



Nam Ngiep 1 Hydropower Project

Quarterly Environment Monitoring Report Second Quarter of 2026

April to June 2026

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A0	05 August 2026	Team leaders	Khamsone XAYSOMPHOU	Wanidaporn RODE	To ADB and LTA for Review
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ABBREVIATIONS / ACRONYMS

AIP	Annual Implementation Plan
ADB	Asian Development Bank
ADM	Administration Division
BAC	Biodiversity Advisory Committee
BOF	Biodiversity Offset Framework
BOMC	Biodiversity Offset Management Committee
BOMP	Biodiversity Offset Management Plan
BOMU	Biodiversity Offset Management Unit
BSP	Biodiversity Service Provider
CA	Concession Agreement between the NNP1PC and GOL
CAP	Corrective Action Plan
CCA	Community Conservation Agreement
CDP	Community Development Plan
COD	Commercial Operation Date
CVC	Conventional Vibrated Concrete
CWC	Civil Works Contract
DAFO	District Agriculture and Forestry Office
DCC	Document Control
DD	Data Deficient of IUCN conservation status
DEB	Department of Energy and Business of the Ministry of Energy and Mine
DEMO	District Energy and Mines Office
DOF	Department of Forestry of Ministry of Agriculture and Forestry
DWP	Detailed Work Program
EC	Electrolytic Conductivity
EIA	Environmental Impact Assessment
EMMR	Environmental Management and Monitoring Reports
EMO	Environmental Management Office of ESD within NNP1PC
EMU	Environmental Monitoring Unit
EMWC	Electrical-Mechanical Works Contract
EPF	Environmental Protection Fund
ESD	Environmental and Social Division of NNP1PC
ESMMP	Environmental and Social Monitoring and Management Plan
FMM	Financial Management Manual
FPF	Forest Protection Fund
FTS	Fortune Service
GOL	Government of Lao PDR

GIS	Geographic Information Systems
HMWC	Hydraulic Metal Works Contract
HR	Human Resources
H&S	Health and Safety
IAP	Independent Advisory Panel
IEE	Initial Environmental Examination
IMA	Independent Monitoring Agency
INRMP	Integrated Natural Resources Management Plan
IUCN	International Union for Conservation of Nature
ISP	Intergraded Spatial Planning
KGS	Khammany General Service
KPI	Key Performance Indicator
kV	kilo-Volt
LC	Least Concern of IUCN conservation status
LTA	Lender's Technical Advisor
LHSE	Lao Holding State Enterprise
MAF	Ministry of Agriculture and Forestry
MEM	Ministry of Energy and Mines, Lao PDR
MOM	Minutes of Meeting
MONRE	Ministry of Natural Resource and Environment, Lao PDR
MOU	Memorandum of Understanding
MPI	Ministry of Planning and Investment
NC-NX	Nam Chouane-Nam Xang
NCR	Non-Compliance Report
NNP1PC	Nam Ngiep 1 Power Company Limited
OAA	Other aquatic animals
OC	Obayashi Corporation
OFIs	Opportunity for Improvement
O&M	Operation & Maintenance
ONC	Observation of Non-Compliance
OSOV	Owners' Site Office and Village
PAFO	Provincial Department of Agriculture and Forestry
PCD	Procurement Division
PEMO	Province Energy and Mine Office
PONRE	Provincial Department of Natural Resource and Environment, MONRE
RCC	Roller Compacted Concrete
SIR	Site Inspection Report

SMO	Social Management Office of ESD within NNP1PC
SMART	Spatial Monitoring and Reporting Tool
SOP	Standard Operating Procedure
SS-ESMMP	Site Specific Environmental and Social Monitoring and Management Plan
TD	Technical Division
TOR	Terms of Reference
TPZ	Totally Protected Zone
TSS	Total Suspended Solids
UAE	United Analysis and Engineering Consultant Company Ltd.
UR	Upper Reservoir
VU	Vulnerable of IUCN conservation status
WCS	Wildlife Conservation Organization
WMF	Watershed Management Fund
WMP	Watershed Management Plan
WRPC	Watershed and Reservoir Protection Committee
WRPO	Watershed and Reservoir Protection Office
WWTS	Wastewater Treatment System

EXECUTIVE SUMMARY

The quarterly environment monitoring report of Nam Ngiep 1 Hydropower Project provides information and analysis of compliance with the environmental and social obligations of the Project stipulated in the Concession Agreement between the Nam Ngiep 1 Power Company (NNP1PC) and the Government of Lao PDR (GOL), and as required by environmental legislation of the Lao PDR, the ADB Safeguard Policy Statement and IFC Performance Standards. The Company ensures compliance with these requirements through implementation of project specific sub-plans, programmes and activities prepared as part of the Environmental and Social Management and Monitoring Plan for the Operation Phase (ESMMP-OP).

