

# Alexandria Renew Enterprises: Organizational Commitment to a Sustainable Future

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# Alexandria Renew Enterprises' Path to Sustainability ...

Our story ....



# Our Facility Circa 2006



- Alexandria Sanitation Authority “ASA”
- 54 MGD AADF meeting BNR Limits and producing EQ Biosolids
- Service population ~320,000
- Comprehensive facility upgrade just completed



# Ready to ride into the sunset ...

## Not so fast!

Growing  
Community  
Around  
Facility

PCBs!

Lower TN  
Limits!

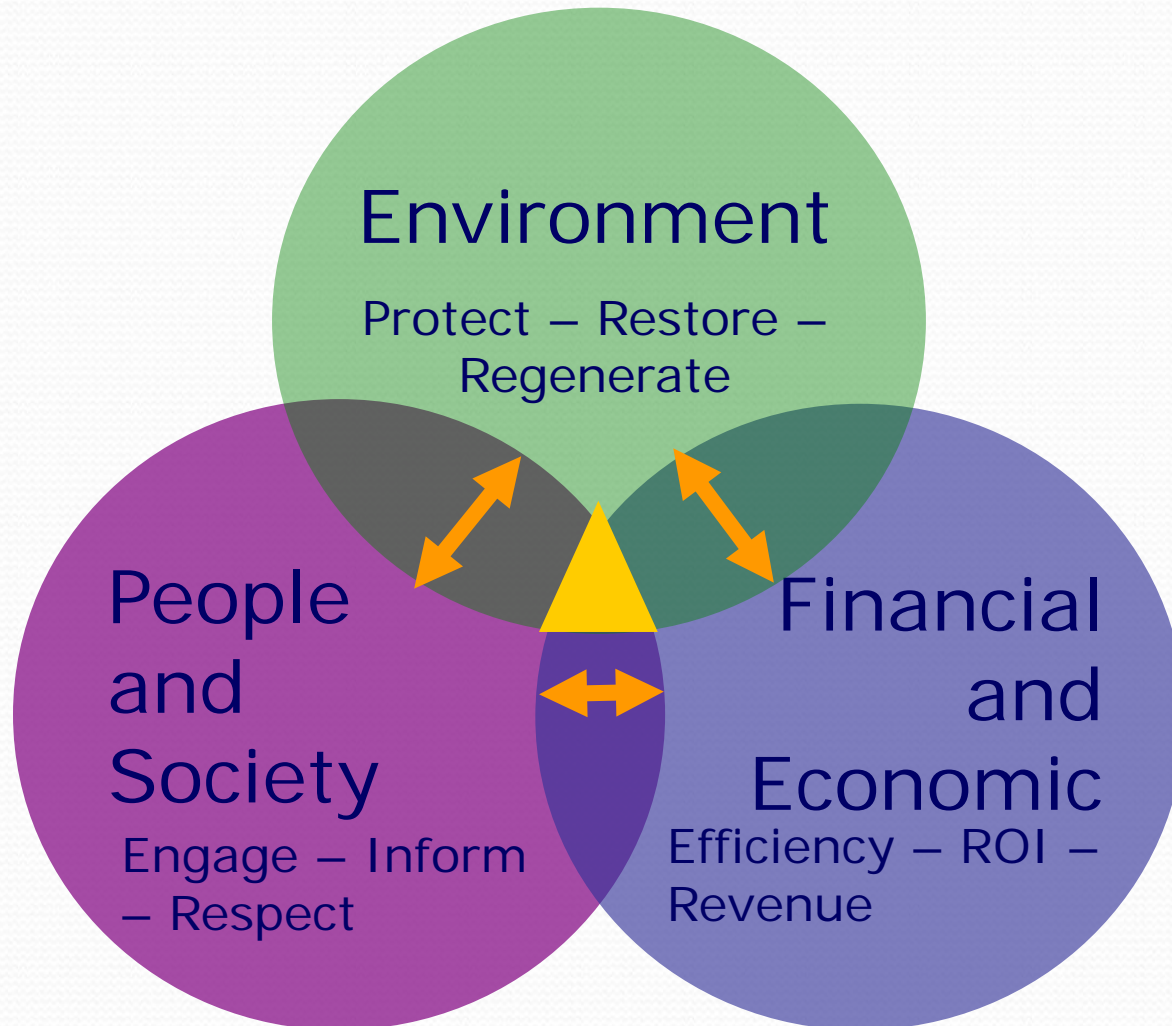
Operational  
Costs!

Customer  
Billing!

