



WATER AND SEWER BOARD REGULAR MEETING
September 11, 2019 – 6:30 a.m.
2nd Floor Conference Room - 301 Walnut Street
Windsor, CO 80550

The Town of Windsor will make reasonable accommodations for access to Town services, programs, and activities and will make special communication arrangements for persons with disabilities. Please call (970) 674-2400 by noon on the 2nd day prior to the meeting to make arrangements.

AGENDA

A. CALL TO ORDER

1. Roll Call
2. Review of Agenda by the Board and Addition of Items of New Business to the Agenda for Consideration by the Board
3. Public Invited to be Heard

B. CONSENT CALENDAR

C. BOARD ACTION

1. None

D. PRESENTATIONS AND DISCUSSION

1. Single-Family Residential Dual Use Systems Raw Water Dedication
2. MS4 Permit Process and Fee Discussion
3. Progress report on Parks, Rec, and Trails grant from Northern Water
4. Discussion on next cycle grant applications for 2020

E. COMMUNICATIONS

1. None

F. ADJOURN



WATER AND SEWER BOARD REGULAR MEETING
July 10, 2019 – 6:30 a.m.
2nd Floor Conference Room – 301 Walnut Street
Windsor, CO 80550

MINUTES

A. CALL TO ORDER

Board Chairperson Bielawski called the meeting to order at 6:28 a.m.

- | | | |
|---------------------|---|---|
| 1. <u>Roll Call</u> | Chairperson
Vice-Chairperson
Secretary | Greg Bielawski
Carlos Medina
Julie Cline
Darell Zimbelman
Milt Tokunaga
Milton Geiger (absent)
Janene Willey
Ken Bennett |
| Also present: | Town Board Liaison

Director of Engineering
Water Resources Manager
Customer Services Manager
Utility Billing Admin Specialist |

Dennis Wagner
John Thornhill
Mike Lucero
Erin Porter |

2. Review of Agenda by the Board and Addition of items of New Business to the Agenda for Consideration by the Board
There were no additional items added to the agenda.
3. Public Invited to be Heard
There was no public comment.

B. CONSENT CALENDAR

There were no items on the consent calendar

C. BOARD ACTION

1. Minutes of June 12, 2019 Regular Meeting
Board Member Willey moved to accept the minutes for the May 8, 2019 meeting; Board Secretary Cline seconded the motion. Motion carried unanimously.
2. Resolution No. 2019-01 – A Resolution of Recognition and Appreciation to Dennis Wagner for his Service and Dedication to the Town of Windsor
Board Member Zimbelman moved to accept the proposed resolution; Board Member Willey seconded the motion. Motion carried unanimously.

D. PRESENTATIONS AND DISCUSSION

1. Presentation: Water Supply Update

Mr. Thornhill updated the Board on the current state of the water supply. He stated that the average demand is around 780M gallons, and that due to a cooler and wetter spring, the actual demand is below last year by 1.5%. The snowpack did not continue to go up, but maintained its levels. He said that the best thing to look at on the runoff reports is actually the river flows.

The temperature and precipitation forecasts from June were accurate, in that there was a lower than average temperature and higher than average precipitation. All of Colorado is out of the drought except a small area near the San Luis Valley.

Current demand projection is around 2,900 acre feet (af), and the projected supply after shrinkage is around 3,201af, so the Town is on track to meet projected demand with projected available supply. The actual supply before 17% shrinkage is 3,388af and after shrinkage the supply is 2,896af. He did give New Cache 460af to pay the running charge for moving CBT water into the Kern Reservoir, rented out 400af to Raindance subdivision to put in their non-potable pond so they could start irrigating, maximized the carryover, and rented out 650af of native agricultural water to agriculture farmers along the north Poudre.

2. Presentation: Non-potable water systems in Windsor

In 1994 Martin Lind acquired land which is now Water Valley. Mr. Lind came up with the idea of a dual water system. The Town went with him, and in 2003 the Town Board passed an ordinance requiring secondary water systems for irrigation of new residential development within the Town of Windsor urban growth boundary.

