


Plant Overview



- Plant located in Industrial Development Area, Roha in Maharashtra.
- Three filling lines (Bottling & canning)
 - Glass line for CSD -500 Bottles /Minute
 - Can line for CSD - 600 Cans /Minute
 - Aquafina line - 93 Bottles /Minute
- Plot Area -6.9 Acres
- Employees - 138
- IMS Certified plant



PepsiCo's Vision



Positive water balance — going beyond zero

Water Recharge at Plant level
+
Water Initiatives at Community level
+
Promoting water Conservation measures in agriculture

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Water used in manufacturing plants


CREDITS

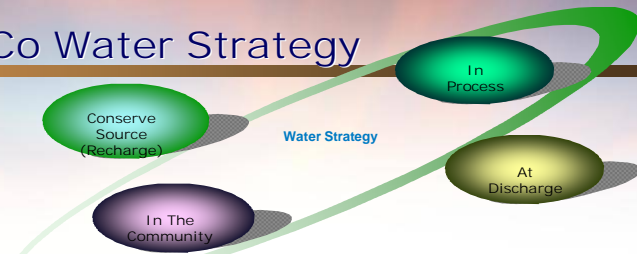
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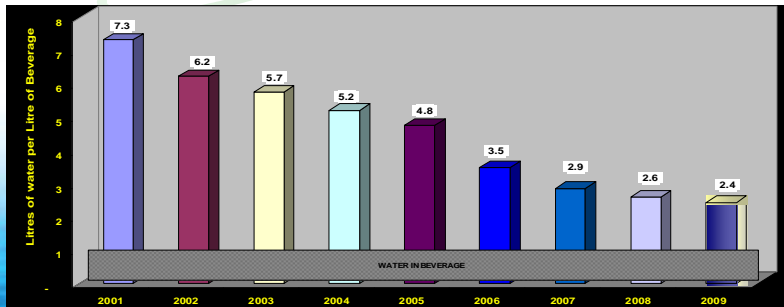
DEBITS

As a result of this focus, water was revalued

PepsiCo Water Strategy



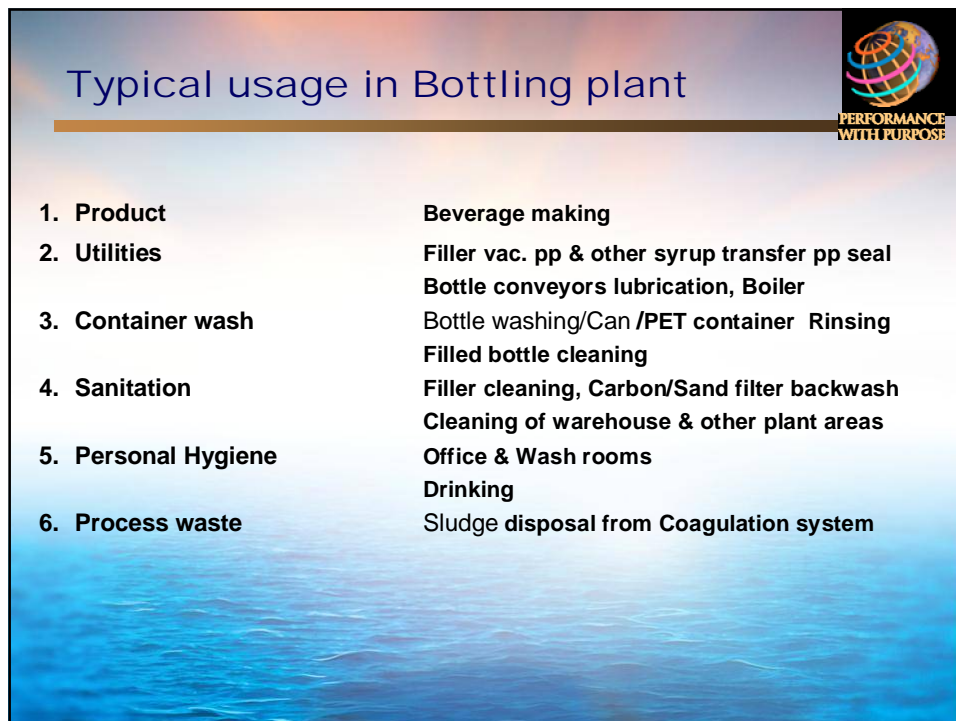
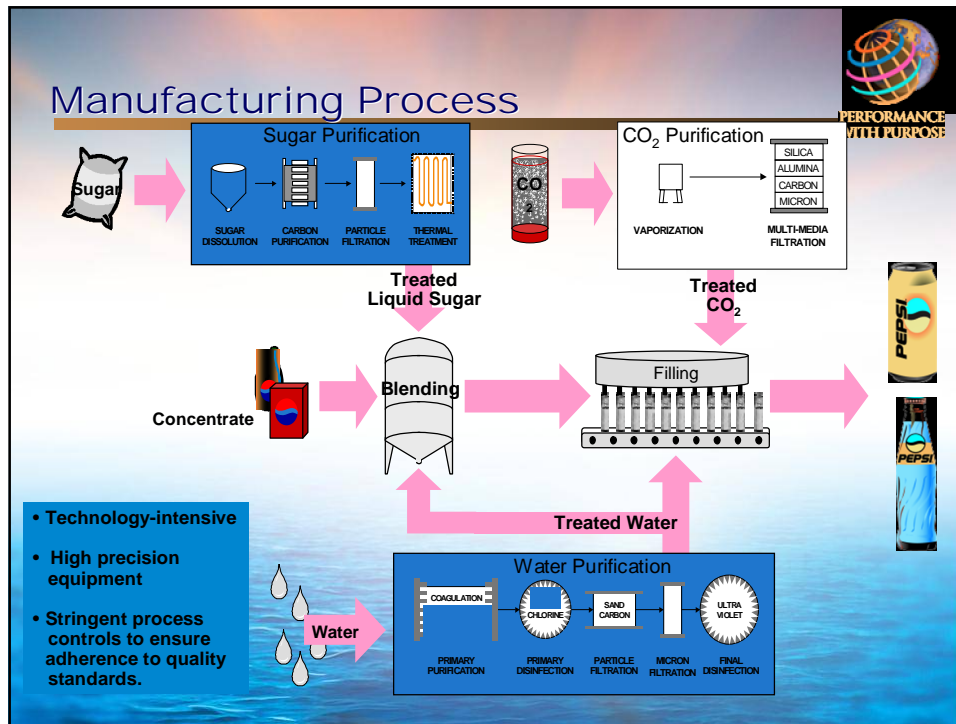





