

CAT® WATER SOLUTIONS

DEFEAT DUST.

NOW YOU'RE IN CONTROL.

A water truck is an important piece of support equipment for quarry and mining operations – and the support you need is just as important.

That's why we introduced the world's first fully integrated Cat® 777 water truck in 2021, connected with advanced technology and backed by the global Cat dealer network.

Our expanded water truck line up now includes the Cat® 777 (07), 777 (05), 785 (04), and 789 (04) — helping you control dust and maintain haul roads around the world. We also offer conversion and retrofit kit options for specific Cat truck models already in the field. Explore the benefits and learn how we can help you take your site to the next level with **Cat® Water Solutions.**

CAT®

CAT WATER SOLUTIONS

SCALABLE OPTIONS TO MEET YOUR NEEDS.



Autonomous watering operation is available on the 789D / 789 (04) truck with Cat® MineStar™ Command.

THE JOURNEY OF WATER
THROUGH INNOVATIVE TECHNOLOGY.

We realize mining and quarry operations need flexibility within their water truck fleet, that's why we offer options to match a variety of customer requirements around the world.

Since introducing the Cat® Water Delivery System in 2012, we have added more offerings to our lineup. These options give you the ability to match your water trucks with your hauling fleet, helping lower maintenance costs using common components.

In 2021, we took it a step further by developing integration with Cat MineStar, offering connectivity packages for water utilization and asset tracking — providing the data you need to get the job done safely and efficiently.

UPGRADE OPTIONS.

Conversion and retrofit kits are offered for specific Cat truck models. These packages include options for both connectivity and water delivery. See your local Cat dealer for more information.

CAT WATER SOLUTIONS

The Cat Dealer Network provides parts and services, including connectivity support, for your water truck. They can also work with you on equipment protection plans and Customer Value Agreements (CVAs) to help maintain your fleet.

Cat® MineStar™ Technology

provides near-real-time information hosted in the cloud to monitor water source and distribution. Use dashboards to track water usage, fuel and water tank levels, asset location, and more. This data helps you determine when and where to water.



The Cat Water Delivery System

automates water output and spray patterns to help prevent overwatering.

Auto Mode, is an exclusive feature designed to deliver a more efficient watering technique with better precision and control compared to traditional watering methods.

Cat Truck Platforms

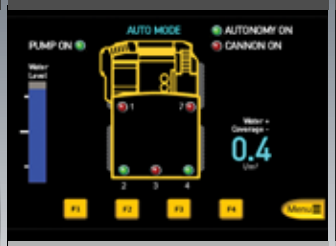
Built on proven Cat truck platforms for durability, reliability, and efficiency. Application-specific cab and ROPS certification for operator safety.

Retrofit kits are available for water delivery and technology systems on specific Cat truck models.

MORE THAN A WATER TRUCK – AN INTEGRATED WATER SOLUTION.

CAT WATER SOLUTIONS

PRODUCT PORTFOLIO

777 (07)* REGION: GLOBAL	777 (05)* REGION: LRC	785 (04)* REGION: LRC	789 (04)* REGION: LRC	WDS 1.0	WDS 2.0**
					
75 700 L (20,000 gal)	75 700 L (20,000 gal)	121 133 L (32,000 gal)	165 000 L (43,588 gal)	FIRST FIT / AFTERMARKET	AFTERMARKET

SUPPORT

BACKED BY OUR GLOBAL **CAT® DEALER NETWORK**

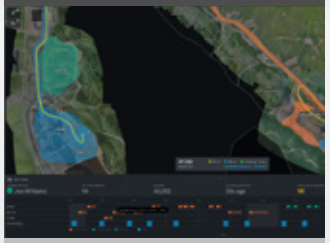
INTEGRATED SOLUTIONS

- Cat® Water Delivery System (WDS)
- Cat MineStar™ for Water Tracking
- Cat Rigid Frame Truck Platforms
- Connectivity Packages: Basic or Premium
- Customer Value Agreements (CVAs)

IN-CAB CONTROLS

- Monitor with touchscreen display
- Keypad to control spray heads
- Joystick to control cannon
- WDS cameras to view tank water fill and water output from spray bar

SOFTWARE



MINESTAR / WDS

***Basic Connectivity comes standard** with a 6-month complimentary service-based offering for better data insights.

WATER TANK CAPACITY DETERMINED BY SIZE CLASS | MINESTAR CONNECTIVITY HARDWARE INCLUDED (FROM FACTORY) | AUTONOMOUS OPERATION – COMMAND (CMD)

LRC = LESSER REGULATED COUNTRIES.

