

NACWA 2012 Excellence In Management Recognition Program
Alexandria Renew Enterprises (ARenew), Alexandria, Virginia
Product Quality

Produces treated effluent, and process residuals, at all facilities operated, in full compliance with regulatory requirements and consistent with customer, public health, and ecological needs.

ARenew has consistently met state of the art treatment levels at its Water Resources Facility. ARenew will receive the NACWA Peak Performance Platinum 7 Award this year. This is all the more exciting as the facility is currently under construction again to implement the final phases of state of the art nitrogen removal.

ARenew treated more than 13 billion gallons of water last year. We kept 32 million pounds of sediment from entering the Chesapeake Bay. We removed 680,000 pounds of phosphorus and 4.2 million pounds of nitrogen. Our biosolids met all requirements for Class A/EQ material.

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Financial Viability

Understands the full life-cycle cost of the utility and establishes and maintains an effective balance between long-term debt, asset values, operations and maintenance expenditures, and operating revenues. Establishes predictable rates—consistent with community expectations and acceptability – adequate to recover costs, provide for reserves, maintain support from bond rating agencies, and plan and invest for future needs.

ARenew uses a 10 year planning cycle for its capital planning, its renewal and replacement planning and its rate modeling efforts. From this, staff recommends to our Board a three year rate structure. Even though rates are set for three years, staff undertakes a review of the adequacy of the rate set annually during budget review. If warranted, staff recommends rate reductions to the Board as a part of its budget presentation.

ARenew's Board has adopted both a Financial Policy and an Investment Policy, vetted by our Financial Advisor and Legal Counsel. These are used to drive our rate modeling and analysis.

The following metrics are used by ARenew's Board to insure financial stability via the financial policies: debt coverage, days of operating capital on hand, % over/under established budget.

<i>Metric</i>	<i>Target</i>	<i>2011</i>	<i>2010</i>	<i>2009</i>
<i>Debt Coverage</i>	<i>1.40</i>	<i>2.10</i>	<i>2.11</i>	<i>1.85</i>
<i>Liquidity-unrestricted</i>	<i>Min 120 days</i>	<i>455</i>	<i>336</i>	<i>315</i>
<i>Liquidity operating fund</i>	<i>Min 60 days</i>	<i>66</i>	<i>70</i>	<i>Data not available</i>

NACWA 2012 Excellence In Management Recognition Program

Alexandria Renew Enterprises, Alexandria, Virginia

Customer Satisfaction

ARenew provides wastewater treatment services; the entities it serves, the City of Alexandria and Fairfax County, own their collections systems. This means that ARenew has no direct connection to the individual customers it serves. ARenew has also utilized third party billing through Virginia American Water, the private water purveyor used in the City of Alexandria. ARenew will begin doing its own billing, as well as the City's collection system billing, this fall. Because of these issues, ARenew long has not had any focus on customer service and satisfaction.

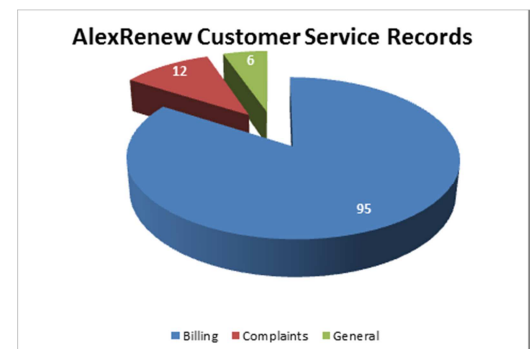
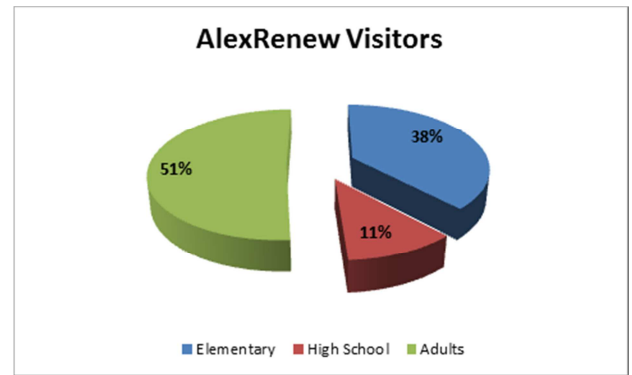
ARenew realized it did not have a customer call center but still required that service; we have trained our receptionist and the Board's Secretary to perform this function per guidelines developed in concert with our communications consultant.

