

Water Delivery and Operations Policy

[supersedes January 26, 2016]

POLICY GUIDELINES**1.0 IRRIGATION OF PROPERLY ASSESSED IRRIGATION LAND**

Water supplied for irrigation may only be delivered to lands that are properly assessed for irrigation purposes. The classification of such lands will be as "irrigation acres" (commonly referred to as *first water*) or subject to an "Annual Agreement" or "Terminable Agreement" (commonly referred to as *second water*).

The *Irrigation Districts Act*, RSA 2000, c.I-11, requires that lands added to the assessment roll meet soil classification standards. The District also evaluates all applications for increases in irrigation acres pursuant to its irrigation acres expansion bylaw before any acres are added. All irrigators are responsible to ensure that their irrigation systems and practices are in compliance with the classification of their lands, the assessment roll and any approval or authorization issued by the District. No irrigation of lands is permitted without proper authorization. Irrigators are to advise the District in advance of any changes in irrigation practice or on-farm irrigation systems in order to ensure that their lands remain properly classified. The District may, from time to time, audit irrigation systems for compliance with the assessment roll and any approval or authorization issued by the District.

A user who diverts and/or uses water on lands that are not included on the assessment roll or are not subject to a current agreement will be considered to have taken water without proper authorization and could be dealt with under any applicable bylaw or under section 188 of the *Irrigation Districts Act*.

2.0 HOUSEHOLD AND RURAL WATER USE REQUIREMENTS**2.1 Household Water Use**

Household Purposes Agreements are limited to one (1) acre foot (1,250 m³) of water per year for the purposes of human consumption (with water treatment being the responsibility of the consumer), sanitation, fire prevention and watering animals, gardens, lawns, and trees. The District is not obligated to supply water in a continuous manner for household purposes.

An owner, or lessee with consent of the owner, of lands that are not classified with irrigation acres may receive water for household purposes if they enter into a Household Purposes Agreement with the District; however, if use of water will exceed 1 acre foot, a Rural Water Use – Country Residential Agreement must be entered into with the District instead. Such agreements are to be entered in advance of any diversions or household water use.

Lands that are classified with irrigation acres are entitled to receive water for household purposes without a Household Purposes Agreement; however, if use of water will exceed 1 acre foot, (which is typical of most farmyards), a Rural Water Use – Farmyard Agreement must be entered into with the District by the owner, or the lessee with consent of the owner.

2.2 Rural Water Use

Landowners or lessees of parcels which have irrigation acres recorded on the assessment roll or are included in an alternate parcel irrigation agreement, may apply to the District for a Rural Water Use Agreement if needing water for uses other than household or irrigation purposes exceeding 1 acre foot. Rural Water Use

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Agreements allow for the delivery of up to twenty (20) acre-feet (25,000 m³) of water per year. The volume of water in a Rural Water Use Agreement is determined by the District in the application and approval process. The District is not obligated to supply water in a continuous manner for rural water use purposes.

2.3 Other Purposes Agreements

Any person may apply to the District for an Other Purposes Agreement for municipal, agricultural, commercial, industrial, habitat enhancement or recreation purposes as authorized by the District's License to Divert and Use Water. The volume of water in an Other Purposes Agreement is determined by the District in the application and approval process. The District is not obligated to supply water in a continuous manner for other purposes.

2.4 On-Farm Water Storage

Water users are responsible to ensure that their "storage reservoirs" are of sufficient size to store all off-season water supplies that they may require (a minimum of 7 months is generally required) plus any water a user may require during any time that the District is unable to deliver water for any reason.

3.0 WATER MANAGEMENT

3.1 Control of Water

All irrigation works are controlled by staff of the District. Individual irrigators or other users are not authorized to operate or adjust any of the irrigation works of the District. Water delivered to irrigators must be taken as ordered. Irrigators are required to manage their irrigation operations in a manner that will provide for the continuous use of water supplies from initial start-up to termination.

3.2 Delivery of Water

All irrigators and/or users shall advise appropriate staff of the District (usually their designated Water Operator), at least **48 HOURS IN ADVANCE**, of their requirements for water. Such notice shall include the quantity of water requested, as well as the location of the delivery. This notice is essential for the District to properly control the water supplies within the irrigation system, and to ensure that it is beneficially used. Irrigators that choose to not communicate their irrigation needs prior to taking water shall be subject to a penalty equivalent to 48 hours of usage charged against the affected parcel.

