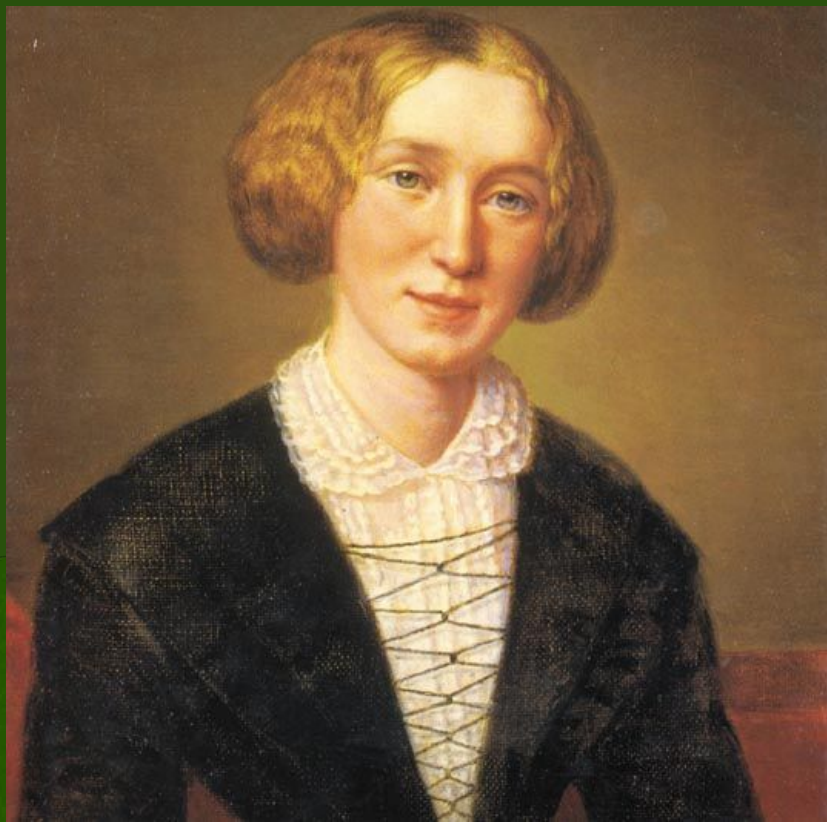
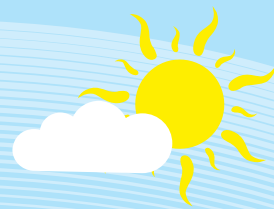




Environmental Stewardship and Community Service Leadership: *Essential Best Practices for the Clean Water Utility of the Future*

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February 12, 2020

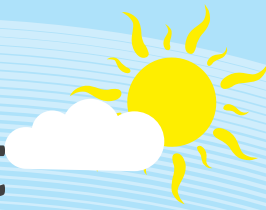


The greater good of the world is largely due to the unhistoric acts of the faithful men and women who may rest in unvisited tombs.”

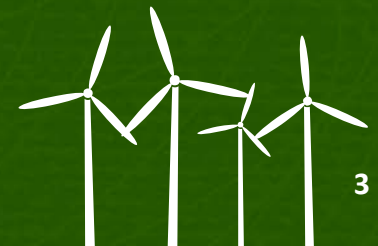
~ George Eliot



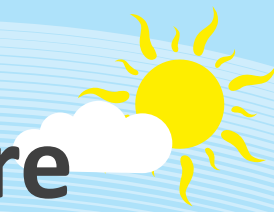
The Clean Water Utility of the Past



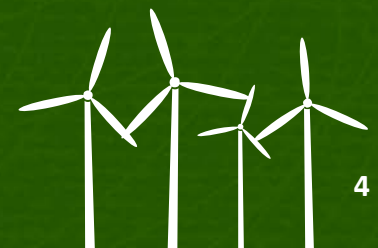
- Permit compliance is the ceiling of aspirations
- Minimal interaction with Community and Regulatory Agencies



The Clean Water Utility of the Future



- Permit compliance is the floor
- The Utility of the Future is a proactive environmental and community service partner
 - ✓ Effluent optimization
 - ✓ Water reuse
 - ✓ Cost efficiency
 - ✓ Asset management
 - ✓ Reducing carbon footprint/Green energy
 - ✓ Green Infrastructure
 - ✓ Community service
 - ✓ Organizational culture/workforce development



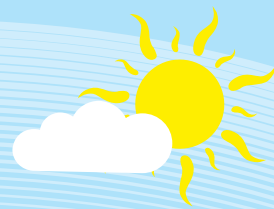
Four Levels/Stages of Utility Investment in Their Communities



