



## Capability Statement

Triverus Cleaning and Environmental Solutions LLC (dba Triverus LLC) is a technology company that designs, manufacturers, sells and services environmentally focused hard surface cleaning equipment. Based on proprietary high-pressure water spray technology developed for the US Navy to satisfactorily clean aircraft carrier decks, Triverus technology ***cleans, lifts, and contains*** surface contaminants for hygienic disposal from hard surfaces that conventional sweeping equipment cannot address.

### Contact Information:

Headquarters:	Key Contacts:
Triverus LLC	Tim Clapp, Sales Coordinator
661 E Steel Loop	Hans Vogel, President
Palmer, AK 99645	Paula Smith, Chief Operating Officer
	Tristan Kenny, Chief Products Officer
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<b>Website:</b> www.triverus.com	

### Industrial and Financial Codes:

GSA Contract Listing Category	Schedule 23V Automotive Superstore
SIN	2701 104
Tax Identification Number	92-01-0176975
DUNS	075893656
Cage Code	1WLH3
Small Business NAICS Code	333318
Triverus LLC is Hub Zone Certified	

### Geographical Coverage

Triverus LLC surface cleaning equipment is in use worldwide. The Municipal Cleaning Vehicle (MCV) has been advertised and offered in North America, Europe and the Middle East. It has found its greatest acceptance and use in the United States where the product has been available and offered for the longest time. Because of the wide-ranging distribution of cleaning

products other than the MCV, Triverus has developed a distinct expertise in developing customer support capability to supplement its technical expertise and products around the world. Mobile service teams are available for fielding based on customer request.

## Triverus LLC Areas of Expertise

<b>Environmental Cleaning of Pervious Surfaces</b>	
Pervious Asphalt Percolation Rejuvenation	Porous Concrete Percolation Rejuvenation
Pervious Asphalt Periodic Deep Maintenance	Porous Concrete Periodic Deep Maintenance
Permeable Paver Percolation Rejuvenation	Stormwater Pollution Prevention and Abatement
Fines and Heavy Metals Recovery	
<b>General Hard Surface Cleaning</b>	
Covered Parking facilities	Waterfront Pier and Marine Facilities
Maintenance Shop Floors	Dry Docks and Marine Maintenance Facilities
Maintenance Yard Surfaces	Clean up Lift and Contain Heavy Metals Concentrations
Aircraft Carrier Decks	Airport Ramp Areas
<b>Spill Response</b>	
Oil Spills	Fuel Spills
Other Hazardous liquids and fine solids	AFFF
Glycol Recovery	
<b>General Hard Surface Maintenance</b>	
Prepaint Surface Cleaning and Preparation	Failing Paint Removal
Pre-Crack Sealing Cleaning and Preparation	

## Unique Capabilities and Resources

Cleaning System Design and Configuration	High Pressure Water Handling
Cleaning Water Recovery and Filtration	Mobile Chassis Development and Adaptation
Machining and Metal Fabrication	Waterjet and Powder Coat Processing
Product Service at Remote Locations	

## Past Projects and Customers

<b>Seattle Parks Department, Seattle, WA:</b> Porous surface cleaning for stormwater and pollution abatement
<b>Pierce County Highway Department, Spanaway, WA:</b> Porous surface cleaning for stormwater and pollution abatement
<b>Monroe Public Works, Monroe, WA:</b> Porous surface cleaning for stormwater and pollution abatement
<b>Minneapolis International Airport, Minneapolis, MN:</b> Covered parking garage surface cleaning for capture of materials unallowable by EPA in storm sewer systems
<b>FAA Technical Center NAPTF, Egg Harbor, NJ</b> MCV To clean runway surfaces and

materials surface testing facility
<b>Miami International Airport, Miami, FL:</b> MCV for spill recovery, general cleaning of ramp and shop areas
<b>University of Wisconsin, Madison, WI:</b> Covered parking garage surface cleaning for general public space hygiene
<b>JBER Elmendorf, Anchorage AK:</b> General hard surface maintenance, roadway painted line cleaning and maintenance

## Key Corporate Personnel

Position	Name	Experience
President, Chief Executive Officer	Hans Vogel	Founder, Triverus & Trijet LLC: 22 yrs engineering, design, manufacturing
Chief Financial Officer	Paula Smith	16 yrs budgeting, financial management & corporate planning
Human Relations and Office Manager	Kristin Buchanan	11 yrs manufacturing HR and general administration
Engineering Director	Tristan Kenny	20 yrs research, development & design of mechanical systems
Manufacturing, Production Manager	Rex Allen	45 yrs Supply Chain, Manufacturing, Technology
Manufacturing Manager, VT	Douglas Morin	14 yrs mobile equipment product development, manufacturing and operations
Purchasing, Inventory Manager VT	Gregory Payne	21 yrs industrial/commercial purchasing & inventory control
Marketing and Operations Manager VT	Steve Karlin	35 yrs Municipal and Gov't Products Sales, Service, and Mfg
Service and Product Support Manager	Tyler Foley	15 yrs Heavy and automotive equipment maintenance & repair

## Acquisition Paths

General Services Administration, Schedule 23V Automotive Superstore, SIN 271 104
Pennsylvania Department of General Services; COSTARS contract 24, vendor 0000539529
Triverus Factory Direct; contact Factory for Credit Approval

## Product Offered on GSA Schedule

### MCV (Municipal Cleaning Vehicle)



Special Item Number 271 104: [Snow Maintenance and Cleaning Equipment and Attachments](#): Includes but not limited to: Sweepers/Scrubbers, Self-contained Snowplows, Snowblowers, Runway De-icing Trucks, Slide-in Units, Snowplows, Salt/Sand spreaders, and Snow Blowers.

**“Since 2001 Triverus Cleaning and Environmental Solutions LLC has pioneered hard surface cleaning solutions with a focus on environmental cleaning through efficiency, maintainability, and lift and containment of pollutants for hygienic disposal.”**

Triverus’ leading-edge technology was originally developed in partnership with the United States Office of Naval Research for cleaning flight decks on aircraft carriers. The technology is designed to use water only (no chemicals) to:

- LIFT pollutants and adhered solids that conventional sweeping technology cannot address from hard surfaces
  - Brush type sweeping is designed primarily for loose material laying on hard surfaces. While effective for superficial cleanup, the brush cannot transfer sufficient energy to adhered and fine solids to remove and separate them from the paved substrate;
  - Triverus high pressure wash technology delivers sufficient energy to the fines, metals, and other material adhered to the surface to separate them and lift them from the underlying paved surface. Once separated from the surface, these materials form a slurry with the pressurized water and are entrained in a high-volume low speed vacuum system
- CONTAIN the pollutants and water slurry in an on-board recovery tank.
- DISPOSE of the slurry and pollutants properly and hygienically, removed from the environment and storm water runoff.

The MCV features Triverus technology packaged on a Bobcat® Toolcat™ equipped with all wheel steer. The cleaning platform is mounted at the front of the Toolcat for improved access into smaller areas and operator safety in high traffic areas. Using a standard Bobtach™ hitch and quick

disconnect water, hydraulic and electrical connections, the configuration allows easy removal and replace of the cleaning platform and the rear module. This allows additional seasonal use of over 40 attachments to maximize usefulness of user investment.

The MCV is unmatched in achieving regulatory compliance through removal and containment of restricted or controlled materials that are more and more often the target of EPA regulations and inspections. The MCV achieves excellent cleaning results with pure water only and does not require chemicals or soap solutions of any kind to do its work.