




PTC JF Water Stewardship Performance




Driving increase in Water Recycling


2017	▶	2024
39,106 m³ <i>Water Withdrawn</i>		43,008 m³* <i>Water Withdrawn</i>
40.9% <i>Water Recycled</i>	▶	42.7% <i>Water Recycled</i>



AWS
Certification



Recycled Water
in Services



ETP RO Plant
Installation

Site Water Balance



MO Operations



100% Waste
Water Recycled

1.8 ppt
Impact on Recycling %

Shifting focus from Recycling to Conservation

2024																	
<table border="0" style="width: 100%;"> <tr> <td style="text-align: center;">Target</td> <td style="text-align: center;">LE</td> </tr> <tr> <td style="text-align: center;">45,912</td> <td style="text-align: center;">43,008</td> </tr> <tr> <td colspan="2" style="text-align: center;">Withdrawn</td> </tr> </table>	Target	LE	45,912	43,008	Withdrawn		<table border="0" style="width: 100%;"> <tr> <td style="text-align: center;">Target</td> <td style="text-align: center;">LE</td> </tr> <tr> <td style="text-align: center;">41.9%</td> <td style="text-align: center;">42.7%</td> </tr> <tr> <td colspan="2" style="text-align: center;">Recycled</td> </tr> </table>	Target	LE	41.9%	42.7%	Recycled					
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 L3 Monitoring MO & FMC Water	 PMD Exhaust Recovery	 Solar Wash Reuse															
2025																	
MAXIMIZE WATER WITHDRAWN REDUCTION THROUGH RE-USE INITIATIVES																	

AMBITION TO BE #1 IN WATER RECYCLING

*Volume & Product Portfolio Expansion

Shared Challenges – Research & Engagement

Sr.No	Shared Challenge	Impact	Likelihood	Prioritization	Actions	Key Players
1	Pollution of Surface Water	High	High	High	Deployment of Onsite Effluent Treatment Plant - G Infrastructure modification to ensure Zero Wastewater Discharge from Site - G Soil and Groundwater Protection Plans to be made- G Sewage Treatment Plant in Catchment- R Collaboration with NGOs for CSR Projects – G Clean up Drives for Surface Water Sources – A	1. Municipal Committee Jhelum 2. DC Jhelum
2	Pollution of Groundwater	High	Medium	Medium	Deployment of Onsite Effluent Treatment Plant - G Infrastructure modification to ensure Zero Wastewater Discharge from Site - G Soil and Groundwater Protection Plans to be made- G Sewage Treatment Plant in Catchment- R Deployment of Filtration Plants in Communities- A (on going project) Deployment of Highly Absorptive Filtration Plants on Site- G	1. Municipal Committee 2. DC Jhelum
3	Depleting Water Table	High	Low	Medium	Water Withdrawal Monitoring of site - G Hydrological Study - G Awareness sessions on responsible water usage both on site and in the catchment- G Identification and sharing of Drip Irrigation Practices/Learnings – A Enable Tree Plantation – G	1. MC 2. DC 3. EPA
4	Inadequate Maintenance of Water Filtration Plants & Mangla Reservoir	Medium	Medium	Medium	Organization of promotional and information campaigns for the local community, farmers, BAT employees, subcontractors regarding the value of water, broadly understood wastewater management and good practices in water management- G Maintenance and operation of PTC's own Filtration Plants– G	1. Local farmers Local community 2. BAT employees and subcontractors
5	Piping and sanitation network Infrastructure Failure	High	Low	Medium	Water Infrastructure of Site has a Maintenance Regime Opportunities: Development of Infrastructure Maintenance Regime of Catchment Water Sources	1. DC Jhelum 2. Municipal Committee
6	Poor Water Management	High	High	High	Identification of good practices related to water and wastewater management that may be applicable to the BAT catchment area and the factory itself. Collaboration with stakeholders in the implementation of identified good practices in the catchment area, the implementation of which is technically feasible and economically rational. Replication of identified good water management practices in the factory- A	All Stakeholders
7	Lack of Awareness	High	High	High	Awareness Sessions – G (Cont. initiative) Share Hydrological Study Report with Stakeholders – G	All Stakeholders