ARenew has implemented WebQA to manage customer inquiries. Through this system, we are able to document each inquiry and our response. Our procedures require a response within 24 hours of receipt of any inquiry; we consistently meet this metric. Using the WebQA information management system, we are able to maintain a database of customer inquiries and service calls in order to track patterns and maintain a working history of specific locations and accounts.

To facilitate company understanding of the needs of the community and City, ARenew's Board Chair and CEO now meet at least annually with the Mayor and members of City Council to review accomplishments and receive advice and direction on the City's annual drivers. This ensures alignment between the City government and ARenew's management. ARenew is now seen as an innovative problem solver for the City because of our West Site program and cost reductions for the joint wet weather program with the City and County. This is acknowledged by meeting requests with the City on various environmental concerns and publicly by City Council and the Mayor during meetings and public hearings which have ARenew involvement.

ARenew's staff and City staff within the Office of Environmental Quality work closely in addressing and meeting several of the City's Eco-City goals and metrics. The results of the climate change metric and reductions in wet weather incidents are reported annually in ARenew's Annual Report and at ARenew's annual presentation to the City's Environmental Policy Committee. ARenew's annual report is required to be submitted to City Council and senior City staff; review with these entities of yearly performance and its impacts to the City is also held.

ARenew has a well-used visitor center in its lobby that is the starting point for the many tours and briefings ARenew provides to the community and our profession. Each year we welcome hundreds of visitors to our facility, ranging from students of all ages to industry insiders and political dignitaries. We also opened our new Visitor Center in the spring of 2010, providing a hands-on learning environment for the community to learn about our people, our process, and our values.



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Employee and Leadership Development

• **Employee and Leadership Development**

Recruits and retains a workforce that is competent, motivated, adaptive, and safe-working. Establishes a participatory, collaborative organization dedicated to continual learning and improvement. Ensures employee institutional knowledge is retained and improved upon over time. Provides a focus on and emphasizes opportunities for professional and leadership development and strives to create an integrated and well-coordinated senior leadership team.

ARenew has developed a robust performance management system. ARenew no longer has a COLA system. Instead, performance reviews are provided annually, with pay increases tied to performance levels. For those individuals that are topped out in their classification, a merit pool has been established. This pool allows for an annual performance recognition payment that does not get added to the overall salary but does provide incentive to perform even if your salary is capped. To make sure that compensation is competitive with the region, ARenew has a Board approved process to review employee compensation every two years. This allows ARenew flexibility to better align salaries with changing market conditions. Wellness benefits, including free gym memberships for employees with a regional gym, were provided as part of an upgraded health benefits package.

ARenew has a training coordinator on staff. The coordinator ensures that needed training, as identified during the performance review process through individual development plans, is identified and provided.

Individual Development Plans are created by the supervisor and employee. It lists mutually agreed upon developmental goals and performance objectives that relate to the employee's key responsibilities, department objectives and ARenew's overall strategic plan.

ARenew instituted MySafeWorkplace, a third party administered 24/7 confidential and anonymous system that allows employees to report workplace issues such as financial and auditing concerns, harassment, theft, substance abuse and unsafe conditions.

ARenew started an intern program last year, partnering with local DeVry University to bring talented seniors into our organization for several month rotations. We started small, focusing on our IT department. We are also looking at local military installations for sources of interns, in the form of returning service men and women.

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Operational Optimization

Ensures ongoing, timely, cost-effective, reliable, and sustainable performance improvements in all facets of its operations. Minimizes resource use, loss, and impacts from day-to-day operations. Maintains awareness of information and operational technology developments to anticipate and support timely adoption of improvements.

ARenew utilizes an integrated Environmental Management System to manage and monitor its processes to ensure continued improvement. This EMS combines the elements of our approved and certified National Biosolids Partnership (NBP) EMS along with a state certified EMS program, through the Virginia Environmental Excellence Program (VEEP). ARenew has received a 'verified' status from our last NBP audit and has attained a VEEP E3 – Exemplary Environmental Enterprise. The EMS Corrective Action process is utilized fully to continue to strengthen our response to process events by mitigating events or preventing future occurrences.

ARenew is currently installing a Centrate Pretreatment Facility, designed to remove up to 90% of the nitrogen in the dewatering centrate. While state of the art nitrogen removal can be highly energy intensive, ARenew plans to use the facility in its most energy efficient mode, deammonification, using a process imported from Strauss, Austria. Our installation will be the first of its kind in operation in the United States.