**AVAILABLE FOR 777G / 777 (07) MODELS.

WE OFFER SCALABLE OPTIONS: FROM OPERATOR-DRIVEN – TO SEMI-AUTONOMOUS – TO FULLY AUTONOMOUS.

***Cat® MineStar™ for water tracking uses cloud-based connectivity through cellular and WiFi to collect and manage data.**

For more information on Cat Command or MineStar connectivity options, contact your local Cat dealer.

CAT WATER SOLUTIONS

INTEGRATED OPTIONS TO SUPPORT YOUR OPERATIONS.

	FACTORY INTEGRATED SOLUTION (CHASSIS, WDS, MINESTAR)	WATER SOLUTIONS UPGRADE KITS (WDS / MINESTAR / CAMERAS)	MINESTAR CONNECTIVITY PACKAGES	REGIONAL OFFERINGS (with CVAs[1])
Cat® 777 (05)	●		●	LRC[1]
Cat® 777 (07)	●	●	●	HRC[1] / LRC[1]
Cat® 785 (04)	●	●	●	LRC[1]
Cat® 789 (04)*	●	●	●	LRC[1]
Cat® 777G / 777F		●	●	non-current
Cat® 785D / 789D		●	●	non-current

*Autonomous watering operation is available with Cat® MineStar™ Command. Requires approved 3rd party OEM water tanks.

OEM = Original Equipment Manufacturer.

Water-ready configuration from factory with integrated WDS cab controls.

Factory assembled and supported by Cat dealer.

Connectivity hardware included.

Water cab / ROPS certified.

Water tank provided by 3rd party OEM.

Cat Water Delivery System (WDS):

- Touchscreen monitor display.
- Keypad to control spray heads.
- Joystick to control cannon.
- WDS Software controls watering system and connects to Cat MineStar software for water and data tracking.

Cat MineStar Hardware:

- Requires Cat Product Link™ Elite.

Camera System: varies by truck model.

ROPS Cab Conversion: varies by model.

Connectivity:
Basic and Premium packages available.

Requires telematics hardware:
Cat MineStar with Product Link Elite.

LRC = Lesser Regulated Countries.

HRC = Highly Regulated Countries.

CVAs = Customer Value Agreements

*Contact your Cat dealer, Mining Tech Rep, or Caterpillar Mining Technology Enabled Solutions (MTES) team for requirements on the autonomous water truck and a list of approved water tank manufacturers.

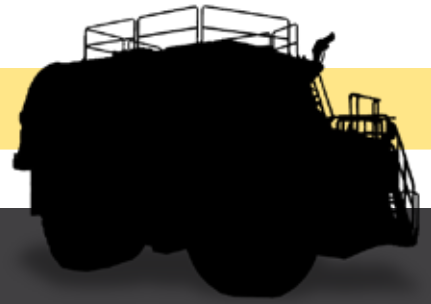
CAT WATER SOLUTIONS DELIVERS BETTER INTEGRATION WITH INCREASED EFFICIENCY.

SYSTEM INTEGRATION
TRUCK, CAB COMPONENTS, SOFTWARE, SPRAY SYSTEM, TELEMATICS

AUTO MODE
EXCLUSIVE AUTOMATED WATER DELIVERY INCREASES ACCURACY & EFFICIENCY

DATA-DRIVEN INSIGHTS
PROVIDED BY CAT MINESTAR™ PERFORMANCE TRACKING





FULLY SUPPORTED BY THE GLOBAL CAT DEALER NETWORK.

CAT WATER SOLUTIONS	OTHER WATER SYSTEMS
With automated water delivery, the operator can focus on driving. **Auto Mode controls and regulates water coverage and output** based on ground speed. No need for the operator to adjust.	**Requires constant operator input** to adjust water spray. **Operator manually sets amount of water** to be sprayed onto the haul road. Water flow rate is constant until the operator adjusts.
Automatic start / stop function, based on truck speed, eliminates overwatering at road intersections when the water truck comes to a complete stop.	**Only waters at certain ground speeds.** Without careful operation, critical areas of the haul road get overwatered.
Variable active spray heads produce larger / heavier water droplets designed to reach the ground – losing less spray to wind / evaporation.	**Competition uses a fixed spray pattern;** a significant amount of water spray is lost to evaporation and wind.
Once set, water deposition is maintained regardless of ground speed. This provides a higher accuracy range of speed: 5 - 35 kph (3 - 25 mph).	**Constant flow reduces water coverage** when truck speed increases, over waters when truck slows down, limiting effective watering speeds to 15 - 20 kph (9 -12 mph).
Patented spray head design regulates water spray with integrated software. **Self-cleaning spray heads** open wide to eject debris, reducing maintenance.	**Competitive water distribution systems require tools** to change flow / spray pattern. Spray heads have shorter life span and require more maintenance.

