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**SECTION H.**  
**DROUGHT CONTINGENCY PLAN, EMERGENCY RESPONSE PLAN AND WATER  
CONSERVATION PLAN**

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**1. The Plan**

In order to conserve the available water supply and to:  
Protect the integrity of water supply facilities, with particular regard for domestic use and sanitation.  
Protect and preserve public health, welfare, and safety.  
Minimize the adverse impacts of water supply shortage or other water supply emergency conditions.  
North Collin Water Supply hereby adopts the following regulations and restrictions on the delivery and consumption of water.

Water consumption above the limits set in accordance with this Drought Contingency Plan (the Plan) are considered to be excessive. Continuation of such usage during times of water shortage or other emergency water supply condition are deemed to constitute a waste of water which subjects the offender(s) to penalties as defined in Section 10 of the Plan.

North Collin Water Supply obtains 99% of its water from North Texas Municipal Water District (NTMWD). NTMWD is responsible for monitoring its supplies (primarily Lake Lavon) and notifying its members and clients when a NTMWD drought trigger has been met. North Collin Water Supply will follow NTMWD's lead in entering and leaving the different drought stages. Note that if the NTMWD plan calls for the rationing of water to its members and clients during a drought, NTMWD member/clients will not be able to draw more water each day than the amount that NTMWD has allowed them.

The Plan sets forth the means to declare a water shortage event and the actions to be taken during a shortage event. Since the ability of North Collin Water Supply to "police" its customers during a water shortage event is virtually non-existent, and since NTMWD may only deliver a fixed amount of water each day during a drought, the Plan must provide a method whereby the users may govern their own actions and water usage so that the amount actually used is less than that delivered by NTMWD each day. The Plan attempts to achieve this goal by the assessment of 'excess water penalty fees' upon customers who exceed their allowed usage amounts during the water shortage event. It is felt that the advance knowledge of the 'excess' fees to be imposed, combined with the severity of those 'excess' fees, will provide sufficient motivation to users to limit their usage during the shortage event.

The calculation of the penalty fees is designed to encourage all customers to conserve water. But users who normally use little water on average would be unfairly penalized if asked to reduce their already low usage even further during later stages of the Drought Plan. Therefore, the Plan allows the Board to designate classes of low usage customers and cap the percentage of water they will be asked to conserve.

If North Collin Water Supply and its customers are successful in reducing their daily water usage to the levels mandated by NTMWD, North Collin Water Supply will not receive

enough revenue to continue operating the system in an efficient and safe manner. Therefore, during a drought stage, North Collin Water Supply may increase the base water usage rates by an amount sufficient to maintain normal revenue levels.

**2. Public Input**

Opportunity for the public to provide input into the preparation of the Plan was provided by the North Collin Water Supply by means of posting in the agenda of the Board of Directors meeting on May 14, 2009.

**3. Annual Notice**

The North Collin Water Supply will annually provide the public with information about the Plan, including information about the conditions under which each stage of the Plan is to be initiated or terminated and the drought response measures to be implemented in each stage. This information will be provided by means of bill inserts, direct mail, and/or local newspapers.

**4. Service Area**

The service area of the North Collin Water Supply is located within the regional water planning area C and North Collin Water Supply has provided a copy of this Plan to the Region C Water Planning Group.

**5. Plan Manager**

The System Manager, or his/her designee, is hereby authorized and directed to implement the applicable provisions of this Plan upon determination that such implementation is necessary to protect the public health, safety, and welfare. The System Manager, or his/her designee, shall have the authority to initiate or terminate drought or other water supply emergency response measures as described in this Plan.

Only the North Collin Water Supply Board of Directors shall have the authority to modify the Plan. The Plan shall be reviewed annually and appropriate changes made thereto.

**6. Customer Categories, Allowed Usage, and Drought Rate Schedules**

The provisions of this Plan shall apply to all persons, customers, and property utilizing water provided by the North Collin Water Supply. The terms “person” and “customer” as used in the Plan includes individuals, corporations, partnerships, associations, and all other legal entities.

The System Manager shall review the North Collin Water Supply customers and assign them into one of four types of customer drought rate categories: Drought Rate 1, Drought Rate 2, Drought Rate 3, or Drought Rate 4. The Board of Directors shall review and approve the

assignments. A customer may, upon application as defined in Section 11- Variances, request assignment to the Exception category defined for each of the four categories. The definition of each category's members is found in Section 7- Definitions. Each customer shall be notified of their classification during the annual notification. Customers may also contact the North Collin Water Supply business office to obtain their classification category.

In the event that rationing becomes necessary, each category will be assigned an allowed usage amount. This amount shall be calculated from historical usage data for that category of customer, and shall be the average amount of water used by that type of customer. There shall be a winter time amount, and a summer time amount. When NTMWD declares a drought stage and sets the target percentages to reduce consumption (rationing is not necessary), North Collin Water Supply will calculate an allowed usage amount for each customer, based on their individual historical usage. Using the target percentage, North Collin Water Supply will reduce the allowed usage amount by the corresponding percentage and the resulting amount will be the allowed usage for that drought stage for that customer.

The System Manager shall define (and the Board of Directors approve) a water rate and penalty fee schedule for each of the eight categories under each of the Drought Stages and the two seasons. Upon the declaration of a drought stage as defined in Section 8- Drought Stage Triggers, water rates and penalty fees applicable to each category and Stage will become effective upon the next billing cycle and will remain in effect for each ensuing billing cycle covered by the drought stage. Each customer shall be notified of the drought rate and penalty fee schedule during the annual notification. Customers may also contact the North Collin Water Supply business office to obtain a copy of the drought rate and penalty fee schedule.

