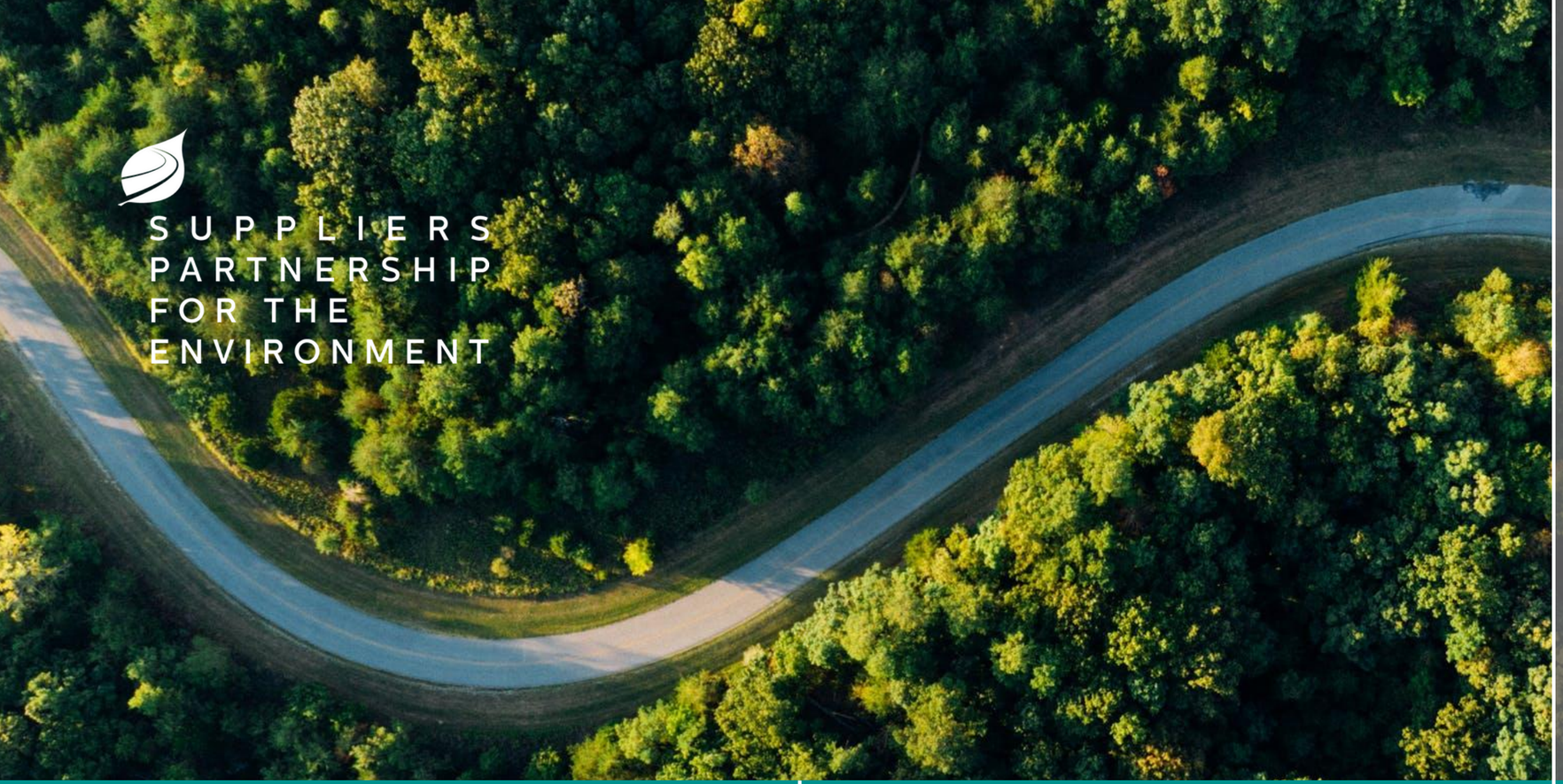
SUPPLIERS PARTNERSHIP FOR THE ENVIRONMENT

# Suppliers Partnership for the Environment

## Water Stewardship Strategy Summary

April 2025




# Our Vision: An automotive industry with positive environmental impact.

## Carbon Neutrality

Working toward long-term goals of achieving carbon neutrality by advancing carbon reporting and reduction practices across the automotive value chain.

## Circular Economy

Working toward a circular materials economy by promoting collaboration to incorporate sustainable practices and materials in the production and content of vehicles.

