

# NORWAY LAKE LEVEL STANDARDS

## Norway Town and Lake Association in Cooperation with Kruger Energy

**Summary:** These rules establish standards for water levels on Norway Lake. These standards establish maximum and minimum water levels, based on established reference points, for various seasons of the year, as guidance for water level management.

### 1. Purposes

These standards are intended to establish patterns of water level management on Norway Lake to maximize public recreational opportunities, to minimize potential for excessive flooding, to maintain adequate water supplies for public and private consumption, and to maintain stable environmental conditions for aquatic life.

These standards are intended to provide quantifiable guidelines, based on known reference points, for dam owners, dam operators, hydro electric generators, and lake-shore property owners.

### 2. Definitions

**AUTUMN:** The period of time from September 1<sup>st</sup> through November 25 of each year, unless otherwise specified.

**FULL POND:** The water level on Norway Lake at which the water normally spills over the crest of the outlet dam without causing any shore-land flooding.

**NGVD:** The National Geodetic Vertical Datum of 1929, which serves as the basis for establishment of elevations in feet of height above mean sea level.

**SPRING:** The period of time from April 1 through June 1 of each year, unless otherwise specified in the standards.

**SUMMER:** The period of time from June 2 through August 31 of each year, unless otherwise specified in the standards.

**TEN YEAR FLOOD:** A flood having a recurrence interval of approximately once in every ten years, as determined by flood insurance studies performed pursuant to the National Flood Insurance Act of 1968, and the Flood Disaster Protection Act of 1973, or by other means.

**WINTER:** The period of time from November 25 through March 31 of each year, unless otherwise specified in the standards.

### 3. General Patterns of Water Level Fluctuations

These water level standards are based upon the following general pattern of seasonal water level fluctuations and current water level management practices across the state of Maine, the guidelines below are specific to Norway Lake established by a joint meeting with the Lake Association, Town of

Norway, and Ridgewood Renewable Power in the spring of 2005.

**Summer – Autumn (June 1 – November 25)** Start with a full pond of 98.5; close all gates and seal all boards to prevent leakage, and to maintain adequate water supply throughout the summer. In the event of heavy rains open the necessary gates to prevent water levels from exceeding the maximum Summer set point of 98.5.

**Winter (November 25 – March 31)** Provide adequate storage capacity for late fall rain and to accept spring runoff from snow-melt and precipitation. The purpose is to have ample reserve to help limit shoreline flooding and maintain stable water levels throughout the season. Water may rise after March 31.

**Spring (April 1 – June 1)** Start with adequate storage for spring runoff; attempt to reduce flooding to only those areas encompassed by a ten year flood; Slowly fill pond up during the spring months to allow for a full pond as of June 1.

#### **4. Derivation of Water Level Standards**

**SUMMER MAXIMUM:** Water level is generally based upon the normal high water mark, spillway elevation of the dams, or other factors which may delineate a full pond elevation. 98.5 has been established by the Town and Lake Association as “full pond”.

**SUMMER MINIMUM:** Water level is generally below .3 tenths of a foot below the summer maximum, unless otherwise specifically defined, to allow for normal water loss through evaporation and dam leakage.

**AUTUMN MAXIMUM:** Water level is generally 4 inches below the summer maximum, unless otherwise specifically defined, to allow capacity for autumn rains.

**AUTUMN MINIMUM:** Water level is generally based on the same standards as Autumn Maximum for Norway Lake.

**WINTER MAXIMUM:** Water level is generally 4 inches below the summer maximum, unless otherwise specifically defined, to provide storage capacity for spring runoff.

**WINTER MINIMUM:** Water level is generally 1 foot below the winter maximum, unless otherwise specifically defined, to insure some protection of aquatic habitat and water supplies.

**SPRING MAXIMUM:** Water level is generally based on the ten year flood elevation, unless otherwise specifically defined, to provide an established goal for flood protection. Typical Maine lakes have a couple of feet draw-down to help prevent shoreline damage and Spring flooding due to typical Spring runoff and snow-melt.

97.5 has been established for Norway Lake by the Town of Norway and the Lake Association.

**SPRING MINIMUM:** Water levels shall be raised gradually throughout April up until June 1<sup>st</sup>, starting the summer season with a full pond.

**Summer – Autumn Max: (June 1 through November 25)** 98.5 Feet NGVD

**Summer – Autumn Min: 97.11 NGVD** (revised as of 11/29/2005, by Ridgewood Power)

**Winter Max: (November 26 – March 1) 97.5 Feet NGVD**

**Winter Min: 97.5 Feet NGVD**

**Spring Max: (April 1 – June 2) 97.5 Feet NGVD**

**Spring Min: 97.5 Feet NGVD**

**Exceptions:**

These standards shall not be construed as to require an owner or operator of a dam to manipulate water levels in a manner contrary to good judgment or reasonable practice. These standards shall not apply in cases of emergency, where compliance would threaten the structural integrity of a dam or endanger the public safety, health or welfare.

These guidelines are proposed by Ridgewood Renewable Power (now Kruger Energy) in cooperation with the Town of Norway and the Norway Lake Association. This is a draft and working document subject to the approval by the Town of Norway and the Lake Association. The purpose is to establish a lake level management plan that will benefit the waterfront property owners and give sufficient water in the summer seasons for recreational use.

**Approved by Select Board, 02-16-2006, as amended.**