



evoQUA  
WATER TECHNOLOGIES



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# **Evoqua/Roseville Overview**

## **RAM/SWANA Conference**

**October 15, 2018**



**TRANSFORMING WATER. ENRICHING LIFE.**

# Leading provider of mission critical water treatment solutions



Transforming water. Enriching life.™

## Core offerings

### ✓ Systems



### ✓ Services



### ✓ Technologies



## Key metrics

**#1\***

*market position in  
North America*

**38,000**

*blue chip  
customers*

**100+**

*years legacy of quality  
and innovation*

**\$1.2 billion**

*2017  
revenues*

**\$208 million**

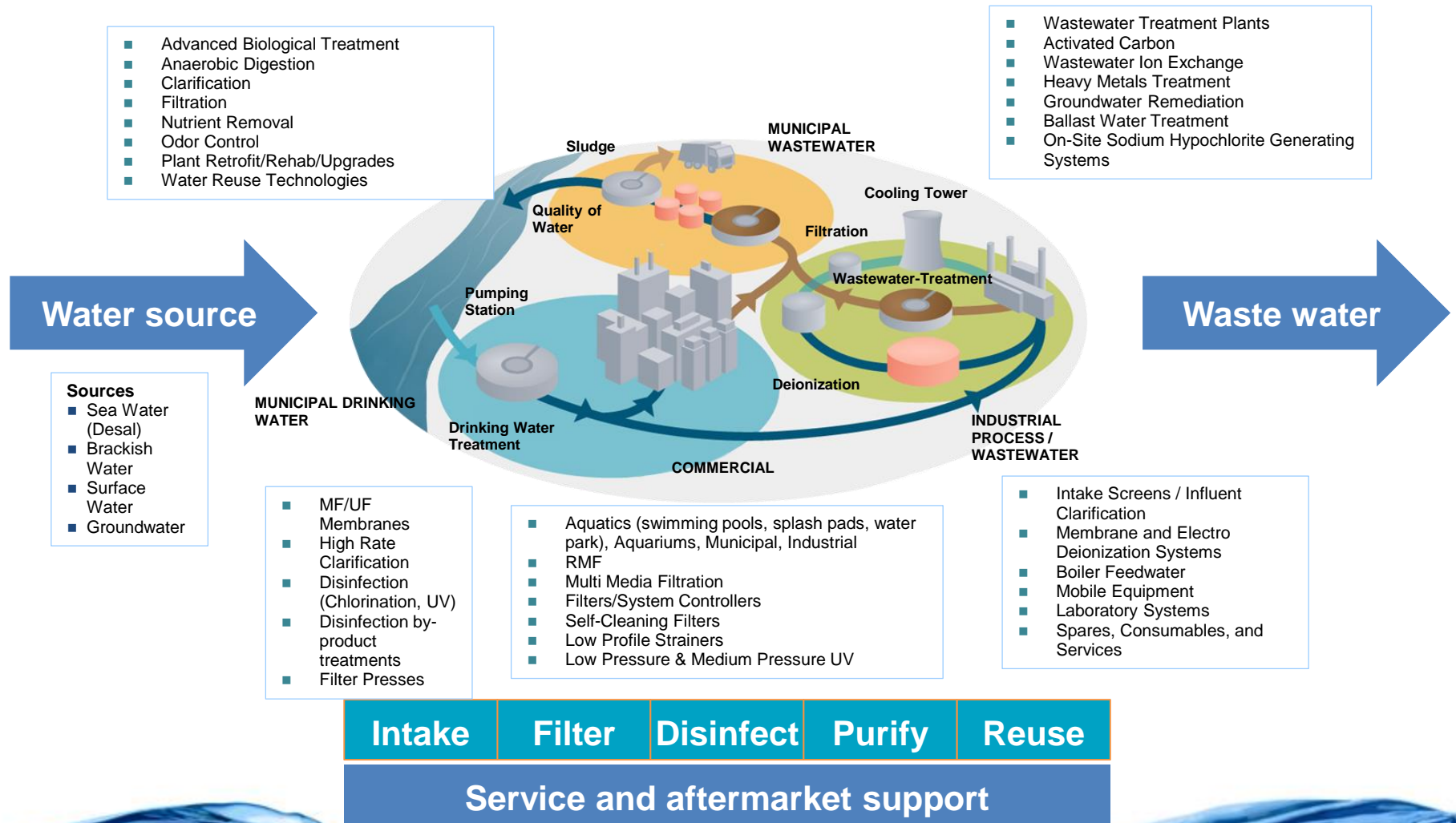
*2017  
Adjusted EBITDA<sup>(1)</sup>*

\*Source: Amane Advisors as of 2016

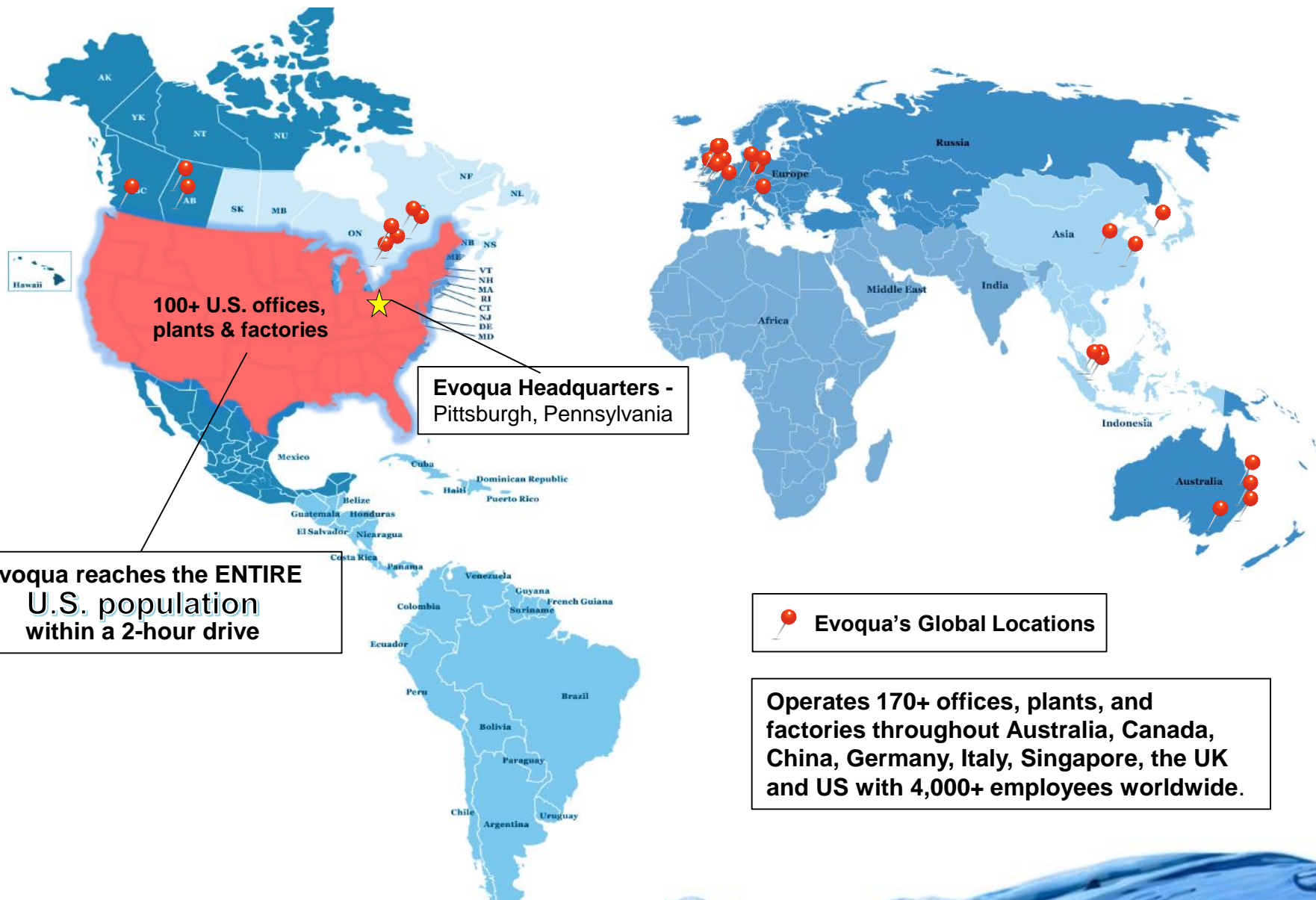