The System Manager shall define (and the Board of Directors approve) a schedule defining the classes of low usage customers and the conservation goal cap assigned to each class for each stage of the Drought Plan.

## 7. Definitions

For the purposes of this Plan, the following definitions shall apply:

Aesthetic water use: water use for ornamental or decorative purposes such as fountains, reflecting pools, and water gardens.

Commercial and institutional water use: water use which is integral to the operations of commercial and non-profit establishments and governmental entities such as retail establishments, hotels and motels, restaurants, and office buildings. Does not include commercial car wash facilities, unless the facility re-cycles used water.

Conservation: those practices, techniques, and technologies that reduce the consumption of water, reduce the loss or waste of water, improve the efficiency in the use of water or increase the recycling and reuse of water so that a supply is conserved and made available for future or alternative uses.

Customer: any person, company, or organization using water supplied by North Collin Water Supply.

Domestic water use: water use for personal needs or for household or sanitary purposes such as drinking, bathing, heating, cooking, sanitation, or for cleaning a residence, business, industry, or institution.

Drought Rate 1 Customers: Any residential customer.

Drought Rate 1 Exceptions: Any Rate 1 Customer who can show, in accordance with Section 11- Variances, why they require amounts of water above that allowed to Rate 1 Customers during a drought.

Drought Rate 2 Customers: Any livestock operation

Drought Rate 2 Exceptions: Any Rate 2 Customer who can show, in accordance with Section XI- Variances, why they require amounts of water above that allowed to Rate 2 Customers during a drought.

Drought Rate 3 Customers: Any commercial or institutional customer, where water is integral to their operation.

Drought Rate 3 Exceptions: Any Rate 3 Customer who can show in accordance with Section XI- Variances, why they require amounts of water above that allowed to Rate 3 Customers during a drought.

Drought Rate 4 Customers: All other customers

Drought Rate 4 Exceptions: Any Rate 4 Customer who can show, in accordance with Section XI-Variances, why they require amounts of water above that allowed to Rate 4 Customers during a drought.

Industrial water use: the use of water in processes designed to convert materials of lower value into forms having greater usability and value.

Landscape irrigation use: water used for the irrigation and maintenance of landscaped areas, whether publicly or privately owned, including residential and commercial lawns, gardens, golf courses, parks, and rights-of-way and medians.

Non-essential water use: water uses that are not essential nor required for the protection of public health, safety, and welfare, including:

- (a) irrigation of landscape areas, including parks, athletic fields, and golf courses, except otherwise provided under this Plan;
- (b) use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle;

- (c) use of water to wash down any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas;
- (d) use of water to wash down buildings or structures for purposes other than immediate fire protection;
- (a) flushing gutters or permitting water to run or accumulate in any gutter or street;
- (b) use of water to fill, refill, or add to any indoor or outdoor swimming pools or jacuzzi-type pools;
- (c) use of water in a fountain or pond for aesthetic or scenic purposes except where necessary to support aquatic life;
- (d) failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s); and
- (e) use of water from hydrants for construction purposes or any other purposes other than fire fighting.

Summer time: The months from May through October.

Winter time: The months from November through April.

## **8. Drought Stage Triggers**

The System Manager or his/her designee shall monitor the water supply and/demand conditions on a daily basis and shall determine when conditions warrant initiation or termination of each stage of the Plan, that is, when the specified “triggers” are reached.

The triggering criteria described below are based on the North Texas Municipal Water District’s Drought Contingency Plan (NTMWD Plan), since that agency supplies all the water used by North Collin Water Supply, and on the North Collin Water Supply system. Those criteria are based on a statistical analysis of the vulnerability of the water source (Lake Lavon) under a drought of record conditions, or based on known system capacity limits.

As the NTMWD Plan is revised, this Plan shall be revised accordingly. As the North Collin Water Supply system is upgraded, this Plan shall be revised accordingly.

### **Stage 1 Triggers -- MILD Water Shortage Conditions**

#### Requirements for initiation

Customers shall be requested to voluntarily conserve water and adhere to the recommended uses, as defined in Section 9 – Actions, when the NTMWD Plan MILD trigger is achieved.

#### Requirements for termination

The necessity for Stage 1 of the Plan ends when all of the Stage 1 triggering events have ceased to exist for a period of 3 consecutive days.

## **Stage 2 Triggers -- MODERATE Water Shortage Conditions**

### Requirements for initiation

Customers shall be requested to voluntarily conserve water and adhere to the recommended uses, as defined in Section 9 – Actions, when the NTMWD Plan MODERATE trigger is achieved.

### Requirements for termination

The necessity for Stage 2 of the Plan ends when all of the Stage 2 triggering events have ceased to exist for a period of 3 consecutive days. Upon termination of Stage 2, Stage 1 becomes operative.

## **Stage 3 Triggers -- SEVERE Water Shortage Conditions**

### Requirements for initiation

Customers shall be requested to voluntarily conserve water and adhere to the recommended uses, as defined in Section 9 – Actions, when the NTMWD Plan SEVERE trigger is achieved.

### Requirements for termination

The necessity for Stage 3 of the Plan ends when all of the Stage 3 triggering events have ceased to exist for a period of 3 consecutive days. Upon termination of Stage 3, Stage 2 becomes operative.