ARenew adopted several improvements identified through an Energy Service Company (ESCO) review. ARenew's energy optimization program focused on sustainable improvements in the use of digester gas produced on site and optimal use of natural gas and electricity. ARenew modified the pasteurization flare burner and fuel train to use digester gas such that gas produced on site is used at a rate of 85 percent. ARenew has retrofitted steam traps throughout the facility, resulting in gained efficiency of our steam system and a reduction in natural gas usage. Lighting systems throughout the facility were replaced with high-efficiency technologies such as compact fluorescent bulbs, LED lamps, and occupancy sensors. ARenew invested in new electric boilers that provide the flexibility to respond to market and environmental conditions by using the gas and electric boilers in an optimal fashion. ARenew has also begun installing solar panels and green roof cells on facility buildings.

ARenew recycled over 10 tons of material, including glass, aluminum, plastics, computer equipment and paper products. ARenew beneficially reused over 22,000 wet tons of biosolids through our land application program.

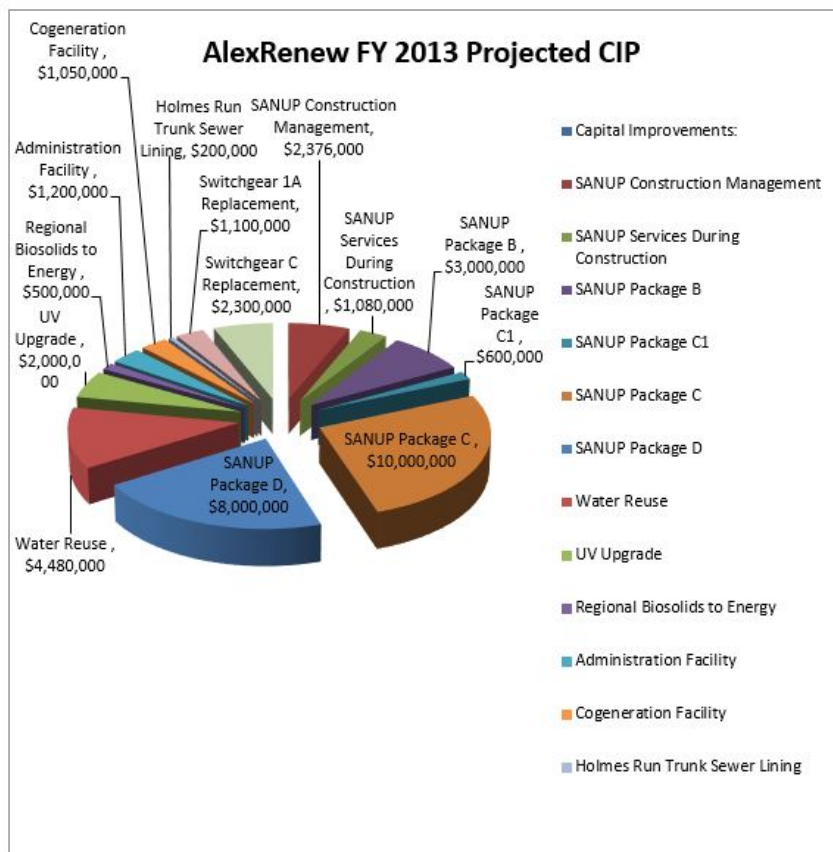
ARenew's laboratory was audited by the Virginia Department of Consolidated Laboratory Services as part of the Commonwealth's VELAC program, and received full certification.

NACWA 2012 Excellence In Management Recognition Program

Alexandria Renew Enterprises, Alexandria, Virginia Infrastructure Stability

ARenew maintains a Board approved 10 year Capital Improvement Program plan and Improvement,

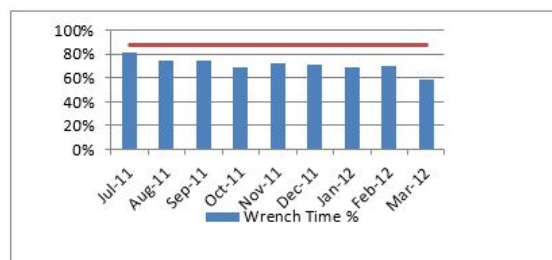
Renewal and Replacement (IRR) plan. The 10 year plan is an important tool used for formulating future project financing plans, maximizing federal and state grant opportunities, addressing changes in regulations, and proactive planning. New regulations that limit the nutrients discharged from our facility require the installation of modern equipment that allows ARenew to meet the new standards. We refer to these projects as "SANUP" (State-of-the-Art Nitrogen Upgrade Program). The CIP projects also address the infrastructure improvements needed to maintain our high level of environmental performance. The following graph illustrates how we allocate our capital funds.