(1) For the definition of Adjusted EBITDA and a reconciliation to net income (loss), its most directly comparable financial measure presented in accordance with GAAP, see the Appendix hereto.

# Water and Wastewater Treatment

## Evoqua's Areas of Expertise



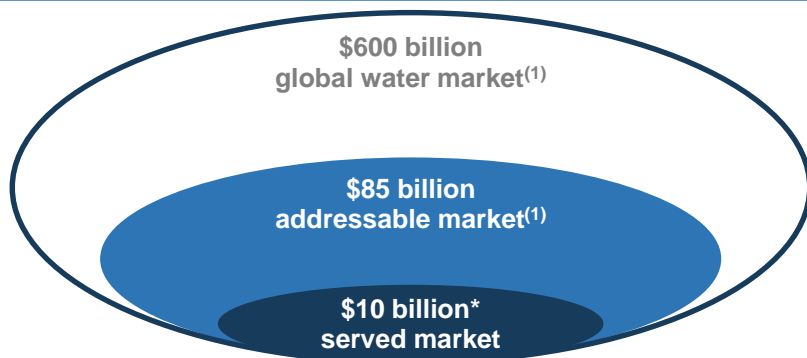
# Evoqua Serving Markets Around the World...





# Evoqua provides high-value added service and technology to an attractive customer base

We serve \$10 billion of an \$85 billion market<sup>(1)</sup>...



✓ Water treatment	✗ Chemicals
✓ Technology & innovation	✗ Water transportation
✓ Service & support	✗ Meters / pumps / valves
✓ North America	✗ Design & construction EPC

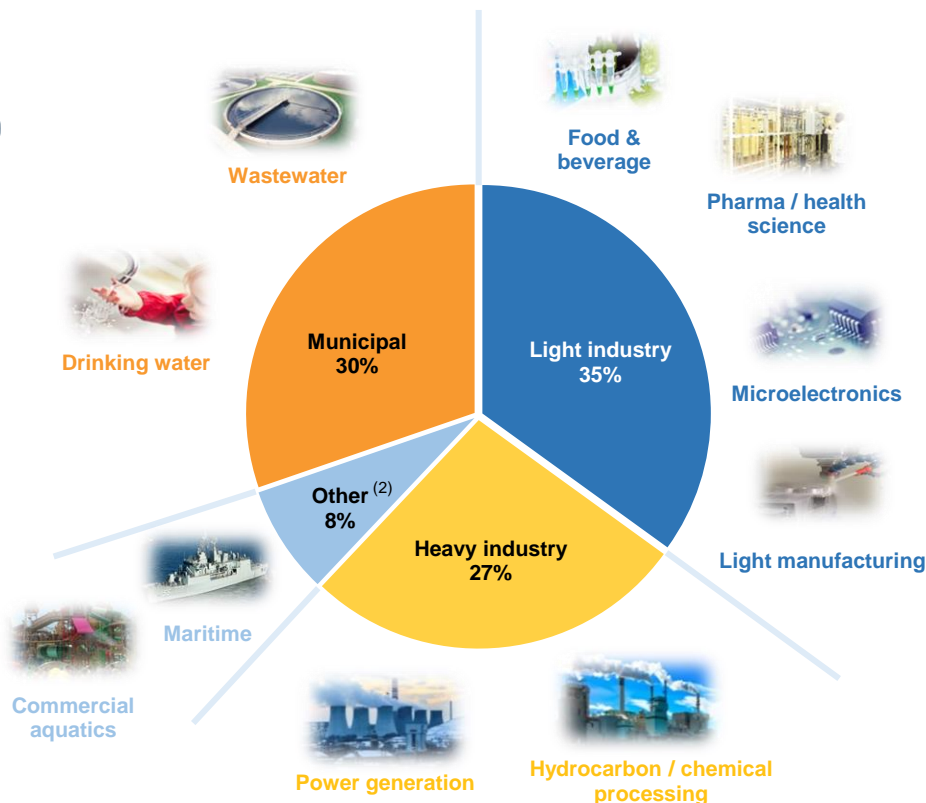
☒ Addressed market sectors
 ☐ Unaddressed markets sectors