## **Stage 4 Triggers -- EMERGENCY Water Shortage Conditions**

### Requirements for initiation

Customers shall be requested to voluntarily conserve water and adhere to the recommended uses, as defined in Section 9 – Actions, when

1. The NTMWD Plan EMERGENCY trigger is achieved or
2. Major water line breaks, or pump or system failures occur, which cause unprecedented loss of capability to provide water service; **or**
2. Natural or man-made contamination of the water supply source(s).

### Requirements for termination

The necessity for Stage 4 of the Plan ends when all of the Stage 4 triggering events have ceased to exist for a period of 2 consecutive days.

## **9. Actions**

The System Manager, or his/her designee, shall monitor the water supply and/or demand conditions on a daily basis and, in accordance with the triggering criteria set forth in Section 8 of this Plan, shall determine that a mild, moderate, severe, or emergency water shortage condition exists and shall implement the following notification procedures:

## Notification

### Notification of the Public:

The System Manager or his/ her designee shall notify the public by one or more of the following means:

*Publication in a local newspaper of general circulation,  
Direct mail to each customer,  
Signs posted in public places.*

### Additional Notification:

The System Manager or his/her designee, shall notify directly, or cause to be notified directly, the following individuals and entities:

Fire Chiefs  
City and County Emergency Management Coordinators  
TCEQ  
Major water users

## Stage 1 Response -- MILD Water Shortage Conditions

Goal: Achieve the percent reduction set by NTMWD in daily water demand.

### Supply Management Measures:

North Collin Water Supply will reduce flushing of water mains.

### Recommended Customer Measures:

- (a) Do limit the irrigation of landscaped areas and irrigate landscapes only between the hours of midnight and 10:00 a.m. and 8:00 p.m. to midnight.
- (b) Do practice water conservation and minimize or discontinue water use for non-essential purposes.

## Stage 2 Response -- MODERATE Water Shortage Conditions

Goal: Achieve the percent reduction set by NTMWD in daily water demand.

### Supply Management Measures:

*North Collin Water Supply will discontinue flushing water lines.*

### Recommended Customers Measures:

- (a) Do limit irrigation of landscaped areas with hose-end sprinklers or automatic irrigation systems to the hours of 12:00 midnight until 10:00 a.m. and between 8:00 p.m. and 12:00 midnight. Irrigation of landscaped areas is may be done at anytime if it is by means of a hand-held hose, a faucet filled bucket or watering can of five (5) gallons or less, or drip irrigation system.

- (b) Do limit the use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle to the hours of 12:00 midnight and 10:00 a.m. and between 8:00 p.m. and 12:00 midnight. Such washing should be done with a hand-held bucket or a hand-held hose equipped with a positive shutoff nozzle for quick rises. Vehicle washing may be done at any time on the immediate premises of a commercial car wash or commercial service station. Further, such washing may be exempted from these regulations if the health, safety, and welfare of the public is contingent upon frequent vehicle cleansing, such as garbage trucks and vehicles used to transport food and perishables.
- (c) Do limit the use of water to fill, refill, or add to any indoor or outdoor swimming pools, wading pools, or jacuzzi-type pools to the hours of 12:00 midnight and 10:00 a.m. and between 8 p.m. and 12:00 midnight.
- (d) Do suspend the operation of any ornamental fountain or pond for aesthetic or scenic purposes except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system.
- (e) Use of water from hydrants should be limited to fire fighting, related activities, or other activities necessary to maintain public health, safety, and welfare, except that use of water from designated fire hydrants for construction purposes may be allowed under special permit from North Collin Water Supply.
- (f) All restaurants should limit the serving of water to patrons except upon request of the patron.
- (g) The following uses of water are defined as non-essential and should be suspended:
  1. wash down of any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas;
  2. use of water to wash down buildings or structures for purposes other than immediate fire protection;
  3. use of water for dust control;
  4. flushing gutters or permitting water to run or accumulate in any gutter or street; and
  5. failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s).

### **Stage 3 Response -- SEVERE Water Shortage Conditions**

Goal: Achieve the percent reduction set by NTMWD in daily water demand.

#### Supply Management Measures

North Collin Water Supply will discontinue all non-essential water use.

Recommended Customers Measures. All requirements of Stage 1 and 2 should remain in effect during Stage 3 with the following recommendations:

- (a) Do limit irrigation of landscaped areas to the hours of 6:00 a.m. and 10:00 a.m. and between 8:00 p.m. and 12:00 midnight and only by means of hand-held hoses, hand-held buckets, or drip irrigation only. The use of hose-end sprinklers or permanently installed automatic sprinkler systems should be suspended.



- (b) Do limit the use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle to the premises of a commercial car wash and commercial service stations.
- (c) Do suspend the filling, refilling, or adding of water to swimming pools, wading pools, and jacuzzi-type pools.
- (d) Do suspend the operation of any ornamental fountain or pond for aesthetic or scenic purposes except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system.
- (e) Applications for new, additional, expanded, or increased-in-size water service connections, meters, service lines, pipeline extensions, mains, or water service facilities of any kind must be approved by the Board of Directors. Time limits for approval of such applications are hereby suspended for such time as this drought response stage or a higher-numbered stage shall be in effect.
- (f) The use of water for construction purposes from designated fire hydrants under special permit is to be discontinued.

#### **Stage 4 Response -- EMERGENCY Water Shortage Conditions**

Goal: Achieve the percent reduction set by NTMWD in daily water supply.

Recommended Customer Measures. All requirements of Stage 1, 2, and 3 should remain in effect during Stage 4 with the following recommendations:

- (a) Do suspend all irrigation of landscaped areas.
- (b) Do suspend all use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle.

