Laundry Sector Champion Program

By

Robert L Brown Sr

Senior Environmental Compliance Inspector, LASAN

Laundry Sector

Laundry Sector Champion is an outreach program that helps the laundry industry grow within the City of Los Angeles and become more sustainable. The goal is to form a connection with the industry to discuss shared challenges and provide a resource of tools available to the industry to achieve its sustainability goals.

Robert L Brown Sr.

LASAN's Industrial Waste Management Division (IWMD) administers the City's EPA-approved pretreatment program in accordance with the City's Industrial Waste Control Ordinance. Specifically, we regulate, monitor, and control the wastewater discharges of over 16,000 industrial users into the City sewers

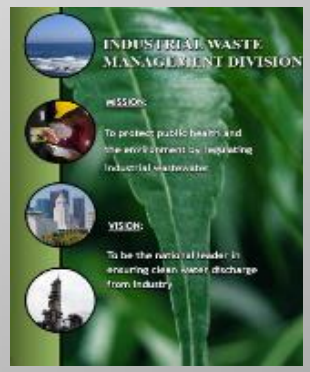
Pretreatment Program Objectives

Protect the Reclamation plants

Ensure the health, safety, and welfare of the public

Provide opportunities for biosolids re-use

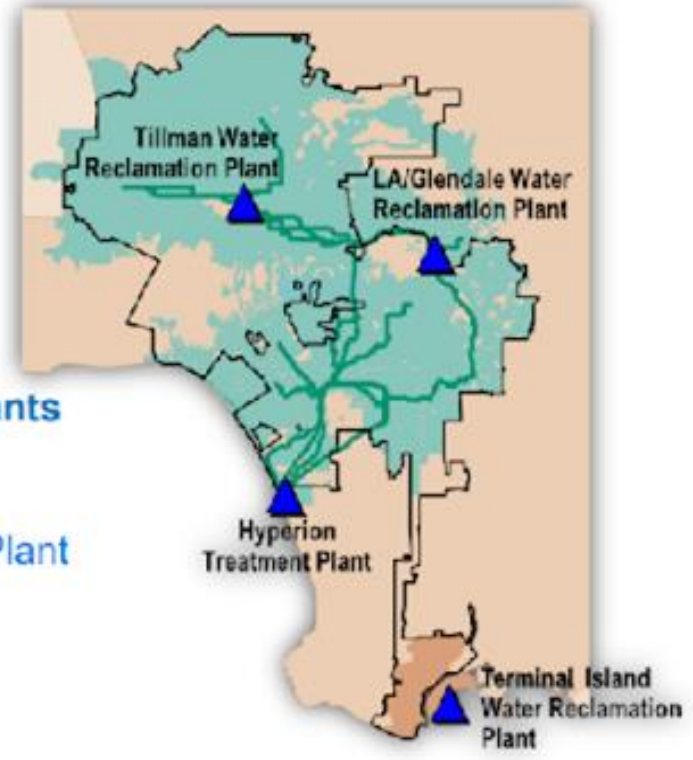
Provide the opportunity for water reclamation



City of Los Angeles Publicly Owned Treatment Works (POTW)

LASAN WASTEWATER SYSTEM OVERVIEW

- **Hyperion Service Area Information**
  - Population served : 4,000,000
  - Area served : 600 Square Miles
  - Sewer System Length: 6,700 Miles
  - Average System Flow: 306 MGD
- **Hyperion Service Area: 3 Interconnected Plants**
  - Tillman Water Reclamation Plant
  - Los Angeles Glendale Water Reclamation Plant
  - Hyperion Water Reclamation Plant
- **Terminal Island Service Area**
  - 100% of Flow is Recycled
  - Average System Flow: 12 MGD



LA Industry

- In alignment with former Mayor Eric Garcetti's Sustainability pLAn to transform the Environment, Economy, and Equity, Los Angeles Sanitation and Environment (LASAN) has launched the LA Industry initiative to aid economic development and business continuity in the LA region. This is an ongoing effort to explore the strategies and opportunities with a collaborative network of internal and external partners to cultivate a business-friendly environment for businesses and industries to strive in the LA region, while meeting regulatory compliance objectives and goals

Sector Champion Program

Initiated by

Michael Simpson:Division Manager IWMD

Sector Champions

The Sector Champion Program was established to provide support to industries and to promote sustainability and productivity through:

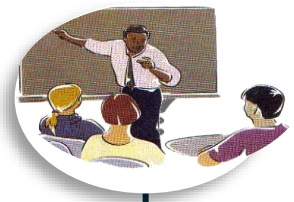
- **Regulatory assistance**
- **Biomimicry**
- **Circular economy**
- **Green chemistry**

To promote employee development on project management, leadership, teamwork, and presentation skills.

Sector Champions Activities

Join Trade Associations

Develop Project Management & Execution



Conduct Seminars & Outreach Events

Promote Green Business Certification

Organize Webinars

Attend Business Summit Expo

Leadership Development

Leadership Development Results

- Strategic Thinking
- Team Dynamics
- Project Management
- Intrinsic Motivation
- Meeting Facilitation

P2 Checklist

- Laundry Proposed P2 Checklist:

- Corporate Level:

1. Does the company has a corporate environmental goals?
2. Do you have a dedicated environmental health and safety person?
3. Are there environmental issues that's limiting your growth?
4. Do you track your greenhouse gas emissions?
5. Has the facility been subject to environmental penalty that we can help address?

- Water use:

1. Do you use water consuming equipment?
   - Cooling tower
   - Boilers
   - Water use in equipment cooling
1. Do you heat water for your operations? (Boiler)
2. Do you use water-cooled equipment? (Can air-cooled equipment be used instead of water-cooled?)
3. Do you have a water balance we can review?
4. If you use water in your operations, is water recirculated until it is dirty for use?
5. Do you recycle wastewater?
6. Do you use flow meters/ totalizers?
7. Do you use ultra-low flush toilets?
8. Do you use aerators on your faucets?
9. Do you use timers on watering your lawn area?

P2 Checklist continued

- Wastewater Generation:

1. Do you have wastewater treatment operations?
2. Do you have a discharge permit?
3. Do you have any permit violations currently?

- Energy use:

1. Do you have an Energy Management System in place? (#6)
2. Do you have any recent upgrades of lighting, pumps, motors that are energy efficient?
3. Do you know the efficiency ratings of equipment that have not been upgraded?
4. Do you have a regular maintenance schedule of your equipment?
5. Do you use timers to turn off equipment automatically when not in use?
6. Do you use a computerized energy management system (EMS) to control heating and cooling system as well as lighting.
   An energy management system is a system of computer-aided tools used by operators of electric utility grids to monitor, control, and optimize the performance of the generation or transmission system.
7. Do you have a boiler? Are the hot water line properly insulated?
8. Do you have solar panels? If not, could solar panels be integrated into the building design to reduce reliance on electricity?
9. Are you aware of energy efficiency programs offered by DWP and MWD?

