

4.1.6 WETLANDS

1.0 Subject Matter

Objective: To derive the water demand for maintenance of ecosystem level processes for wetlands and aquatic ecosystems (henceforth termed wetlands).

Definition of wetlands: "wetland" means an area of marsh, fen, peat land or water; whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six meters, but does not include river channels, paddy fields, human-made water bodies/tanks specifically constructed for drinking water purposes and structure specifically constructed for aquaculture, salt production, recreation and irrigation purposes [Wetlands Conservation and Management Rules, 2017, Clause 2 (1) g]

Status and extent of wetlands and aquatic ecosystems and their usage

Maps depicting wetlands, urban and rural settlements, land use land cover, drainage and Protected Areas shall be prepared for each District

- a) Status of wetlands- State wise (**Table 1**)
- b) Status of wetlands – District wise (**Table 2**)
- c) Status of aquatic species – State wise population trend of select species (**Table 3**)
- d) Sector wise water allocation for maintenance of ecosystem level processes and other common users (**Table 4**)
- e) Status of geo-tagging information on wetlands along with Class of Wetlands

2.0 Availability & Utilizable Water Temporal & Spatial basis is to be considered.

- a. Availability: Total volume of water available in wetlands(**Table 5**)
- b. Utilizable: Total water utilizable in terms of quality (Designated Best Use Water Quality Criteria) and quantity (**Table 6**)
- c. Demand: Water availability as per the natural hydro period of a given water body or for wetlands 60-75% of the natural mean monthly water volume at human used wetlands, 90-100% of the natural mean monthly water volume in notified wetlands or wetlands in protected areas for maintenance of ecosystem level processes (**Table 7**)
- d. Supply: The amount of water available in wetlands after consumptive use by humans (**Table 8**)
- e. Consumption: The amount of water required from wetlands for maintenance of ecosystem level processes (**Table 9**)

Table 10 is related to the Storage Volume in water bodies like lakes, wetlands etc. The approximate volume of water available in these storage spaces as on 1st of June of the Water Year needs to be ascertained from the surface water area and average depth of water on the said date.

Table 10

A9. Storage* in Wetlands (MCM) as on 1 st June		REMARKS
In Basin A/ Sub-basin		
In Basin B/ Sub-basin		
In Basin C/ Sub-basin		
TOTAL		

* There is District-wise inventory of ponds, tanks, wetlands (including lakes) and other water resources available from the NWIA database available on India-WRIS and VEDAS for the entire country. The same may be used to estimate the Storage of Water in these sources. (<https://vedas.sac.gov.in/vedas/node/59> & <http://www.moef.gov.in/division/national-wetland-inventory-and-assessment-nwia>)

For table 11, the utilizable surface water from wetlands etc can be assessed by considering the abstractions round the year and remaining storage as on the last day of the Water Year i.e. 31st May. Eventually, these water bodies again gets filled up during the monsoon in the next Water Year and water is available for utilization.

Table 11

B7. Utilizable Surface Water: Wetlands (Considering Tables A1 & A9) (MCM)		REMARKS
Abstractions/Withdrawals round the year		
Basin A/ Sub-basin		
Basin B/ Sub-basin		
Basin C/ Sub-basin		

Storage* remaining after fulfilling all abstractions/withdrawals, losses etc. as on 31 st May the next	
Basin A/ Sub-basin	
Basin B/ Sub-basin	
Basin C/ Sub-basin	
TOTAL	

*There is District-wise inventory of ponds, tanks, wetlands (including lakes) and other water resources available from the NWIA database available on India-WRIS and VEDAS for the entire country. The same may be used to estimate the Storage of Water in these sources. (<https://vedas.sac.gov.in/vedas/node/59> & <http://www.moef.gov.in/division/national-wetland-inventory-and-assessment-nwia>)

The water that is lost from the System through evaporation from water bodies would come in this Table 12 as another Outflow from the System Boundary in an annual scale.

Table 12

D4. Evaporation ** from all Surface Water Bodies (MCM) in a Water Year		REMARKS
Basin A/ Sub-basin		
Basin B/ Sub-basin		
Basin C/ Sub-basin		
TOTAL		

** Evaporation from the open water surfaces like Reservoirs, lakes, ponds, tanks and wetlands can be estimated using one of the standard methods like Pan Evaporation Method, Priestly-Taylor or any other standard and simple methods.