\*Source: Amame Advisors as of 2016

(1) Estimated as of 2016; (2) Other includes commercial aquatics, maritime and other / miscellaneous.

...across a diverse, growing set of end markets

We hold top market positions across our key end markets



# We serve our customers through three operating segments

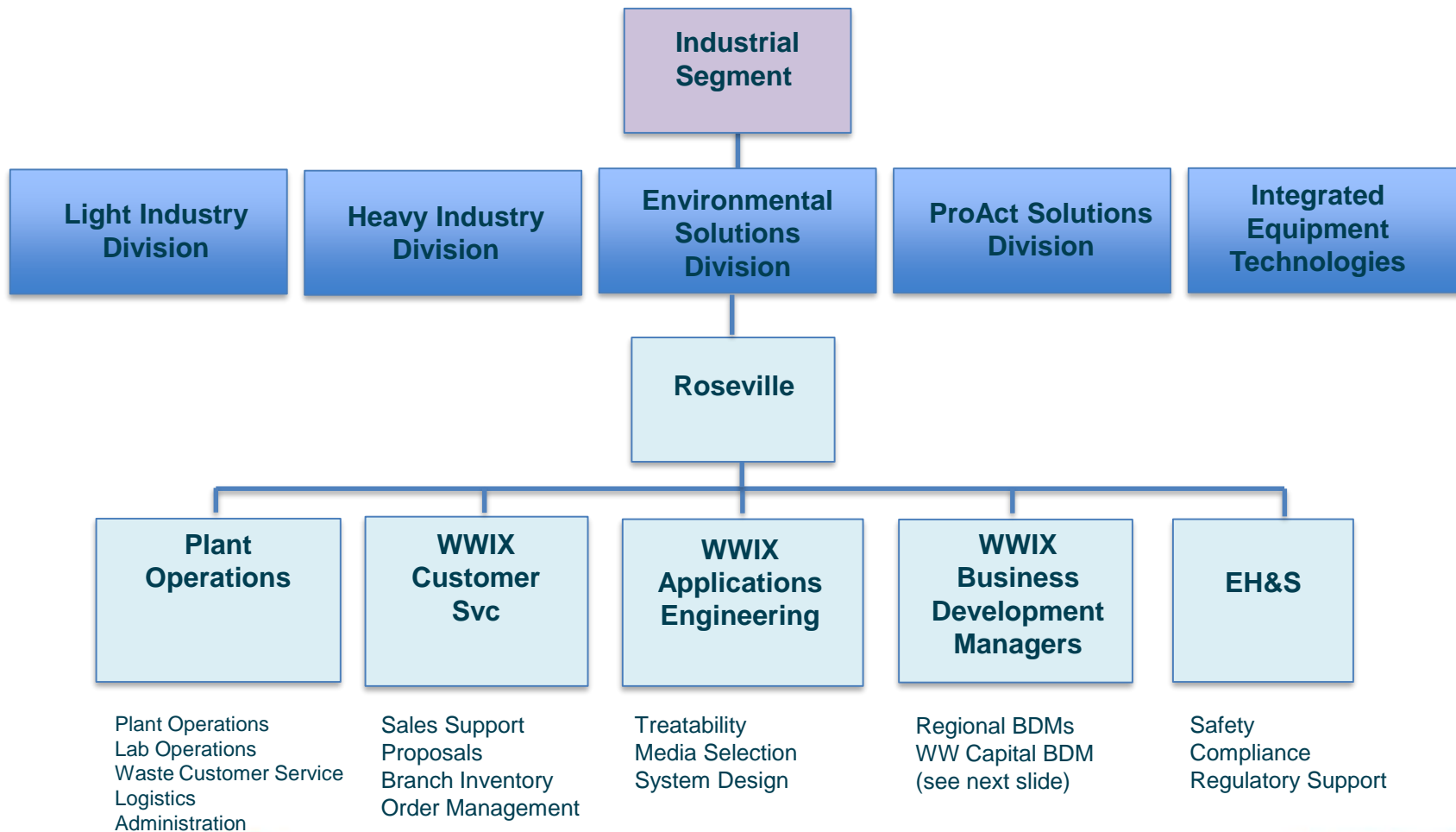
(\$ in millions)

	Industrial	Municipal	Products
2017 revenue	 <p>\$643</p>	 <p>\$279</p>	 <p>\$325</p>
Services and solutions	<ul style="list-style-type: none"> <li>■ Full life cycle service and solutions for process and utility water</li> <li>■ Water as a service</li> </ul> 	<ul style="list-style-type: none"> <li>■ Full range of products for wastewater and drinking water applications</li> <li>■ Broad services for odor and corrosion control</li> </ul> 	<ul style="list-style-type: none"> <li>■ Filtration / Disinfection</li> <li>■ Anode technology</li> <li>■ Electrodeionization</li> <li>■ Analyzers and controllers</li> </ul>  
Representative customers <sup>(1)</sup>			

