Wifi:
NCWCD-Guest
Username: wirelessg
Password: northernH2o

Poll:
Text “NW2019” to 22333
pollEV.com/nw2019
WELCOME TO NORTHERN WATER

2019 Winter Water Efficiency Stakeholders Meeting
January 15, 2019

Guest Wifi:
User: wirelessg
Password: northernH2o
Welcome!

- **Purpose**: Update allottees about our Water Efficiency program, pertinent issues and available tools to implement conservation.
- **Goals for today**: Inform – Innovate - Impact
- We’re glad you came, and we have a big day for you!
Logistics

- **Bathrooms**
  - Down the hall
  - Downstairs

- **Evacuation**
  - Out this door
  - Down the stairs
  - Convene in grass
Timeline

Jan 2017
Board Retreat

Jul 2017
Case Studies

Aug - Sep. 2017
Outreach

Oct. 2017
Plan Framework
Recommendations

Nov. 2017
Compile results from
focus groups &
interviews

Dec-Apr. 2018
Plan scoping

Apr. 2018
Stakeholders
Meeting

Jul-Aug 2018
Board Review

Sep. 2018
Begin plan
implementation
Identified Priorities

- Centralize Information
- Technical Support
- Education, Outreach and Messaging
- Regional Coordination
Centralize Information & Connect Regional Partners

- Functional water efficiency website
- Centralized resources (plans, ordinances, local programs information, data, watering schedules, online tools…)
- Partnership with Irrigation Technology Center
- Partnership with ReSource Central
- Grant programs facilitation
Demonstration studies driven by stakeholders needs (design, installation, maintenance)

Conservation Campus

Landscape Consultations

Collaborative Landscape Grant Program

Water Audits (residential & non-residential)

Expanded Trainings & Certifications

Technical Support
Education, Outreach & Messaging

Periodic Stakeholders Meeting

Drought response communications plan

Water efficiency messaging
Regional Cooperation

Regional Studies

Legislative Issues
Drought Contingency Planning

What is Northern Water’s role?
Between 2002 and 2017 SNWA GPCD declined by 36% while the community's population increased by nearly 660,000.
**WEP Update: Inform - Innovate – Impact**

<table>
<thead>
<tr>
<th>Changing water use: ag to muni</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximize water efficiency &amp; value</td>
</tr>
<tr>
<td>Minimize waste</td>
</tr>
<tr>
<td>Educate</td>
</tr>
<tr>
<td>Facilitate</td>
</tr>
<tr>
<td>Partner</td>
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<tr>
<td>Projects</td>
</tr>
</tbody>
</table>
STATE OF COLORADO
HOUSE BILL 19-1050

House Committees Senate Committees
Energy & Environment
A BILL FOR AN ACT

CONCERNING THE PROMOTION OF
WATER-EFFICIENT LANDSCAPING ON
PROPERTY SUBJECT TO
MANAGEMENT BY LOCAL
SUPERVISORY
ENTITIES.

Allows use of
Xeriscape in common
areas

Builds on SENATE
BILLS 13-183,
14-017, 14-104,
15-008 - The Land
Use Bill
Cherry Creek Homeowners Association, LLC

Old Landscape, before

After renovation

Courtesy Don Ireland, C3, LLC HOA
New plants have lured more pollinators.
The Quiet Hero – the Water Meter

By Peter Mayer, P.E., Principal, Water Demand Management, Boulder, Colorado

Water utilities are today faced with a historic demand for water conservation coupled with the need to balance the demand with available supply. The water meter is the quiet hero of the water system. This article will explain why and how the water meter works and what we can learn with its help.

The accurate measurement of water use has played a quiet but essential role in reducing urban water demand.

Water utilities are faced with the challenge of balancing the demand for water with the available supply. The water meter is a critical tool in this process, as it accurately measures water use and helps utilities identify areas where conservation efforts can be focused.

Traditional water meters are not capable of providing the level of detail that modern water management systems require. They simply record the volume of water used, without providing information about the timing or rate of use. This makes it difficult for utilities to identify high-use customers or to implement targeted conservation measures.

The water meter is a critical tool in water demand management, as it allows utilities to:
- Identify high-use customers
- Implement targeted conservation measures
- Monitor the effectiveness of conservation efforts
- Forecast future water demand

By providing accurate and detailed information about water use, the water meter enables utilities to make informed decisions about water supply and demand.