Evaporation from smaller water bodies may be clubbed together for ease and simplicity.

3.0 Issues and Challenges (including - Issues related to loss in ecological functions, temporal variations in biodiversity and water quality. Further changes in the wetland area over a temporal scale needs to be assessed)

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

Following defined categories and/or any other State-specific parameter(s) shall be explained and Root-cause, their effects and interventions adopted to address those issues may be provided.

5.0 Governance / Management

a. Statute / Law / Policy/ Regulations if any

- i. Wetlands (Conservation and Management) Rules, 2017
- ii. Guidelines for National Lake Conservation Plan, 2008
- iii. National Plan for Conservation of Aquatic Ecosystems (NPCA), 2016
- iv. Provision under National Environmental Policy, 2006
- v. Provision under The Forest (Conservation) Act, 1980
- vi. Provision under The Wildlife (Protection) Act, 1972
- vii. Provision under Environmental (Protection) Act, 1986
- viii. Construction and Demolition Waste Management Rules, 2016;
- ix. Manufacture, Storage and Import of Hazardous Chemical Rules, 1989
- x. Rules for Manufacture, Use, Import, Export and Storage of Hazardous Micro-organisms Genetically engineered organisms or cells, 1989
- xi. Hazardous Wastes (Management, Handling and Trans-boundary Movement) Rules, 2008;
- xii. E-Waste (Management) Rules, 2016
- xiii. Any other

b. Institutions governing / managing / monitoring the resources and Institutional structure. (State Wetland Committee (Composition; decisions taken); District Wetland Committees

- i. National Wetlands Committee (NWC) [Wetlands (Conservation and Management) Rules, 2017, Clause 6
- ii. Central Wetland Regulatory Authority (CWRA)
- iii. Lake Development Authority (LDA)
- iv. Lake Conservation Authority (LCA)
- v. State Wetlands Authority or Union Territory Wetlands Authority
- vi. Irrigation and water resource Department

- vii. Central Pollution Control Board (CPCB)/ State Pollution Control Board (SPCB)
- viii. Pollution control committees (where applicable)
- ix. Municipal Council/Corporation
- x. Forest Department/Wildlife Department
- xi. Local level institutions (Role of Panchayati Raj System, if any)
- xii. Self Help Group, NGOs
- xiii. NABARD, ADB
- xiv. Any other

c. Areas of Peoples/Private Participation if any

- i. Participatory management of water resources, if any
- ii. Local level institutions/Panchayati Raj System in water resource management, if any
- iii. Interdepartmental collaboration in wetland management, if any
- iv. Any other

d. Schemes & Financing [Also, relevant tables on Water Financing and Economics may be looked into Chapter 7 and filled up with appropriate data/information]

- i. Central Government schemes under National Committee on Aquatic Ecosystems (NCAE) etc.
- ii. State Government aid projects
- iii. UNDP funded projects
- iv. World Bank aided projects
- v. Local level site-specific projects such as MGNREGA

6.0 Measurement, Monitoring and Data Constraints/ Management

Following defined categories and/or any other State-specific parameter(s) shall be explained and interventions adopted to address those issues may be provided.

- a. Description of the area: Boundary, geology, climate, demography
- b. Maps depicting wetlands, urban and rural settlements and Protected Areas
- c. Monitoring protocol: Monitoring of hydrological parameters like depth and water spread area;
- d. monitoring of biodiversity in terms of aquatic fauna, flora and migratory water birds;
- e. Monitoring of water quality in terms of Designated-Best-Use Criteria (DBU) described by Central Pollution Control Board
- f. Assessment methods
- g. Periodicity of assessment
- h. Wetlands status reporting frequency (Report shall be submitted to NWC, CWRA, LCA as per their jurisdiction) **(Table 13)**
- i. Document control and data management: Availability, Transparency and Circulation
- j. Monitoring agency
- k. Availability of trained manpower
- l. Any other

7.0 Performance Indicators:

a) Bench Marks/ Norms/ Standards and deviation from the norms/bench marks/standards