Shared Challenges – Hydrological Study

Sr.No	Shared Challenge	Impact	Likelihood	Prioritization	Actions	Key Players
1	Potential Contamination of groundwater from surface water pollution	High	High	High	Deployment of Onsite Effluent Treatment Plant - G Infrastructure modification to ensure Zero Wastewater Discharge from Site - G Soil and Groundwater Protection Plans to be made- G Sewage Treatment Plant in Catchment- R Collaboration with NGOs for CSR Projects - G Clean up Drives for Surface Water Sources - A	1. Municipal Committee Jhelum 2. DC Jhelum
2	Deficiency of regulations and groundwater modeling tools	High	Medium	Medium	Deployment of Onsite Effluent Treatment Plant - G Infrastructure modification to ensure Zero Wastewater Discharge from Site - G Soil and Groundwater Protection Plans to be made- G Sewage Treatment Plant in Catchment- R Deployment of Filtration Plants in Communities- A (on going project) Deployment of Highly Absorptive Filtration Plants on Site- G	1. Municipal Committee 2. DC Akora 3. PCRWR
3	Weak institutional framework in the water sector	High	Low	Medium	Water Withdrawal Monitoring of site - G Hydrological Study - G Awareness sessions on responsible water usage both on site and in the catchment- G Water conservation initiative awareness for eg Alternate Furrow- A Enable Tree Plantation - G	1. MC 2. DC 3. EPA
4	Land use change in terms of industrialization & urbanization in area, resulting in decreasing recharge area.	Medium	Medium	Medium	Organization of promotional and information campaigns for the local community, farmers, BAT employees, subcontractors regarding the value of water, broadly understood wastewater management and good practices in water management- G Maintenance and operation of PTC's own Filtration Plants- G	1. Local farmers Local community 2. BAT employees and subcontractors
5	Groundwater Depletion & Insufficient water storage capacity.	High	Low	Medium	Water Infrastructure of Site has a Maintenance Regime Opportunities: Development of Infrastructure Maintenance Regime of Catchment Water Sources	1. DC Jhelum 2. Municipal Committee
6	Effluent disposal in ponds and seepage boreholes in villages.	High	High	High	Identification of good practices related to water and wastewater management that may be applicable to the BAT catchment area and the factory itself. Collaboration with stakeholders in the implementation of identified good practices in the catchment area, the implementation of which is technically feasible and economically rational. Replication of identified good water management practices in the factory- A	All Stakeholders
7	Lack of data availability regarding groundwater pumping in the city surroundings and its impact on water table.	High	High	High	Awareness Sessions - G (Cont. initiative) Share Hydrological Study Report with Stakeholders - G	All Stakeholders
8	Public Perception as a Water Steward	High	High	High	Awareness Sessions - G (Cont. initiative)	