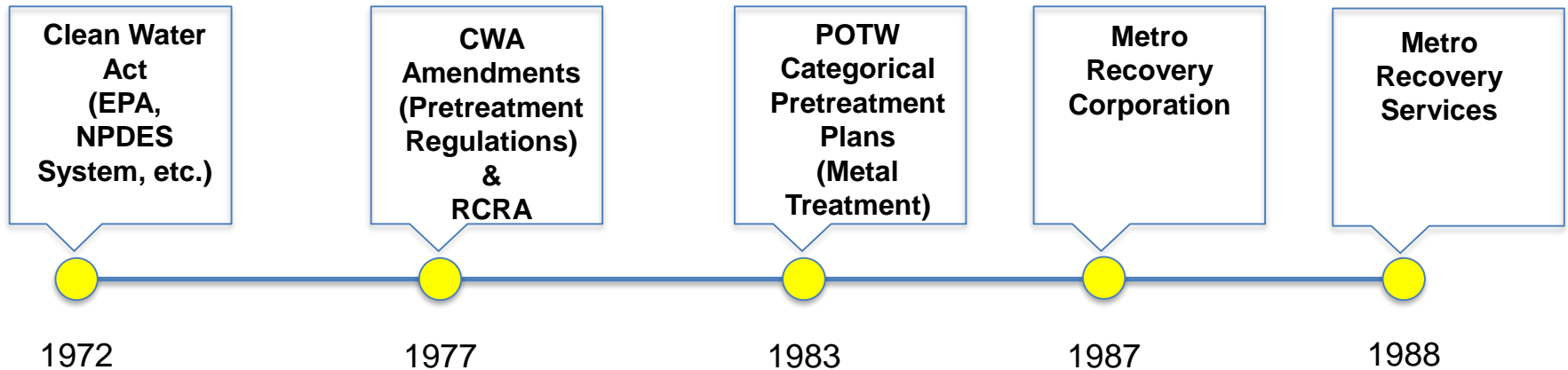
(1) Trademarks shown are those of their respective owners.

# Evoqua/Roseville

## Where We Fit In Evoqua



# Evoqua Water Technologies/Roseville Chronology



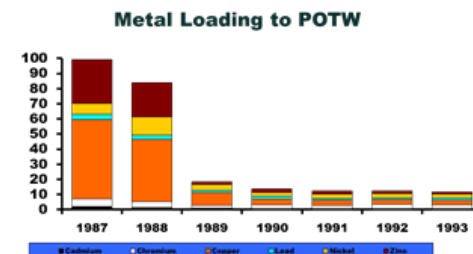
- Business acquired by U.S. Filter Corporation 1992; operated as USFilter Recovery Services
- Business acquired by Vivendi/Veolia (France) in 1999; operated as Vivendi Water/Veolia Environmental
- Business acquired by Siemens (Germany) in 2004; operated as Siemens Water Technologies
- Business acquired by AEA Investors in 2014; renamed Evoqua Water Technologies
- Evoqua Water Technologies IPO 2017



# Evoqua/Roseville - Facility



- Inorganic waste treatment business
  - No explosive, radioactive, or biological wastes
- RCRA Part B TSD Facility regulated by:
  - Minnesota Pollution Control Agency (RCRA permit; industrial storm water permit)
  - Ramsey County Department of Health (facility license; hazardous waste generator license)
  - Metropolitan Council for Environmental Services (industrial discharge permit)
  - US DOT (hazardous materials registration)
- Facility Profile
  - Established 1987 in response to Categorical Pretreatment Standards & RCRA
  - CERCLA approved; ISO 14001 – 2015 certified
  - Purpose built facility – engineered specifically for activities performed at site
  - ~ 75,000 ft2 of plant/processing space/~ 8,000 ft2 of office space
  - 40 employees; plant operates two shifts/day
  - Typical RCRA waste codes received:
    - F006, F007, F008, F009, F011, F012, F019
    - D001, D002, D004 – D011
    - P&U codes on “case by case” basis



# Roseville Business Profile - Plant Operations

- Processing activities include:
  - Resin regeneration;
  - Neutralization;
  - Precipitation;
  - Ammonia stripping.
  - Chemical oxidation/reduction;
- MPCA issued RCRA Permit for Storage and Treatment of Hazardous Waste
  - 14 – Container Storage Areas ~ 1,700 (55 gal) equivalents ~ 94,000 gallons
  - 65 – Tanks for Storage and Treatment ~ 290,000 gallons
  - 140 – Total tanks, vaults, lift stations, ect.
- Production Metrics
  - 10 Million gallons of Waste Water Discharge
  - 6,700,000 Pounds of Waste Shipped Off-Site
    - 4,813,000 Pounds (72%) to Recovery
    - 2,127,000 Pounds generated by Evoqua (100%) to Recovery
    - 190 Off-Site Shipments
    - 120 Shipments of Treatment Residuals