Our asset management program, while relatively basic, assists us in determining equipment life cycles, analyzing failure rates and providing for equipment criticality. All assets

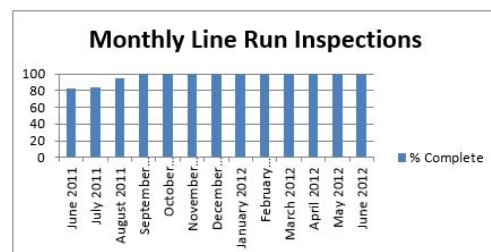
have a criticality assignment; this helps us prioritize limited financial resource investments. This criticality rating was a result of a complete asset inventory process, done at the conclusion of our most recent upgrades.

Our goal is for the maintenance staff to execute maintenance work orders for 87.5% of their time at work. During the 2011-2012 evaluation period, our maintenance teams improved their hands on wrench time from 38% to 71.5%.



ARenew is responsible for four major interceptors within our service area. The maintenance staff conducts regular monthly inspections of the manholes on each interceptor and following storm events. Known as "line run inspections," the staff endeavors to detect issues that may cause blockages or infrastructure failures before the problems escalate.

ARenew also uses predictive maintenance measures, such as infrared analysis of electrical gear, oil analysis and other methods to monitor wear on critical pieces of equipment and help adjust replacement timing as needed.



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Operational Resiliency

Ensures utility leadership and staff work together to anticipate and avoid problems. Proactively identifies, assesses, establishes tolerance levels for, and effectively manages a full range of business risks (including legal, regulatory, financial, environmental, safety, security, and natural disaster-related) in a proactive way consistent with industry trends and system reliability goals.

ARenew staff meets regularly, on a weekly and monthly basis, within departments and among cross-functional teams to communicate and address conditions within the facilities with respect to environmental, safety and security, and fiscal responsibilities. Process controls maintain our compliant, efficient operation, and internal financial controls sustain our fiscally responsible stewardship of ratepayers' funds.

ARenew is an active member of the Alexandria area Local Emergency Planning Committee which facilitates communication among the City's critical service organizations, including incident command.

In addition to the basic asset management program, cross-functional teams conduct regular inspection tours of the facilities for safety and maintenance issues, during which discrepancies are noted for correction. Following any abnormal incident (accident, injury, major equipment failure, etc.), a cross-functional team conducts a thorough investigation into root causes and produces a corrective action plan to address the situation as needed.

ARenew partners with the local police to allow them practice areas for canine training and police bicycle and motorcycle skills development. Police and SWAT teams practice repelling off of our biosolids handling building (about 135 feet tall).

ARenew partners with the local fire fighters to help them facilitate training on industrial sites. During a digester clean out a year ago, fire fighters performed confined space entry training. Hazmat training exercises are performed on our facilities.

ARenew is an active participant in the Virginia WARN system, providing supplies as requested after large storm events last year to communities in Southern Virginia.

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Community Sustainability

Is explicitly cognizant of and attentive to the impacts its decisions have on current and long-term future community and watershed health and welfare. Manages operations, infrastructure, and investments to protect, restore, and enhance the natural environment; efficiently use water and energy resources; promote economic vitality; and engender overall community improvement. Explicitly considers a variety of pollution prevention, watershed, and source water protection approaches as part of an overall strategy to maintain and enhance ecological and community sustainability.

Sustainability is an active factor in all areas of operation, construction, administration, and community outreach at ARenew. Energy and water use in operations are monitored on a daily basis. The soil amendment product derived from our biosolids is used in the onsite demonstration garden and distributed to the public during Earth Day celebrations and other community events. Contractors building infrastructure projects at ARenew are accountable for their sustainable practices such as workers' use of mass transit and reporting the weight of material recycled from the site, and they are credited for workers using reusable drinking water containers. ARenew staff and consultants use file transfer sites to share documents rather than produce multiple copies of documents that are subject to review and revision.

