PASSAMAQUODDY TRIBE
TRIBAL ORDINANCE

on

WATER RESOURCES MANAGEMENT
for Tribal Trust Lands in Township 19, M.D.
Washington County, Maine

SUMMARY: This Ordinance sets forth standards and procedures under which the Tribe will permit the withdrawal of water for agricultural purposes from ponds, streams or groundwater located on tribal trust lands in Township 19, Middle Division, utilizing a permit by rule process. Water withdrawals that are not authorized by or exempted from this Ordinance are prohibited as a matter of Passamaquoddy tribal law unless approved on a case-by-case basis by the Joint Tribal Council.

1. FINDINGS AND PURPOSES: The Passamaquoddy trust lands in Township 19, M. D. ("T. 19") are in substantial part occupied by naturally-occurring wild blueberries, which the Tribe manages and harvests. More recently, the Tribe has engaged in cranberry cultivation on the same T. 19 trust lands. These wild blueberry and cranberry cultivation operations, managed by the Tribe d/b/a Northeastern Blueberry Company ("NEBCO"), provide employment, job training and financial support to the Tribe and its members. Increasingly, the Tribe has relied on crop irrigation to protect and enhance the wild blueberry crop, and to provide the necessary growth and harvesting conditions and for cold weather protection of the cranberry vines. Continued use of irrigation for these purposes is very important to the economic well-being of the Tribe.

Water for these agricultural purposes has for many years been drawn from the local surface waters, Inglewass (Grassy) Pond, Libby Brook, Black Brook Ponds, and Black Brook Stream. These local waters are all part of the Machias River watershed, draining into the Machias River – Grassy Pond via Libby Brook and the Black Brook Ponds through Black Brook Stream and Mopang Stream. The Machias River provides habitat for the Atlantic Salmon, which has been listed as an Endangered Species. It is important to the Tribe that its water withdrawals at T. 19 do not adversely affect the Atlantic Salmon in any of its life stages, or its habitat. There are a number of active beaver dams on both Libby Brook and Black Brook Stream, effectively blocking fish passage, and there is no indication that either stream provides current habitat for Atlantic Salmon. Accordingly, this Ordinance restricts the withdrawal of water from groundwater and from any surface waters at T. 19 in a number of ways, based upon the best scientific evidence and analysis currently available, specifically to avoid any such adverse impact on the Atlantic salmon.

Geologist Robert Gerber studied the specific geology and hydrology of the Libby Brook and Black Brook watersheds and groundwater in the immediate vicinity of the tribal trust land. His studies were conducted in the field, including test well observation and pump testing, and by reference to the available mapping, stream flows and other evidence. He developed a map of groundwater contours in the area, and a model to predict the discharge of groundwater into the local ponds and streams. His groundwater contour map was later corroborated by water level measurements in existing wells.

These specific watersheds are dominated by thick sand and gravel deposits, with groundwater generally fifty or sixty feet below the surface. Ponds, including Grassy Pond and the Black Brook Ponds, large wetland areas and surface streams are "groundwater outcrops," essentially at the same level as the groundwater table. Their surrounding geology makes these surface waters unusual in Maine and New England, in that they are fed for the most part by a vast local groundwater reservoir, or aquifer, rather than surface runoff. The result is that water levels and flows in these bodies of water are relatively independent of rainfall, and far more constant throughout the year than the typical Maine river. Consistent with NEBCO's historic observations, water levels and flows in these ponds and streams can be expected to return rapidly following irrigation pumping to approximately their natural levels.

Water level, stream flow or water quality data for the surface waters on the tribal trust lands at T. 19 have only been gathered in the past few years. In Mr. Gerber's opinion, only four Maine rivers where flows have been monitored long enough to provide a suitable database are geologically comparable (watersheds with large sand/gravel areas), and of those, only the Narraguagus River is geographically comparable (outside southern Maine). The approximately 50 years of Narraguagus data shows that only in one out of every four years on average over a long period of time, do August and September streamflows drop as low as .25 csm (cubic feet per second, per square mile of drainage area), a level that must be sufficient to support the historic salmon population using the river. The comparable 25th percentile flows for July and October are .39 csm in the Narraguagus. In all other months, average monthly flows exceed .5 csm, often substantially. The Narraguagus River flow data is considered the best available basis for establishing minimum flow levels for Libby Brook and Black Brook Stream. The tribal regulatory controls on water withdrawals in this Ordinance are more watershed-specific, utilize better monitoring, a complex analysis of the local groundwater regimes and computer modeling of stream flow impacts. In general, these analyses are considered to be more advanced and precise than the regulatory control system currently in use by the State of Maine.