In 2004, there were about 800 secondary systems and 3,000 treated water taps, and now there are more dual system taps than treated water taps. This leads to a significant savings to the Town, and Windsor is unique as other area municipalities do not have the same type of system usage. If the Town had not done this, more water rights would need to have been acquired and treated which would have been very expensive.

With treated water, there has consistently been about 90,000-100,000 gallons per household per year, and has stayed pretty consistent, but the dual use accounts has been steadily coming down. If the Town continues to enforce the ordinance and continues to build on historically irrigated land, the dual use will continue to decrease.

For Municipal Non-Potable water, on average it takes 2.5 to 3 af to irrigate 1 acre of bluegrass. Parks, Trails and open Space manages approx. 650 acres, of which about 100 acres are irrigated. The town has about 162 acres that are yet to be developed, about 2/3 of which will be irrigated.

Mr. Thornhill discussed the maps of the Kern/Windsor Lake System, going over the delivery system and the various parkland that is being irrigated within the system. The Town draws water from the various ditches and canals, but it makes the river whole with return flows. The Town also is obligated by agreement to send 1 CFS (cubic feet per second) to Water Valley.

There is a Non-Potable Water Master Plan (NPWMP) developed in 2010 which was set up to analyze current demands, the usage of existing supplies to meet demands, and project future demands and sources of supply including water acquisition, water storage, and system improvements.

There were several findings and recommendations, quite a bit of which has been completed, and some ongoing projects including incorporating Town Hall as part of irrigated acreage for Main Park. There are a couple of items that have been determined not to be feasible at this time including installing a drip irrigation at Folkstone Nursery.

The Town owns 100% of the Kern Reservoir, which originally included 1,800af of storage and 1,000 acres of irrigation. A case was filed in 2002, which the Town received an annual fill limit of 1,277af with an average of 1,048af, a return flow of 518af to the Poudre River, an annual consumptive use limit of 530af, and 500af were rented through an agreement to Front Range Energy. The Town dredged the lake and filed a case to enlarge the current reservoir. The Town claimed 1,966af with the right to fill and refill in priority.

The Parks and Open Spaces Department tracks all of the readings throughout the Town, as well as the irrigation usage for the wells, which is reported monthly to the state.

The Kyger Reservoir has a 1,257af of storage capacity, which can be obtained through gravity from the river, pumped from the river or pumped from the reservoir. There are 2 pumps that generate 20cfs, and the reservoir is used to augment parks, the school district, Kern RFO's and non-potable irrigation. The total cost for buying the land, the reservoir and the facilities is around \$5,000af.

3. Discussion: WaterSense Homes Specification

There are a couple of builders in Colorado that are recognized as WaterSense builders. Mr. Thornhill has tried to get builders to commit to building full WaterSense homes, and they said it would add \$15,000 to \$20,000 per home because the homes would have to be redesigned. To make a WaterSense home, it is more than just including efficient fixtures, it also includes making changes to rooms to make water delivery more efficient room to room.

If the Town offers rebates, it would be on WaterSense certified fixtures and appliances.

E. COMMUNICATIONS

1. Town Board Work Session July 15 – Water & Sewer Board Charter

This will be a review of the role of the Water and Sewer Board and a continuation of the discussion from the last Water and Sewer Board.

2. Recap of June 12, 2019 meeting with Greeley Water & Sewer Board

The Town had talked about the necessity to rent water for the next few years until NISP goes online. The Town also made clear that we want a seat at the table, not just a passive customer, and Greeley seemed receptive to that.

G. ADJOURN

Board Vice Chairperson Medina moved to adjourn the meeting at 7:47 am; Board Member Willey seconded the motion. Motion carried unanimously.

Submitted by:

A handwritten signature in blue ink, appearing to read "Erin Porter". The signature is written in a cursive style with a long horizontal stroke at the end.

Erin Porter, Utility Billing Administrative Specialist



MEMORANDUM

Date: September 6, 2019
To: Water & Sewer Board
From: John Thornhill, Community Development Director
Re: Single-Family Residential Dual Use Raw Water Requirement

Background / Discussion

In order to provide a safe, reliable water supply in perpetuity, the Town of Windsor requires developers to furnish water rights to meet the increased demands of new development.