Irrigators are asked not to request water deliveries to be made on Sundays.

Water will be delivered as soon as is reasonably possible, in most cases the next day. Deliveries will only be made on the same day where there is equivalent water being shut-off or is otherwise available. Where constraints to water delivery exist, irrigators will be advised of the length of time they may have to wait prior to the delivery of water.

Notwithstanding the above, all irrigators and/or users who receive water for irrigation acres from a point of delivery designated as coming from a drain that relies, at least partially, on spill water (ie. irrigation return flow) from upstream irrigators and the canal system, may not receive water within the normal 48 hour period.

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Water deliveries to these lands will be made as soon as possible and the District may choose to augment flows in drains at times when there are no shortages in water supply.

All irrigators and/or users who receive water for irrigation acres from a point of delivery designated as being from a lake or reservoir, are entirely responsible for the installation and operation of the means of accessing the water for their irrigation and/or agreement purposes and to adapt to all fluctuations in the water levels in the lake or reservoir.

3.3 Shut-Off of Water

All irrigators and/or users shall advise their Water Operator, at least **24 HOURS IN ADVANCE**, of their intention to stop delivery of water. This notice is essential in order for the District to properly control water supplies within the irrigation system, and to provide for the reallocation of such water for other uses and/or to reduce delivery requirements within the irrigation system.

Water supplied to irrigators is to be beneficially used at all times. When emergency situations arise preventing the proper issuance to a Water Operator of a notice of termination of water delivery, irrigators and/or users are required to notify their Water Operator as soon as possible. Depending upon the nature of the emergency, water delivery may be terminated immediately and until the emergency has been rectified.

3.4 Maximum Amount of Water/Allocation of Available Water Per Irrigation Acre

(a) Maximum Amount of Water

The District has, by bylaw, established a maximum amount of water per irrigation season that may be delivered by the District to each acre entitled to receive water for irrigation purposes.

(b) Allocation of Available Water

The District may at any time approve a bylaw to change the maximum amount of water per irrigation season that may be delivered by the District to each acre entitled to receive water for irrigation purposes.

In the event the District reduces the maximum amount of water per irrigation season that may be delivered by the District for irrigation purposes, there will be no reduction, abatement or cancellation of any rates, fees or charges assessed on any acres receiving water for irrigation purposes.

Subject to the express provisions of any Drought Plan or other system of reduction or rationing approved by the District, irrigators and other users may be permitted to share or otherwise reallocate water delivered by the District,

Except as authorized in any Drought Plan or other system of reduction or rationing as expressly approved by the District, irrigators and other users will not be permitted to pool and/or transfer any of the water provided to them.

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3.5 Calculation of Water Delivery Volumes

Water deliveries are calculated as being in effect from the hour the water is delivered to the point of delivery by the Water Operator until notice of shut-off is properly received and the delivery is terminated, whichever is later. (For example, if an irrigator ceases to divert water provided to him without providing proper advance notice, the water delivery will continue to be counted as being delivered to the parcel until the notice has been received and all required upstream adjustments have been made terminating the flow to the irrigator.)

The District has established standard flow rates that will be used in the calculation of water delivery volumes for sprinkler irrigation as follows:

- ¼ section low pressure pivot.....1000 US gpm
- ¼ section high pressure pivot1150 US gpm
- ¼ section pivot with corner arm1350 US gpm
- ¼ mile of side-roll wheel moves400 US gpm
- ½ mile of side-roll wheel moves800 US gpm
- [Note: 450 US gpm equals approximately 1 cfs.]
- [Note: Non-standard size pivot systems and systems where water spills past a pump site will have individual flow rates established.]

The District has established "rule-of-thumb" maximum delivery rates for surface (flood) irrigation as follows:

- 160 acres6 cfs
- 80 acres 4 cfs
- 40 acres 3 cfs

Flow rates for surface irrigation will be the actual flow rate of the water delivered to the farm gate. Irrigators are advised to verify their actual flow rate at the time of delivery with their Water Operator.

Examples of Flow Calculations:

Example # 1: 120 acre surface irrigation

Maximum water per each irrigation acre set at 24" [2 acre-feet per acre or 240 acre-feet]

Delivery rate of 6 cfs [1 cfs for 24 hours equals 2 acre-feet]

Daily delivery volume at 6 cfs is 12 acre-feet per day

The maximum delivery of water to this parcel at 6 cfs would be 20 days.