Sector Champion Groups

Food Industry

Metal Finishers

Textile Industry

Car Wash Industry

Micro Brewery

Groundwater

Cannabis

Laundry

LA Industry Sector Champions

Food Industry

Faye Llanes

Car Wash

Pamela Bond

Laundry

Robert Brown

Microbrewery

Eugene Hall

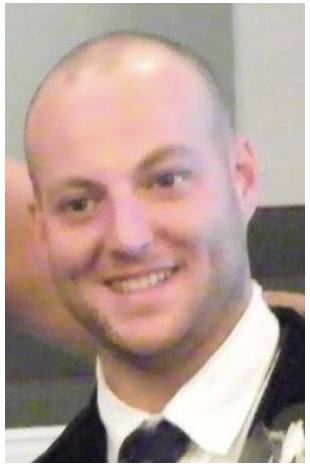
Food Services Establishment

Trina Lai

Metal Finishing

Miguel Rodas

Cannabis



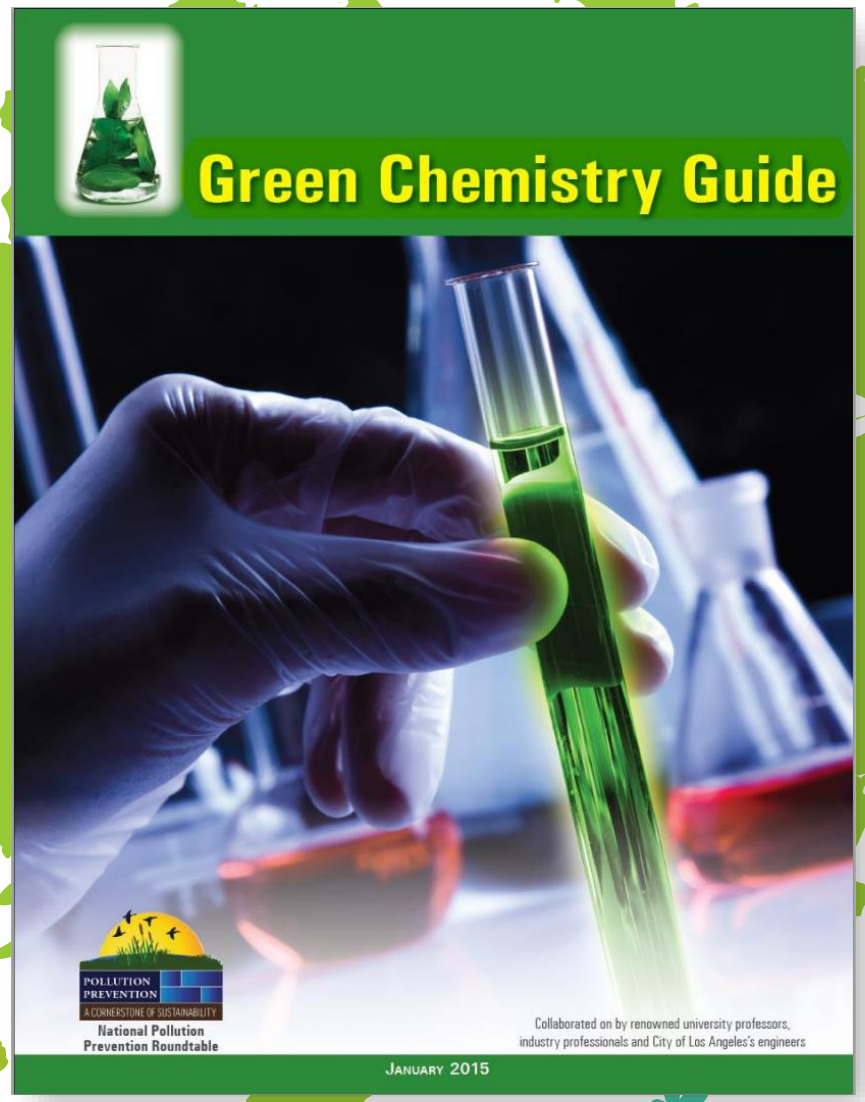
Bobby Benson

Groundwater

Leila Dirin

Textiles

Gwen Ramos



Green Chemistry Guide

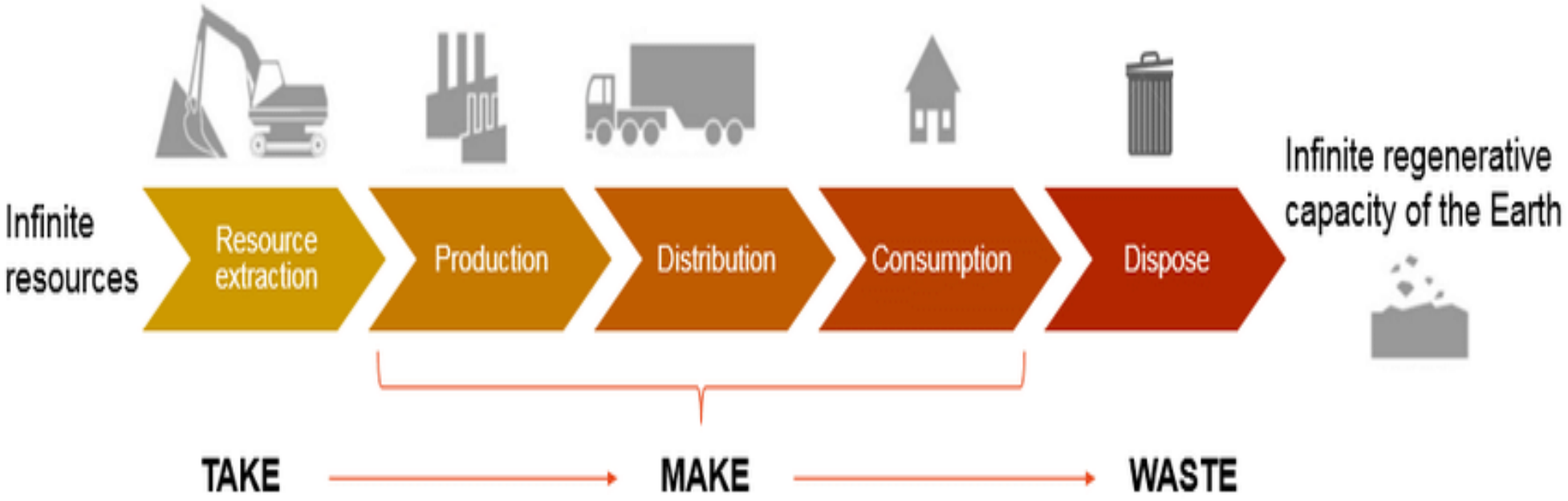
https://www.lacitysan.org/san/sandocview?docname=cnt022546