## Nature & Water Stewardship

Working toward a nature-positive future by supporting industry goals to operate in harmony with the environment, preserve biodiversity, and restore natural ecosystems.

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# SP Water Stewardship

This summary highlights the critical importance of water to the automotive sector and the value of adopting a stewardship strategy. It outlines SP's guiding policy and sector framework designed to manage water risks, enhance value, and foster collaboration among stakeholders.

## Sector Reliance & Climate Risks

**Water is a critical input and asset across the automotive value chain**—from raw materials to manufacturing to end-of-life.

Producing one passenger vehicle can require 13,000–40,000 gallons of water; EVs further increase this footprint.

Climate change escalates water scarcity, pollution, and flood risks— increasing risks of disrupting operations and supply chains.

**Urgent action is needed to manage rising water risks and ensure long-term water security for the sector.**

## SP's Water Stewardship Aspiration

SP recognizes water as a stressed global resource vital to people, nature, products, and the automotive value chain.

The partnership strives toward **improving water risk assessments**, **developing meaningful metrics**, and **fostering continuous improvement** in water use across the sector.

SP emphasizes balancing water impacts by prioritizing actions with the greatest watershed benefits and engaging stakeholders in collaborative projects.

**Transparent communication** of water stewardship outcomes and shared challenges is central to this approach.

**The auto sector relies on water across its value chain and faces growing climate-driven risks, including scarcity and quality challenges.**

**The Suppliers Partnership for the Environment (SP) champions collaborative water stewardship to promote sustainable use, risk reduction, and transparency.**

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# Traditional Water Management vs. Water Stewardship

## “water stewardship”

**the use of water that is socially equitable, environmentally sustainable and economically beneficial.**

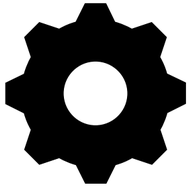
*The Alliance for Water Stewardship (AWS)*

| Traditional Water Management | vs. | Water Stewardship |
|---|---|---|
| Focus on site-level efficiency, cost savings, and regulatory compliance | | Focus on watershed-level sustainability, equity, and long-term value |
| Minimizes water use and manages wastewater within facility boundaries ("fence line") | | Addresses water risks and opportunities both inside and beyond the fence line |
| Reactive, compliance-driven approach | | Proactive, risk-informed and collaborative approach |
| Isolated actions at individual sites | | Coordinated actions across value chain and stakeholders |

# Water Stewardship can be applied across the Automotive Value Chain

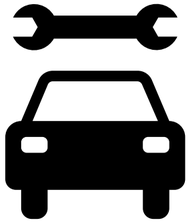
### Raw Material Extraction

Site-specific water risk assessments + watershed alignment



### Component Manufacturing

Supplier engagement + upstream water impact tracking

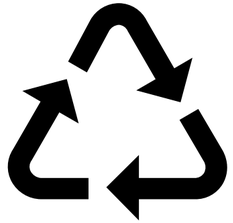


### Vehicle Assembly

Facility-level efficiency + beyond-the-fence mitigation

### Dealership & Operations

Local water use tracking + community collaboration



### End-of-Life & Recycling

Circular practices + sustainable water disposal

**Automotive water stewardship leadership goes beyond cost and compliance, embracing a holistic, watershed-based approach.**

It emphasizes **site-specific actions and cross-value chain collaboration** to tackle shared water risks and opportunities

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# Value Proposition for Water Stewardship

## Enhanced Brand Value

- **Attracts younger, purpose-driven consumers** seeking transparency on water and environmental impact
- **Enhances brand reputation** through credible water stewardship
- **Differentiates companies** in a competitive automotive market

## Risk Mitigation & Operational Efficiency

- **Expands focus** to water quality, stormwater, and off-site regulatory risks
- **Identifies hidden vulnerabilities** beyond the facility boundary
- **Unlocks cost savings and efficiencies** through proactive, holistic management

## Cost Savings

- **Reduces water treatment and energy costs** (e.g., boilers, cooling systems)
- **Lowers equipment maintenance needs** tied to water systems
- **Avoids fines and cuts compliance-related expenses**

## Resilience

- **Reduces disruptions** from floods, droughts, and water quality issues
- **Protects supply chains and operations** from climate-related water risks
- **Enhances business continuity** and long-term resilience

## Trust

- **Builds stakeholder trust** through transparent water practices
- **Strengthens community support** for operations and growth
- **Improves reputation** with regulators, customers, and investors

