WESTMINSTER
COLORADO

Tuesday, May 11, 2021 at 5:00 p.m.

PLANNING COMMISSION MEETING AGENDA

1. ROLL CALL

2. CONSIDERATION OF PREVIOUS MEETING MINUTES
   Meeting Minutes of April 27, 2021

3. CONSIDERATION OF NEW BUSINESS
   Water Supply Plan Update Presentation

   Prepared by: Sarah Borgers, Water Resources & Quality Manager

4. OLD BUSINESS

5. MISCELLANEOUS BUSINESS

6. ADJOURNMENT

PLEASE NOTE

The following are the procedures used by the Planning Commission for in-person meetings.
For virtual participation guidelines please visit www.cityofwestminster.us/pc

1. Staff will present agenda items. The Developer may present after Staff.
2. Those in attendance who favor the proposed development may address the Commission, followed by those who do not favor the proposed development. The Chair may impose time limits on speakers. **PLEASE SIGN THE SHEET IN THE FRONT OF THE COUNCIL CHAMBERS WHEN YOU SPEAK.**
3. All questions shall be addressed to the Chair of the Planning Commission. The Chair will call on Staff to address questions at the end of the hearing. Planning Commission reserves the right to question anyone at any time during the Public Hearing.
4. The Commission is charged with the review of Comprehensive Plan Amendments, Rezonings, Preliminary Development Plans, Amended Preliminary Development Plans, Official Development Plans, Amended Official Development Plans, Preliminary Plats and Amended Preliminary Plats that are not approved administratively by the City Manager.
5. There are two different procedures involved in the review of applications for development plan approval and the procedure depends on the type of plan under consideration:
   a. After review and a public hearing, the Planning Commission may recommend approval of an application, approval subject to specified conditions, or denial of an application. The Planning Commission is **not** the final authority on these applications. The City Council is the final decision maker.
   b. On applications for Official Development Plans and Amended Official Development Plans, the Planning Commission **does** make the final decision, unless the decision of the Planning Commission is appealed to the City Council within 10 days of the Planning Commission decision by a "party-in-interest," as described in Section 11-5-13(B.1) of the Westminster Municipal Code. If a decision of the Planning Commission is properly appealed to the City Council, the City Council will schedule the item for consideration at one of their upcoming meetings and, after holding a public hearing, make a final decision on the application.

If you need further information regarding this process, or any other matter related to the City's development review process, please contact the City Planning Division at 303-658-2092.

NOTE: Persons needing an accommodation, such as an interpreter for another language, or who have an impairment that requires accommodation, must notify the Planning Aide no later than noon on the Thursday prior to the scheduled Planning Commission hearing to allow adequate time to discuss arrangements. Please call 303-658-2092/TTY711 or State Relay or email jbaden@cityofwestminster.us to make a reasonable accommodation request.

WESTMINSTER

CITY OF WESTMINSTER
PLANNING COMMISSION
Meeting Minutes
April 27, 2021

1. ROLL CALL
The virtual meeting was called to order at 5:30 pm by Chair James Boschert. Present were Vice-Chair Joe McConnell, Commissioners David Carpenter, Lawrence Dunn, David Tomecek, Rick Mayo, Chennou Xiong and Elisa Torrez. Excused from attendance was Commissioner Tracy Colling. Also present: Staff members Rita McConnell, Planning Manager, John McConnell, Principal Planner, Andrew Spurgin, Principal Planner, Jennifer Baden, Planning Aide, and Matt Williams, Technical Support Specialist. With the roll called, Chairperson Boschert stated that even though a quorum was present the first alternate would be voting.

2. CONSIDERATION OF MINUTES
Meeting Minutes from March 9, 2021.
Commissioner Carpenter made a motion to accept the minutes from the March 9, 2021 Planning Commission meeting. Vice-Chair McConnell seconded the motion. The minutes were unanimously accepted (7-0).

3. CONSIDERATION OF NEW BUSINESS
2040 Comprehensive Plan Presentation by Andrew Spurgin, AICP, Principal Planner

A full recording of the meeting has been posted on the Planning Commission webpage.