Green Chemistry

GREEN CHEMISTRY

- Green Chemistry is essentially a way of thinking and is about utilizing a set of principles that seek to reduce the adverse environmental impact of chemical processes and products and to contribute to sustainable development. It deals with new sciences and technologies to prevent the formation of any waste by Life Cycle Assessment (LCA). Principles and objectives of green chemistry are varied. Elimination or minimization of waste, safer and non-toxic products, direct reactions with minimum or fewer steps, and Renewable and non depleting feedstock are some examples. Challenges for green chemistry that are also concerns of all manufacturers and designers including the following:
- *Renewable feedstock, preferably non-food plants*
- *and their full conversion to useful products.*
- *Reactions having minimum environmental impact,*
- *for example, use of eco-friendly organic catalysts.*
- *Industrial processes and reactors having maximum efficiency and minimum waste.*
- *Products of reduced toxicity and increased biodegradability to substitute environmentally*
- *harmful chemicals.*
- *Prediction of chemical and biological properties*
- *of compounds from their chemical structures.*
- *Cleaner solvents as replacements of the flammable,*
- *toxic and volatile solvents polluting atmosphere.*

Linear Economy Model



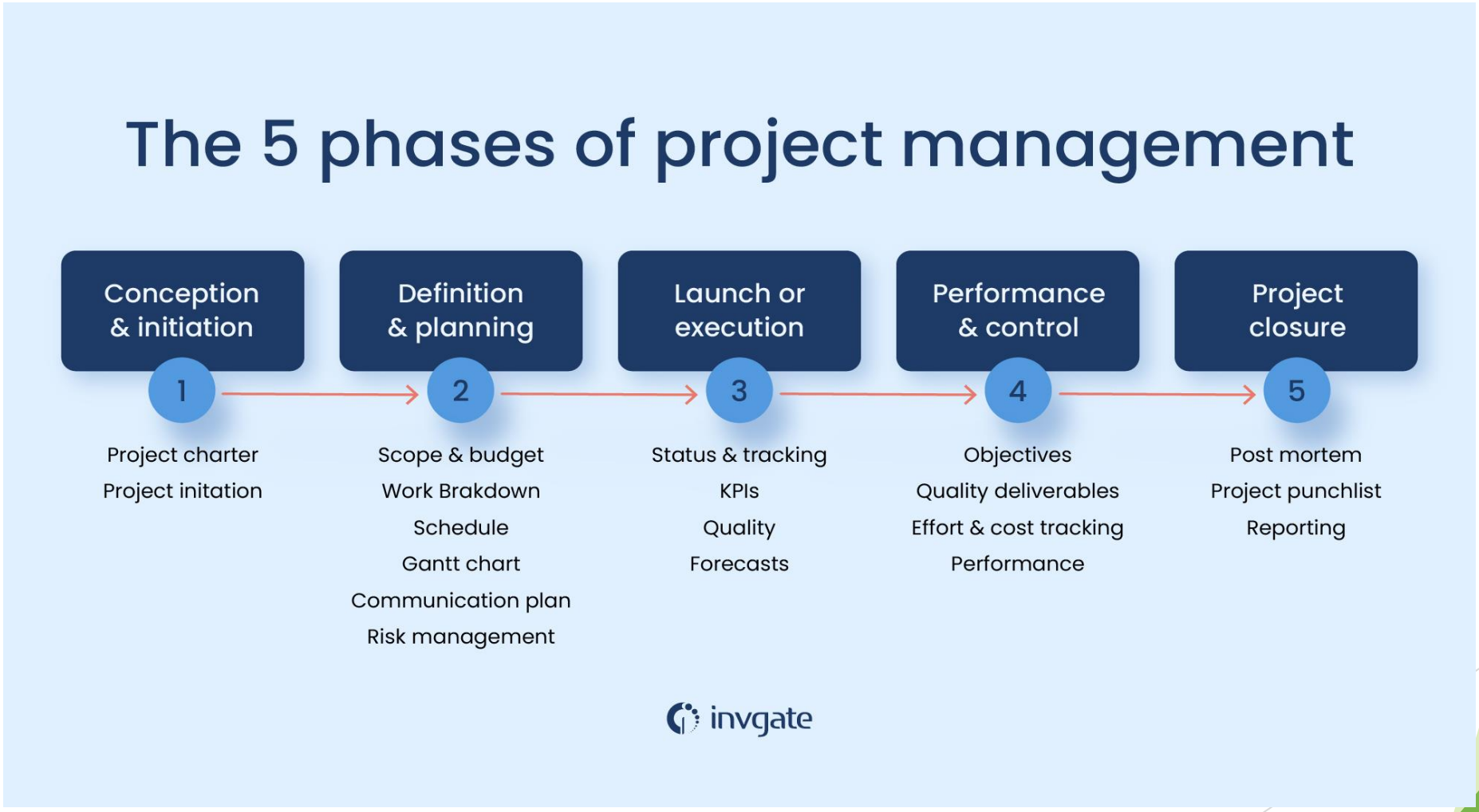
Circular Economy Definition:

It is based on three principles, driven by design: eliminate waste and pollution, circulate products and materials (at their highest value), and regenerate nature. decouples economic activity from the consumption of finite resources. It is a resilient system that is good for business, people and the environment.