Water Stewardship Plan

PTC Jhelum Factory - Water Stewardship Plan

Action	Timeframe	Monitoring	Action Linkage	Target	Value Creation	Scope	Priority	AWS Outcome	Budget (PKR)	Category	Responsible	Accountable	Consulted	Informed	Status
Identification of Best Practices Related to Water Stewardship through engagements with stakeholders, suppliers and other End Markets	Cont.	NA	Shared Water Challenge: Lack of Awareness, Poor Water Management, Pollution of Water Resources	Improved Water Stewardship	Social, Cultural	Internal	Medium	All Outcomes	10,000.00	Long Term	EHSM	EHSM	Relevant Stakeholders	FM	On Track
Establishment of Maintenance and Cleaning regime of Drinking Water Supplies	Cont.	Monitoring through inspection checklist	Water Risk/ Shared Water Challenge	PEQS Compliance	Social, Cultural	Internal	High	Good Water Quality Status	3,300,000	Continuous	FUM/EHSM	FUM/EHSM	FUM/EHSM	ESSM	On Track
Monitoring and Tracking of Soil and Grounwater Protection Policy	Cont.	Monitoring through inspection checklist	Water Risk	PEQS Compliance	Social, Cultural	Internal	High	IWRAs Good Water Quality Status	N/A	Long Term	EHSM/FUM	EHSM/FUM	EHSM	FM	On Track
Deployment of Legal Register to monitor and track compliance to Water Related Laws	Cont.	Annual Review/Based on change in law	Water Risk	Yearly	Social, Cultural and Economic	Internal	High	All Outcomes	N/A	Continuous	EHSM	EHSM	LEX	All Employees	On Track
Clean up Drives for IWRAs	Cont.	NA	Shared Water Challenge: Pollution of Surface Water	IWRA Improvement	Social, Cultural	External	Medium	Good Water Governance WASH IWRAs	1,000.00	Long Term	EHSM	EHSM	FM	Factory Audience	On Track
AWS Awareness Session	Cont.	NA	Shared Water Challenge: Lack of Awareness, Poor Water Management	Improved Water Stewardship	Social, Cultural	External	High	All Outcomes	150,000.00	Long Term	EHSM	EHSM	LEX	LEX	On Track
Identification and sharing of Drip Irrigation Practices	Cont.	NA	Shared Water Challenge: Depleting Water Table	Improved Water Stewardship	Social, Cultural	External	Medium	Good Water Governance Sustainable Water Balance WASH IWRAs	N/A	Long Term	EHSM	EHSM	EHSM	EHSM	On Track
Collaboration with NGOs	Cont.	NA	Shared Water Challenge: Lack of Awareness, Poor Water Management	Improved Water Stewardship	Social, Cultural, Economic	External	Medium	All Outcomes	N/A	Long Term	EHSM	EHSM	LEX	LEX	On Track
Key Stakeholder Engagement and onboarding	Cont.	NA	Shared Water Challenge: Lack of Awareness, Poor Water Management	Improved Water Stewardship	Social, Cultural	External	High	All Outcomes	10,000.00	Long Term	EHSM	EHSM	LEX	LEX	On Track
Governance of Filtration Plants Installed in the Catchment by PTC	Cont.	Maintenance Program via 3rd party vendor	Shared Water Challenge: Inadequate Maintenance of Filtration Plants	Protection of IWRA	Social, Cultural	External	High	IWRAs	1,500,000.00	Long Term	EHSM	EHSM/LEX	LEX	LEX	On Track
Provision of adequate Washroom facilities for all employees	Cont.	Daily Cleaning Checklists	Water Risk	WASH Access & Provision	Social, Cultural	Internal	High	WASH	6,600,000.00	Short Term	EHSM/FUM	EHSM	EHSM/FUM	ESSM	On Track