4. ADJOURNMENT
The meeting was adjourned at 6:29 pm.

THE WESTMINSTER PLANNING COMMISSION

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James Boschert, Chairperson

Subject: Water Supply Plan Update

Prepared By: Sarah Borgers, Water Resources & Quality Manager

Summary Statement

- This report is an overview and supplemental document for a Staff presentation of the Water Supply Plan update. It is for information only and requires no action.
- The last Water Supply Plan update was completed in 2014
- Staff has completed an update to the Water Supply Plan that greatly improves understanding of risk and resiliency of the City's water supply and will support policy decision-making.
- The Water Supply Plan update was completed in close coordination with the development of the 2040 Comprehensive Plan.
- The results of the Water Supply Plan analysis show the importance of conservation and drought preparedness.

Background Information:

What is the Water Supply Plan?

The Water Supply Plan itself is not a policy document. It is a technical analysis of the City's water supply and water needs. It is driven by other documents that do provide policy direction – most specifically the Comprehensive Plan, which outlines how much and what type of developments will occur across the City; the Water Conservation Plan (also referred to as the Water Efficiency Plan), which sets out water conservation goals and strategies; and the Drought Management Plan, which sets out water supply goals when there are water supply shortages. These policy documents are combined with legal and regulatory documents and a variety of other agreements with partner agencies to provide the parameters necessary to model the City's future water supply needs.

The Water Supply Plan analysis has three overarching goals:

1. Identify how much water the City's system can produce.

2. Identify how much water our community needs for a time period in line with the Comprehensive Plan time horizon.
3. Identify the risk of water supply shortfall.

This analysis is looking at the future needs of the community at or near buildout. This is anticipated to be approximately the year 2040. This planning horizon is in line with the 2040 Comprehensive Plan that is currently in development. There has been significant coordination between the development of the Water Supply Plan and the 2040 Comprehensive Plan to ensure that the important land use policy discussion and decisions are appropriately supported by the City's water supply.

Water Supply Needs Today versus Future

The Water Supply Plan is focused on a future 2040 date. How will land be developed in 2040? What will water use look like for various customer types at that time? Will climate change impact available water supply or increase water demand? Will the City's water supply be resilient enough to weather droughts in 2040?

The Water Supply Plan assumes that the City is fully developed with all "green field" lands developed and using City water supplies. This is why the construction of a new development does not impact the Water Supply Plan unless the Comprehensive Plan land use designation is changed. It is all already included in water supply modeling.

The modeling efforts and technical analysis that are involved with this study are future-focused. They do not directly evaluate today's water needs. The City is already prepared to support existing customers with existing water supply and infrastructure. Available water supplies and reservoir storage are sufficient to support all indoor needs of existing customers and, with the exception of drought conditions, can fully support all outdoor water needs of existing customers.

As discussed below, weather variability can cut existing water supplies by a third or more. This is where drought management strategies are important in ensuring that the water supply is resilient for the current and future needs of the community. With drought management, the system can withstand major droughts and protect water services for our existing and future customers.

Previous Water Supply Plan Analysis

The last update to the Water Supply Plan was completed in 2014. In that analysis, multiple assumptions were made about future conditions as the City approaches build-out. These assumptions were wide-ranging and included everything from how much water to expect in Clear Creek (the City's primary drinking water supply), to how customers will use water in the future, and what new development might look like.

Through significant study and research, assumptions were made for each of these variables, and those values were put into a computer model that generated a single set of numbers that represent the future water supply, the City's future water needs

(or demand), and the associated gap. These were the results of that analysis that was previously shared with City Council:

- Water Supply = 31,300 acre-feet (Note: 1 acre-foot is approximately 325,000 gallons)
- Water Demand = 33,300 acre-feet
- Water Gap = 2,000 acre-feet

With this analysis, there was a very clear message that there is a potential for a water shortfall in the future.

These numbers were previously shared during executive session with City Council because, at the time, there were concerns this information would impact negotiations for procuring new water rights. Today, there are extraordinarily few water rights left available to purchase within the City's water system. While the City will still buy water rights when/if they become available, the City must now find solutions beyond the simple purchase of new water rights to meet the needs of the community.

Water Supply Plan Update – A Robust Analysis

The 2014 Water Supply Plan results were helpful in a number of ways. The results were simple to talk about and easy to understand. They appropriately identified that there was a potential for a water supply shortfall, and they maximized the use of technology that was available at that time.

Ultimately, though, the analysis provided only a single snapshot of one possible future. It did not provide information about the range of possible futures the City's water system could encounter and what risk those variabilities might be to the water supply.