ARenew is partnering with a private developer whose property adjoins ARenew's to create a new neighborhood where none now exists. The current land is the remains of the old city landfill; being contaminated has limited options for the developer, requiring ingenious solutions to house parking. In doing so, a green deck is being built, linking the ARenew site to the developer's areas. ARenew is also giving back to the neighborhood by constructing a regulation size athletic field on top of its required nutrient removal facilities. Between the public and private green amenities, over 4.5 acres of green space will be provided to the neighborhood. Essentially ARenew and its private developer partner are recreating a new neighborhood in a highly urban area out of previously contaminated and underutilized lands, while still constructing required nitrogen removal facilities that will serve to enhance the Chesapeake Bay.

It was this partnership that led to our recent rebranding efforts. The Board, through our Strategic Planning process, required a rebrand by 2016. Given that we were going to have a product for use by the private developer and public, our reuse water, which needed a name, we undertook to give that a 'brand'. During that time, we realized that we had an opportunity to recreate the understanding of wastewater treatment in our community through our integration of community wants (an athletic field and green space) with community needs (high levels of wastewater treatment and ability to grow and stimulate it economically) by changing our name from the Alexandria Sanitation Authority to Alexandria Renew Enterprises. Not only has the change been positively accepted in our community, our employees truly are energized by the new brand identity as well!

ARenew is rebuilding a pump station that is beyond its useful life. In doing so, ARenew needed to minimize or eliminate a projected 18 month raw sewage pump around that was needed during the construction period. ARenew partnered with City Parks and Recreation to utilize some of their properties. In doing so, ARenew will completely avoid the pump around, being able to construct the new pump station while the old one remains in service. ARenew will construct a new park office and restrooms, as well as a play field and vehicle and equipment storage center, for Parks use. The addition of restrooms and an office will allow the pump station to get LEED certification as well.

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Stakeholder Understanding and Support

Engenders understanding and support from oversight bodies, community and watershed interests, and regulatory bodies for service levels, rate structures, operating budgets, capital improvement programs, and risk management decisions. Actively involves stakeholders in the decisions that will affect them.

ARenew is an active member of multiple community and watershed interest groups – the Metropolitan Washington Council of Governments and the Potomac Watershed Roundtable, for example – and established professional and technical associations. Through these affiliations, ARenew remains attuned to regulatory changes and issues encountered by other utilities which could impact the budget decisions and capital improvements we make.

ARenew actively seeks the input of area residents and commercial interests when planning new infrastructure elements. During the design process, ARenew meets with homeowners associations and City- and State-level staff – all of whom may be impacted by our proposed construction. ARenew endeavors to address local stakeholder concerns through neighborhood meetings and public hearings.

ARenew served as a host site for the Potomac Watershed Clean up. Volunteers and ARenew employees helped remove over 6,000 pounds of trash from Hooff Run, a tributary of the Potomac, last year.

ARenew employees serve as judges for the City middle and high school Science Fairs. ARenew employees led a partnership with one of our engineering consultants and a local STEM focused elementary school to engage in World Water Monitoring Day activities.

ARenew hosts numerous tour groups, ranging from elementary school children to delegates from Japan to representatives from the German ministry.

ARenew has sponsored and participated in the City's Earth Day celebration for several years. In the last few years, ARenew has provided bags of George's Old Town blend, our soil amendment product, at the event.

Jointly with the City's Environmental Policy Commission, ARenew has awarded the Ellen Pickering Environmental Excellence Award to a local citizen or business who has promoted environmental stewardship within the City of Alexandria.

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Resource Efficiency & Protection Activities
Energy Management/Efficiency

ARenew undertook a review of potential energy savings projects through an Energy Services Company (ESCO). This audit focused primarily on natural gas usage reductions because that commodity was much more expensive than the facility's electrical energy costs. Use of digester gas was maximized, through the use of dual fuel boilers, adsorption chiller, dual fuel pasteurization flare and mixing.

ARenew conducted an audit for the potential benefits of solar power. The audit showed very little return on investment for solar; however, ARenew chose to install a 10kW solar panel system on one of its building as a demonstration project and to supplement power requirements within the building. A mock-up of the panel and output screen will be located in our Visitor Center so that those touring the facility can see how the panels work.

ARenew also analyzed the potential for wind energy. The analysis showed that there was no benefit or return through the installation of wind turbines.

