4.2.4.4 Government Office & Campuses

1.0Subject Matter

(Present a brief historical background on the growth of offices – a bird's eye view picture and analysis of the sector using the information/ tables) provided in the annexure.

GIS based map depicting location of all the Government Offices - District level
Type and total no. of Government Offices in the State. *(Refer Annexure: Table-1)*
Time trend of the number (growth) of Offices in the state and Water Demand & Supply position. *(Refer Annexure: Table-2)*

2.0Details of Water Availability, Supply, Demand, Withdrawal & Consumption for the Offices

Water Supply & Demand for Offices in the State

Time trend of total water demand and actual current water supplied to the Offices along with growth of offices in the state. *Provide trend analysis (10-15 years) with breakup.(Refer Annexure: Table – 2, 3a, 3b)*

Total Freshwater Withdrawal and Actual Water Consumption by Offices in the State

Comparative trend of Total Freshwater Withdrawal vs Actual Water Consumption by Offices in the State:

State Water Budgeting: *Refer Annexure- Table 3(e)*

SECTOR (District-wise)	Previous Year / Average Annual Demand (MCM)	Previous Year/ Average Annual Supply & Consumptive Use (MCM)		Demand for the present Water Year (MCM)
		Supply	Consumptive Use	
District 1				
District 2				
GRAND TOTAL	xxx	xxx	xxx	xxx

3.0Issues and Challenges

Illustrative issues and challenges may include

- Water demand and supply issues in the Government office and campuses in the state, provide details
- Issues & challenges relevant to the water supply & consumption
- Issues related to monitoring and reporting of data

(Supporting data & analysis for above points may also be furnished)

4.0Problem Tree / Root cause Analysis: Cause, Effect and Interventions

5.0Governance / Management:

Statute / Law / Policy/ Regulations if any

- State level laws, policy and governance for the Offices in the state on water access, consumption and wastewater discharge.
- Any specific fresh and waste water regulation/ guidelines for Offices in state, provide details.

Institutions governing / managing / monitoring the resources and Institutional structure.

- Institutions governing / managing / monitoring the water consumption and supply.

Governing body for sector	Water allocation & Monitoring authority	Waste water discharge monitoring
E.g. Government of India	*E.g. CGWA/ Water resource department/ Urban or Rural body*	*e.g. State pollution Control Board*

Areas of Peoples/Private Participation if any

- Water Projects set up by Government office and campuses for the benefit of neighborhood/ local community/ Environment.

Govt. Office & Campuses	Any OE[32] or critical block within the watershed	Water Conservation / Waste Water Treatment initiatives if any	Partnership			Sustainability of initiative
			Community Participation	PPP	Others	

Govt. Office & Campuses	Any OE or critical block within the watershed	Water Reuse/ Recycle initiatives under PPP	PPP Yes/No	Sustainability of initiative

Schemes, Economics& Financing-

Existing schemes and programs along with financial allocations, expenditure etc.

- Water Tariff and procurement cost*(Refer Annexure: Table 6(a) & 6(b))*
- Expenditure on Water management*(Refer Annexure: Table 6(c) & 6(d))*

6.0Measurement, Monitoring and Data Constraints/ Management

- **Water & Wastewater Measurement:**
- **Monitoring** at State Government: Institution/ Agency/ Official responsible for Sustainable Water Management comprehensively for this Sector.
- **Data Management**: Should specify - Frequency of measurement, Frequency of Reporting to centralized agency, Water Quality Parameters monitored, how data is being used to improve Water Use Efficiency and ensure water quality parameters within the prescribed norms etc.
- **Constraints** with respect to the measurement & monitoring

7.0Performance Indicators:

a. Benchmarks on water use *(Refer Annexure: Table-13)*

b. Status of various Performance Indicators– for comparison across Districts/ Plants/ Units/ Products etc.

Performance Indicators

Category	**Indicator**	**Bench Mark** *(as applicable)*	**District- 1**	**District- 2**
Water Quantity Measurement	**Water Quantity**			
	% of Government Office and campuses with installed water flow meters			
	% of Government Office and campuses undertaken internal water audit in the last year			
	% of Government Office and campuses undertaken external water audit in the last year			
	% of Government Office and campuses undertaken Third party Water Audit in the last Year			
Water Conservation	% of Government Office and campuses with water harvesting structures?			
	% reduction of total water demand compared to the previous year.			

[32]Overexploited block of groundwater

Performance Indicators

Category	Indicator	Benchmark*(as applicable)*	District 1	District 2
Water Use Efficiency *(Annexure-7)*	Water consumed per employee/ day			
	Specific Water Consumption (SWC); (litres/capita/day of water consumed) *(refer Annexure-7(a),(b) & (c))*			
	Have specific water consumption norms/bench marks established?	Yes/No		
Waste Water *(Annexure-8)*	% reduction in wastewater generation as compared to previous year?			
Water Quality *(Annexure-9)*	% of Government Office and campuses with online water quality monitoring systems installed.			
Economics	Whether economic incentives are in place by state to encourage water efficiency & conservation?	Yes/No		
	Whether economic disincentive mechanisms like penalties etc. are in place by state to discourage water wastage & inefficient use?	Yes/No		
	Whether water use charges & tariff are revised regularly and are reflective of rational pricing mechanisms?	Yes/No		

8.0Reforms undertaken/ being undertaken/ proposed if any

9.0Road map of activities / tasks proposed for

Better governance
Better source / supply management
Better demand management /improved Water Use Efficiency
Water Quality
Water Economics and Financing
Sustainable Water budgeting with timelines and agencies responsible for each task/activity.

