Water Demand Management Plan

Chip Chesley General Services Director

Marco Philippon Water Treatment Superintendent

What is a Demand Management Plan?

- A look at where the water goes.
- How the customer base is divided up.
- How do we compare to other utilities nationally.
- Recommendations on what can be done to promote efficiencies.

Why does Concord need a Demand Management Plan?

• To understand our water system demands & patterns.

 To identify strategies in which we can maximize existing water supplies allowing us to be as efficient as possible and foster economic development.

Existing Water Customers



How do we compare nationally?

- Concord Gallons used on a per capita basis(GPCD) 85.
- National Average GPCD 75.
- National Conservation Movement (MA WMA) 65.
- California (2022) GPCD 55.

Gallons Per Day



How does this affect our current supply?

- Current water supply has a maximum capacity of 10.0 Million Gallons per Day (MGD).
- Additional Supply must be identified and planned when we approach 90% of Max Day.
- At our current rate of 85 GPCD we will need to have an additional source identified and constructed by 2042 (at a cost of \$18M in todays dollars).

MAXIMUM DAILY DEMAND VS. PUMPING CAPACITY



Top 5 Plan Recommendations

- 5. Monitor and Maintain the Distribution system to no less than 85% metered ratio. (In house standard is 90%).
- 4. Maintain an up to date Meter testing program.
- 5. Reduce distribution system leakage with an active Leak Detection Program (only Conservation Technician in N.H.)
- 2. Adopt and promote an appliance, and fixture rebate program (currently developing an appropriate program).
- 1. Rate Structure that promotes Conservation (currently completing).

What's Concords plan?

- With 3 of the top 5 recommendations already implemented we will focus on:
- Complete the rate study to include a conservation component (a requirement prior to applying for a new source of supply).
- 2 Initiate a rebate program for appliances with the highest usage (toilets, and clothes washers).

Rebate Program

- Program will be in partnership with EPA, and WaterSense.
- Partial rebate for toilet replacement for an approved WaterSense unit.
- Partial rebate for clothes washing machine for an approved WaterSense unit.



City of Concord General Services, Water Division

Clothes Washer Rebate Application

Please make sure you read this application carefully, fill out completely, and sign bottom.