Year	Litres of water per Litre of Beverage
2001	7.3
2002	6.2
2003	5.7
2004	5.2
2005	4.8
2006	3.5
2007	2.9
2008	2.6
2009	2.4

Cumulative Savings: 5200 MM liters

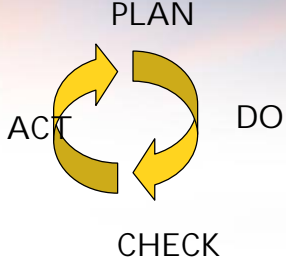
Annual Savings: 750 MM liters




TPM Approach on conservation



- Assess current situation
- Estimate Losses
- Take Loss Reduction Target
- Identify Losses
- Identify Projects
- Formation of Task force / Teams
- Deploy 4R Tool
- Implement Solutions
- Check Results
- Plan further actions



Employee participation



Water conservation pledge

Initiatives on Water conservation- Rinse water



Can & Aqua Bottle Rinsing water recovery 40 KL/day saving



Cip Rinse water Recovery 60 KL/Month saving

Annual water saving is 7820 KL

Initiatives on Water conservation- Aquafina


Aquafina RO Reject – Opportunity Area

Opportunity: Aquafina RO reject was being drained to ETP & permeate was used for Product.


The Quality parameters of RO reject was fully meeting the requirements to recycle the water because of TDS level of < 500 ppm, recycling Aquafina RO reject was an opportunity area.

Opportunity was created to reuse RO Reject after softening for boiler & utility purpose



- AQUAFINA RO Design is 15 KL/Hr
- 12 KL permeate used for Aquafina bottling & Reject @ 3 KL/hr for softening



RO Unit



Water Savings




- Aquafina RO Run Hours/Day: 20Hrs
- Total Reject Generation @ 3KL/hr = $3 \times 20 = 60$ KL/ Day
- 60×20 days = 1200 KL/ Month water is reused as a soft water .
- Direct reduction of 1200KL/Month in Gross Water Usage of Plant.

Approximately 15000 KL/Year Water Savings

Thus Reduced Effluent generation & fresh water intake

Initiatives on Water conservation- Bottle Washer

Recycle Initiative – Glass Bottle Line




Initiatives Taken :