#### **10. Enforcement**

Enforcement of the curtailed water usage is effected by the assessment of 'excess water penalty fees' at the end of each billing period during the drought. The fees are calculated in accordance with the penalty fee schedules set for that category of customer and that type of Drought Stage.

The 'excess penalty' fees will be billed to the customer in accordance with North Collin Water Supply's normal billing methods and shall be treated in the same manner as a charge to the customer's bill during a non-drought period.

#### **11. Variances**

The System Manager, or his/her designee, may, in writing, grant temporary variance for existing water uses otherwise recommended under this Plan if it is determined that failure to grant such variance would cause an emergency condition adversely affecting the health or sanitation of the public or the person requesting such variance and if one or more of the following conditions are met:

- (a) Compliance with this Plan cannot be technically accomplished during the duration of the water supply shortage or other condition for which the Plan is in effect.
- (b) Alternative methods can be implemented which will achieve the same level of reduction in water use.

Persons requesting an exemption from the provisions of this Ordinance shall file a petition for variance with North Collin Water Supply within 5 days after the Plan or a particular drought response stage has been invoked. All petitions for variances shall be reviewed by the System Manager, or his/her designee, and shall include the following:

- (a) Name and address of the petitioner(s).
- (b) Purpose of water use.
- (c) Specific provision(s) of the Plan from which the petitioner is requesting relief.
- (d) Detailed statement as to how the specific provision of the Plan adversely affects the petitioner or what damage or harm will occur to the petitioner or others if petitioner complies with this Ordinance.
- (e) Description of the relief requested.
- (f) Period of time for which the variance is sought.
- (g) Alternative water use restrictions or other measures the petitioner is taking or proposes to take to meet the intent of this Plan and the compliance date.
- (h) Other pertinent information.

Variances granted by North Collin Water Supply shall be subject to the following conditions, unless waived or modified by the System Manager or his/her designee:

- (a) Variances granted shall include a timetable for compliance.
- (b) Variances granted shall expire when the Plan is no longer in effect, unless the petitioner has failed to meet specified requirements.

No variance shall be retroactive or otherwise justify any violation of this Plan occurring prior to the issuance of the variance.

Customers may file an application to alter their classification in one of the four base categories, supplying the same information and using the same procedure as given above. These applications may be taken in advance of a drought declaration and will remain in effect until:

- a) the customer requests their reassignment to the appropriate base category.
- b) the customer's type of usage changes significantly enough to warrant their reassignment by the System Manager .

Petitions for re-assignment must be approved by the Board of Directors.

## **12. Penalty Fee Calculation Overview**

Customers will be charged an excess penalty fee (per 1000 gallons) for water use exceeding their individual allowed usage amounts. At the May 14, 2009 Board meeting, the Board set the excess penalty fees as follows (using the base water rate of \$3.35 per 1000 gallons and a penalty multiplier

of 2 times the base rate, 3 times the base rate, and 4 times the base rate for Stages 2, 3, and 4 respectively):

	Stage 2 Penalty Fee Schedule	Stage 3 Penalty Fee Schedule	Stage 4 Penalty Fee Schedule
Excess Penalty Amount per 1000 gallons	\$7.70	\$10.05	\$13.40

Examples for Stage 2:

Excess Gallons	Calculation	Excess Penalty Fee
5,000	5 * \$7.70	\$38.50
15,000	15 * \$7.70	\$115.50
25,000	25 * \$7.70	\$192.50

Examples for Stage 3:

Excess Gallons	Calculation	Excess Penalty Fee
5,000	5 * \$10.05	\$50.25
15,000	15 * \$10.05	\$150.75
25,000	25 * \$10.05	\$251.25

Examples for Stage 4:

Excess Gallons	Calculation	Excess Penalty Fee
5,000	5 * \$13.40	\$67.00
15,000	15 * \$13.40	\$201.00
25,000	25 * \$13.40	\$335.00

Each customer's summer and winter time average use amounts are calculated from their year 2005 usage. The allowed amount per customer is their summer or winter average use, minus the savings goal percentage set by the Board for that Stage. At the May 11, 2006 Board meeting, the Board set the savings goal percentages as follows:

	Stage 2 Goal	Stage 3 Goal	Stage 4 Goal	Rationing Goal
NTMWD Goal for NCWSC	2%	5%	10%	Daily %
NCWSC Customer Goals				
Customer average < 5,001 gallons	2%	2%	2%	2%
Customer average > 5,000	2%	5%	10%	Daily %

gallons				
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Examples:

Customer Monthly Average	Stage 2 Allowed amount	Stage 3 Allowed amount	Stage 4 Allowed amount
3,300 gallons	3,234	3,234	3,234
7,600 gallons	7,448	7,220	6,840

### 13. Penalty Fee Calculation Detail

**Step 1** - Calculate the winter and summer averages for each meter, using the readings from the previous calendar year (meter readings are in 100's of gallons). Months with zero usage are not counted towards the average.

Example:

Nov '05	Dec '05	Jan '05	Feb '05	Mar '05	Apr '05	Winter Average
499	147	148	0	131	190	223
May '05	June '05	July '05	Aug '05	Sept '05	Oct '05	Summer Average
292	362	1189	1061	985	578	744.5

**Step 2** - Using the usage percentage goal set by the Board, calculate the allowed usage amount for each meter, measured from the meter's winter or summer average amount. Then round the allowed usage amount up to the next thousand. Note that an even thousands amount (i.e. 5000 gallons) rounds up to the same number (i.e. 5000 rounds up to 5000, while 5001 will round up to 6000).