What is a circular economy? | Ellen MacArthur Foundation

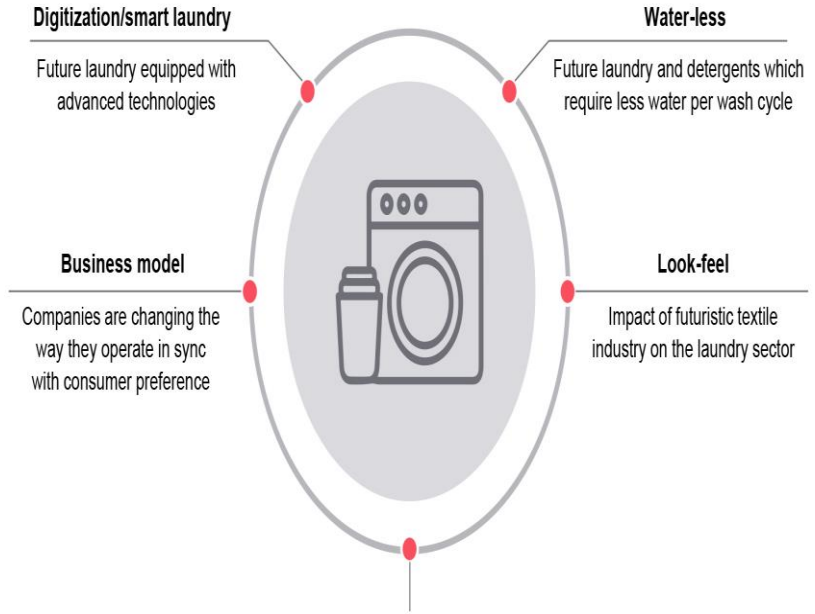
Circular Economy Model

Project Management



LA Industry and Sector Champions Relationship

LA Industry	Shared Goals	Sector Champions
Role: Establish and organize business friendly relationships while promoting environmentally sustainable practices to all industries. **Goals:** • Achieve Sustainability City pLAn objectives • Demystify regulations and create agency partnerships • Discover innovations and incentives • Integrate environmental justice in IWMD operations • Develop industry specific green checklist	**Goals:** • Support business retention • Promote circular economy • Expand LA Green Business Program	**Role:** Tailor industry specific project management plans to strengthen and preserve existing business friendly relationships to maintain effective communication with stakeholders and better cater to their needs **Goals:** • Foster emerging leaders • Design industry specific project management plans through research and develop • Inform IUs on new environmental practices and incentives (actively monitor industry publications and current IU practices) • Deploy P2 checklist (compliance, regulations, guidelines, circular economy, and green chemistry) • Join an industry specific trade or professional organization



Source: FutureBridge Analysis

Goals

Laundry Champion Sector is an outreach program that helps the laundry industry grow within the City of Los Angeles and become more sustainable. The goal is to form a connection with the industry to discuss shared challenges and provide a resource of tools available to the industry to achieve its sustainability goals.

LAUNDRY CHAMPION SECTOR

TEAM MEMBERS: Robert L Brown Sr, Olga Krel, Lyil Calvery and Adity Verma, Sudja Sjresta

Activities

Symposium

-Proposed symposium with the Laundry industry and the City of Los Angeles and LADWP to come up with common ground solutions to regulate the rate structure and to offer resources that are available within the City of Los Angeles to help the

Newsletter

Created a Newsletter highlighting the changes and news in the Laundry industry.

Other Activities

- Joined Coin Laundry Association (CLA)
- Attended Biomimicry Webinar
- Proposed a P2 checklist for the Industry

EPA Assistance

The laundry industry is a substantial producer of wastewater. Many of the laundry companies in the City of Los Angeles are small businesses and these businesses are having a most difficult time trying to keep up with changing technology.

-EPA might have projects that can assist small businesses upgrade their existing equipment.

-EPA might know of projects that can assist in making the laundry wastewater more suitable for reuse.


SAFER
CHOICE
Meets U.S. EPA
Safer Product
Standards™
epa.gov/saferchoice

LAUNDRY INDUSTRY NEWSLETTER

Term: 2021 | Issue 1

CHECK IF YOUR LAUNDRY DETERGENT IS SUSTAINABLE

Search
https://www.epa.gov/saferchoice/products

To view products with the Safer Choice label help consumers and commercial buyers identify products with safer chemical ingredients, without sacrificing quality or performance.More than 2,000 products currently qualify to carry the Safer Choice label. Safer Choice products are available for your laundry mat or service.

Participation in the Safer Choice program is voluntary. Companies who make products carrying the Safer Choice label have invested heavily in research and reformulation to ensure that their products meet the Safer Choice Standard. These companies are leaders in safer products and sustainability.

SAFER CHOICE
Meets U.S. EPA Safer Product Standards
epa.gov/saferchoice

Available Rebates!!!-More information please visit: www.ladwp.com , www.sce.com

Equipment Type	Rebate	Agency
High-Efficiency Clothes Washer	$400/unit	LADWP
Screw-in LED Lamps	$.08/kWh	LADWP
2019 Energy Star Certified Natural Gas Dryer	$50/unit	SoCalGas

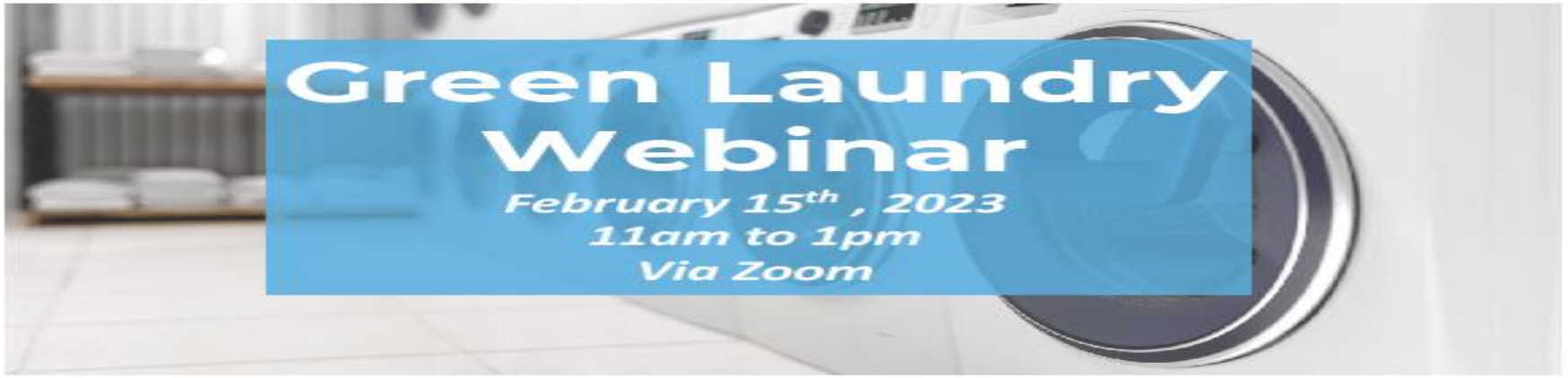
Company of the Season!

Clean. Green. Express.