DELIVERING DATA-DRIVEN INSIGHTS FOR FLEET OPTIMIZATION — WITH A FOCUS ON SAFETY, EFFICIENCY, AND DURABILITY.

A COLLABORATIVE DESIGN APPROACH TO MANAGE DUST.

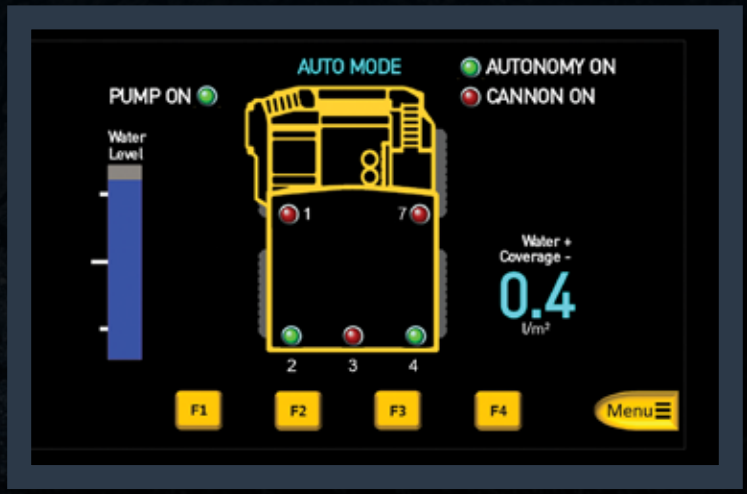
As we set out to develop Cat® Water Solutions — we listened to customer, dealer, and industry feedback.

Using this information, we designed an integrated system equipped with advanced technology to provide better dust control.

DESIGNED WITH THE OPERATOR IN MIND.

The Cat Water Delivery System (WDS), includes factory-integrated controls in the cab, providing the comfort and ergonomics you expect from Cat machines. This includes a joystick, keypad, and touchscreen to easily control the water delivery system — all within operator reach.

The operator can use the integrated touchscreen to view important data about the water delivery system. Water tank level, spray head selection, and water displacement rate can all be viewed in the high definition monitor. WDS cameras are also integrated into the display to view water tank refill and water output from the spray bar.



PROPERLY WATERED HAUL ROADS DIRECTLY IMPACT FLEET CYCLE TIMES — ALLOWING YOUR OPERATIONS TO RUN MORE EFFICIENTLY.

Our automated watering delivery system connected with telematics gives you and your operators the tools to manage water distribution with ease. Auto Mode regulates water spray based on truck speed and reduces the output when slowing down, stopping, or rounding a corner. This feature helps prevent your operators from spraying too much water – compared to traditional manual watering methods that tend to oversaturate the roads, using a constant flow of water.

Mine managers can see Auto Mode data and water truck fuel usage in the MineStar dashboards. This data can be used to understand where the truck has been watering and calculate fuel efficiency. Maintaining safer haul roads with better visibility enables your haul trucks and other equipment to meet production targets. **Use data to enhance site safety, optimize productivity, and gain efficiency with Cat Water Solutions.**

CONNECT YOUR TRUCK – CONNECT YOUR SITE – CONNECT WITH WATER.

The Cat® Water Delivery System connects with Cat MineStar™ technology to provide data-driven insights.

This integration gives you control of your water truck, while delivering the efficiency required for peak performance.

MineStar for water includes a cloud-based service offering that collects and communicates machine data, enabling site supervisors to know what their fleet is doing, who is operating which machine, and how they are spending their time. To help manage the site more safely and productively, Caterpillar offers a choice between two connectivity options. Cat WDS MineStar Basic uses Equipment Tracking to monitor the water truck and tracks how it is being utilized. Cat WDS MineStar Premium adds Production Recording, helping address sitewide watering needs in conjunction with other water trucks and equipment. With scalable levels of connectivity, customers can start with the Basic package and easily upgrade to Premium, gaining additional features like water distribution maps and replay data.

BASIC CONNECTIVITY:*

Equipment Tracking

Equipment Tracking provides insights that help mines better manage their assets, and as a result deliver more value — lowering total cost of ownership.

