

Sebec Lake Fisheries Management Plan – 2012

Sebec Lake is a 6,800-acre oligotrophic lake located in northwestern Maine. It has popular fisheries for landlocked salmon, lake trout, and smallmouth bass. Other species such as smelt, pickerel, and white perch also contribute to the recreational fishing at Sebec Lake. The lake is one of the original landlocked salmon waters in Maine and the salmon population can best be characterized as slow growing. In the 1950's, salmon were managed with a 5 fish bag limit and 12-inch minimum length limit due to the abundance of smaller fish. The lake trout fishery is maintained through a stocking program that began in 1961. Lake trout were present in Sebec Lake prior to the stocking program and contributed to the fishery. It is unclear whether these fish were native to Sebec Lake or wild drop downs from lake trout waters further upstream in the drainage, such as Wilson Pond, Big Benson Pond, and Big Greenwood Pond. The lake trout fishery at Sebec Lake provides most of the winter fishing opportunity. Winter angler use is estimated to be between 2,000-3,000 angler-days and nearly all of this angling opportunity is directed at lake trout. It is important recreationally and economically to the region. While Sebec Lake is not managed exclusively for large lake trout, there is a trophy component to the fishery with fish between 10-25 lbs caught annually. The contribution of salmon to the winter fishery has been small; however, salmon and smallmouth bass are the principal components of the summer recreational fishery. The salmon at Sebec Lake have a unique challenge compared to most other Maine lakes. There are waterfalls on both of the spawning tributaries to the lake which are major obstacles for adult fish to negotiate. These falls undoubtedly increase stress and mortality and likely reduce the physical condition for mature salmon at Sebec Lake.

The purpose of this fisheries management plan is to create a document with clear, measurable goals and objectives for the future management of the lake using scientific data as well as public input. This plan was developed using data collected by the Maine Department of Inland Fisheries and Wildlife for over 50 years at Sebec Lake in conjunction with input from the Sebec Lake Stakeholders group which includes members from the business community, summer and winter anglers, campowners, and the Sebec Lake Association. The plan contains 3 overarching primary goals for the management of Sebec Lake and specific measurable objectives within each of the goals. Potential problems associated with each objective have been identified along with possible strategies to overcome those problems. No priority was set in the objectives; however, the group felt it is most important to maintain the current fishing opportunities while attempting to reach the objectives.

Sebec Lake Stakeholders Group includes:

Tim Obrey - ME IFW

Jerry Packard - Property owner and operator of former Packard's Camps

Brian Woodworth- Sebec Lake Association

Jim Drinkwater – Bass angler

Jerry Colbry – Owner of Mountain's Market

Ben Dever – Campowner

John Tatko- Angler

Management Plan for Sebec Lake

Management Goals

1. Maintain the excellent water quality, aquatic habitat, and current coldwater and warmwater gamefish species at Sebec Lake.
2. Maintain and improve current public access to Sebec Lake.
3. Maintain and improve the coldwater and warmwater fishery resources to provide winter and summer recreational fisheries.

Management Objectives

1. Maintain a mean July – August Secchi disc reading of 6.6 meters.
2. Maintain more than 5ppm of dissolved oxygen below the summer thermocline.
3. Maintain appropriate flows in Wilson Stream to support and promote wild landlocked salmon recruitment.
4. Maintain fall lake elevations to ensure salmon passage at Earley's Falls.
5. Maintain lake elevations to promote successful smelt spawning.
6. Maintain lake elevations to promote successful white perch and smallmouth bass spawning.
7. Maintain the following principal fisheries
 - a. Self-sustaining landlocked salmon
 - b. Hatchery lake trout
 - c. Self-sustaining smallmouth bass
 - d. Self-sustaining white perch
 - e. Self-sustaining pickerel
8. Maintain the following access points for anglers
 - a. Greeley's Landing – summer and winter
 - b. Packard's Landing – summer and winter
 - c. Bowerbank – summer
 - d. Sebec Village – summer
 - e. Peaks Kenney State Park – winter

9. Maintain and improve the coldwater and warmwater fisheries

Species	Mean Length (inches)	Mean Condition Factor	Gear/season
Landlocked salmon	16.5"	0.85	Fall Trapnet/Winter Creel Survey
Lake trout	21.0"	0.87	Winter Creel Survey
Smallmouth bass	10.1"		Experimental Angling
White perch	11.3"		Winter Creel Survey

Species	Quality Index (Length/inches)	% greater than QI	Gear/season
Landlocked salmon	18"	25%	Winter Creel Survey
Lake trout	22" 25"	26% 6%	Winter Creel Survey
Smallmouth bass	12"	20%	Spring Experimental Angling
White perch	12"	30%	Winter Creel Survey

Species	Minimum Standard Legals/hr	Minimum Standard Sub/hr	Gear/season
Landlocked salmon	0.013	0.028	Winter Creel Survey
Lake trout	0.047	0.087	Winter Creel Survey
White perch	0.025	n/a	Winter Creel Survey

Problems and Strategies

P1a. ME IFW does not have the staff to conduct water quality routinely on Sebec Lake.