Example # 2 140 acre irrigated with ½ mile of side-roll wheel moves

Maximum water per each irrigation acre set at 24" [2 acre-feet per acre or 280 acre-feet]

Delivery rate of 800 US gpm [800 ÷ 450 = 1.78 cfs]

Daily delivery volume at 1.78 cfs is 3.56 acre-feet per day

The maximum delivery of water to this parcel at 800 US gpm would be 79 days.

Note: If 200 US gpm runs past the pump, the delivery rate would be calculated at 1000 US gpm or 2.22 cfs being 4.44 acre-feet per day, with the maximum delivery of water being limited to 63 days.

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3.6 Water Management Decisions During Periods of Water Shortage

The Board has passed bylaws to:

- (a) Govern the maximum amount of water that may be delivered for irrigation purposes and for any other purpose; and
- (b) Regulate the delivery and distribution of water to users, to establish the terms and conditions that apply to that delivery and the circumstances under which the delivery of water to a user may be reduced or stopped.

Furthermore, the Board may, as it deems appropriate, pass other bylaws, resolutions or adopt a Drought Plan or other system of reduction or rationing to better manage water during periods of shortage.

3.7 Point of Delivery

All parcels of land have an assigned "point of delivery" from the irrigation works of the District. Additional points of delivery or alternate locations for points of delivery may only be installed with the written authorization of the District. In any case, the obligation of the District is to maintain the irrigation system to deliver to the assigned "point of delivery". During times of water shortages, the District may choose to provide water deliveries to a single location on a parcel of land.

Where additional or alternate locations of points of delivery are made at the express request of an irrigator and for the convenience of irrigator's operations, then all costs of such change shall be paid for by the irrigator. Where additional or alternate locations of points of delivery are to the advantage of the District in the management and operation of the irrigation system, the District may agree to pay a portion or all of the costs for such installations. The District reserves the right to perform such installations to its standards and to limit the number of points of delivery to any parcel of land.

4.0 UNAUTHORIZED AND/OR PROHIBITED PRACTICES**4.1 General**

- (a) Irrigators and users are prohibited from placing within the irrigation works anything that may interfere with access to the irrigation works or with the delivery of water.
- (b) Unless it is an emergency situation, water is not to be returned directly into the supply or drainage systems for the operational convenience of irrigators (for example, at night or on weekends.) Irrigators who terminate water use on a parcel without proper notice, may not have water delivered to that same parcel for a minimum of 4 days, unless such termination was due to an emergency.
- (c) All persons using water from the District's works are to make beneficial use of the water provided to them and to prevent the water from causing injury to any person or damage to any property.
- (d) Irrigators are required to operate their irrigation and/or water diversion systems in a manner that will prevent excessive spillage of water from their irrigation operations. Excessive spillage is defined by the District as any spillage in excess of 50% of delivered flow rate, spilled instantaneously, and/or

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35% of total water being delivered to a parcel of land being spilled. For example, if 3 cfs is being delivered, any spill from on-farm systems or return to the irrigation network of more than 1.5 cfs instantaneous and/or 1.0 cfs average could be considered excessive spillage.)

4.2 Damage to the Irrigation Works

All irrigators of the District share in the costs of annual operation and maintenance. In order to provide water in a timely and efficient manner, all irrigators are to ensure that the irrigation works of the District are not damaged as a result of their farming and/or irrigation operations.

The irrigation of canal and drain banks is prohibited. Irrigators are responsible to ensure that any cattle that may occupy their lands and may be adjacent to any of the irrigation works of the District, are prevented from causing any damage to the irrigation system. Farming operations must take into account the presence of canal banks, and as such, the irrigation works of the District are not to be cultivated or farmed in any manner that may cause them harm. The use of portions of the irrigation works for any of these purposes may only take place upon receipt of a written agreement from the District.

The repair of trampled or otherwise damaged canal banks and repair to canal armour or liners is expensive. The District may at any time fence canals that are lined, armoured or otherwise rehabilitated, and recover repair costs from adjacent landowners where their operations have caused damage to the irrigation works.