Sec. 13-2-80. – Grant of Water Rights of the Town Municipal Code states:

(a) All premises requesting original water service from the Town shall furnish to the Town, without cost to the Town, water rights in the following amounts:

(1) Single-family residential with separate non-potable irrigation system: 0.25 AF per residence, plus a seventeen percent (17%) shrinkage factor, for a total of 0.29 AF;

Staff has received several requests recently to evaluate the raw water dedication requirements for *single-family residential dual use systems (a separate non-potable system provides irrigation water)* in Windsor. An analysis on water demand was performed for all dual-use systems in Windsor. Table 1 lists the average annual demand for single-family residential dual use systems in by year:

Table 1

	Average Monthly Consumption by Year (gal)	Use/Year Gal	Use Pre Shrink (AF)	With Shrink (AF)
2011	5,534	66,402	0.20	0.24
2012	5,761	69,128	0.21	0.25
2013	5,051	60,615	0.19	0.22
2014	4,761	57,134	0.18	0.21
2015	4,703	56,441	0.17	0.20
2016	4,578	54,935	0.17	0.20
2017	4,351	52,213	0.16	0.19
2018	4,327	51,924	0.16	0.19
Average	4,883	58,599	0.18	0.21

Table 1 shows that Windsor’s use has steadily declined to an average of .21 acre-feet (with 17% shrink). The current requirement is based on an average demand of .25 acre-feet + 17% shrink for a final dedication value of

.29 acre-feet. Part of the discussion on what the final requirement is should be centered around whether the Town of Windsor should use an “average” demand or for example, a higher demand such as 2012. The year 2012 was extremely hot and dry and water usage even in dual-use systems reflected the increase in demand. The Town should also consider including a drought safety factor built into the calculation to ensure we can meet the needs of residents through an extended period of drought.

Staff has also re-examined the shrink value used in determining the final dedication value. Table 2 below confirms the 17% shrink is still appropriate at this time.

Table 2

Values in AF			Required Transfers w/Shrink			
			30%	10%	10%	
Use at the Tap	Required At the Plant ¹	Calculated Shrink	Greeley	FCLWD	NWCWD	
2013	1,772	2,079	17%	847	371	861
2014	1,825	2,138	17%	847	371	920
2015	1,886	2,204	17%	847	371	986
2016	1,995	2,325	17%	847	371	1,107
2017	2,016	2,348	16%	847	371	1,130
2018	2,071	2,408	16%	847	371	1,190
Average		17%				

As future demand increases, the location of where that demand is treated can have a significant impact on the shrink values for dedication. Currently, most of the new demand will be treated and delivered through North Weld master meters which could potentially lower the shrink value the Town uses. On the other hand, as the Raindance subdivision continues to build out and brings online the Greeley Loveland Irrigation Companies water, that water will have to be treated at the Boyd Lake Water Treatment plant, resulting in a much higher shrink assessment.

Another important component of raw water dedication is the value of credit assigned to the sources of supply the Town will accept. Currently, the Town of Windsor accepts Colorado Big Thompson Units (C-BT) and North Poudre Irrigation Shares. Each share of North Poudre comes with four units of C-BT. Each unit of C-BT currently is credited with .7 acre-feet of water for dedication. In regards to raw water dedication, the discussion should include whether the Town should continue to use the average yield of C-BT or potentially use a lower yield to

¹ This represents the amount of water Windsor is required to transfer per the respective Water Service Agreements with North Weld County Water District, The City of Greeley, and the Fort Collins Loveland Water District. This number does not include system losses in Windsor’s system or unaccounted for water.

develop a drought safety factor into the raw water calculation. The following matrix shows the amount of units that would be required based upon what yield would be given per unit of C-BT and the associated dedication requirement per permit in acre-feet.