Clean Green Express is an modern LA based laundromat that use sustainable and green practices while washing and drying in only 60 minutes some green approaches they take are:

- Battle the California drought by conserving water with faster loads.
- Do your part in helping mother earth by conserving water, electricity and gas every day using our state-of-the-art energy saving technology.
- Save on water heating costs.
- Get water that's hotter and more efficient than you ever cold at home.
- Save Time! Wash and Dry in 60 minutes.
- Large commercial load machines are perfect for handling the entire families laundry for the week in one load.
- Save loads of money on your utility bills, laundry detergent,

environment LA SANITATION
www.lacitysan.org



Green Laundry Webinar

February 15th , 2023
11am to 1pm
Via Zoom

EXPLORE COST SAVINGS GRANTS AND INCENTIVES
Connect with partner agencies to take advantage of available cost saving incentives and loans

IMPROVE YOUR SUSAINABILITY
Learn about innovative ways to reduce energy and water consumption, avoid toxic chemicals/detergents, and prevent plastics from polluting our environment.

FEATURED TOPICS
- Water Technological Assistance from LADWP
- Information on grants and incentives
- Explanation of fees and billing
- Government support
- Waste disposal guidelines
- Businesses resources

Sign up using QR code or link below:
https://greenlaundryLA.eventbrite.com

More Information please contact or visit:
daysi.kelly@lacity.org

environment LA SANITATION
CITY OF LOS ANGELES
zero waste • zero wasted water

Green Laundry Webinar Stakeholders

- Industry Groups
  - Coin Laundry Association (CLA)
  - Textile Rental Service Association (TRSA)
  - Dry Cleaners Association
  - Industry Success Story: Bonaventure Hotel's Wastewater Reduction
- IWMD (Industrial Waste Management Division)
  - LA Industry: Technical Support
  - Billing and Surcharge: Explained How Fees Are Calculated
  - Laundry Sector Champion Group
- LADWP (Los Angeles Department of Water and Power)
- EDD (Employment Development Department)
- Zoom Audience

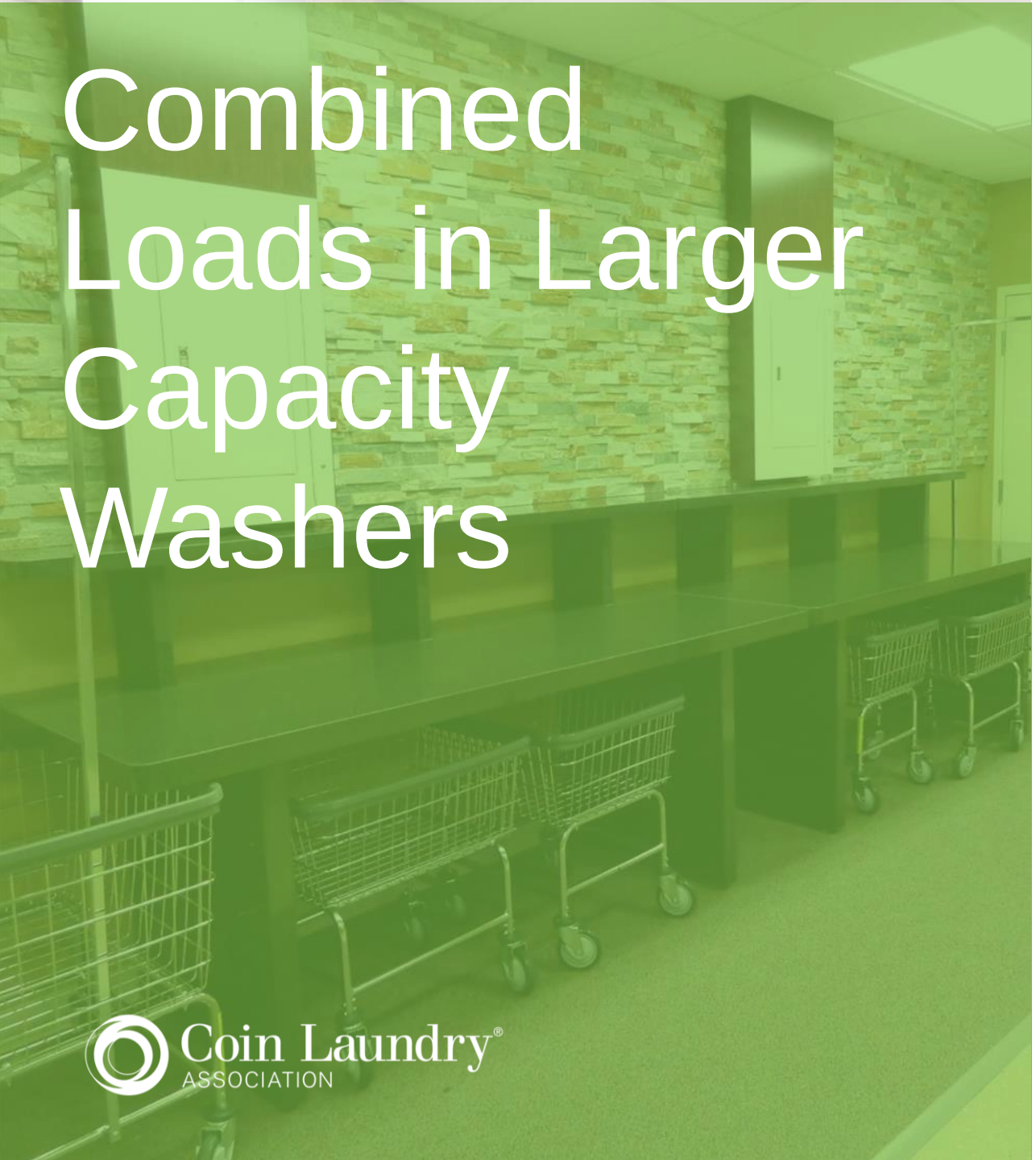
CLA Takeaways

- Modern washing machines use less water per cycle
- Machines spin at greater centrifugal force; clothes come out drier
- Less energy used per pound of clothes dried
- Detergents are more efficient, money saved per load.
- Some detergents have the Safer Choice label on them.

Equipment Innovations Drive Reduced Utility Consumption

- Laundromats provide an ***essential*** service
- Utilities comprise top operating cost
- Equipment innovations in recent years have driven expense ratios for utilities from **30%+ of gross sales to 15%-20%** for new or updated laundromats
- **Conservation and profitability meet at the laundromat**: the fewer utility resources consumed, the more profitable the laundromat!