Category	Indicator	Bench Mark	District1	District2
Measurement & Statute	Number of wetlands notified as protected			
	% of notified wetlands geo tagged			
	Number of wetlands that are covered under Integrated Management Plan [Wetlands (Conservation and Management) Rules, 2017, Clauses 2 (1) e) & 5 (4) g) and h)]			
	Number of wetlands that do not have Integrated Management Plan [Wetlands (Conservation and Management) Rules, 2017, Clauses 2 (1) e) & 5 (4) g) and h)]			
	Number of Wetlands of the State not notified yet			
	Whether Identification of lakes having area >10.0 ha is completed			

Category	Indicator	Bench Mark	District1	District2
	Number of wetlands in which Physical, Chemical and Microbiological parameters are being monitored as per EPA, 1986			
	Number of wetlands in which biodiversity in terms of aquatic major fauna, flora and migratory water birds are monitored			
Water Management Demand	Number of wetlands where abstraction exceeds inflow			
	Extraction of water from wetlands (cubic meter per annum)			
	Number of wetlands that dry-up during summer			
Problems	Number of wetlands reported shrinkage in 'Zone of influence' due to anthropogenic causes			
	% & Number of lakes with shrinkage in catchment			
	0-25%			
	25-50%			
	50-75%			
	75-100%			
	Number of wetlands reported encroachment			
	Number of wetlands where prohibited activities are still continued			
Water Quality	Number of wetlands categorized on Designated Best Use (DBU) Class A			
	Number of wetlands categorized on DBU Class B			
	Number of wetlands categorized on DBU Class C			
	Number of wetlands categorized on DBU Class D			
	Number of wetlands categorized on DBU Class E			
	Number of wetlands not categorized on DBU Criteria			
	Number of wetlands wherein water quality have degraded from DBU Class B and C to DBU Class D or E			
Waste Water / Pollution	Number of wetlands affected by Sewage			
	Number of wetlands affected by Industrial effluents			
	Number of wetlands affected by other source of wastewater i.e. <i>dhobi ghats</i> , cattle wallowing, etc.			
	Number of wetlands with STPs/ sewage treatment system			
	Number of wetlands with solid waste management system			
	Number of wetlands affected due to eutrophication (Problem due to excessive nutrients)			
	Number of wetlands with Biochemical Oxygen Demand (BOD) of 3 mg/L or less			
	Number of wetlands with Dissolved Oxygen concentration of 6 mg/L or more			
	Number of wetlands beyond the ideal range pH between 7.5 to 8.5			

Category	Indicator	Bench Mark	District1	District2
	% Coastal Wetlands that have shown decline in salinity significantly			
Status Assessment: Biodiversity	Number of wetlands where biodiversity (aquatic plants and animals) is assessed			
	Number of species locally extinct due to change in water quality and quantity			
	Number of species re-appeared due to rejuvenation of water quality and availability			
	No. of wetlands where population decline reported in migratory water bird congregation			
	No. of wetlands where population increase reported in migratory water bird congregation			
	% and Number of Lakes where Bio-diversity (Aquatic plants and Animals) is badly affected			
Participatory management in aquatic ecosystem conservation	Number of wetlands where people's participation is involved in Conservation.			
	Number of wetlands where mass awareness campaign is conducted			
	Number of wetlands reclaimed/rejuvenated through participatory management			
Source Augmentation (Restoration of wetlands)	Number of wetlands where restoration work has been taken up			
	Number of wetlands restored as compared to total number of wetlands identified for restoration.			
	Number of wetlands restored as compared to total number of wetlands identified for restoration.			
Water economics of aquatic ecosystems	Investment per hectare in the current year for wetland restoration (Rs.)			
	Revenue generated through wetland tourism (Rs.)			
	Revenue generated out of ecosystem goods and services (Rs.)			

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

The performance Indicators described above shall be evaluated in terms of deviation from norms/bench marks for spatial and temporal comparisons

8.0 Reforms undertaken/ being undertaken/ proposed if any

- a. Reforms in terms of following cases may be evaluated. Any other approach may also be incorporated.

- b. Table 11. Reforms undertaken/ being undertaken/ proposed for management of wetland for maintenance of ecosystem level process – District-wise (Current Year)
- c. Table 12. Reforms undertaken/ being undertaken/ proposed for management of wetland for maintenance of ecosystem level process – Wetland-wise (Current Year)

9.0 Road map of activities / tasks proposed for better governance with timelines and agencies responsible for each task/activity.