Features include:

- Near-real-time and historical reporting.
- Truck location and utilization data:
  - Starts and stops.
  - Routes.
- Fuel and water level.
- Whether or not the truck is spraying water.
- Water Delivery System utilization (auto vs. manual mode).

PREMIUM CONNECTIVITY:

Equipment Tracking + Production Recording

Production Recording delivers an accurate and automated near-real-time solution that measures and reports on every aspect of the watering cycle without requiring operator input.

Additional features include:

- Water usage by truck/fill station.
- Volume of water put down over time and area covered.
- Water rate and water delivery system setting by location, truck, and conditions.
- Activity breakdown with time and distance (watering, not watering, stopped, etc.)
- View / export at least 8 weeks of historical data of watering activities.
- In-cab reporting to operator.



**Basic connectivity package comes standard on new truck purchase with a 6-month complimentary service-based offering for better data insights. Based on equipment connectivity via WiFi or cellular data.*

CAT WATER SOLUTIONS MINESTAR CONNECTIVITY FEATURES*	LEVEL 1: BASIC** Equipment Tracking	LEVEL 2: PREMIUM Equipment Tracking + Production Recording
Near-real-time and historical reporting.	●	●
Truck location / utilization data: routes, starts, and stops.	●	●
Fuel and water level.	●	●
Whether or not the truck is spraying water.	●	●
Water Delivery System Utilization: Auto Mode vs. manual mode operation.	●	●
Home Page View.	●	●
Home Page View with Cumulative and Hourly graphs.		●
Water Distribution Map.		●
Volume of water put down over time and area covered.		●
Water distribution rate, water delivery system setting by location, truck, and conditions.		●
Activity breakdown including time and distance: watering, not watering, stopped, etc.		●
Water dispensed by time/rate and mode, last 5 water activities, water dispensed by age.		●
View and export at least 8 weeks of historical water activity data.		●
Replay provides the ability to review and replay shifts by selecting a historical date and time. Review water level, pump on/off, heads on/off, cannon on/off, WDS Mode (Manual or Auto Mode), and coverage rates.		●
In-cab reporting to operator on water coverage and need.		●

**Based on equipment connectivity via WiFi or cellular data. **Basic Connectivity Package comes standard with a 6-month complimentary service-based offering.*

CUSTOMER CASE STUDY

USE DATA TO INCREASE OPERATOR SKILLS

HELP YOUR SITE **BECOME MORE PRODUCTIVE** THROUGH OPERATOR COACHING.

Traditional open-pit coal mine operation in a tropical climate.
Data output from MineStar, connected to fleet of Cat 777 water trucks.





***LET'S REVIEW THE DATA:**

On Day 1, the operator waters in Auto Mode.
Auto mode is the recommended mode of operation to optimize the full capabilities of the Cat Water Delivery System. This mode of operation applies the appropriate amount of water based on truck speed and selected water deposition.

On Day 2, the operator waters in Manual Mode.
Manual mode allows the operator to set a water flow rate that remains constant, regardless of ground speed — resulting in reduced watering efficiency, visible haul road damage, and increased fuel usage. This mode is not recommended for daily operation.

SO, WHY DID THE OPERATOR START IN AUTO MODE ON DAY 1, THEN SWITCH TO MANUAL MODE ON DAY 2?

THE REASON: AN OPERATOR SHIFT CHANGE.