Intuitively, we understand that some years there will be plenty of water. Other years there will be drought. Customers may decide to install xeric landscaping and use less water or they may increase their installation of turf grass and increase their water use. No single year in the future is likely to actually have a water demand of exactly 33,300 acre-feet. Nor will any year have exactly 31,300 acre-feet of water supply. Every year will be different, and different variables will impact both water supply and water demand in different ways.

With better computing power today than was available in 2014, there is now the ability to look into a broader range of possible future conditions. Through industry-leading modeling, this Water Supply Plan update evaluated not just one model run – but millions of model runs. This allowed for the evaluation of more than just a single water supply future. It allowed for the evaluation of a full range of possible futures, which provides greater understanding of the variability that could occur in the water supply and water use.

From the perspective of how much water the City's water system can produce, these model upgrades have provided critical understanding of how vulnerable the system is

to varying climactic conditions. The model has been upgraded to incorporate probabilistic modeling based on a tree ring study that provides information about wet and dry cycles that the water supply might experience in the future. One major finding of this new analysis is that there is a fifty-fifty chance in the next century of the City experiencing a drought worse than what has been seen in the last century.

From the perspective of how much water the City will ultimately need, a thorough analysis was completed on virtually all 33,000 water accounts in the City. It evaluated water consumption based on land use, indoor and outdoor uses, and even age of construction. This provided a much clearer understanding of the range of possible demands that could be seen for each development type, and also provided increased understanding that that demand might change over time. By understanding how each development type uses water, it allowed for a thorough analysis of how changes to the Comprehensive Plan could impact the water supply needs of the community now and in the future.

This increased knowledge provides a clearer understanding of what risks most threaten the City's water supply system. And it also provides a clearer understanding of what actions the City can take to provide the most meaningful impact to the City's water supply resiliency.

Water Supply Plan Update – Scenario Planning

As discussed above, there are a multitude of different assumptions that must be made to perform an analysis of the water supply. Of these assumptions, there were a number of variables that were of greatest interest. These variables were more specifically evaluated and vetted. These variables are the following:

- *Land Development and Redevelopment.* Adding or changing development types can impact how much water the City will need. The City is largely built out with only 5-10% of the land in the City available to be developed and a similar amount that could potentially be redeveloped. How much impact does this remaining area have on the ultimate water needs of the community?
- *Water Conservation Trends.* As has been discussed in previous presentations, the City is seeing a slow decrease in water demand over time. Can water conservation trends significantly impact the ultimate water needs of the community?
- *Climate Change.* In general climate change models show the Front Range will likely have increased temperatures over the next 20 to 50 years. Increased temperature can affect a number of different aspects of the water cycle, particularly the amount of water that would be available to the City, the timing of when that water is available, and the amount of water needed to irrigate outdoor landscaping. The climate change models used in these scenarios were identified as representative in the Joint Front Range Climate Change Vulnerability Study (JFRCCVS).

Results

As mentioned above, the 2014 Water Supply Plan identified a 2,000 acre-foot gap. These updated Water Supply Plan results. The results of these scenario runs show a range of 23,400 to 34,500 acre-feet in water supply that can be produced by the City's system (which assumes a number of items including the completion of the Wattenberg Reservoir Complex). This brackets the 2014 Water Supply Plan results of 31,300 in water supply.

A baseline condition was evaluated to determine water needs of the community using a land use map similar to the existing Comprehensive Plan land use map, a continuation of current conservation trends, and minimal climate change impacts. The set of model runs for this baseline condition produced a range of results of how much water the City needs at development. Water demand results vary from the 2014 Water Supply Plan primarily because the updated analysis includes conservation trends. In 2014, the downward trend in water demand was not yet clear and was thought to be associated with what is termed "drought shadow". A drought shadow is when water demand remains low for a period of time after drought restrictions are implemented. There is also a lot of variability in water consumption from year to year that can mask consumption trends. Now, though, twenty years of data shows a consistent decline in water consumption. Backed by significant research into trends seen by other entities and experts in the water consumption field, it is appropriate to assume that the conservation trends seen in the last 20 years can continue over the next 20 years assuming continued support for conservation.

The water demand results for this baseline condition ranged from 16,000 to 23,000 acre-feet. Substantially less than the 33,300 acre-feet seen in the 2014 Water Supply Plan.