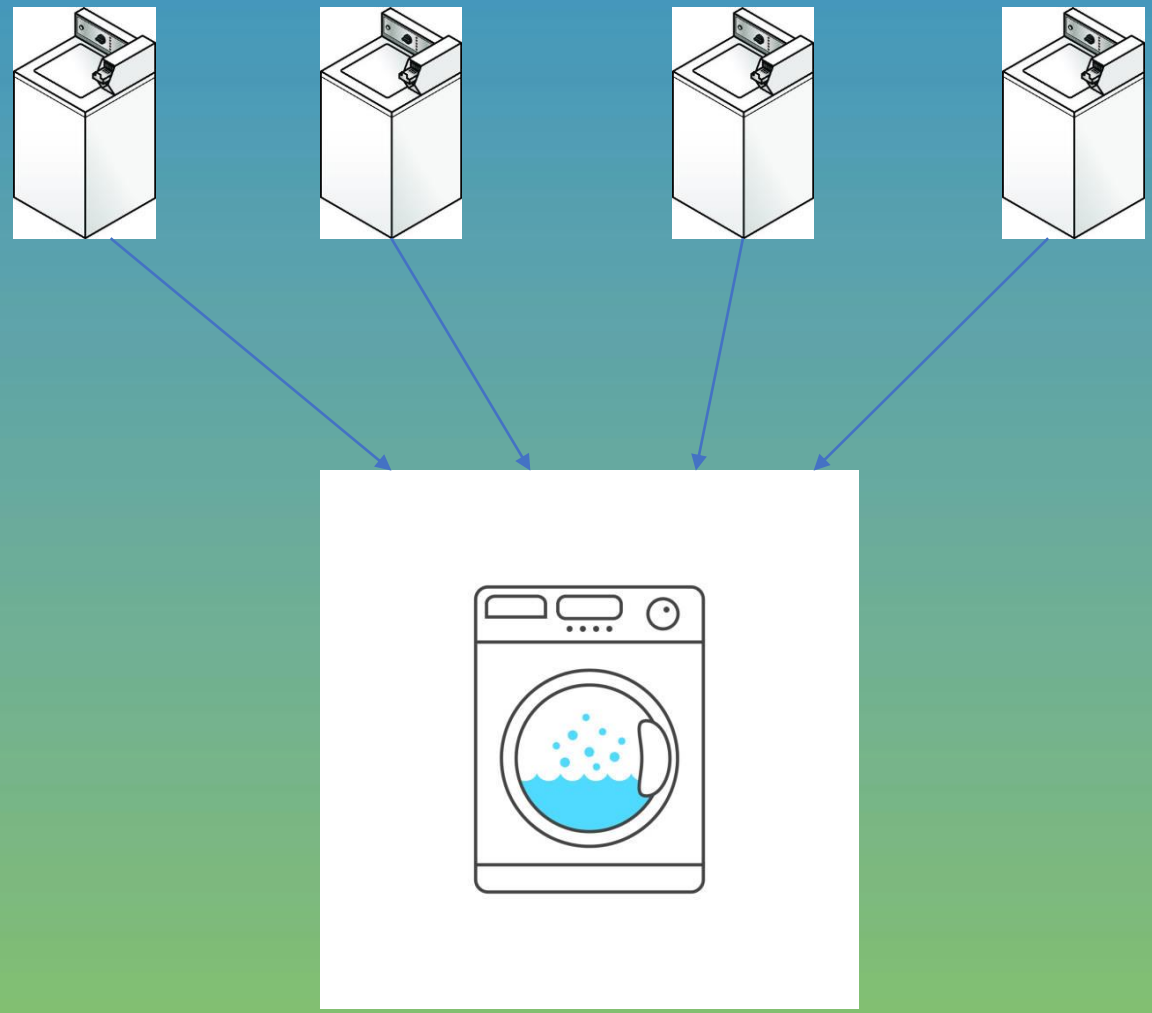
Coin Laundry® ASSOCIATION



- Laundromats have evolved from featuring single and double-load washers to large capacity washers that can accommodate 4, 6, 8 and even 10-12 loads in a single cycle.
- Consumers have come to prefer these larger washers as both a faster way to tackle big loads but also to save money on vend price.
- This win-win-win scenario benefits low-income consumers, the business owner as well as the environment

- High-Efficiency Washers
- Combined Loads in Larger Capacity Washers
- More Extraction, Less Drying Time ↓ Gas & Electric Use
- High-Efficiency Dryers
- More Utility-Saving Solutions

Four single-load (10-12#) washers will use more than 100 gallons to wash 40lbs of clothes



A single, 40-lb. capacity commercial washer will use only 32-40 gallons with a better wash results -- and much less detergent used

High-Efficiency Dryers

- Modern commercial clothes dryers feature innovations in both energy input and air flow to improve efficiency
- Old laundromat dryers rated at 125,000+ Btu's; modern laundromat dryers at 70,000-90,000 Btu's
- Today's dryers also feature axial-flow design which forces air from the back of the drum to the front – giving air best chance to remove maximum moisture in exhaust
- Modern dryers also utilizing inverter/VFD motors to reduce electricity usage