- Bottle Washer Recovery from final rinse zone

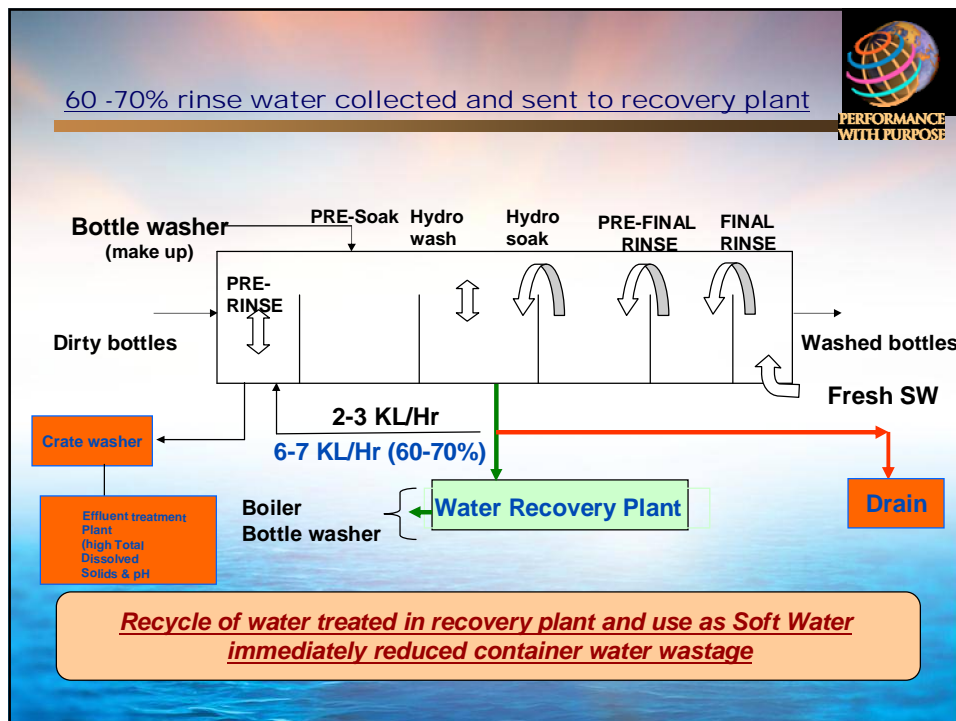
Results :

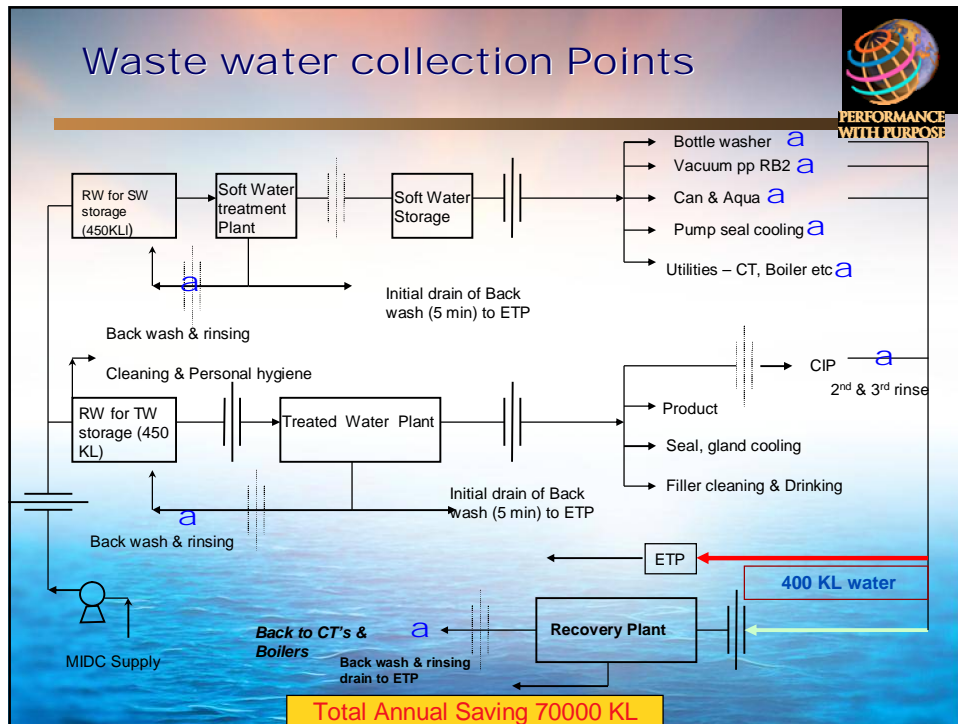
- 75.82 % reduction per case
- Reduction in effluent from 450 KL to 150 KL / day
- Zero Effluent discharge plant except rainy months.
- Zero ETP sludge Discharge since October 07
- Saving in Power & chemical consumption .



Bottle Washer

Annual water saving is 21000 KL





Zero based targeting

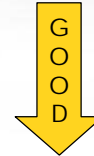
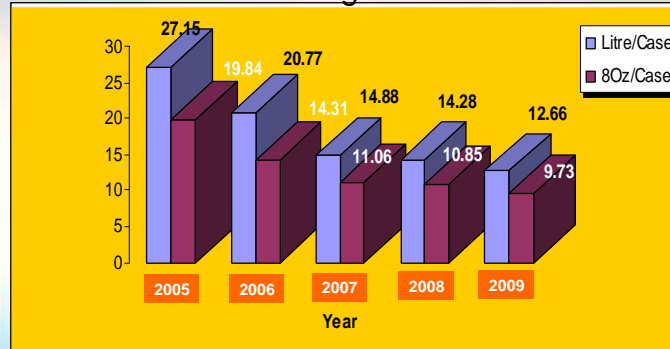
Roadmap for reduction

- Define specifications of water to be used at each step in the process
- Determine quantity and quality of discharge at each stage
- Identify opportunities for recycling, treatment and technology to be deployed
- Discard as effluent after establishing that it is unfit for recycling

Journey in Water Conservation...