ANNEXURE

1Total number of Government Office and Campuses in the State

Total no. of Government Office and Campuses in the State				
Category	Department name	No. of offices in the State	No. of employees	
State Government				
Semi-State Govt.				
Central Government				
Semi-Central Govt.				

2Growth Trend of Government Office and campuses over a period and Water Demand and Supply position

Government office & campuses		**Years**					
		1990	**1995**	**2000**	**2005**	**2010**	**2017**
No. of Government Office							
No. of associated Campuses							
Total							
Water Demand and Supply							
Total Water Demand (MCM)							
Total Water Supply (MCM)	***GW***						
	SW						
	Total						
Demand-Supply Gap							

3Water Budgeting

3(a) Demand, Supply (Withdrawals) & Consumptive Use:

Government Offices and Campuses: (MCM) Present Water Year: 1st June to 31st May next year									
INSTITUTIONS (within the Basin/ Sub-basin A)	Previous Year/ Average Annual Demand	Demand for Present Water Year	Previous Year/ Average Annual Supply				Previous Year/ Average Annual Waste Water Generated	Previous Year/ Average Annual Consumptive Use	Remarks
			Rain Water	Surface Water	Ground Water*	**TOTAL SUPPLY**			
Unit 1									
Unit 2									
GRAND TOTAL									

*GW Draft can be calculated from the number of GW abstraction structures & corresponding draft for each Industrial Use/ Process.

3(b) Source Wise: Previous Year/ Average Annual Water Supply

Government Offices and Campuses: (MCM)											
Source	Sub Source	**Unit 1**	**Unit 2**	**Unit 3**	**Unit 4**						**TOTAL**
Rain Water	Directly Harvested Rain Water										
Total											
Surface Water	Springs, Nallahs										
	Major Projects										
	Medium Projects										
	Minor Projects										
	Ponds, Tanks										
	Wetlands										
	Sea Water /Desalinated Water										
	Inter Basin Transfer										
Total											
Ground Water* (Dynamic / Static)	Dug wells (Total No. x Draft)										
	Dug cum Bore well (Total No. x Draft)										
	Bore/Tube wells (Total No. x Draft)										
	Others etc										
Total											
Treated Waste Water											
GRAND TOTAL											

*GW Draft can be calculated from the number of GW abstraction structures & corresponding draft for each Industrial Use/ Process.

3(c) Previous Year/ Average Annual Demand, Supply (Source wise) and Consumption for Basin/ Sub-basin A:

Source of Water	Demand of all Units in Basin/ Sub-basin A	Supply/ Withdrawal for all Units	Consumptive Use of all Units	Gap/Remarks
Rain Water (Directly Harvested)				
Springs, Nallahs				
Major Projects				
Medium Projects				
Minor Projects				
Ponds, Tanks				
Wetlands				
Desalinated Water/ Sea water				
Inter-Basin Transfer				
Ground Water (Dynamic)				
Treated Waste Water				
TOTAL (MCM)				

3(d) Previous Year/ Average Annual Demand, Supply (Source wise) and Consumption for Whole State:

Source of Water	Demand of all Units in the State	Supply/ Withdrawal for all Units	Consumptive Use of all Units	Gap/Remarks
Rain Water (Directly Harvested)				
Springs, Nallahs				
Major Projects				
Medium Projects				
Minor Projects				
Ponds, Tanks				
Wetlands				
Desalinated Water/ Sea water				
Inter-Basin Transfer				
Ground Water (Dynamic)				
Treated Waste Water				
TOTAL (MCM)				

3(e) Summary State Water Budget for Government office & campuses

Government office & campuses (District-wise)	Previous Year / Average Annual Demand (MCM)	Previous Year/ Average Annual Supply & Consumptive Use (MCM)		Demand for the present Water Year (MCM)
		Supply	Consumptive Use	
All districts	xxx	xxx	xxx	xxx

4Proportion of Water withdrawal and consumption by Government office & campuses against total industries in the State

Total Water Withdrawal by all the Government office & campuses (%)	Total water withdrawal by all the Industries in state	Total Water Consumption by all the Government office & campuses (%)	Total water Consumption by all the Industries in state

(Refer 4(a) below)		*(Refer 4(b) below)*	

4(a) Total Water Withdrawal/Abstraction by **Government office & campuses** in the State as percentage of total water withdrawal by all industries in the State

Total water withdrawal (%) = (Total water withdrawal by Government office & campuses in the State) x 100 / (Total water withdrawal by all the industries in the state)