- Indifference
- Do No Harm
- Be a Good Neighbor
- Be a Proactive Advocate and Anchor Institution that is Invested in the Quality of Life of our Community



Do No Harm → Odor Prevention



- Closed odorous sludge composting facilities
- Odor inventory by independent consultant
- Installed new odor control systems at plant headworks
- Imposed zero tolerance policy with respect to odors from carelessness (doors left open; odor systems left off, etc)
- Increased supervision, especially on weekends
- Numerous outreach attempts to neighboring community to improve relationship



Becoming a Good Neighbor- Environmental Justice Initiatives



- Reduced rates for Camden City residents
- Elimination of truck traffic
- Creation of a waterfront park and fishing pier
- Creation of a Community tree nursery



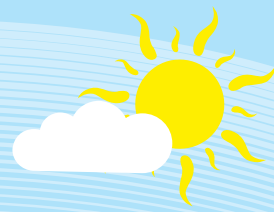
Waterfront South Rain Gardens Green Infrastructure on Brownfield Sites- *Before & After*



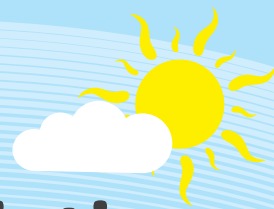
Phoenix Park Project- *Before*



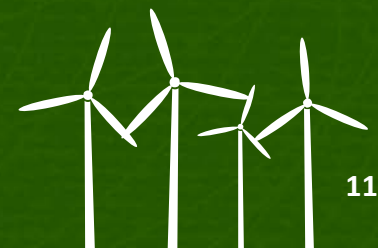
Phoenix Park Project- *After*



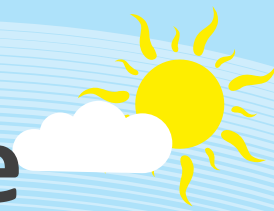
Environmental & Community Service Leadership- Camden Collaborative Initiative



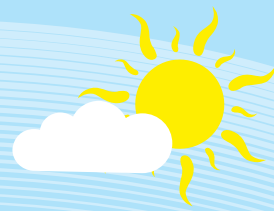
- Collaboration among USEPA, NJDEP, CCMUA, Camden City and 60 other environmental and community service agencies, to address environmental issues
- Six working groups formed:
 - Flooding
 - Air Emissions
 - Contaminated Sites
 - Recycling
 - Environmental Justice
 - Environmental Education



Camden Collaborative Initiative



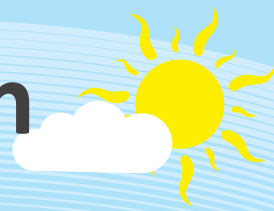
Green Infrastructure & Flooding Control



- A completely voluntary collaborative among NJDEP, NJ Tree Foundation, Rutgers, CCMUA, Camden City and Cooper's Ferry Partnership to reduce flooding citywide
- 60 rain gardens, stream daylighting, depaving projects and 1000 trees planted
- Combined sewers replaced and rehabilitated
- Assistance with operations and maintenance oversight (Peer to Peer Collaboration)



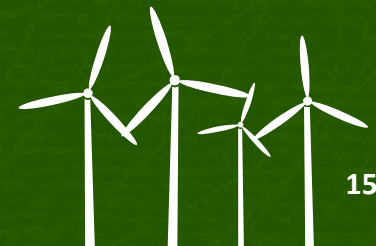
Riverfront Access through Creation of New Parks



- Michael Doyle Riverfront Park (fishing pier)
- Phoenix Park (10 acre riverfront park created from an abandoned factory)
- Gateway Park (40 acre riverfront park)
- Cramer hill Nature Preserve (30 acre riverfront park)
- 100 acres greened and preserved... *and counting*



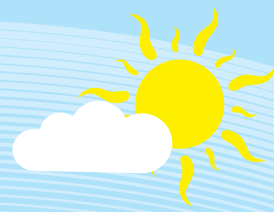
Baldwin's Run Stream Daylighting Project- *Before*



Baldwin's Run Stream Daylighting Project- *After*



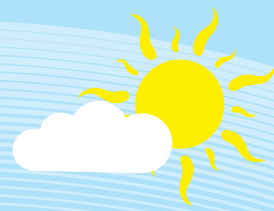
Green Job Opportunities



- Power Corps- *partnership with AmeriCorps to provide green infrastructure maintenance jobs and life skills training to 240 at-risk young men & women over 4 years*
- Green Ambassadors- *partnership with EPA, NPS and others to provide green jobs over the summer for Camden high school students with an interest in environmental science*



