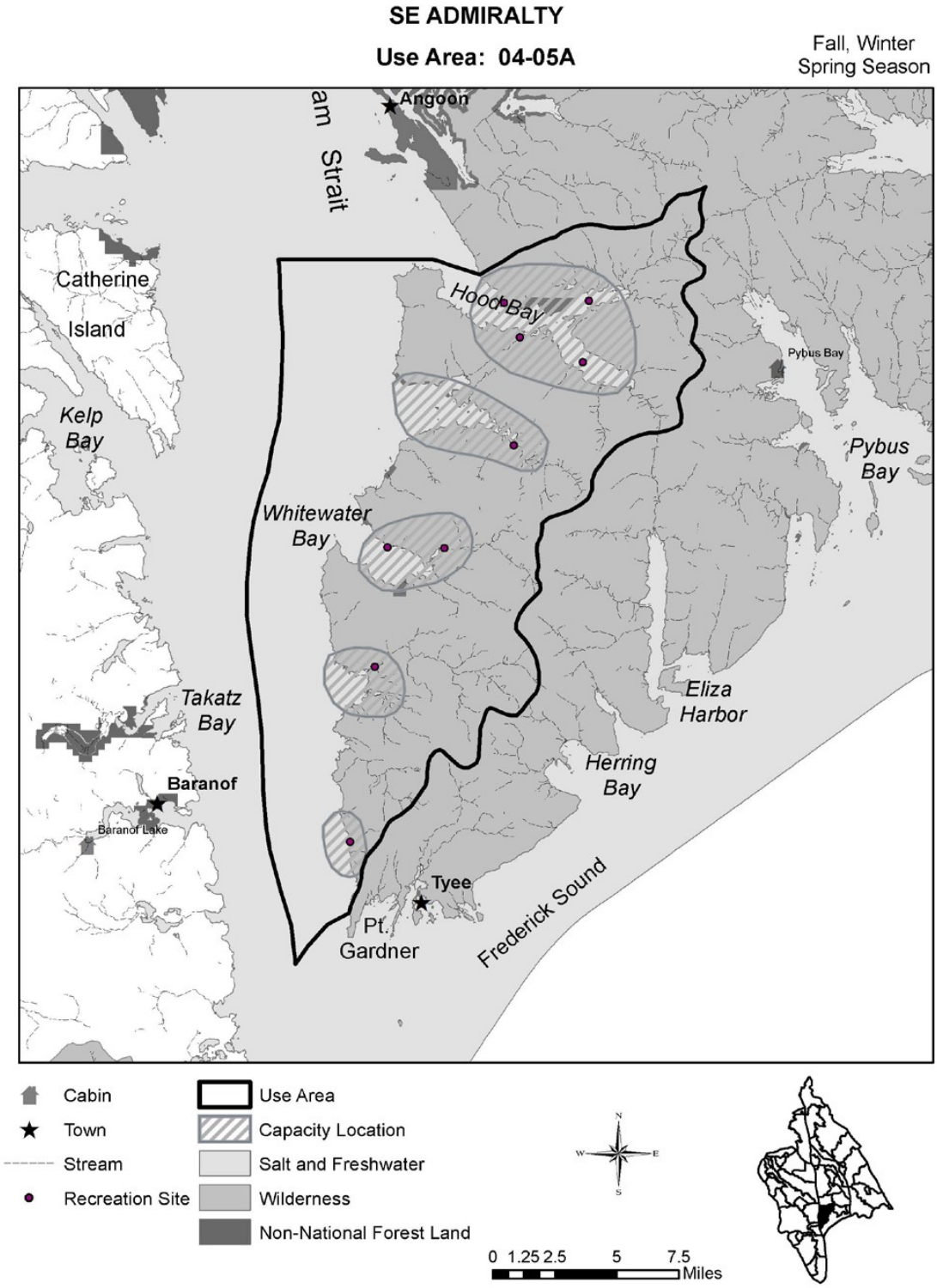

Figure E-5. Pybus Bay capacity locations, Summer season.

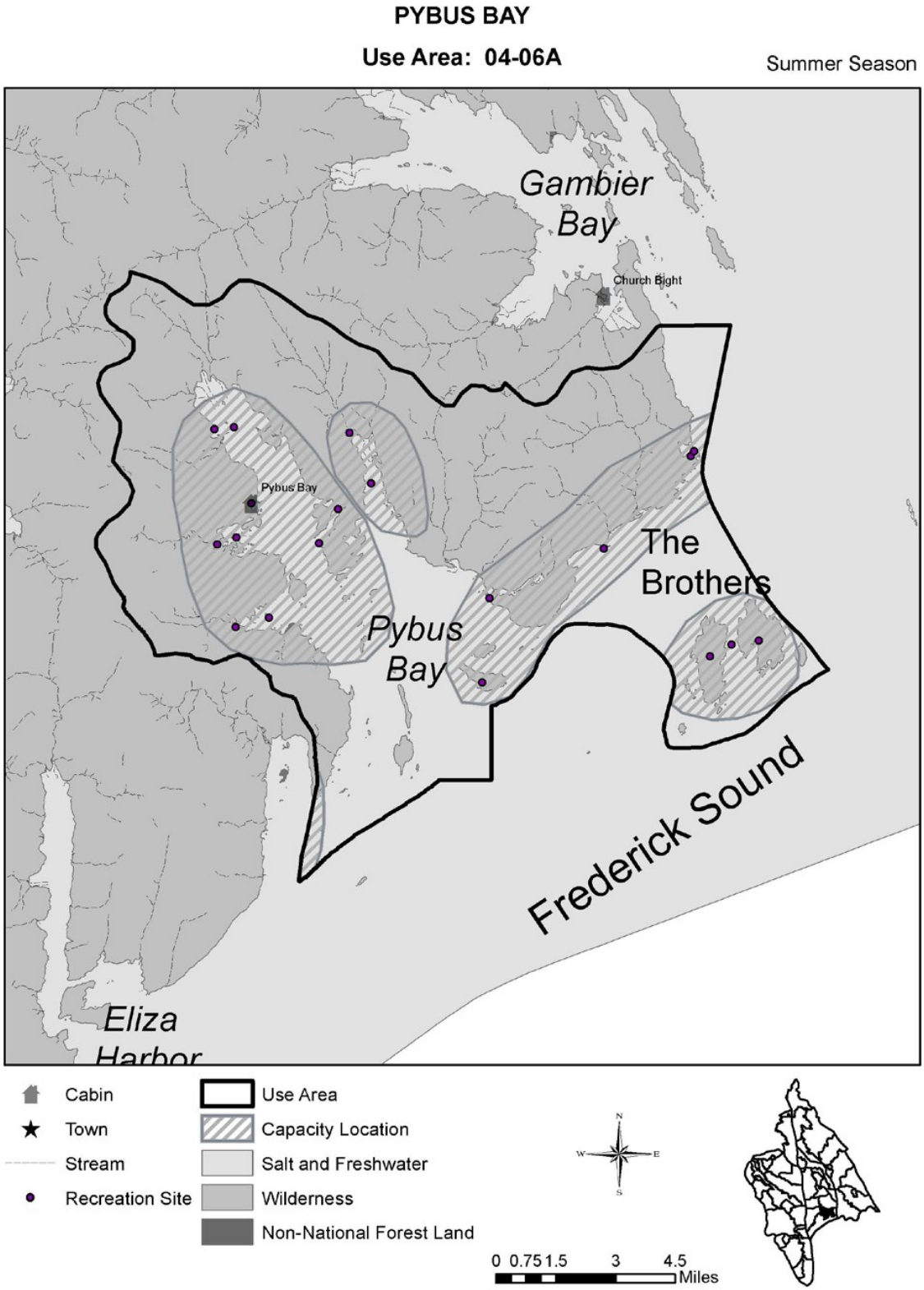

Figure E-6. Pybus Bay capacity locations, Fall, Winter, and Spring seasons.

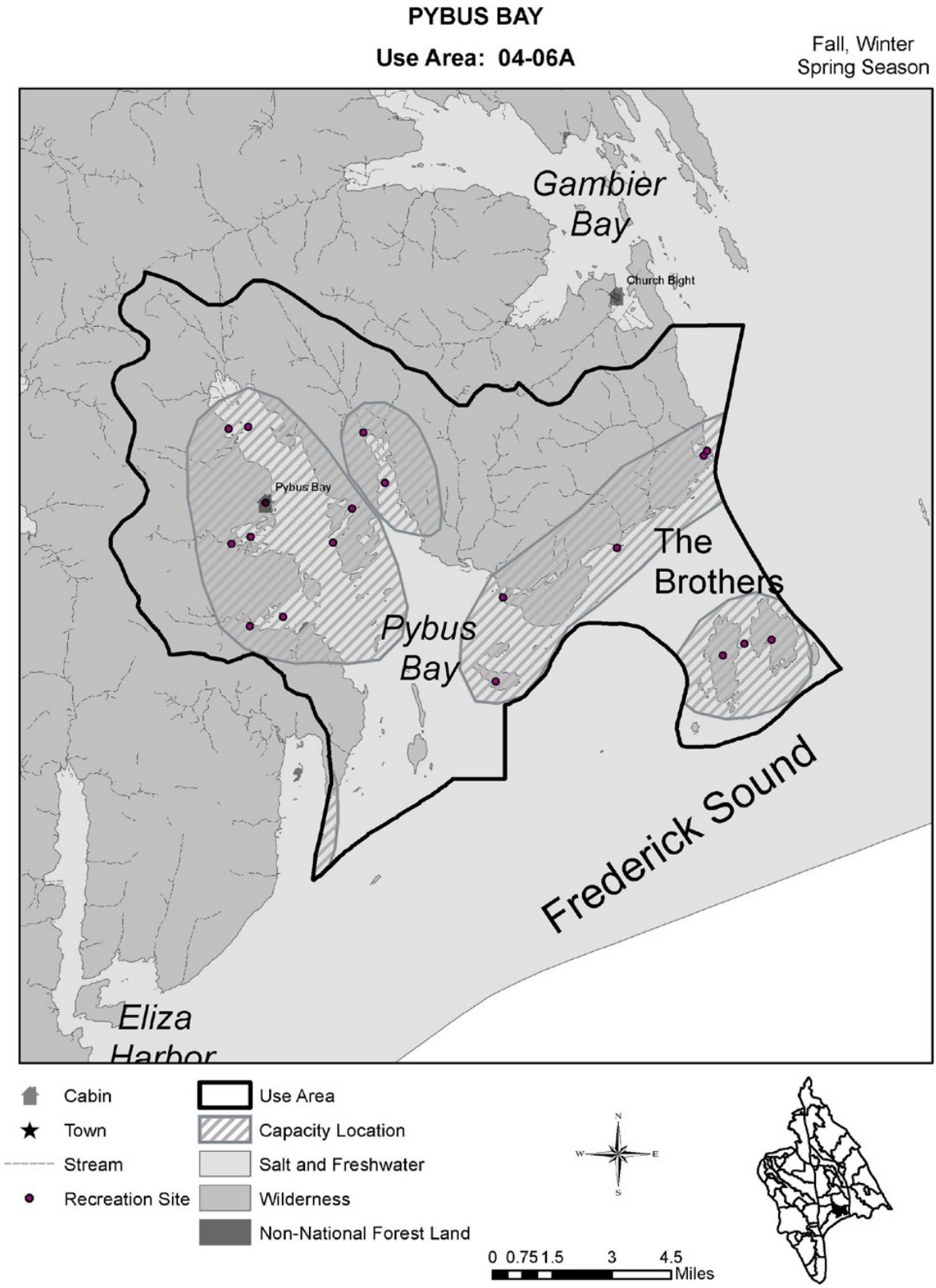

Figure E-7. Eliza Harbor capacity locations, Summer season.

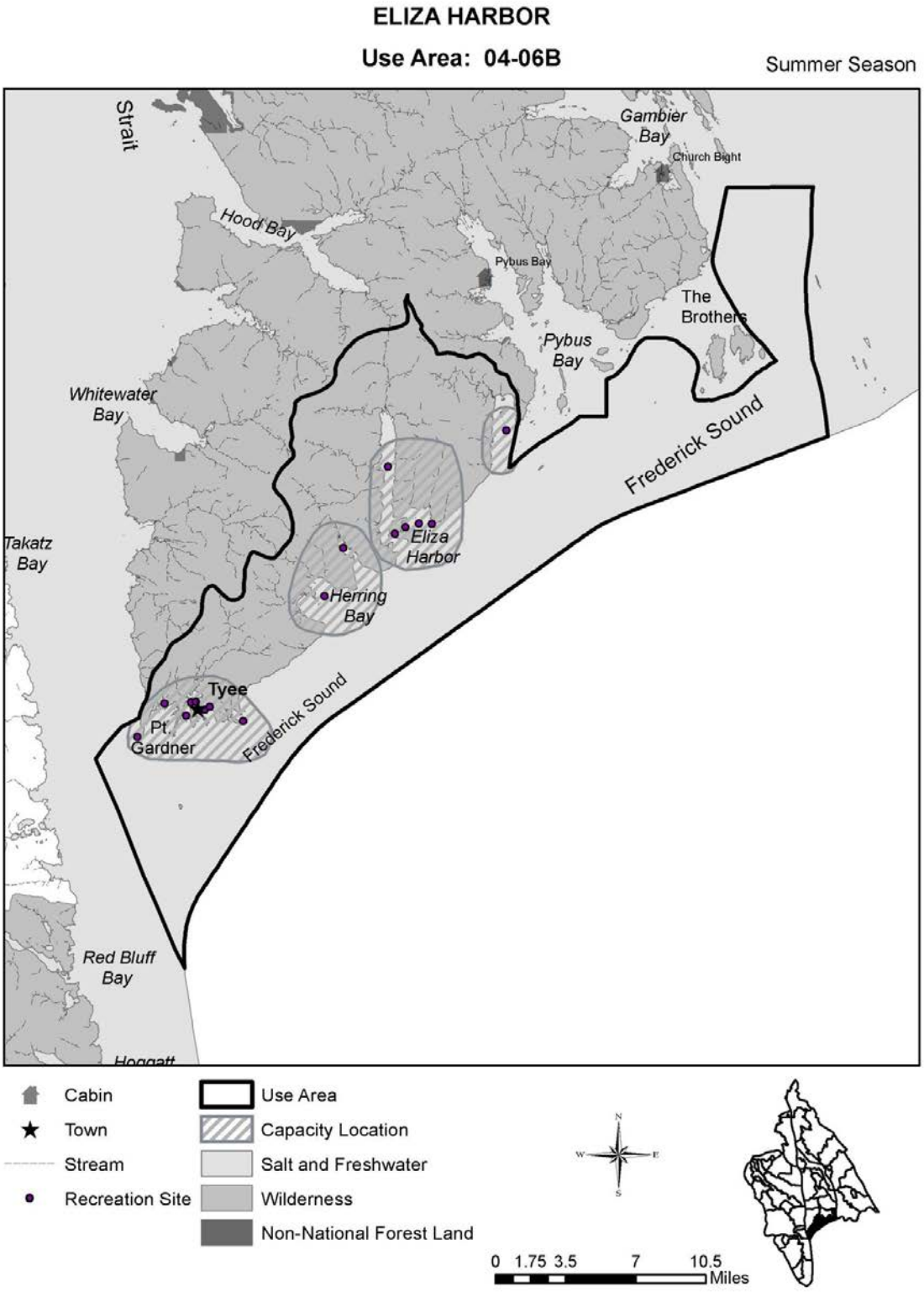

Figure E-8. Eliza Harbor capacity locations, Fall, Winter, and Spring seasons.

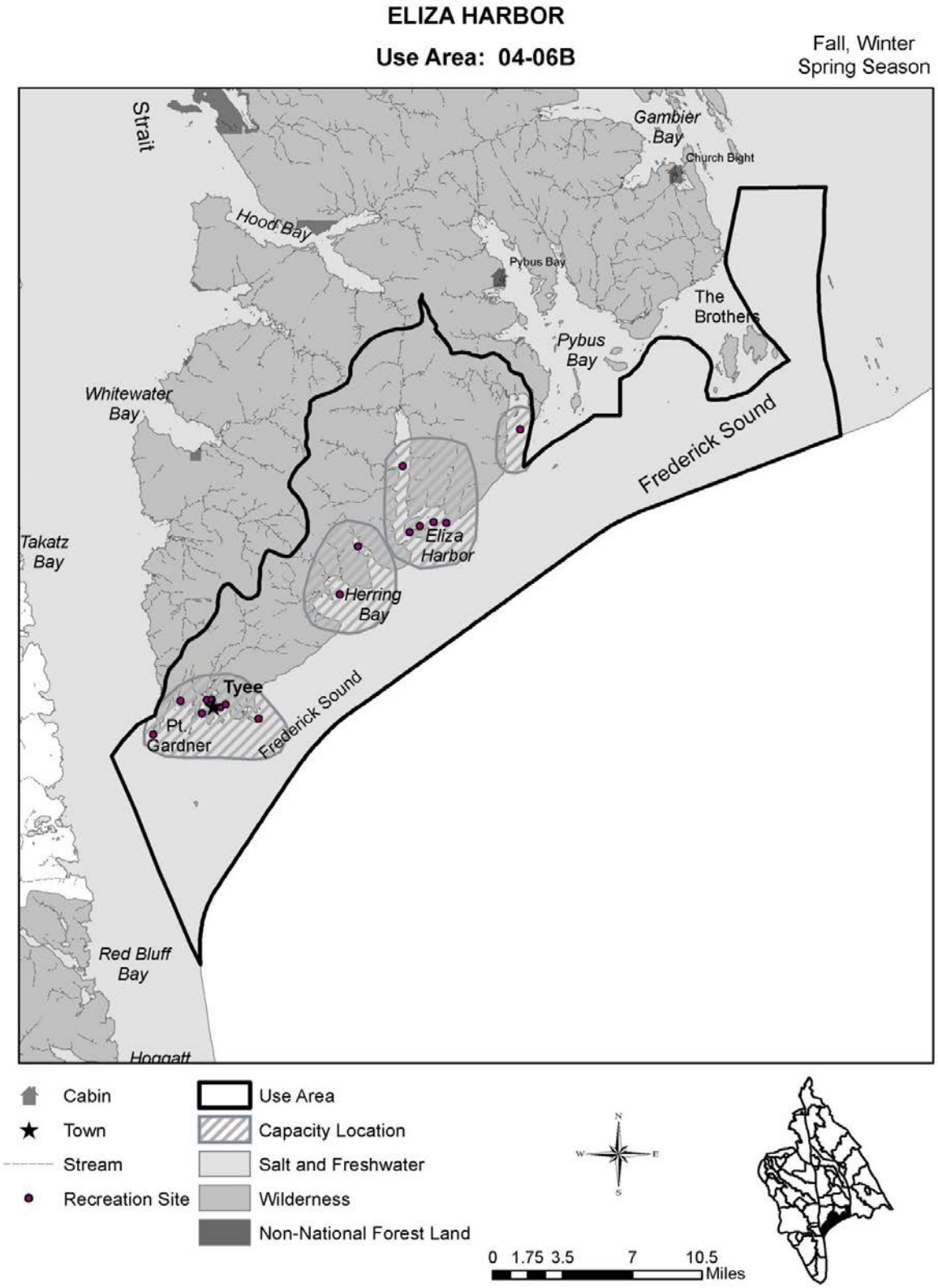

Figure E-9. Gambier Bay capacity locations, Summer season.

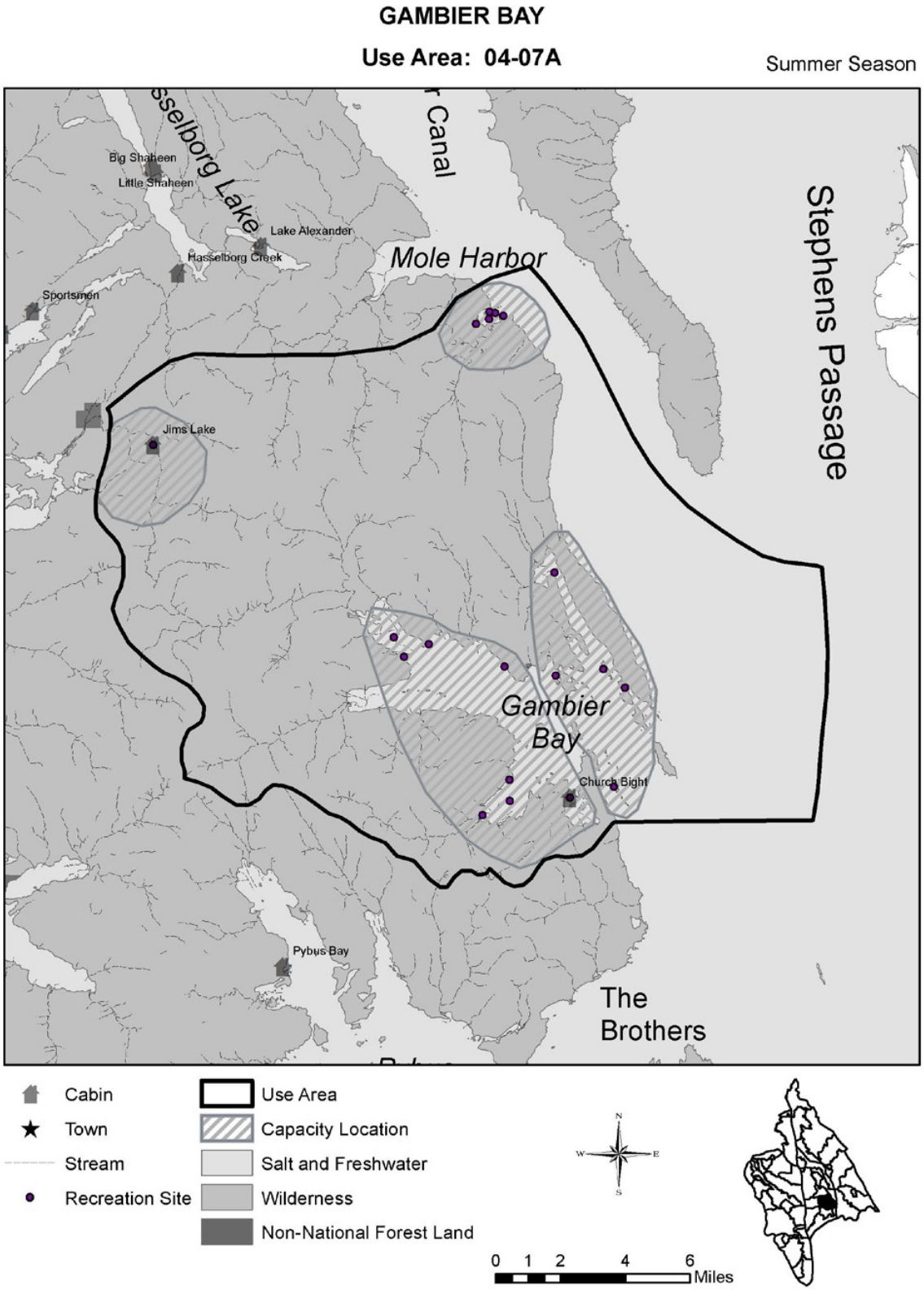

Figure E-10. Gambier Bay capacity locations, Fall, Winter, and Spring seasons.

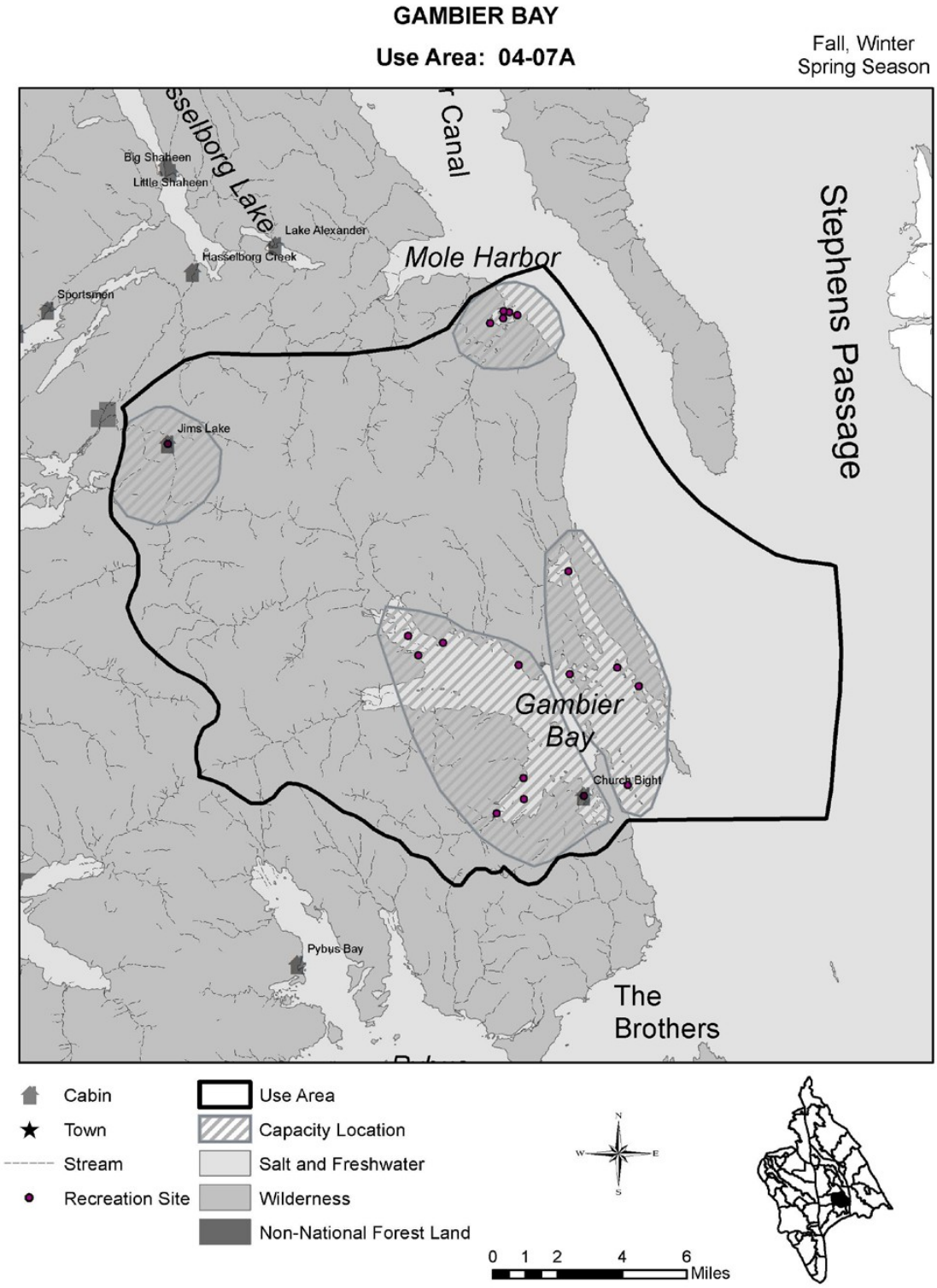

Figure E-11. Cross-Admiralty Canoe Route capacity locations, Summer season.

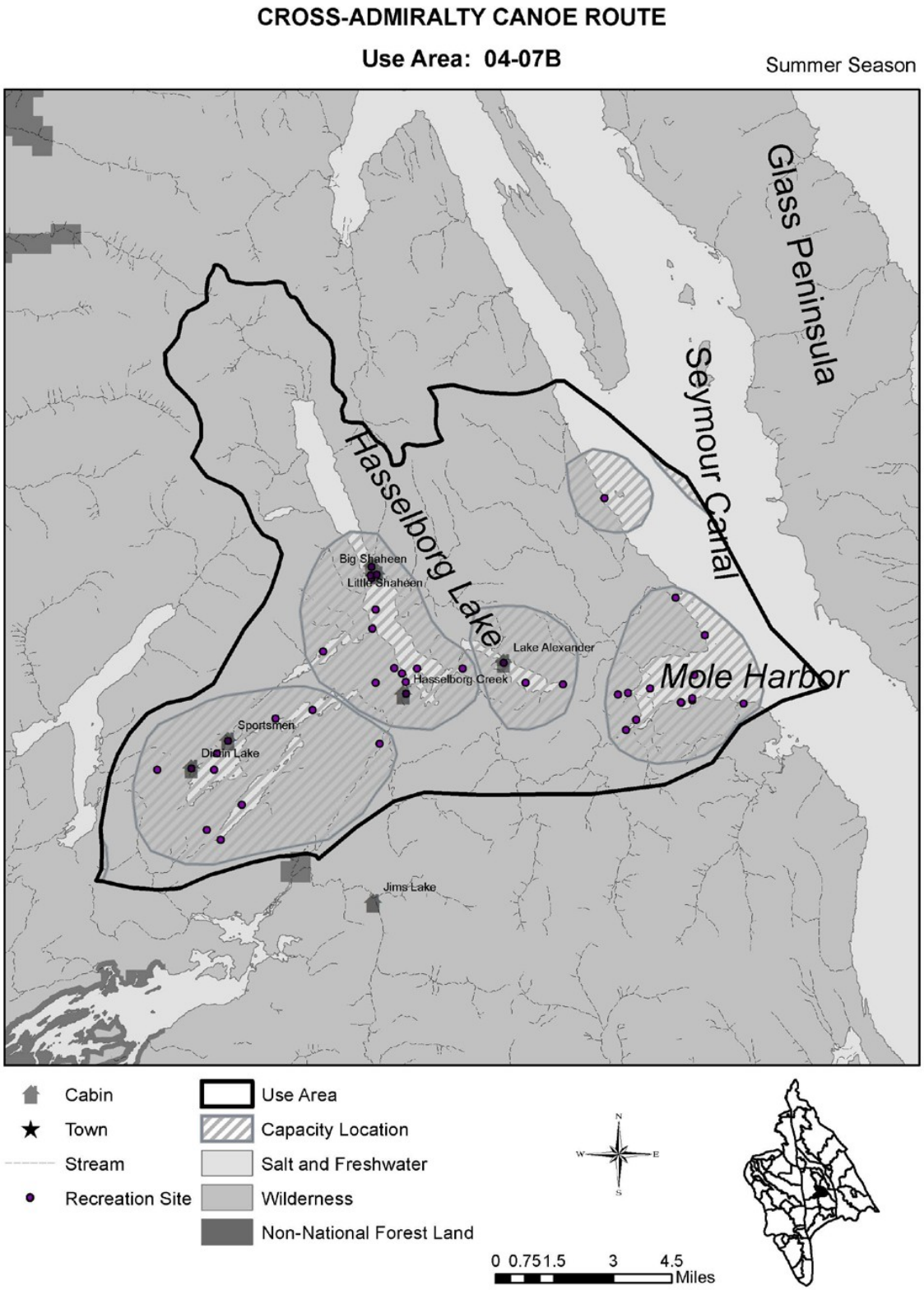

Figure E-12. Cross-Admiralty Canoe Route, Fall, Winter, and Spring seasons.

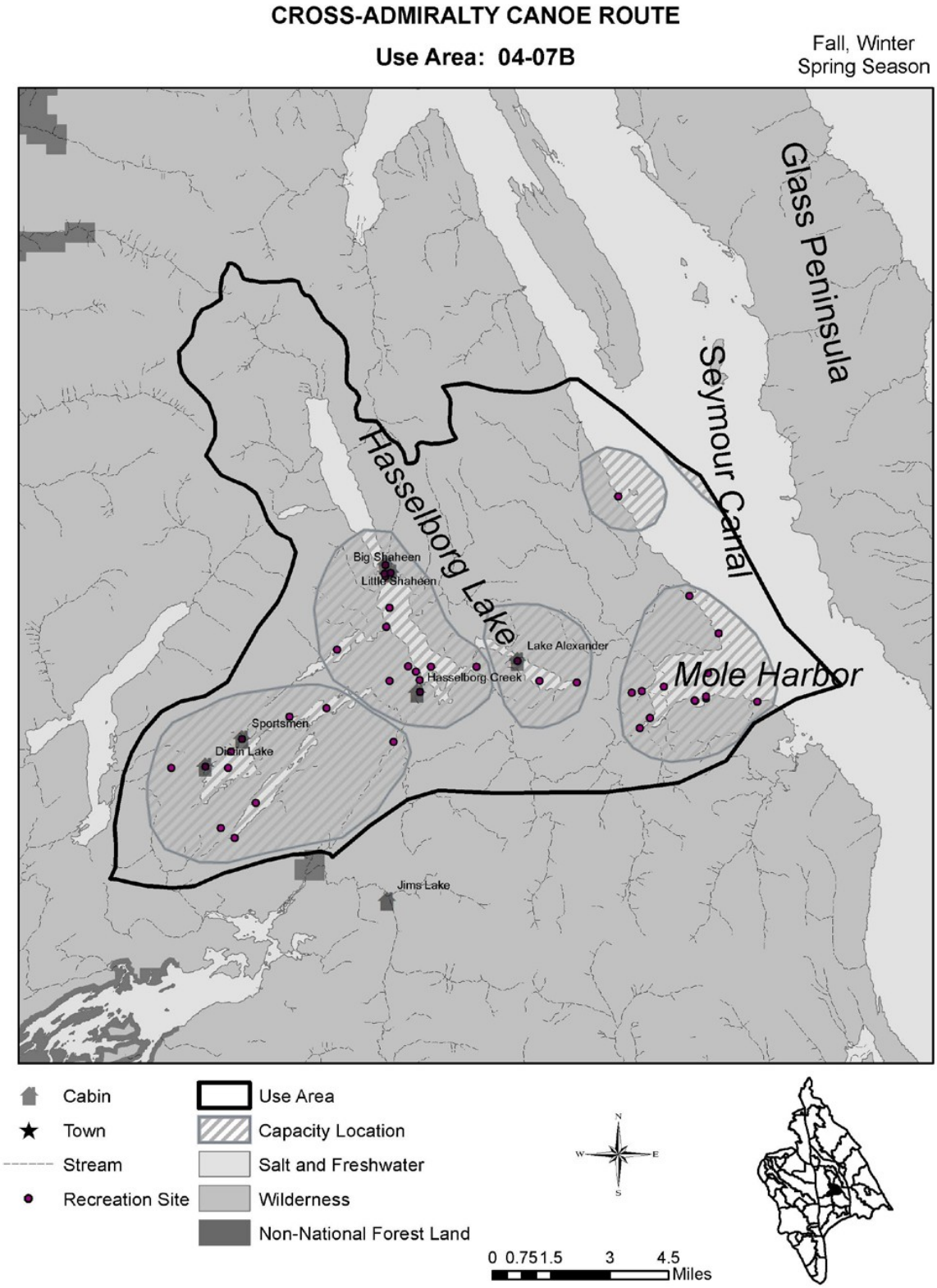

Figure E-13. Northeast Admiralty capacity locations, Summer season.

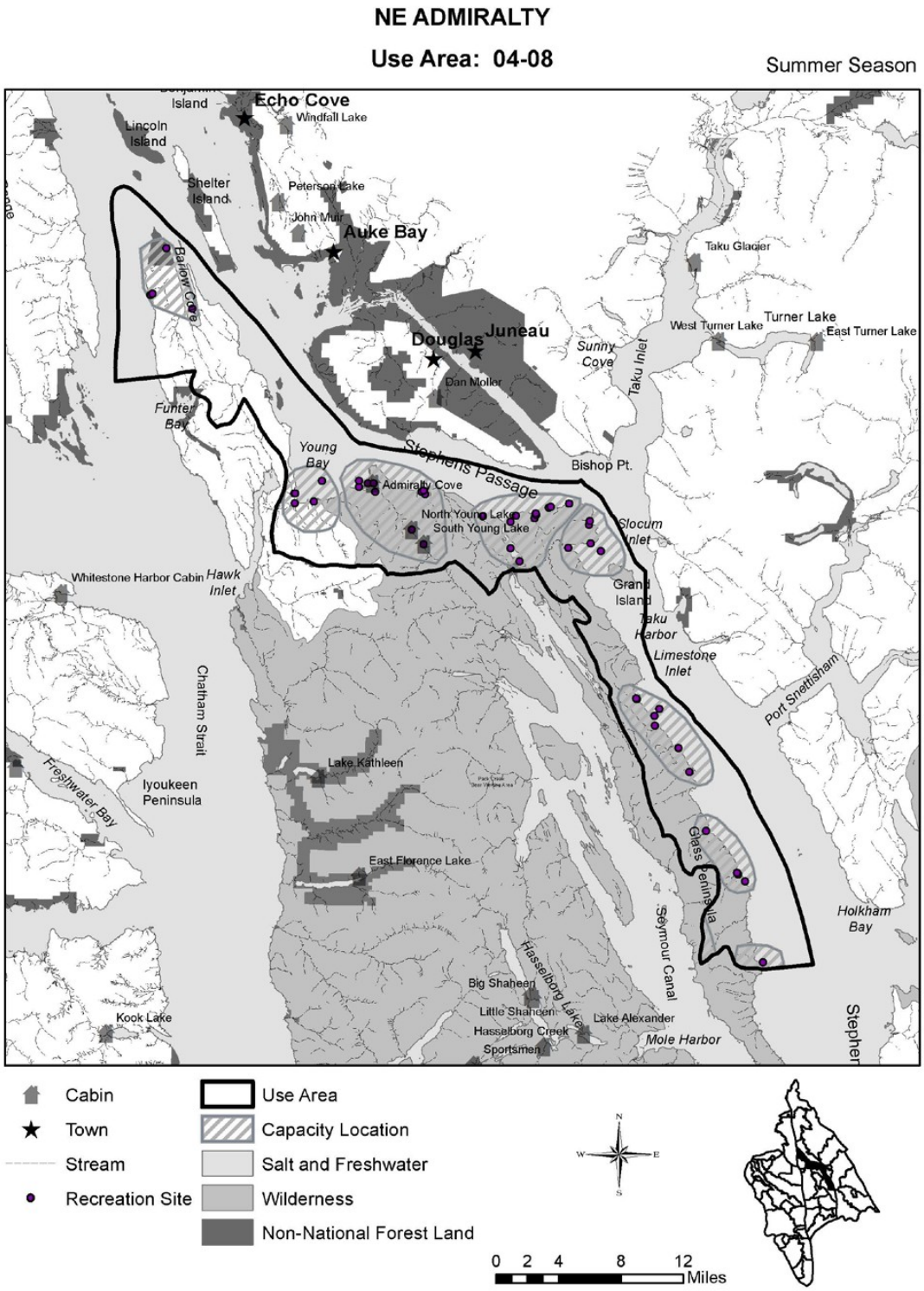

Figure E-14. Northeast Admiralty capacity locations, Fall, Winter, and Spring seasons.

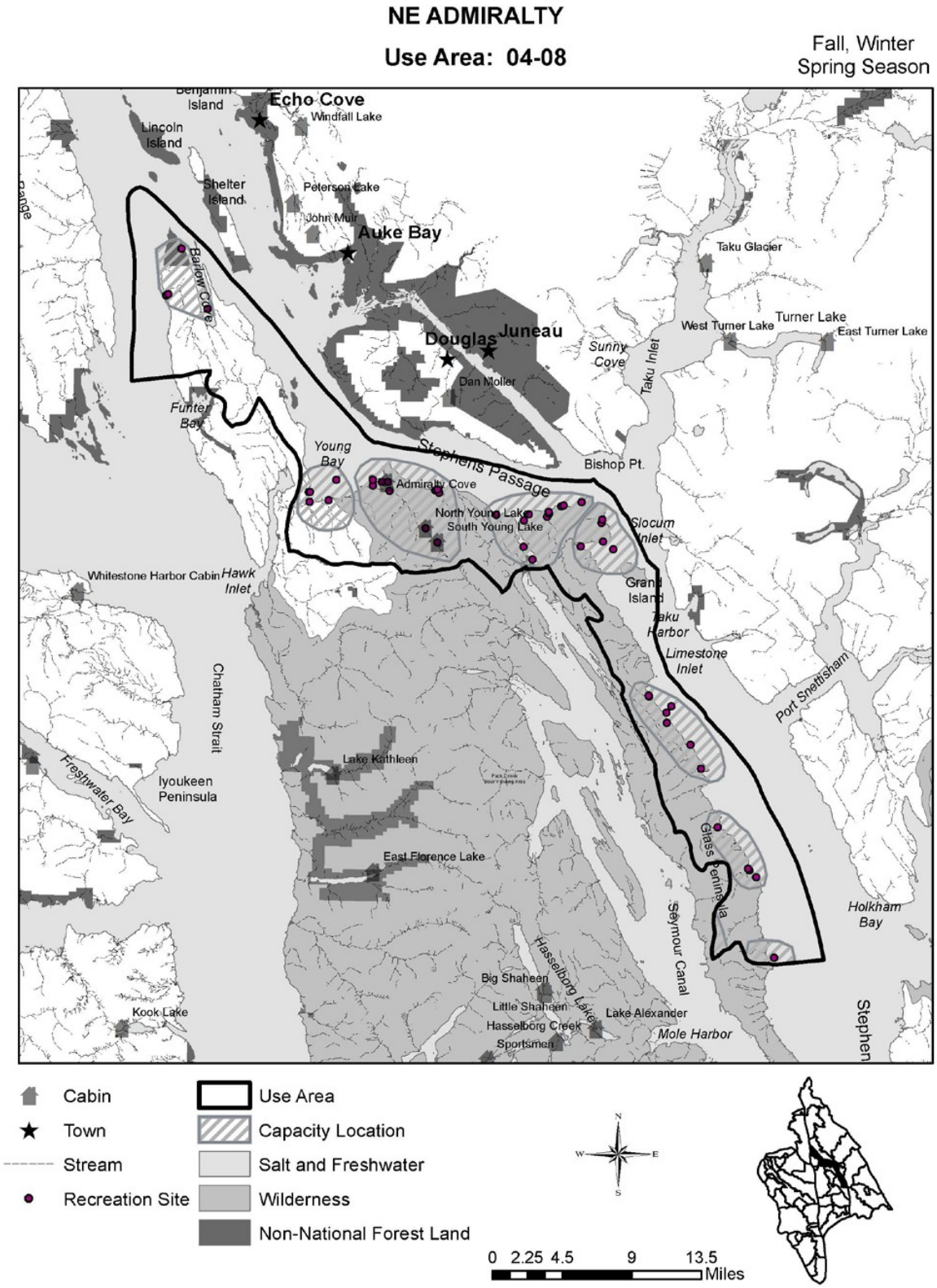

Figure E-14. Seymour Canal capacity locations, Summer season.

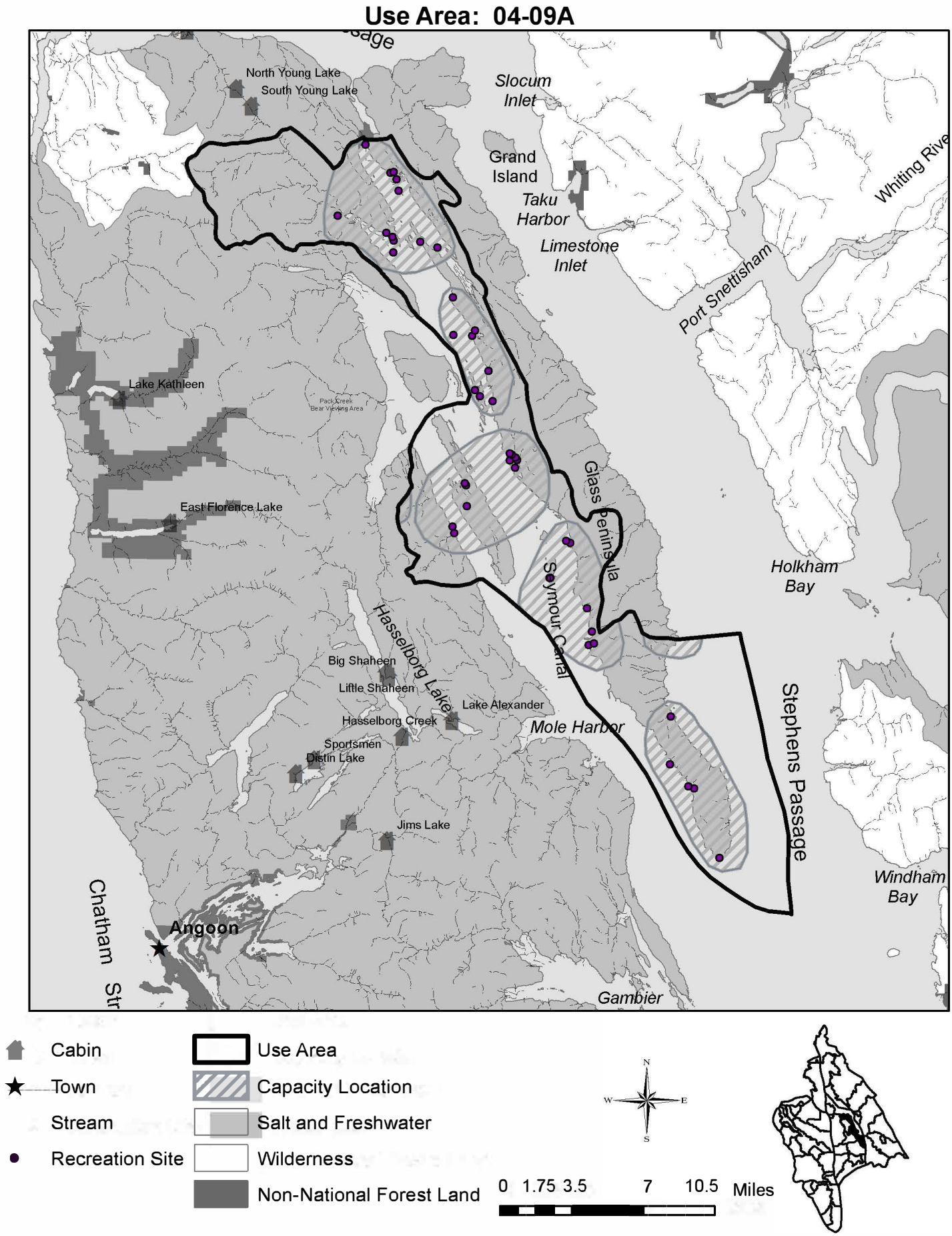

Figure E-16. Seymour Canal capacity locations, Fall, Winter, and Spring seasons.