Dedication/Yield Matrix		Dedication Requirement Single-Family Res Dual-Use (AF)		
		0.29	0.25	0.21
CBT yield/unit - AF		CBT Units Required per Permit		
Average	0.7	0.41	0.36	0.30
Planning	0.6	0.48	0.42	0.35
Firm	0.5	0.58	0.50	0.42

The impact of yield on the Town’s water supply is shown in Table 3 below. While most years still provide enough water to meet demands with excess supplies being rented out to agriculture, a firm yield value currently only provides an 8% safety factor. Table 4 shows the historic yields of the C-BT system. When the next extended drought period comes, the Town again could be found in a situation where demands cannot be met with existing supplies and the Town will have to find additional supplies in a drought situation as well as implementing strong drought restrictions. The amount of risk the Town is willing to take should be factored into the decision making process of raw water dedication.

Table 3

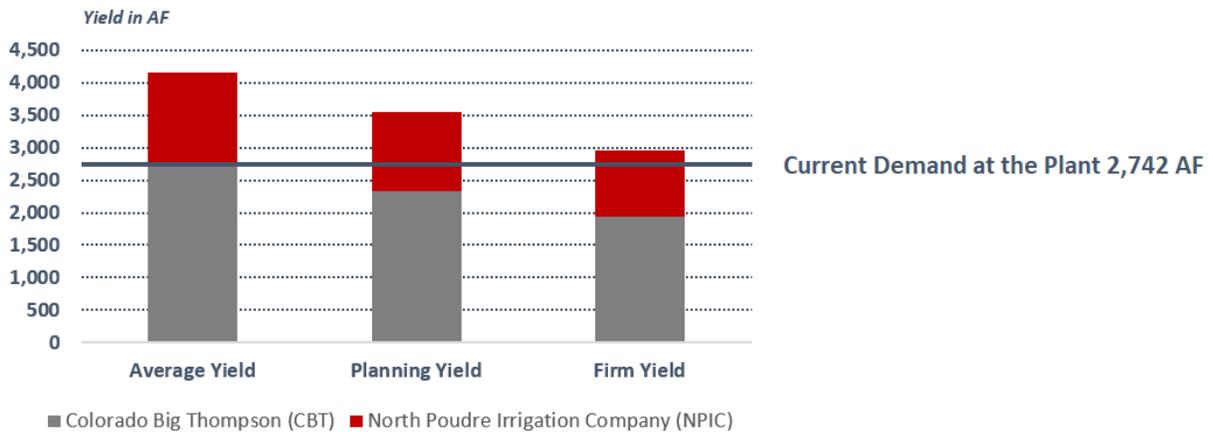
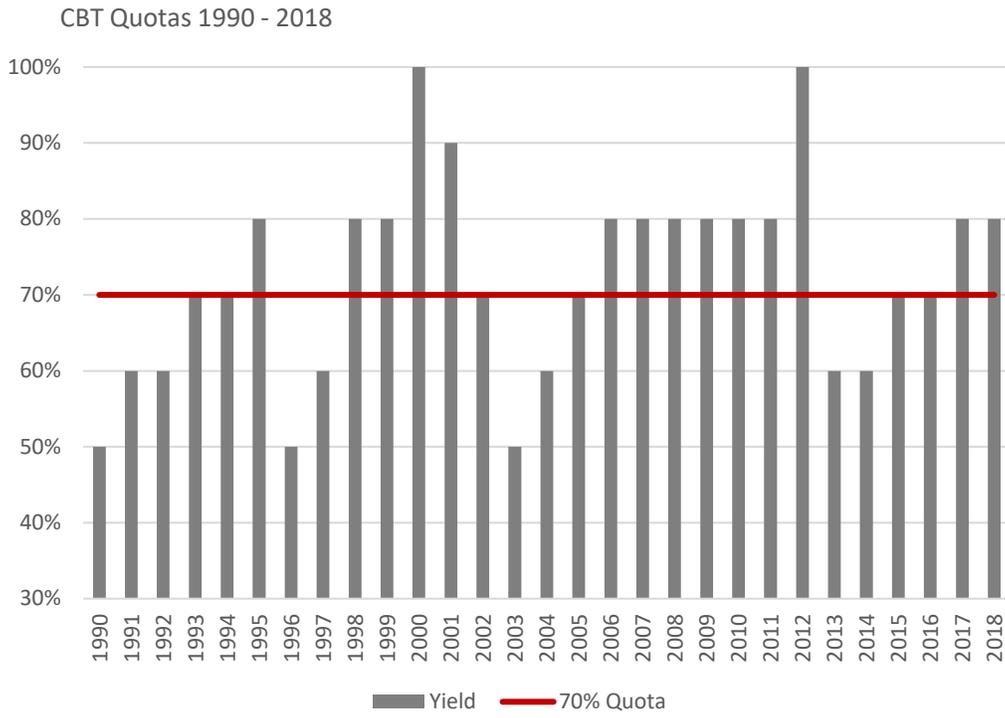