***No water-related compliance violations since 2019**

Water Stewardship Plan



PTC Jhelum Factory - Water Stewardship Plan															
Action	Timeframe	Monitoring	Action Linkage	Target	Value Creation	Scope	Priority	AWS Outcome	Budget (PKR)	Category	Responsible	Accountable	Consulted	Informed	Status
Expansion of Treated Water Utilization: Reuse in FG Cooling Towers & Air Washers	January'24	Tracking of Water Consumption in DDS	Water Opportunity	43% Water Recycling	Social, Cultural, Economic	Internal	High	Sustainable Water Balance Good Water Governance	N/A (Extension of 2023 project)	Long Term	FUM	FUM	ESSM/EHSM/FM	FM	Done
Steam Condensate recycle from PMD Casing Kitchen	January'24	Tracking of Water Consumption in DDS	Water Opportunity	638 m3/yr	Cultural, Economic	Internal	Medium	Good Water Governance Sustainable Water Balance	250,000	Long Term	FUM	FUM	ESSM/EHSM/FM	FM	Done
Sensor Taps Deployment	November'24	Tracking of Water Consumption in DDS	Water Opportunity	18 taps 650 m3/year	Cultural, Economic	Internal	Medium	Good Water Governance Sustainable Water Balance WASH	1,360,000	Long Term	FUM	FUM	ESSM/EHSM/FM	FM	Done
Water Sprinkler Installation across Factory	December'24	Tracking of Water Consumption in DDS	Water Opportunity	1400 m3/year	Cultural, Economic	Internal	Medium	Good Water Governance Sustainable Water Balance	2,500,000	Long Term	FUM	FUM	ESSM/EHSM/FM	FM	Done
Installation of Filtration Plant in Catchment	September'24	Spot Check post Implementation	Shared Water Challenge: Pollution of Water Resources	5000 Liters/Day	Social, Cultural	External	High	Good Water Quality Status	525,000	Long Term	Jawwad Ahmed	Jawwad Ahmed	Governmental Bodies	Governmental Bodies	Done
Installation of Sensor Taps in Local Mosques	December'24	Engagement with Mosque Stakeholders	Shared Water Challenge: Depleting Water Table, Poor Water Management	30 Taps	Social, Cultural, Economic	External	High	Good Water Governance Sustainable Water Balance IWRAS	700,000	Long Term	EHSM	EHSM	LEX	Community Members	Done
Provision of Filters for Water Coolers in Local Mosques & Houses	December'24	Engagement with Mosque Stakeholders	Shared Water Challenge: Pollution of Water Resources	10 Filters	Social, Cultural, Economic	External	High	Good Water Quality Status	300,000	Long Term	EHSM	EHSM	LEX	Community Members	Done
Drain Repair and cleaning in Local Community	December'24	Engagement with Local Community	Shared Water Challenge: Pollution of Water Resources	WASH Improvement for Catchment	Social, Cultural, Economic	External	Medium	Good Water Governance WASH	100,000	Long Term	EHSM	EHSM	LEX	LEX	Done
Installation of deep well in factory	November'24	Tracking of Water Consumption in DDS	Water Quality	01 Tube well	Cultural, Economic	Internal	Medium	Good Water Governance Sustainable Water Balance	17,500,000	Long Term	FUM	FUM	ESSM/EHSM/FM	FM	Done
Level 3 Water Monitoring	June'25	Tracking of Water Consumption in DDS	Water Opportunity	500 m3/year	Cultural, Economic	Internal	Medium	Good Water Governance Sustainable Water Balance	12,000,000	Long Term	FUM	FUM	ESSM/EHSM/FM	FM	Planned
Replacement of open circuit evaporator cooling tower with closed circuit cooling towers	December'25	Tracking of Water Consumption in DDS	Water Opportunity	3,000 m3/year	Cultural, Economic	Internal	Medium	Good Water Governance Sustainable Water Balance	TBD	Long Term	FUM	FUM	ESSM/EHSM/FM	FM	Planned
Upgradation of VELO water related infrastructure to remove leakages by brining underground infrastructure above ground	March'25	Tracking of Water Consumption in DDS	Water Opportunity	100 m3/year	Cultural, Economic	Internal	Medium	Good Water Governance Sustainable Water Balance	3,500,000	Long Term	FUM	FUM	ESSM/EHSM/FM	FM	Planned
Celebration of International World Water Day	March'25	Engagement with factory population	Shared water challenge	Awareness Campaign	Social, Cultural, Economic	Internal	Medium	Good Water Governance Sustainable Water Balance	500,000	Long Term	SSO	EHSM	ESSM/EHSM/FM	FM	Planned
ETP Sludge Dehydrator	January'25	Tracking of Water consumption in DDS	Water Opportunity	50 m3/year	Cultural, Economic	Internal	High	Good Water Governance Sustainable Water Balance	1,200,000	Long Term	FUM	FUM	ESSM/EHSM/FM	FM	Planned
Installation of Sensor Taps in Local Mosques	July'25	Engagement with Mosque Stakeholders	Shared Water Challenge: Depleting Water Table, Poor Water Management	30 Taps	Social, Cultural, Economic	External	High	Good Water Governance Sustainable Water Balance IWRAS	800,000	Long Term	EHSM	EHSM	LEX	Community Members	Planned
Provision of Filters for Water Coolers in Local Mosques	July'25	Engagement with Mosque Stakeholders	Shared Water Challenge: Pollution of Water Resources	5 Coolers	Social, Cultural, Economic	External	High	Good Water Quality Status	300,000	Long Term	EHSM	EHSM	LEX	Community Members	Planned

***No water-related compliance violations since 2019**

Water Stewardship Initiatives

Effluent Treatment Plant

12m³/Hr.

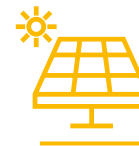


ETP Treatment Capacity

combines all elements of the activated sludge purification process into a single compact unit

Treated Water Quality

PH 6-9
BOD < 80 mg
COD < 150mg/L
TSS < 200mg/L



Solar Plates Cleaning



Toilets



Gardening

Water Stewardship Initiatives

Enabling Governmental Stakeholders

The site has **shared** the **Hydrological Study Report** of the catchment area with **key governmental Stakeholders** to enable them to take steps to mitigate the water related risks in the area. This initiative is an important step in onboarding the **Key Players** in the catchment.