Note that the goals set by the Board for low usage customers (customers whose average is less than 5,000 gallons per month) will override the goal set by NTMWD for each stage of the Drought Plan.

This table shows the NTMWD goal for NCWSC, and the NCWSC goals for low usage customers and all other customers.

	Stage 2 Goal	Stage 3 Goal	Stage 4 Goal	Rationing Goal
NTMWD Goal for NCWSC	2%	5%	10%	Daily %
NCWSC Customer Goals				

Customer average < 5,001 gallons	2%	2%	2%	2%
Customer average > 5,000 gallons	2%	5%	10%	Daily %

Example for customers whose average is greater than 5,000 gallons per month:

	Average Amount in gallons	Stage 2 Allowed Usage Amount (2%)	Stage 2 Rounded Allowed Usage Amount in 000's	Stage 3 Allowed Usage Amount (5%)	Stage 3 Rounded Allowed Usage Amount in 000's	Stage 4 Allowed Usage Amount (10%)	Stage 4 Rounded Allowed Usage Amount in 000's
Winter	22,300	21,854	22	20,761	21	19,723	20
Summer	74,450	72,961	73	69,313	70	65,847	66

**Step 3** - Convert the current month's water usage to gallons (meter readings are in 100's of gallons), and round down the usage amount to the next lowest 1000. Note that an even thousands amount (i.e. 5000 gallons) rounds down to the same number (i.e. 5000 rounds down to 5000, while 5999 will round down to 5000).

Example:

Meter reading amount in 00's	Usage in gallons	Rounded Usage Amount in 000's
54	5,400	5

**Step 4** – Calculate the Excess Usage amount, in thousands, by using the rounded numbers calculated in Steps 2 and 3. If the usage is less than the allowed amount, then there is no excess usage. If the usage is less than or equal to 1000 gallons, then there is no excess usage. Otherwise, the excess usage is the difference between the used amount and the allowed amount.

Examples:

Usage Amount in gallons	Rounded Usage Amount in 000's	Allowed Usage Amount in gallons	Rounded Allowed Usage Amount in 000's	Excess Usage Amount in gallons	Rounded Excess Usage Amount in 000's
34,500	34	21,854	22	12,646	12
34,500	34	72,150	73	0	0
954	0	4,853	5	0	0

**Step 5** – Calculate the Year to Date (YTD) Allowed Usage and YTD Credit. The YTD Allowed Usage is the sum of the previous month's YTD Credit and the current month's Allowed Usage. In January, the previous month's YTD Credit is set to zero. The YTD Credit is the calculated by subtracting the current month's Usage amount from the YTD Allowed Usage. Round the YTD Credit to the next lowest 1000.

Examples:

Previous Month's YTD Credit in gallons	Current Month Allowed Usage in gallons	Current Month YTD Allowed Usage in gallons	Current Month Usage in gallons	YTD Credit in gallons	Rounded YTD Credit amount in 000's
4,308	21,854	26,162	9,400	16,762	16
-5,471	10,715	5,244	6,200	-956	0
-7,949	5,276	-2,673	6,200	-8,873	8

**Step 6** – Calculate the excess penalty amount that will be used to calculate the excess penalty fee. If a customer has built up a positive YTD Credit, and it is greater than the current month's excess usage, then there will be no penalty fee this month. If a customer has built up a positive YTD Credit, but the current month's excess usage is greater than the YTD Credit, then there will be a penalty fee this month, but it will only be calculated for the excess usage over the YTD Credit amount. Otherwise, the penalty fee will be based on the full excess usage amount. First determine if there is a partial credit by comparing the YTD Credit amount and the Excess Usage amount. There is partial credit if the YTD Credit amount is less than the Excess Usage amount. There is no partial credit if the YTD Credit amount is greater than the Excess Usage amount. Then calculate the Excess Penalty amount using the following steps:

A – If the current month's YTD Credit is positive, then the Excess Penalty amount is zero

B – If the current month's YTD Credit is negative and there is no partial credit, then the Excess Penalty amount is the same as the Rounded Excess Usage amount

C – If the current month's YTD Credit is negative and there is partial credit, then the Excess Penalty amount is the same as the Rounded YTD Credit amount

Examples:

YTD Credit amount in gallons	Excess Usage amount in gallons	Partial Credit – Yes/No	Rounded Excess Usage amount in 000's	Rounded YTD Credit amount in 000's	Excess Penalty amount in 000's
16,762					0
-4,889	5,196	Yes	5	4	4
-10,956	5,562	No	5	10	5

**Step 7** – Finally, calculate the Excess Penalty Fee using the penalty fee schedule set for each of the Drought Stages.

If Excess Penalty Amount calculated in Step 6 is zero, then the Excess Penalty Fee is zero.

Otherwise, use the following table to calculate the Excess Penalty Fee.