Organization  
Changes



# New Future, New Vision ...



# How to Create a Sustainable Future?

- Clear Vision
  - Supported and championed at all levels
- Sustainability Framework
  - Guides decision-making
- Maximizing Revenue Options
- Improving Institutional Competency
- Community Relations
- Partnerships

# The Commitment Begins at the Top

## Board 2040 Vision

- Establish a personal connection with local waterways
- Eat local fish and swim in local streams
- Support a healthy and resilient local economy
- Inspire water stewardship action

# Long Range Planning

- Starting in 2006, AlexRenew began a process that identified:
  - Current and future regulations
  - Potential limits on biosolids management practices
  - Community needs (recycled water, soil amendment)
  - Rapid urban development
  - Sustainability goals



# SANUP – State-of-the-Art Nitrogen Upgrade Program

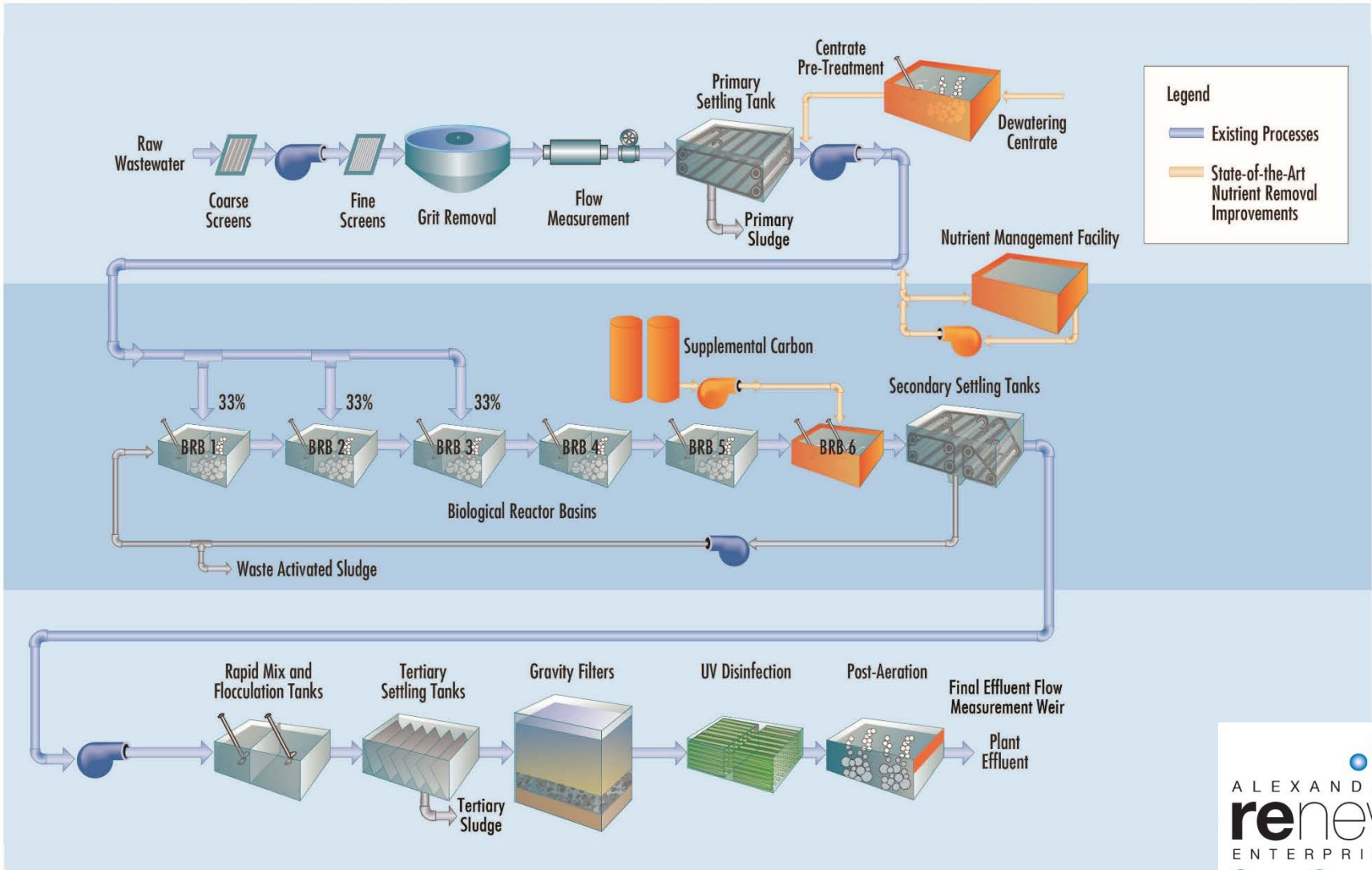
- More stringent total nitrogen discharge limits required process upgrades
- Planning process used to create a scope for the facility upgrade
- In line with AlexRenew's mission/vision