Water Usage Trend

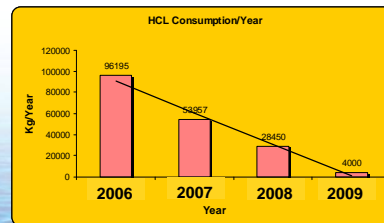
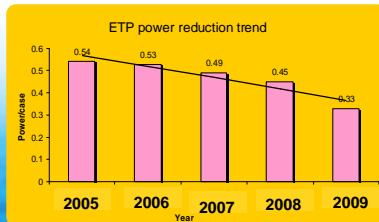
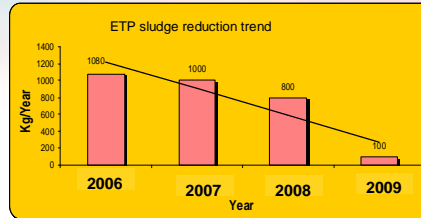


- Total Savings of 473 Million Ltrs over 2005.
- No.1 on YTD Basis across 41 Pepsico Plants in India with 1.7 Lit water/Lit Beverage.
- 60 % reduction in effluent Discharge


Reduction in Chemical Usage, sludge generation & power usage



Moving towards zero sludge generation through Eco-friendly process of replacing chemicals with BioEnzymes



PepsiCo's Community Water Projects



- We have engaged in unique public/private partnerships for citrus cultivation
- This could deliver:
 - Three-fold increase in farmer incomes
 - Reduction in water consumption by 1.5 MM L/hectare

India set to be hub for Pepsi's juice sourcing

■ Punjab farm project on course; but hurdles remain

JUICY FRUIT

■ We expect to start using some domestic varieties for juices other for blending or under new brand, which will be the market by next Sept.

■ PepsiCo set to start citrus cultivation in Punjab

■ Bud wood to be allocated to growers by August

PepsiCo gets headstart on corporate farming

■ Targeting \$500 M in Next 3 Years

PepsiCo India, having gone private, is set to start a major expansion program in the coming days. It is expected to invest in a number of projects in the next 3-5 years. The company is also looking at setting up a corporate farming program in India. This will involve setting up a dedicated farm for producing raw materials for its beverages. The company is also looking at setting up a dedicated farm for producing raw materials for its beverages. The company is also looking at setting up a dedicated farm for producing raw materials for its beverages.

PepsiCo India to revive tomato production

■ Company plans to revive tomato production in Punjab


■ PepsiCo India is planning to revive tomato production in Punjab. The company is also looking at setting up a dedicated farm for producing raw materials for its beverages. The company is also looking at setting up a dedicated farm for producing raw materials for its beverages. The company is also looking at setting up a dedicated farm for producing raw materials for its beverages.


Pepsi may supply tomato paste to Heinz

■ Heinz is looking to source tomato paste from PepsiCo

■ PepsiCo India is planning to supply tomato paste to Heinz. The company is also looking at setting up a dedicated farm for producing raw materials for its beverages. The company is also looking at setting up a dedicated farm for producing raw materials for its beverages. The company is also looking at setting up a dedicated farm for producing raw materials for its beverages.

In agriculture, a small change can have a BIG impact!






Pepsi's paddy cultivation method saves water by 40%

- Direct-seeded paddy cultivation saves 40% of water
- Trials cover four years on multiple varieties to validate approach
- Farmer saves 11% costs with no impact on yield
- Farmers happy with the results—keen to do more acreage next year
- Punjab Agricultural University also endorses this technology

Only 1800 hectares of direct seeding will completely offset the total water consumed by all our foods and beverage plants in one year!!

Way Forward




- Identifying further opportunities to save water through process effectiveness.
- Redesign & Rethink Strategy added to 4R
- Reduction of Effluent by adopting latest technologies. (Electro Chlorinator)
- Optimizing total recovery from the existing water recovery systems.
- Abnormalities paid higher attention by top to bottom
- Consulting Experts to generate ideas on water conservation.

Proposed action for 2010




Water Conservation

**REDUCTION OF WATER USE BY COMPLETE
USAGE OF ETP TREATED EFFLUENT**





Scope of using @ 150 KL/Day Effluent /Day in plant for other purpose

We continue to achieve water "credits" through recharge of water resources



- Roof water harvesting at our facilities
- Saving of 3000 KL is possible



Rewards & Recognitions