The Ordinance restricts surface water and groundwater withdrawals of any

more than insignificant amounts to (1) agricultural uses, (2) from specified locations, (3) under defined, controlled conditions, and (4) only at such times and in such amounts as will always leave surface water stream flows at or above naturally occurring low flow levels. The purpose of this Ordinance is to establish the Standards and Operating Requirements under which groundwater and surface water withdrawals are allowed in such detail as to allow NEBCO to locate, install and operate irrigation pumps that will satisfy the Tribe's regulatory criteria for protecting surface water quality, stream flows and fisheries and wildlife habitat, including specifically Atlantic Salmon and their habitat, without case-by-case permitting procedures.

A permitted activity will have no significant adverse effect on natural resources or their environment if carried out in accordance with this Ordinance.

2. SCOPE. This Ordinance regulates the pumping or other withdrawal of waters from the groundwater and the surface waters within the boundaries of Passamaquoddy trust lands within Township 19, Middle Division, in Washington County, Maine, for crop irrigation or other agricultural purposes, and associated equipment operation. The diversion or withdrawal of groundwater or surface waters within Passamaquoddy trust lands in T. 19 except in compliance with this Ordinance is prohibited under Passamaquoddy tribal law. The withdrawal of insignificant amounts of groundwater or surface waters for domestic use, and emergency withdrawal for firefighting use, are exempt from this Ordinance.

3. CRITERIA. Surface water withdrawals and the operation of associated equipment are permitted under this Ordinance only when the following criteria are satisfied:

The water withdrawal will not lower the water quality of any water body classified and approved in accordance with the Clean Water Act below the level of such classification;

Associated equipment will be set up and operated so that its operation does not contaminate any surface water through erosion of disturbed soils or the storage, handling or use of petroleum fuels;

Habitat for fish and other aquatic life will not be permanently disrupted or changed significantly from natural conditions, and there is no impoundment of stream waters or interference with fish passage at any time;

The public health will not be endangered;

Equipment to monitor the effect of agricultural water use on surface water levels and stream flows is in place in appropriate surface water locations, including, with respect to the pumping of groundwater for agricultural use, in monitoring wells at appropriate locations to assess impacts on groundwater levels, and the resulting monitoring data are utilized to regulate water withdrawals; and

Water withdrawals are conducted only by the Tribe, acting through NEBCO, or any of its authorized agents, and the equipment and technical assistance necessary to ensure compliance with the requirements of this Ordinance are utilized.

4. PERMIT BY RULE. Water for agricultural use may be drawn at appropriate locations from Inglewass (Grassy) Pond, Libby Brook, Black Brook Ponds, Black Brook Stream and from one or more groundwater production wells, *provided* that the following standards and operating requirements are met at all times, and prior notification is given as required below:

A. <u>Standards and Operating Requirements</u>.

(1) <u>Direct Stream Withdrawal.</u> Streamflows at the point of stream withdrawal shall not be reduced below the daily average rates set forth below, expressed in csm (cubic feet per second rate of flow per square mile of watershed, averaged over a 24-hour period) in any day in the corresponding month shown:

Streamflow Rate (SFR)	Month
0.5 csm	November through June, inclusive;
0.4 csm	July
0.25 csm	August, September
0.4 csm	October

If the most recent measured streamflow available to NEBCO staff at the time any stream withdrawal is proposed to begin, is equal to or less than the minimum daily average flows specified for that month, no stream withdrawal is permitted.

Libby Brook streamflow shall be gauged as close as possible to the point of any stream water withdrawal point. Differences between flows at the Libby Brook pumping site and at the stream gauge shall be prorated on a csm basis for each site whenever the withdrawal point or stream gauge location are changed.

The stream gauge measurement shall be taken no less often than once weekly during any period of groundwater or surface water withdrawal. Stream gauge measurements shall be converted to the corresponding streamflow using the best

available rating curve for the gauge position.

Stream withdrawal pumping rates shall be adjusted so that they do not exceed the available flow above the minimum prescribed flow, calculated as follows:

$F =$ Streamflow available for pumping withdrawal, in cubic feet per second;

$Q_s =$ Streamflow as measured within the last 7 days by the nearest stream gauge, in cubic feet per second;

$A_s =$ Surface drainage area above gauge site, in square miles;

$A_p =$ Surface drainage area above pumping site, in square miles;

$M =$ Minimum prescribed flow for the current month, in cubic feet per second;

$$F = \frac{(Q_s \times A_p)}{A_s} - M$$

The time of day and output flow rate shall be recorded at the time each pump is started or shut off. A record shall also be made each time the pump operation is checked. If the output flow rate is adjusted, the time and adjusted output flow rate shall be recorded. The total amount of operating time and the estimated cumulative water withdrawal of each pump shall be determined and recorded each day from these records.