# Decision Model

- Used to evaluate alternatives

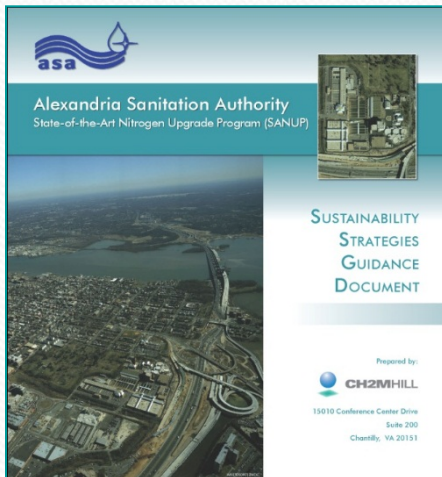


# Resulting Upgrade Project



# Sustainability Framework

- 2-day sustainability workshop to kickoff the project
- Developed sustainability objectives, strategies, tools and metrics



## SANUP Sustainability Categories and Objectives

### Energy

- Reduce Energy Consumption
- Generate Energy/  
Increase Use of Renewable Energy

### Climate Change/ GHG Emissions

- Minimize Life-Cycle GHG Emissions
- Adapt to Climate Change

### Site Development & Natural Environment

- Create Aesthetically Pleasing Environment
- Increase Value of Ecologically Viable Areas

### Stormwater & Water Management

- Maximize Use of Stormwater Resource
- Maintain Stormwater Quality
- Beneficial Reuse of High Quality Effluent

### Human Health

- Eliminate/Reduce Physical/Chemical Hazards
- Maintain Healthy Air Quality
- Ensure Worker Safety During Construction & Operations

### Materials & Waste

- Use Environmentally Preferable Materials
- Standardize Equipment Units & Spare Parts
- Utilize Sustainable Approaches for Project Execution
- Minimize Wastes Produced

### Community Relations

- Achieve Public Acceptance
- Minimize Traffic
- Minimize Odors
- Minimize Post Construction Operational Noise
- Minimize Post Construction Light Impacts
- Minimize Construction Impacts

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### Env

- C
- A
- P
- E
- I
- E
- V

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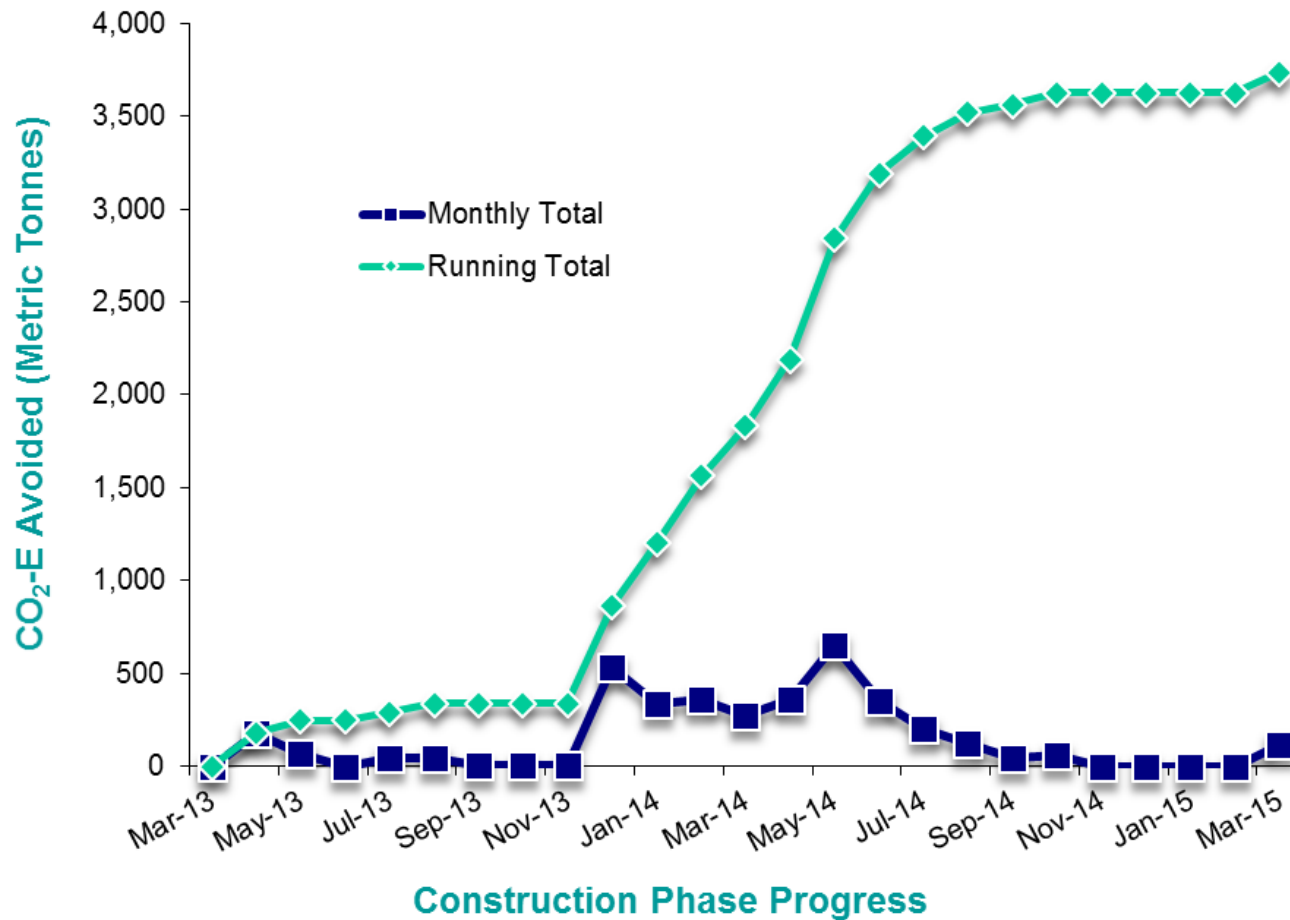
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# Generating KPIs