Coin Laundry® ASSOCIATION

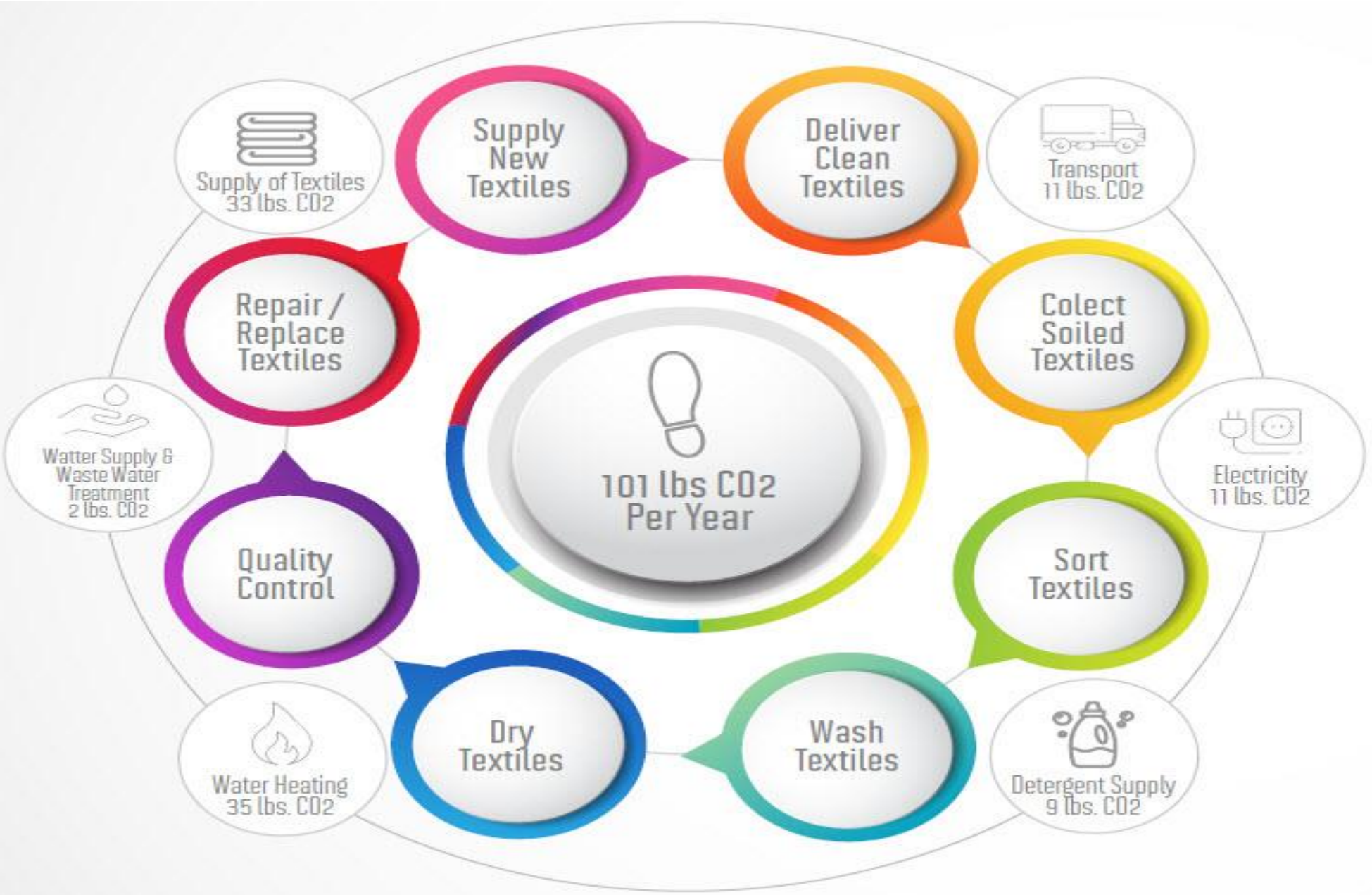
More Utility-Saving Innovations

- Ozone installations
- High-efficiency/Tankless Water Heaters
- Auto-injection of detergents/wash chemistry
- Re-lamping with LED to reduce electricity from lighting
- Vending HE detergents

Coin Laundry® ASSOCIATION

Textile Rental Service Association (TRSA) Takeaways


Linen, Uniform, and Facility Services
$20.3 Billion
$14.1 Billion
20 Million+ Employees Wear Uniforms and Garments
2,580
22,000
15 Billion lbs. Per Year
Vehicles, Facilities, and Laundry
30 Billion+ Gallons of Water Saved
30,000+ Americans Have Power Needs Met
Environmental Stewardship


Supply of Textiles
33 lbs. CO2
Supply New Textiles
Deliver Clean Textiles
Transport
11 lbs. CO2
Repair / Replace Textiles
Colect Soiled Textiles
Watter Supply & Waste Water Treatment
2 lbs. CO2
101 lbs CO2 Per Year
Electricity
11 lbs. CO2
Quality Control
Sort Textiles
Water Heating
35 lbs. CO2
Dry Textiles
Wash Textiles
Detergent Supply
9 lbs. CO2