**Water stewardship delivers multifaceted business value** for the automotive sector.

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# Drivers of Action in the Sector

Trends across the automotive sector and other water intensive sectors point to the following factors as key drivers for addressing shared water-related challenges and opportunities

## Cost Considerations

- Water, treatment, and stormwater costs are increasing across the U.S.
- Indirect costs (heating, cooling, cleaning) add to the total burden
- Multiplied across many sites, these expenses become significant for large enterprises

## Physical Risk

- Flooding, scarcity, and poor water quality disrupt operations across sectors
- Indirect impacts include higher insurance premiums and permit fees
- Water-related physical risks are increasingly widespread and costly

## Regulatory Uncertainty

- Drought, pollution, and groundwater stress are driving new water regulations
- Businesses face tightening rules on groundwater withdrawal, conservation, and runoff control
- State-by-state policy shifts require ongoing monitoring and adaptation

## Customer and Investor Pressures

- Stakeholders expect credible, watershed-level water stewardship
- ESG frameworks demand detailed water risk disclosures
- Proactive communication builds investor confidence and competitive edge

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# Water Materiality: Automotive Value Chain Stakeholder Overview

- Water is a critical resource with unique impacts and uses across the automotive value chain. Understanding water materiality for each stakeholder group drives targeted stewardship actions.

## Key stakeholder groups and their water materiality in the automotive sector

- **Original Equipment Manufacturers (OEMs)** can use significant water in painting processes, rain testing, and HVAC operations, making watershed risk assessments key with sites potentially located in high-water-risk regions.
- **Materials Suppliers** may rely heavily on water for raw material production processes such as steel cooling and cleaning, aluminum refining, plastic production, rubber processing, and lithium mining for EV batteries, which can be highly water intensive.
- **Component Suppliers** tend to utilize water mainly for cooling equipment, metal finishing, paint applications, and HVAC systems; their wastewater may contain contaminants like oils and metals requiring careful management.
- **Dealers** typically primarily consume water for car washing, landscape irrigation, and domestic uses, with stormwater management being an important aspect due to large impervious surfaces at dealership lots.
- **End-of-Life operations** can involve water-intensive processes like plastic recycling washes, hydrometallurgy for battery recycling, and may face risks of pollution from improper disposal affecting local water quality.

# OEMs

OEMs design and release final vehicles, with major water use concentrated in painting, rain testing, and HVAC operations. Some may operate in high water-risk regions such as Rio Lerma and Rio Verde basins, for example.

## Key Water Uses

- **Painting & Cataphoresis**: Up to 15,000 gallons per vehicle for corrosion protection and wash cycles
- **Rain Testing**: ~700 gallons per vehicle, largely recyclable
- **HVAC Systems**: Up to 48% of facility water use; major potential for efficiency
- **Water Treatment & Reuse**: Processes to separate chemicals and recycle paint wastewater

## Risks & Impacts

- High physical water risk at key OEM sites (e.g., WRI Water Risk Atlas data)
- Exposure to reputational, regulatory, and operational risks in water-stressed areas
- Cost implications from inefficient water systems and potential disruptions

## Stewardship Opportunities

- Expand commitment to water stewardship at both operational and supply chain levels
- Conduct watershed risk assessments at priority sites
- Optimize HVAC and process water systems for savings and resilience
- Align stewardship with climate adaptation and ESG goals

# Materials Suppliers

Materials suppliers play a critical role in automotive production, with raw material processing—especially for EV components—driving high water use and water-related risks across the supply chain.

## Key Water Uses

- **Steel production:** Up to 40,000 gallons of water per ton (cooling and cleaning).
- **Aluminum (alumina) production:** 0.66 to 36.33 gallons per pound.
- **Plastics:** ~22 gallons per pound due to oil and gas extraction and cooling.
- **Synthetic rubber:** Significant water use in oil/coal refinement and cooling.
- **EV batteries:** Lithium extraction can use up to ~24,000 gallons for 8 kg of lithium per battery.

## Risks & Impacts

- High water consumption across mining, extraction, and processing.
- Operational and reputational risk in water-stressed regions.
- Growing scrutiny over the environmental footprint of EV components.

## Stewardship Opportunities

- Conduct enterprise-wide water use assessments across material types.
- Identify high-risk, high-impact suppliers and processes.
- Disclose findings to build transparency and industry knowledge through SP.
- Engage suppliers in watershed-based stewardship and best practice sharing.