# Roseville Business Profile - Offerings

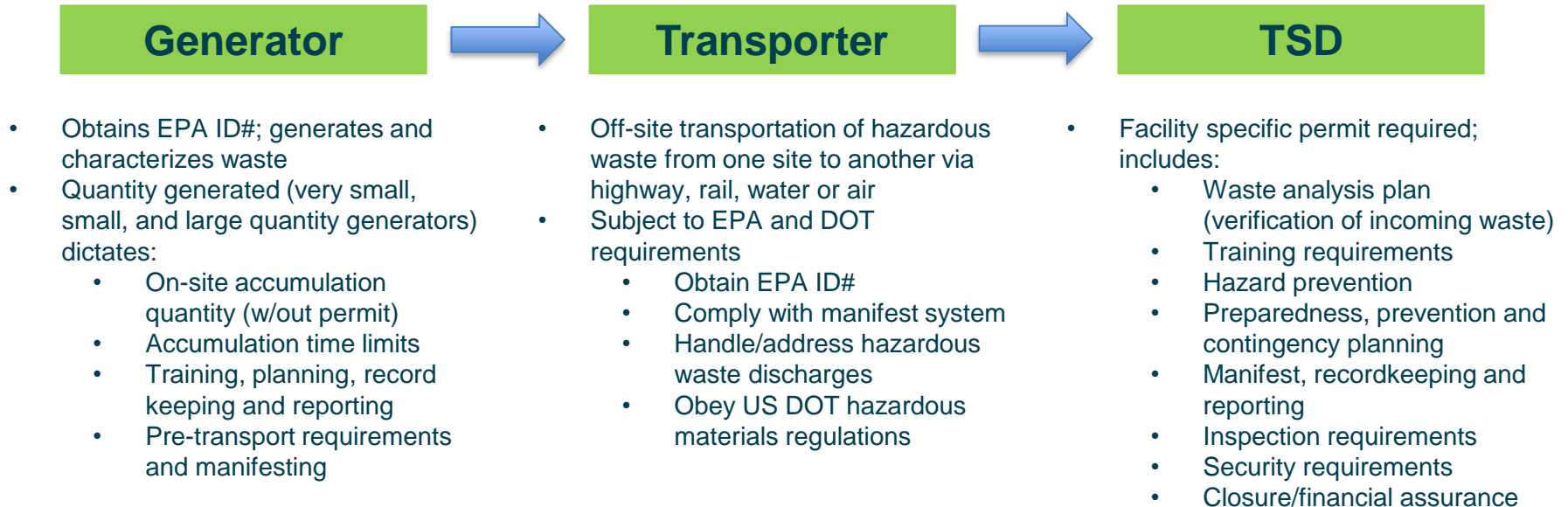
- Products/Services
  - “Regional” bulk inorganic waste treatment business
    - ~ 100 customers
    - Direct sale to generators/third party “waste program” providers
    - “Sphere of influence” limited by freight
  - National wastewater ion exchange (WWIX) business
    - Service based metals discharge compliance; includes associated/complementary wastewater capital equipment
    - ~ 650 customers nationwide (and Canada); ~ 1,000 installations
    - Direct end user sales through Light Industry/Heavy Industry/Environmental Solutions Division field sales teams (supported by regional WWIX Business Development Managers)
    - Local service provided by > 70 Segment service branches (also direct supply from Roseville)
    - Exhausted tanks cycle through Roseville facility for regeneration/media replacement; 10 day transfer sites in several west coast branches with consolidation in Vernon, CA
    - Metals treatment includes Ag, Al, As, Au, B, Cd, Cn, Co, Cr+3, Cr+6. Cu, Fe, Hg, Mg, Mn, Mo, Ni, Pb, Pd, Pt, Sn, V, Zn, etc.
  - National branch WW capital business
    - Neutralization, CPS systems, etc.
- Key markets
  - PWB/semiconductor/solar/other microelectronics
  - Electroplating/metal finishing
  - Aviation/aerospace
  - General manufacturing





# Roseville – Business Overview

## Regulatory Overview ... Hazardous waste “cradle to grave” chain of custody



### Roseville

- Has a RCRA Part B permit, is CERCLA approved, and employs an ISO certified Environmental Management System
- Assumes title to, and liability for, conforming wastes once received; recovers > 99% of metals received into the facility for treatment
- Assists generators with:
  - Waste characterization
  - Preparation of manifests/placarding
  - Freight/logistics activities (including hazardous carriers)
  - Annual/other reporting requirements