Sl. No.	Proposed tasks	Methodology adopted	Probable outcome	Agency responsible	Proposed timeline

ANNEXURE

Information Sources

- i. National Wetland Atlas
- ii. State Wetlands Authority or Union Territory Wetlands Authority
- iii. Lake Development Authority (LDA)
- iv. Lake Conservation Authority (LCA)
- v. Central and State Pollution Control Board
- vi. Forest Department/Wildlife Department
- vii. Irrigation and Water Resource Department
- viii. Department of Science and Technology
- ix. Groundwater Board
- x. State Statistical Department
- xi. State Biodiversity Board
- xii. Biodiversity Management Committee (BMCs)
- xiii. People's Biodiversity Register (PBRs)
- xiv. Village Panchayat, blocks and Tehsil Office

Table 1: Status of wetlands – State wise

Sl. No.	Evaluation criteria	2000	2010	2017
1.	Total number of wetlands inside Protected Areas	Natural		
		Manmade (Dam, barrage, water hole etc.)		
2.	Total number of wetlands outside Protected Areas	Natural		
		Manmade (Dam, barrage, water hole etc.)		
3.	Total water spread area for wetlands inside Protected Areas	Natural		
		Manmade (Dam, barrage, water hole etc.)		
4.	Total water spread area for wetlands outside Protected Areas	Natural		
		Manmade (Dam, barrage, check dam etc.)		
5.	Total catchment area for wetlands (Hectare) inside Protected Areas	Natural		
		Manmade (Dam, barrage, water hole etc.)		
6.	Total catchment area wetlands (Hectare) outside Protected Areas	Natural		
		Manmade (Dam, barrage, water hole etc.)		
7.	Number of wetlands used for drinking water/house-hold usage			
8.	Number of wetlands used for Municipal drinking water supply			

Sl. No.	Evaluation criteria	2000	2010	2017
9.	Number of wetlands used for Irrigation			
10.	Number of wetlands used for Industrial water supply			
11.	Number of wetlands declared as Ramsar Sites			
12.	Number of wetlands located in Eco-sensitive area			
13.	Number of wetlands under UNESCO World Heritage Sites			
14.	Wetlands notified [Wetlands (Conservation and Management) Rules, 2017, Clause 5 (4) b) & c)]			
15.	Comprehensive digital inventory prepared for number of wetlands [Wetlands (Conservation and Management) Rules, 2017, Clause 5 (4) d)]			
16.	Integrated management plan prepared for number of wetlands [Wetlands (Conservation and Management) Rules, 2017, Clause 5 (4) h)]			
17.	Demarcation of 'Zone of influence' for number of wetlands [Wetlands (Conservation and Management) Rules, 2017, Clause 7 (1) b)]			
Level of Threat				
18.	Total number of wetlands lost due to habitat destruction and encroachments through drainage and landfill			
19.	Total number of wetlands where water spread area is reduced due to siltation			
20.	Total number of wetlands where water spread area is reduced due to residential and/or agricultural encroachment/landfills etc.			
21.	Total number of wetlands where municipal waste water is discharged			
22.	Total number of wetlands where industrial effluent is discharged			
23.	Total number of wetlands contaminated with heavy metal and pesticide pollution			
24.	Total number of wetlands need restoration (due to reduced water availability, over-abstraction of water, pollution, draught, anthropogenic factors and other causes like climate shifts)			
25.	Total number of wetlands under Designated-Best-Use Water Quality Criteria(http://www.cpcb.nic.in/Water_Quality_Criteria.php)	Class A		
		Class B		
		Class C		
		Class D		
		Class E		
		Un-assessed		

Table 2: Status of wetlands – District wise

Sl. No.	Evaluation criteria	Dist. 1	Dist. 2	Dist.3
1.	Total number of wetlands inside Protected Areas	Natural		
		Manmade (Dam, barrage, water hole etc.)		
2.	Total number of wetlands outside Protected Areas	Natural		
		Manmade (Dam, barrage, water holes etc.)		
3.	Total water spread area for wetlands inside Protected Areas	Natural		
		Manmade (Dam, barrage, water holes etc.)		
4.	Total water spread area for wetlands outside Protected Areas	Natural		
		Manmade (Dam, barrage, check dam etc.)		
5.	Total catchment area for wetlands (Hectare) inside Protected Areas	Natural		
		Manmade (Dam, barrage, water holes etc.)		
6.	Total catchment area wetlands (Hectare) outside Protected Areas	Natural		
		Manmade (Dam, barrage, water holes etc.)		
7.	Number of wetlands used for drinking water/house-hold by locals			