# Component Suppliers

Component suppliers face diverse water challenges across cooling, metal finishing, and painting operations—particularly in water-stressed regions—necessitating improved stewardship and risk mitigation.

## Key Water Uses

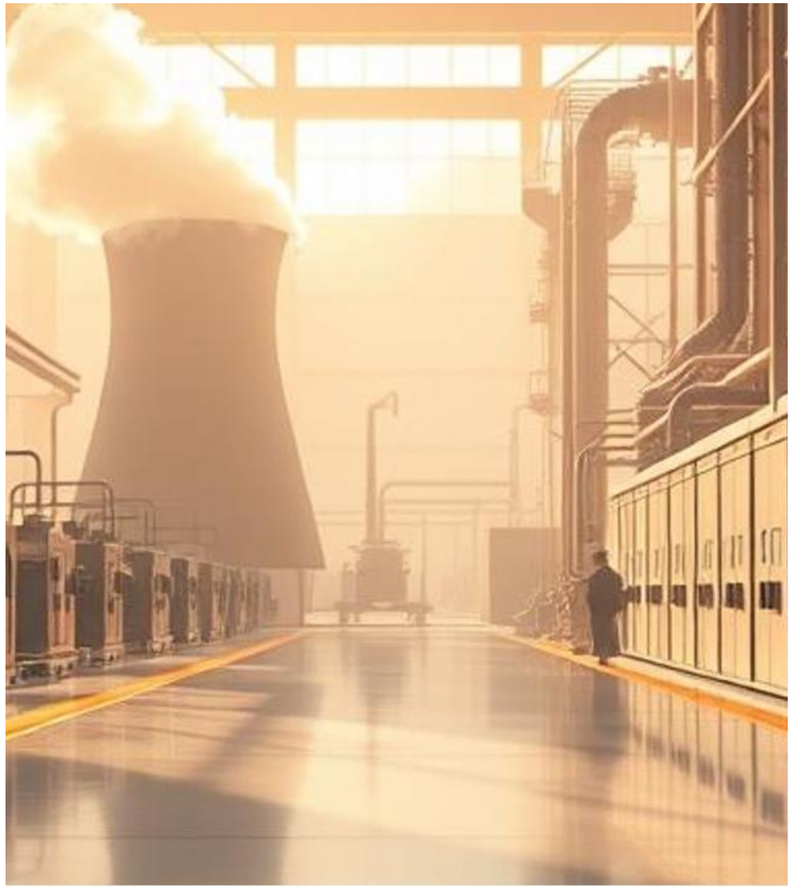
- **Cooling:** Water used in towers to regulate equipment/material temps.
- **Metal finishing:** Water-intensive cleaning, polishing, and plating.
- **Paint processes:** Applied to many components, require significant water use.
- **HVAC systems:** Up to 48% of facility water use; optimization offers savings.
- **Wastewater:** May contains metals, oils, and harmful residues.

## Risks & Impacts

- Wastewater discharge risks due to contaminants.
- High water use in regions facing extreme water stress (e.g., Mexico's NW coast, Rio Grande basin).
- Operational disruption and regulatory pressure tied to localized water scarcity and quality.

## Stewardship Opportunities

- Conduct operational water assessments to pinpoint high-impact processes.
- Disclose findings through SP to support transparency and industry learning.
- Engage suppliers in watershed-based water stewardship initiatives.
- Invest in HVAC and process optimization to reduce consumption and costs.



# Dealerships

Dealers use water primarily for vehicle washing, landscaping, and indoor use—making efficiency and stormwater management key to sustainable operations.

## Key Water Uses

- **Car washing:** Weekly washes during vehicle storage use 15–85 gallons per wash; many use reclaimed water.
- **Landscape irrigation:** Significant water use, especially in hotter regions.
- **Indoor/domestic use:** Restrooms and client facilities contribute to daily water demand.
- **Maintenance services:** Water use from oil changes, brake work, etc.

## Risks & Impacts

- **Stormwater runoff:** Large impervious surfaces increase flood and pollution risk; may trigger regulatory oversight.
- **Cost exposure:** Inefficient water use raises utility bills and maintenance costs.

## Stewardship Opportunities

- Implement metering to track and manage water use.
- Explore water recycling opportunities (e.g., car washes, irrigation).
- Conduct site-level assessments to identify savings and compliance strategies.
- Share insights through SP to promote water stewardship in the retail segment.