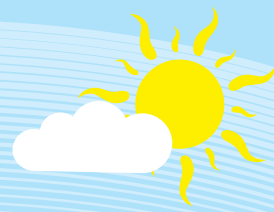
Contaminated Sites



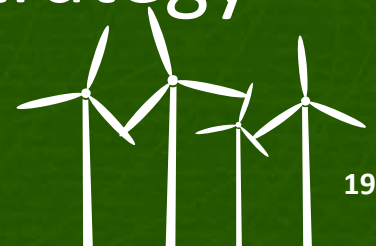
- Identification of best opportunities for redevelopment
- Identification of best opportunities for green space preservation
- Waterfront South Rain Gardens
- Phoenix Park
- Cramer Hill Nature Preserve
- Gateway Park



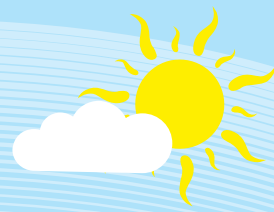
Air Emissions



- Identification of most significant discharges
- Development of BMP's for each industry to cost efficiency minimize impacts from emissions
- Green ports initiative with USEPA
- Development of mobile sources strategy



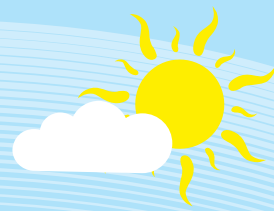
Recycling & Illegal Dumping



- Revised Camden City recycling specification
- Developing Camden City school recycling challenge
- Mobile app to assist with illegal dumping



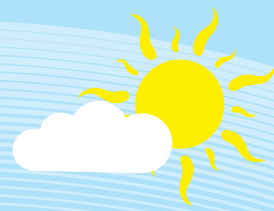
Environmental Justice



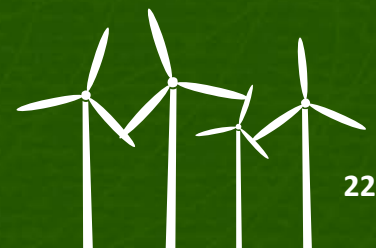
- Developed sustainability/environmental justice ordinance
- Creating four riverfront parks to provide riverfront access to residents
- Sustainable Jersey Silver Certification
- Camden City Host Community Benefit
- National Environmental Justice Initiative



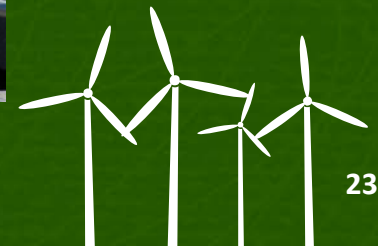
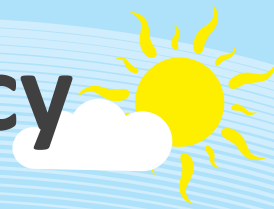
Environmental Education



- Developed environmental education resource guide for Camden Schools
- Established Camden Green Ambassadors Internship Program
- Local Awareness Program



Energy Conservation & Resiliency Program



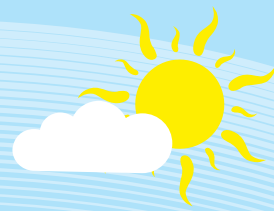
Energy Conservation & Green Energy Initiatives



- Energy conservation measures
- Solar panels
- Digestion/Combined heat and power
- Sewage heat recovery
- Community microgrid to keep hospitals, drinking water plants, police & schools operating even during a city-wide power outage



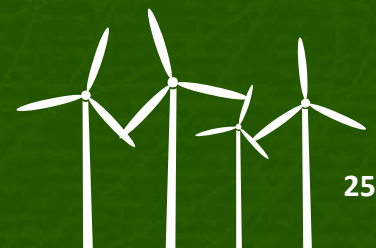
The Cost of Environmental Stewardship & Community Service Leadership



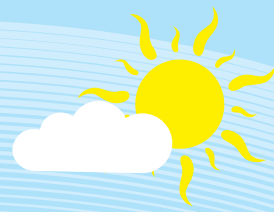
- CCMUA Annual Rate in 1996- \$337 per household
- CCMUA Annual Rate in 2019- \$352 per household
- Factoring in inflation, user rates actually decreased by over 40%

CONCLUSION

Optimizing efficiency and performance allows utilities to be environmental and community service champions while being cost efficient as well



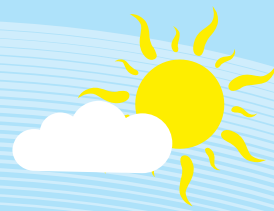
Conclusion



The Clean Water Utilities of the Future have the opportunity, and the obligation, to “become the change we wish to see” and do our part to help save the planet and improve the quality of life for our neighbors by providing environmental and community service leadership.



Thanks for Listening!



If you would like more information, please contact:

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