	Stage 2 Penalty Fee Schedule	Stage 3 Penalty Fee Schedule	Stage 4 Penalty Fee Schedule
Excess Penalty	\$7.70	\$10.05	\$13.40

Amount per 1000 gallons			
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Examples for Stage 2:

Excess Penalty Amount in '000s	Calculation	Excess Penalty Fee
5	5 * \$7.70	\$38.50
15	15 * \$7.70	\$115.50
25	25 * \$7.70	\$192.50

Examples for Stage 3:

Excess Penalty Amount in 000's	Calculation	Excess Penalty Fee
5	5 * \$10.05	\$50.25
15	15 * \$10.05	\$150.75
25	25 * \$10.05	\$251.25

Examples for Stage 4:

Excess Penalty Amount in '000s	Calculation	Excess Penalty Fee
5	5 * \$13.40	\$67.00
15	15 * \$13.40	\$201.00
25	25 * \$13.40	\$335.00

**SPECIFICATION OF WATER CONSERVATION GOALS**

TCEQ rules require the adoption of specific water conservation goals for a water conservation plan. As part of plan adoption, each Member City and Customer must develop 5-year and 10-year goals for per capita municipal use. These goals should be submitted to NTMWD in draft form for review. The goals for this water conservation plan include the following:

- Maintain the per capita municipal water use below the specified amount in gallons per capita per day in a dry year, as shown in the completed Table 4.1.
- Maintain the level of unaccounted water in the system below 15 percent annually in 2008 and subsequent years. Implement and maintain a program of universal metering and meter replacement and repair.
- Increase efficient water usage through a water conservation ordinance, order or resolution.

- Decrease waste in lawn irrigation by implementation and enforcement of landscape water management regulations. (These landscape water management regulations are recommended but are not required.)
- Raise public awareness of water conservation and encourage responsible public behavior by a public education and information program.
- Develop a system specific strategy to conserve water during peak demands, thereby reducing the peak use.

**Table 4.1  
Five-Year and Ten-Year Municipal Per Capita Water Use Goals (gpcd)**

Description	Current Average (gpcd)	5-Year Goal (gpcd)	10-Year Goal (gpcd)
Current 5-Year Average Per Capita Municipal Use with Credit for Reuse	222	181	135
Expected Reduction due to Low-Flow Plumbing Fixtures	3	4	4
Projected Reduction Due to Elements in this Plan	3	4	4

### **WATER RATE STRUCTURE**

North Collin Water Supply has implemented an increasing block rate water structure that is intended to encourage water conservation and discourage excessive use and waste of water upon completion of the next rate study or within five years. An example water rate structure is as follows:

Water Rates

<u>Monthly</u>	<u>17.50</u>
<u>First 1,000g.</u>	<u>Included</u>
<u>1,001g. to 10,000g.</u>	<u>\$3.35 per 1000g.</u>
<u>10,001g. to 20,000g.</u>	<u>\$3.60 per 1000g.</u>
<u>All over 20,000g.</u>	<u>\$3.85 per 1000g.</u>



## **OTHER WATER CONSERVATION MEASURES**

### **Ordinances, Plumbing Codes, or Rules on Water-Conserving Fixtures**

The state has required water-conserving fixtures in new construction and renovations since 1992. The state standards call for flows of no more than 2.5 gallons per minute (gpm) for faucets, 3.0 gpm for showerheads, and 1.6 gallons per flush for toilets. Similar standards are now required nationally under federal law. These state and federal standards assure that all new construction and renovations will use water-conserving fixtures.

### **Landscape Water Management Measures**

The following landscape water management measures are required by the NCWSC for this plan. These are the minimal measures that should be implemented and enforced in order to irrigate the landscape appropriately.

- Time of day restrictions prohibiting lawn irrigation watering from 10 AM to 6 PM beginning May 1 and ending October 31 of each year.
- Prohibition of watering of impervious surfaces. (Wind driven water drift will be taken into consideration.)
- Prohibition of outdoor watering during precipitation or freeze events.
- Lawn and landscape irrigation limited to twice per week.
- Prohibiting the use of treated water to fill or refill residential, amenity, and any other natural or manmade ponds. A pond is considered to be a still body of water with a surface area of 500 square feet or more.
- Rain and freeze sensors and/or ET or Smart controllers required on all new irrigation systems. Rain and freeze sensors and/or ET or Smart controllers must be maintained to function properly.
- “At home” car washing can be done only when using a water hose with a shut-off nozzle.
- NCWSC is responsible for developing regulations, ordinances, policies, or procedures for enforcement of water conservation guidelines.
- Prohibition of watering areas that have been overseeded with cool season grasses (such as rye grass or other similar grasses), except for golf courses and public athletic fields.

### **Additional Water Conservation Measures (Not Required)**

The following water conservation measures are also included in this Plan as options to be considered by Member Cities and Customers:

- Additional landscape water management regulations
- Landscape ordinance
- Water audits
- Rebates

In addition, NCWSC recommends the following measures, but they are not required:

- Requirement that all existing irrigation systems be retrofitted with rain and freeze sensors and/or ET or Smart controllers capable of multiple programming. Rain and freeze sensors and/or ET or Smart controllers must be maintained to function properly.
- Prohibition of use of poorly maintained irrigation systems that waste water.
- Prohibition of planting cool season grasses (such as rye grass or other similar grasses) that intensify cool season water requirements, exception allowed for golf courses or public athletic fields.
- Requirement that all new athletic fields be irrigated by a separate irrigation system from surrounding areas.
- Implementation of other measures to encourage off-peak water use.

Landscape ordinances are developed by cities to guide developers in landscaping requirements for the city. NCWSC recommends that the following measures be included,

- Requirement that all new irrigation systems be in compliance with state design and installation regulations (TAC Title 30, Part 1, Chapter 344).
- Native, drought tolerant, or adaptive plants should be encouraged.
- Drip irrigation systems should be promoted.
- Evapotranspiration (ET) / Smart controllers that only allow sprinkler systems to irrigate when necessary should be promoted.