This means that, for this scenario, there is sufficient water to support the water needs of the community at build-out. That said, this result is contingent on multiple assumptions coming to fruition over the next twenty years. In evaluating each of the scenarios, it is increasingly clear that variables in and out of the City control can significantly impact the ultimate water supply and water demand of our community. Understanding each of these variables is important in helping guide policy decisions that will affect the ultimate resiliency of the City's water supply.

The key takeaways on variables largely **outside** of the City's control:

- Water supply can vary by as much as 11,100 acre-feet depending on weather and drought management activities.
- The water supply availability guided by the tree-ring study largely encompasses drought issues that could be expected from climate change modeling. Climate change was not a major driver of ultimate water needs. As we learn more and climate change models improve, additional study in this area will be needed.

Key takeaways on variables **within** the City's control:

- Moving to a high-conservation, xeric-landscaping future could save the City between 3,690 acre-feet and 4,200 acre-feet depending on land use trends. Moving to a low-conservation future would cost the City between 8,660 acre-feet and 9,343 acre-feet depending on land use trends. Increased demand of this magnitude would result in significant water supply shortfalls.
- In a future scenario with a weak economy and land use less dense than what is currently anticipated in the existing Comprehensive Plan, the City would save between 930 acre-feet and 1,435 acre-feet. If the City becomes significantly more dense than is anticipated in the current Comprehensive Plan, the City would spend an additional 1,3400 acre-feet to 2,020 acre-feet more water. This quantity of water impact is not insignificant, but it is not as impactful as conservation trends.

Policy Decisions that will Impact Water Supply

- Support of conservation practices is the single biggest thing the City can do to meaningfully impact resiliency against drought, climate change, and development trends.
- Minor changes to land uses beyond the Comprehensive Plan can be accommodated as long as current conservation trends continue. For context, a minor change might be changing a Comprehensive Plan Land Use designation for a smaller parcel from an office land use to a medium density residential land use type. Both of these land uses have moderate water needs. There would be a small amount of increased water demand, but it would be minimal in comparison to other factors.
- Major changes to proposed land uses, on a larger geographic scale, can have a negative impact on resiliency and should be considered carefully. For context, a major change might be changing a Comprehensive Plan Land Use designation for a larger parcel from a medium density residential use to a high-density residential use, which results in greater water use both due to change in land use type as well as the scale of the amendment. This change would have more substantial impacts to water supply and would need to be carefully considered. As a part of any Comprehensive Plan Amendment request, Staff provides information on if the request is a minor or major impact to the Water Supply Plan.
- Support of infrastructure maintenance and the completion of the Wattenberg Reservoir Complex will ensure the infrastructure is in place to meet the water supply levels shown in this modeling.
- Supporting conservation at a policy level provides a measure of flexibility for future decision making.

The Water Supply Plan update supports the strategic plan goals of Beautiful, Desirable, Safe and Environmentally Responsible City by providing clear information on water supply issues to support well-informed policy decisions.

PUBLIC COMMENT RECEIVED AFTER ORIGINAL PACKET WAS POSTED ON

MAY 6, 2021

Baden, Jennifer

From: Karen Ray <2karenray@gmail.com>
Sent: Tuesday, May 11, 2021 7:49 AM
To: PCPubComm
Subject: Public Comment Planning Commission May 11, 2021 on Water Supply Report

Public Comments on New Business: Water Supply Report: Planning Commission May 11, 2021
From: Karen Ray, Shaw Blvd., Westminster, CO