LADWP Takeaways

- Programs to assist businesses
- Rebate Programs

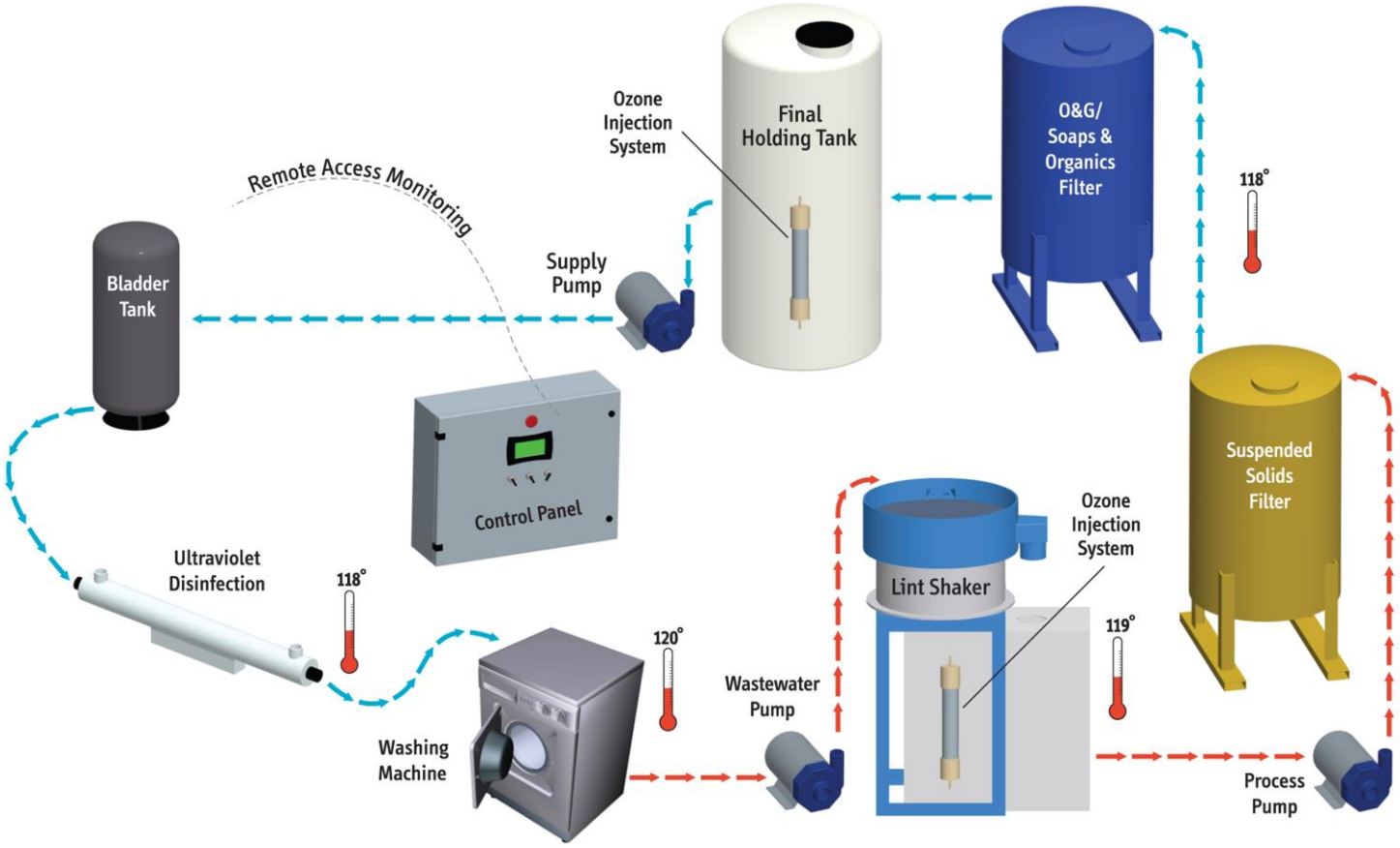
Case Study: Hotel Laundry Recycling

- Reuse laundry sewer water by use of Activated Carbon system

TAP Customer Success! - R.O. Recycling

LADWP Rebate
$63,489
Metered Water
Savings expected
9.1 MGPY
Estimated Annual
LADWP Bill Savings
$121,000
Payback in
1.3 yrs

Recycle System Process Flow Diagram



Westin Bonaventure Laundry Recycling Project

Startup Date	Aug-14
Months in Operation	99
Projected Payback in Months	12
Actual Payback in Months	6

Summary of Savings	Cumulative
Water / Sewer Savings	$680,588
Energy Savings	$246,563
Total Savings	$927,150
Annualized Return on Investment	112%

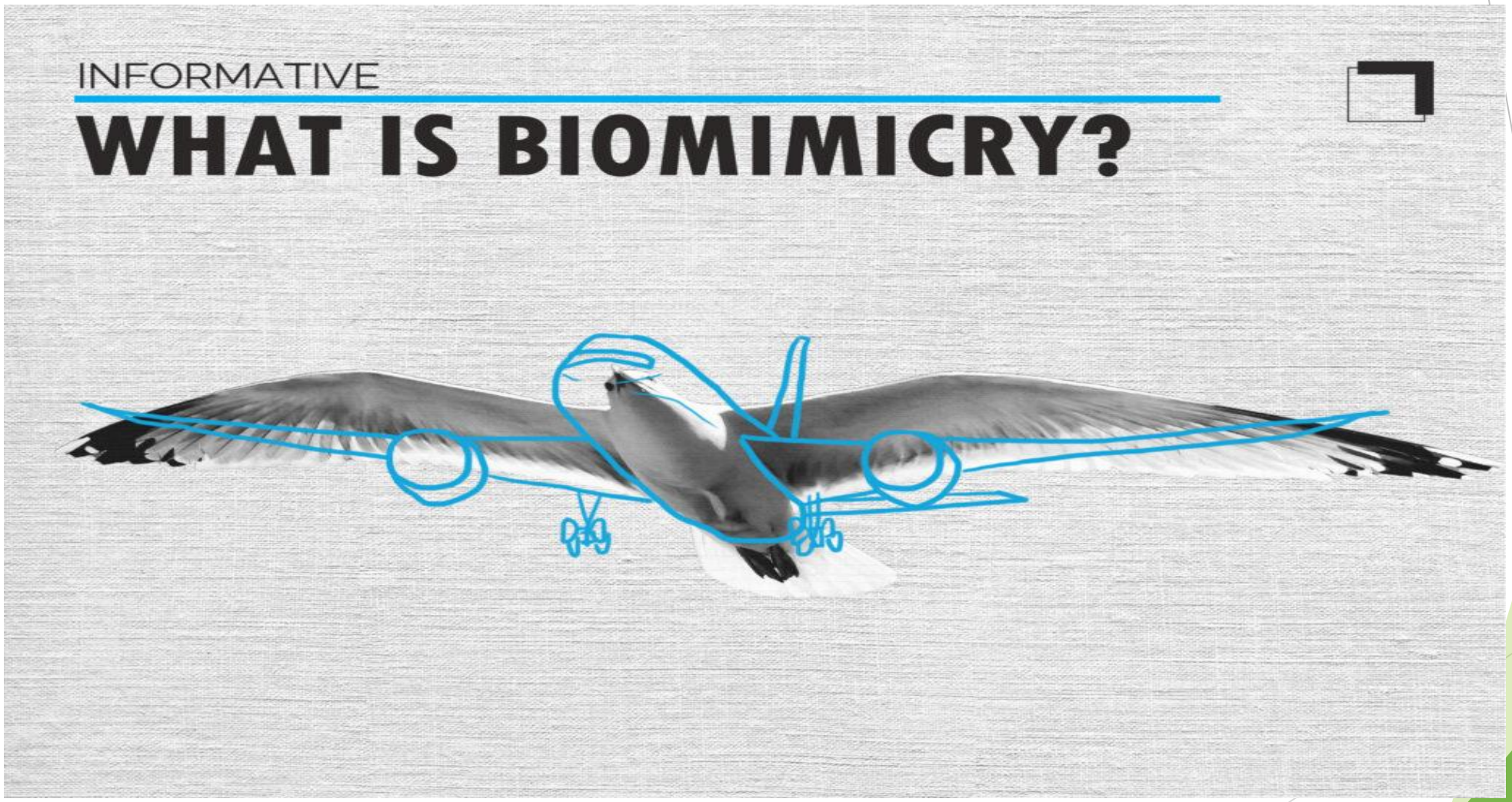
ENVIRONMENTAL IMPACT STATEMENT	This Month	Cumulative	
Greenhouse Gas (GHG) Emissions Reductions	-	2,054.69	MT of CO2
Increase of Drinking Water to the Public		54,490,604	gallons
Reduction of Wastewater Discharge to the Environment		49,041,544	gallons
Increase of Natural Gas Resources	-	342,448	gallons
Reduction of Toxins Discharged to the Sewer Systems		24,521	LBS of TOCs

Biomimicry

- bi·o·mim·ic·ry
- /ˌbīōˈmiməkrē/
- noun
- the design and production of materials, structures, and systems that are modeled on biological entities and processes.

- Our, IWMD's Resident expert on Biomimicry is Laura McAlister, Environmental Engineering Associate II, laura.mcalister@lacity.org

Biomimicry Example 1



Biomimicry Example 2

Examples 3 and 4: Snakes and Eels

- Snakes and eels have the ability to breakdown blood.
- Blood is one of the hardest stains to remove from clothing.
- Detergent manufacturers in the Laundry industry are trying to mimic the digestive action of these two animals to better understand how to remove blood stains from clothes.

Biomimicry Institute
by
Jane Benyus

Questions