The water meter is a proven technology that has been used for over 100 years. However, the recent advancements in metering technology have made it possible to develop smart water meters that can provide even more detailed information about water use.

Smart water meters are capable of collecting and transmitting data in real-time, allowing utilities to monitor water use on a continuous basis. This information can be used to:
- Monitor the performance of water conservation programs
- Identify leaks and other water losses
- Forecast future water demand

The water meter is a powerful tool in water demand management, and its role will only become more important as the need for water conservation increases.

Utility companies can use this information to:
- Identify high-use customers
- Implement targeted conservation measures
- Monitor the effectiveness of conservation efforts
- Forecast future water demand

The water meter is a critical component of any water demand management strategy, and its role will only become more important as the need for water conservation increases.

To get useful information from the meter, traditionally water meters are "out of sight, out of mind." Instead of a meter box or a pit at the street in the formerly known "cold" department. A data log storage/management were considered to be out of reach until recently. The utilities have been encouraged to start using their existing data to make informed decisions about water conservation.
Water Efficiency Progress & Innovation

Policy
Technology
Research
Methods
Solutions
Collaborations
# Water Efficiency Program: Innovate

<table>
<thead>
<tr>
<th>Workgroups</th>
<th>Berthoud “Conservation” Campus</th>
<th>Landscape Grants Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Future:</td>
<td>Water Use Audit Partnerships</td>
<td>Communications &amp; Collateral Team</td>
</tr>
<tr>
<td>Low-Income</td>
<td>Landscape Consultations</td>
<td>Conservation Gardens Renovations</td>
</tr>
<tr>
<td>New Construction</td>
<td>Trainings &amp; Certifications</td>
<td>Campus Signage</td>
</tr>
</tbody>
</table>
Non-Residential Consultations

Goals...

- Position as objective
- High value outcomes
- Interactions inform program directions
- Large irrigated areas with impractical turf areas (HOA greenbelts)
- Precursor to Grants

Status: What we've learned, where we're at:

- Perceived as trusted and a welcome 3rd party
- 13 customers; HOAs, municipalities, developers
- Concerns: manageability, water cost, use overall
- Small, medium and large landscape areas
- Great potential demonstrations
  - Multiplier effect
Customers

Motivated
Capitalized
Informed
Eager to learn
Nervous
Excited to change
Open to ideas

Impractical, challenging or unnecessary areas not adding value

Make me better!

24” of turf??
Consultations

Findings:…

- Major interest in converting high water use turf to native seed mix
- Low probability of success without good direction
- Need good landscape examples to commit

Response…

- Collaborate on turf to native transitions and guidance
- Determine Green Industry capability
- Develop turf alternative examples

HOA common area next to public trail
Conservation Campus

Vision: Learning laboratory
Indoor/Outdoor Demonstrations

- Fixture upgrades
- Indoor audit
- Car wash cert
  - 40 Gallons/wash
- Emulate concerns

HYBRID!
Conservation Campus

Vision: Learning laboratory
Indoor/Outdoor Demonstrations

- Outdoor Audit
- Irrigation Upgrades
- Landscape Modifications
- Tree walk / New signage
- Composting
EXISTING TRAININGS & CERTIFICATIONS

- Northern Water Irrigation Auditor Trainings
- Irrigation Association Classes and Exams
- Conservation Garden Fair
- Fall Field Day
TRAINING TARGET AUDIENCES

- Contractors
- Green Industry
- Water Professionals
- General Public
- Property Management Professionals
- HOA Boards
ENHANCEMENTS

Watershed Wise Landscape Professional (Green Garden Group) - Oct 18, 19 2018

CSU Extension Homeowner Bootcamp - March 11, 18, 25

Turf to Native Grass Workshop - Spring TBD

CSU Short Course - Green Industry - July – TBD
Irrigation Association Training – WaterSense

- Certified Landscape Technician – March 4th
- Certified Landscape Irrigation Auditor – March 5, 6
Tools for you – and your customers

Ready to Use:
- Posters
- Fact Sheets
- Studies
- FiFiFi Flags

Tours

New Website (2019)…
Ready to Use: EPA WaterSense Products:
Indoors Irrigation Controllers
Spray Sprinkler Bodies
In dev: Soil Moisture Sensors
## Tools for you – Programs