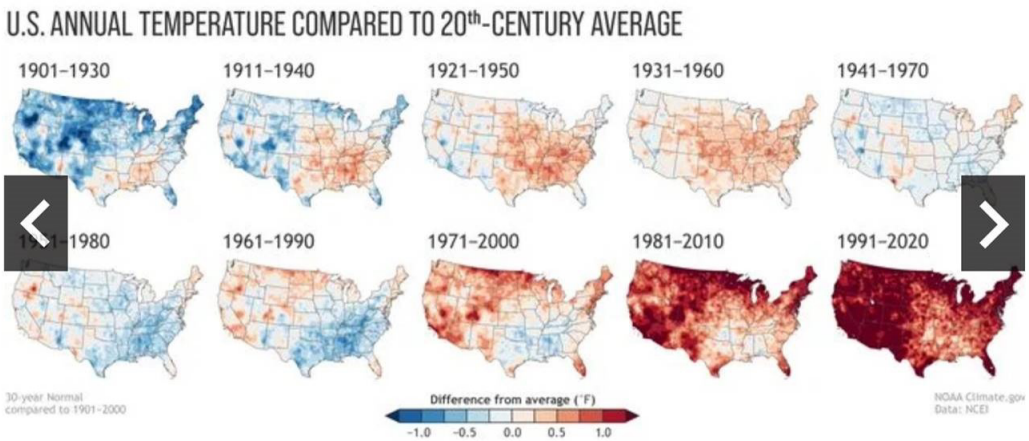
I have read through the summary provided to commissioners tonight and find flaw in the conclusions being made.
While this commission is made up of local business representatives and not scientists or environmental experts, you are being asked to weigh in on decisions that will affect the health and well being of residents now and in the future. Actions that are taken today will have monumental impacts on what life will be like in the future.

What is normal? Climate Science says more weather extremes, more droughts, and ongoing global warming. The National Oceanic and Atmospheric Administration Report released May 4, 2021 shows that most of Colorado, including the Front Range, is warming and drying.

https://www.denverpost.com/2021/05/10/colorado-weather-new-climate-normals

The City Water Supply report offers different scenarios and hopeful thinking that projects the best-case scenario—one with minimal Climate Change, even greater conservation on the part of residents, and finding alternative water resources—as the scenario that the city makes planning and development decisions based on.
The report acts as more of a justification to the current buildout plans than an objective science-based analysis of the current finite water supplies and escalating impacts of climate change.
Without balancing the equation, the only assumption that can be made is that the problem is being kicked down the road. This is really not an option today.

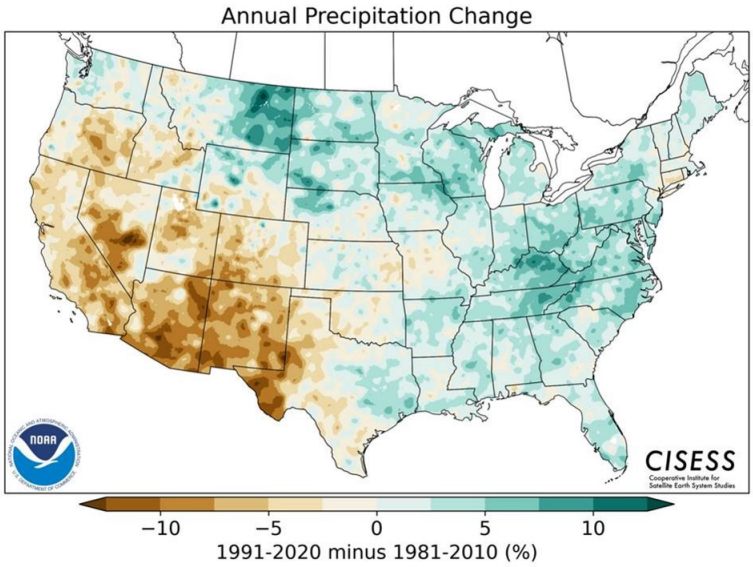
We are living through a continuing drought, and in 2020 saw some of the worst fires in our State's history. The effects of the continuing changing climate are just being realized and accepted as the normal cities must adjust to. And cities must change behaviors and habits, stop acting as though our resources are limitless, re-evaluate the way they build, and implement land preservation and conservation as part of the effort to lessen the impacts of climate change.
We cannot accept a gap in water supply and demand. We cannot sell our future and think that someone else will figure it out down the road.
This report is flawed in its conclusions on how the city should plan for the future. Water is a finite resource and the fact is that resource is literally drying up.



1 of 2

A series of maps shows the changes in average temperature across the U.S. over the last century, according to data released by the NOAA on Tuesday, May 4, 2021.

When you look at the national changes, you'll notice that much of the country has warmed compared to the previous normals,` with the exception of the far Northern Plains. When looking at the precipitation trends, the desert southwest has dried rather significantly since the last update, while much of the rest of the country has seen an increase in precipitation, most notably, again, in the far Northern Plains.



1 of 2

A map of changes in annual precipitation normals, according to data released by the NOAA on Tuesday, May 4, 2021.