4(b) Total Actual Water Consumption by **Government office & campuses** in the State as percentage of total water consumption by all industries in the State

Total water consumption(%)=(Total actual water consumption by Government office & campuses in State) x100 / (Total water consumption by all the industries in the state)

4(c) Total Freshwater Withdrawal and Total Actual Water Consumption by all Government office & campuses in the State

	CY -11	**CY -10**	**CY -9**	**CY -8**	**CY -7**	**CY -6**	**CY -5**	**CY -4**	**CY -3**	**CY -2**	**CY -1**	**CY / 2017**
Total Fresh Water Withdrawal by all Government office & campuses (MCM)												
Total Actual Water Consumption by all Government office & campuses (MCM)												

5Total Water Withdrawal (Abstraction) and Actual Water Consumption as percentage of total renewable freshwater resources

	CY-5	**CY-4**	**CY-3**	**CY-2**	**CY-1**	**CY/ 2017**
Total Fresh Water Withdrawal by all Government office & campuses (%) *(Refer 5(a) below)*						
Total Actual Water Consumption by all Government office & campuses (%) *(Refer 5(b) below)*						

5(a) Total Water Withdrawal/Abstraction by **Government office and campuses** in the State as percentage of Total available freshwater resources of the State

Total water withdrawal (%) = (Total water withdrawal by all Government office & campuses in the State) x 100 / (Total available freshwater resources of the state)

5(b) Total Actual Water Consumption by all **Government office & campuses** in the state as percentage of Total available freshwater resources of the State

Total water consumption(%) = (Total actual water consumption by all Government office & campuses in State) x 100 / (Total available freshwater resources of the state)

6Water Economics & Financing:

6(a) Water Tariff *(Rs./m³)*

Source	CY-5	CY-4	CY-3	CY-2	CY-1	CY/ 2017
GW						
Urban body						
Treated Waste Water for reuse						
Others						

6(b) Procurement Cost of Water (in Rs)

Year wise cost of procurement of Water				
CY-5	CY-4	CY-3	CY-2	CY-1

6(c) Expenditure on Water including Treatment and Management-Time trend at State level

	CY-5	CY-4	CY-3	CY-2	CY-1	CY/ 2017
Total Capex by Government office & campuses on water treatment and management (Lakhs)						
Total O&M Expenditure by Government office and campuses on water treatment and management (Lakhs)						
Total						
O&M Expense (%)						

6(d) Expenditure by Government office & campuses at district level for the Current Year- CY

Government office & campuses	Capital Expenditure (Lakhs)	O&M Expenditure (Lakhs)	Total	O&M Expense (%)
District 1				
District 2				
District 3				
District 4				
District 5				
Total				

7Water Use Efficiency:

Water use efficiency in terms of Specific Water Consumption (SWC) viz. amount of water used/consumed per unit person. In case of Government office & campuses it can be represented as the total volume of water used/consumed (in litres) per official.

Specific Water Consumption (SWC) of Government office and campuses:

$$\textbf{Specific Water Consumption (litres/capita/day)} = \frac{\text{Volume of water consumed by the Government office \& campuses, (litres)}}{\text{(Total no. of officials)}}$$

7(a) Specific Water Consumption (SWC) for Current Year

	Average Daily Vol. of Water Consumed (litres)	Total no. of Officials	**SWC** (litres per capita per day)
District 1			
District 2			
District 3			

7(b) Average SWC of Government office and campuses for the State – time trend (also represent through Graph)

	CY-5	CY-4	CY-3	CY-2	CY-1	CY/ 2017
Average SWC of Government office & campuses in State						

7(c) Specific Water Consumption (**SWC**)

SWC of Government office & campuses in the **State**; Decadal trends or 15 years trend to be provided.

Trend of average Specific Water Consumption (SWC) of Government office & campuses at district level.
Percentage of Government office & campuses having specific water consumption within the norms/bench marks/standards (**as applicable**)

8Waste Water

	Bench Mark *(as applicable)*	**District 1**	**District 2**	**District 3**
Total Waste Water Generated from Government office & campuses in the state (m^3/annum)				
% Total quantum of wastewater discharged after recycling				

9Water Quality

		Bench Mark*(as applicable)*	**District 1**	**District 2**	**District 3**
Water Quality	% of Government office & campuses with online water quality monitoring systems installed.				

Water Quality Time trend- Graphs: Compliance to Waste water discharge Quality norms (E.g. BOD / PH /COD / TSS etc.)

10Bench Marks/ Norms/ Standards and deviation from the norms/bench marks/standards currently for Government office & campuses in state.

10(a) Benchmark for Water Consumption, Waste Water Generation etc. – District-wise

Parameters	Unit	Indian Bench Mark	International Bench Mark
Specific Water Consumption	litres/capita/day		
Waste Water generation	litres/capita/day		
Waste Water discharged	litres/capita/day		

10(b) Existing benchmarks/norms in certain sectors for reference

*(As per **CPHEEO Norms** for Office Buildings)*

	SWC
Specific Water Consumption for Office building	45 litres/capita/day