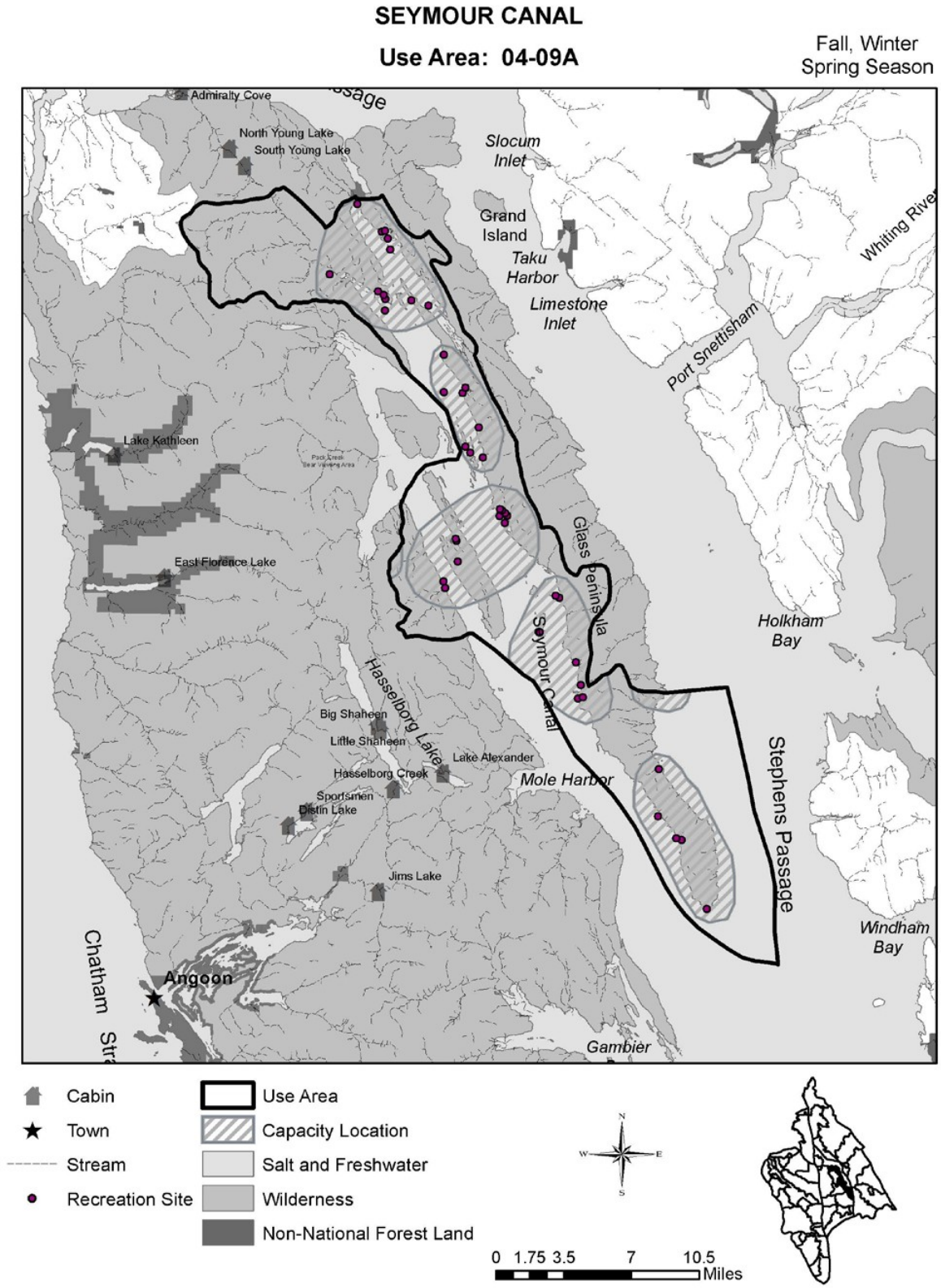

Figure E-17. Pack Creek zoological area, Summer season.

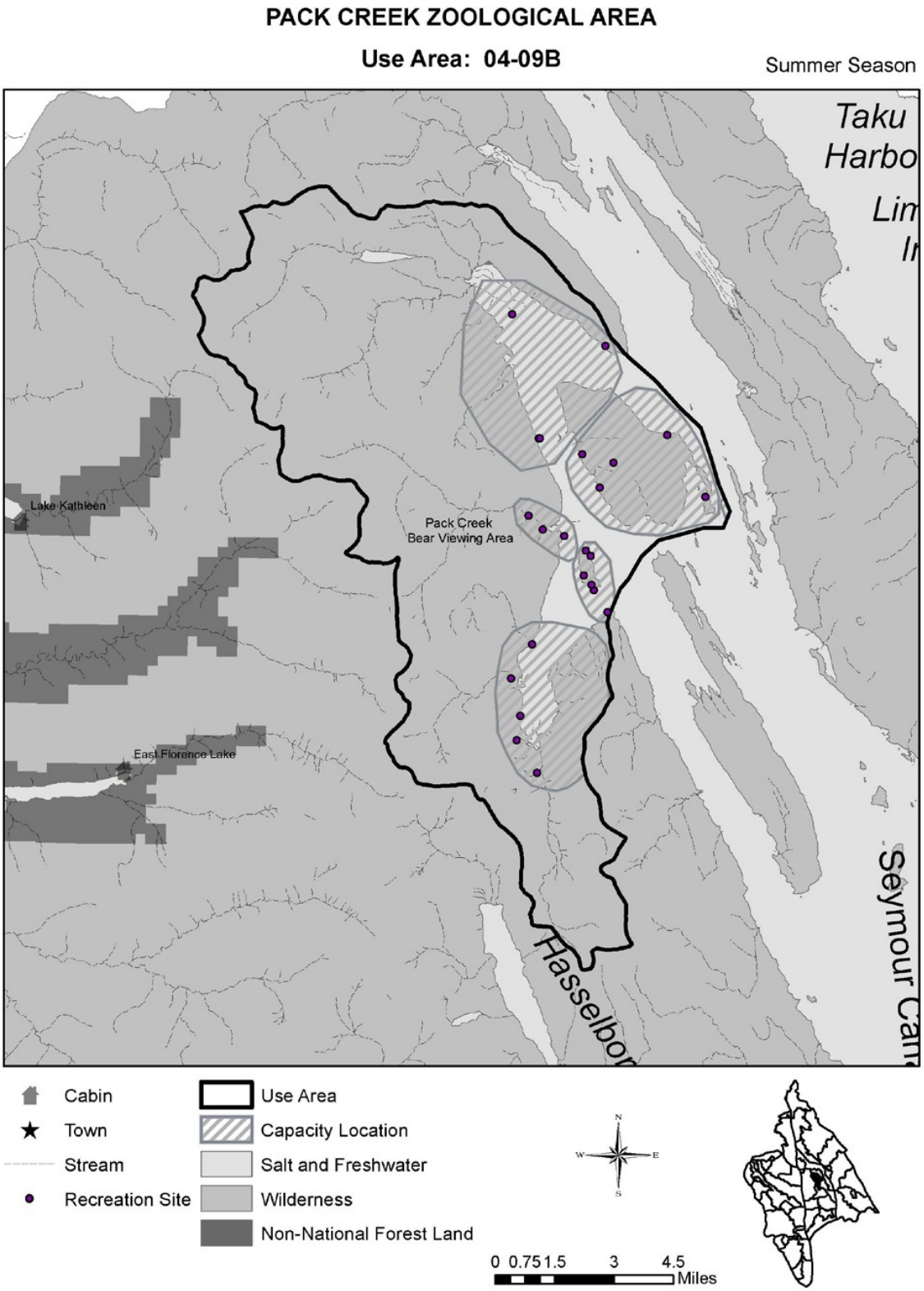

Figure E-18. Pack Creek Zoological Area capacity locations, Fall, Winter, and Spring seasons.

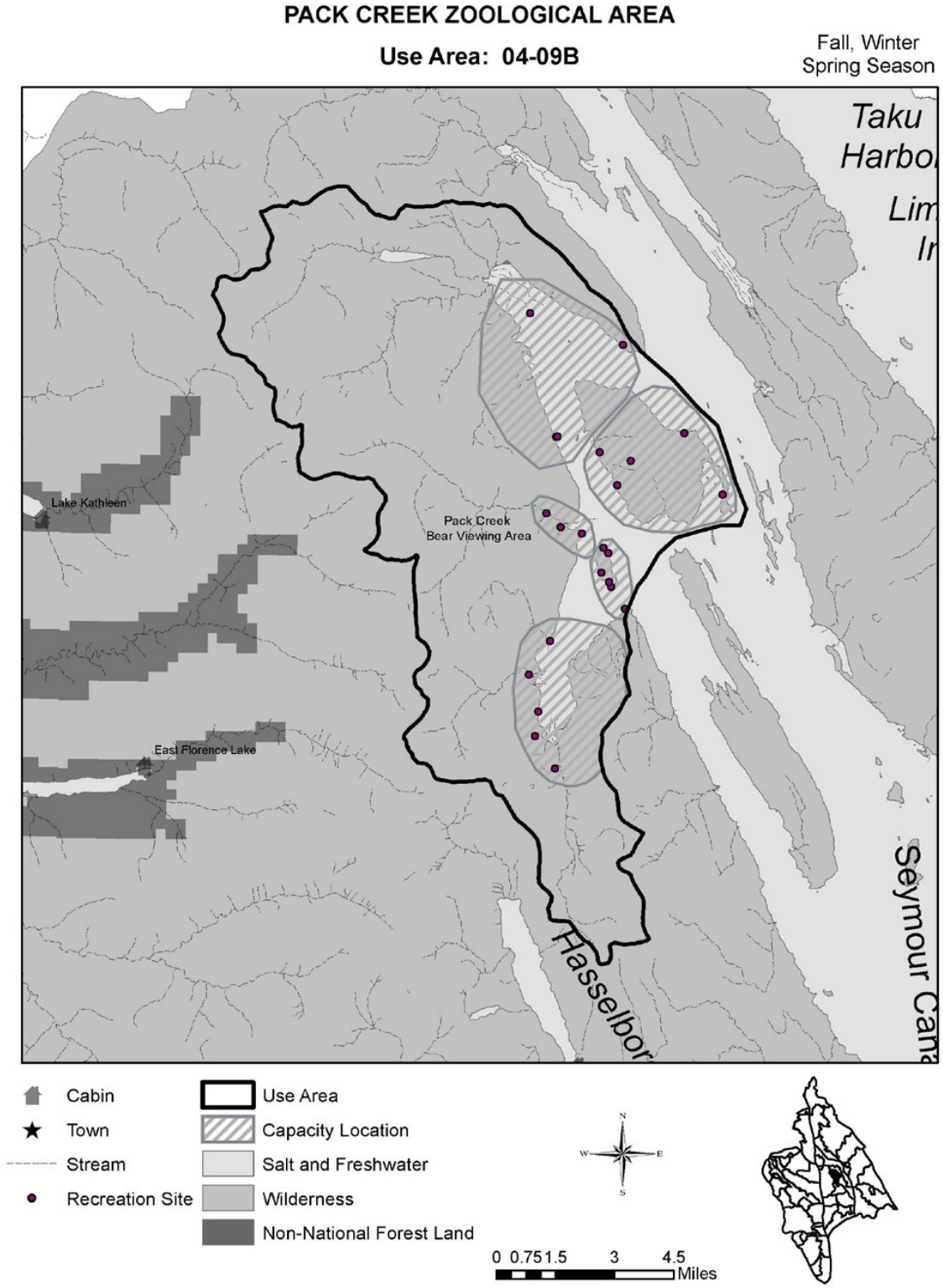

Figure E-19. Greens Creek capacity location, Summer season.

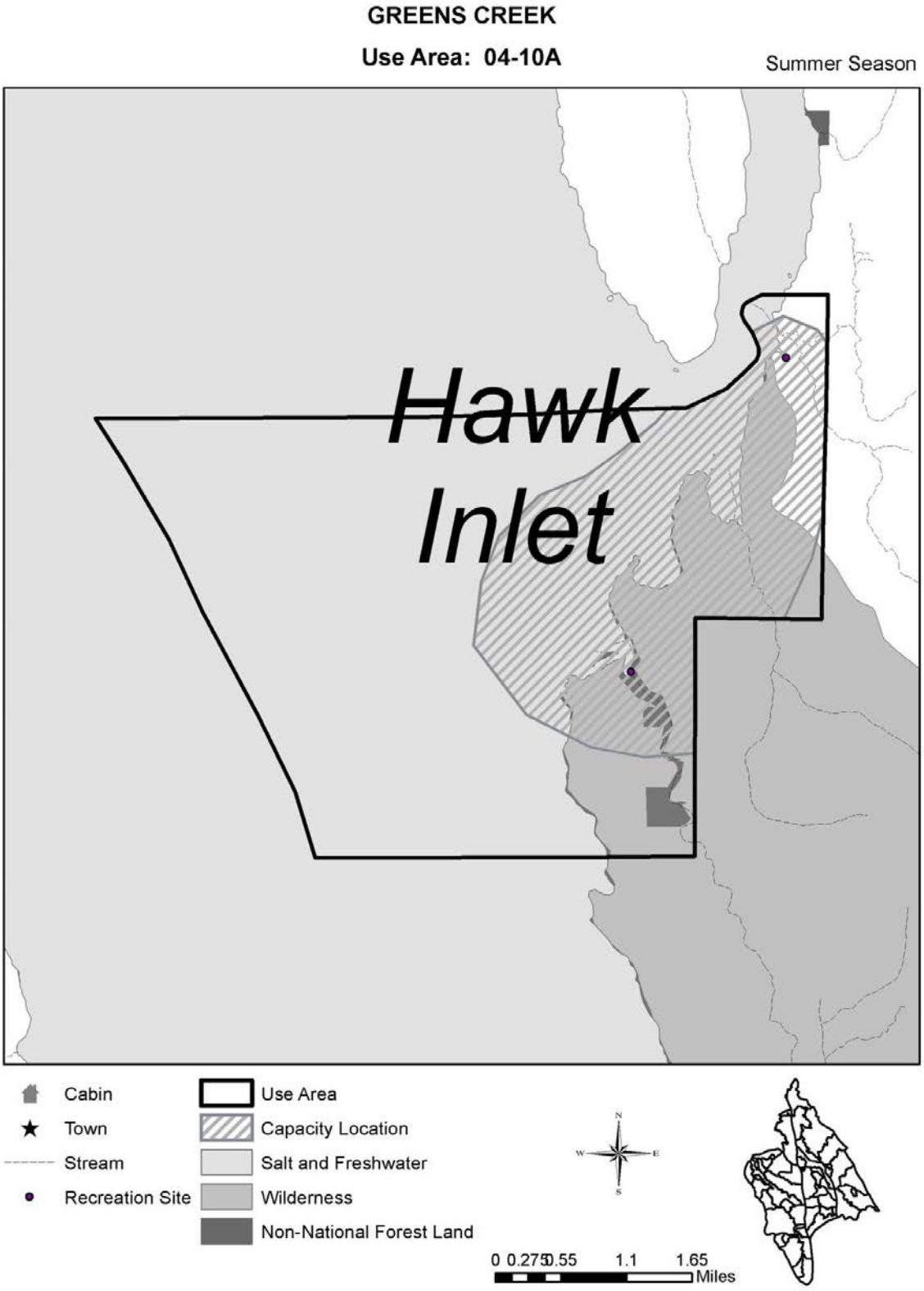

Figure E-20. Greens Creek capacity locations, Fall, Winter, and Spring seasons.

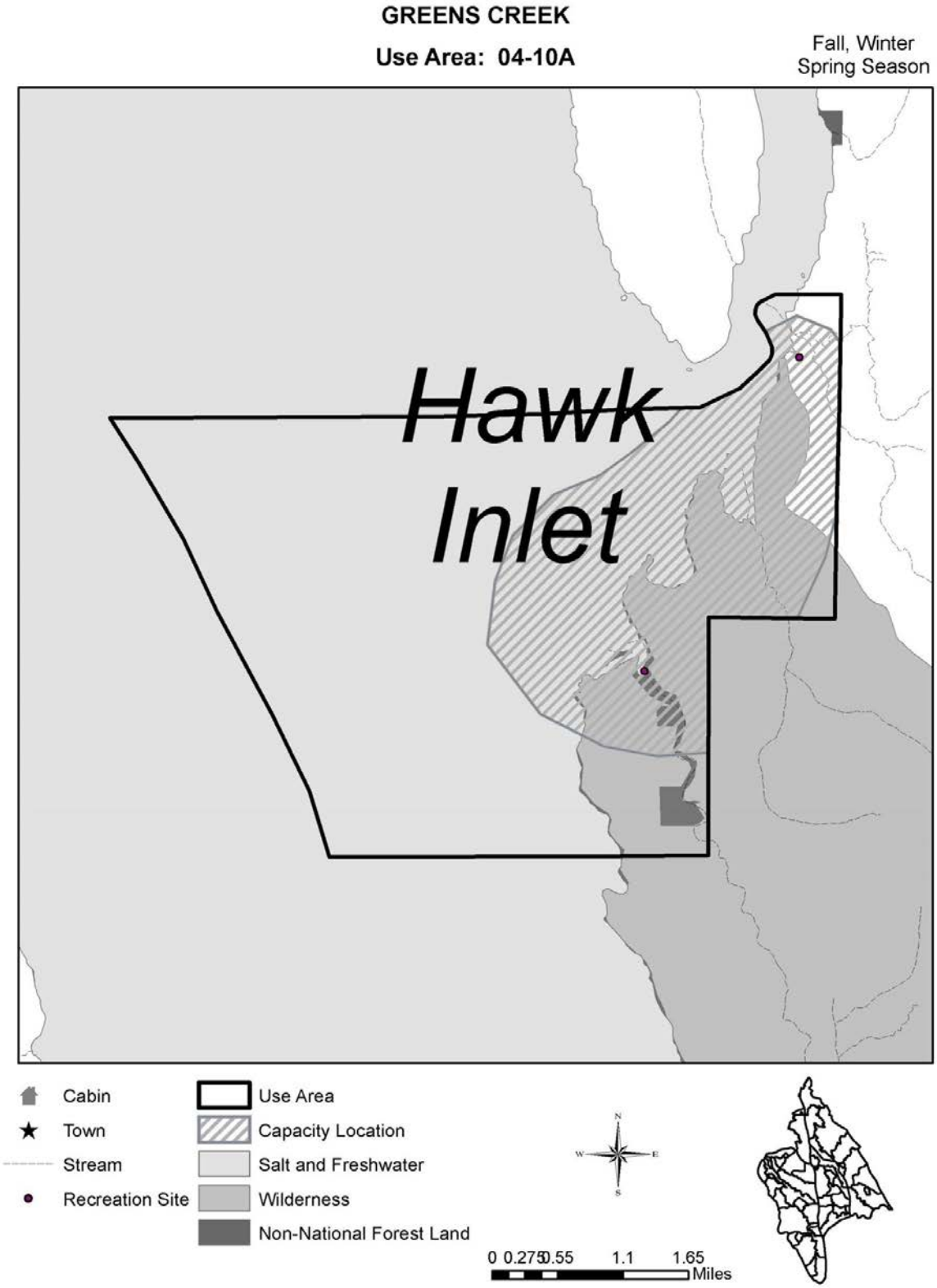

Figure E-21. Port Frederick capacity locations, Summer season.

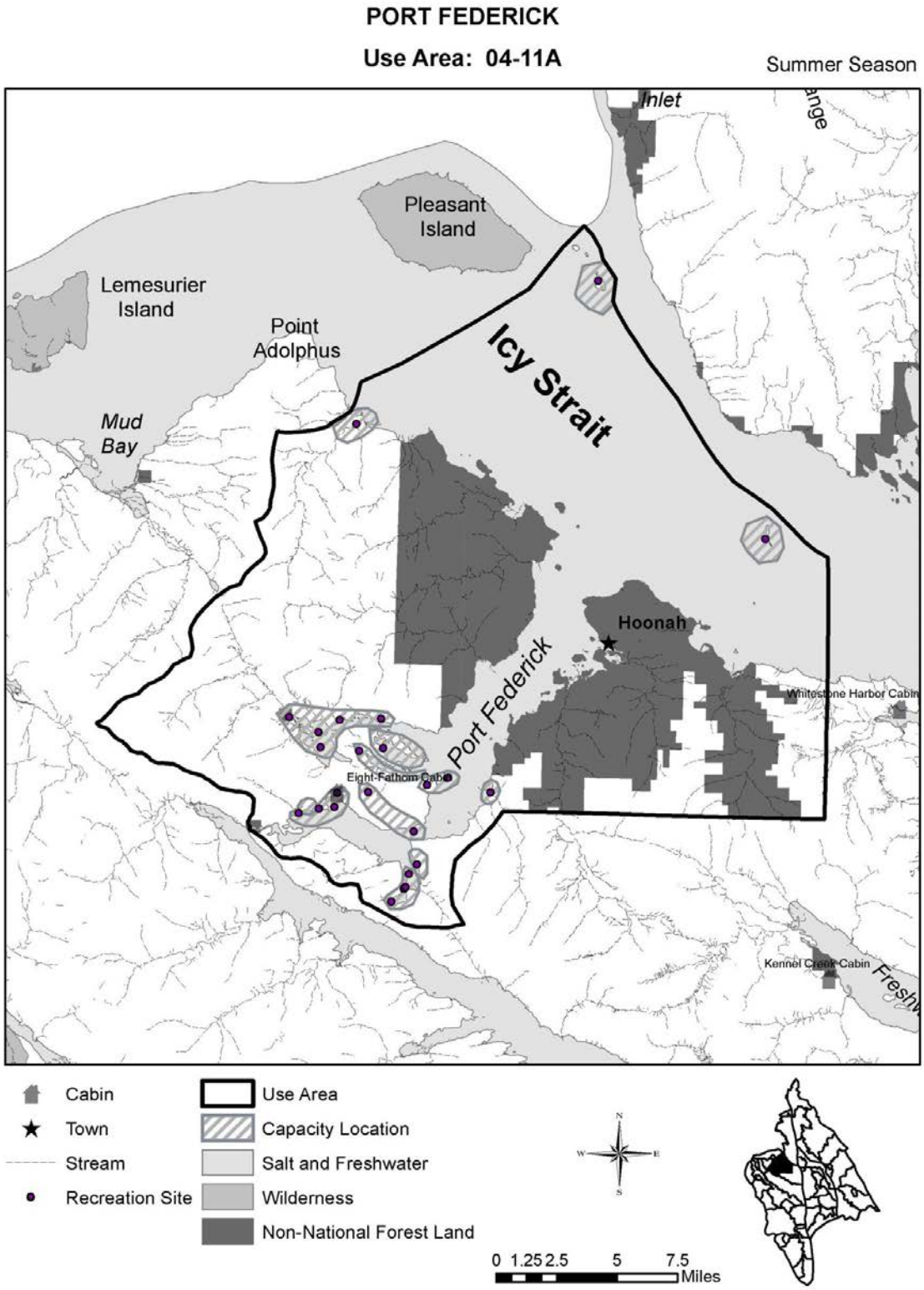

Figure E-22. Port Frederick capacity locations, Fall, Winter, and Spring seasons.

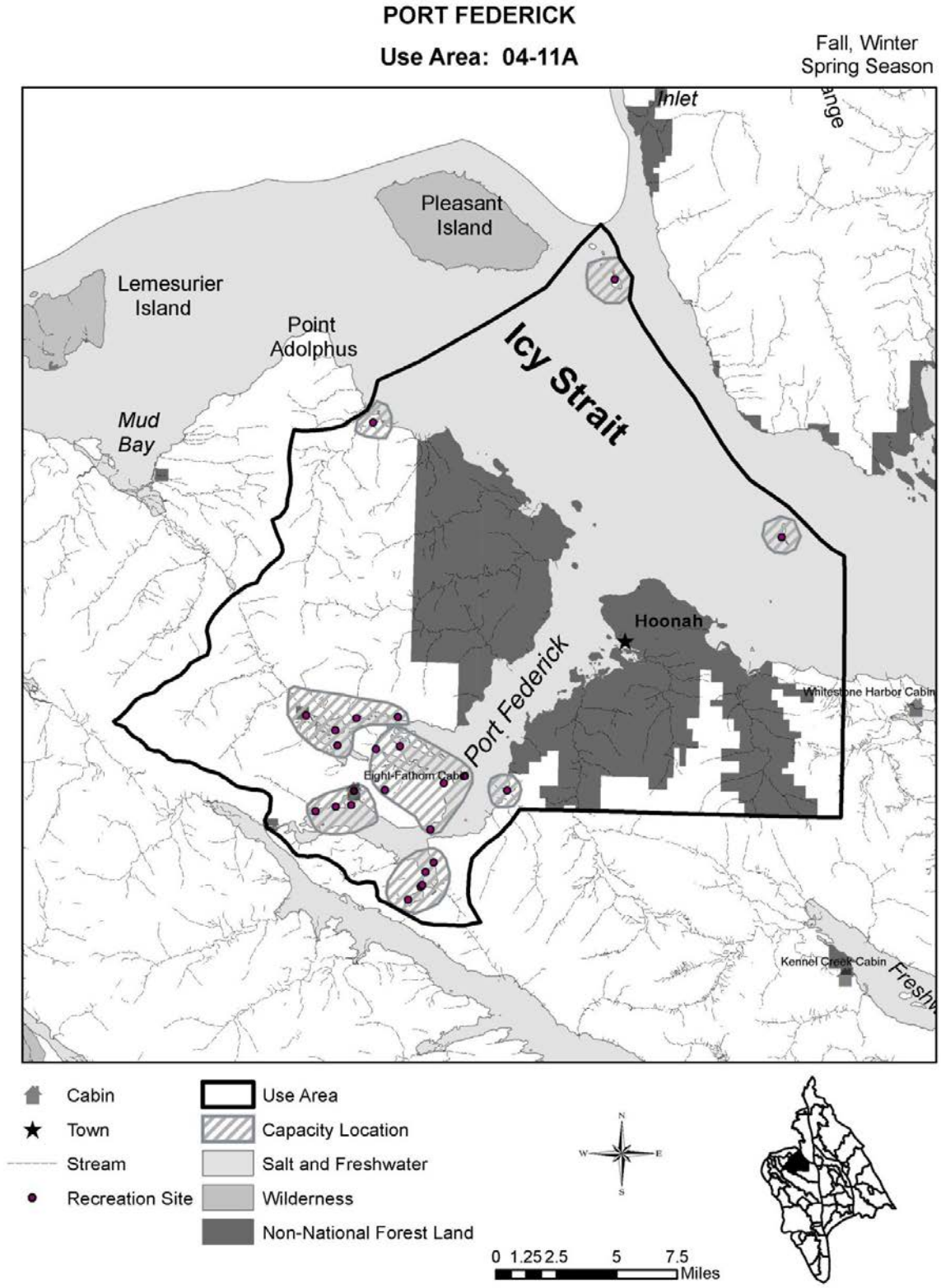

Figure E-23. Freshwater Bay capacity locations, Summer season.

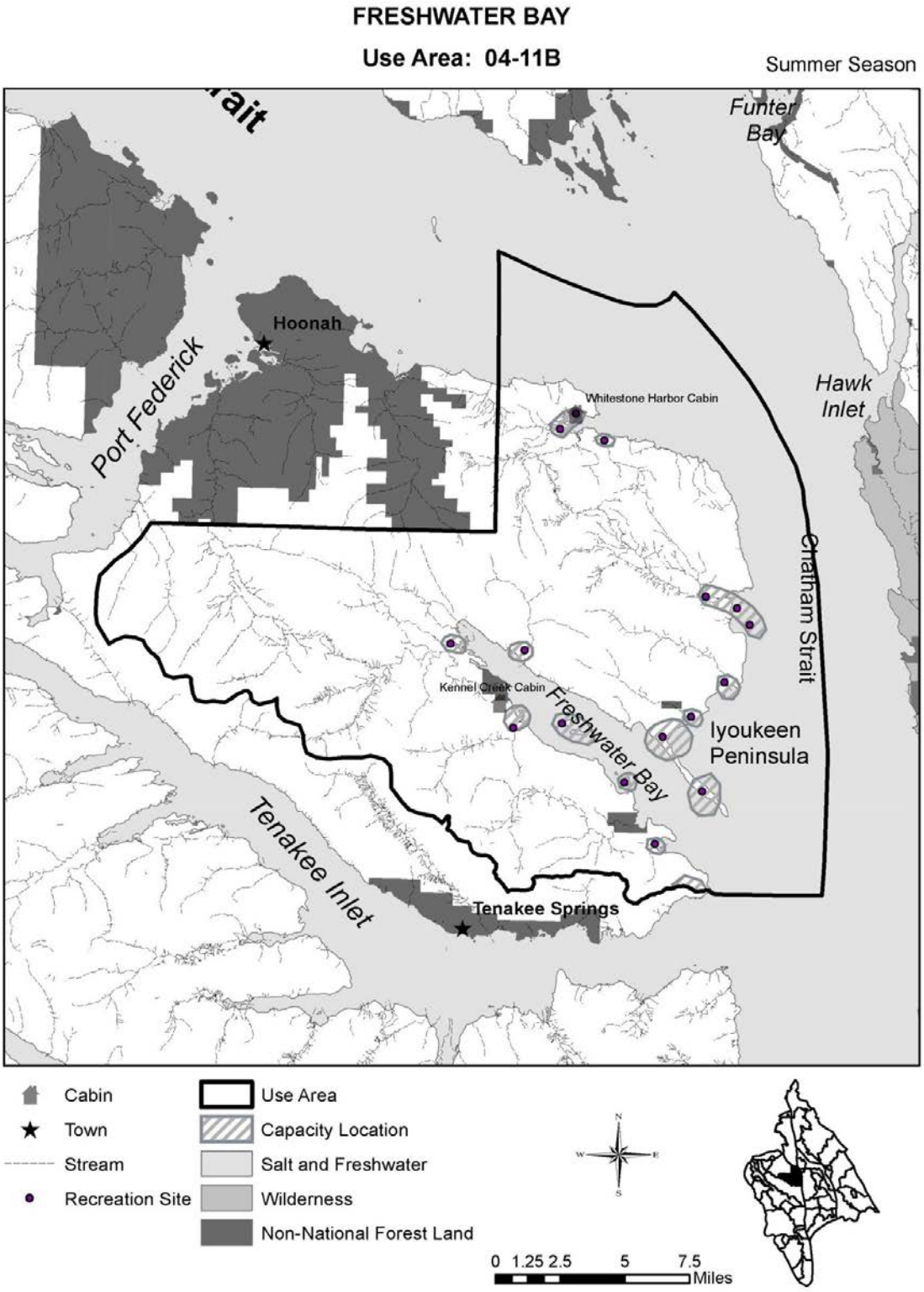

Figure E-24. Freshwater Bay capacity locations, Fall, Winter, and Spring seasons.

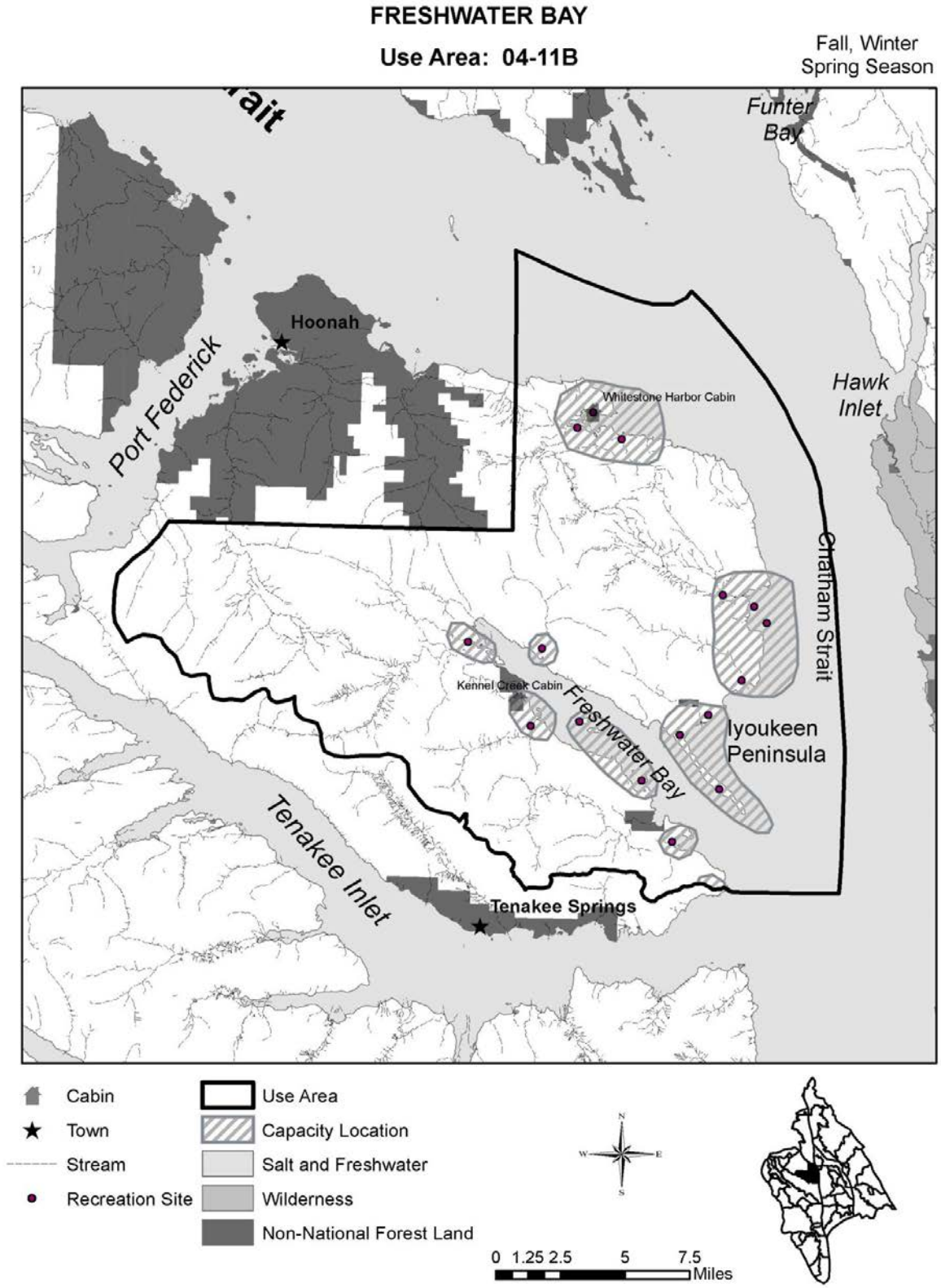

Figure E-25. Lisianski capacity locations, Summer season.

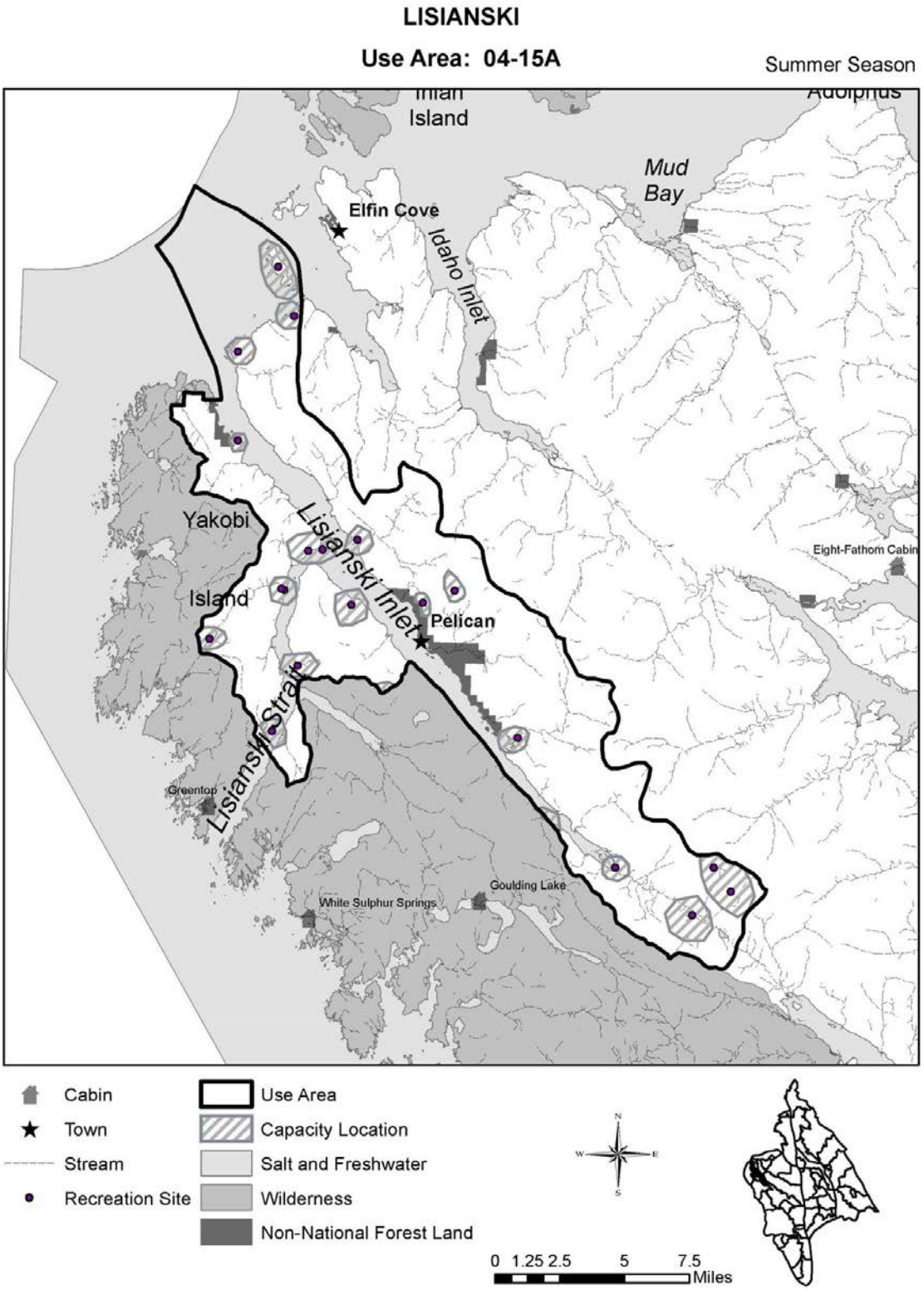

Figure E-26. Lisianski capacity locations, Fall, Winter, and Spring seasons.

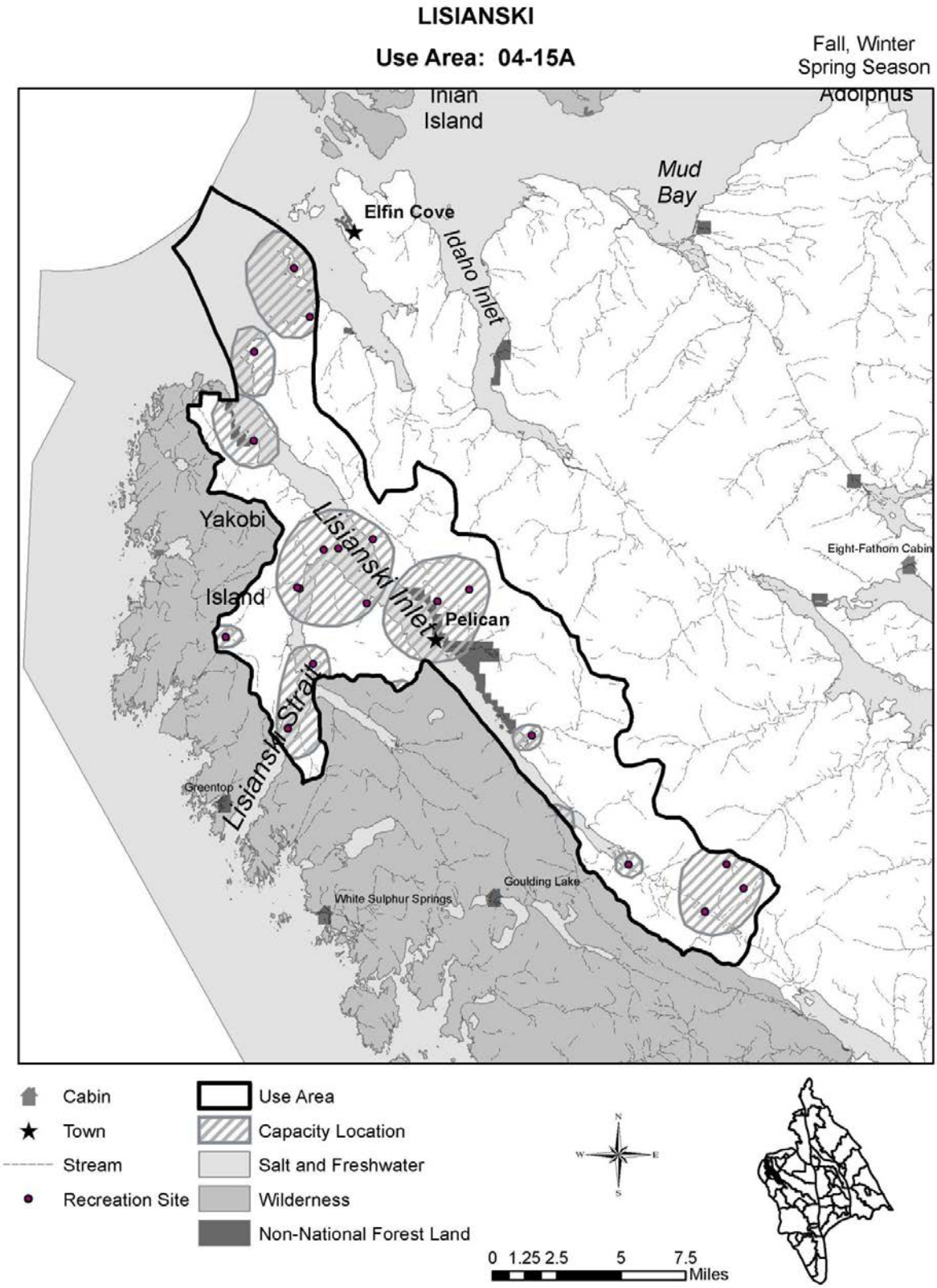

Figure E-27. West Yakobi Island capacity location, Summer season.