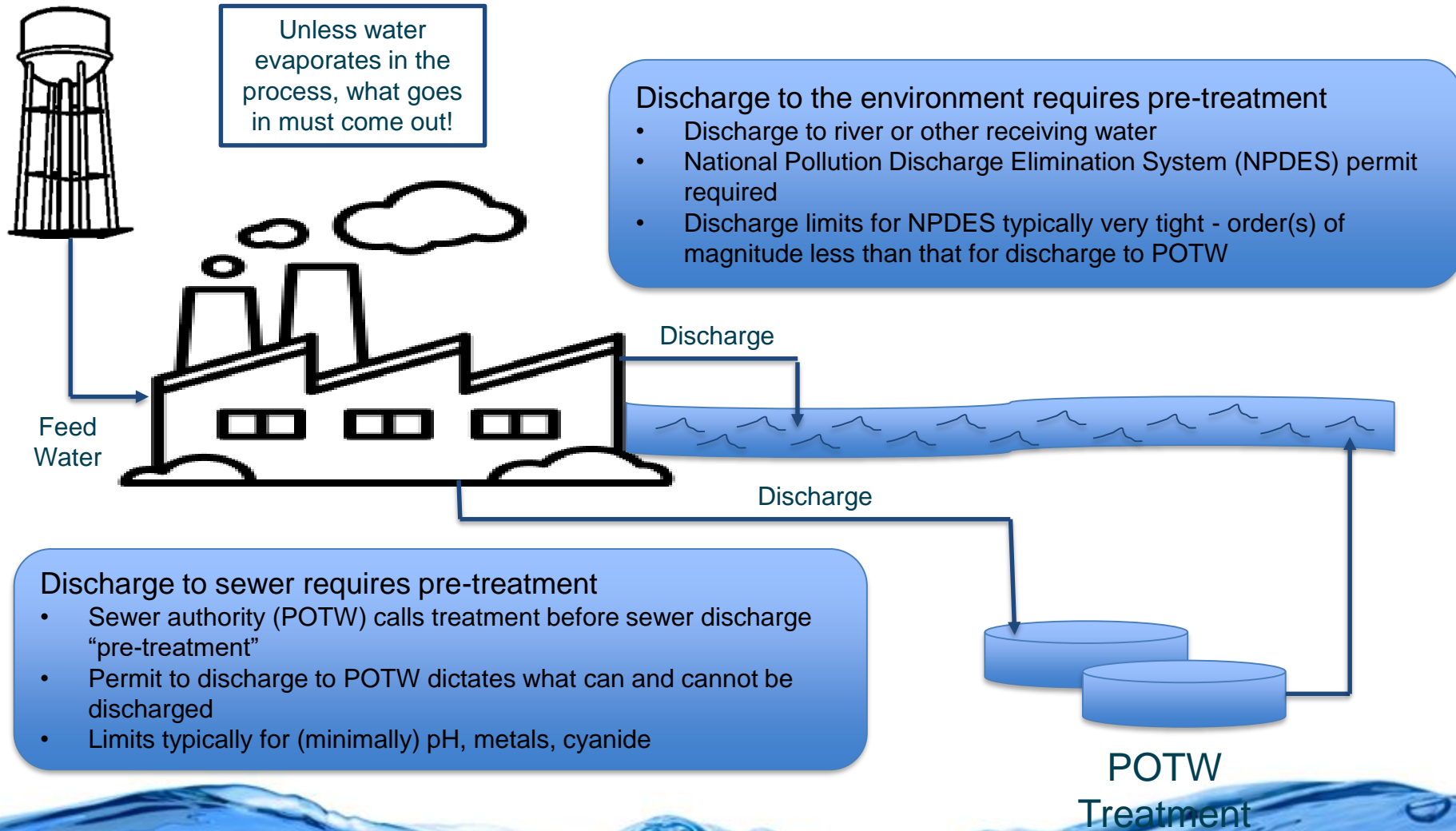
# Roseville – Business Overview

## Value Proposition ... Simple, confident compliance

Evoqua offers:

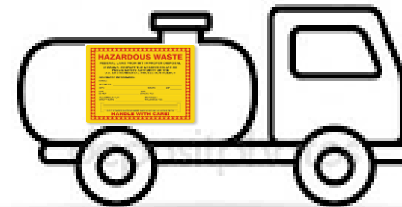
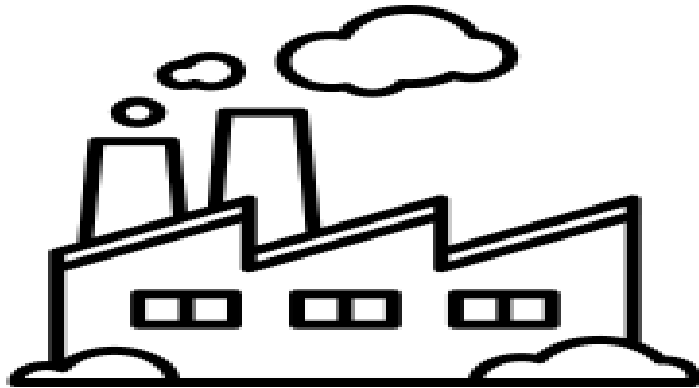
- RCRA permitted facility and ISO certified Environmental Management System focused on metal recovery = **hazardous waste liability mitigation**
- Ability to supply complementary WW capital equipment = **“One-Stop Shop” for optimized equipment/service solutions**
- > 30 years of metals removal applications expertise (and > 1,500 installations) = **working with the market leader with a proven record of success**
- In-house analytical lab and application engineering = **quick treatment evaluation/system design and deployment**
- Simple and reliable (including scalable, unit exchange based systems) = **avoid significant capital outlay, minimize space/maintenance/on-site chemicals, and easily adjust capacity**
- For WWIX, inventory at/delivery from local branch locations = **quick response.**

# Customers Using Water – Water “in” normally means water “out”



# Roseville - Business Overview

## How do Generators Comply with Metals Discharge Regulations?



### On-site Treatment Options:

- Metals precipitation
- Chemical & advanced oxidation
- Electrowinning
- Ion exchange/adsorptive media

### Off-site Treatment Options:

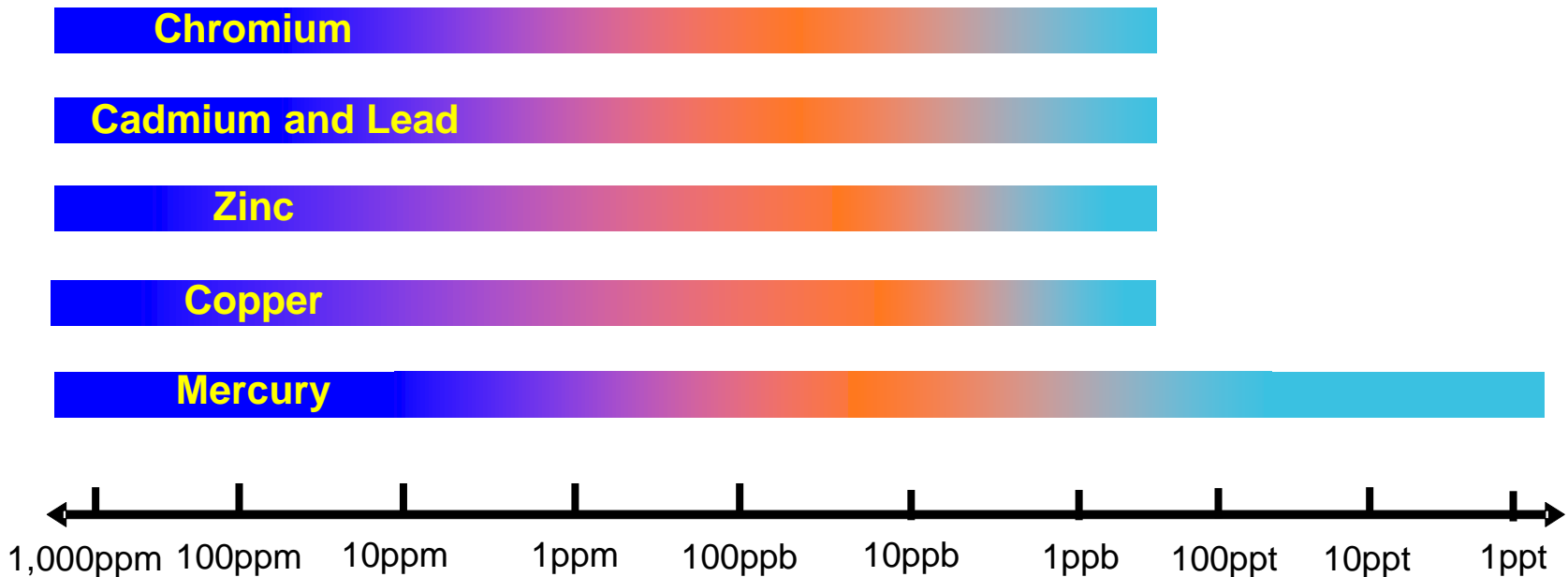
- Deep well injection
- Treatment and disposal
- Treatment and recovery