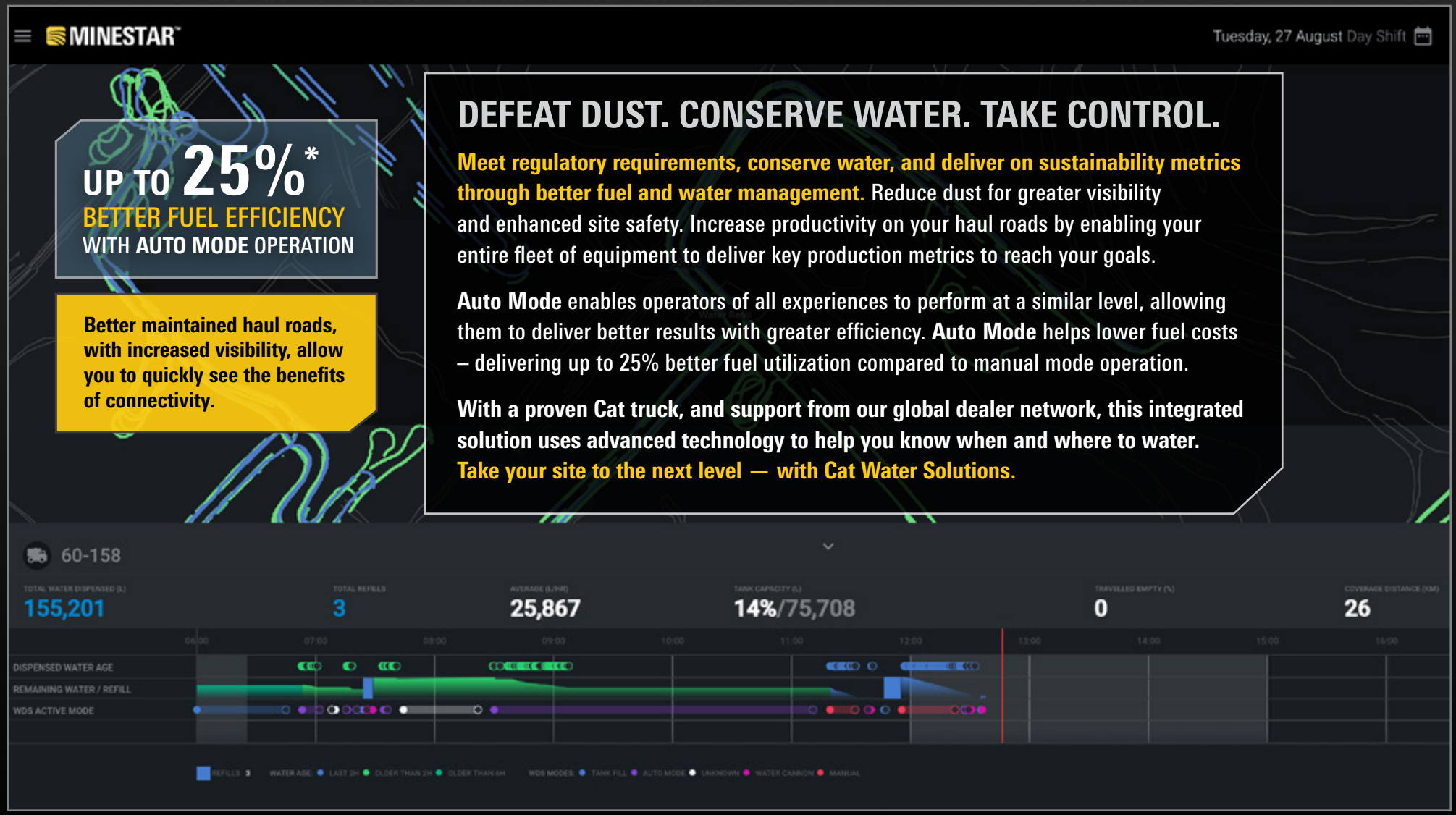
With MineStar Replay, the site manager was able to view historical data that showed Day 1 was Operator A and Day 2 was Operator B.

Operator A is a great example of how to use the system to water more efficiently. The operations manager can now review the appropriate watering technique with Operator B — enhancing skills that result in better haul road management and increased productivity.

**Results are a combined outcome from the Cat Water Delivery System connected with MineStar, comparing Auto Mode to Manual Mode operation. Testing was conducted using field follow data at an approved customer site in 2024. Results may vary.*

LOWER FUEL COSTS WITH THE CAT WATER DELIVERY SYSTEM.

THE CAT WATER DELIVERY SYSTEM'S ADVANCED AUTO MODE HELPS YOU GAIN EFFICIENCY WITH RESULTS YOU CAN SEE.



**Results are a combined outcome from the Cat Water Delivery System connected with MineStar, comparing Auto Mode to Manual Mode operation. Testing was conducted using field follow data at an approved customer site in 2024. Results may vary.*

GET CONNECTED WITH
CAT WATER SOLUTIONS.

LEARN MORE.

WWW.CAT.COM/WATERSOLUTIONS

Track Key Performance Indicators (KPIs) using Cat MineStar for water.
View water cycle duration, volume of water distribution, fuel usage, and other important information from the MineStar application dashboard.

MineStar Replay allows managers to review sections of water production data.
For example, you can see complete water cycles – measuring water output rate and truck speed from a previous shift.

We know it's a challenge to find experienced operators. Guided by automation and fuel optimization, this integrated system can help junior operators perform at a higher level – helping increase your overall production targets.

Increase Tire Life. Decrease Downtime. Lower Maintenance Costs.
Better maintained haul roads help reduce your total cost of ownership – extending tire life and enhancing conditions that lead to faster cycle times.

Let's lean into the dust together, with the confidence to power through it.
Now you can increase your watering efficiency using advanced technology – for smarter, safer, more productive, and sustainable operations.

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