### Ready to Use: EPA WaterSense

**New Homes**

**Promotional Partners**

**Tools**

**Education**

---

**Northern Water is a Promotional Partner**

**H2Otel Challenge**

**Water Score for Multifamily Housing**

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<table>
<thead>
<tr>
<th>Indoor Criteria:</th>
<th>Outdoor Criteria:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaks</td>
<td>Landscape Design</td>
</tr>
<tr>
<td>• No visible leaks</td>
<td>• Complies with WaterSense’s <a href="https://www.epa.gov/watersense/professional-certification">Water Budget Tool</a> for water-smart design</td>
</tr>
<tr>
<td>Service Pressure</td>
<td>Irrigation System*</td>
</tr>
<tr>
<td>• Service pressure test ≤ 60 psi</td>
<td>• WaterSense labeled irrigation controllers</td>
</tr>
<tr>
<td>Hot Water Delivery</td>
<td>• Designed or installed by an irrigation professional certified by a WaterSense labeled program</td>
</tr>
<tr>
<td>• 10°F temperature change observed within ≤ 0.6 gallons</td>
<td>• Audited by an irrigation professional certified by a WaterSense labeled program</td>
</tr>
<tr>
<td>Plumbing Fixtures</td>
<td>• Multi-family: Independently metered</td>
</tr>
<tr>
<td>• WaterSense labeled toilets, bathroom sink faucets, and showerheads</td>
<td>Pools and Spas*</td>
</tr>
<tr>
<td>Dishwashers and Clothes Washers*</td>
<td>• Single-family: Cover installed</td>
</tr>
<tr>
<td>• ENERGY STAR certified dishwashers and clothes washers</td>
<td>• Multi-family: Independently metered, gutter or grate system used, sorptive media (pre-coat) or cartridge filtration system installed</td>
</tr>
</tbody>
</table>

**Promotional Partners**

- [https://www.epa.gov/watersense/professional-certification](https://www.epa.gov/watersense/professional-certification)
- [https://www.epa.gov/watersense/our-water](https://www.epa.gov/watersense/our-water)
Tools for you – Professional Certification

Ready to Use: EPA WaterSense Programs
Find a Pro Professional Certification

Certification Programs for Irrigation Professionals
Background

WaterSense
Find a Pro
Irrigation with a Pro

https://www.epa.gov/watersense/professional-certification
Demonstration Garden - Concept

- Landscape Showroom
  - Test drive new options – buy-in for change
- Habitat Hero-Pollinators
- Milkweed-monarchs
- USGBC's LEED
- Scalable Solutions

Four Season Sensation garden design from Colorado Vista Landscape Design, Inc.
Showroom area possibilities
ReSource Central – Irrigation Study-Results

Presenter: Mary Hattendorf, Ph.D.
Soil Water Scientist, Northern Water
# Garden in a Box Irrigation Study

**What we did**
- Planted 3 GIAB gardens
- Irrigated at 3 levels
- Visually rated the gardens biweekly for 3 years

**What we found**
- GIAB irrigated at a plant factor of 0.3 had adequate visual appeal
- Using this PF, xeric gardens on average would use rainfall for 74% of water needs vs. 32% for traditional cool season turf
- On average, xeric gardens needed 3.6 in of supplemental irrigation vs. 20 in for traditional turf.

Morning Sunrise in 2016
Garden in a Box 2019 Showroom

- Plant 2019 Spring boxes
  - Showcase newly planted
  - See over time
  - Spring and Fall
  - Small spaces
  - Simple renovations

Spring Awakening Garden
Collaborative Water Efficient Landscapes Grant Program

Objectives
Assists water-efficiency landscape projects within our boundaries

Expand reach of Northern Water Programs
WHO: HOAs, commercial sites ... NOT single-family

WHEN: Annual program – annual theme

HOW MUCH
- $100,000
- $5,000 - $15,000/project
- 50% match

Focus
- Public education
- Showcase before/after

Commitments
- Flow metering . Landscape Plan . Plants list
- Long-term maintenance

Northern Water not involved in labor or design aspects of project, but could assist in design reviews
Let’s lead the way!