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Resource Efficiency & Protection Activities
Pretreatment

ARenew serves an area of minimal industrialization, but has an active and long standing Pretreatment Program. ARenew administers three permitted dischargers. ARenew nominated Covanta Alexandria/Arlington, the Energy from waste facility that serves the two jurisdictions, for the 2011 Virginia Water Environment Association (VWEA) Industrial Waste and Pretreatment Environmental Excellence Award in the Gold category for its outstanding record of 100% compliance with the program for the last three year.. Covanta was also recognized with a silver award in 2009 and a gold in 2010.

The three dischargers self-report on a monthly or semi-annual basis, plus ARenew conducts annual sampling of these industries to confirm the self-reporting. While one SIU was compliant for each of the last three years, the following enforcement actions were taken with the other two SIUs: 2009 – Two notices of violations (NOVs) issue; 2010 – One NOV, one verbal warning; 2011 – One NOV, two verbal warnings.

Last year, ARenew partnered with a laundry service, Alsco, to develop a flow metering system that allowed the industry to only pay for flow discharged into the sanitary system. This acknowledges the fact that their industry has evaporative losses through their processing.

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Resource Efficiency & Protection Activities
Biosolids/Septage/Residuals Management

ARenew produces an Exceptional Quality Class A Biosolids product. Our treatment process includes centrifuge thickening and dewatering to minimize the weight of hauled solids. All of our biosolids are applied to agricultural lands in Virginia, with the exception of a small quantity [462 wet tons during the last three years] that is processed at an offsite location and blended with wood waste into a soil amendment product by our contracted biosolids hauler. ARenew uses the blended product for onsite landscaping and community promotional purposes. At this time, none of the biosolids are used as a renewable fuel source.

ARenew actively participates in biosolids research both nationally through WERF and locally with partners such as the Washington Council of Governments, Virginia Tech, Bucknell University and George Mason University. ARenew also led the efforts to identify a regional solution for a biosolids to energy facility. Unfortunately, technology wasn't identified that would have been able to serve all of the potential jurisdictional partners.

ARenew does not receive septage at its facility.

Because of our close proximity to the urban center of Alexandria and given the I-495 "Beltway" as a site border, odor control is a paramount concern for our operation. ARenew has invested in an extensive odor control network and physically enclosed the odor-generating processes. We use an Environmental Management System to effectively control all critical control points in the biosolids value chain to minimizing odors, produce the highest quality and quantity of digester gas for conversion to steam energy, and beneficially reuse 100% of our product.

ARenew actively participates in the annual Alexandria Earth Day event and Earth Force, and we use of the website for communication with stakeholders and the public. We conduct numerous facility tours with citizen groups and other stakeholders. We actively participate in in the Virginia Biosolids Council and the Mid-Atlantic Biosolids Association, which has members from generators, land appliers, and farmers.

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Resource Efficiency & Protection Activities
Climate Change Adaptation or Mitigation

ARenew began considering climate change in the design of new facilities. Our coastal location places us in a potentially vulnerable position. Prior planning incorporated 100-year floodplain elevations in the location of equipment, but attention is turning to the vulnerability of our outfall location. ARenew's incorporation of planned green roofs on the facility and sustainable landscaping are part of the overall effort at stormwater management.

ARenew is actively reusing digester methane gas to power onsite boilers that heat the pasteurization system. Our current rate of digester gas use is 85 percent, with a goal of 100% usage during the next year.

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Resource Efficiency & Protection Activities
Water Quality Protection on a Watershed Basis

ARenew voluntarily joined the Virginia Nutrient Exchange program. Through the program, it holds a nutrient VPDES general permit. This allows ARenew to buy and sell nitrogen and phosphorus credits within the Potomac River and Eastern Shore watersheds, as defined within the Exchange and Commonwealth regulations. Last year, ARenew contributed 46,644 pounds of nitrogen credits and 23,810 pounds of phosphorus credits to the Exchange for trade.

Through its purchase of adjacent property needed to construct nitrogen removal facilities, ARenew will dedicate over 5 acres to the City that are within the resource protection area. This area will remain native and not be disturbed. ARenew will also perform invasive species removal work in this area and in an area of Hooff Run that adjoins both of its properties.

ARenew has partnered with the City of Alexandria, whose residents it serves, and with its wholesale customer, Fairfax County, to work together to complete detailed hydraulic analyses of their respective collection and interceptor systems. This has identified needed wet weather projects, such as a wet weather pump station and CSO tunnel along the ARenew property to help mitigate wet weather surcharging in the interceptor and collection system.

As roofs need repair and/or replacement around the facility, ARenew is investing in a green roof grid system for replacement. A pump station rebuild will also include a green roof system.