(2) <u>Groundwater Withdrawal.</u> Groundwater withdrawal at or near location PW-1 as shown on Appendix A to this Ordinance shall be limited so that withdrawals do not exceed the flow available for withdrawal at PW-1, calculated as follows:.

For each month of the irrigation season the withdrawal of groundwater will be limited according to the gauged streamflow at the Libby Brook USGS stream gage and the pre-determined maximum expected reduction in Black Brook streamflow for that month as determined in the Stratex January 3, 2006, report, "*Modeling the Incremental Impact of Groundwater Withdrawal on Stream Flow in Libby Brook and Black Brook at TD19, Maine,*" as follows:

$Q_{LB} =$ Streamflow measured at the Libby Brook stream gauge, in cubic feet per second (cfs)

A_{LB} = Groundwater contributing area above Libby Brook gauge = 6.34 square miles

C_{BB} = Factor to convert Libby Brook baseflow at USGS gauge site to Black Brook baseflow at impact determination point = 0.5

SBR_{BB} = Black Brook baseflow reduction in cfs, at point of impact determination, based on month of the year, due to maximum irrigation withdrawals at PW-1, in cfs, as shown in the following table:

SBR_{BB}	Month
0.1	May, June
0.3	July
0.4	August, September
0.9	October
1.0	November, December

SFR = daily average Libby Brook streamflow rates set forth below, expressed in csm (cubic feet per second rate of flow per square mile of watershed, averaged over a 24-hour period)

Streamflow Rate (SFR)	Month
0.5 csm	November through June, inclusive;
0.4 csm	July
0.25 csm	August, September
0.4 csm	October

F_G = Flow available for groundwater withdrawal from PW-1, in cfs, averaged over 24 hours

For any month of the year,

$$F_G = (Q_{LB} \times C_{BB}) - (A_{LB} \times SFR \times C_{BB}) - SBR_{BB},$$

where the variables SFR and SBR_{BB} are specific to each month in question and selected from the tables above

The time of day and output flow rate shall be recorded at the time each pump is started or shut off. A record shall also be made each time the pump operation is checked. If the output flow rate is adjusted, the time and adjusted output flow rate

shall be recorded. The total amount of operating time and the estimated cumulative water withdrawal of each pump shall be determined and recorded each day from these records.

(3) **Pond Withdrawal.** Pond levels shall not be reduced greater than 2 feet more than natural decreases of pond level. Pond levels shall be recorded with appropriate fixed gauges no less frequently than once per week beginning June 1st in the year 2000 and May 15th thereafter through periods of pond water withdrawal. Estimates of pond evaporation losses shall be developed through measurements of standard pan evaporation as corrected by precipitation measurements. Based upon the data available to estimate natural summer pond fluctuations in Maine, it is assumed that pond levels will decrease by 2 feet naturally over a summer. Therefore, direct water withdrawal from a pond shall cease when pond level has decreased 4 feet from the May 15th level.

The date, time of day and output flow rate shall be recorded at the time each pump is started or shut off. A record shall also be made each time the pump operation is checked. If the output flow rate is adjusted, the date, time and adjusted output flow rate shall be recorded. The total amount of operating time and the estimated cumulative water withdrawal of each pump shall be determined and recorded each day from these records.

(4) **Pollution Prevention; Environmental Quality.**_____Surface water and groundwater shall be protected from accidental discharges of petroleum products. Fuel tanks shall have secondary containment structures capable of holding 100% of the full fuel tank capacity. Any fuel stored at the pump site shall be inside the containment structure. Refueling of tanks should be done away from the edge of the water body and within the containment structure, if possible, otherwise automatic shutoff valves should be installed on all refueling nozzles. A spill clean-up kit shall be kept at each surface water pump site where petroleum-fueled pumps are to be operated. The kit shall contain an appropriate length of boom to extend across the stream or enclose at least 100 lineal feet of pond shoreline. The kit shall also contain a large quantity of absorbent pads. The toll-free phone number (800-482-0777) of the Maine DEP oil spill reporting system shall be kept in the spill kit and at NEBCO's main office. Employees responsible for maintaining and refueling the pumps or associated generators shall be trained at least annually in immediate spill response techniques.

Pumps generators, fuel tanks and vehicles shall be located on relatively level ground, no closer than 10 feet from the edge of a pond or stream and no activity shall take place in the stream or pond except placement of intake lines and appropriate water level and other essential data recording devices.