Sl. No.	Evaluation criteria	Dist. 1	Dist. 2	Dist.3	
8.	Number of wetlands used for Municipal drinking water supply				
	Number of wetlands used for Irrigation				
	Number of wetlands used for Industrial water supply				
9.	Numbers of wetlands declared as Ramsar Sites				
10.	Numbers of wetlands located in Eco-sensitive area				
11.	Numbers of wetlands under UNESCO World Heritage Sites				
12.	Numbers of wetlands having socio cultural or religious value				
13.	Wetlands notified [Wetlands Conservation and Management Rules, 2017, Clause 5 (4) b) & c)]				
14.	Comprehensive digital inventory prepared for number of wetlands [Wetlands Conservation and Management Rules, 2017, Clause 5 (4) d)]				
15.	Integrated management plan prepared for number of wetlands [Wetlands Conservation and Management Rules, 2017, Clause 5 (4) h)]				
16.	Demarcation of 'Zone of influence' for number of wetlands [Wetlands Conservation and Management Rules, 2017, Clause 7 (1) b)]				
Level of threat					
17.	Total number of wetlands lost due to habitat destruction and encroachments through drainage and landfill				
18.	Total number of wetlands with discharge of waste water and industrial effluents				
19.	Total number of wetlands contaminated with heavy metal and pesticide pollution				
20.	Total number of wetlands with reduced water spread area due siltation				
21.	Total number of wetlands need restoration (due to reduced water availability, over-abstraction of water, pollution, draught, anthropogenic factors and other causes like climate shifts)				
22.	Total number of wetlands under Designated-Best-Use Water Quality Criteria(http://www.cpcb.nic.in/Water_Quality_Criteria.php)	Class A			
		Class B			
		Class C			
		Class D			
		Class E			
	Un-assessed				

Table 3: Status of aquatic species – State wise population trend of species of conservation significance

Fauna		Name of important species	Global status*	Local status**	2000	2010	2017 (CY)
Aquatic and semi-aquatic mammals	Otters	1.					
		2.					
Birds	Resident	Herons					
		Cranes					
		Waders					
		Ducks and geese					
		Total congregation (Number of birds)					
	Migratory	Herons					
		Cranes					
		Waders					

Fauna		Name of important species	Global status*	Local status**	2000	2010	2017 (CY)
		2.					
	Ducks and geese	1.					
		2.					
	Total congregation (Number of birds)						
	Number of ground nesting bird colonies	Congregation (Total number)					
	Number of Heronry around wetlands/river/ stream	Congregation (Total number)					
Reptiles	Freshwater turtles	1.					
		2.					
	Mugger						
	Aquatic snakes	Overall population					
Amphibians	Overall population						
Fish	Total catch of important fish species						
Invertebrates	Total catch of species like freshwater shrimps and prawns						

*Global status: According to International Union for Conservation of Nature (IUCN) Red List

**Local status: According to assessment of Forest Departments

Table 4: Sector wise water allocation for maintenance of ecosystem level processes and other common users

Sectors	Total amount of water allocated annually (Cubic meter per annum)		
	2000	2010	2017
Maintenance of Ecosystem Processes			
Agricultural/Irrigation sector			
Drinking water supply			
Industrial use			
Municipal/House-hold consumption			
Diversion by any other Hydro-projects			
Any other			

Table 5: Availability

State wise water availability in wetlands	2000	2010	2017
Total mean annual water volume stored in wetlands (cubic meter)			

Table 6: Utilizable

Total water utilizable in terms of quality (Designated Best Use Water Quality Criteria) and quantity	2000	2010	2017
Total number of wetlands under Class A			
Total number of wetlands under Class B			
Total number of wetlands under Class C			
Total number of wetlands under Class D			
Total number of wetlands under Class E			
Not assessed			