S1a. Work with the Sebec Lake Association and the Volunteer Lakes Monitoring Program (VLMP) to maintain continuity in data collection.

P1b. Land use practices can impact water clarity.

S1b. Work with the Sebec Lake Association and the ME DEP to provide campowners with information regarding clearing, fertilizers, and other potential threats to Sebec Lake water quality.

P2a. Land use practices can impact dissolved oxygen levels.

S2b. Work with the Sebec Lake Association and the ME DEP to provide campowners with information regarding clearing, fertilizers, and other potential threats to Sebec Lake water quality.

P3a. The Wilson Stream watershed is mostly unregulated except for Wilson Dam in Greenville. Naturally occurring summer flows are adequate to maintain young salmon in the stream, however fall flows need to be closely regulated for salmon to negotiate Earley's Falls.

S3a. Continue to closely communicate with the Wilson Dam operators to provide higher attraction flows (approximately 100cfs) then lower flows to allow fish to swim upstream (approximately 40-50 cfs of total flow).

S3b. Re-examine the possibilities of constructing a fish passage device at the falls.

P4a. The lake must be maintained at nearly full pond for successful passage. Fall rains and especially tropical storms can cause flooding and erosion around the lake shore.

S4a. Make sure dam operators at Sebec Dam understand they can release water when there is severe risk of flooding in the forecast.

S4b. IFW staff should call dam operators as soon as adequate numbers of fish have passed the falls so drawdown can begin early if possible.

P4b. Campowners and the public believe spring and summer high lake elevations were the result of the IFW requesting the lake be held full for salmon.

S4c. Educate the campowners and public via fishing reports and the Sebec Lake Association's newsletter regarding the water level agreement and any future issues.

S4d. Work with the Sebec Lake Association to monitor lake levels in the summer. IFW has inadequate staff to monitor the lake elevations, but IFW and DEP need to be notified if lake elevations fall outside of the DEP Water Quality Certification.

P5a. Sebec Lake is typically drawn down in the early spring to allow the installment of flashboards. This drawdown often occurs during or just after the smelt run causing the dewatering of eggs.

S5a. Discuss the issue with the dam operators so they understand the problem.

S5b. Investigate possible alternatives with the dam operators.

S5c. Attempt to create additional smelt runs using egg transfers.

P6a. White perch and smallmouth bass typically spawn in the spring after water levels have stabilized.

S6a. Work with the Sebec Lake Association to monitor lake elevations.

P7a. We have seen wild lake trout populations created from hatchery stocking programs in other Maine waters similar to Sebec Lake. These populations can quickly become overabundant and stress the forage base for both salmon and lake trout. Data indicate the cessation of stocking can actually exacerbate the situation. Sebec Lake has a quality lake trout fishery comprised primarily of stocked lake trout with a small component of wild lake trout.

S7a. Continue to stock lake trout and adjust stocking rates to meet objectives for growth and catch rates while maintaining current fishing opportunities.

S7b. Work with the dam operators to maximize winter drawdowns that will discourage successful lake trout reproduction.

P8a. Boat launching facilities can become crowded and fall into disrepair.

S8a. Work with the municipalities to maintain existing sites. Use IFW/DOC funds where appropriate.

P8b. Packard's boat launch is privately owned and maintained. It has always been available for public use, however, it is uncertain whether this can be maintained in the future and it is an important summer and winter access site.

S8b. Work with the owner to develop a plan for permanent public access at this site that does not require the landowner to maintain the site.

P8c. Winter access at Peaks Kenny State Park can be difficult in some years because the gate is left closed and the placement of

boulders to eliminate vehicle access makes snowmobiling dangerous.

S8c. Discuss with BPL to ensure consistent access at this location and the possibility of a parking area at the entrance to the park.

S8d. Educate the public through fishing reports about the importance of the site and stress that vehicle (Cars/trucks) access through the park gate in the winter is not permitted and causes access problems for others.

P9a. Low smelt abundance can affect survival, growth, and the condition of Sebec Lake salmon and lake trout.

S9a. Develop a work plan to include monitoring smelt runs at Sebec Lake.

S9b. Develop a source of smelt eggs that can be used as a donor for transfers to Sebec Lake and other waters.

S9c. Monitor winter food habits of lake trout and salmon to track smelt abundance.

P9b. Excessive salmon and/or lake trout abundance can cause the smelt abundance to decrease.

S9d. Adjust stocking rates to meet growth and catch rate objectives while maintaining current fishing opportunities.

S9e. Adjust bag limit and size limits on salmon and lake trout to meet growth and catch rate objectives.

S9f. Continue to monitor salmon densities in Wilson Stream and correlate to adult abundance in summer and winter.

P9c. Sebec Lake has a history of smaller than average salmon with slower growth rates.

S9g. Determine spawning mortality to identify what percentage of mature fish successfully return to the lake to grow to larger sizes.

S9h. Develop length and age frequency index for long-term monitoring of spawning salmon at Sebec Lake.

S9i. Investigate possible weir sites for future evaluation of spawning run of wild landlocked salmon.