Surface water intake lines must be placed so that natural vegetation on banks and bottoms of streams or ponds are left undisturbed and pump operation will not scour the bottom of streams or ponds.

Creation of dams that would be an impediment to stream passage is prohibited.

Excavation of pools to increase stream or pond depths is prohibited.

(5) **Inspection and Records.** Pumps, generators, fuel tanks, secondary containment vessels, and intake lines shall be inspected daily during the period of operation or fuel storage at the site, for proper operation and compliance with standards of this Ordinance.

Pond level gauges, evaporation pans, stream gauges, and precipitation gauges shall read no less frequently then weekly from May 1 through October 30 of each year.

Records required to be kept by this ordinance shall be maintained in an orderly manner, summarized and reported to the Tribe annually by March 30 of each year, and kept in permanent storage for a period of 5 years at the Passamaquoddy Tribe's Environmental Department offices.

B. Notification Procedure. In each calendar year, in order to have authorization under this Ordinance, NEBCO must fill out and file a written notice using a form similar to Appendix B to this Ordinance. Filing shall be with the Environmental Department of each of the two tribal Reservations. The notice must be accompanied by a USGS topographic map with each pump site clearly marked. Each notice must identify the type and location of water level and stream flow monitoring equipment to be used to control the volume and timing of water withdrawals, and the person(s) who will be responsible for determining permissible withdrawals under this Ordinance. Each notice must include a statement signed by the person responsible for pumping operations stating that all standards and requirements of this Ordinance will be met in connection with all water withdrawals.

In addition to filing with the Tribe, a copy of the Notice shall be provided to the U.S. Dept. of Interior, Bureau of Indian Affairs.

Copies of the Notice shall be made available upon request to any interested tribal member at the Tribal Offices at each Reservation. As a courtesy and at the discretion of NEBCO or the Tribe, a copy of the Notice may be provided to any other interested person or entity, including without limitation neighboring landowners, the U.S. Fish & Wildlife Service, the U.S. Geological Service, , other

interested federal or state agencies, and persons or groups interested in natural resource conservation efforts.

Authorization is complete upon delivery of the notification to the Tribe, *provided that* any person may file written objections or comments at any time based upon potential harm to any natural resources or the environment. Any such comments shall be transmitted to the person who signed the Notification. Based upon any such comment, or on its own motion, the Joint Tribal Council reserves the right to direct that water withdrawal be further restricted, made subject to further conditions, or ceased entirely, at any pump site and/or for any period of time, if it is concluded that any activity authorized by this Ordinance

- could lead to significant adverse environmental impacts, including cumulative impacts, or
- could adversely impact a resource of special concern.

Such a restriction or cessation may be ordered by resolution of the Council without amendment of this Ordinance.

5. **EXEMPTIONS.** This Ordinance does not apply to:

   A. the withdrawal of not more than 10 gallons of water per person from the surface waters of the T. 19 tribal trust lands for domestic use;

   B. the emergency withdrawal of water for firefighting use; or

   C. the withdrawal of groundwater for domestic use from any well on the T. 19 tribal trust lands.

6. **ENFORCEMENT.**

   A. **Violations**. A violation of this Ordinance occurs when any person performs, or causes to be performed, any of the following acts:

   (1.) Water is withdrawn from surface waters or groundwater within the boundaries of the Tribe's T. 19 trust lands in a manner or for a use that is inconsistent with the terms of this Ordinance;

   (2.) An activity that is permitted by this Ordinance is undertaken before the required notification is made;

   (3.) An activity that is properly authorized by this Ordinance is undertaken but the standards of this Ordinance are not complied

with; or

(4.) The terms of a court order or administrative consent agreement entered pursuant to this Ordinance are not complied with.

As property manager, NEBCO is responsible for the actions of its employees and agents, who are presumed to be acting under NEBCO's control. In appropriate cases, NEBCO and individuals who are not NEBCO's employee or agent may each be held responsible for a violation. Each day that a violation occurs or continues is a separate offense.

B. Enforcement powers. The Tribal Game Wardens and the tribal environmental staff are tribal enforcement officials for purposes of this Ordinance, and shall coordinate their resources and efforts to provide for the enforcement of this Tribal Ordinance. Between them, they shall maintain a frequent presence at the T. 19 tribal trust lands during the relevant agricultural seasons. The Tribal Game Wardens shall have principal law enforcement authority to enforce this Tribal Ordinance.