Evoqua Capital Equipment

Evoqua Services

# Roseville – Business Overview

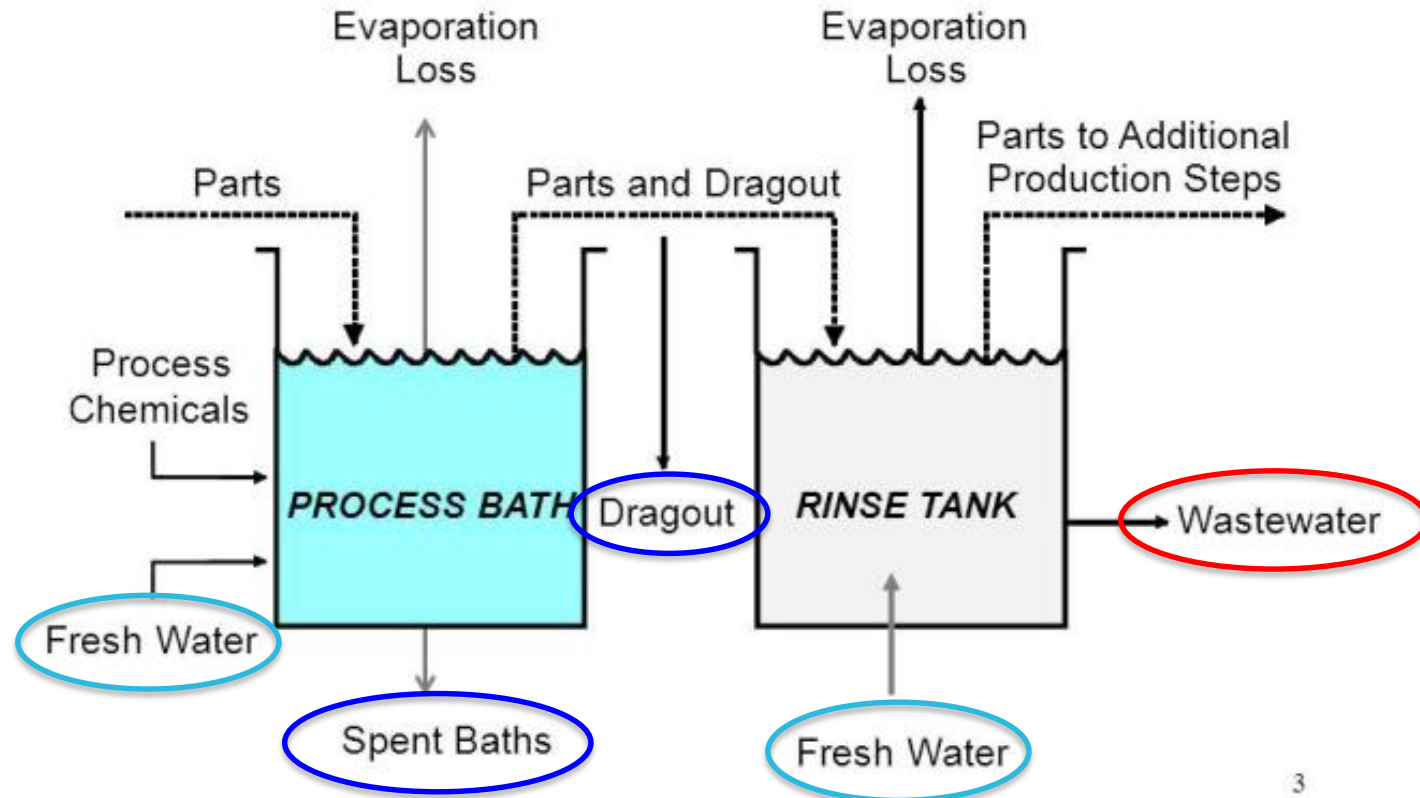
## Metals-Removal Technology Treatment Ranges





# Evoqua Technology Applications

## Customer's Typical Metal Finishing Process Unit



3

Evoqua RO, SDI, RO/SDI

Evoqua WWIX Branch Capital  
(or Roseville waste)

Evoqua WWIX Media

# Wastewater Ion Exchange (WWIX)

## Branch Wastewater Capital Treatment Offerings - Summary

### Inorganic Contaminant Removal

Ag, As, Au, Cd, Cr, Cu, F, Hg, Mn, Mo, Ni, Pd, Pb, Pt, V, Zn,  $\text{ClO}_4$ , CN,  $\text{PO}_4$ , TDS

### Equipment

- pH Neutralization
- Metals precipitation
- Oxidation for cyanide destruction
- Solids dewatering (JWI J-Press) and filtration
- Typical applications for metals concentrations >100ppm
- Typical treated effluent levels in 0.5 - 1ppm range