Water audits are useful in finding ways in which water can be used more efficiently at a specific location. In addition to the conservation measures described above, the NTMWD considers the following water conservation incentive programs as options that might be included in the plan:

- Low-flow toilet replacement and rebate programs,
- Rebates for rain/freeze sensors and/or ET or Smart controllers,
- Low-flow showerhead and sink aerators replacement programs or rebates,
- ET/Smart irrigation controller rebates,
- Water efficient clothes washer rebates,
- Pressure reducing valve installation programs or rebates,
- Rain barrel rebates,
- On-demand hot water heater rebates, or
- Other water conservation incentive programs.

## **METERING, WATER USE RECORDS, CONTROL OF UNACCOUNTED WATER, AND LEAK DETECTION AND REPAIR**

One of the key elements of water conservation is tracking water use and controlling losses through illegal diversions and leaks. It is important to carefully meter water use, detect and repair leaks in the distribution system and provide regular monitoring of unaccounted water.

### **Accurate Metering of Treated Water Deliveries from NTMWD**

Water deliveries from NCWSC are metered by NCWSC using meters with accuracy of  $\pm 2\%$ .

### **Metering of Customer and Public Uses and Meter Testing, Repair, and Replacement**

The provision of water to all customers, including public and governmental users, should be metered. All customer meters should be replaced on a minimum of a 15-year cycle. Those who do not currently have a meter testing and replacement program should implement such a program over the next three years.

### **Record Management System**

As required by TAC Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2(a)(2)(B), a record management system should allow for the separation of water sales and uses into residential, commercial, public/institutional, and industrial categories. This information should be included in an annual water conservation report. Those entities whose record management systems do not currently comply with this requirement should move to implement such a system within the next five years.

### **Determination and Control of Unaccounted Water**

Unaccounted water is the difference between water delivered to NCWSC from NTMWD (and other supplies, if applicable) and metered water sales to customers plus authorized but unmetered uses. (Authorized but unmetered uses would include use for fire fighting, releases for flushing of lines, uses associated with new construction, etc.) Unaccounted water can include several categories:

- Inaccuracies in customer meters. (Customer meters tend to run more slowly as they age and under-report actual use.)
- Accounts which are being used but have not yet been added to the billing system.
- Losses due to water main breaks and leaks in the water distribution system.
- Losses due to illegal connections and theft
- Other.

Measures to control unaccounted water should be part of the routine operations of North Collin Water Supply. Maintenance crews and personnel should look for and report evidence of leaks in the water distribution system. A leak detection and repair program is described below. Meter readers should watch for and report signs of illegal connections, so they can be quickly addressed.

. With the measures described in this plan, North Collin Water Supply should maintain unaccounted water below 15 percent in 2008 and subsequent years. If unaccounted water exceeds this goal, North Collin Water Supply should implement a more intensive audit to determine the source(s) of and reduce the unaccounted water. The annual conservation report described below is the primary tool that should be used to monitor unaccounted water.

### **Leak Detection and Repair**

As described above, city crews and personnel should look for and report evidence of leaks in the water distribution system. Areas of the water distribution system in which numerous leaks and line breaks occur should be targeted for replacement as funds are available.

### **Monitoring of Effectiveness and Efficiency - Annual Water Conservation Report**

This report(on file) should be used in the development of an annual water conservation report by Member Cities and Customers. This form should be completed by March 31 of the following year and used to monitor the effectiveness and efficiency of the water conservation program and to plan

conservation-related activities for the next year. The form records the water use by category, per capita municipal use, and unaccounted water for the current year and compares them to historical values. The annual water conservation report should be sent to NTMWD, which will monitor NTMWD Member Cities' and Customers' water conservation trends.

#### **Water Conservation Implementation Report**

The report (page 22) includes the TCEQ-required water conservation implementation report. The report is due to the TCEQ by May 1 of every year, starting in the year 2010. This report lists the various water conservation strategies that have been implemented, including the date the strategy was implemented. The report also calls for the five-year and ten-year per capita water use goals from the previous water conservation plan. The reporting entity must answer whether or not these goals have been met and if not, why not. The amount of water saved is also requested.

### **CONTINUING PUBLIC EDUCATION AND INFORMATION CAMPAIGN**

The continuing public education and information campaign on water conservation includes the following elements:

- Utilize the “Water IQ: Know Your Water” and other public education materials produced by the NTMWD.
- Encourage local media coverage of water conservation issues and the importance of water conservation.
- Notify local organizations, schools, and civic groups that Member City or Customer staff and staff of the NTMWD are available to make presentations on the importance of water conservation and ways to save water.
- Promote the *Texas Smartscape* web site ([www.txsmartscape.com](http://www.txsmartscape.com)) and provide water conservation brochures and other water conservation materials available to the public at City Hall and other public places.
- Make information on water conservation available on its website (if applicable) and include links to the “Water IQ: Know Your Water” website, *Texas Smartscape* website and to information on water conservation on the TWDB and TCEQ web sites and other resources.