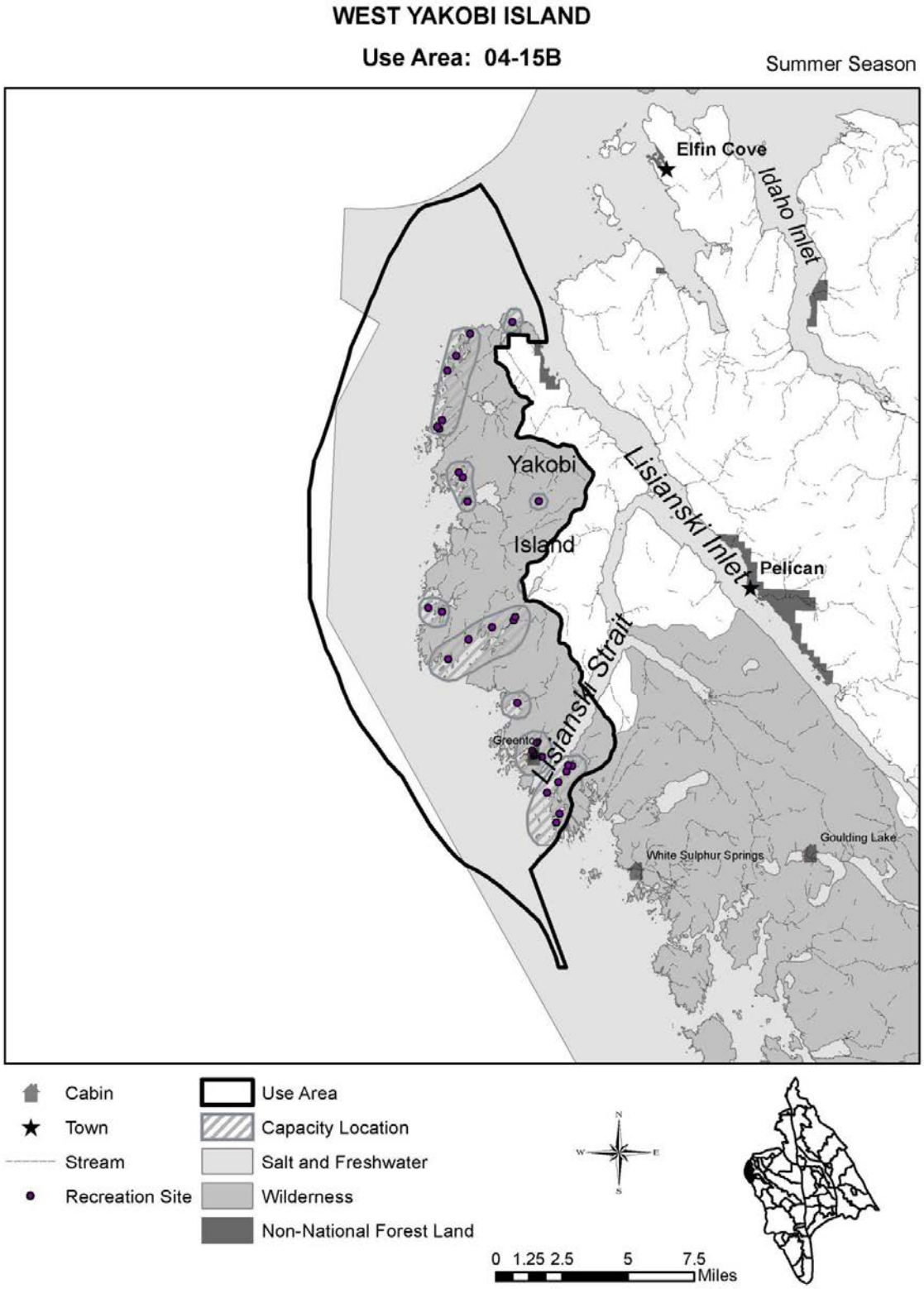

Figure E-28. West Yakobi Island capacity location, Fall, Winter, and Spring seasons.

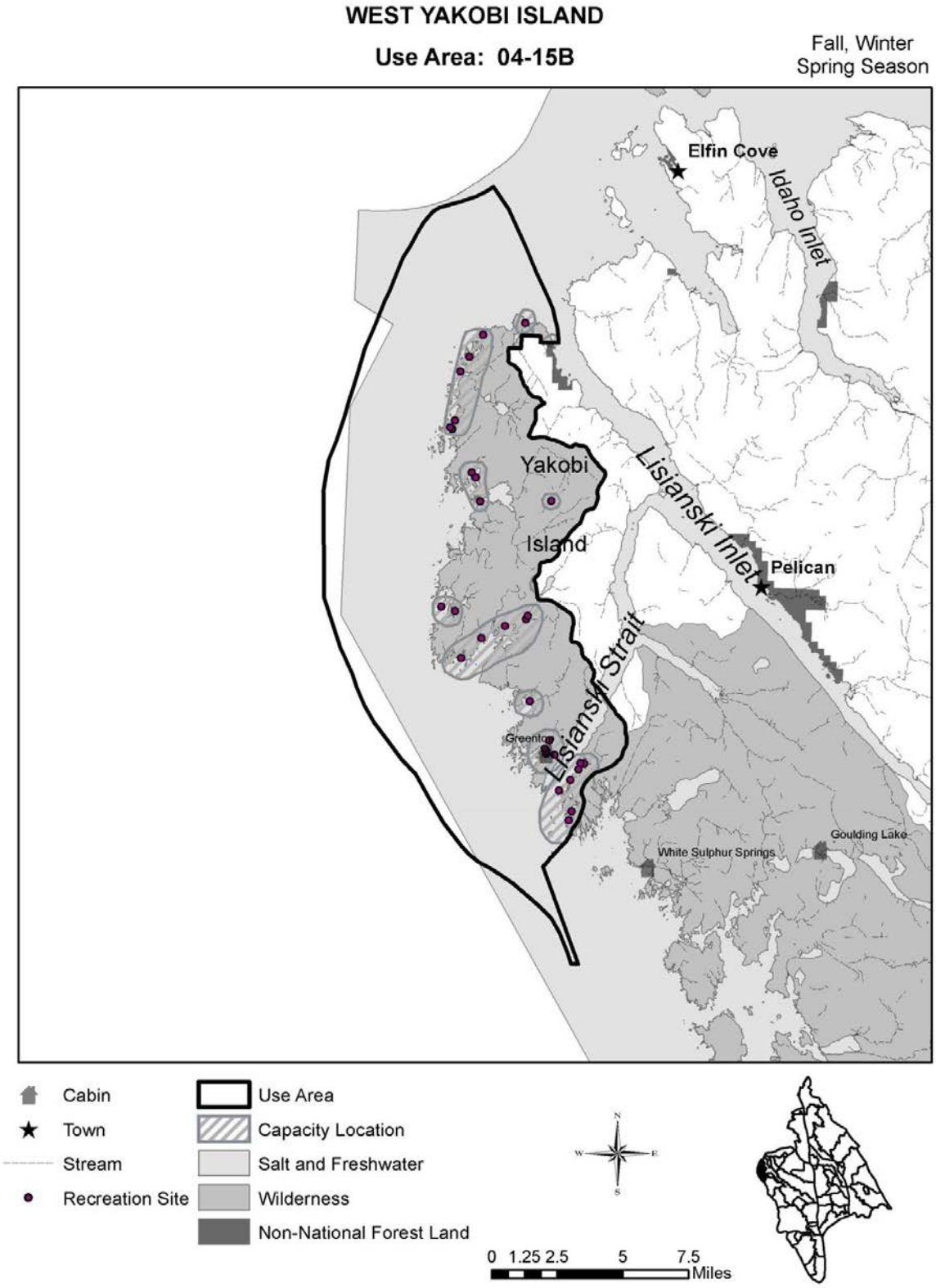

Figure E-29. Stag Bay capacity locations, Summer season.

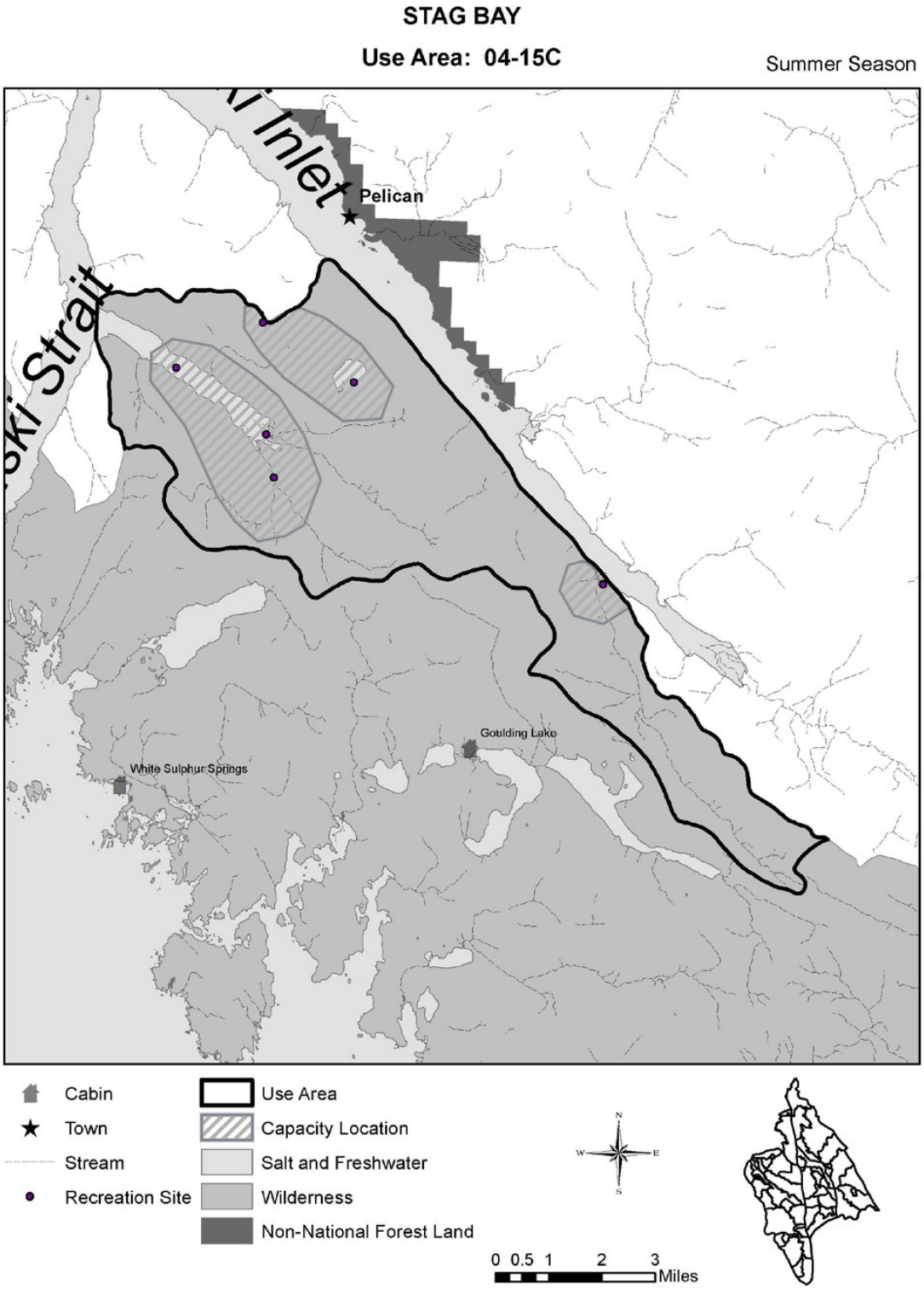

Figure E-30. Stag Bay capacity locations, Fall, Winter, and Spring seasons.

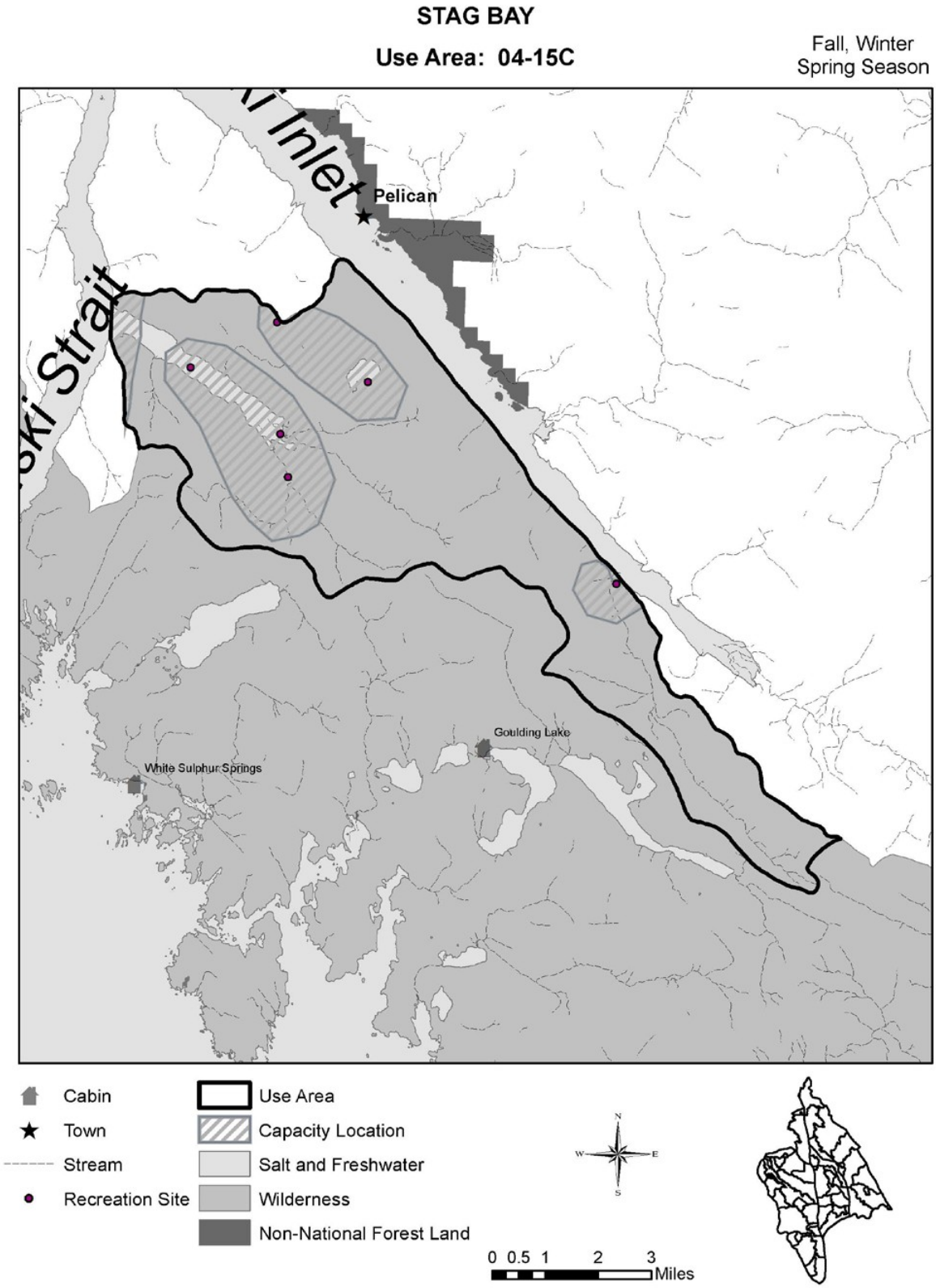

Figure E-31. Point Adolphus capacity locations, Summer season.

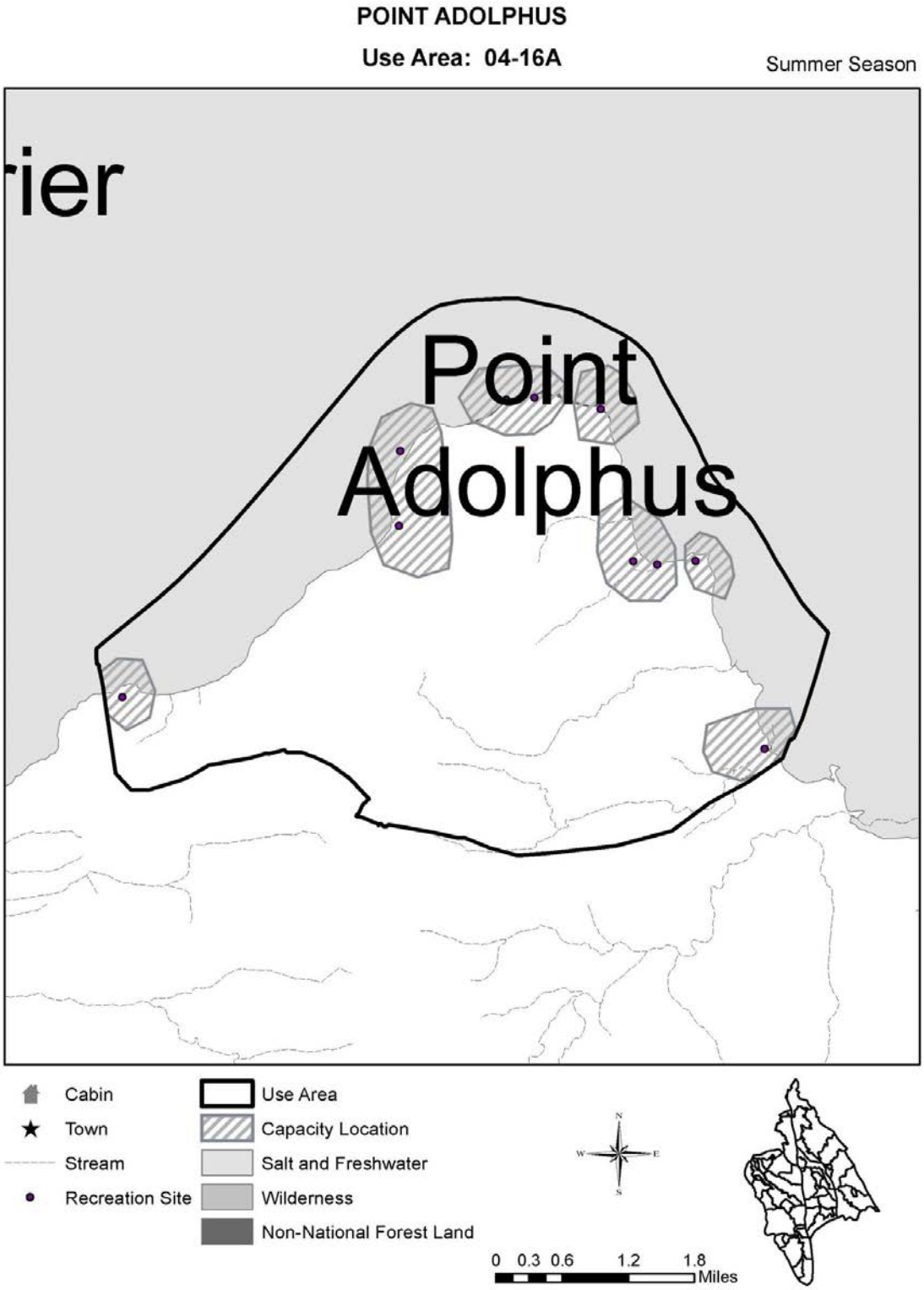

Figure E-32. Point Adolphus capacity locations, Fall, Winter, and Spring seasons.

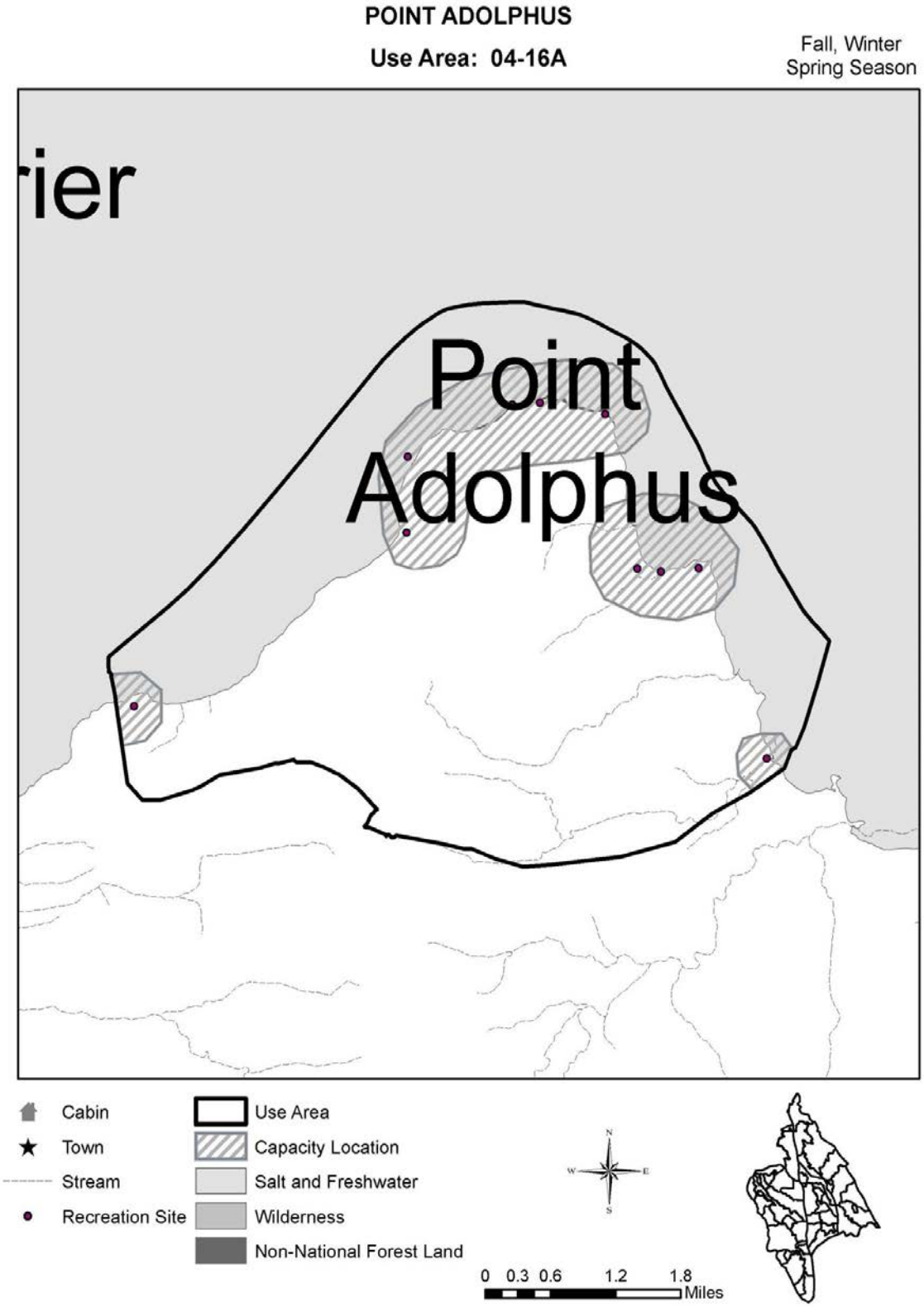

Figure E-33. North Chichagof capacity locations, Summer season.

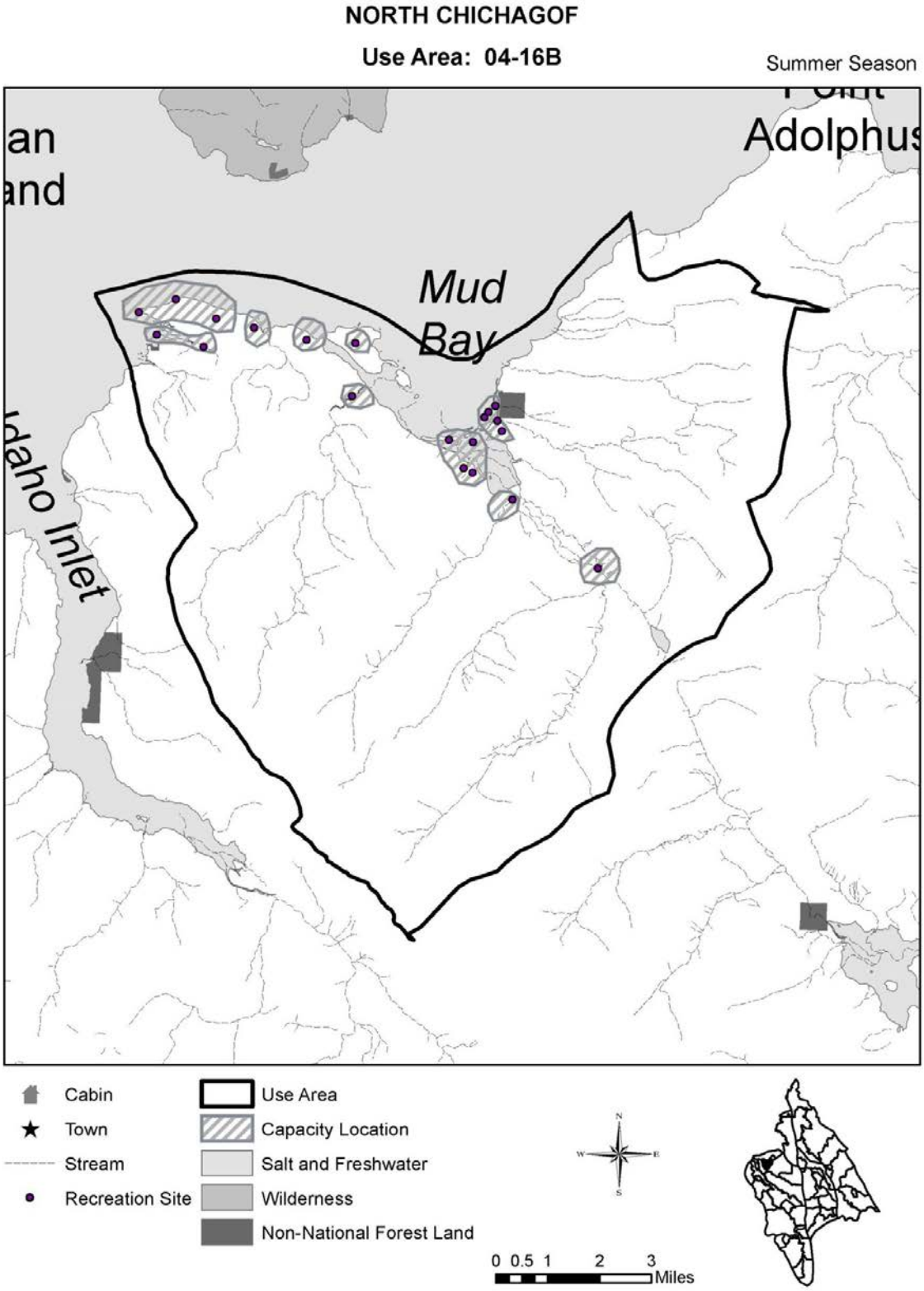

Figure E-34. North Chichagof capacity locations, Fall, Winter, and Spring seasons.

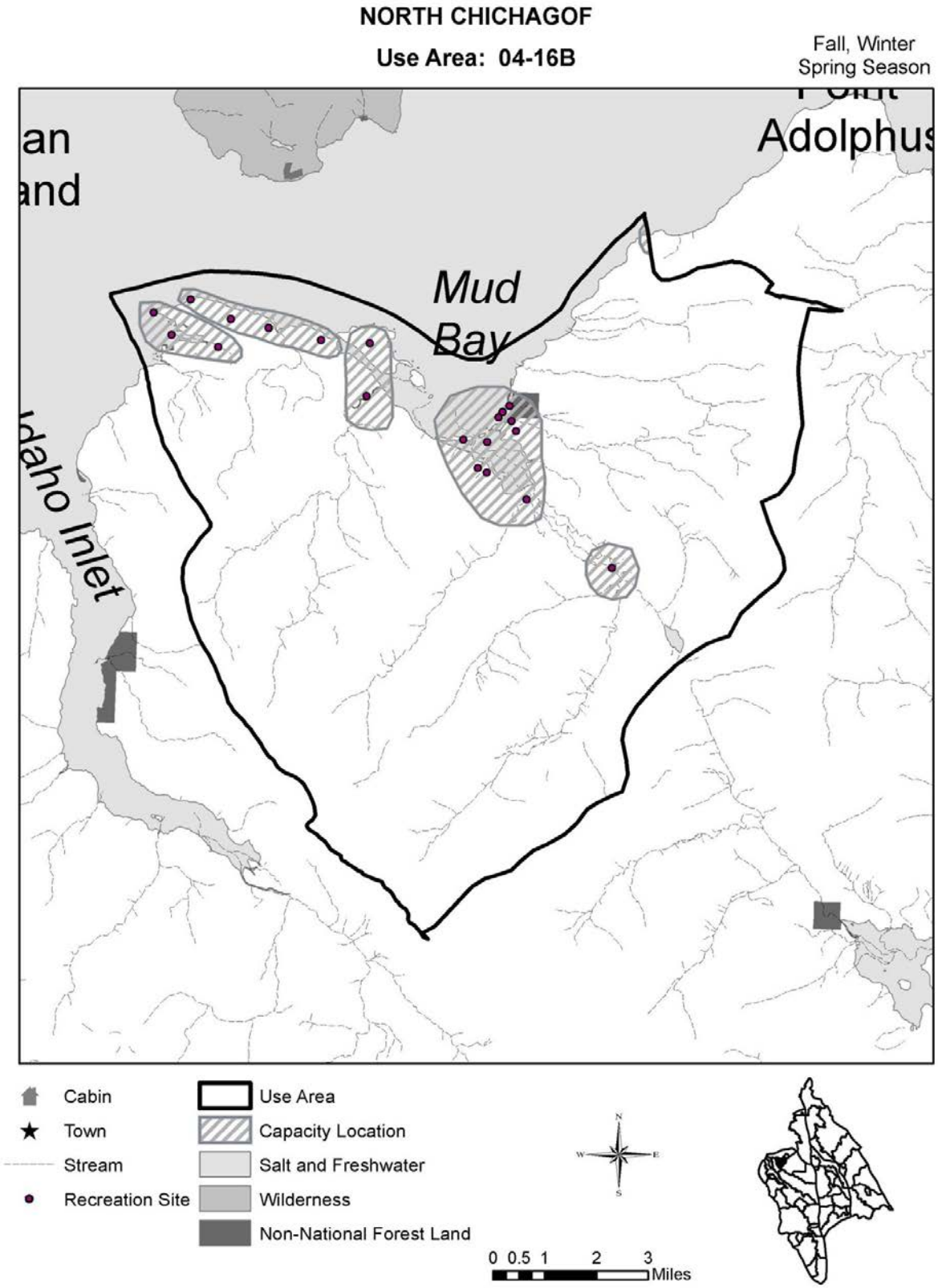

Figure E-35. Idaho Inlet capacity locations, Summer season.

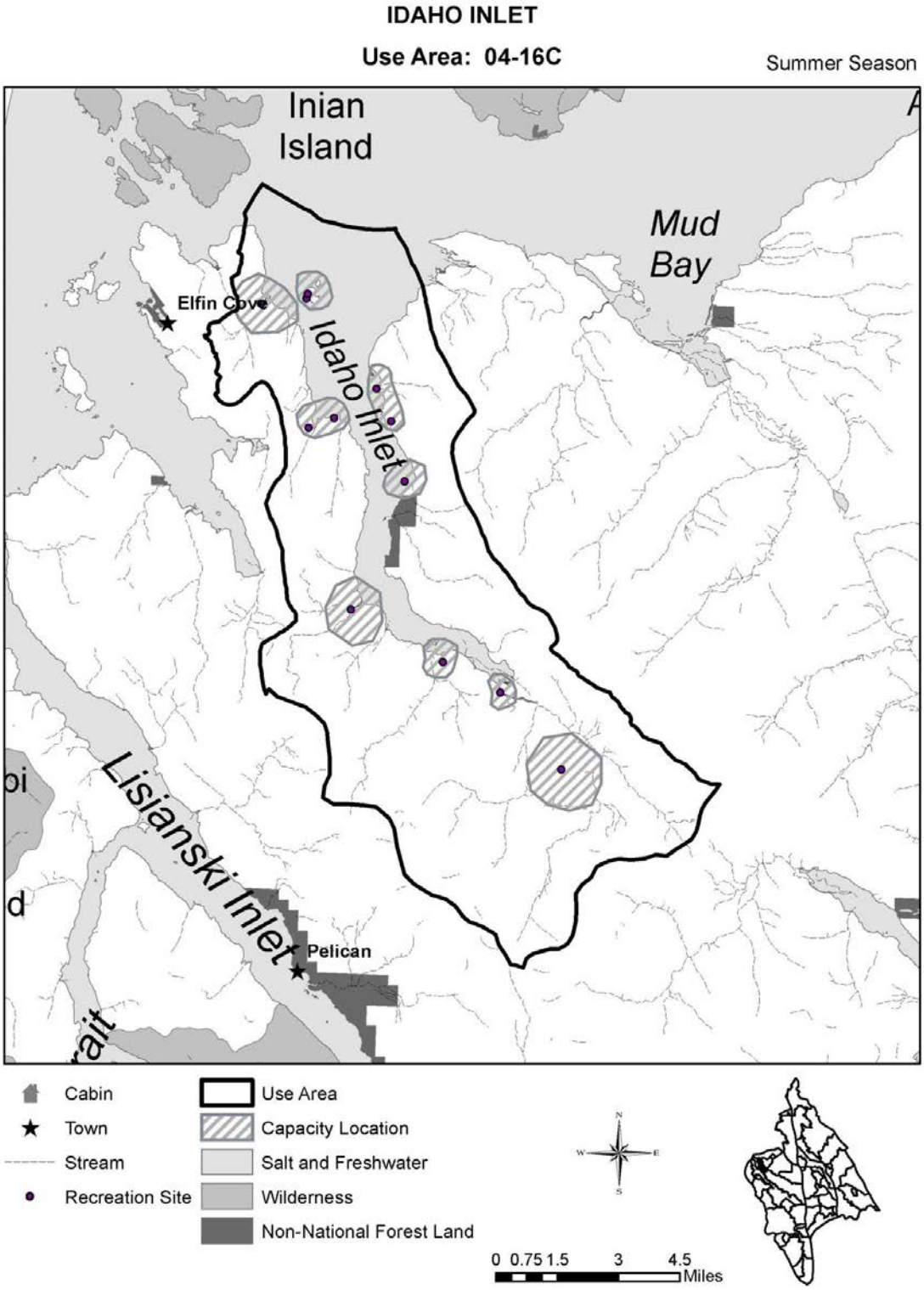

Figure E-36. Idaho Inlet capacity locations, Fall, Winter, and Spring seasons.

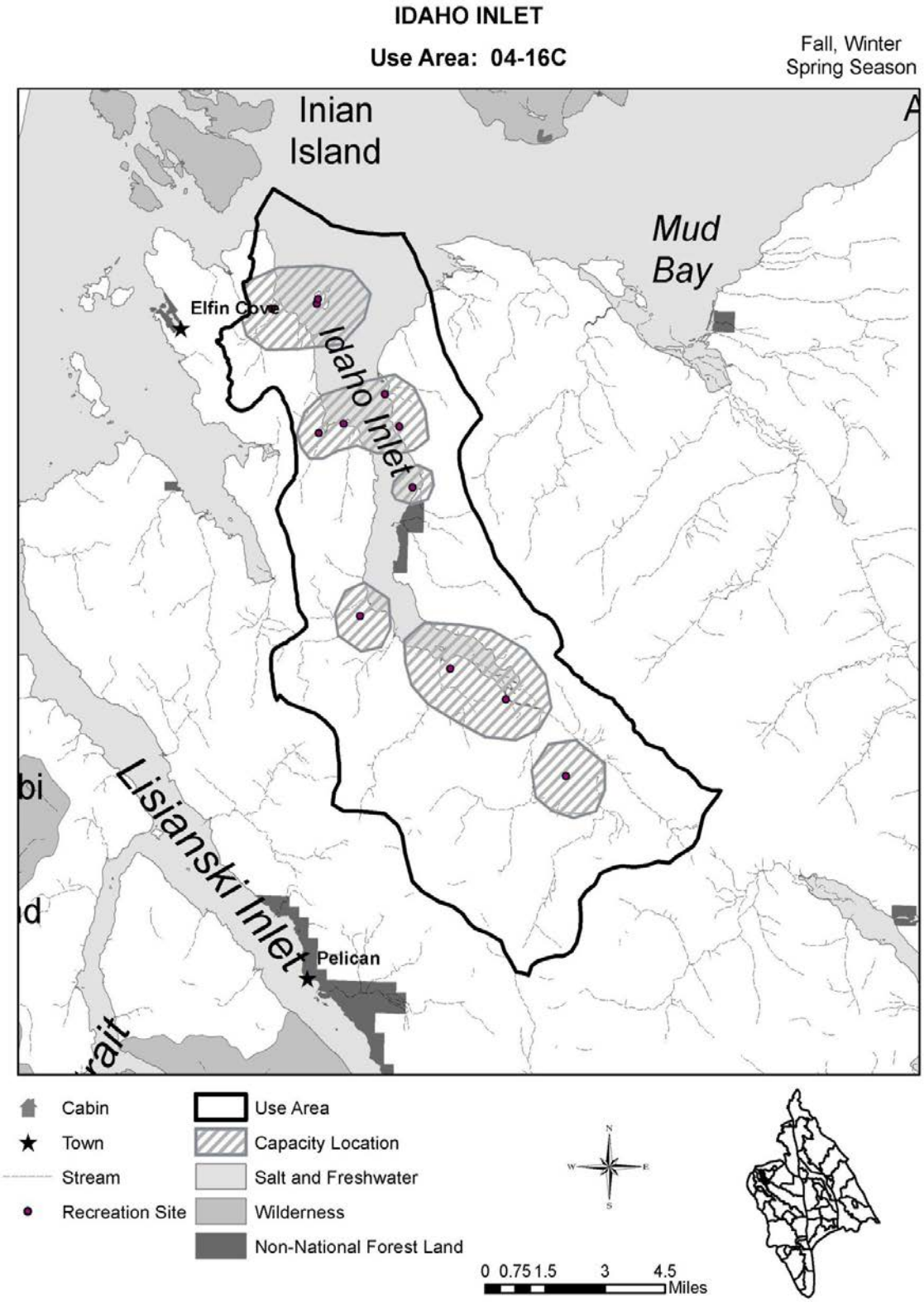

Figure E-37. PLI Wilderness capacity locations, Summer season.

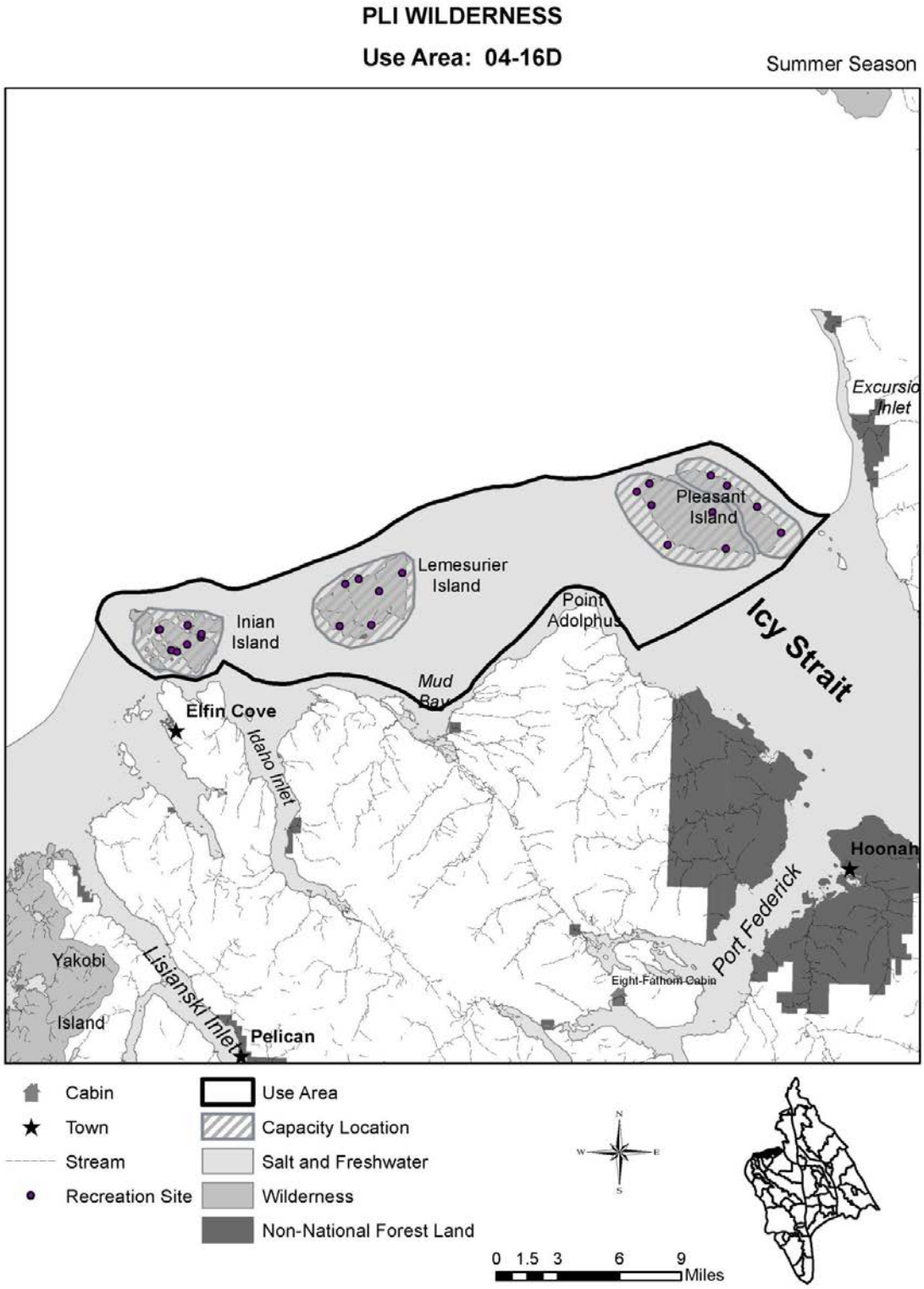

Figure E-38. PLI Wilderness capacity locations, Fall, Winter, and Spring seasons.

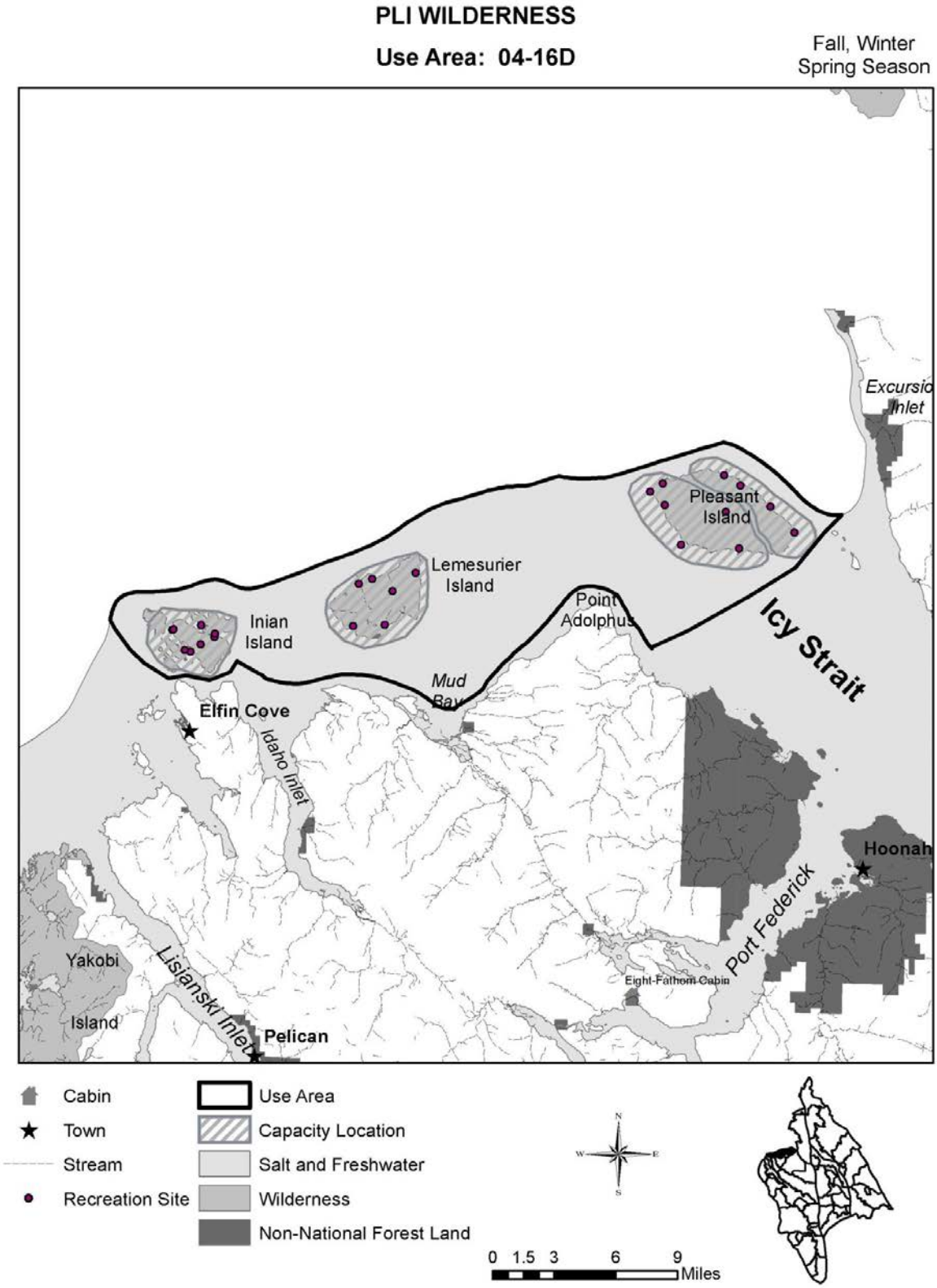

Figure E-39. Port Althorp capacity locations, Summer season.