- Key Performance Indicators (KPIs) created to measure the performance
- KPIs used to track progress against the desired outcomes

# Tracking KPIs

Package C: Greenhouse Gas Emissions Avoided





# Re-Branding

- In 2012 Virginia American Water stopped handling billing for AlexRenew
- AlexRenew rebranded in order to better communicate who we are, what we do and how we are different



# George's Old Town Blend

- Up to 5,000 wet tons of AlexRenew's EQ Biosolids are combined with wood fines to create soil amendment
- Culpeper Recycling markets and sells the product



# Reclaimed Water

- Used 1.4 billion gallons of reclaimed water in 2014 for plant processes
- In 2015, a new reclaimed water pump station and distribution system will be put into service



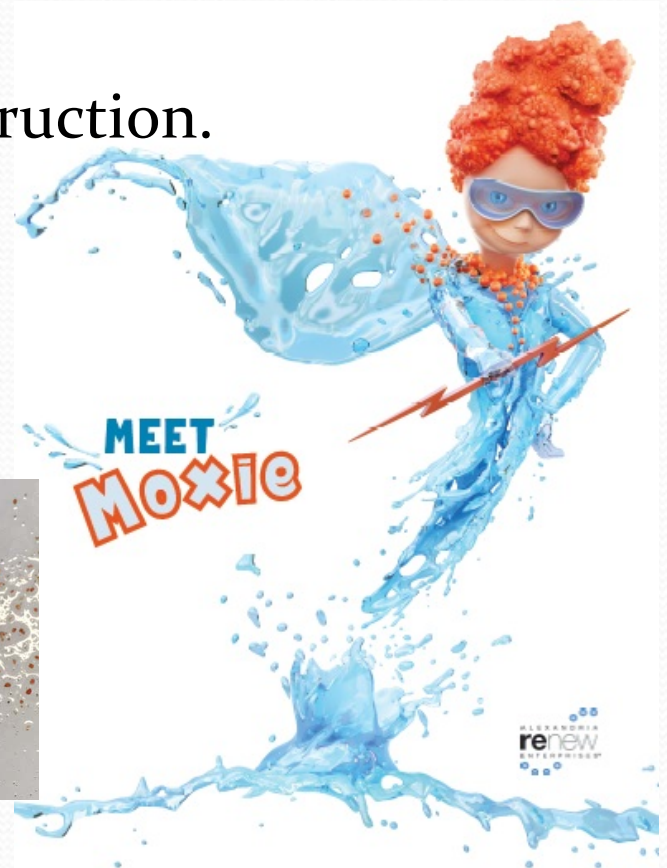
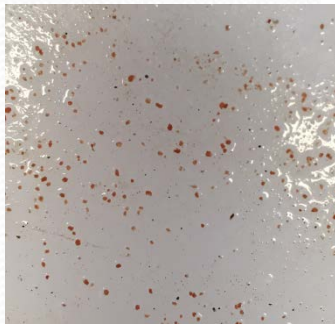
# Workforce of the Future

- Apprenticeship Program combines academic instruction and on-the-job-training
- Wastewater Systems Technician
- Wastewater Mechanic
- Controls System Technician (Electrician)



# Innovative Technologies

- Anammox process removes nitrogen more efficiently
  - Sidestream in May 2015
  - Mainstream process under construction.



# Community-Oriented Development

- Environmental Center and Athletic Field



# Visible in the Community



Earth Day 2014



Watershed Cleanup



AlexRenew Open House

# Collaboration with Other Utilities

- WERF Research Projects
- DC Water Digestion Seeding
- VCS Denmark





# Summary

- Sustainability
- Innovation
- Continuous Education