**Resolution No. 05142009-1R**

**A RESOLUTION PERTAINING TO ILLEGAL WATER CONNECTIONS AND/OR THE THEFT OF WATER RELATED TO THE WATER SUPPLY FOR THE NORTH COLLIN WATER SUPPLY CORPORATION.**

**WHEREAS**, the North Collin Water Supply Corporation (the “WSC”), recognizes that the amount of water available to its water customers is limited; and

**WHEREAS**, pursuant to Chapter 67 of the Water Code, the WSC is authorized to adopt such policies necessary to preserve and conserve available water supplies; and

**WHEREAS**, the WSC seeks to adopt an order pertaining to illegal water connections and theft of water.

**NOW THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE NORTH COLLIN WATER SUPPLY CORPORATION THAT:**

**Section 1.** The Board of Directors hereby approves and adopts this Resolution as described herein.

**Section 2.** A person commits an offense of theft of water by any of the following actions:

- (a) A person may not knowingly tamper, connect to, or alter any component of the WSC’s water system including valves, meters, meter boxes, lids, hydrants, lines, pump stations, ground

storage tanks, and elevated storage tanks. This shall include direct or indirect efforts to initiate or restore water service without the approval of the WSC.

- (b) If, without the written consent of the WSC, the person knowingly causes, suffers or allows the initiation or restoration of water service to the property after termination of service(s). For purposes of this section, it shall be assumed that the owner, occupant, or person in control of the property caused, suffered, or allowed the unlawful initiation or restoration of service(s).
- (c) A person may not knowingly make or cause a false report to be made to the WSC of a reading of a water meter installed for metered billing.
- (d) A person commits a separate offense each day that the person performs an act prohibited by this section or fails to perform an act required by this section.

**Section 3.** An offense under this Resolution is punishable in accordance with the WSC's rules and policies regarding rates, including its approved tariff, and may result in disconnection of service.

**Section 4.** The Board of Directors does hereby find and declare that sufficient written notice of the date, hour, place and subject of the meeting considering this Resolution was posted at a designated place convenient to the public for the time required by law preceding this meeting, that such place of posting was readily accessible at all times to the general public, and that all of the foregoing was done as required by law at all times during which this Resolution, and the subject matter thereof has been discussed, considered and formally acted upon. The Board of Directors further ratifies, approves and confirms such written notice and the posting thereof.

**Section 5.** Should any paragraph, sentence, clause, phrase or word of this Resolution be declared unconstitutional or invalid for any reason, the remainder of this Resolution shall not be affected.

Approved and adopted by the Board of Directors on this \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_.

\_\_\_\_\_  
President, Board of Directors

Attest:

\_\_\_\_\_  
Secretary

Resolution No. 05142009-2R

**A RESOLUTION ADOPTING A WATER CONSERVATION AND DROUGHT CONTINGENCY AND WATER EMERGENCY RESPONSE PLAN FOR THE NORTH COLLIN WATER SUPPLY CORPORATION TO PROMOTE THE RESPONSIBLE USE OF WATER AND TO PROVIDE FOR PENALTIES AND/OR THE DISCONNECTION OF WATER SERVICE FOR NONCOMPLIANCE WITH THE PROVISIONS OF THE WATER CONSERVATION AND DROUGHT CONTINGENCY AND WATER EMERGENCY RESPONSE PLAN.**

**WHEREAS**, the North Collin Water Supply Corporation (the “WSC”), recognizes that the amount of water available to its water customers is limited; and

**WHEREAS**, the WSC recognizes that due to natural limitations, drought conditions, system failures and other acts of God which may occur, the WSC cannot guarantee an uninterrupted water supply for all purposes at all times; and

**WHEREAS**, the Water Code and the regulations of the Texas Commission on Environmental Quality (the “Commission”) require that the WSC adopt a Water Conservation and Drought Contingency and Water Emergency Response Plan; and

**WHEREAS**, the WSC has determined an urgent need in the best interest of the public to adopt a Water Conservation and Drought Contingency and Water Emergency Response Plan; and

**WHEREAS**, pursuant to Chapter 67 of the Water Code, the WSC is authorized to adopt such policies necessary to preserve and conserve its water resources; and

**NOW THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE NORTH COLLIN WATER SUPPLY CORPORATION THAT:**

**Section 1.** The Board of Directors hereby approves and adopts the Water Conservation and Drought Contingency and Water Emergency Response Plan (the “Plan”), attached hereto as Addendum A, as if recited verbatim herein. The WSC commits to implement the requirements and procedures set forth in the adopted Plan.

**Section 2.** Any customer, defined pursuant to 30 Tex. Admin. Code Chapter 291, failing to comply with the provisions of the Plan shall be subject to a monetary fine as allowed by law, and/or discontinuance of water service by the WSC. Proof of a culpable mental state is not required for a conviction of an offense under this section. Each day a customer fails to comply with the Plan is a separate violation. The WSC's authority to seek injunctive or other civil relief available under the law is not limited by this section.

**Section 3.** The Board of Directors does hereby find and declare that sufficient written notice of the date, hour, place and subject of the meeting adopting this Resolution was posted at a designated place convenient to the public for the time required by law preceding the meeting, that such place of posting was readily accessible at all times to the general public, and that all of the foregoing was done as required by law at all times during which this Resolution and the subject matter thereof has been discussed, considered and formally acted upon. The Board of Directors further ratifies, approves and confirms such written notice and the posting thereof.

**Section 4.** The General Manager or his designee is hereby directed to file a copy of the Plan and this Resolution with the Commission in accordance with Title 30, Chapter 288 of the Texas Administrative Code. Further, the Board of Directors hereby authorizes the General Manager or his designee to file an amendment to the WSC’s tariff to incorporate the Plan therein.

**Section 5.** Should any paragraph, sentence, clause, phrase or word of this Resolution be declared unconstitutional or invalid for any reason, the remainder of this Resolution shall not be affected.

Approved and adopted by the \_\_\_\_\_ on this \_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
President, Board of Directors

Attest:

\_\_\_\_\_  
Secretary