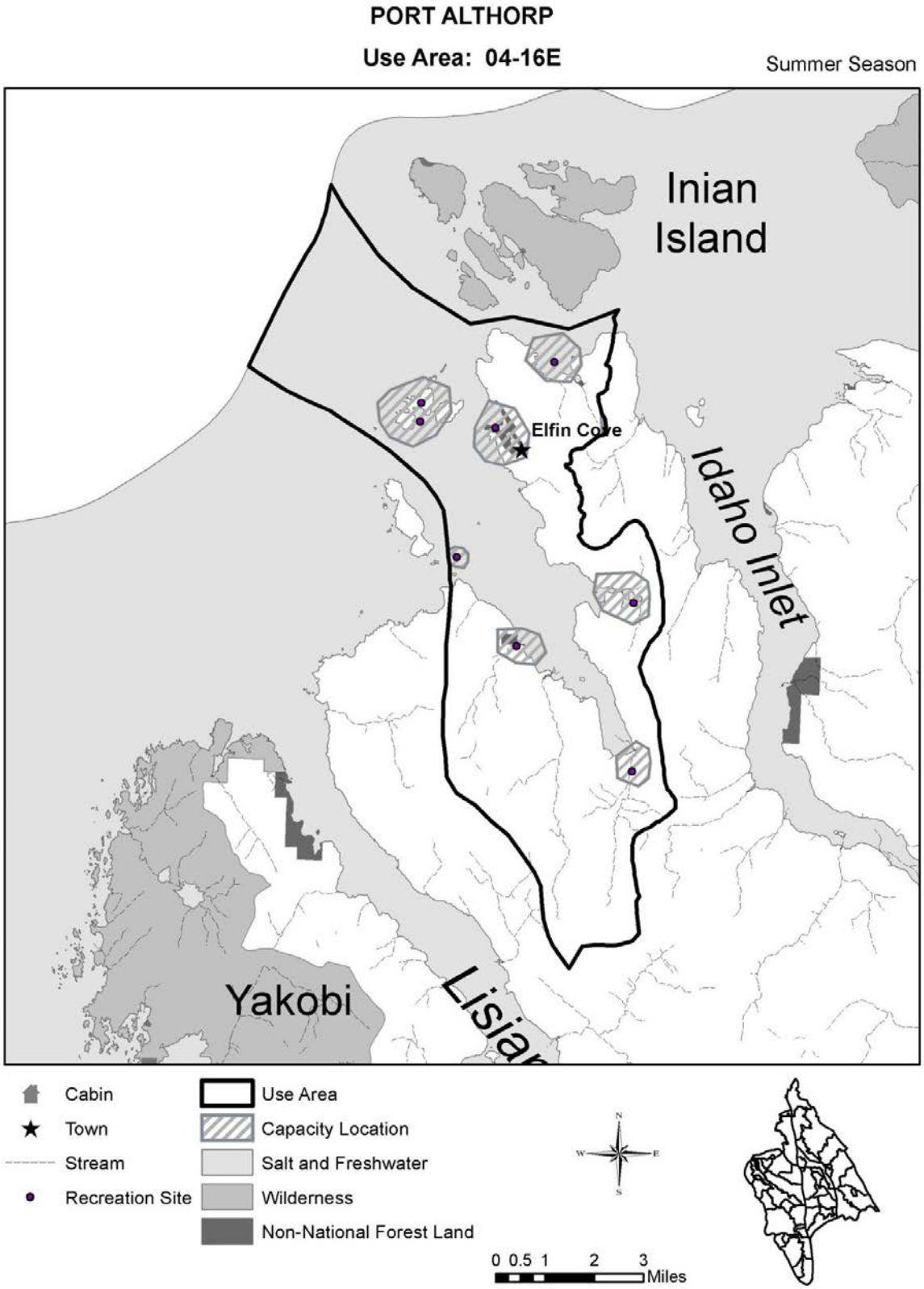

Figure E-40. Port Althorp capacity locations, Fall, Winter, and Spring seasons.

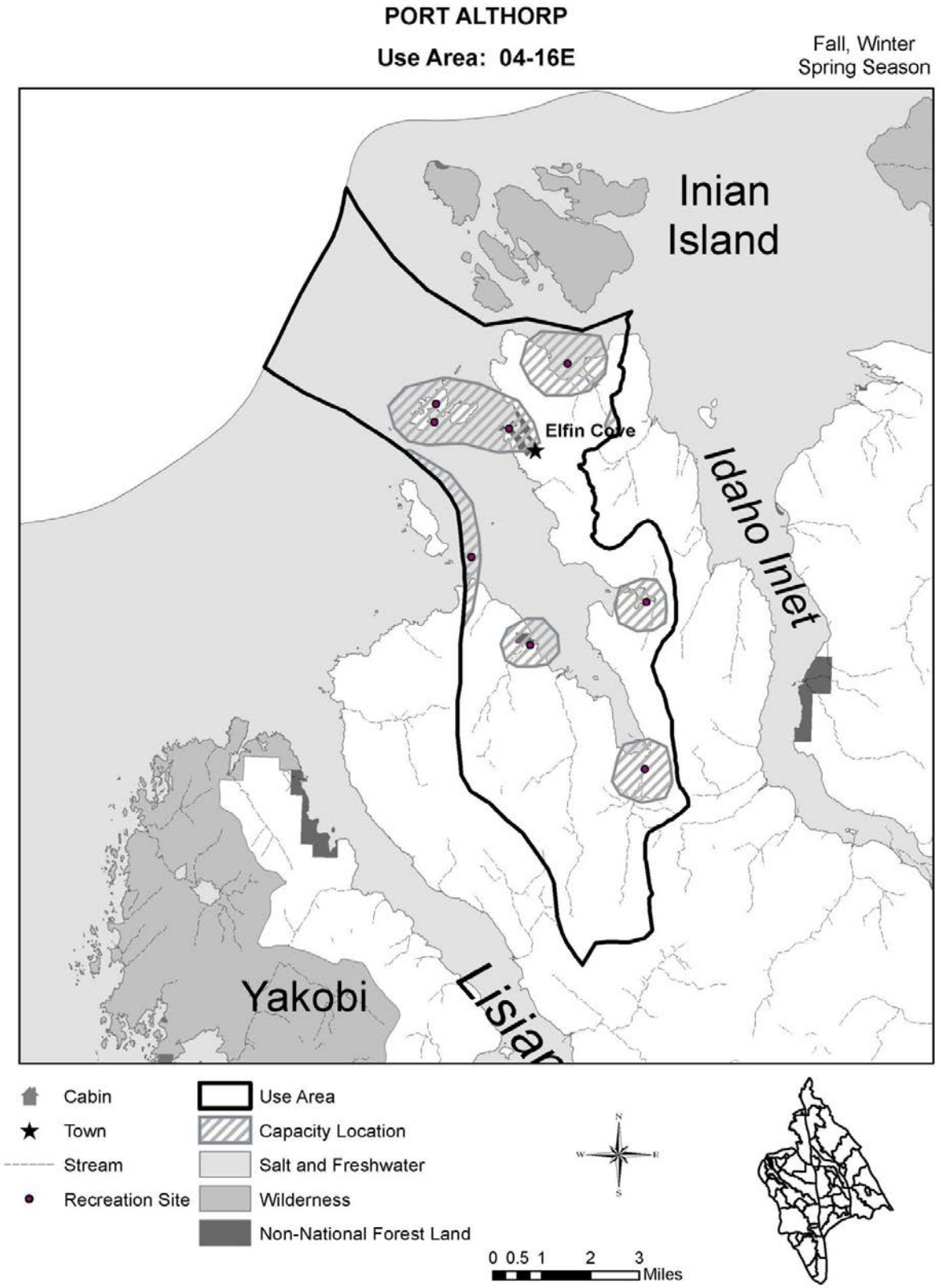

Figure E-41. Skagway Area capacity locations, Summer season.

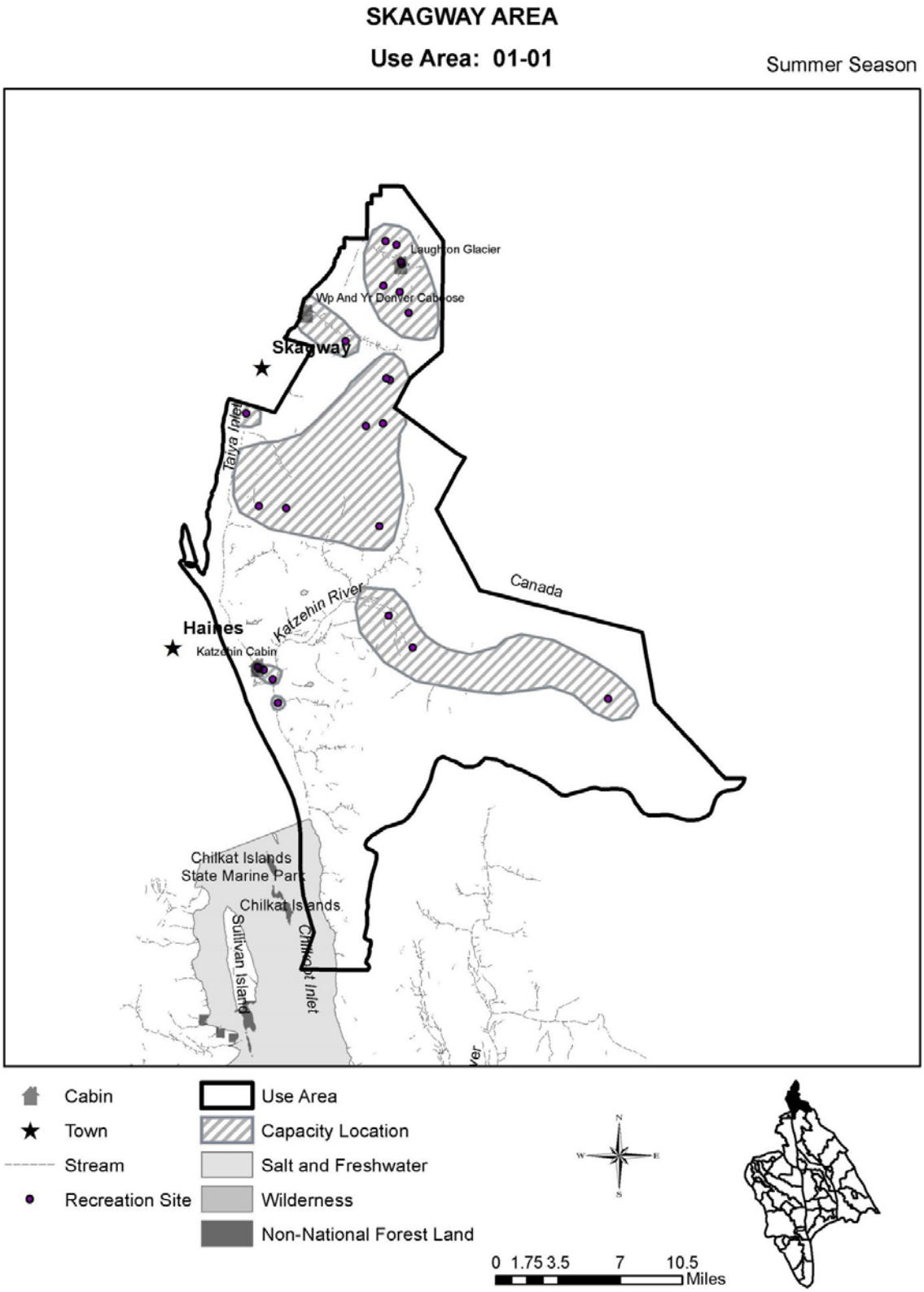

Figure E-42. Skagway Area capacity locations, Fall, Winter, and Spring seasons.

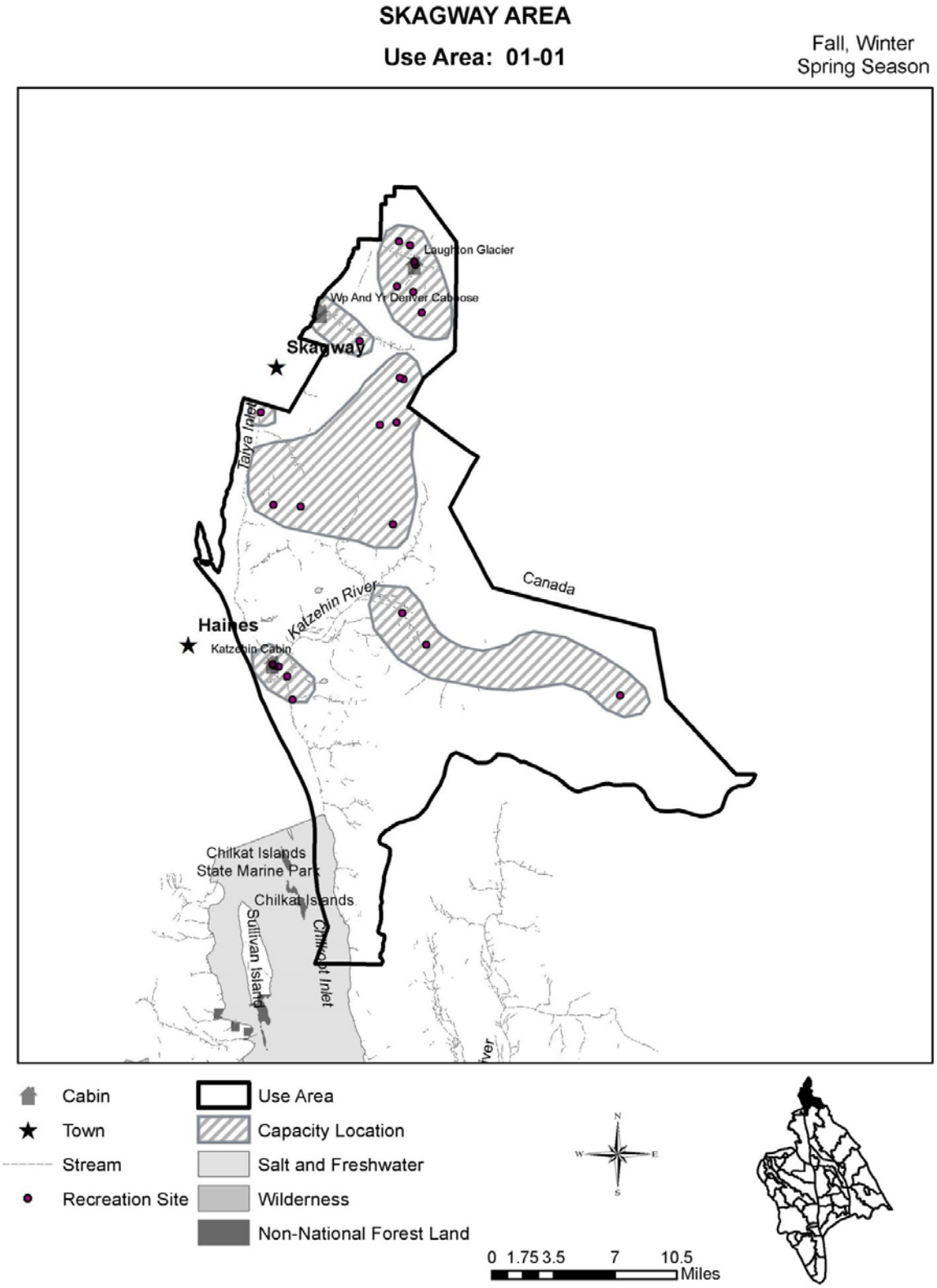

Figure E-43. Haines Area capacity locations, Summer season.

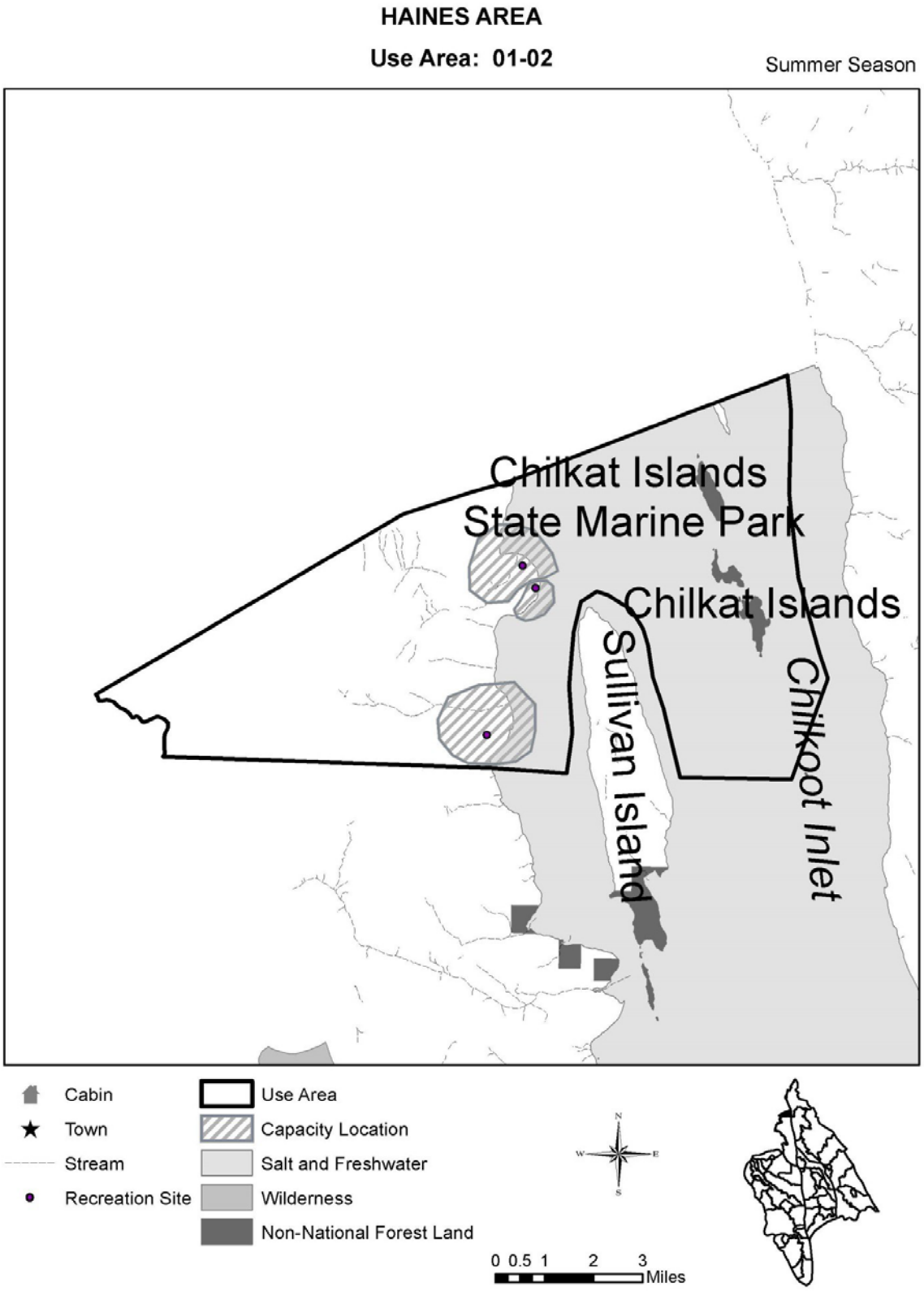

Figure E-44. Haines Area capacity locations, Fall, Winter, and Spring seasons.

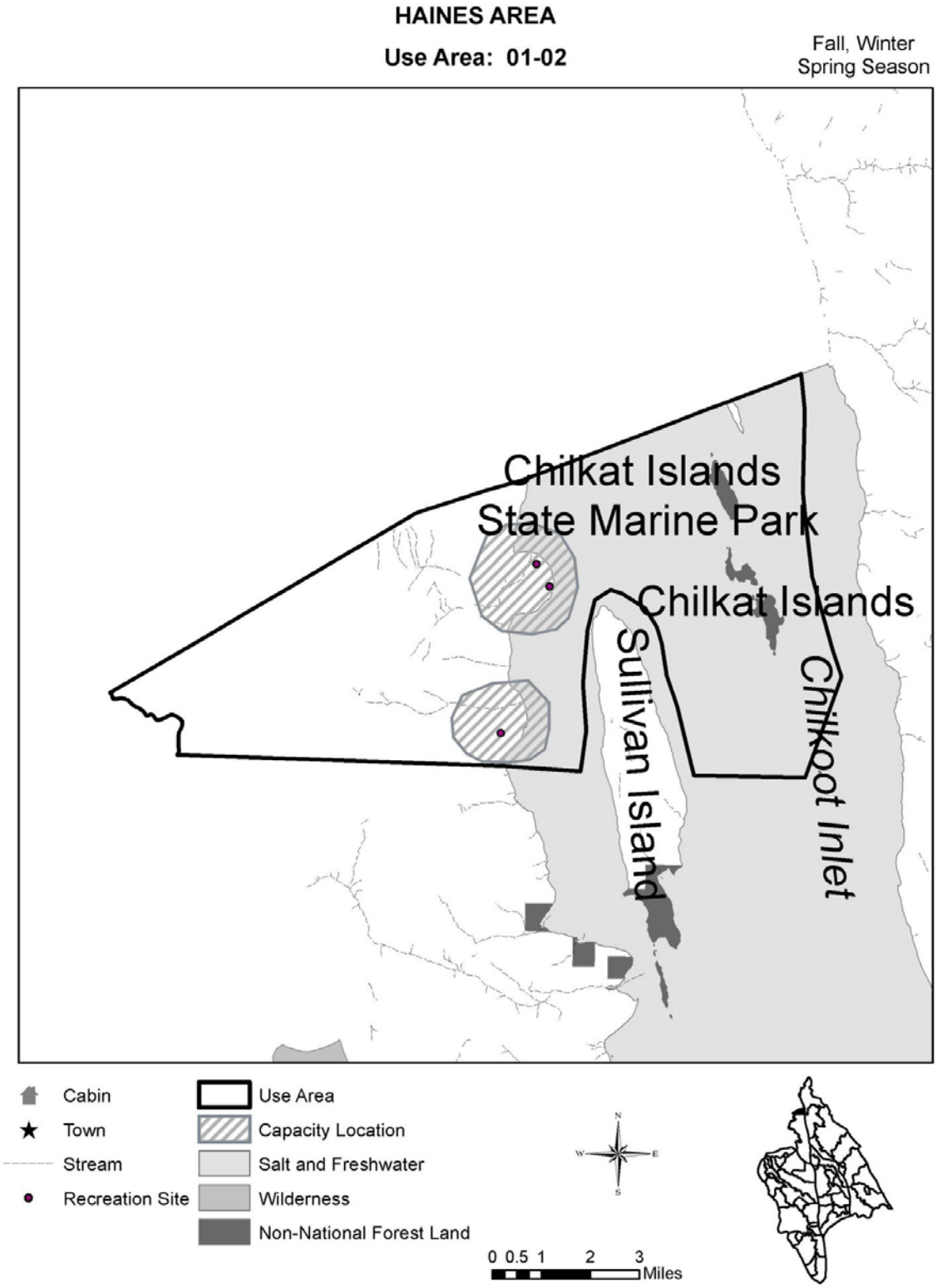

Figure E-45. East Chilkats capacity location, Summer season.

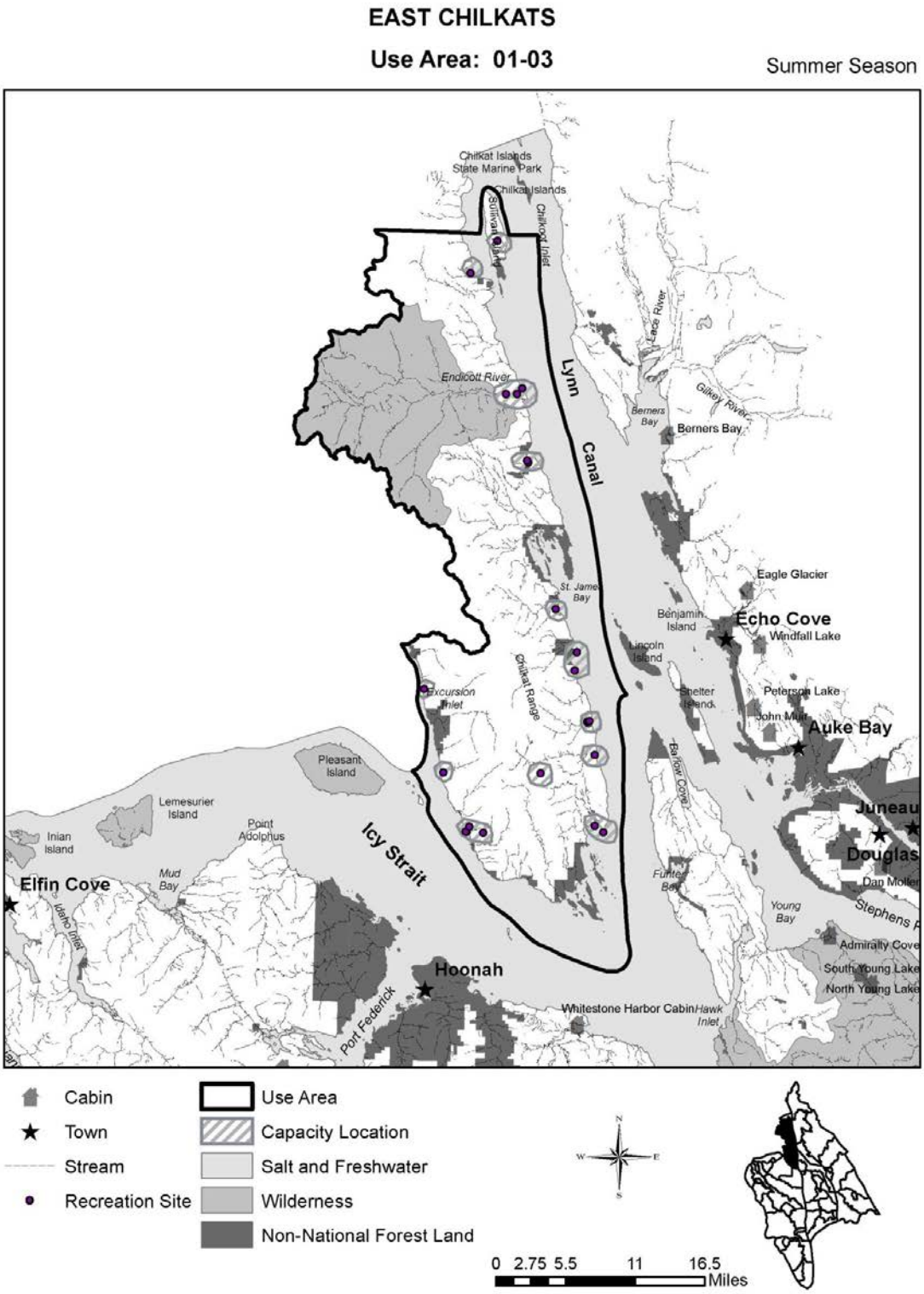

Figure E-46. East Chilkats capacity location, Fall, Winter, and Spring season.

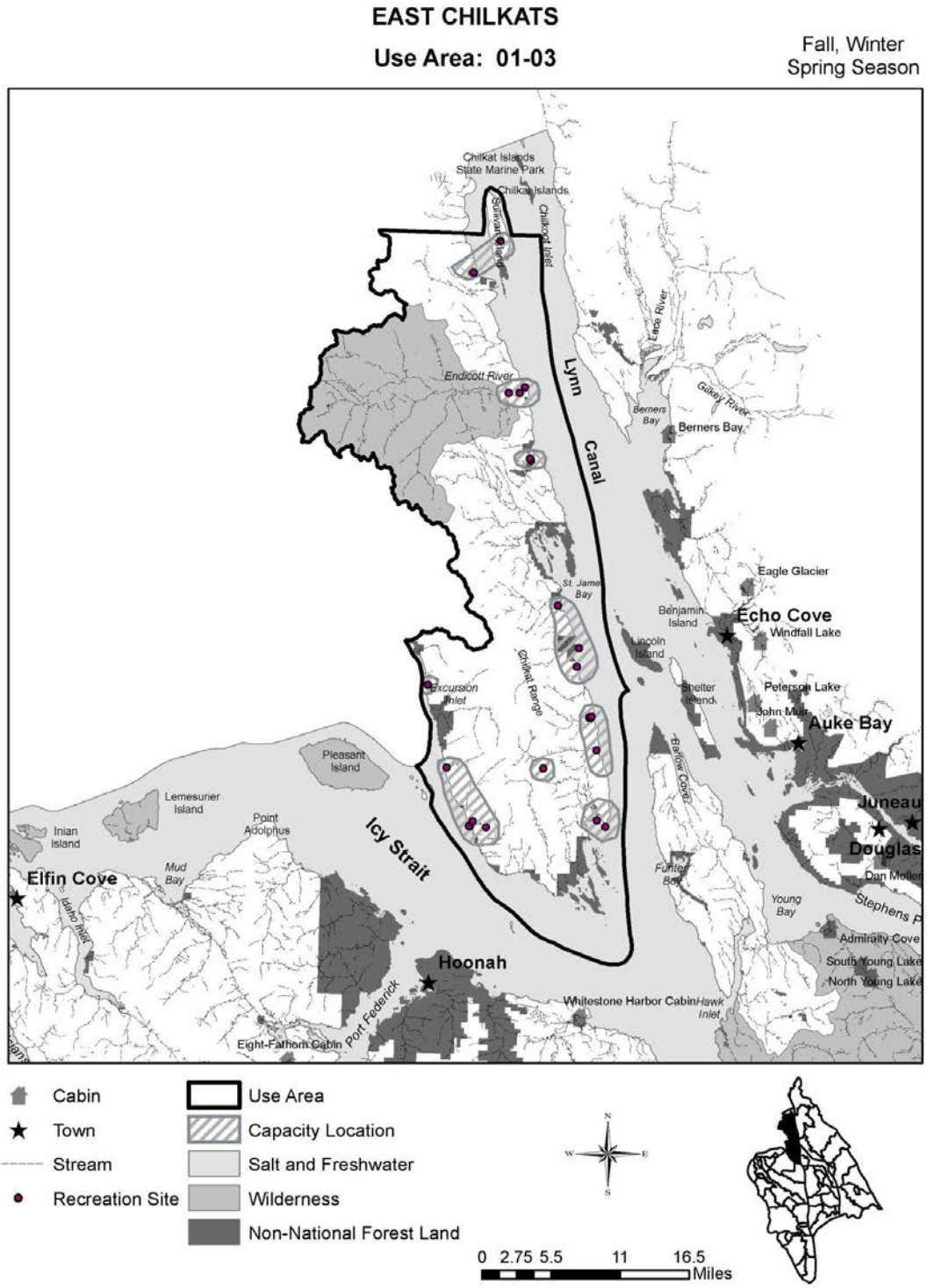

Figure E-47. Berners Bay capacity location, Summer season.

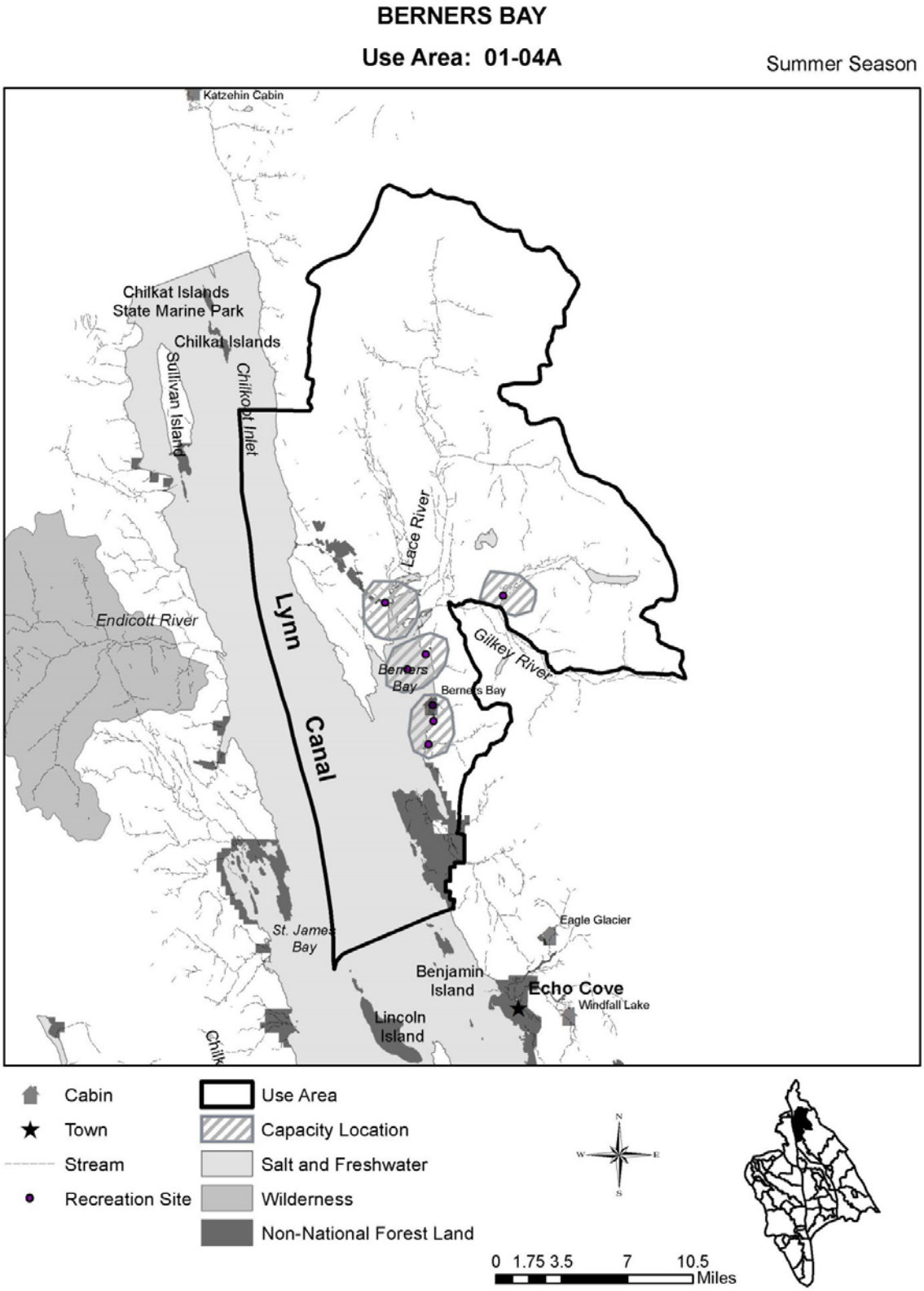

Figure E-48. Berners Bay capacity locations, Fall, Winter, and Spring seasons.

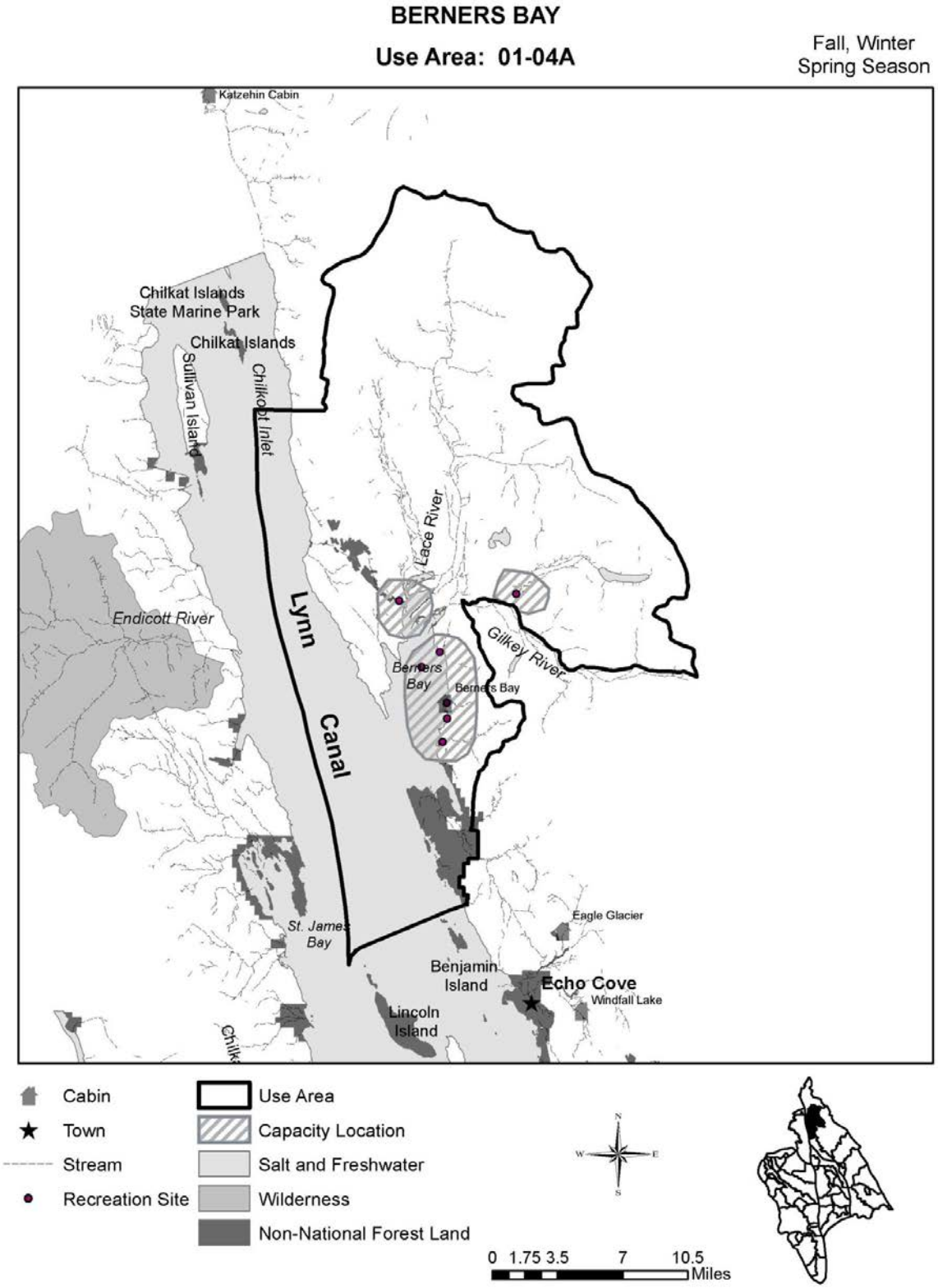

Figure E-49. North Juneau Coast capacity locations, Summer season.

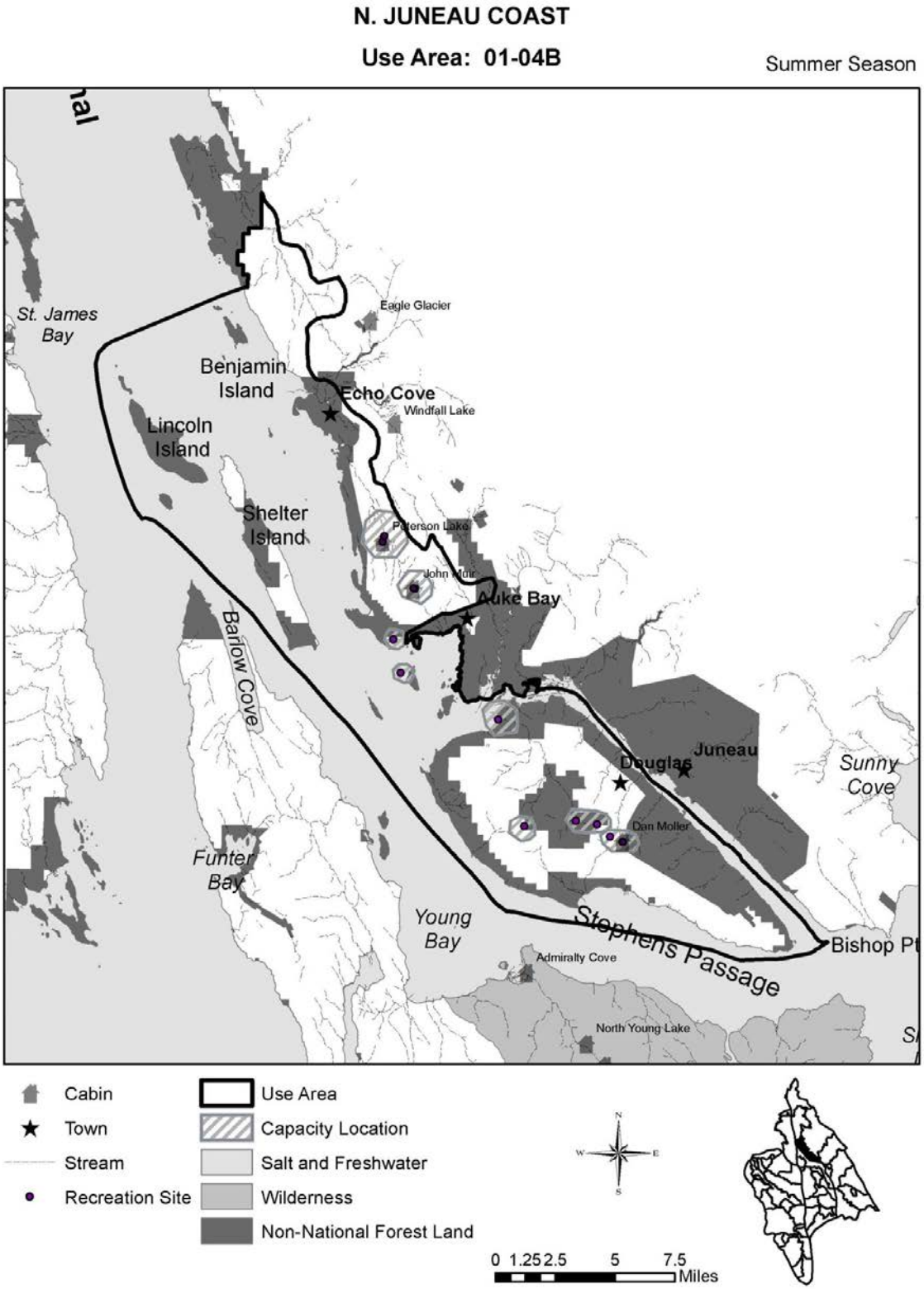

Figure E-50. North Juneau Coast capacity locations, Fall, Winter, and Spring seasons.

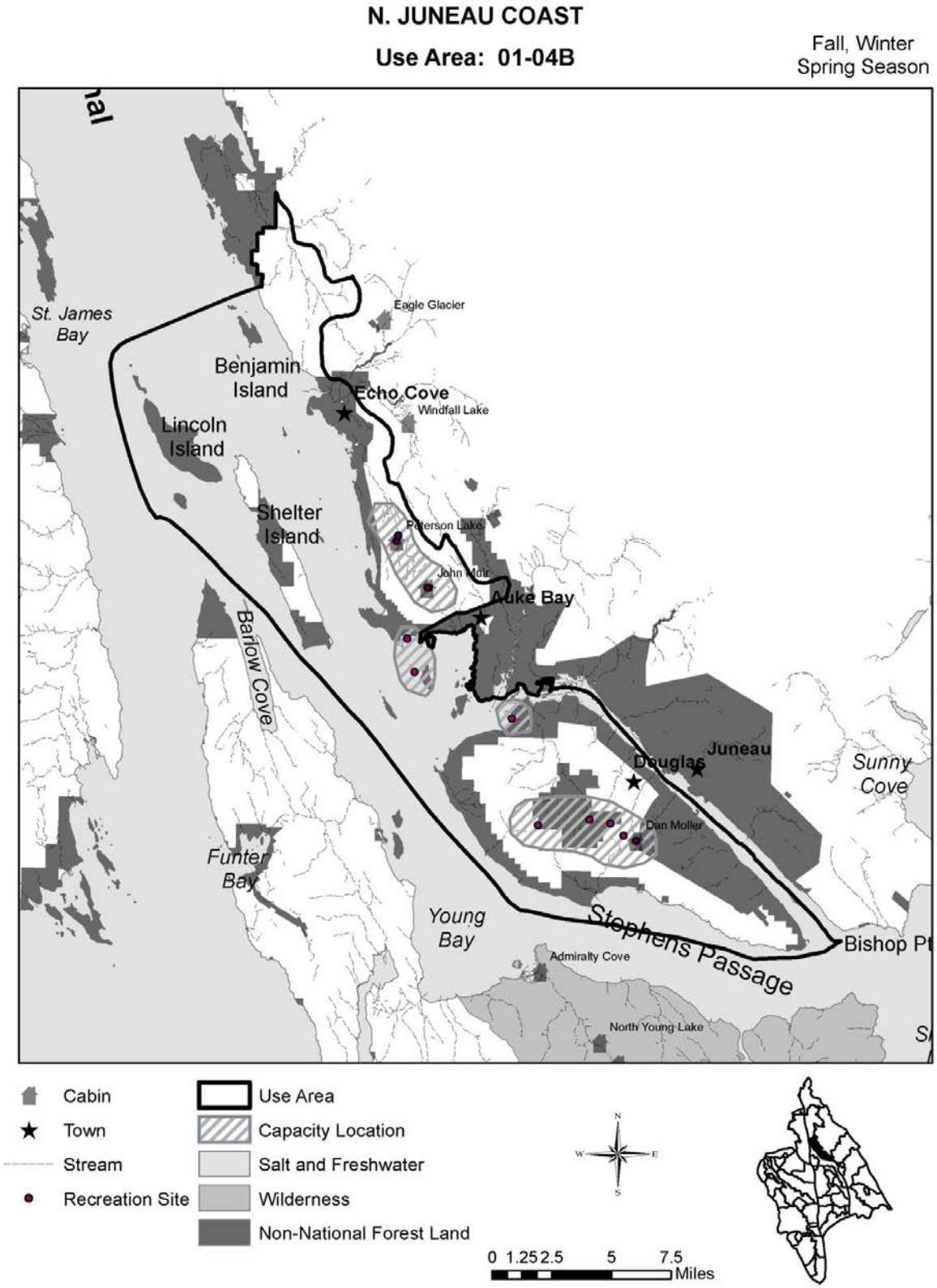

Figure E-51. Taku Inlet capacity locations, Summer season.