# End-of-Life

Water plays a critical role in recycling and disposal processes at a vehicle's end-of-life, with key risks stemming from pollution, improper disposal, and wastewater generation.

## Key Water Uses

- **Plastic recycling:** Begins with intensive washing, sometimes requiring chemical agents.
- **Battery recycling (hydrometallurgy):** Uses aqueous solutions to extract metals like lithium and copper; produces heavy-metal-laden wastewater.
- **Oil recycling:** Filtration and treatment reduce the need for water-intensive virgin oil extraction.

## Risks & Impacts

- **Improper disposal/export:** Can contaminate local water through leaching, runoff, and poor hazardous waste management.
- **Wastewater risks:** From recycling processes; requires robust treatment to prevent heavy metal and chemical discharge.
- **Water pollution:** Landfill fires, emissions, and mismanaged scrap sites can degrade water quality.

## Stewardship Opportunities

- Conduct water use and discharge assessments across end-of-life processing facilities.
- Focus on wastewater treatment improvements and runoff prevention.
- Identify processes where recycled materials can reduce upstream water use.
- Encourage transparency and safe disposal practices to safeguard local watersheds.

NEXT STEPS

# Suggested Further Actions

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1

## Survey all sites for water data collected

- Survey sites under direct operational control to determine what type of water-related data is reported. This would help sites assess gaps in understanding of water uses and impacts

2

## Conduct watershed assessments at all sites

- Use a free online tool to assess watershed risk at those sites under direct operational control

3

## Apply the SP Water Stewardship Action Matrix at key sites

- After conducting a watershed risk assessment, apply the Action Matrix to sites with highest levels of water-related risk per the assessment tool used

NEXT STEPS

# Key Issues to Track for Future Leadership

## Aligning Water Use with Climate Goals

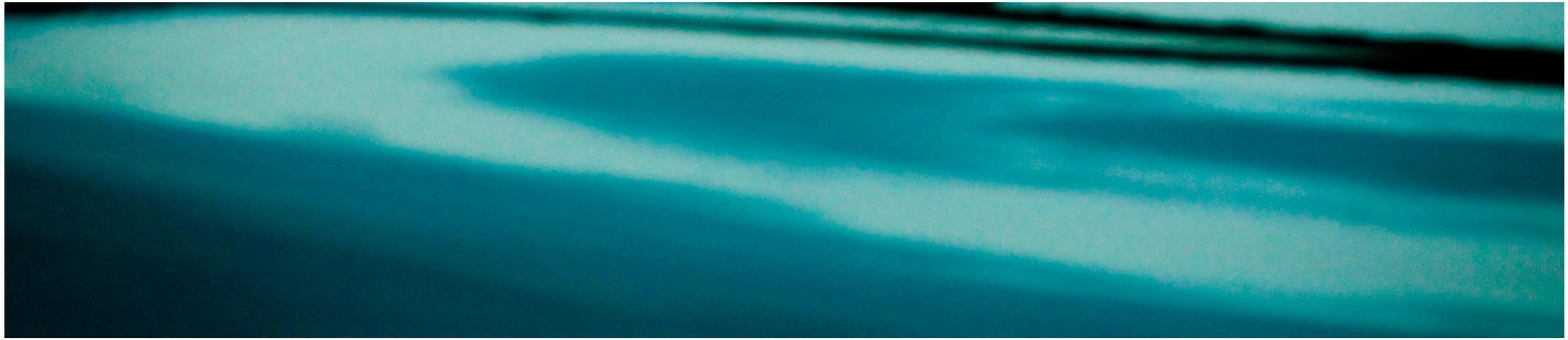
There's a growing opportunity to define co-metrics and co-benefits that link water use reduction to climate adaptation and carbon reduction—an emerging area of interest across industrial sectors, offering a chance for the automotive industry to lead in thought leadership.

## Developing a Fit-for-Use Water Strategy

Understanding the appropriate water quality required across the supply chain—such as using recycled water for non-potable processes like painting, irrigation, and car washes—can optimize resource use. This must be informed by local watershed conditions and stressors.

## Assessing EV transition Water Impacts

The shift to electric vehicles brings new pressures on water resources due to increased demand for mining and mineral processing. The sector should proactively assess and communicate these impacts, especially if the total water footprint increases.



**Download the full Water Stewardship Strategy Framework Guidance Document at https://www.supplierspartnership.org/water-strategy-framework/**

# Disclaimer

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