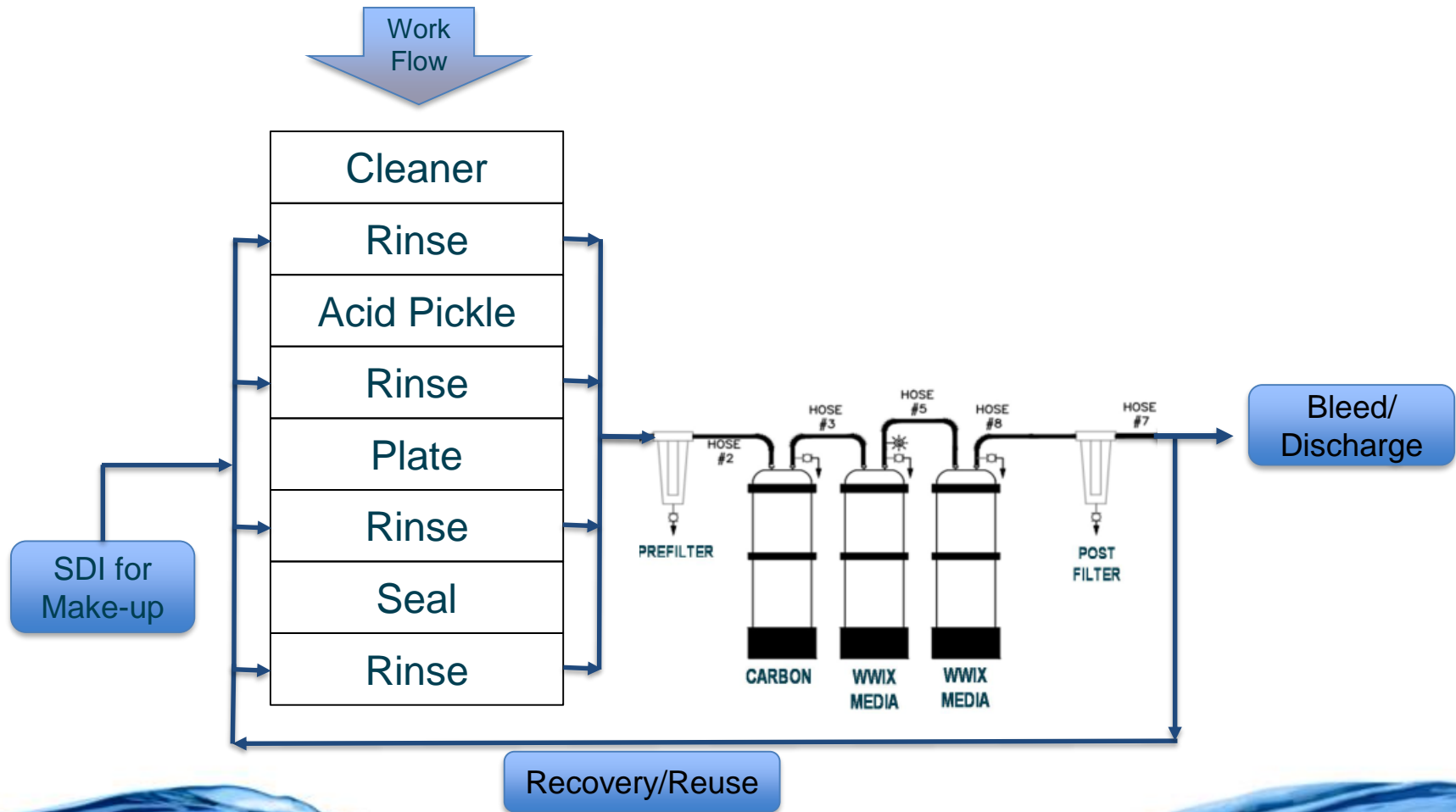
### Modular Systems Approach

- Standard products



# Evoqua WWIX

## Typical Application to Customer's Processing Line



# Wastewater Ion Exchange (WWIX)

## Media Treatment Offerings - Summary

### Inorganic Contaminant Removal

Ag, As, Au, Cd, Cr, Cu, F, Hg, Mn, Mo, Ni, Pd, Pb, Pt, V, Zn,  $\text{ClO}_4$ , CN,  $\text{PO}_4$ , TDS

### Media Tanks

- Ion exchange resin and adsorptive media (selection tailored to contaminants)
- Portable (1.2 to 60 ft<sup>3</sup>) and fixed (350 to 700 ft<sup>3</sup>)
- Flowrates from 1 to 1000+ gpm
- Typical treatment range up to 100ppm
- Typical treated effluent levels in the 1 ppm - 20 ppb range

### Ancillary equipment

- Aquasaver™ lift stations (15-60gpm, with and without pH adjust)
- Hoses, filters, etc.





# Roseville – Business Overview

## Sources, Streams, Metals & Outlets

### Sources

- Contract metal finishing, electroplating and anodizing
- Printed circuit board manufacturing and populating
- Microelectronics/solar
  - Metal finishing and electroplating rinses
  - Anodizing rinses
  - Metal working cleaning and etching rinses
  - Parts washing
- General manufacturing (aerospace, automotive, medical device, glass, solar, etc.)
- Power, chemicals, mining, metals
- Storm Water, Groundwater

### Streams

- Solids
- Liquids
- IX / Adsorbents

### Metals

- Zinc
- Copper
- Cobalt
- Chrome
- Nickel
- Tin
- Silver

### Outlets

- Zinc (40%)
  - 4.1 Million Pounds
  - HTMR w/ EAF Dust
  - Waelz Oxide & IRM
- Copper, Chrome, Cobalt & Nickel (57%)
  - 441,000 Pounds
  - Concentrate and blend metal units
- Nickel & Tin (100%)
  - 217,000 Pounds
  - Concentrates select metal concentrates
- Silver (0%)
  - ~9,000 Pounds
  - Precious Metals
  - Chemical, Incineration, Smelting, etc.



# evoqua

WATER TECHNOLOGIES



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*USFilter*

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Neptune Benson<sup>®</sup>



JetTech

**Ionpure**<sup>®</sup>

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