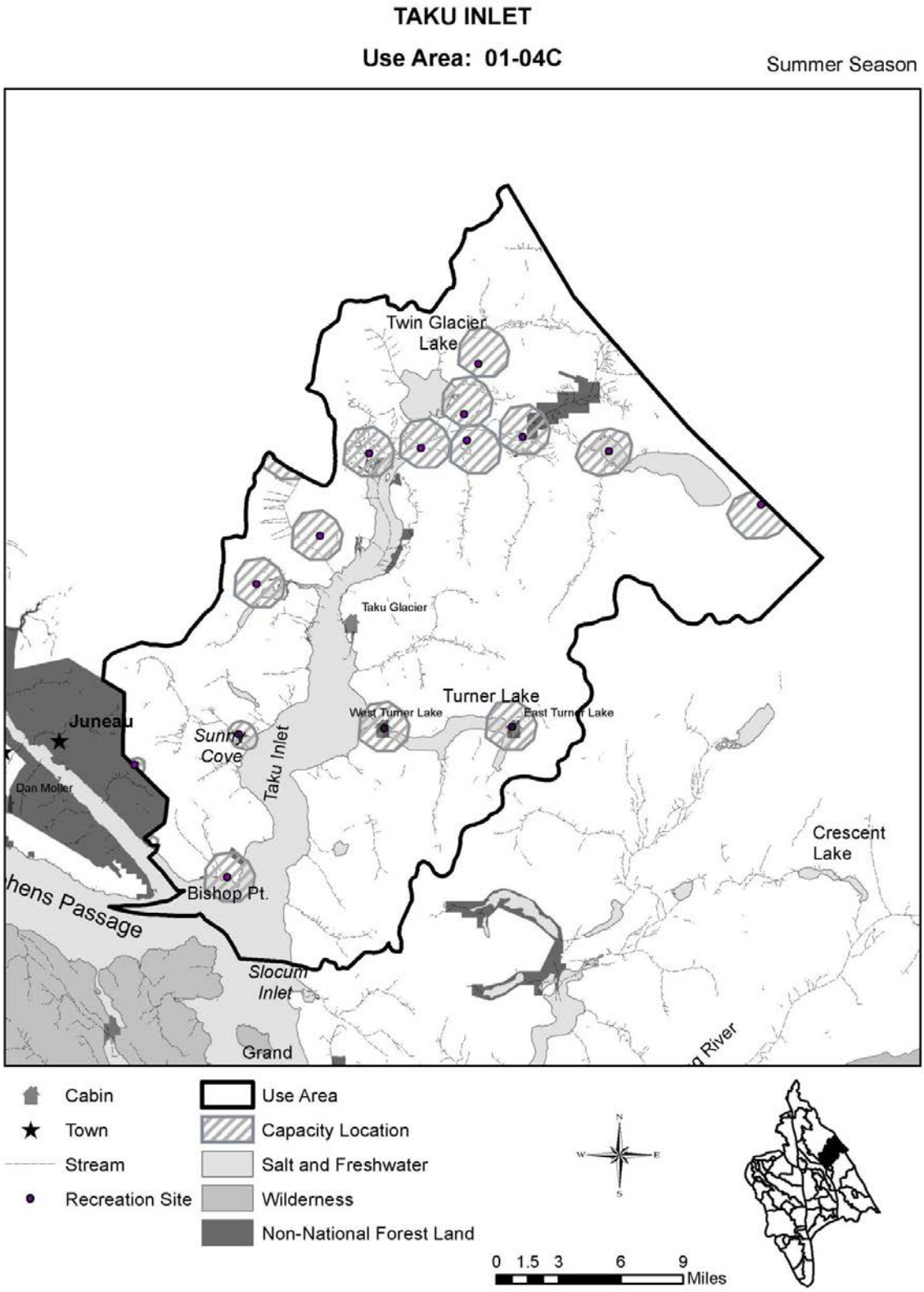

Figure E-52. Taku Inlet capacity locations, Fall, Winter, and Spring seasons.

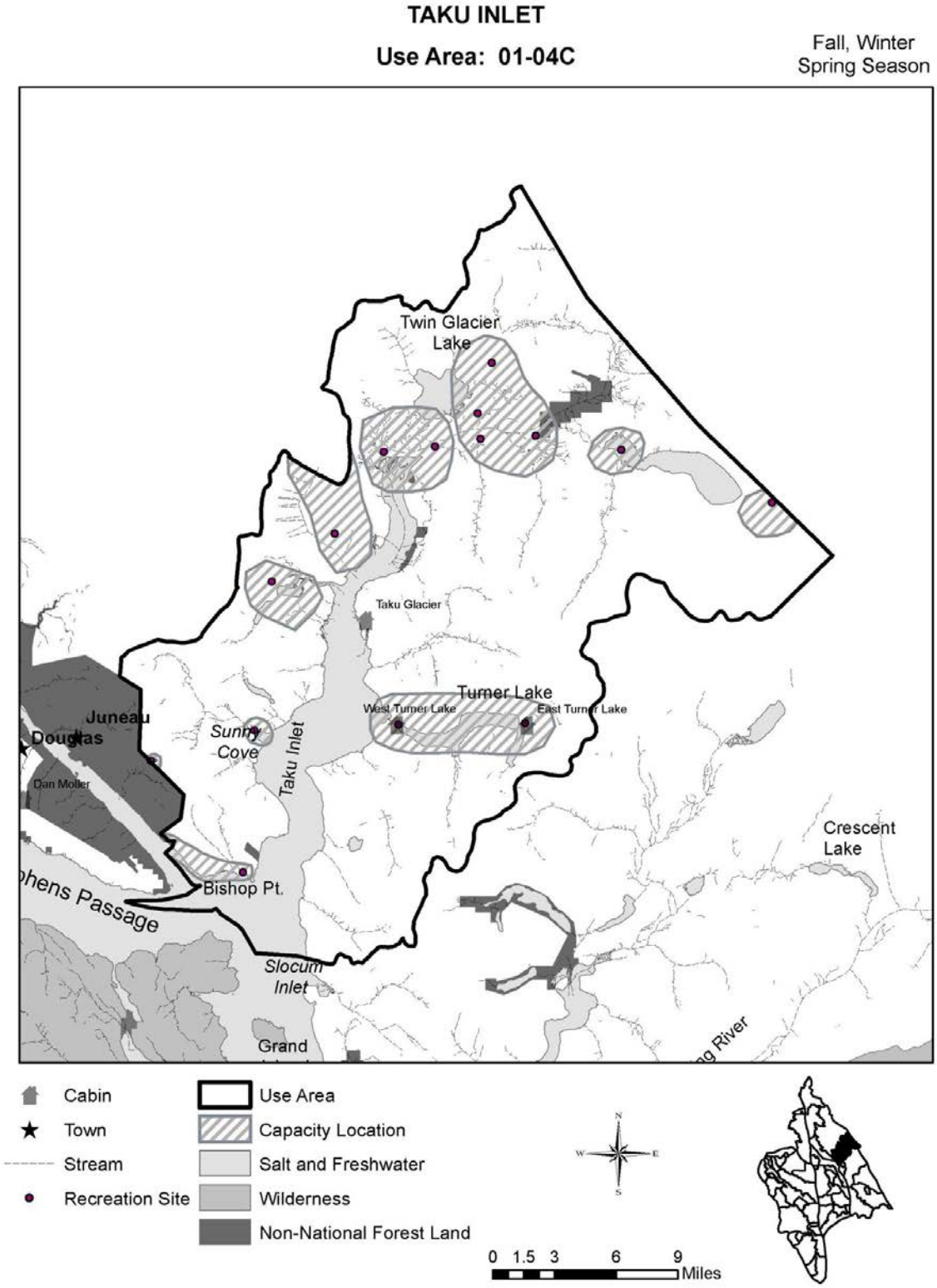

Figure E-53. Slocum Inlet capacity location, Summer season.

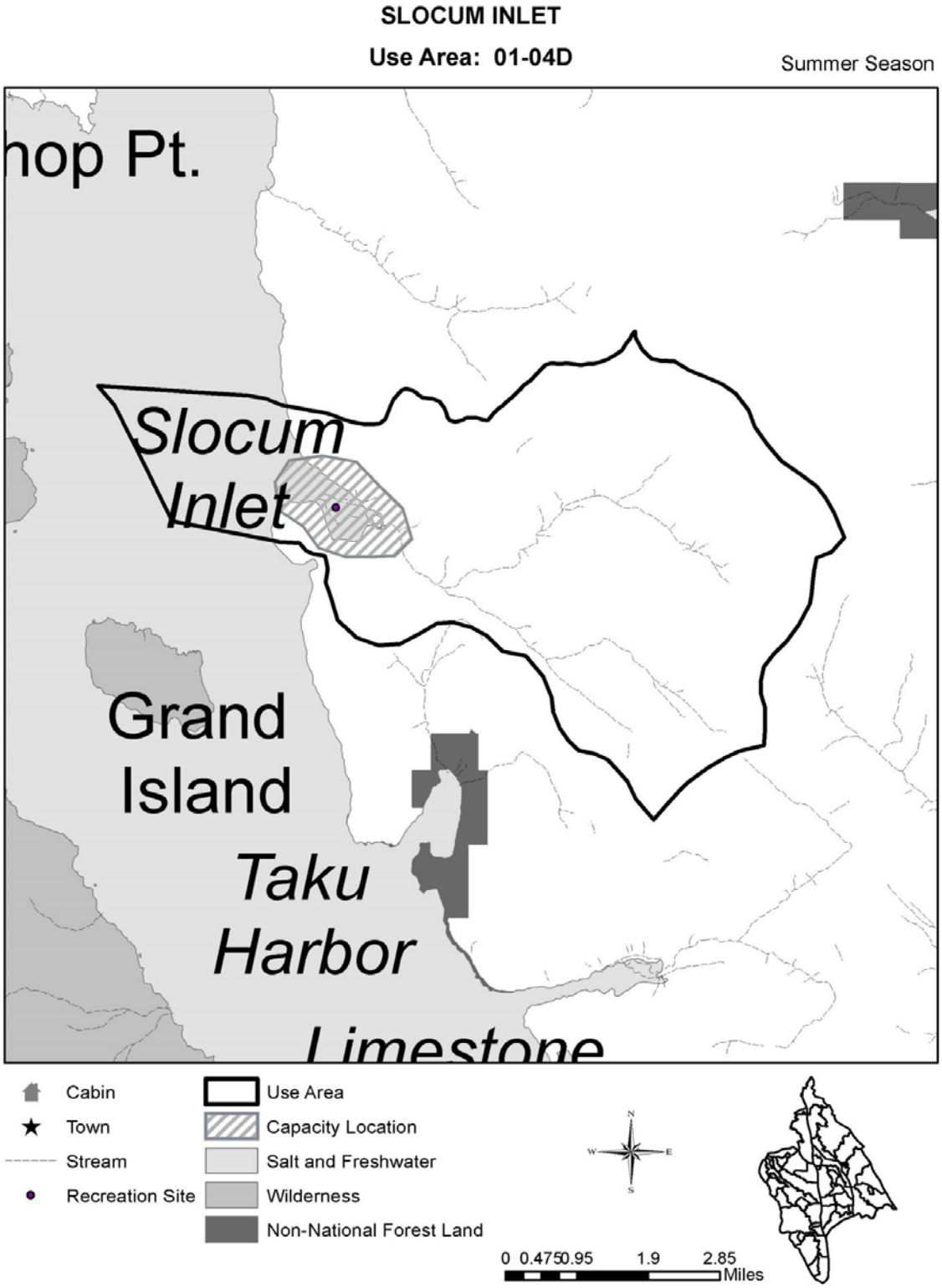

Figure E-54. Slocum Inlet capacity locations, Fall, Winter, and Spring seasons.

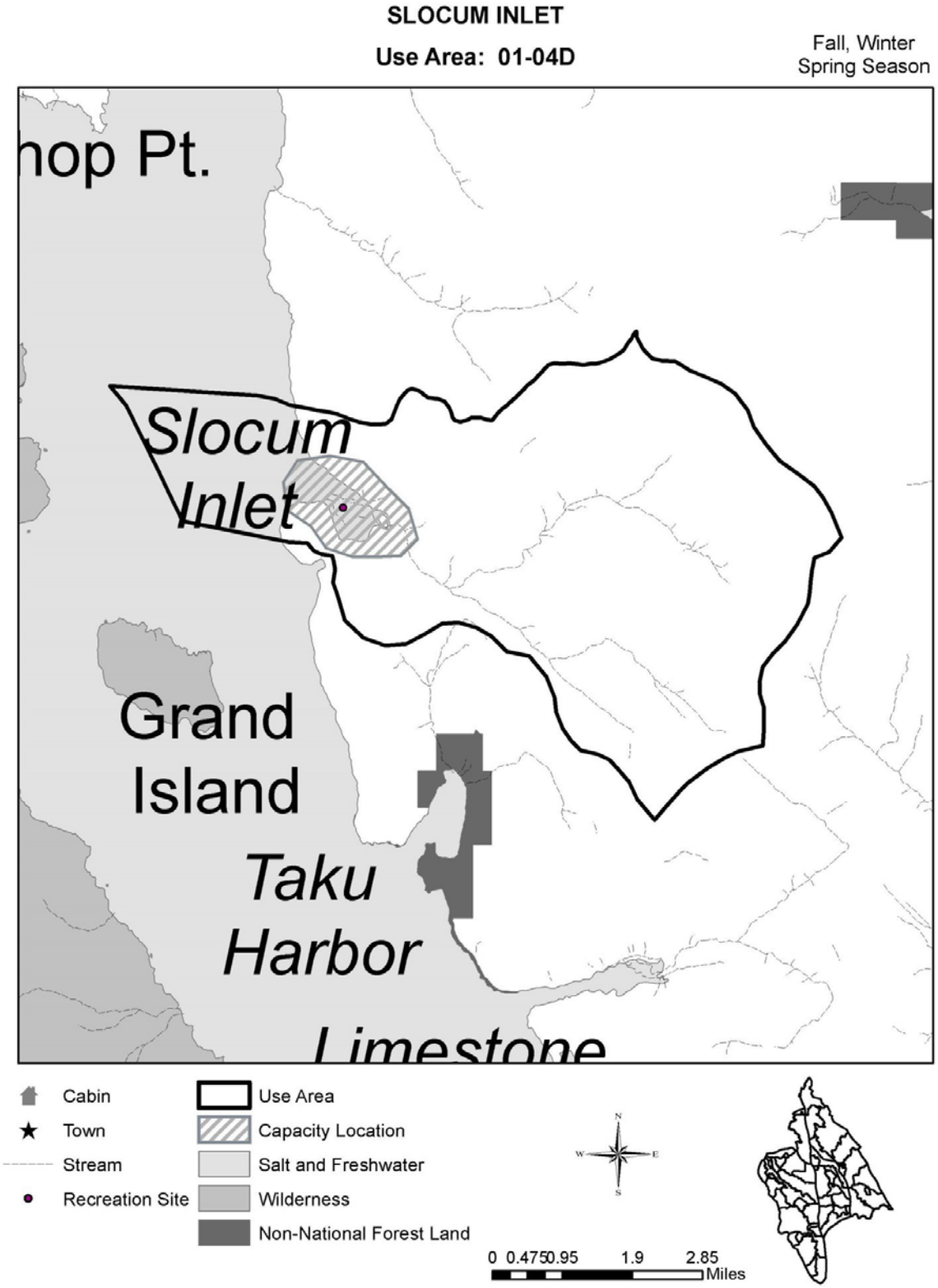

Figure E-55. Taku Harbor capacity locations, Summer season.

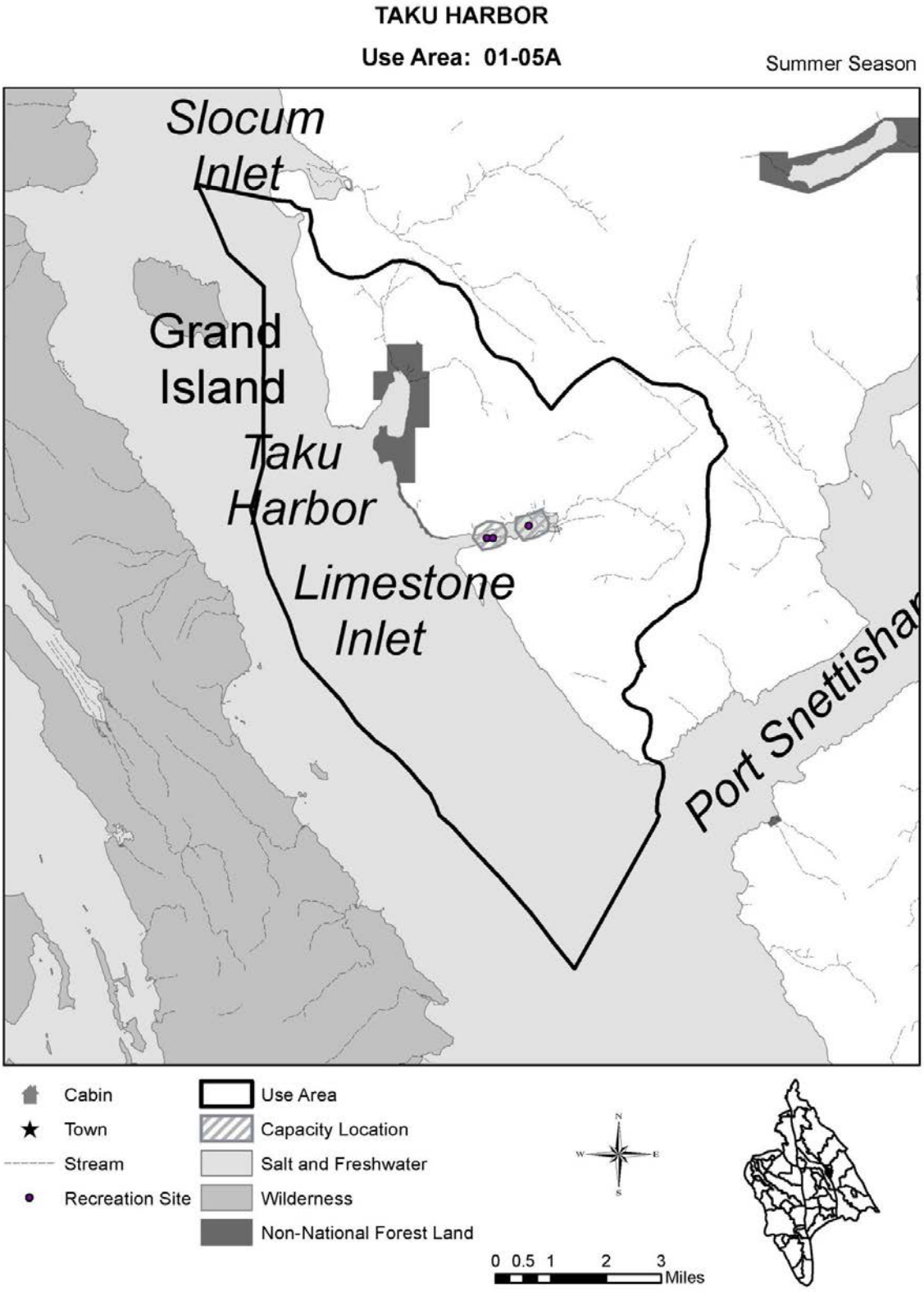

Figure E-56. Taku Harbor capacity locations, Fall, Winter, and Spring seasons.

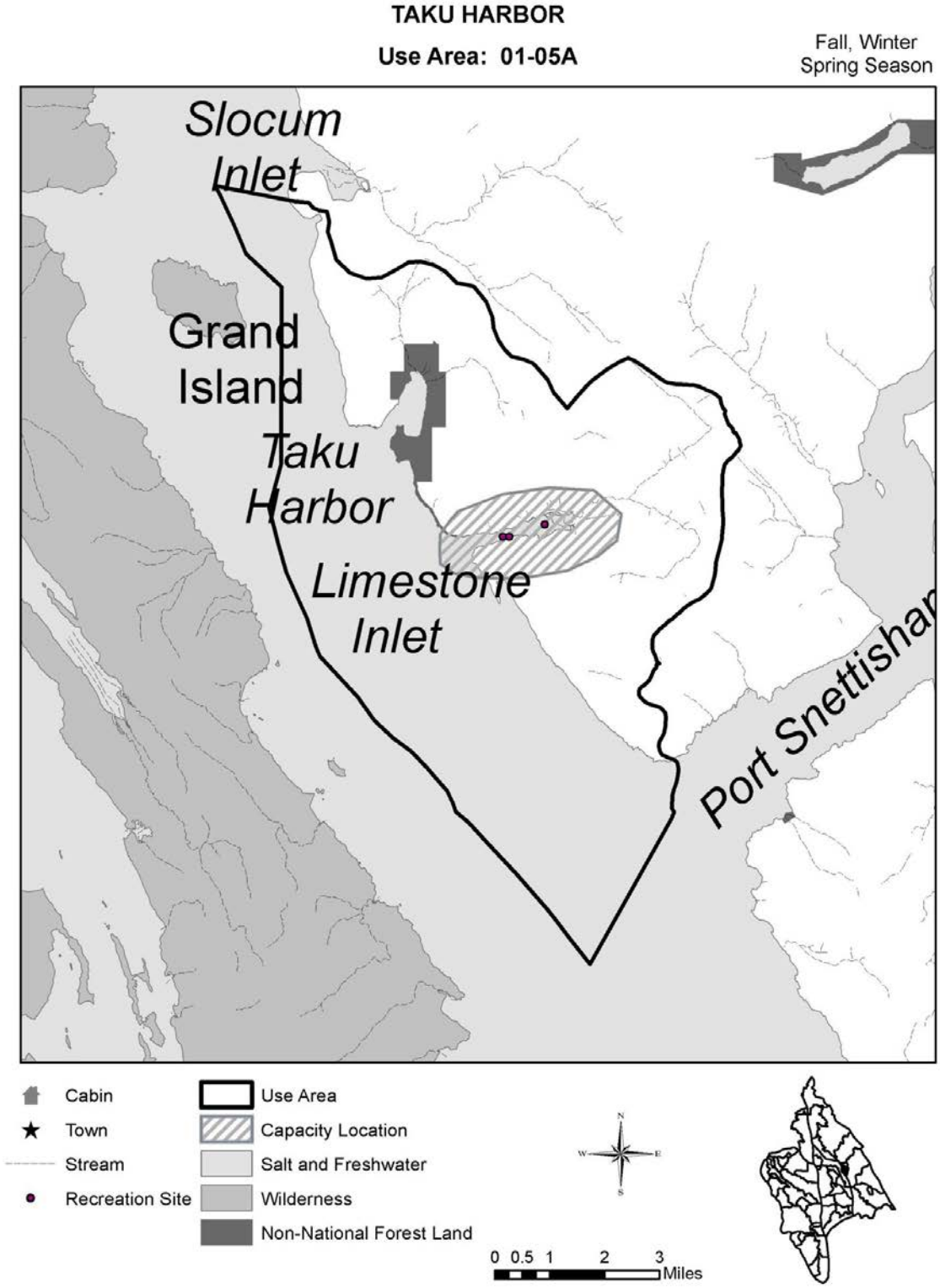

Figure E-57. Port Snettisham capacity locations, Summer season.

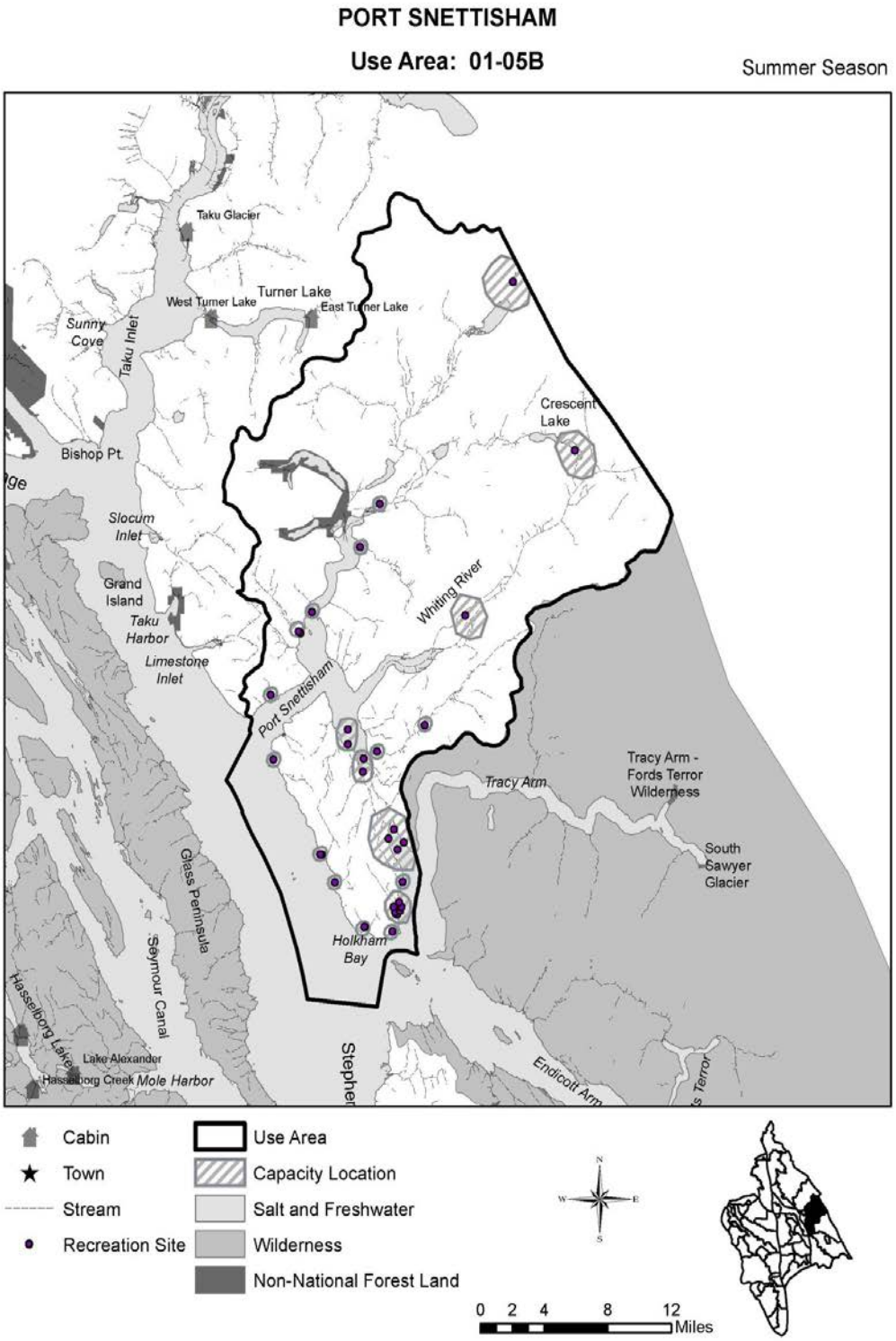

Figure E-58. Port Snettisham capacity locations, Fall, Winter, and Spring seasons.

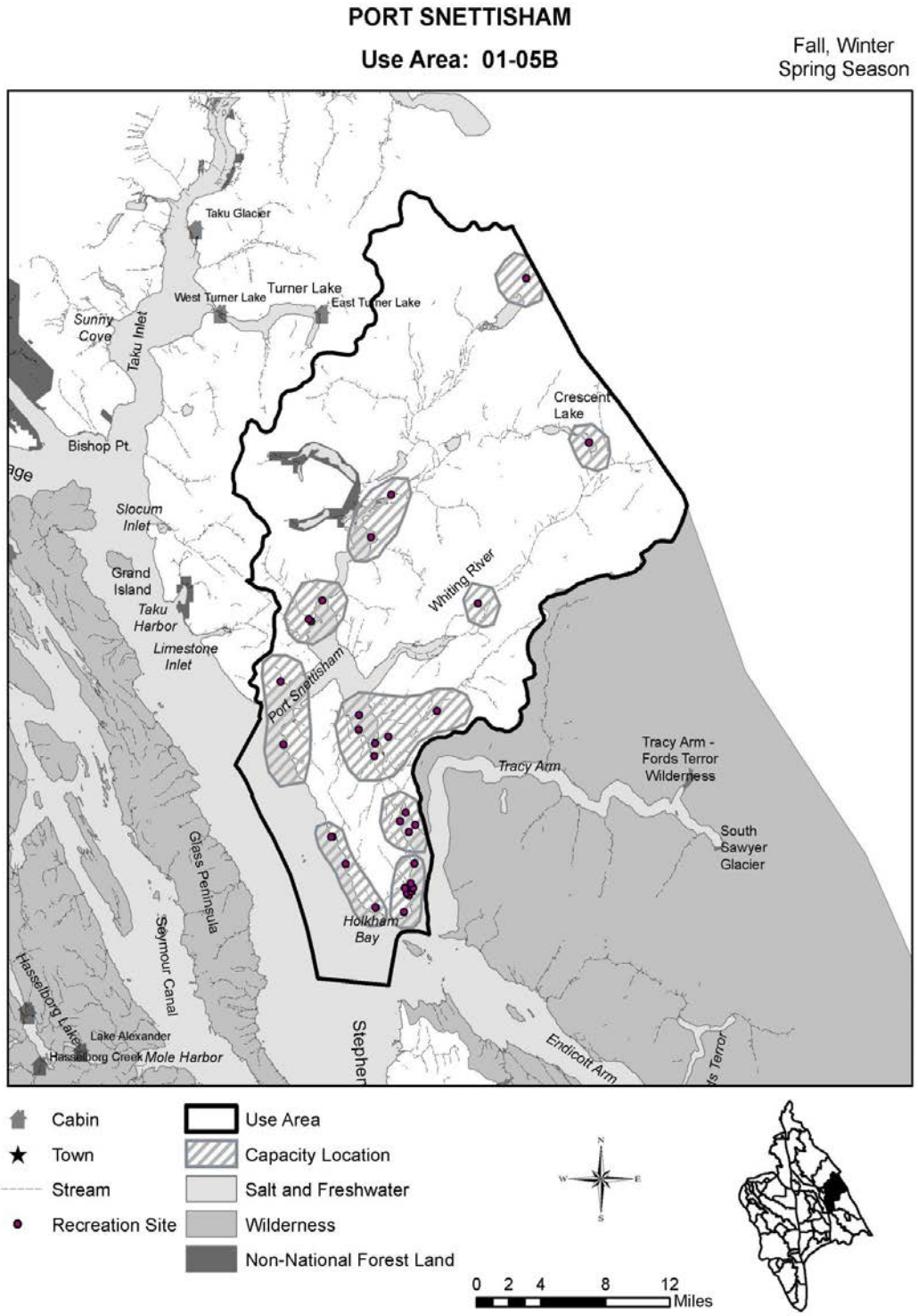

Figure E-59. Windham Bay capacity locations, Summer season.

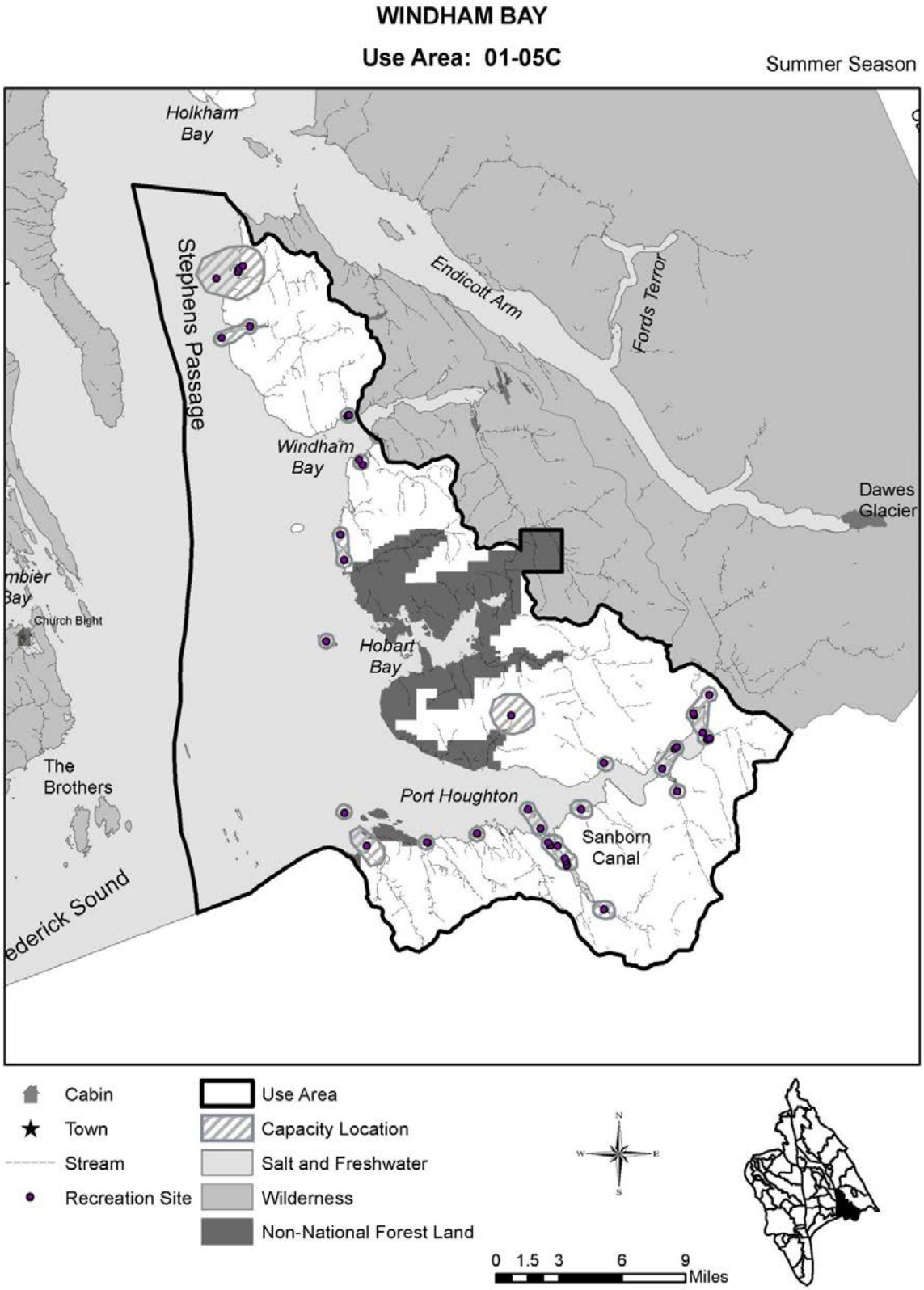

Figure E-60. Windham Bay capacity locations, Fall, Winter, and Spring seasons.

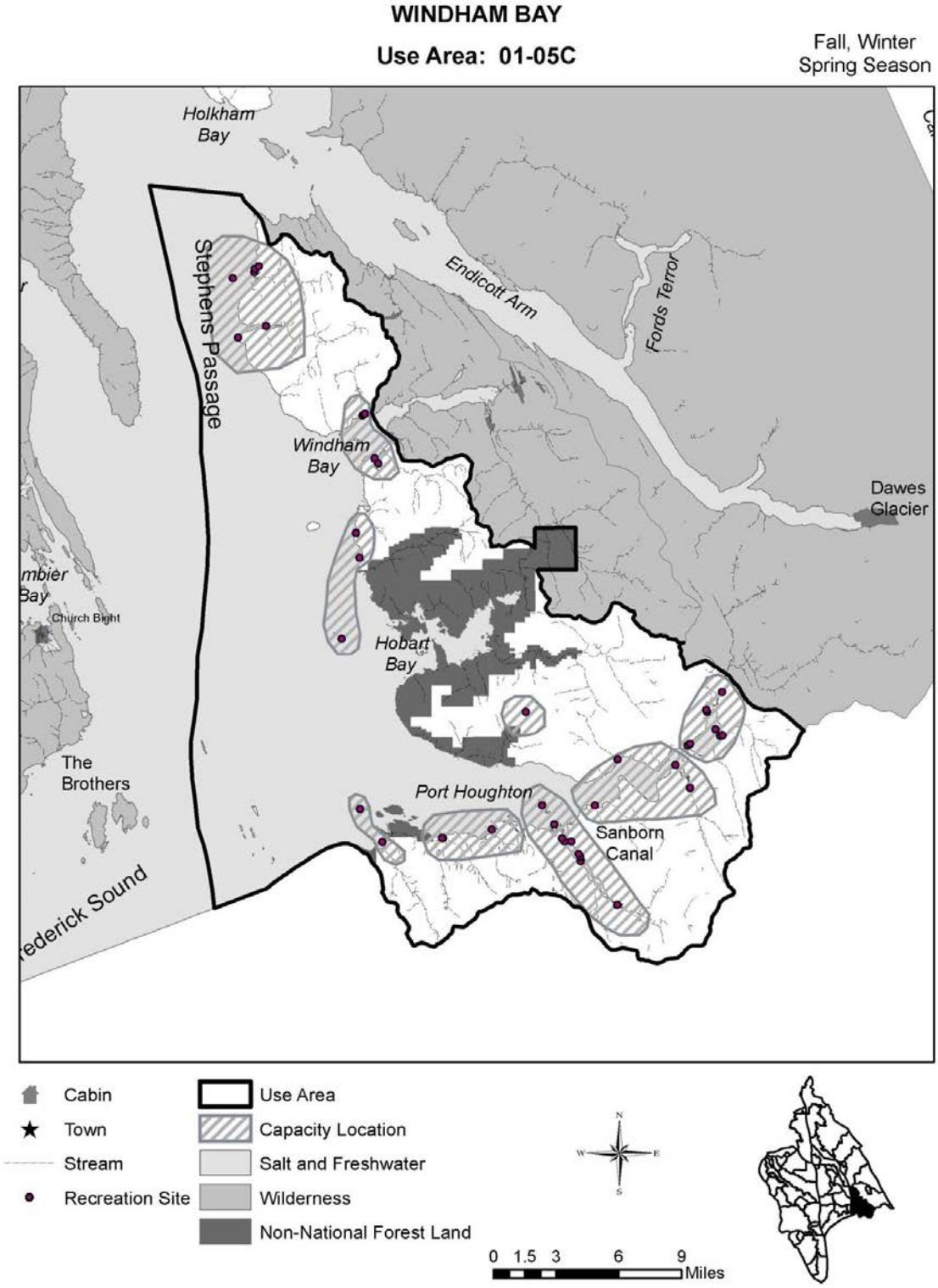

Figure E-61. Tracy Arm capacity locations, Summer season.

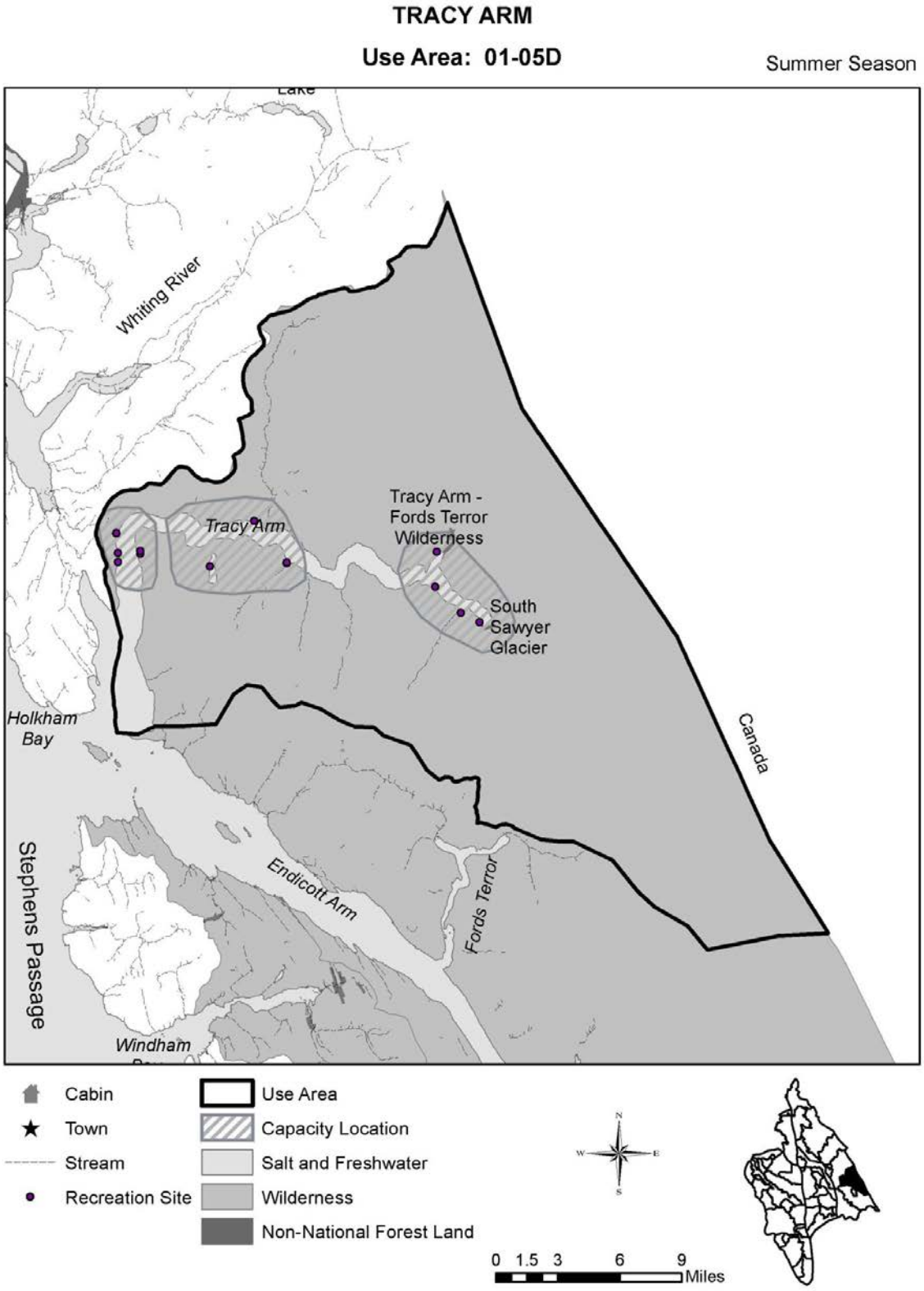

Figure E-62. Tracy Arm capacity locations, Fall, Winter, and Spring seasons.