Table 7: Demand

Year	Water availability as per the natural hydro period of a given water body or for wetlands 60-75% of the natural mean monthly water volume at human used wetlands, 90-100% of the natural mean monthly water volume in notified wetlands in protected areas for maintenance of ecosystem level processes	
	Number of wetlands retaining 75% (Optimum level) of the total natural storage at human used wetlands	Number of wetlands retaining 100% (Optimum level) of the total natural storage in notified wetlands or wetlands in protected areas
2000		
2010		
2017		

Table 8: Supply

Year	The amount of water available in wetlands after consumptive use by humans		
	Total annual mean storage (cubic meter)	Total mean annual volume of water withdrawn from all sectors apart from 'Ecosystem' (cubic meter per annum)	Remaining annual mean storage (cubic meter)
2000			
2010			
2017			

Table 9: Consumption

Sl. No.	The amount of water required for wetlands for maintenance of ecosystem level processes	Percentage (%) of wetlands fulfilling the criteria		
		2000	2010	2017
1.	Wetlands retaining 75% (Optimum level) of the total natural storage at human used wetlands <i>Criteria: 60-75% of the natural mean monthly water volume at human used wetlands for maintenance of ecosystem level process.</i>			
2.	Wetlands retaining 100% (Optimum level) of the total natural storage in notified wetlands or wetlands in protected areas <i>Criteria: 90-100% of the natural mean monthly water volume at notified wetlands and wetlands in Protected Areas for maintenance of ecosystem level processes.</i>			

Table 10: Wetlands status reporting frequency (Report shall be submitted to NWC, CWRA, LCA as per their jurisdiction)

Sl. No.	Assessment parameters	Assessment / Monitoring frequency	Reporting frequency
1	Water quality	Monthly	Half yearly (June and December of each calendar year)
2	Hydrology (depth and water spread area)	Quarterly	Half yearly (June and December of each calendar year)
3	Biodiversity (Key aquatic fauna like fish and water birds)	Half yearly	Half yearly (June and December of each calendar year)
4	Any abnormal changes in water quality, encroachment, de-watering etc. reported by local community	As and when detected	

Table 11: Reforms undertaken/ being undertaken/ proposed for management of wetland for maintenance of ecosystem level process– District-wise (Current Year)

Sl. No.	Categories	Districts		
		1	2	3...
1.	Wetlands notified [Wetlands (Conservation and Management) Rules, 2017, Clause 5 (4) b) & c)]			
2.	Comprehensive digital inventory prepared for number of wetlands [Wetlands (Conservation and Management) Rules, 2017, Clause 5 (4) d)]			
3.	Integrated management plan prepared for number of wetlands [Wetlands (Conservation and Management) Rules, 2017, Clause 5 (4) h)]			
4.	Demarcation of 'Zone of influence' for number of wetlands [Wetlands (Conservation and Management) Rules, 2017, Clause 7 (1) b)]			
5.	Total number of sensitization workshops/seminars on aquatic ecosystem and biodiversity conservation targeting various stakeholders			
6.	Total number of capacity building workshops on aquatic ecosystem and biodiversity conservation for institutions governing/managing/monitoring the aquatic resources			
7.	% reduction in conversion/land use change for wetlands			
8.	% wetlands revived after deterioration (if any)			
9.	% of wetlands newly designated for regular water quality assessment by State Pollution Control Board or other MoEF&CC recognized agency such as NABL*			
10.	% wetlands restored in terms of Biochemical Oxygen Demand (BOD) of 3 mg/L or less			
11.	% wetlands restored in terms of Dissolved Oxygen concentration of 6 mg/L or more			
12.	New riparian area developed/restored under watershed management			
13.	Man-made interventions: Example/Case studies (Criteria: Restored/rejuvenated biodiversity and ecological service value)			
14.	Any other			

***NABL: National Accreditation Board for Testing and Calibration Laboratories**

Table 12: Reforms undertaken/ being undertaken/ proposed for management of wetland for maintenance of ecosystem level process – Wetland-wise (Current Year) [Wetlands (Conservation and Management) Rules, 2017, Clause 5 (4) e)]

Sl. No.	Name of wetland	Activities restricted in the wetland and its zone of influence	Activities permitted in the wetland and its zone of influence	Activities regulated in the wetland and its zone of influence	Regulation/enforcement authority	Monitoring frequency of regulated activities in the wetland and its zone of influence
1						
2						
3						
4						