Table 4





MEMORANDUM

Date: September 5, 2019
To: Water/Sewer Board
From: Janine Hegeman, Stormwater Program Coordinator
Re: MS4 Permit Process and Fee Discussion

As detailed in the Municipal Separate Storm Sewer (MS4) permit issued to the Town of Windsor, inspections must be conducted by the Town at construction sites where the disturbed area totals one acre or more. This includes construction on less-than-one-acre lots within one-quarter mile of each other totaling, in aggregate, one acre or more. Building permits for single-family homes in Windsor are typically submitted in this fashion, and builders are currently permitted for MS4 compliance through this process. MS4 inspections carried out by Town staff for permit compliance on groups of lots that fit this description started in May of this year, but no fees have been assessed for these permits to date.

Additionally the MS4 permit requires that “the permittee’s Construction Sites Program address the selection, installation, implementation, and maintenance of control measures...” Managing single-lot construction for cradle-to-grave compliance has resulted in a tremendous impact on staff’s time.

SafeBuilt has offered to provide MS4 inspection services, and potentially other MS4 required services, to the Town of Windsor for single-lot construction. As indicated in the attached breakdown of estimated fees (provided by SafeBuilt), the company is prepared to manage the single-lot construction inspections and/or the program in part or in whole. Our initial discussion has focused on SafeBuilt doing the most time-consuming task – the indicator inspections, which are conducted every two weeks. The fee for this service would be \$40.00 per lot (1x charge). For a more complete, cradle-to-grave approach, the MS4 fee for each lot will total an estimated \$200.00. Town staff would turn over review of building permits for MS4 compliance, permitting, inspecting and enforcing MS4 regulations for single-lot construction to SafeBuilt in this case. Oversight the of program and ultimate responsibility for MS4 compliance would still remain with the Town.

We are still in the process of determining the appropriate fee to cover Town Staff services in each of these scenarios and variations, if needed. This proposal applies only to single-lot construction in housing developments.

Attachments: Total Estimated MS4 Single Lot Fees (SafeBuilt)

SAFEbuilt Fees for MS4 Single Lot Inspections (per lot):

OPTION 1:

Indicator (drive by, perimeter only, every 14 days, estimate 8-10 inspections)

Total estimated inspection cost = \$40 per lot

OPTION 2:

The above inspections, plus-

Routine (includes initial, thorough, every 45 days) = \$60 (estimate 4 inspections)

Compliance/Complaint (within 7 days of a failed inspection) = \$40 (estimate 2 inspections, no rebates)

Inactive (work stoppage, report only) = no additional fee

Winter Conditions (frozen ground, report only) = no additional fee

Final Stabilization = \$20 (estimate 1 inspection)

Total estimated inspection cost = \$160 per lot

OPTION 3:

The above inspections, plus-

Permit intake, processing, and plan review.

Total estimated cost for single lot MS4 Permit processing and cradle to grave inspections = \$200 per lot

Impact on Town Staff:

It is anticipated that SafeBuilt permit technicians working here at Town Hall will accept permits, enter them into CommunityCore, and forward to Safebuilt for review. They would also stipulate fee payment before, or at the time of, permit pick up.

No impact to the routine of Windsor's permit technician is expected. Stormwater Program Coordinator will still be available for questions, and enforcement situations – anticipate 4-6 hours a month.