| Name: | | ce address: | | |
|--|--|---|--|-----------------------------------|
| Telephone: | Account number (from water hill): Email address: | | | |
| (evening): | | address | | - |
| High-Efficiency Clothes Wa | sher Information | | | |
| Brand | Model name | Model No. | Purchase Date | Purchase Puice |
| Rebute applications must be subm | itted within 90 days of nurchase. | Be sure to include the | ereint! | |
| Contra allanca gana music ne sacin | nten winnin vo asys or parenase. | the sare to incruit the | ecept. | |
| - | | and the second | | |
| Terms and Conditions: Plea | ise Read and Sign Below | 12 11 12 | | and the second |
| listed on the rehate application. Robates are available for products energy and 40% less water than re Applicant agrees and understands in water savings, as site-specific w PWD does not warrant, endorse, or | listed with ENERGY STAR certific gular washers. that the PWD does not guarantee the ater consumption varies. r assume liability for the quality, per | ntions. ENERGY STAR at the installation of a hij rformance, or safety of t | l olothes washers use a gh-efficiency clothes v he contractor and/or re | thout 25% less vasher will res |
| Issach nu für chätta application. Rocharist ans avvisible för grodottat manga van 40% fass statar hära trä Applicaart agreten and umdestander in vulter avvirge, un silte-specific va VPUT dass nut værante, nadarne, o verbenenne, en performanse of any i fin natter ta be eligible ta parkeipat funct the FWU on is regressentive is applicat to applicant's water bill. An umaltered datel silte reserjet, i Applicant understannisk talat PWUT i The chitoks water of abar charistica talat future at a WUT applicant's avater bill. The FWUT reserves the right to dis future at any time and without this future at any time and without this future at any time and without this of the resiste offer is on a first-con Applications num be reselved off. | listed with ENERGY STAR certific galar asslors, that the PWD does not guarance the star consumption varies, assume lisbility for the quality, per appliance or fixture. Choice and as in the totake program, applicants r has the right to impect and may up may sting the make and model number, may withhold rebute until any or all and will be in the form of a checkt continue the rebute program und/or i ther notice. | attions. ENERGY STAR at the installation of a hij reformance, or subty of d replance of materials as must have an account io ent the installation of th MUST accompany this a of the above listed could miled to the customer, a change the arribut of s exhausted. Only one in | Lolothos washers use a gla-efficiency clothes o he contractor and/or tre ed is solely the applica good standing with the e fixture before or after pplication. tions are met. eligible rebute on any | appliance or |
| Isiad on the relate application. Robotics are avoidable for product many and 40% less state that re- definition of the second state of the work of the second state of the WD data and warrant, nadaras, o wholesailer, or performance of any in order to be eligible to participat theat the EVD or integresentiative is applicat to applicant's water bill. An unaltered data state receipt, in A mandread data state receipt, in the other the WD order state receipt in The clubbs water robust of WD reserves the right to the The relative state relation and without the The relative state relative state relative state future at any time and without the The relative state of the relative state of the relative state of the relative state of the state at any time and without the The relative state must be received state. | listed with ENERGY STAR certific galar asslors, that the PWD does not guarance the star consumption varies, assume lisbility for the quality, per appliance or fixture. Choice and as in the totake program, applicants r has the right to impect and may up may sting the make and model number, may withhold rebute until any or all and will be in the form of a checkt continue the rebute program und/or i ther notice. | attions. ENERGY STAR at the installation of a hij reformance, or subty of d replance of materials as must have an account io ent the installation of th MUST accompany this a of the above listed could miled to the customer, a change the arribut of s exhausted. Only one in | Lolothos washers use a gla-efficiency clothes o he contractor and/or tre ed is solely the applica good standing with the e fixture before or after pplication. tions are met. eligible rebute on any | appliance or |
| Robies are available for products mergy and 40% less water that as Applicant agrees and understands in water swings, we is its specific's PWD does not warrant, endorse, o wholensite, or performance of any the the Childko to participating further PWD or its equestraming the the PWD or its equestraming is applicat of agolicant's water bulk An unaltered dated sales receipt, it with a standard sales is \$150 The Childs washer chains is \$150 in future to a shift-order to an affiri- the standard sales receipt, it the thous washer chains is \$150 in future to a shift-order to an affiri- the results offs to an affiri- the soles and performs and advlout fut The related Sales is a shift order to an affiries offs and shift-order to and shift-order and a shift offs and shift-order to and affiries offs and shift-order to and shift-order and a shift offs and shift-order to and shift-order and a shift offs and shift-order to and shift-order and a shift off and shift-order to and shift-order and a shift off a shift offs offs offs affiri- and a shift off and shift-order to and shift-order and a shift off and shift off offs offs affiri- and a shift off and shift off and shift offs offs offs offs offs offs offs of | listed with ENERGY STAR certific galar asslors, that the PWD does not guarance the star consumption varies, assume lisbility for the quality, per appliance or fixture. Choice and as in the totake program, applicants r has the right to impect and may up may sting the make and model number, may withhold rebute until any or all and will be in the form of a checkt continue the rebute program und/or i ther notice. | attions. ENERGY STAR at the installation of a hij reformance, or subty of d replance of materials as must have an account io ent the installation of th MUST accompany this a of the above listed could miled to the customer, a change the arribut of s exhausted. Only one in | Lolothos washers use a gla-efficiency clothes o he contractor and/or tre ed is solely the applica good standing with the e fixture before or after pplication. tions are met. eligible rebute on any | appliance or |

Current Rate Structure

- Declining Block Rate structure.
- 3 ccf allowance in minimum charge (no credit if you use less).
- Does not reflect the true cost of water.

Benefits of conservation to Concord

- Additional capacity source identified, it will be the Merrimack River, as a supplemental plant to the existing plant.
- With the current population growth pattern and consumption level (85 GPCD)we will need a supplemental plant by 2042.
- With a reduction to 75 GPCD, it will be delayed to approx. 2070
- With a reduction to 65 GPCD it will be delayed to approx. 2100.

Questions?