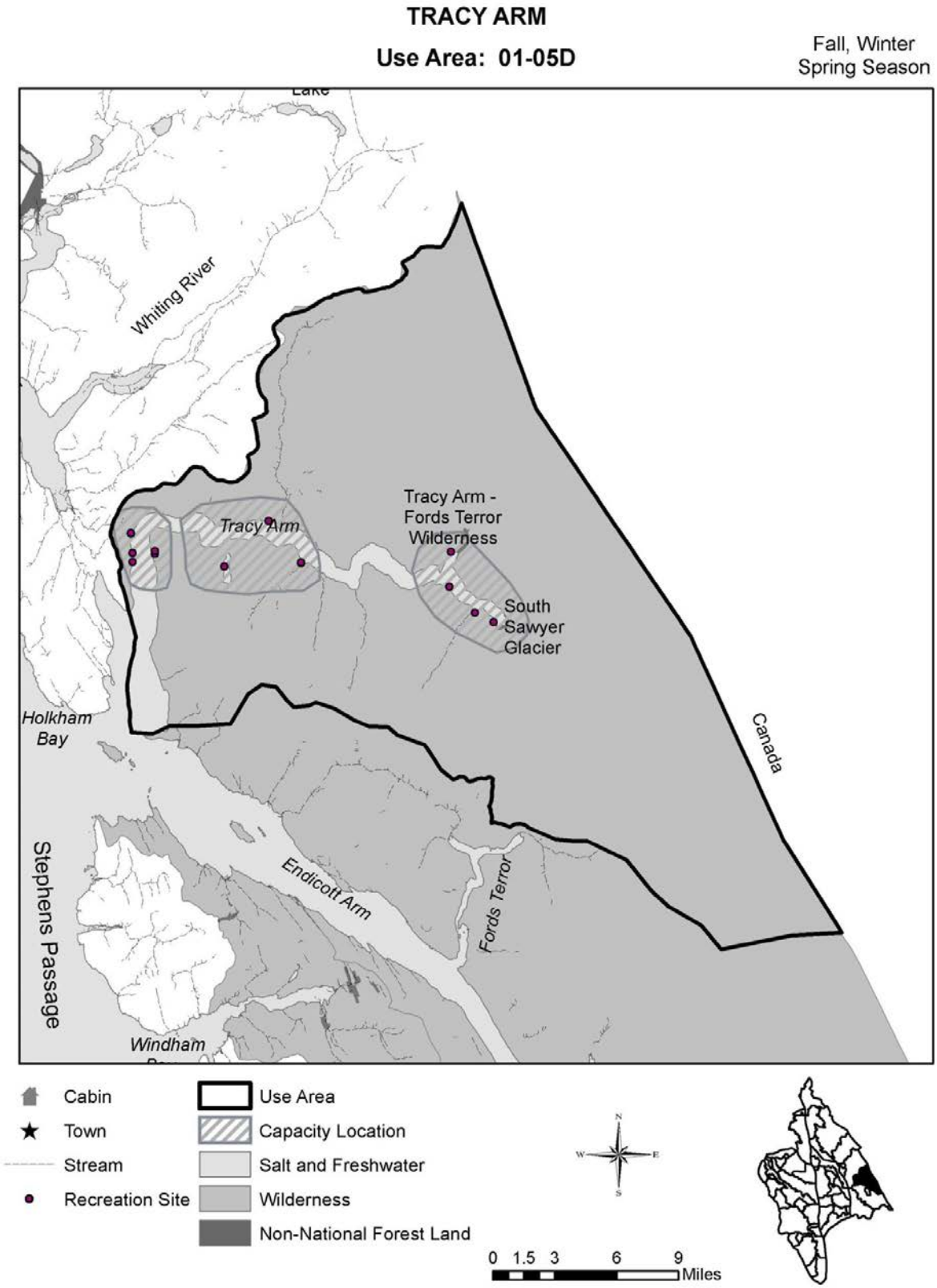

Figure E-63. Fords Terror capacity locations, Summer season.

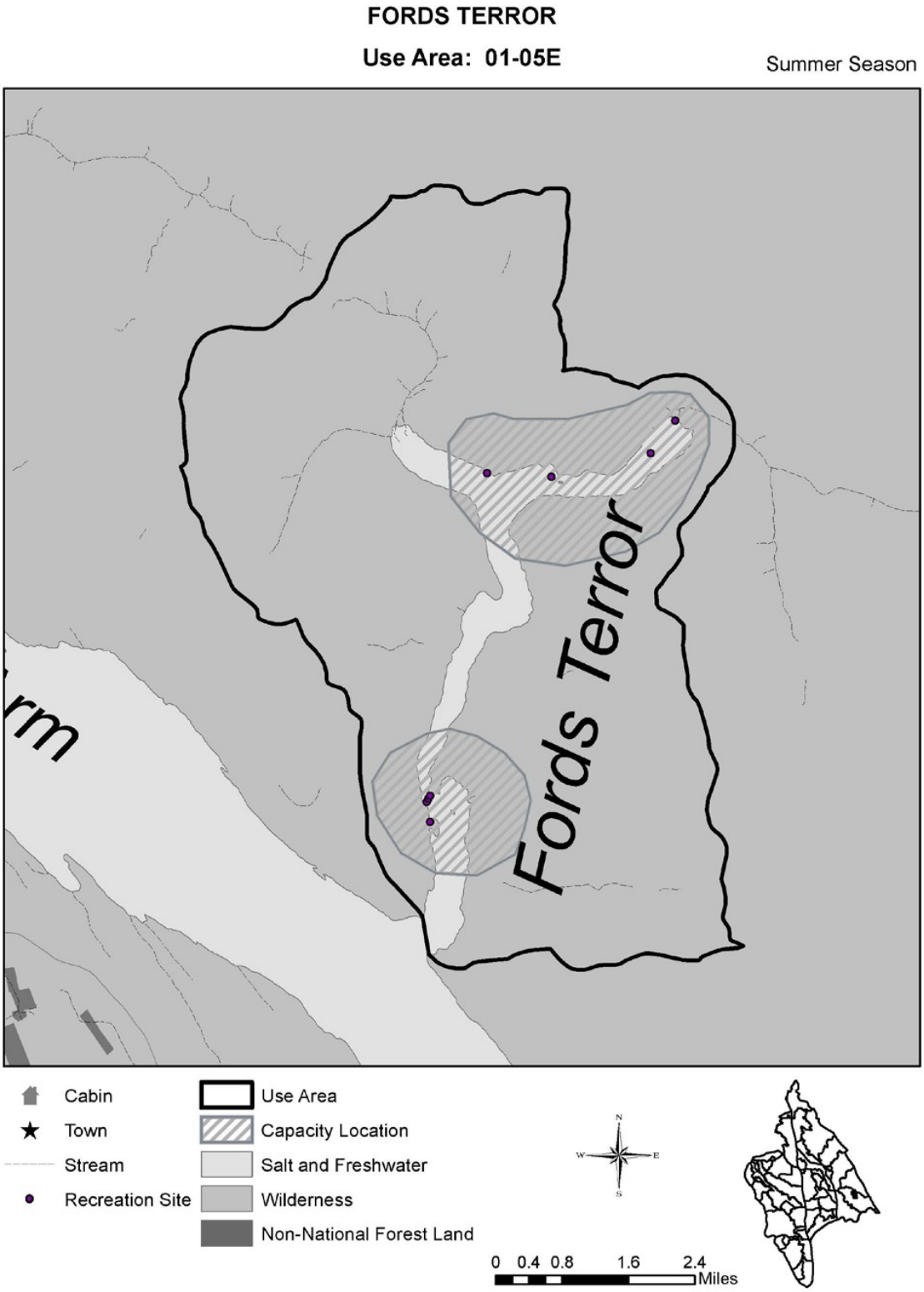

Figure E-64. Fords Terror capacity locations, Fall, Winter, and Spring seasons.

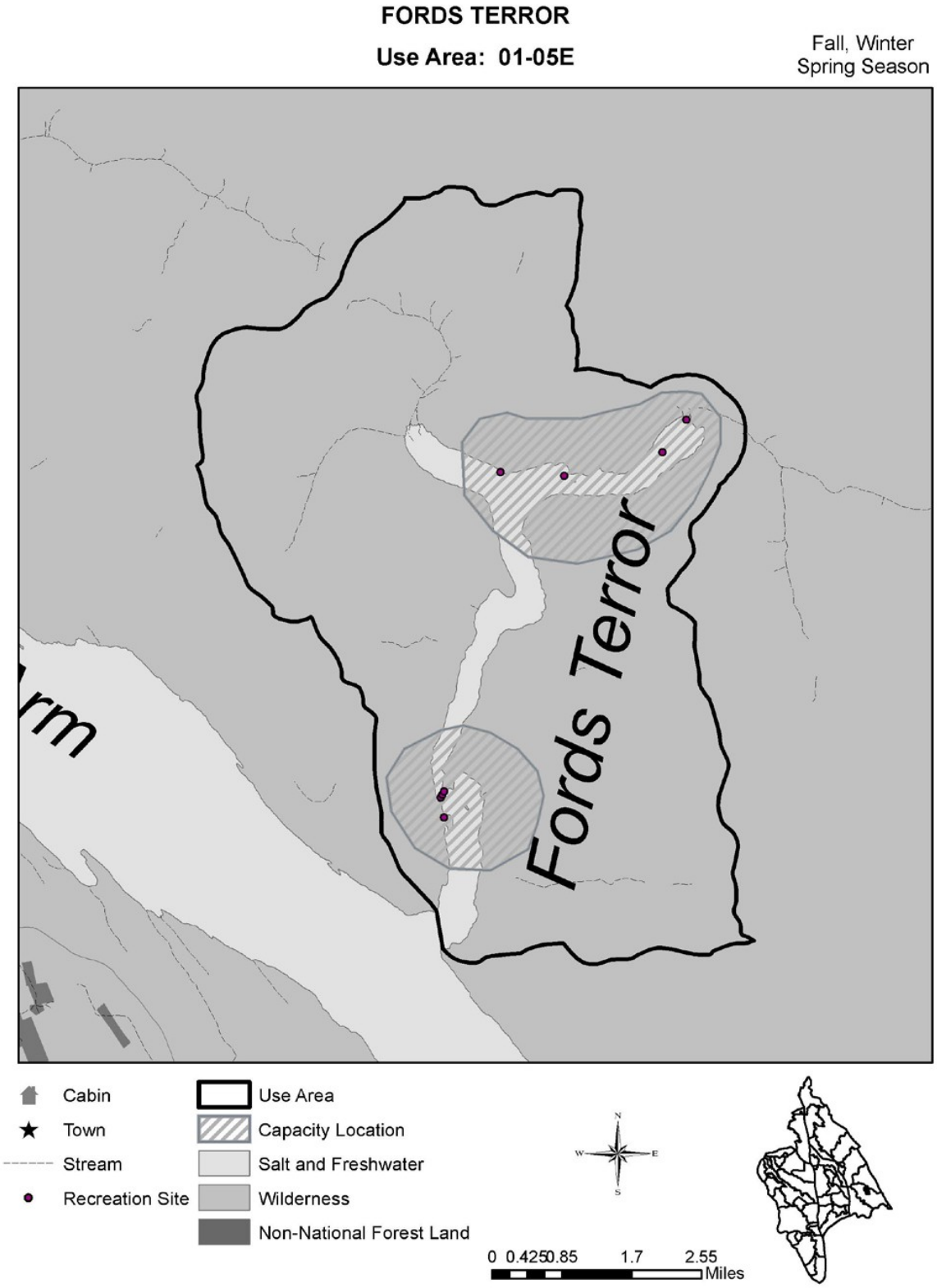

Figure E-65. Endicott Arm capacity locations, Summer season.

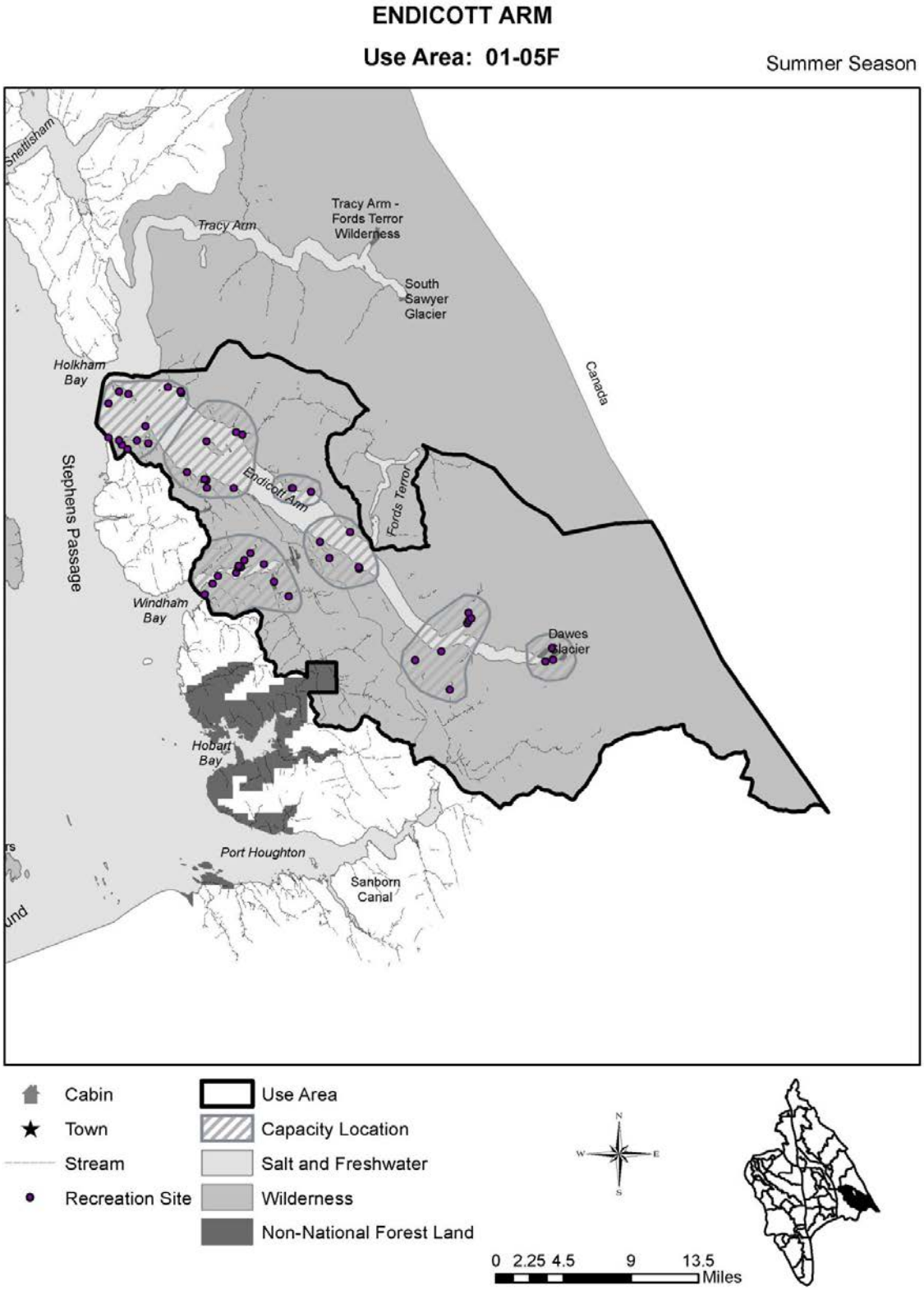

Figure E-66. Endicott Arm capacity locations, Fall, Winter, and Spring seasons.

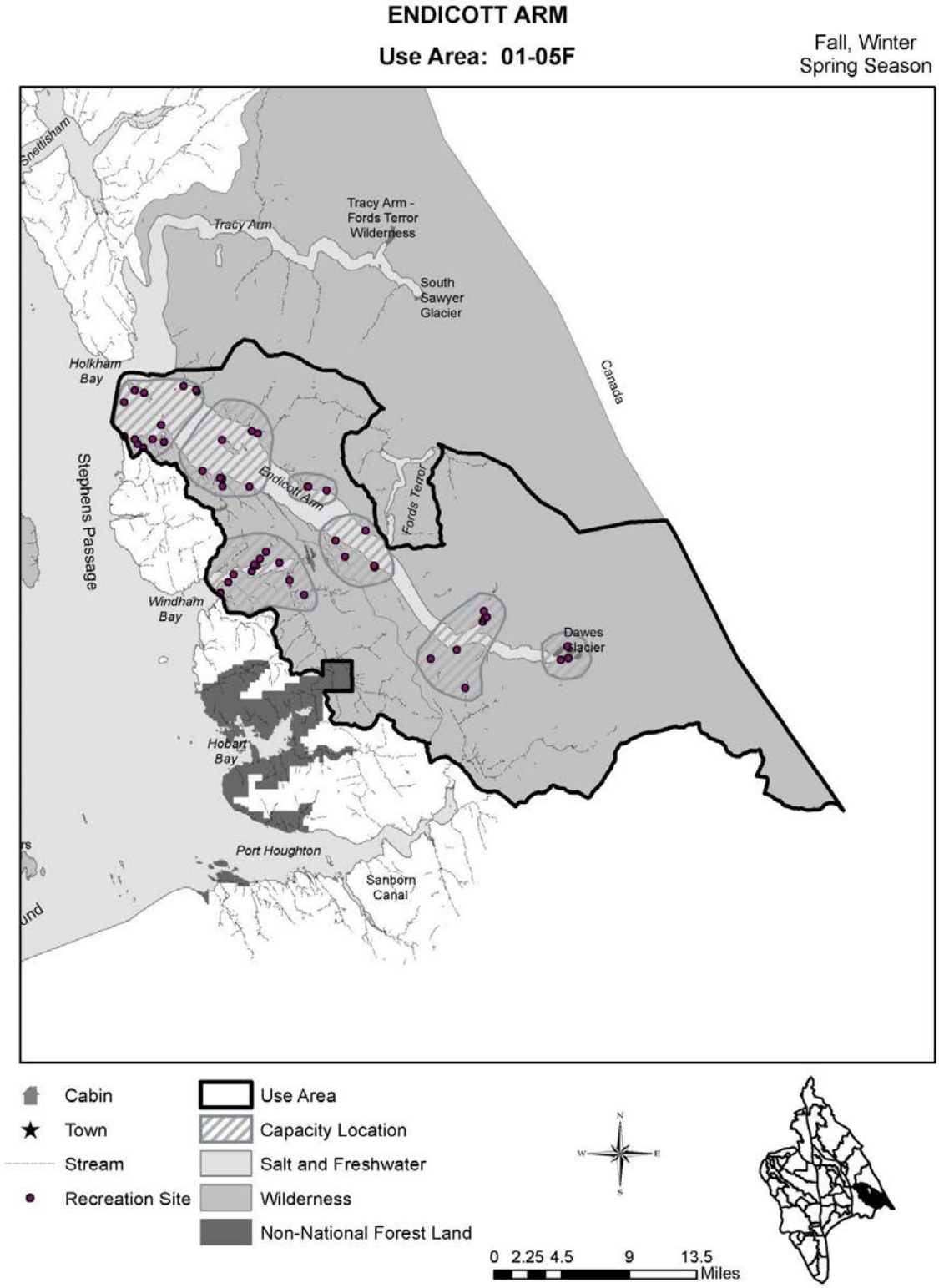

Figure E-67. Gut Bay, Baranof capacity locations, Summer season.

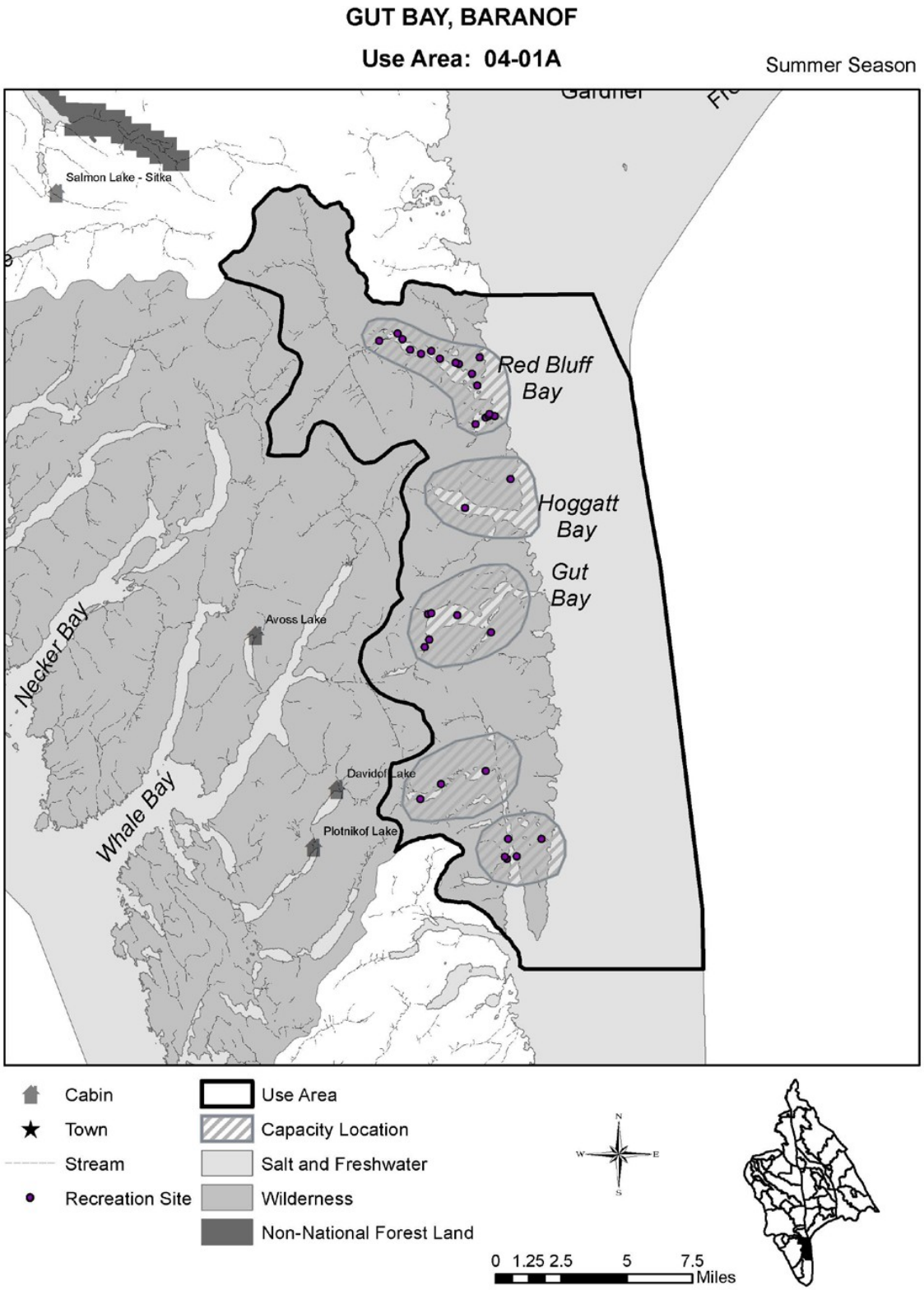

Figure E-68. Gut Bay, Baranof capacity locations, Fall, Winter, and Spring seasons.

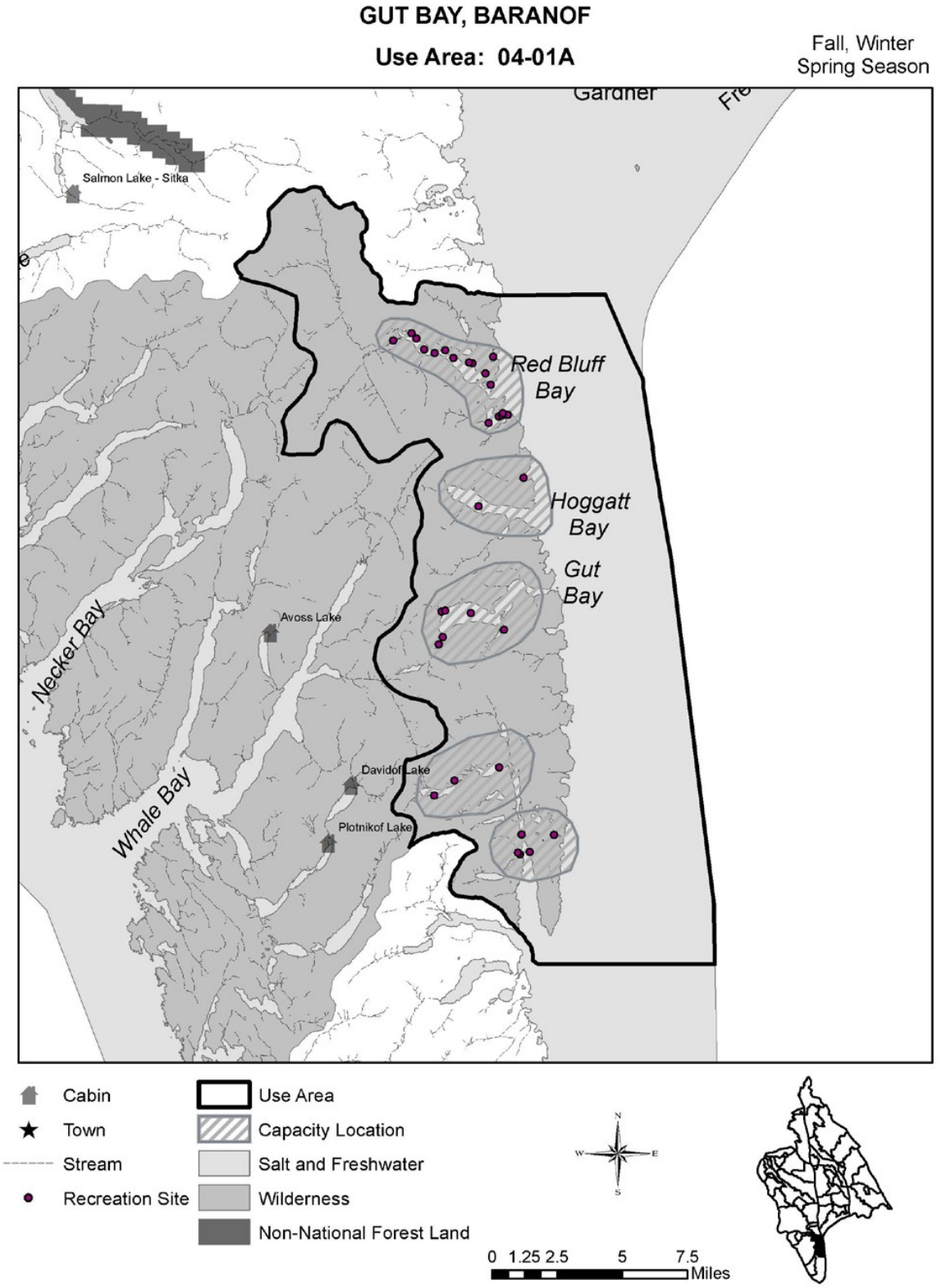

Figure E-69. Port Armstrong capacity locations, Summer season.

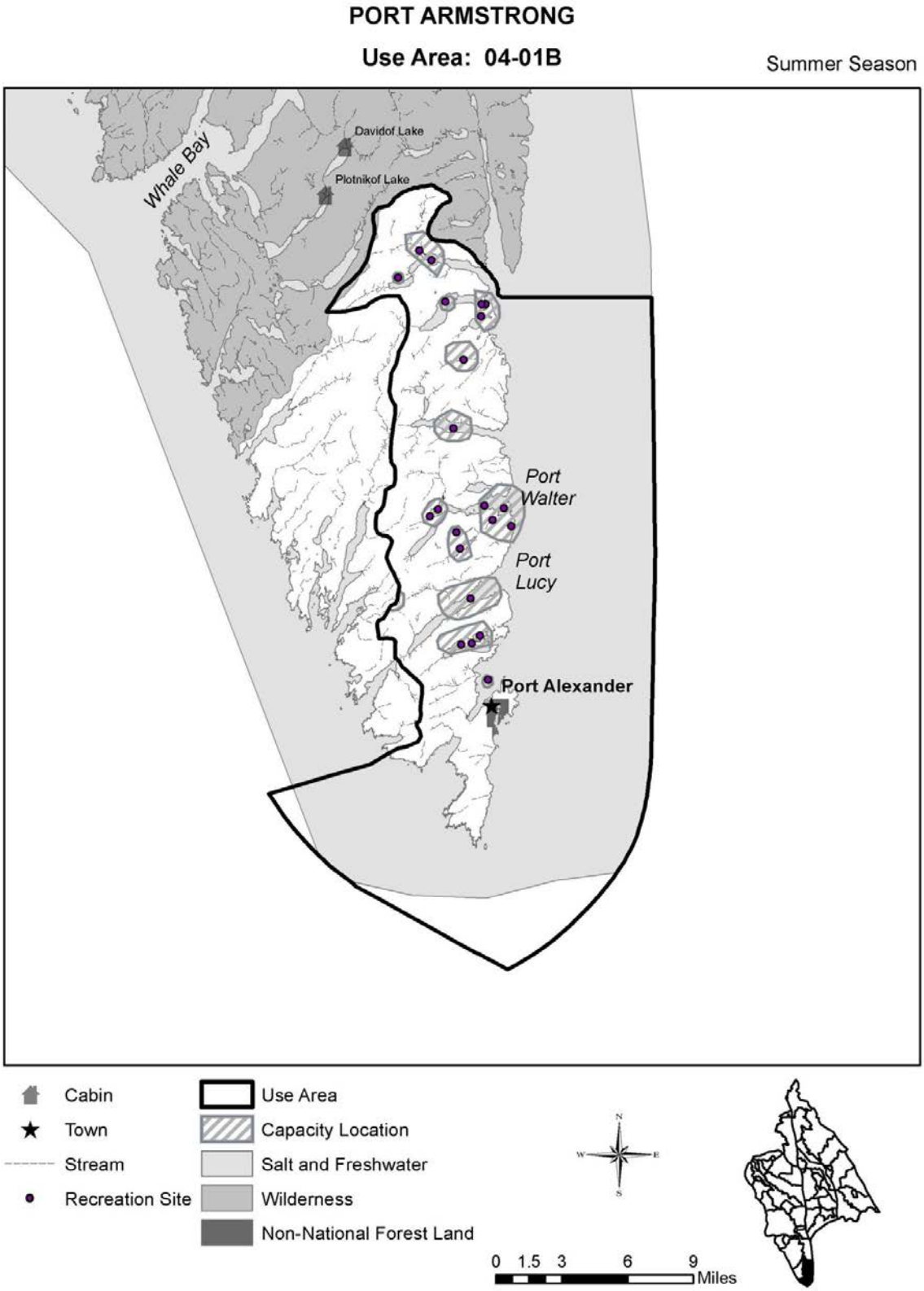

Figure E-70. Port Armstrong capacity locations, Fall, Winter, and Spring seasons.

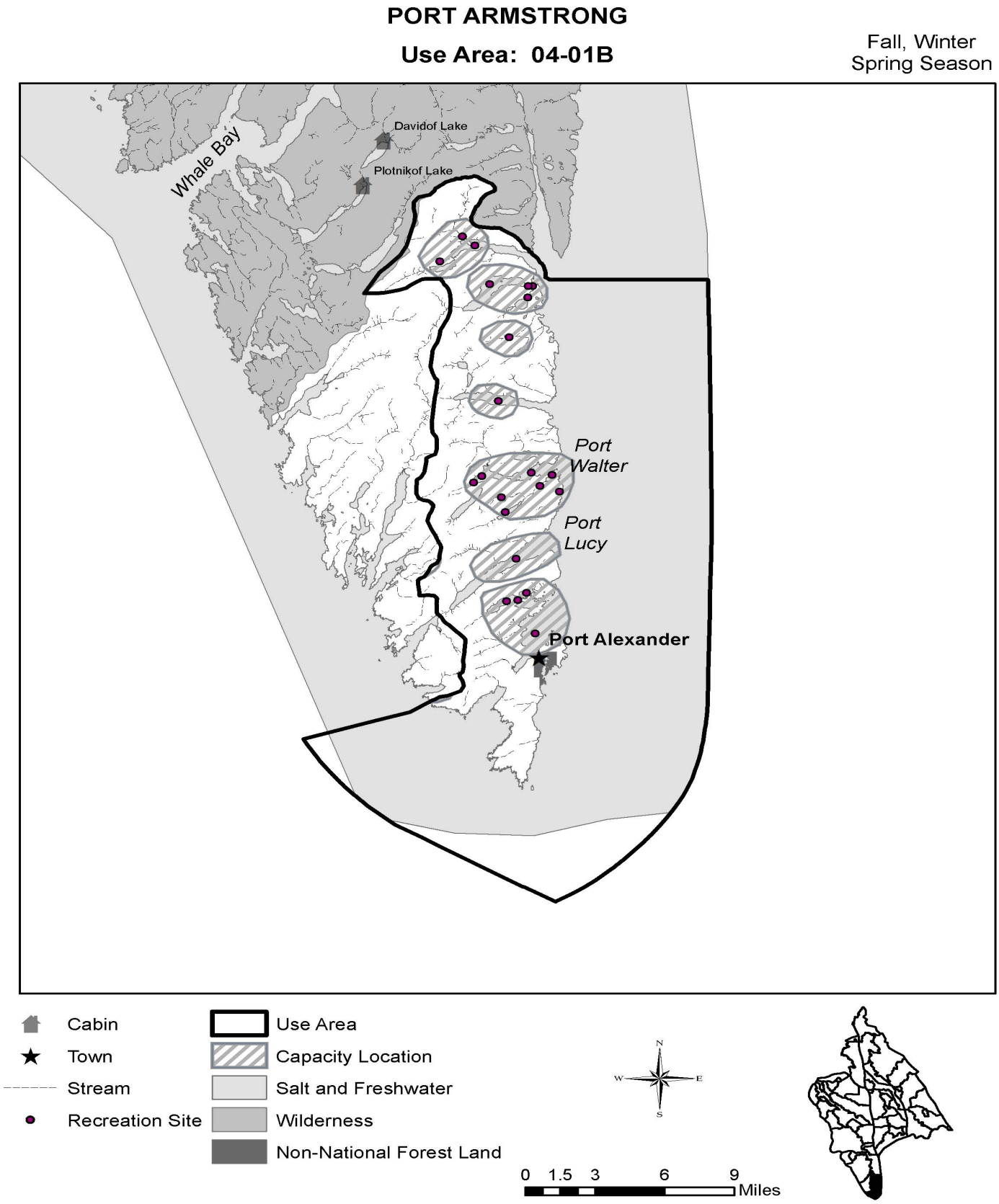

Figure E-71. Nelson Bay capacity locations, Summer season.

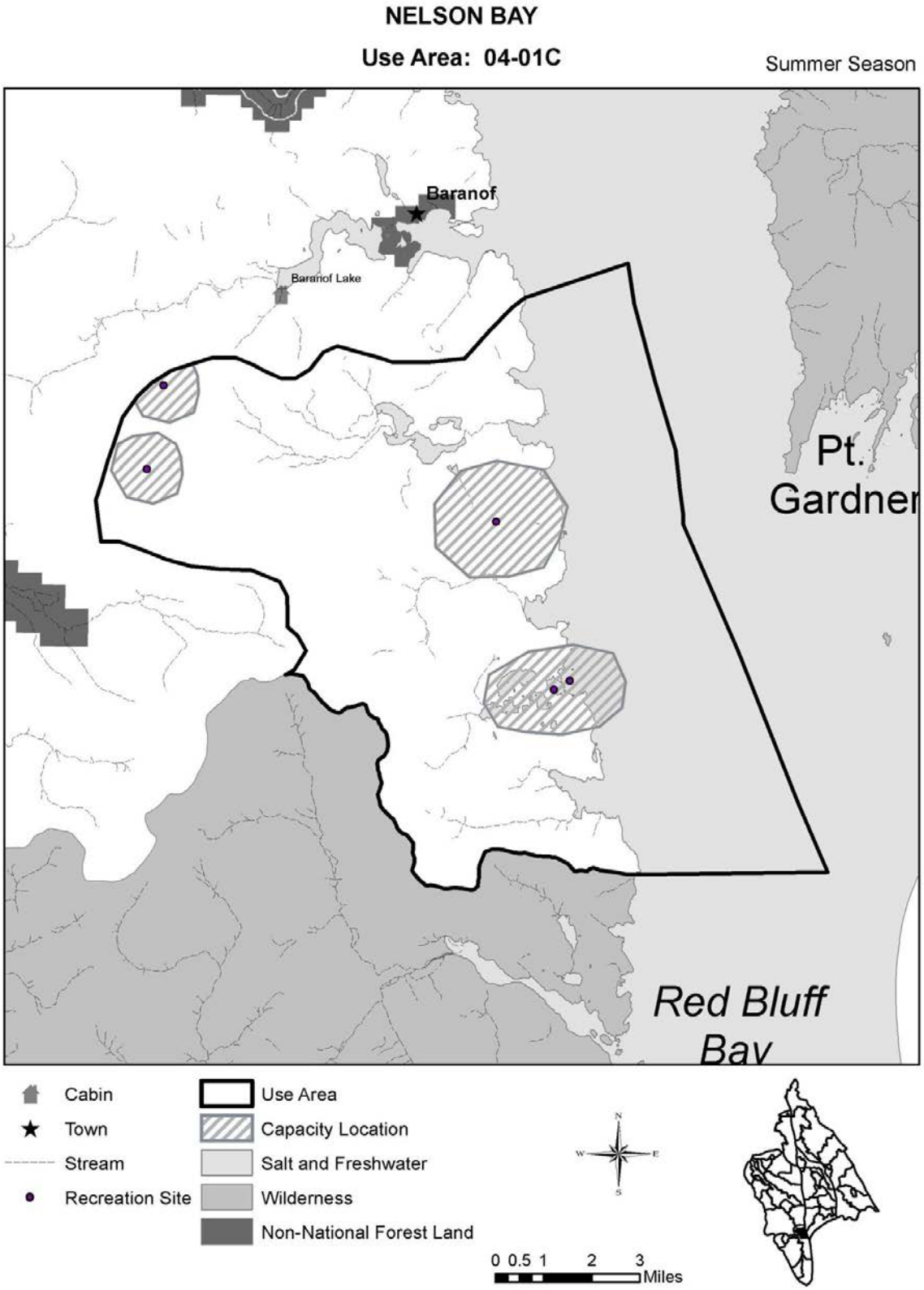

Figure E-72. Nelson Bay capacity locations, Fall, Winter, and Spring seasons.

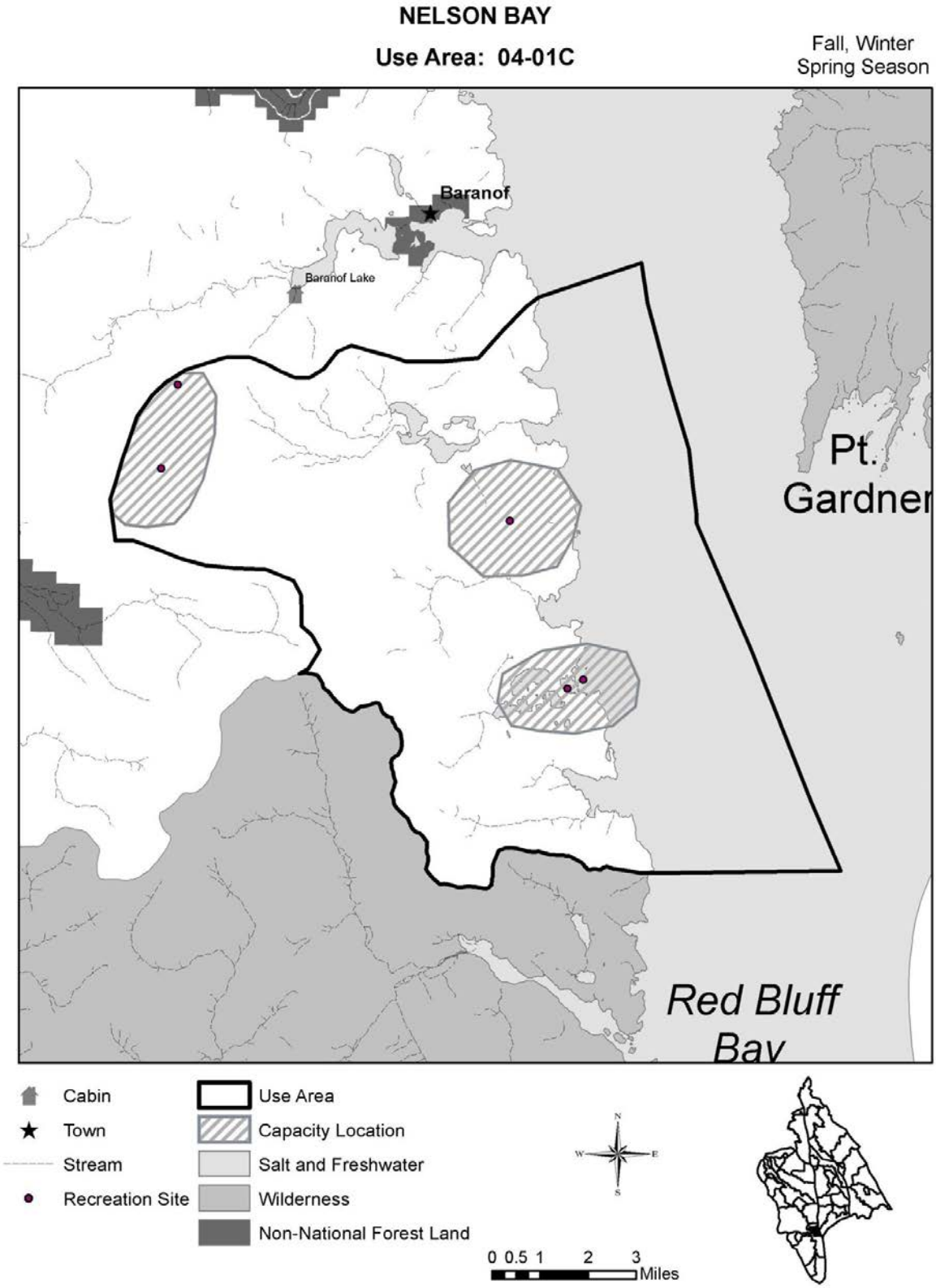

Figure E-73. Redoubt Lake capacity locations, Summer season.

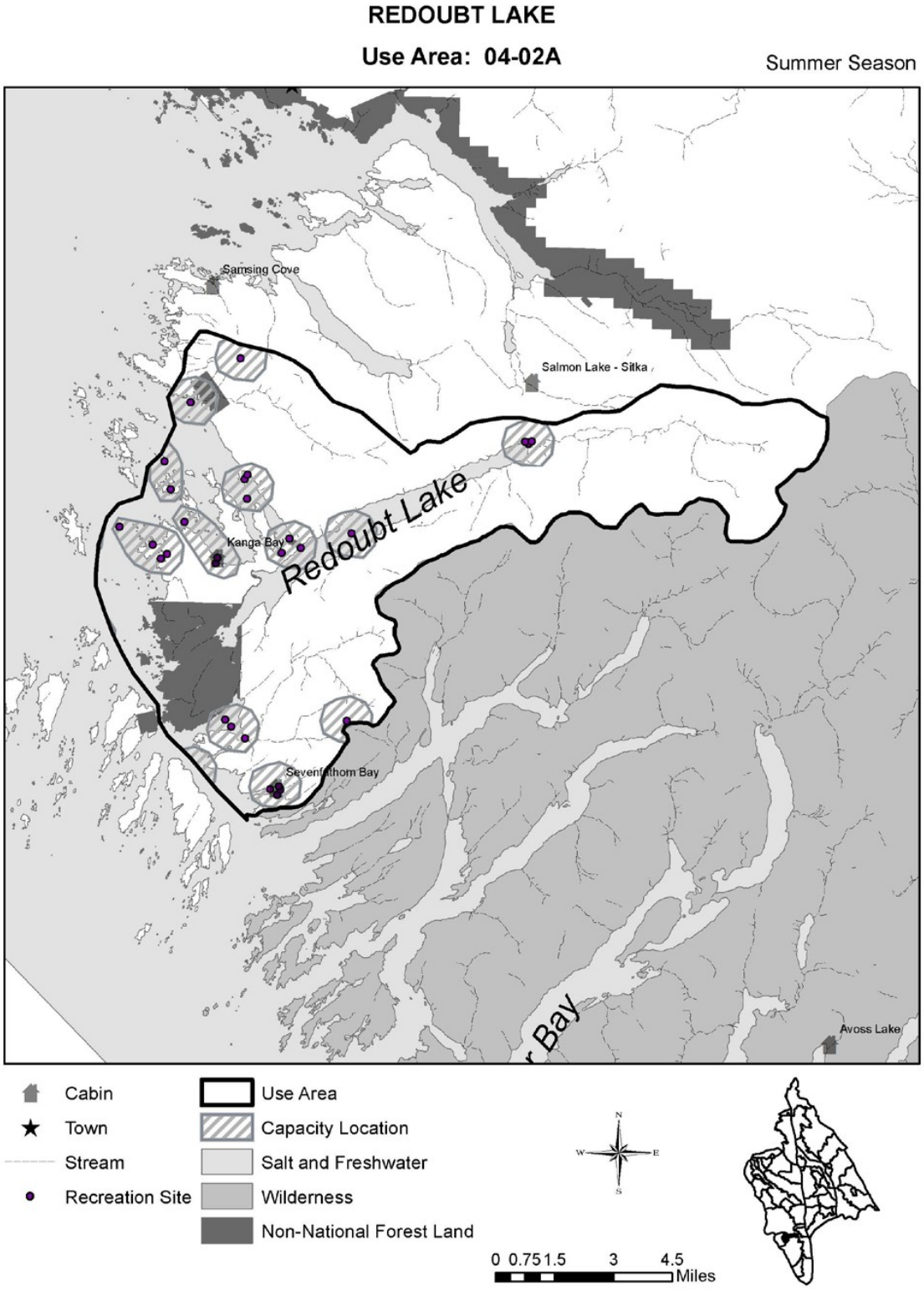

Figure E-74. Redoubt Lake capacity locations, Fall, Winter, and Spring seasons.