Whenever it appears to a tribal enforcement official, after investigation, that there is or has been a violation of this Ordinance, the enforcement official may initiate one or more of the following enforcement actions:

(1) Resolving the violation through an administrative consent agreement pursuant to subsection D, signed by the violator and approved by the Chief Warden; or

(2) Acting through a Tribal Game Warden, commencing a civil or criminal prosecution by delivery of a summons to the violator.

The Passamaquoddy Tribal Court has jurisdiction to hear and decide any civil violation of this Ordinance, and any criminal charge of a violation of this Ordinance made against NEBCO or any Passamaquoddy or Penobscot tribal member. A charge of a criminal violation by an individual who is not a Passamaquoddy or Penobscot tribal member must be brought in the state courts.

C. Notice of Violation. Before initiating any enforcement action pursuant to subsection B(1) above, the tribal enforcement officer shall give notice of violation to the Manager or Assistant Manager of Northeastern Blueberry Company. The notice of violation may be verbal or written, but must describe the alleged violation or violations, to the extent then known; identify the Ordinance provision alleged to have been violated; identify the NEBCO employee(s) or other person(s) believed to have knowledge of and/or to have caused or permitted the

violation, and provide time periods for any necessary corrective action and to respond to the notice. For violations the tribal enforcement official finds to be minor, the notice may state that further enforcement action will not be pursued if compliance is achieved within the time period specified in the notice or under other appropriate circumstances.

D. Administrative consent agreements. Following a notice of violation pursuant to subsection C and after receipt of any response to that notice or expiration of the time period specified in the notice for a response, in situations determined by a Tribal Game Warden to be appropriate for further enforcement action, the Warden may send a proposed administrative consent agreement to the Manager of NEBCO, for violations alleged to have been NEBCO's responsibility, or, for violations alleged to have been caused by a person not employed by NEBCO, to the alleged violator or violators.

A. Any proposed administrative consent agreement sent to an alleged violator must be accompanied by a written statement, explaining that the administrative consent agreement process is a voluntary mechanism for resolving enforcement matters without the need for litigation, and an explanation of the department's procedures for handling administrative consent agreements. The correspondence must also identify the factors considered by the Tribal Game Warden in determining any proposed civil penalty, specify a reasonable time period for the alleged violator to respond to the proposed administrative consent agreement and offer the opportunity for a meeting with a tribal enforcement official to discuss the proposed agreement.

B. After a proposed administrative consent agreement has been sent to the alleged violator, the Tribal Game Warden may revise the agreement if further circumstances become known to the Warden, including information provided by the alleged violator, that justify a revision.

C. When the Tribal Game Warden and the alleged violator can not agree to the terms of a consent agreement, the Tribal Game Warden may elect to bring an enforcement action for penalties or other relief under subsection B(2).

E. <u>Penalties</u>. In the absence of a finding that a violation was willful and intentional, or resulted in environmental damage, a violation shall be a civil violation, punishable as follows:

(1.) For a first violation, a civil penalty of up to $1,000 for an individual

who was not, at the time of the violation, an agent or employee of NEBCO, and $5,000 for NEBCO or any other entity;

(2.) For a second or subsequent violation involving the same person, a civil penalty of up to $5,000, or $10,000 for NEBCO or any other entity.

In setting an appropriate penalty, the following factors shall be considered: (i) whether or not the violation produced a definable risk of significant environmental harm, and (ii) whether the violation involved conditions or practices that were less protective of natural resources than NEBCO's historical practices.

A charge and finding that a violation was willful and intentional, or resulted in significant environmental damage, is required to establish a criminal violation of this Ordinance, which shall be punishable by a fine of up to $2,000 and imprisonment for a period of up to 30 days, or both, for an individual, whether or not an employee of NEBCO, and by a fine of up to $5,000 for NEBCO or any other entity.

In addition, in either a civil or criminal proceeding against NEBCO on a violation, injunctive orders may be issued against NEBCO to prevent or require particular methods of operation, or to require restoration or mitigation of documented harm to natural resources, including habitat.

Any fines or money penalties paid for a violation of this Ordinance shall be delivered to the Passamaquoddy Joint Tribal Council.

7. **AMENDMENT.** This Ordinance may be amended from time to time by the Joint Tribal Council in accordance with normal procedures for the amendment of tribal law.

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CERTIFICATION

I, Mary J. Lola, Clerk of the Joint Tribal Council of the Passamaquoddy Tribe, do hereby certify that this is a true copy of an Ordinance duly amended by the Passamaquoddy Tribe at a meeting of its Joint Tribal Council held on April 12, 2006 at the Pleasant Point Passamaquoddy Reservation.

ATTEST:

Mary J. Lola, Clerk

4/28/06

Date