Why Renewable Water?
Securing our future, protecting our investments
Key Factors Driving This Conversation

• 2/3 of the water that originates here is promised to rights’ holders outside the state (this is why it’s expensive)

• Two Forks dam denied by EPA in 1990; communities forced to look at alternatives

• Douglas County witnessed unprecedented growth in 90s

• 2003 South Metro Water Supply Study highlighted drastic reductions in well water supply
The Problem:
Increasing demand and decreasing supply of non-renewable ground/well water
What We Know:
Well water from Denver Basin aquifers is being depleted

- CPNMD relies on 7 wells, some drilled as deep as 2,000 feet below the surface
- These wells do not get replenished
  - And groundwater is increasingly expensive because water must be extracted from layers of sandstone and shale
- Water levels in the aquifers drop 17 to 65 feet each year
- Our pumps have been lowered as far as they can go
What We Know:
The Denver Basin Aquifers Are A Shared Resource

• Over 330,000 people in Douglas County alone rely on water from the wells in the Denver Basin aquifers; usage continues to increase
• Douglas County population will continue to grow, which means water utilities throughout the region will pull water from wells at increasing rates
  • 47% increase from 2010 to 2030
  • 68% increase by 2050
What We Know:
Despite conservation efforts, usage increases

• CPNMD continues its commitment to conservation
  • Conservation-based rate structure
  • Free 90-minute irrigation/sprinkler audits
  • Rebates for water-efficient nozzles, rain sensors, low-flow toilets and showerheads, sod replacement, etc.
  • Watering schedule (every 3 days during early morning and late evening)
  • Abundance of tips and resources on our website
Water Use in Castle Pines is Increasing
One Day Summer Peak for Castle Pines

38% increase
2013 to 2017

2013: 2,900,000 gallons
2014: 2,800,000 gallons
2015: 3,400,000 gallons
2016: 3,600,000 gallons
2017: 4,000,000 gallons
The Solution:
Reduce dependency on ground/well water; reserve it for emergencies
What We’ve Accomplished:
Between 2003 and Today

✔ Purchased surface (renewable) water rights
  • East Plum Creek, Upper South Platte, Lower South Platte

✔ Purchased storage (requires entities to supply water)
  • Rueter-Hess Reservoir, Chatfield Reservoir (once complete)

✔ Delivering renewable water October – April
  • Made possible through partnership with Centennial Water & Sanitation District
12-Year Renewable Water Plan

• In 2013, CPNMD commissioned a 2-year analysis of 300 options for renewable water
• Engineering experts and consultants narrowed the options to the 3 most economical solutions
• In 2015, the Board of Directors chose a strategic direction centered on expanding existing and building new partnerships to help contain costs
Components of the Plan

• $65.5 million for 50% renewable water by 2030
  • Will allow us to utilize renewable water rights we already own
    • East Plum Creek, Upper South Platte, Lower South Platte (LSP)
  • Will pay for enhanced treatment capacity at Centennial
    • Surface water requires additional treatment and processes
  • Will fund the construction of gravel pit storage at LSP near Fort Lupton and infrastructure to move water to and from
Renewable Water Expansion
Project Capital Costs = $65.5M

- Contingency & Ancillary Costs: $2,500,000
- New Storage & Delivery Systems for Lower South Platte: $33,000,000
- Expanded Treatment Capacity at Centennial: $30,000,000
Capital Projects By Year

- CWSD Engineering
- CWSD WTP Expansion
- Chatfield Capacity Purchase
- LSP Engineering
- LSP Gravel Pit Storage Construction
- LSP Pump Station

Years:
- 2020
- 2021
- 2022
- 2023
- 2024
- 2025
- 2026
- 2027
- 2028
- 2029
- 2030
Financing Options: 
*Mills (Property Taxes) v. Fees*

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<tr>
<th>Home Value</th>
<th>$500K</th>
<th>$550K</th>
<th>$600K</th>
<th>$700K</th>
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<tr>
<td>15 Mills</td>
<td>$540</td>
<td>$594</td>
<td>$648</td>
<td>$756</td>
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<tr>
<td>$60 Fee*</td>
<td>$720</td>
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<td>Difference</td>
<td>+ 180</td>
<td>+ 126</td>
<td>+ 72</td>
<td>- $36</td>
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Castle Pines median home price is $575,000

“Break even” point is about $700,000

*To pay for these capital costs, fees will have to be increased to $60/month per residential tap at some point in the near future.*
Financing Options:
A Closer Look at Mills/Property Taxes

12-YEAR RENEWABLE WATER PROJECT = 15 MILLS

• 2017 & prior = 41 mills (w/legacy debt payment)
• 2018 = 19 mills (legacy debt is paid off)
• 2019 onward = 34 mills (19 base mills + 15 mills for renewable water)

NET DECREASE OF 7 MILLS FROM 2017 TO 2019
Benefits of Paying for Capital Costs via Increased Property Taxes

• Unless your home is valued ~$700,000 or more, you will pay less in property taxes than fees.
• If you pay for these capital costs in property taxes, they can be used as a deduction on your federal taxes.
• CPNMD is paying off its legacy debt in 2017, which means the property taxes they collect go down.
  • Even if voters approve an increase to pay for renewable water, tax bills will still be less in future years than they are today.
Recap

• We only keep 1/3 of the water that originates here, making surface water expensive
• Groundwater is also expensive because we have to drill through layers of rock thousands of feet below the surface
• But ensuring a sustainable future water source is the best way to protect our investments
• We already own renewable surface water rights, but we must invest in additional treatment, storage and delivery systems to put them to use
• Beginning to invest now in this 12-year plan is the most cost-effective method because construction costs will only go up
• We’ll save money by paying for it through taxes rather than fees
Next Steps: Now – Early 2018

• Continue public outreach/education efforts and gather community input
  • Community survey
  • Presentations to HOAs, Chamber groups, etc.
  • Communications via email, website, Nextdoor, Facebook and the Connection
  • Participation in community events
• Board of Directors will decide in 2018 whether to pursue a bond election
Q & A