Water Stewardship Initiatives

Awareness Session



Education & Awareness

- ***AWS Vision & outcomes***
 - ***Good Water Governance***
 - ***Sustainable Water Usage***
 - ***Sanitation & Hygiene***
 - ***IWRAs Maintenance***
 - ***Water Quality Issues***
-



Feedback

- ***Stakeholders provided feedback to PTC***
 - ***Attendees approached the NGO to volunteer***
 - ***Best Practices and learnings shared***
-



Collective Effort

- ***Collaboration between PTC, NGO and General Public***
 - ***Pledge to work towards a common goal: Saving Water***
-

Water Stewardship Initiatives

Awareness Session



Water Stewardship Initiatives

Public Awareness

The site has deployed **Signs & Signages** in the mosques to educate and urge the users to be **mindful of water wastages**.

The signages present **religious references** that **discourage water wastage** to create and impact on the users.



Water Stewardship Initiatives

Door to Door Engagements

- › *Education of Private Stakeholders regarding maintenance of catchment IWRAs*
- › *Engagement on identification of best practices in catchment*
- › *Identification of Water Related challenges faced by the Stakeholders*



Water Stewardship Initiatives

Collaboration with NGOs – Clean Up Drive

Being a responsible water steward, PTC Jhelum collaborated with We Fixers to execute a **clean-up drive** on the bank of **River Jhelum**.

The Jhelum River is an Important Water Related Area in the catchment and a famous **recreational spot**.

Unfortunately, the maintenance of the IWRA is poor. PTC participated in and enabled the clean-up drive to **spread awareness** regarding **IWRAs maintenance**.



Water Stewardship Initiatives

Enabling Water Conservation

Community Mosques are one of the most intensive water consumers. Around **2 liters** of water is used by an average person for **ablution**. This amounts to **~500 liters** of **daily** water usage by each mosque.

The mosques are Important Water Related Areas since they have **high value** for the community from a **religious, and cultural** perspective.

PTC has deployed **water efficient taps** in **four** of the **local mosques**. The aim of the initiative is to raise awareness among the local community regarding the significance of maintaining Important Water Related Areas and reducing water wastages.

The estimated **water savings** from the initiative are **40%**



Water Stewardship Initiatives

Identifying & Supporting Drip Irrigation

*PTC visited the Porilla Farmhouse to **appreciate** the **water stewardship efforts** of the owner: Mr. Waseem and to enlighten the workforce regarding the vision of AWS and the possible **best practices** that could be further implemented*

*The site aims to **take learnings** from the owner and **share with other landowners** to replicate the same.*



Water Stewardship Initiatives

Tree Plantation

PTC donates **trees** from its nursery to **Governmental Stakeholders** and **General Public** in efforts to drive collective action



700K Saplings
donated in 2022



**Enabling Tree
Plantation**
On green belts & small towns



Installation & Maintenance of Filtration Plants

PTC has deployed **5 Filtration Plants** in Jhelum to provide stakeholders with Clean Drinking Water. The **Maintenance** is **borne by the company**.

Maintenance includes:

- CIP of membrane, Sand Filter, Carbon Filter and UV Rod
- Cartridges Replacement
- Product Water Tank CIP
- Servicing
- Monitoring Parameters



Providing Clean Drinking Water

Continuous Collaboration with NGOs

As a responsible water steward, PTC Jhelum recognizes the importance of **collective action** and **continuous improvement**, hence we collaborated with an active NGO in the catchment; **Al-Khidmat** to deploy various water stewardship projects including **Clean Up Drives, distribution of Water Filters, Water Coolers & Push Button Taps**



Provision of Water Coolers

Recognizing the **challenges** regarding **provision of Drinking Water & Sanitation**, PTC **collaborated** with **Al-Khidmat Foundation** and deployed Drinking Water Coolers at 5 locations in the District:

- 1- Sanghoi
- 2- Chotala
- 3- MM3
- 4- Dina
- 5- Sohawa

The coolers were provided based on the **inputs from the NGO and governmental Stakeholders**



Provision of Carbon Filter Stone Faucets

Recognizing the **challenges** regarding **WASH**, PTC provided 20 Carbon Filter Faucets via Al-Khidmat Foundation to catchment users.

The aim of this initiative is to enable easy-access to water for basic needs such as dishwashing and cleaning.

The faucets were provided based on the **inputs from the NGO**



Thank You