4.3 Pollution of Irrigation Works

Irrigators are to ensure that their operations do not cause any pollutants or contaminants to enter into the irrigation works. The same canal and drainage system that is used to convey water for irrigation purposes is also used to provide water for household purposes for human and livestock consumption. All irrigators need to ensure that their livestock operations are designed in a manner to prevent cattle feces, effluent, or runoff from cattle impoundments from entering the canal system as either surface or groundwater return flows.

Irrigators are required to ensure that "garbage" is not deposited on their lands in a manner that will cause it to enter the irrigation system as a result of natural occurrences, for example, wind and rain, etc. Irrigators are requested to notify the District if they observe any pollution of the District's irrigation works. Such cooperative approach will help to ensure the safety of those who make use of the water from the irrigation system.

4.4 Soil Drifting

All irrigators have the responsibility to prevent soil erosion on their lands, and further to prevent any drifting of soil from being deposited within the irrigation works. The costs incurred by the District to control soil drifting are recoverable by the District against the offending landowners.

5.0 ON-FARM IRRIGATION WORKS

All irrigators are responsible for the proper operation and maintenance of their on-farm irrigation works. As irrigation in the District is accomplished both by surface [gravity or flood] methods and by mechanized sprinkler irrigation, irrigators must ensure that their on-farm irrigation works are in proper and operable condition.

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In the case of surface irrigation, head ditches, structures, border dikes, contour ditches, etc. must be kept clean and free from weeds and other obstructions and are required to be designed and constructed to make proper use of water supplies so provided. All irrigators are responsible to ensure that designed for surface irrigation systems comply with the District's ability to supply water for such purposes.

In the case of mechanized sprinkler irrigation, pumping ponds, dugouts, standpipes, or pump wells must be so designed as to make efficient and proper use of water supplies. Pumping ponds and dugouts are to be designed and constructed to provide flexibility in sprinkler operation, and to prevent spillage of delivered water supplies from passing downstream. Standpipes or pump wells may be installed for mechanized sprinkler irrigation systems, but only with the authorization of the District. Irrigators who make use of such installations may be required to participate in the provision of downstream drainage facilities prior to such authorization. Pumping installations directly in the flow of a canal are prohibited.

6.0 RIGHT TO ACCESS FOR OPERATION AND MAINTENANCE

The District requires unimpeded access to its irrigation works at all times for the purposes of monitoring water supplies and performing the required operation and maintenance of the irrigation system. Irrigators are not to install any on-farm irrigation works, fencing, or other such improvements that could prevent or delay access to the irrigation works, unless such crossings or installations are authorized in writing by the District.

The canal banks of the irrigation works are not designed to be used as access for farm implements. Any such use by irrigators is at their own risk. Should such use result in damage or pollution to the irrigation works, the District reserves the right to collect the costs to repair the same from the respective irrigator.

7.0 WEED CONTROL

All irrigators are encouraged to assist the District in the control of weeds along or within its canal system. The District operates an annual program of weed control along its canal banks, and aquatic weed growth within the canals. Control of weeds on adjacent lands assists the District during the season in preventing weeds within the canal.

8.0 QUALITY OF WATER

Irrigators and/or users are required to accept the water delivered to them in the condition in which it may be found at the point of delivery. They are required to provide their own screening, filtering or treatment as required at their own cost.

The District may provide some initial screening on some pipelines or may undertake weed and/or aquatic vegetation control in some canals if there is a perceived benefit to a number of irrigators and/or users or to protect the irrigation works of the District. In no case does the District accept any responsibility for final screening of delivered water.

9.0 RUNOFF

The District may not be held responsible for problems that may, in any way, be associated with runoff of excess rain or snow melt from lands adjacent to the irrigation works. While designs for the canal system

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include an element for storm flows and heavy rainfall events, the irrigation works are not provided as a means of controlling runoff. In addition, irrigators may only return flows from their irrigation systems into the canal or drainage system where approved and provided for by the District.

10.0 COMPLAINTS

In the event that an irrigator is unable to resolve an issue or complaint by communicating with their Water Operator, they are encouraged to contact the Division Superintendent in their area.

In most cases problems will be able to be dealt with at this level. Irrigators may also address any concerns either in writing to, or attending in person at, the District main office, and may, if they cannot receive satisfaction to their concerns in any other manner, request an appointment to meet with the Board of Directors.

11.0 ADDITIONAL INFORMATION

Additional information regarding the specific applications of any of these matters may be obtained by contacting the closest District office, or by contacting the main office of the Eastern Irrigation District.