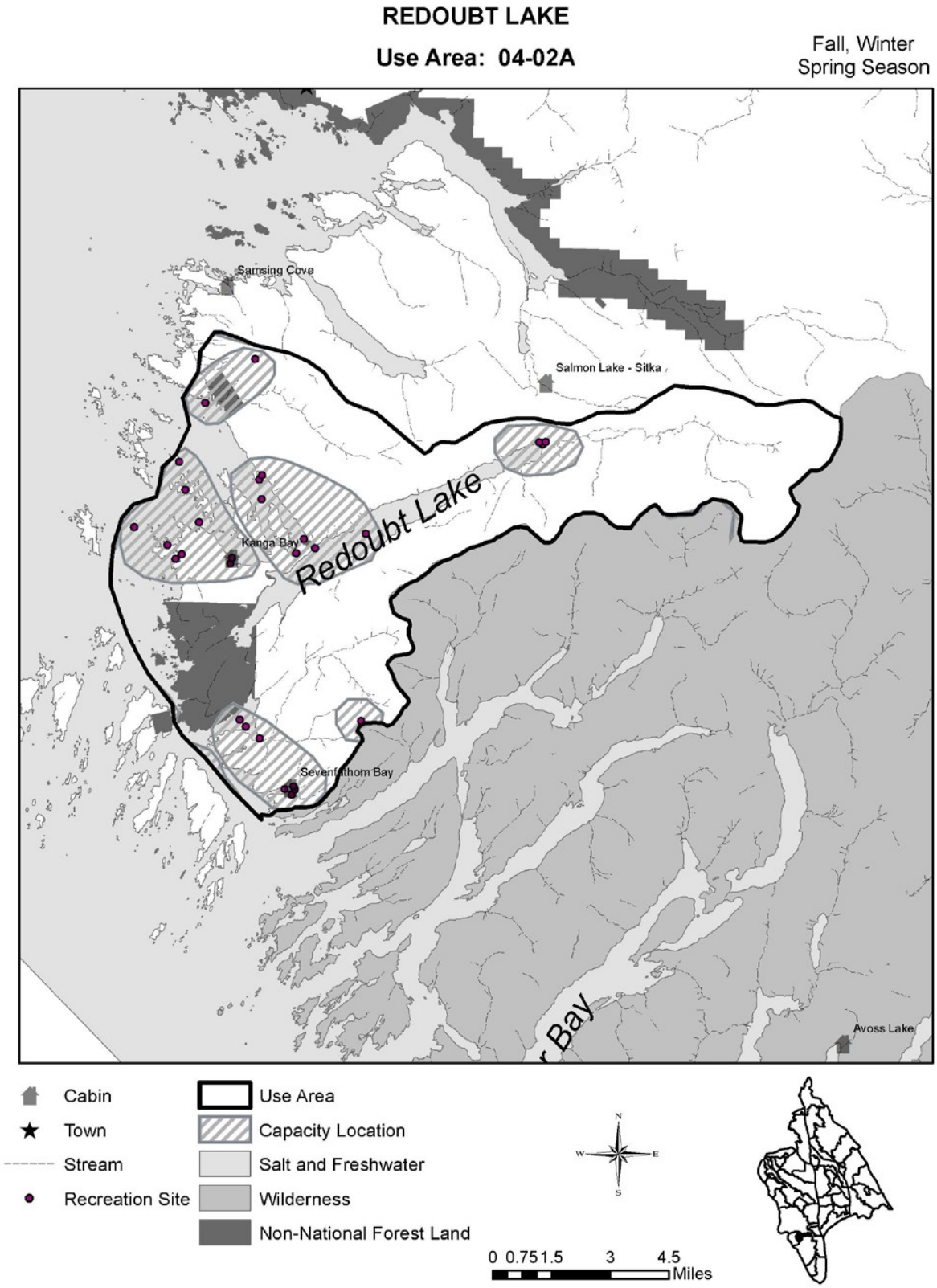

Figure E-75. Whale Bay capacity locations, Summer season.

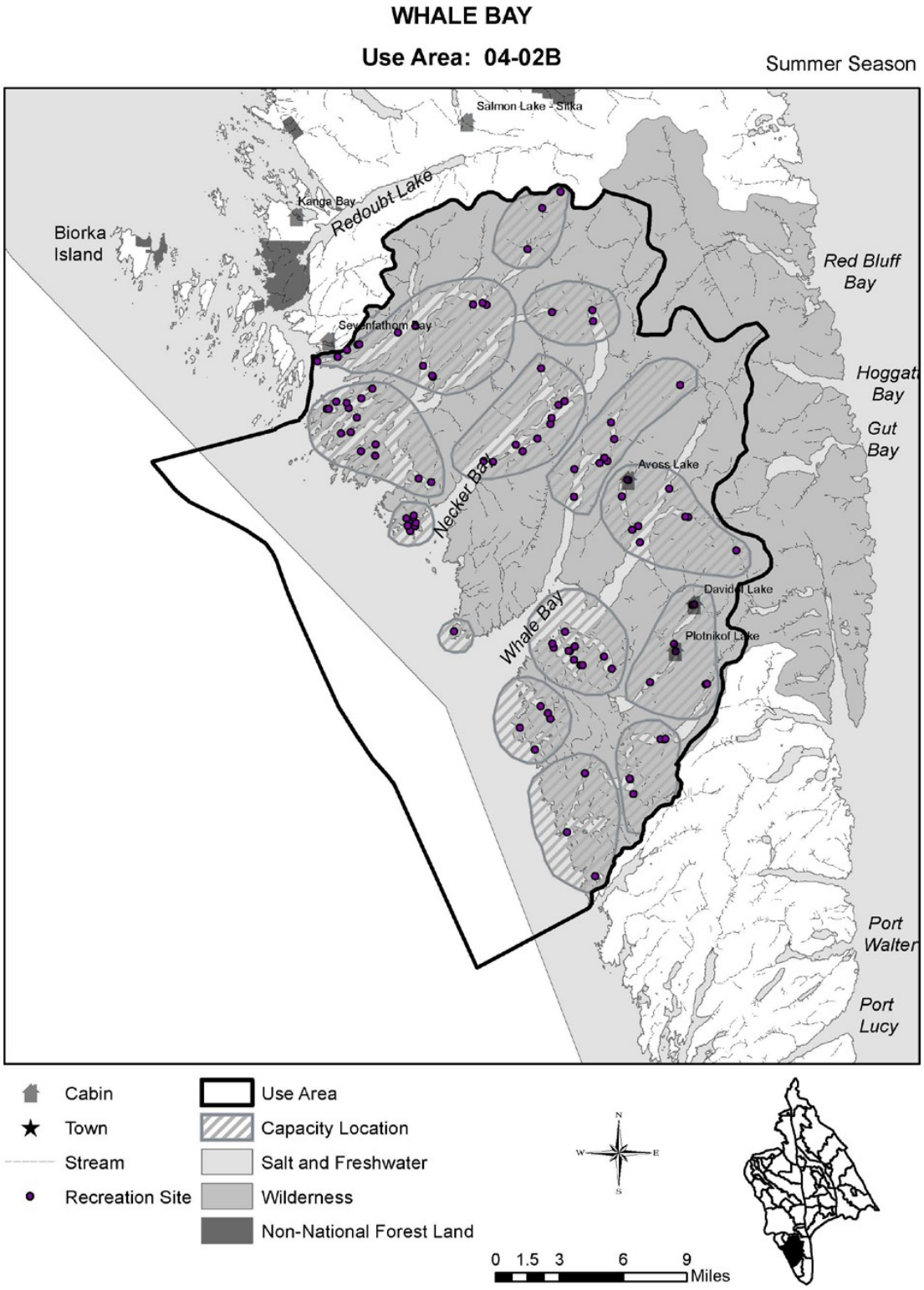

Figure E-76. Whale Bay capacity locations, Fall, Winter, and Spring seasons.

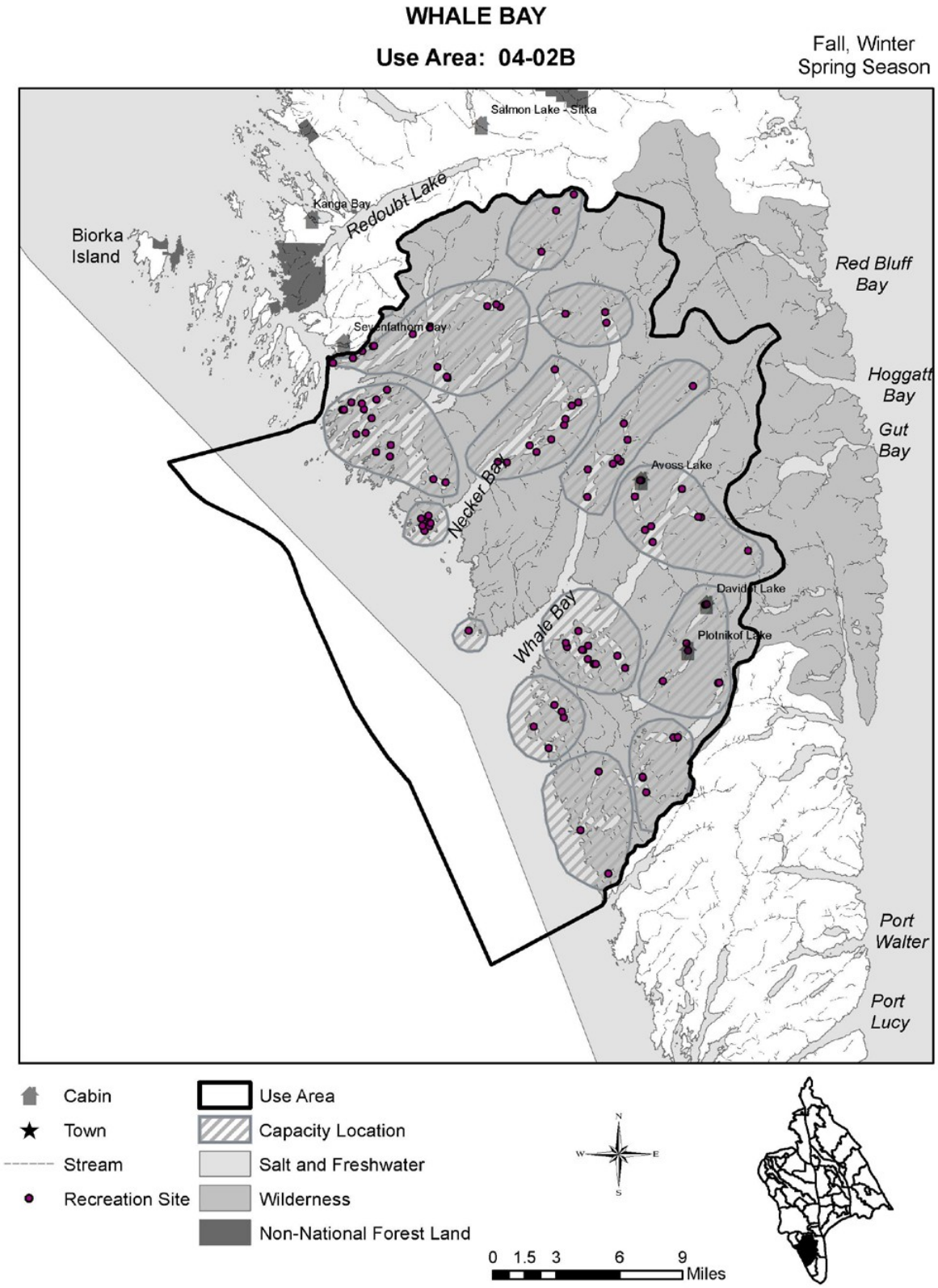

Figure E-77. Necker Islands capacity location, Summer season.

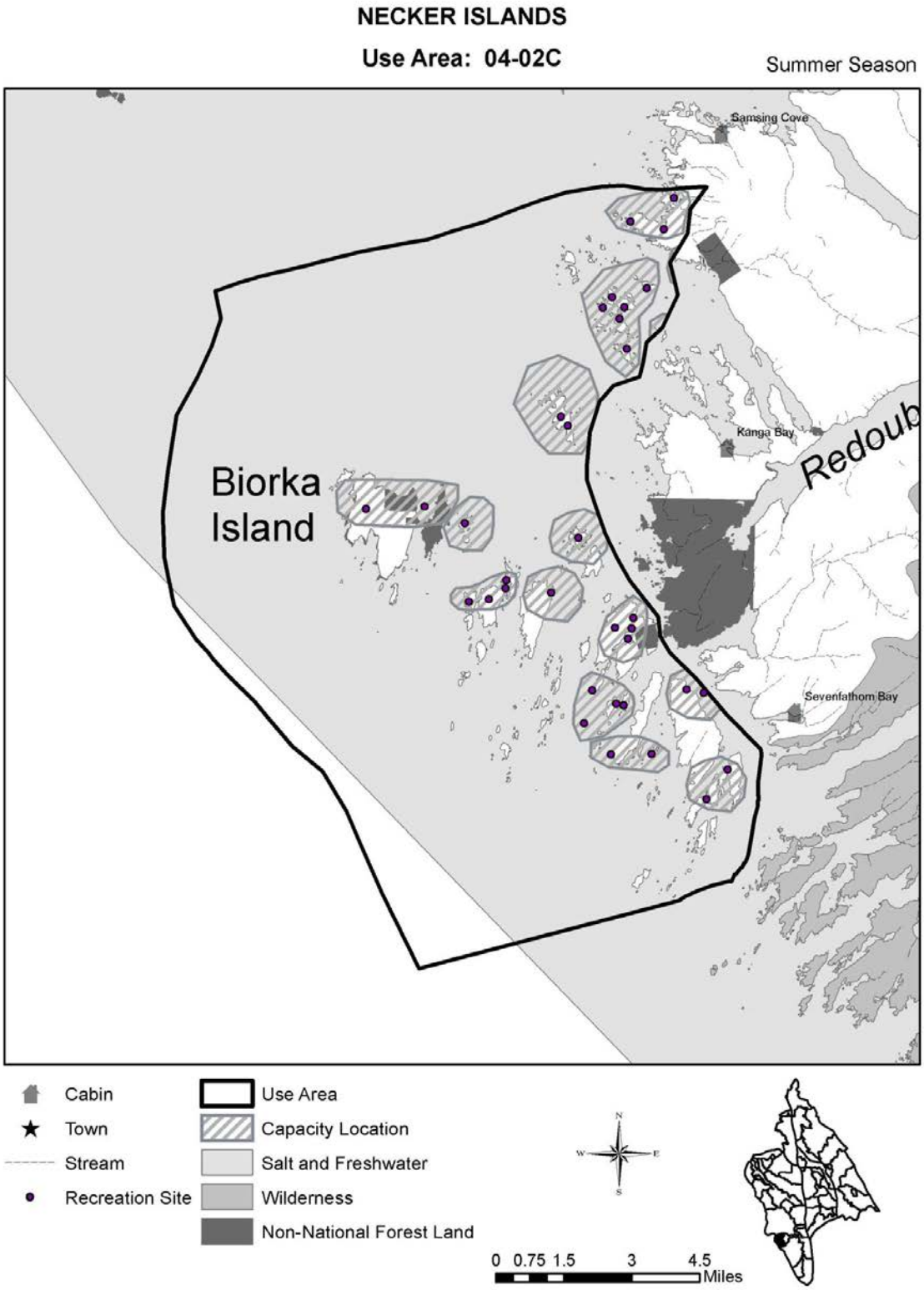

Figure E-78. Necker Islands capacity locations, Fall, Winter, and Spring seasons.

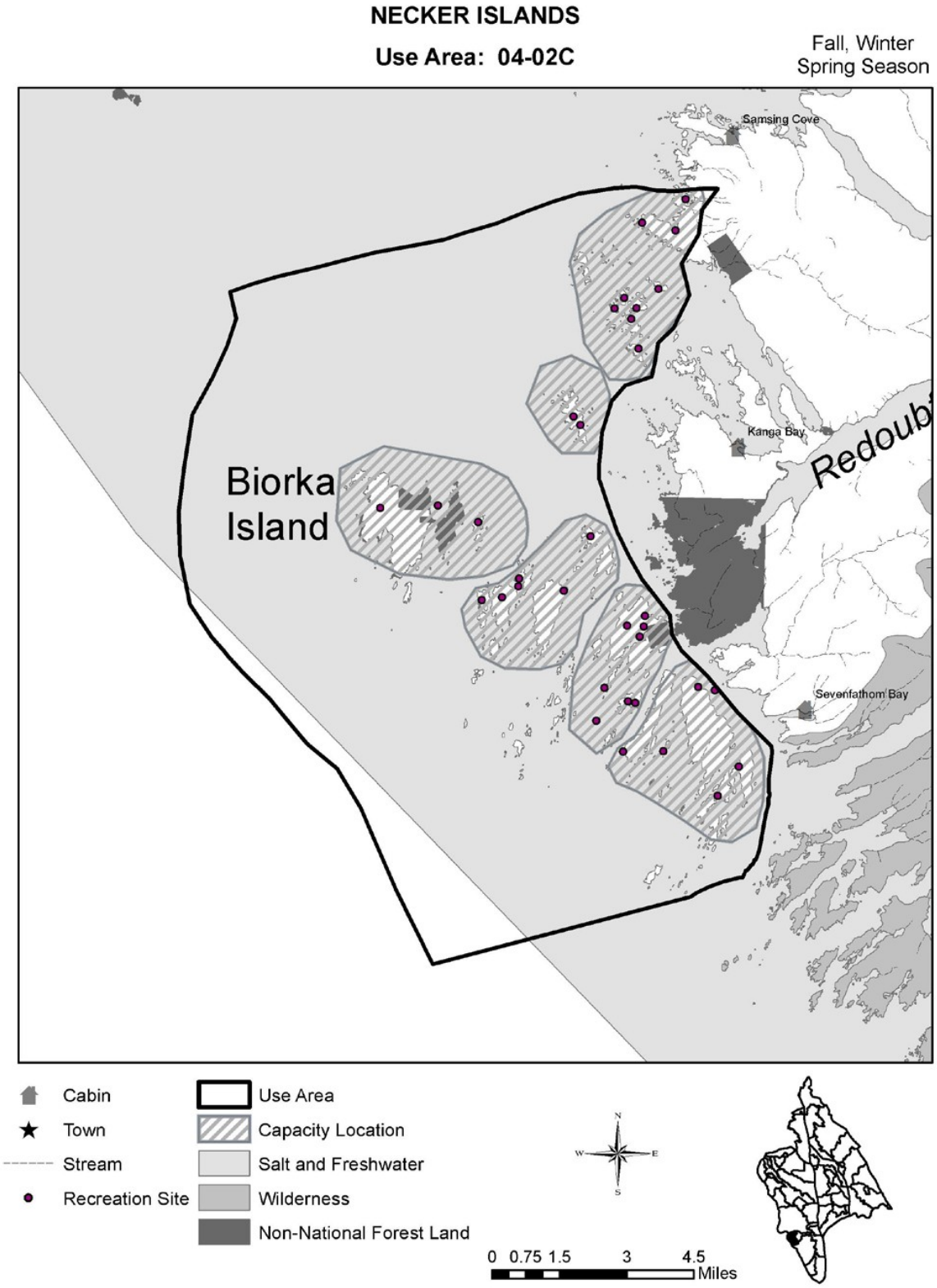

Figure E-79. Southwest Baranof capacity locations, Summer season.

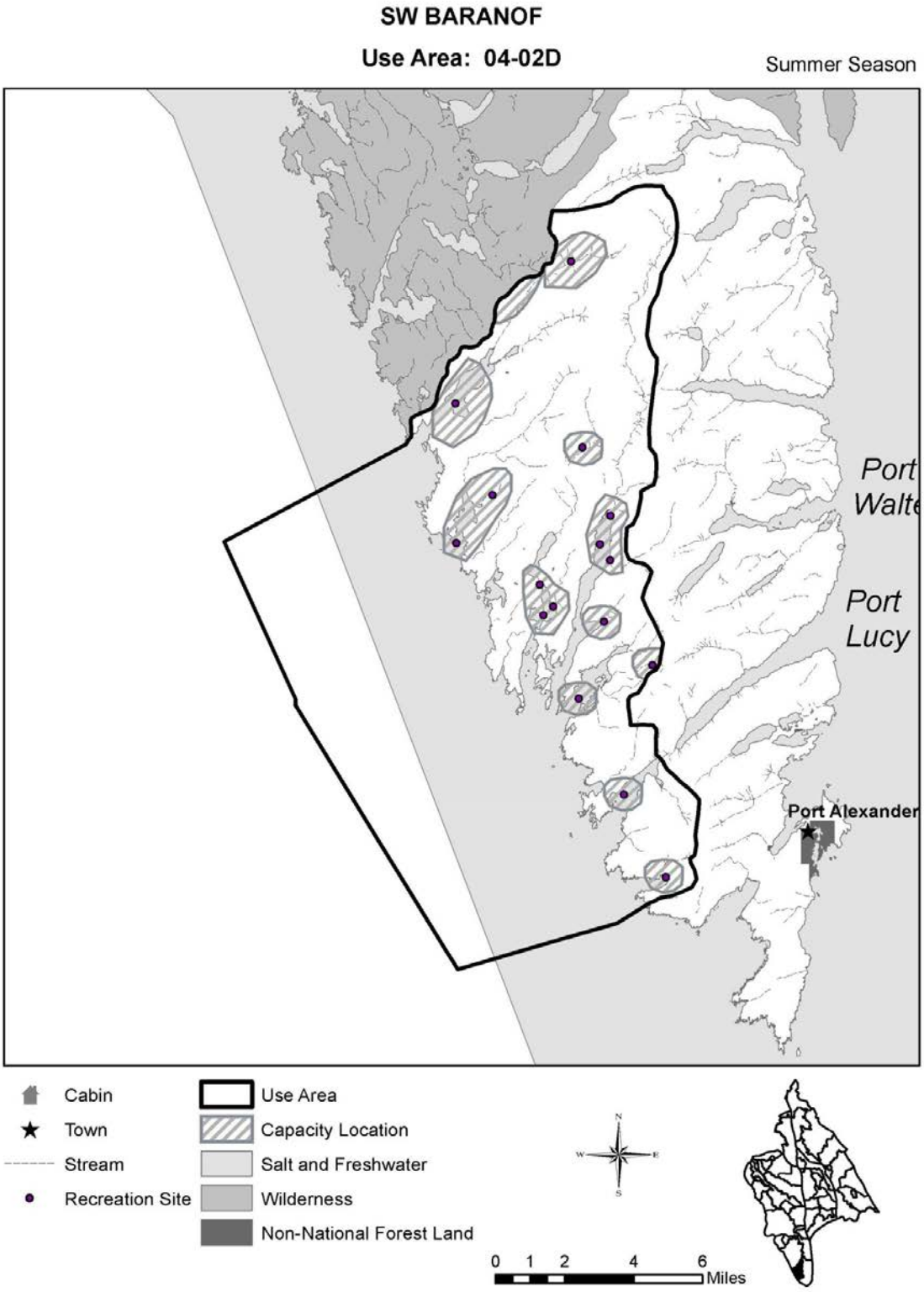

Figure E-80. Southwest Baranof capacity locations, Fall, Winter, and Spring seasons.

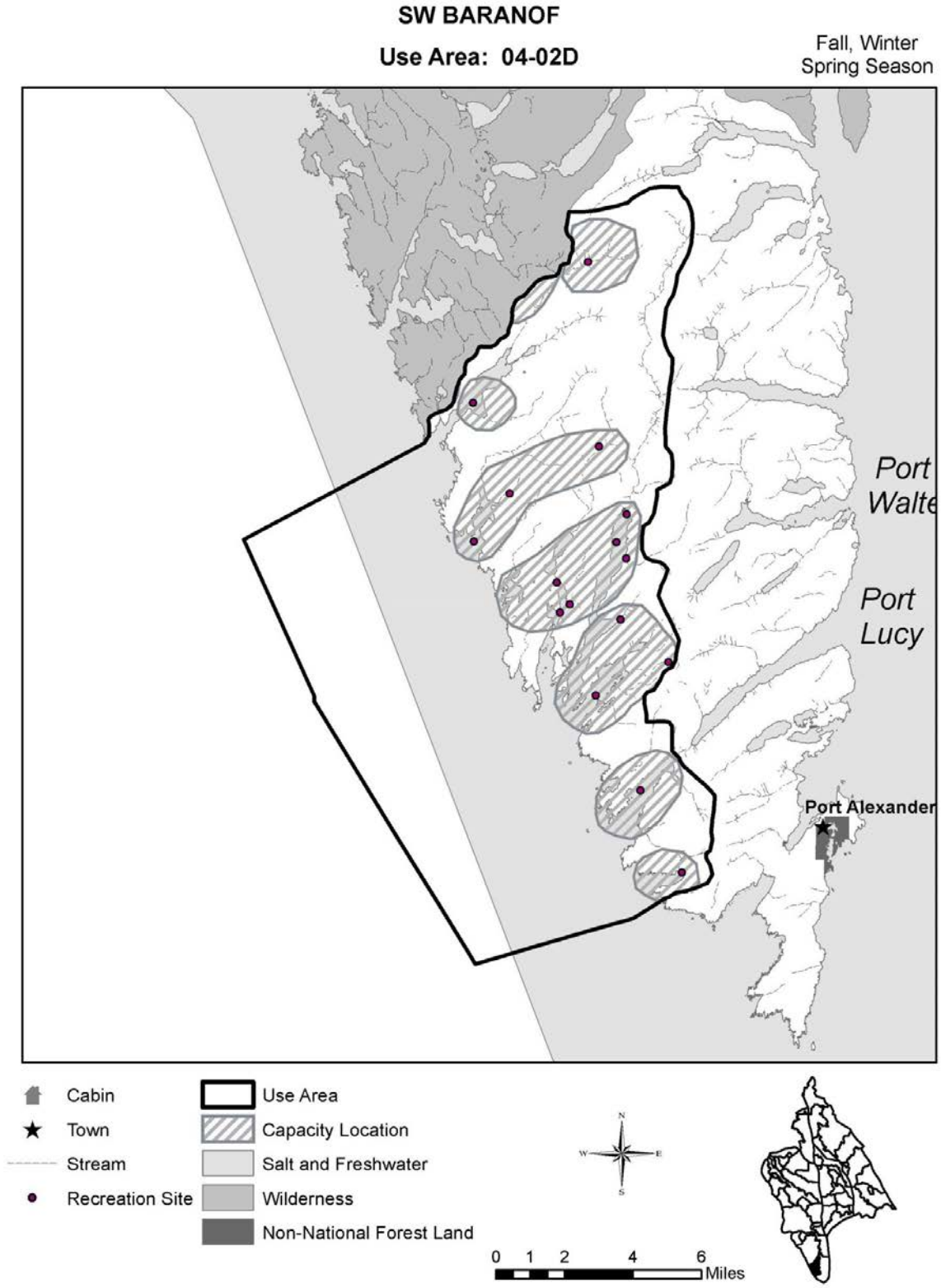

Figure E-81. Sitka Area capacity locations, Summer season.

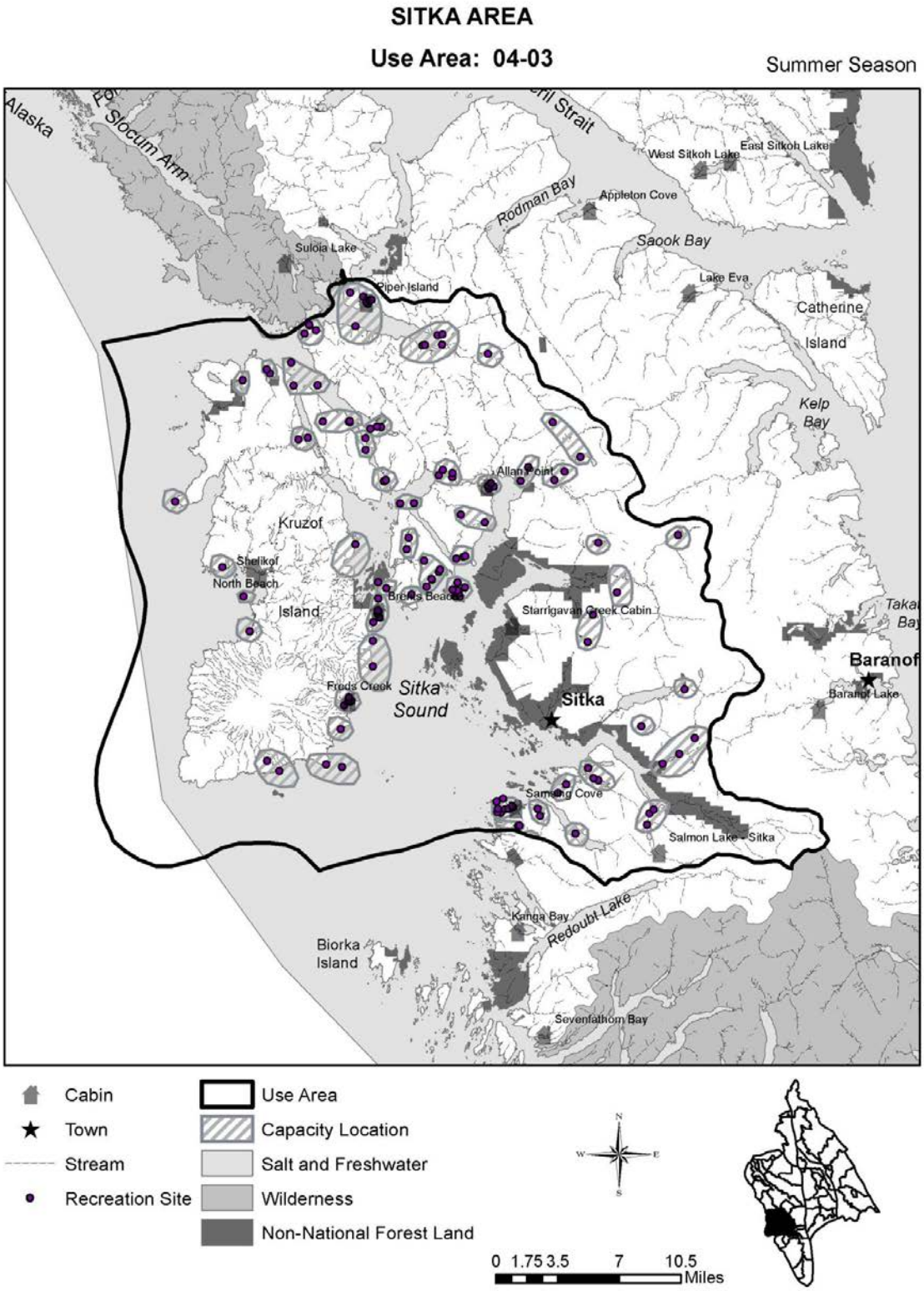

Figure E-82. Sitka Area capacity locations, Fall, Winter, and Spring seasons.

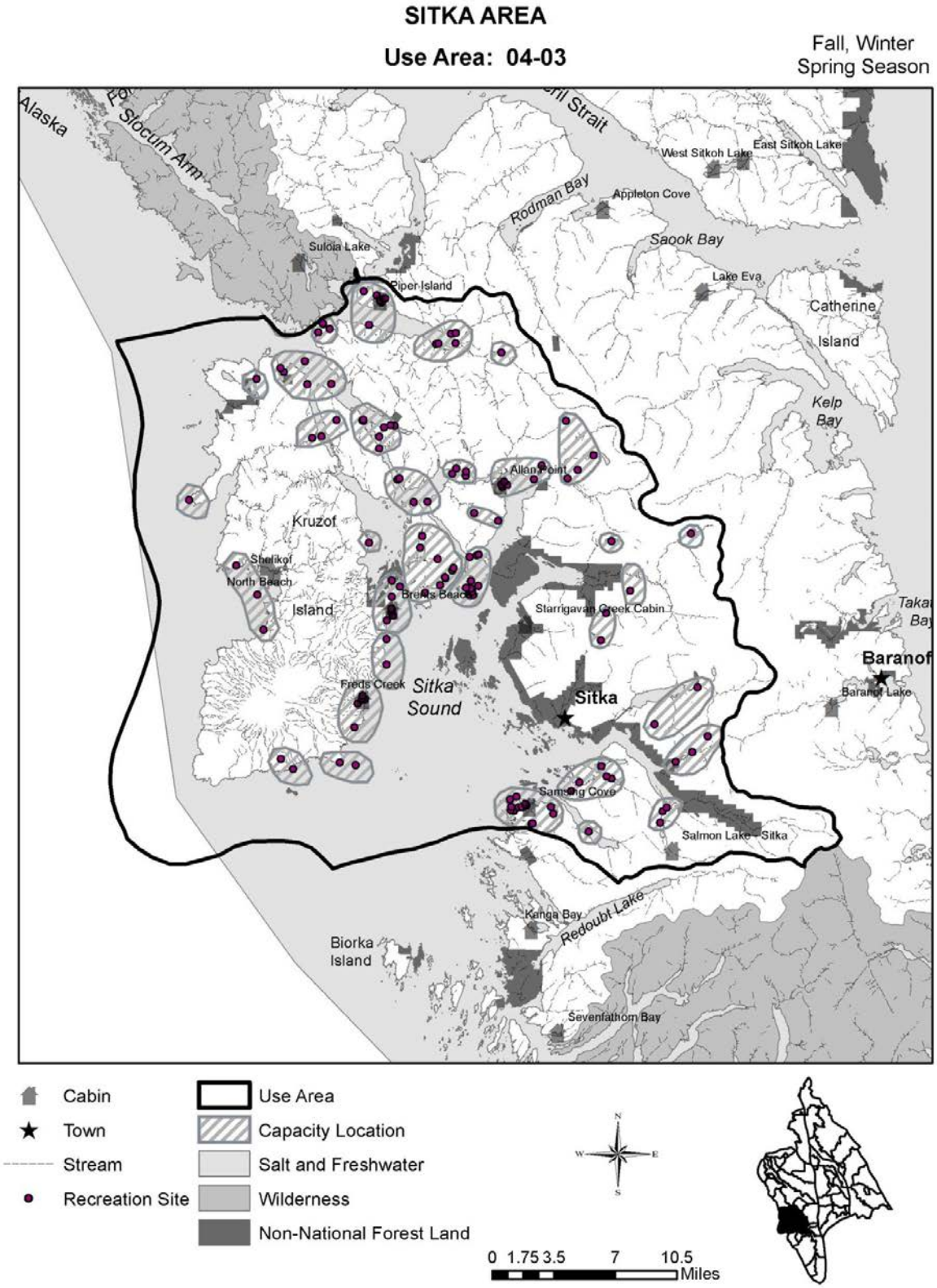

Figure E-83. Rodman Bay capacity locations, Summer season.

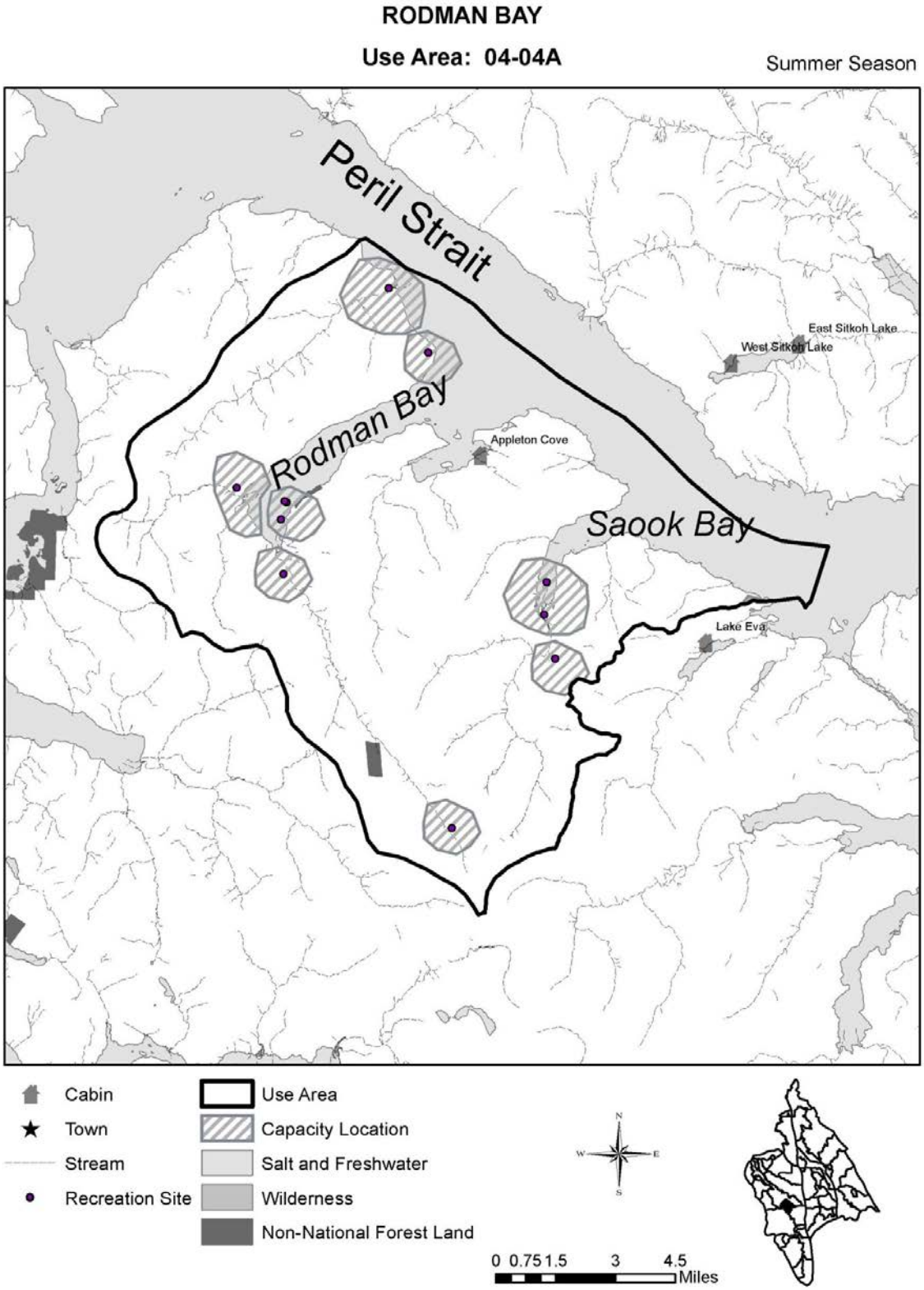

Figure E-84. Rodman Bay capacity locations, Fall, Winter, and Spring seasons.

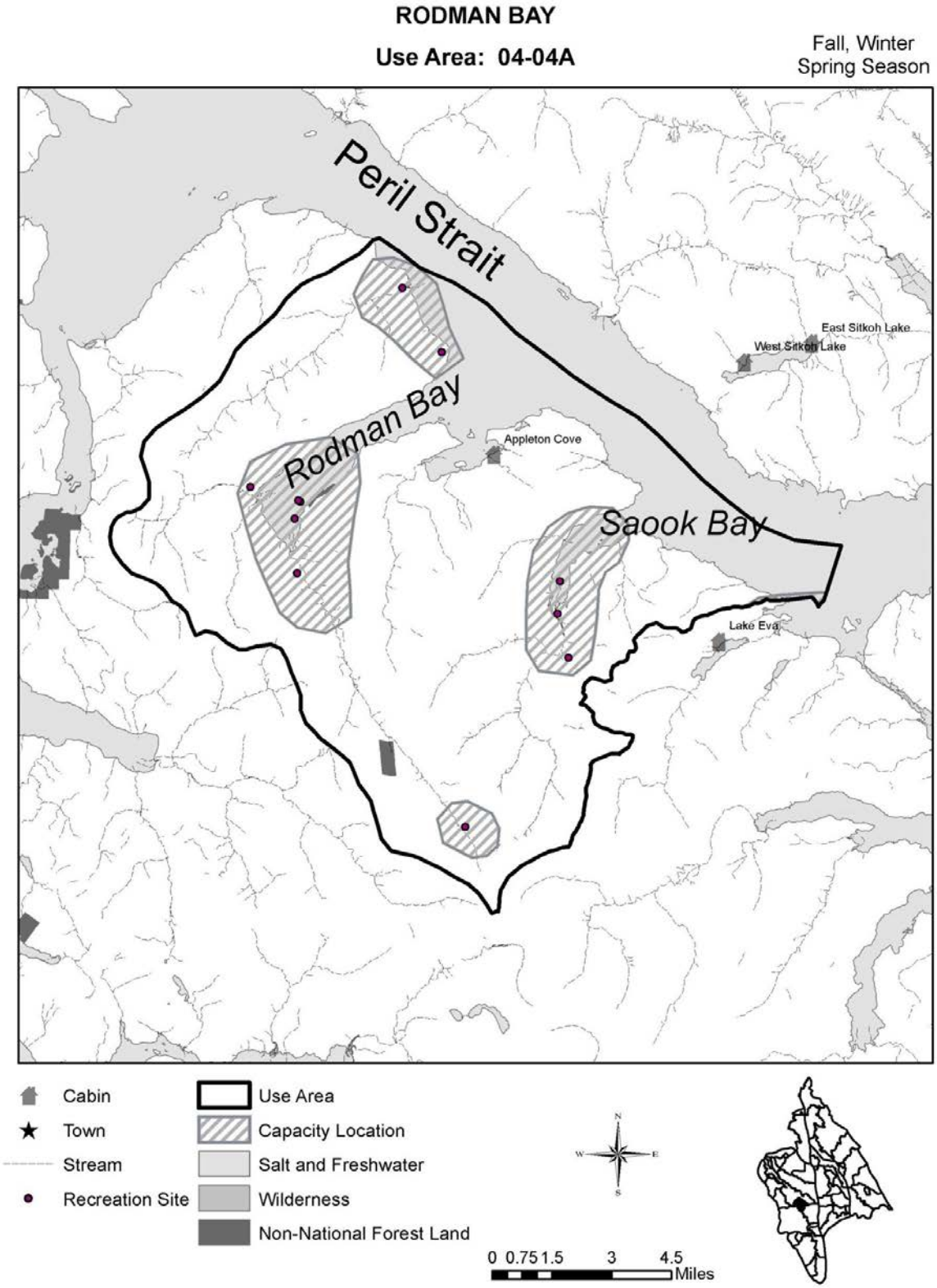

Figure E-85. Kelp Bay capacity locations, Summer season.

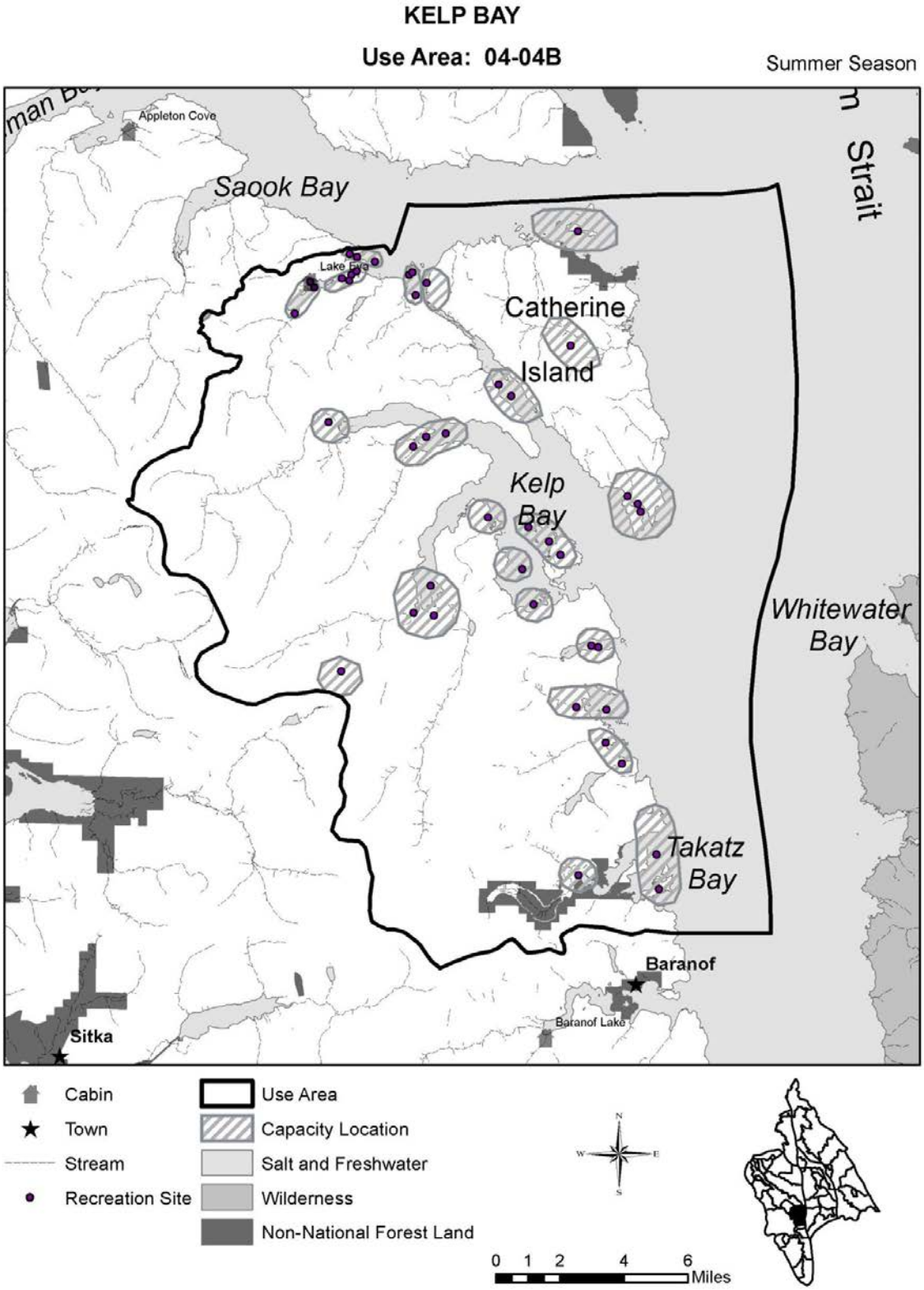

Figure E-86. Kelp Bay capacity locations, Fall, Winter, and Spring seasons.

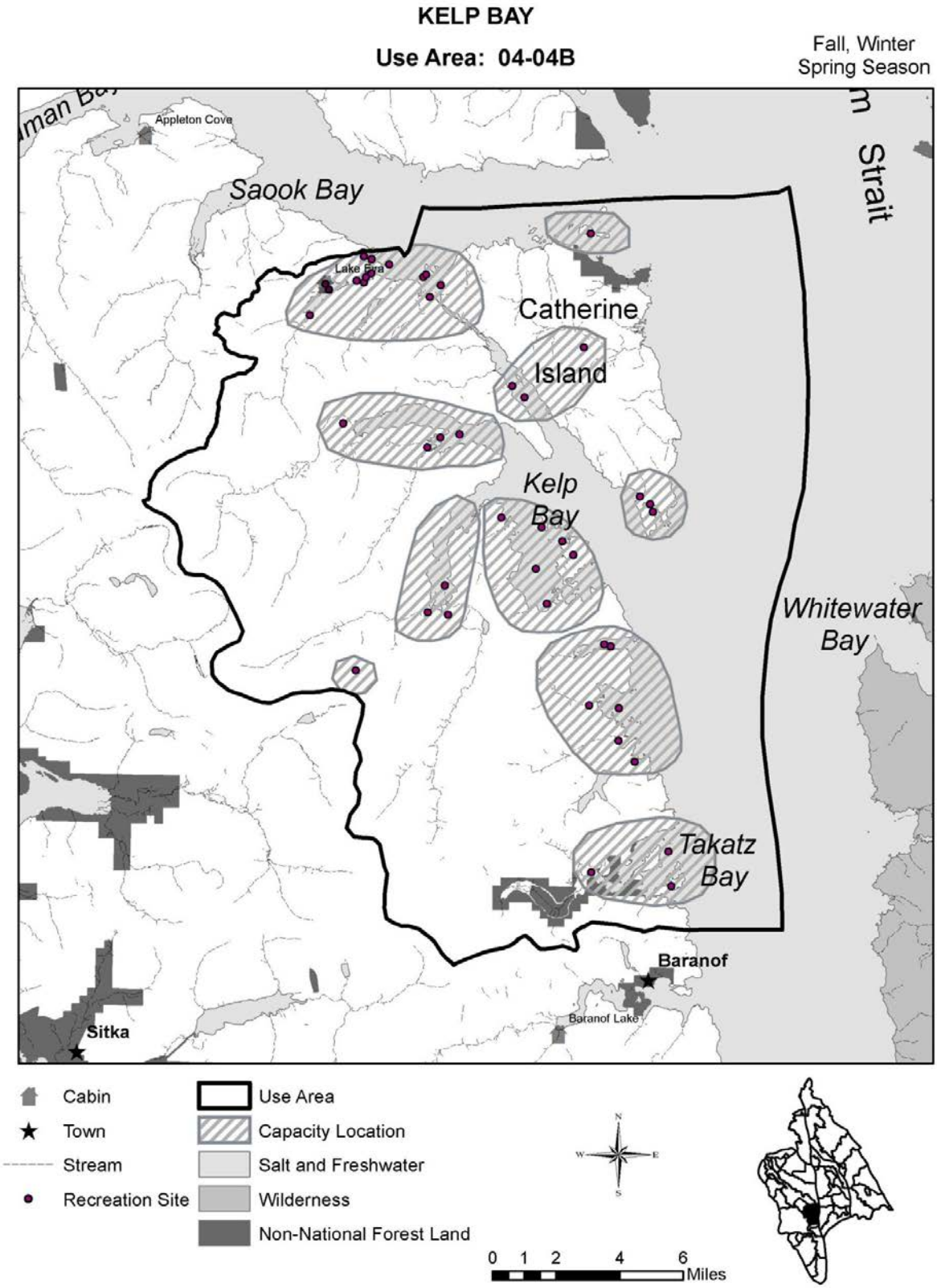

Figure E-87. Baranof Warm Springs capacity location, Summer season.

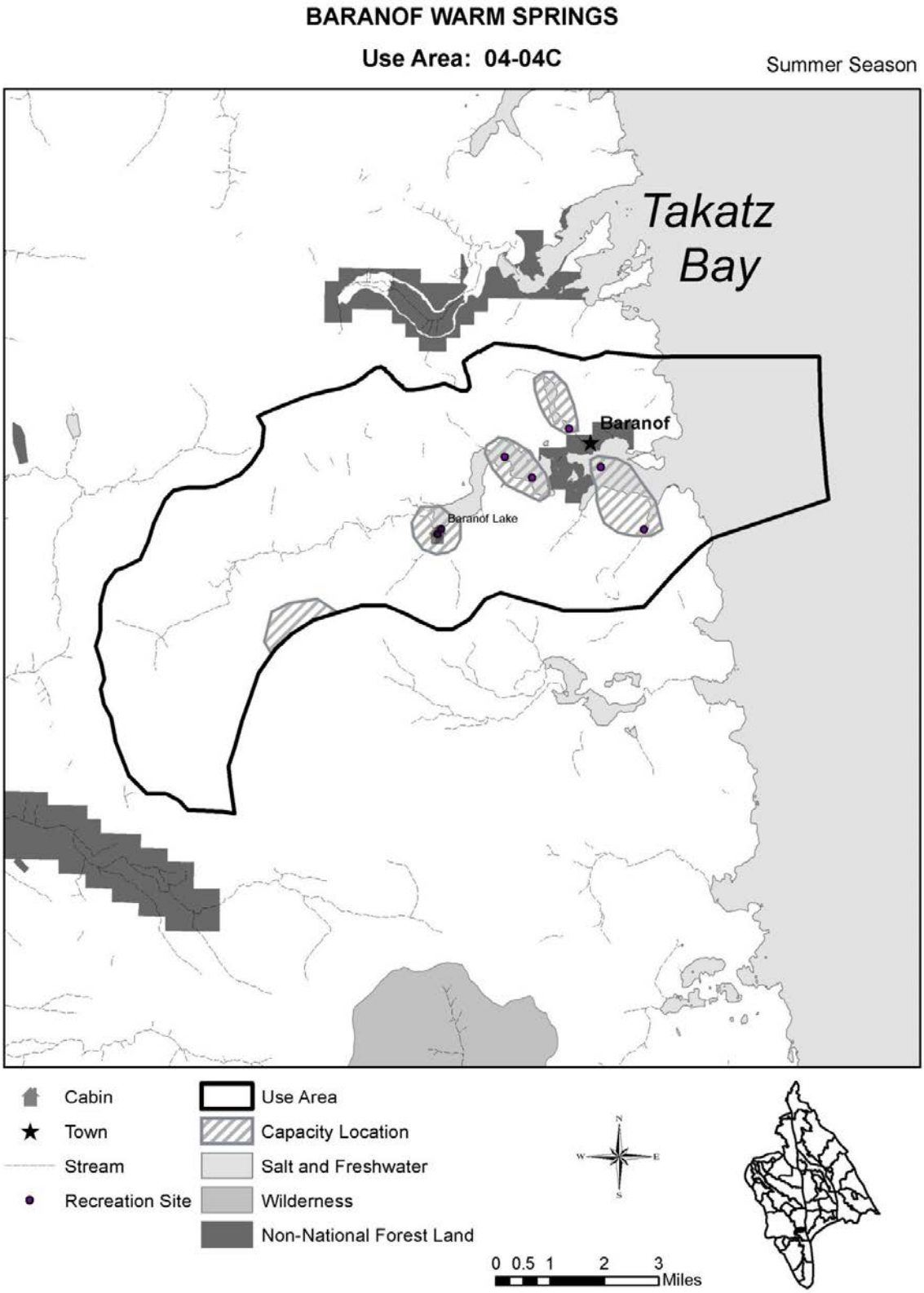

Figure E-88. Baranof Warm Springs capacity location, Fall, Winter, and Spring seasons.

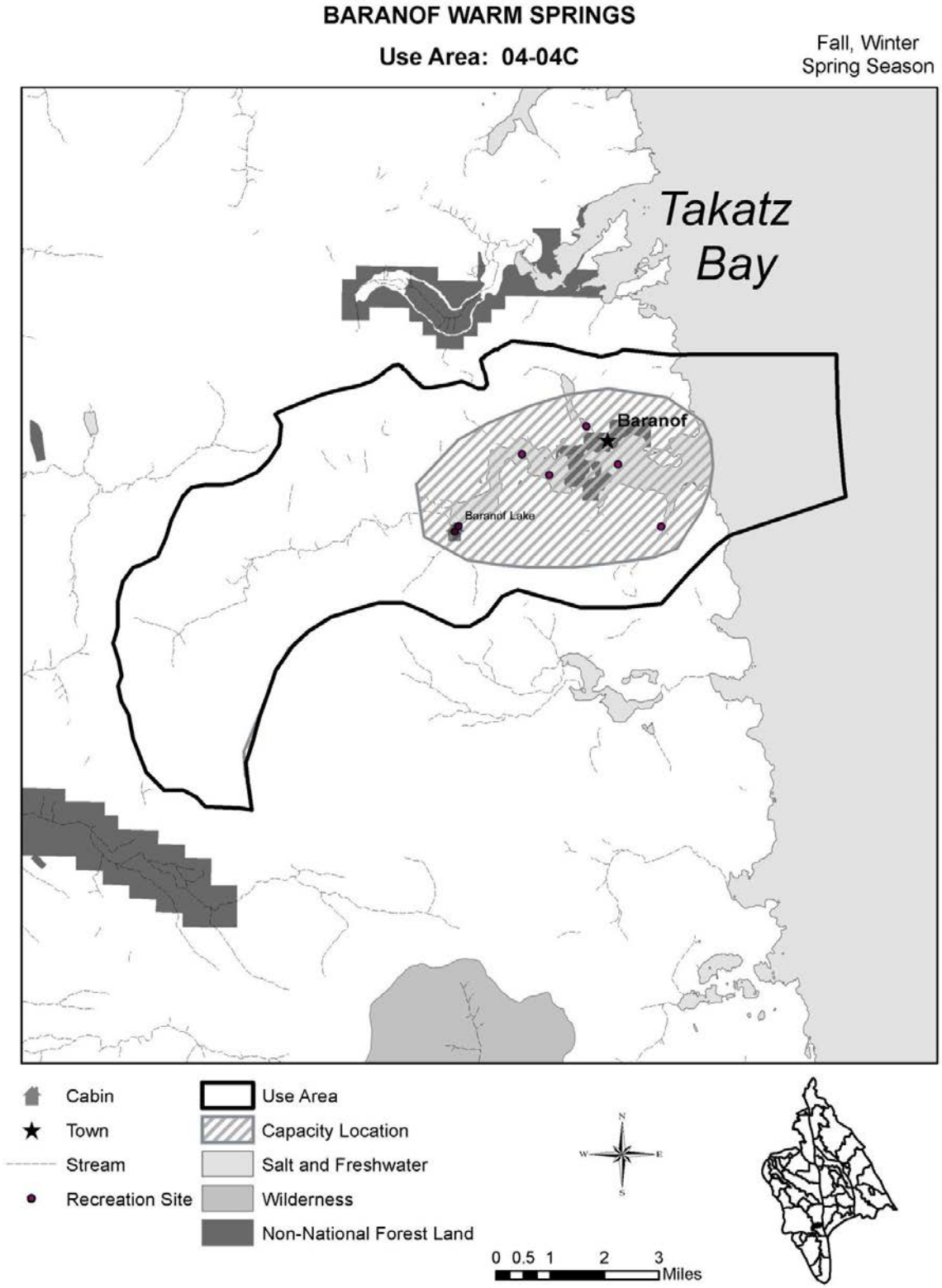

Figure E-89. Tenakee Inlet capacity locations, Summer season.

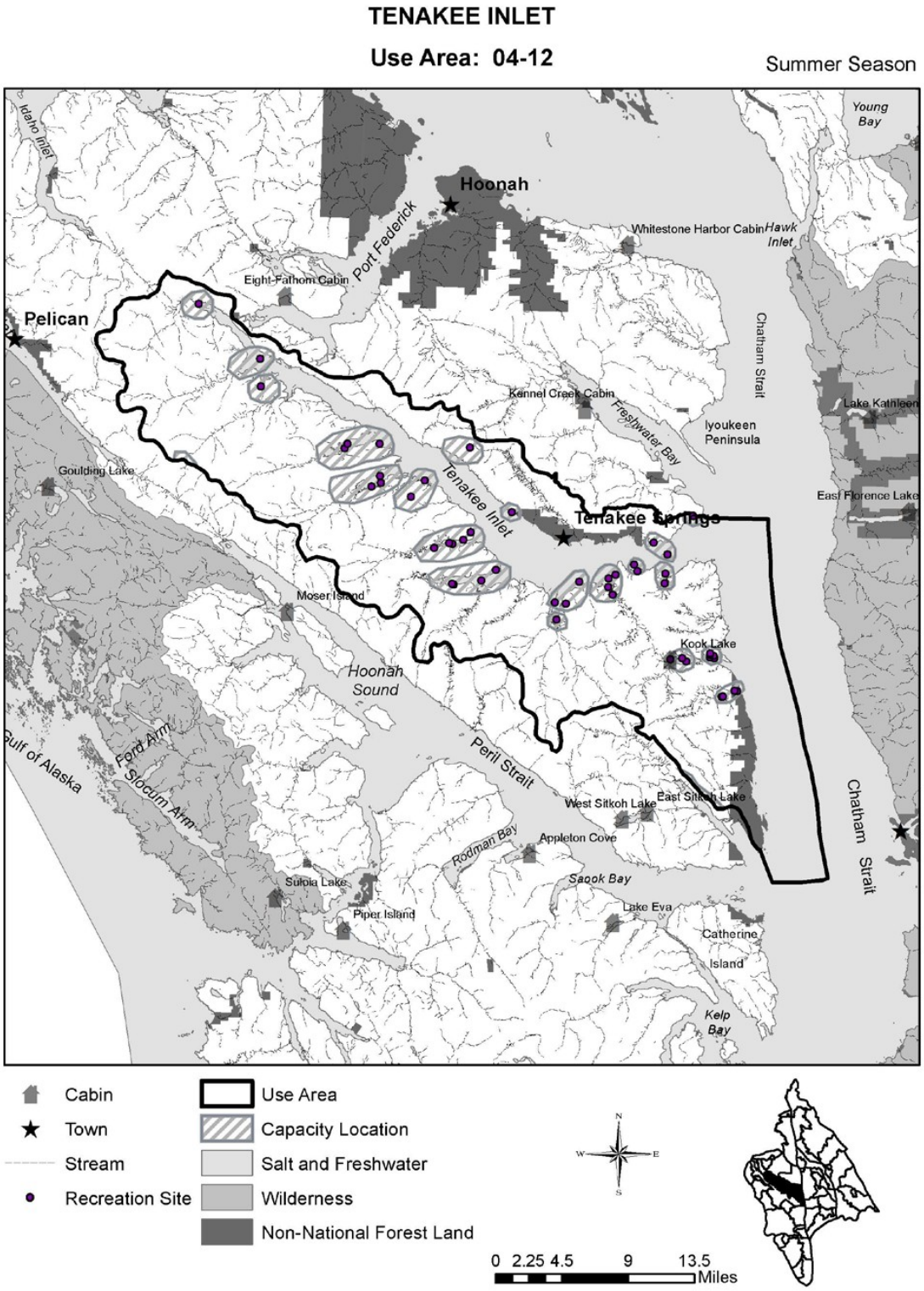

Figure E-90. Tenakee Inlet capacity locations, Fall, Winter, and Spring seasons.

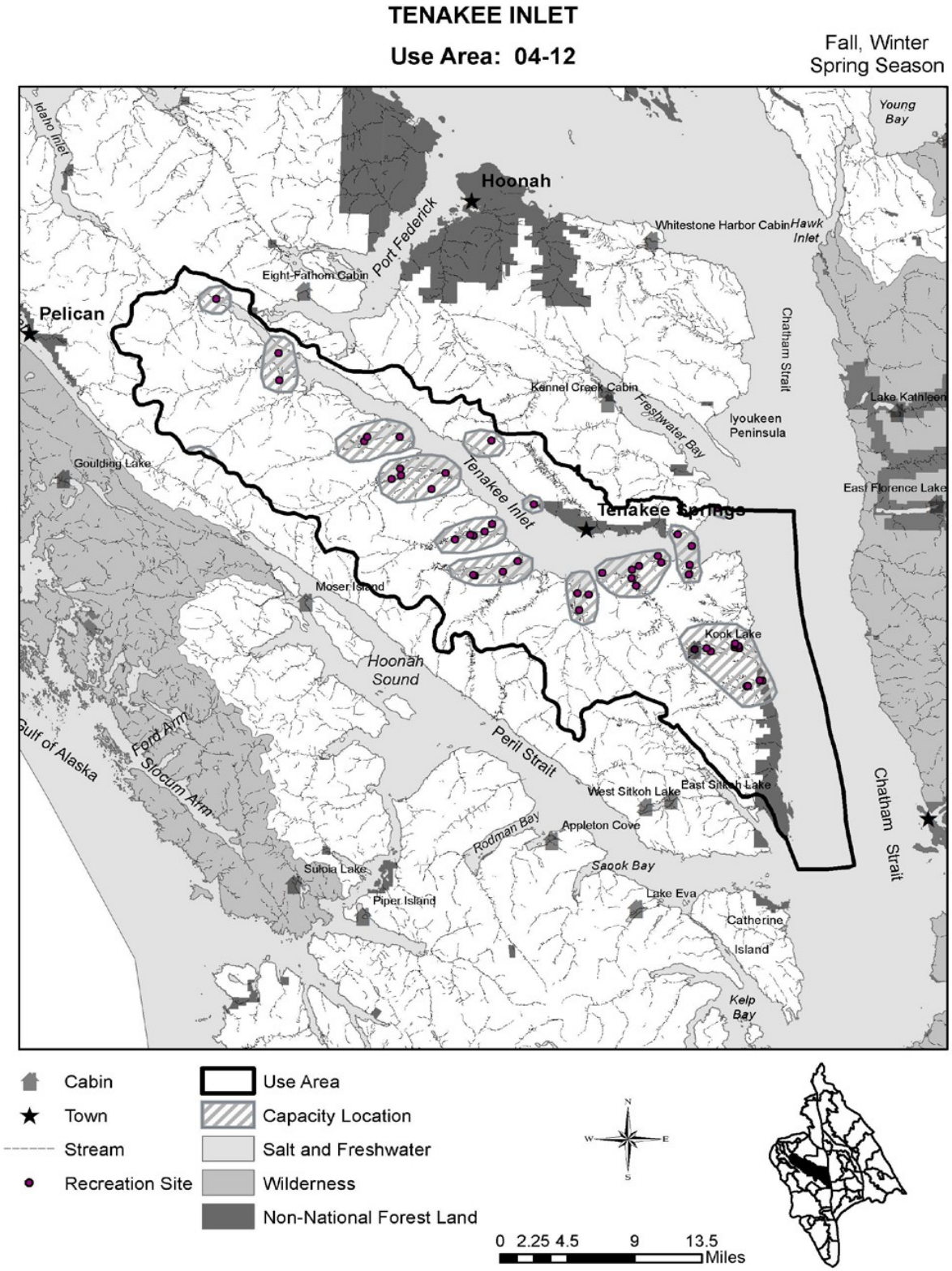

Figure E-91. Peril Strait capacity locations, Summer season.

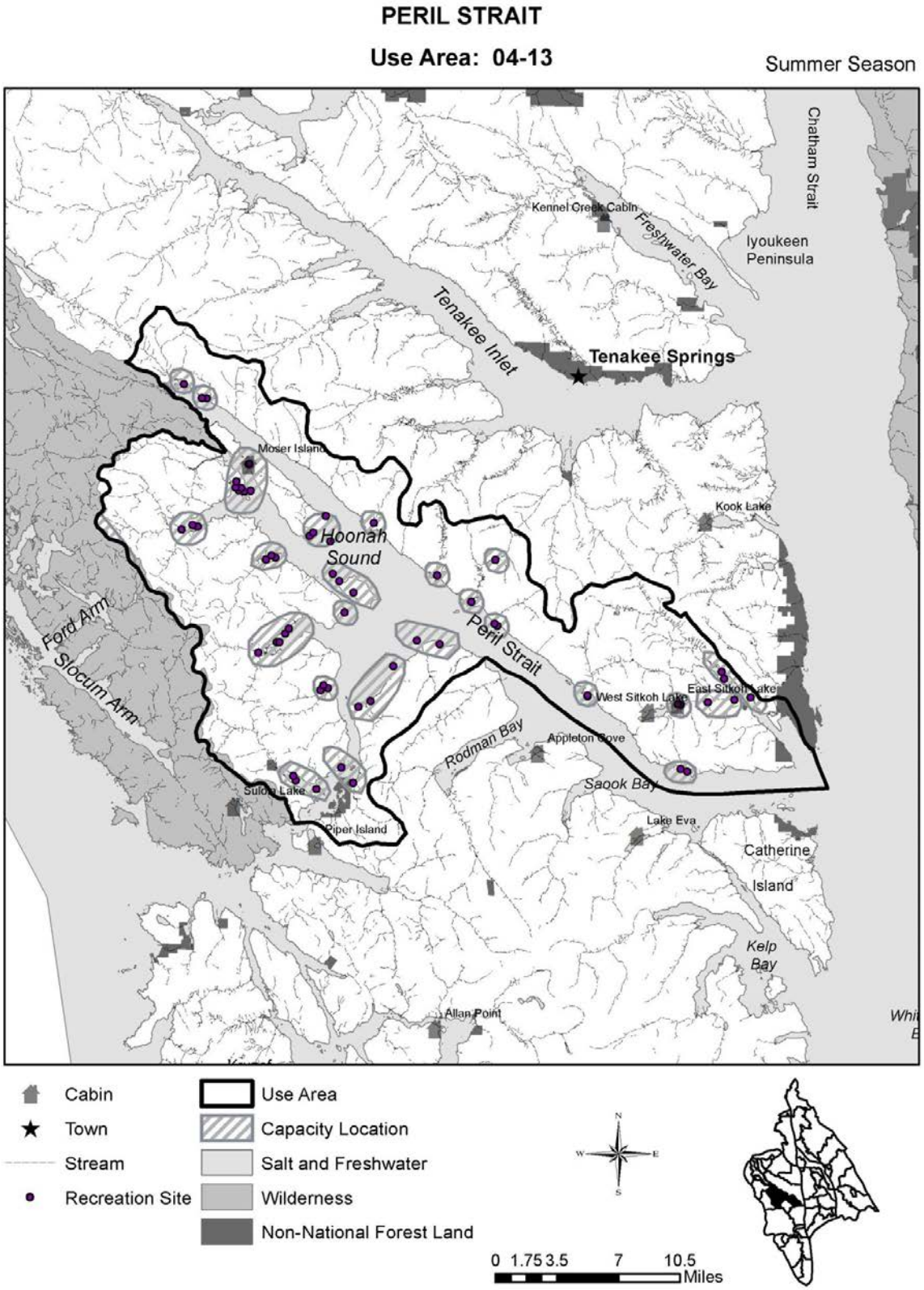

Figure E-92. Peril Strait capacity locations, Fall, Winter, and Spring seasons.

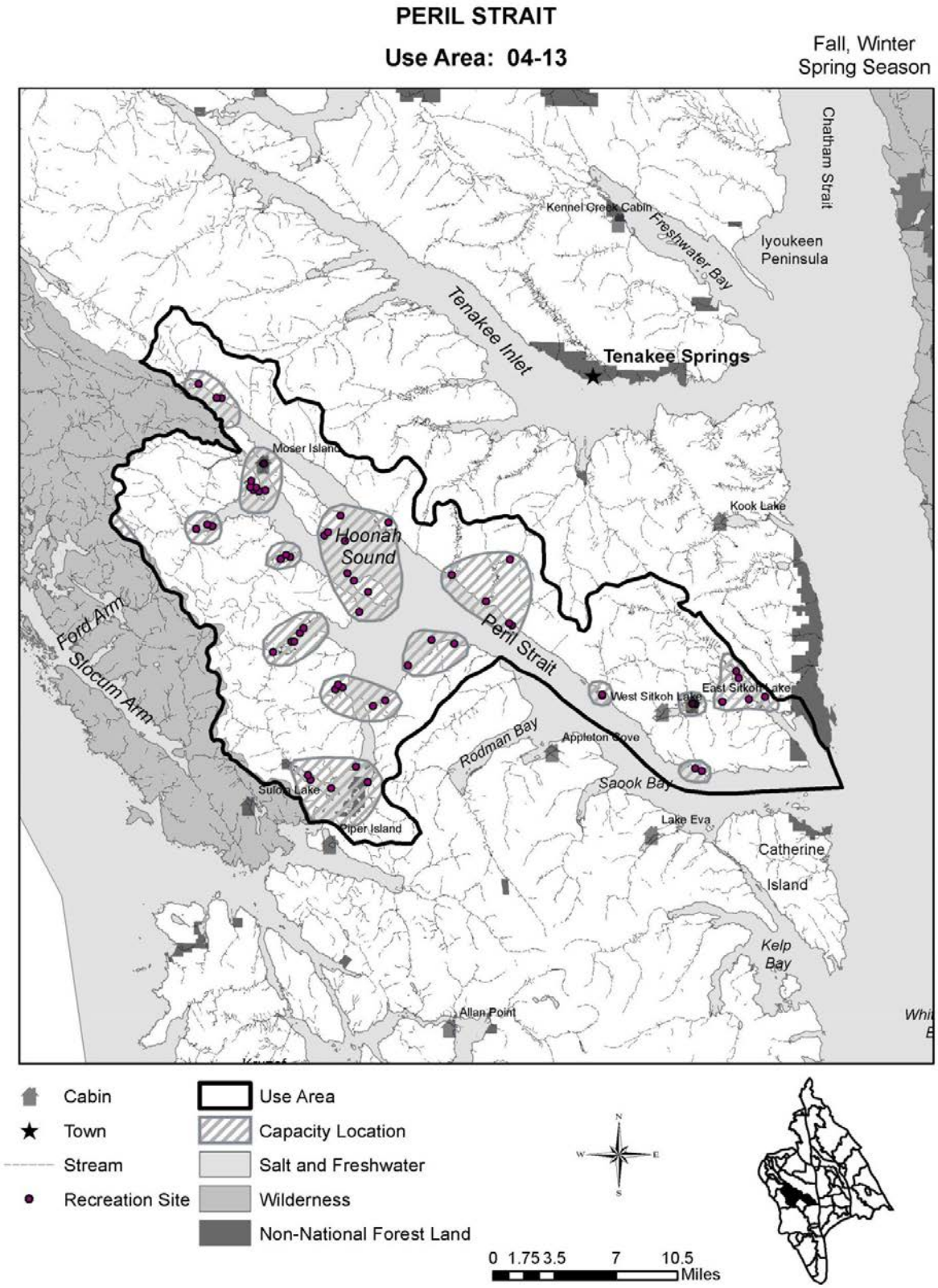

Figure E-93. Slocum Arm capacity locations, Summer season.

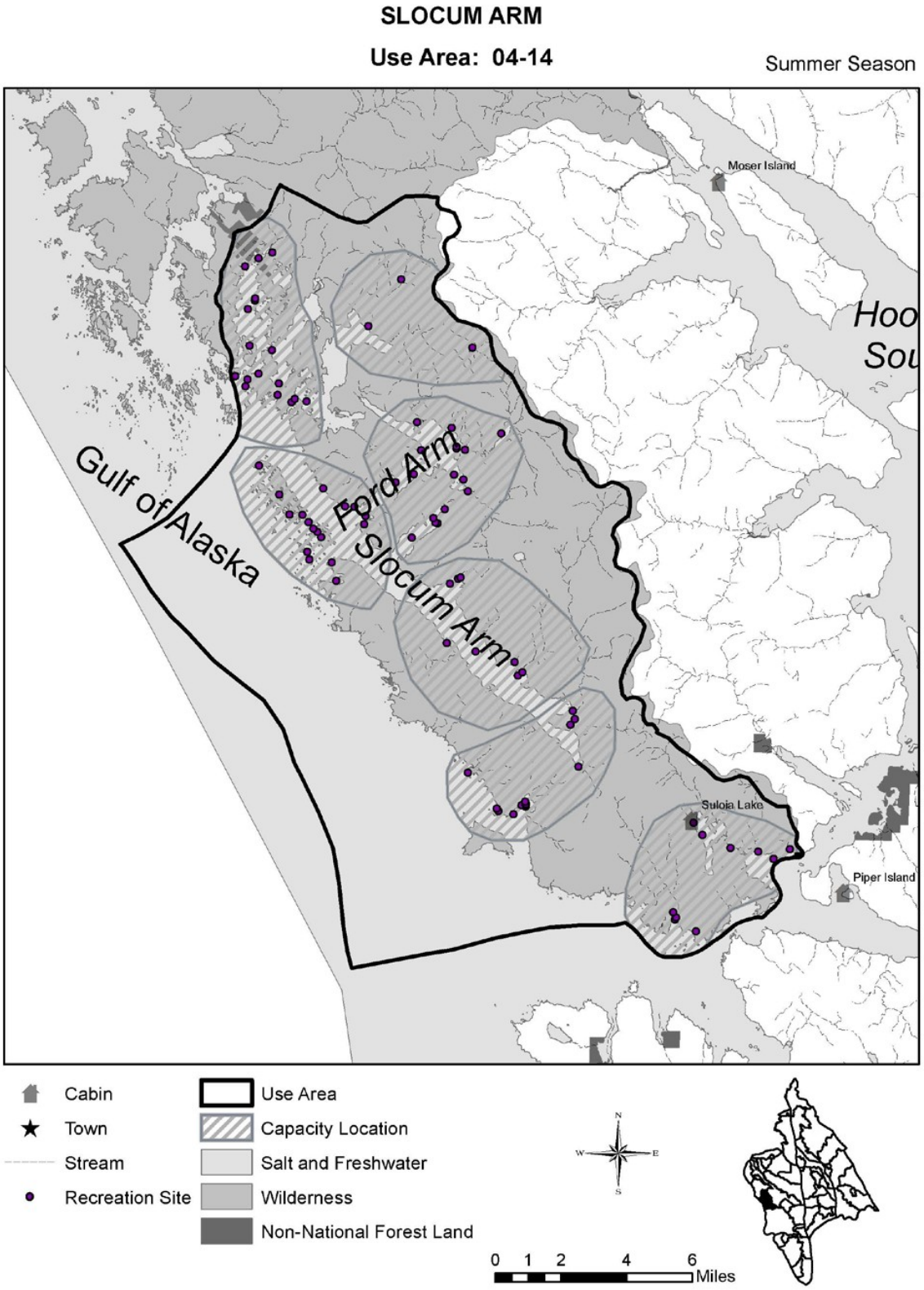

Figure E-94. Slocum Arm capacity locations, Fall, Winter, and Spring seasons.

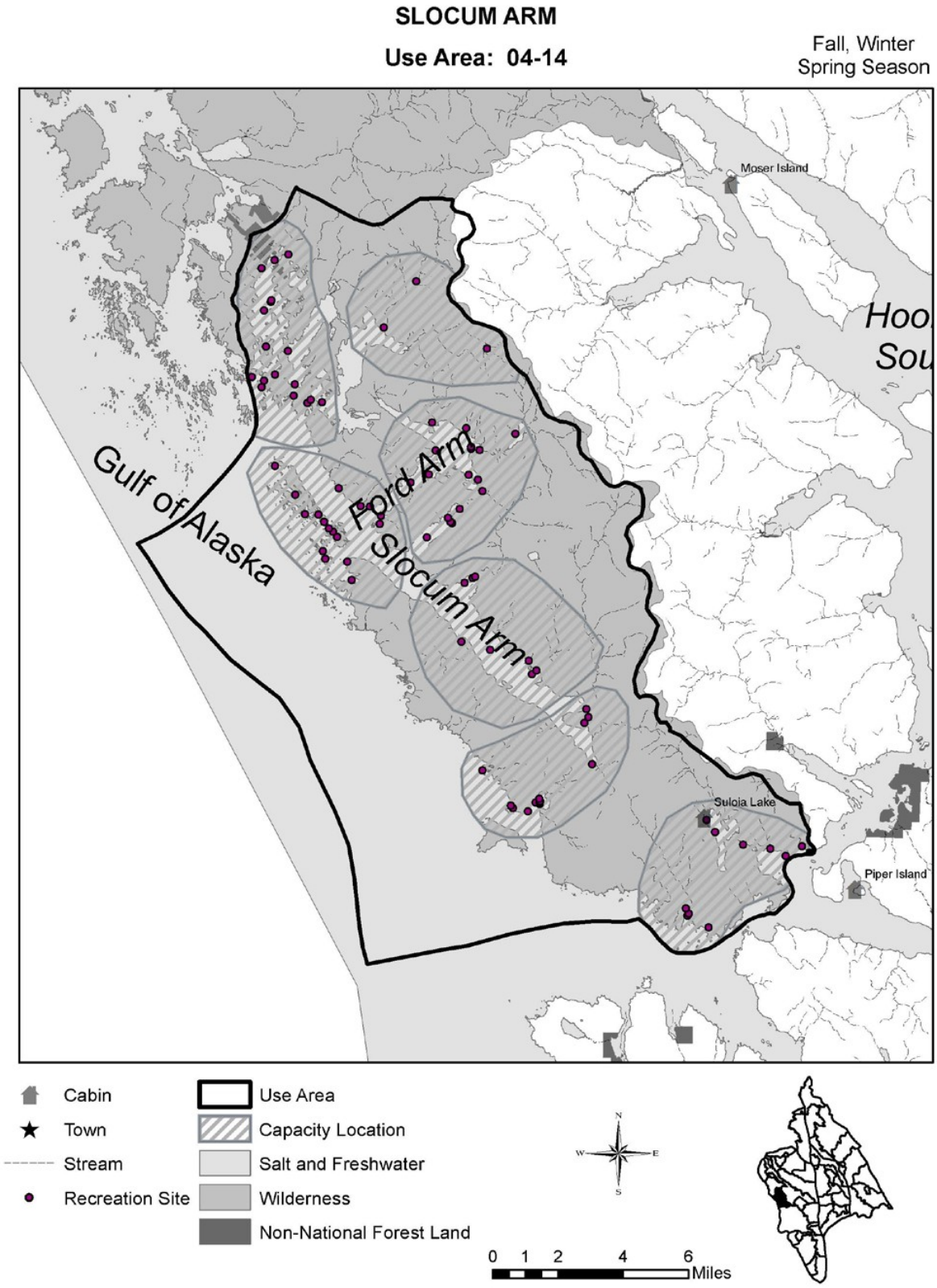

Figure E-95. Portlock Harbor capacity locations, Summer season.

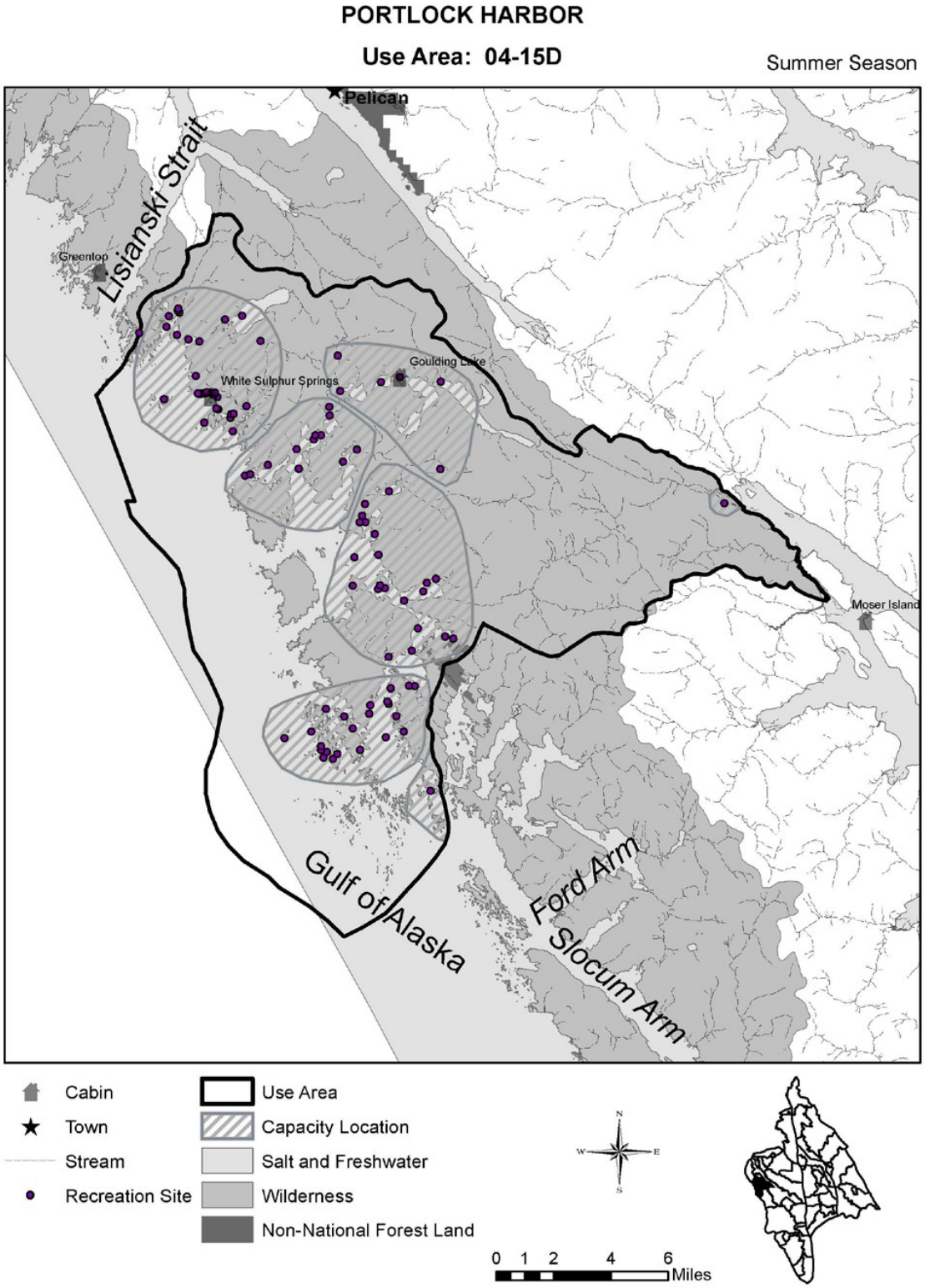
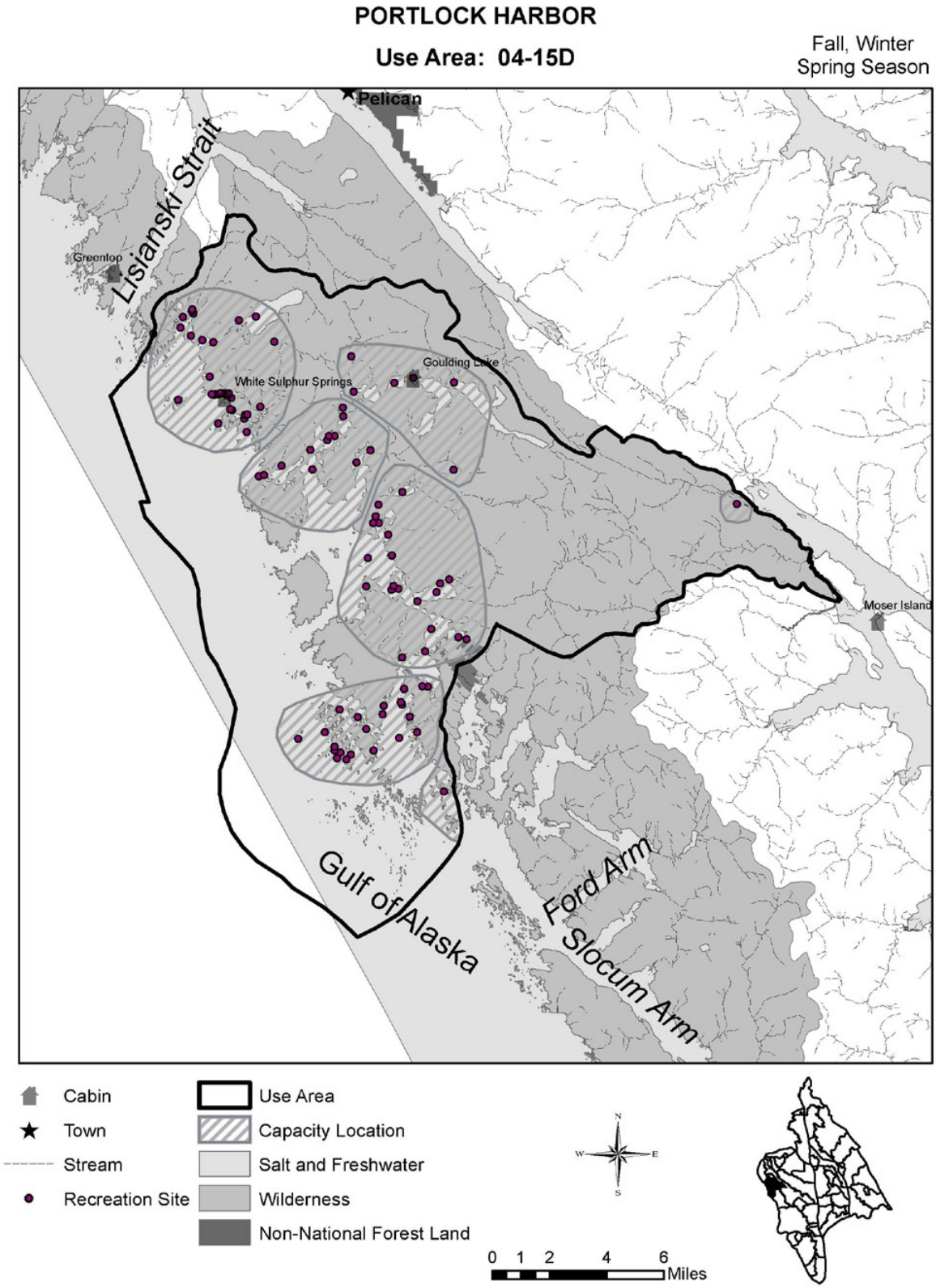
Figure E-96. Portlock Harbor capacity locations, Fall, Winter, and Spring seasons.