In Q2 2026, the implementation of the activities under ISO14001:2015 continued such as the implementation of the four Environmental Management Plans (EMPs). The EMPs will be executed from January to December 2026 including EMP01: HSE awareness training for NNP1PC staff and contractors, EMP02: Food Waste-to-Compost, EMP03: Environmental Performance Audit, and EMP04: Planting of 300 CHAMPA trees (national flower). Implementation plan and progress are provided in the relevant sections of this report.

Three joint monthly site inspections were conducted by EMO, ADM and Technical Division (TD) to follow up on the progress of previous corrective actions and any new findings. During the inspections, six Observations of Non-Compliance (ONCs) and one Non-compliance Report level 2 (NCR2) were issued together with required corrective actions. Subsequent inspections have confirmed that two ONCs and the NCR2 have been resolved, four ONCs remain pending.

In Q2 2026, a total of 13.93 m³ solid waste from NNP1 project sites and camps was disposed of at the NNP1 Project Landfill, an increase of 0.16 m³ compared with Q1 2026. The local waste management contractor maintained routine waste collection and operation of the NNP1 Project Landfill throughout Q2 2026.

The environmental flow requirements were monitored throughout Q2 2026. Overall compliance was maintained, with the exception of five recorded instances where the maximum rate of change in stage of 0.6 m per hour were exceeded.

The concentration of dissolved oxygen (DO) at the surface level in R05 (Main Reservoir immediately upstream of the main dam) ranged between 7.0 mg/L and 8.5 mg/L. The monthly mean DO concentration at the intake level decreased from 3.05 mg/L in April 2026 to 0.61 mg/L in May 2026 and 0.10 mg/L in June 2026. The DO concentrations in Nam Chian and Nam Phouan were above 6 mg/L. The DO concentrations at the surface level in the Re-regulation Reservoir (R07) were between 3.5 and 4.5 mg/L. During combined turbine and labyrinth discharges on 24 April 2026 and turbine discharges in May and June 2026, DO concentrations in Nam Ngiep downstream the Re-regulation Dam were less than 6 mg/L (non-compliance with the standard) for the first 25.9 km from the Re-regulation Dam) but then gradually increased to 6 mg/L at the further downstream stations thus complying with the Standard. In addition, during gate discharge on 26 April 2026, the DO concentrations were above 8 mg/L for all downstream stations (complied with the Standard).

The depth profile monitoring during the period indicates formation of oxyclines in the Main Reservoir at the monitored stations at varying depths.

The Fishery Co-Management Plan (FCMP) and its regulation (FCMR) have been finalized, with implementation prioritized under the 2026 Annual Implementation Plans of Xaysomboun and

Bolikhamxay Watershed and Reservoir Protection Offices. Additionally, EMO discussed the FCMP with the SMO team to align the fishery activities under the plan with livelihood initiatives.

NNP1 EMO, district authorities and local production groups, carried out field monitoring, technical facilitation and market linkage across the Hom and Thathom Districts in Xaysomboun Province. In particular, pineapple disease response, market access for pineapple producers, rattan handicraft development and agricultural livelihood diversification through greenhouse vegetable production.

The Bolikhamxay Provincial Watershed and Reservoir Protection Office suspended operational activities due to budget constraints. The fund disbursement under the approved Annual Implementation Plan for 2026 remain pending, with funds expected to clear in Q3 2026. Activities will resume upon receipt of transfer.

Bolikhamxay Biodiversity Offset Management Unit (BOMU) carried out forest patrols and guarded the patrol sub-stations. The updated Community Development Plan (CDP) is under review by ADB. BOMU also conducted monitoring and follow-up training of the Community Conservation Agreement (CCA) funds and completed the installation of Fish Conservation Zone (FCZ) signboards in all six NC-NX villages. BOMU organized meetings with the Border Military Unit 251 and 257 to strengthen coordination and collaboration on the NC-NX management. The BOMU Annual Implementation Plan (AIP) 2026 was submitted to ADB and IAP for review. NNP1 maintains ongoing engagement with the Government of Laos (GOL) to address risks associated with the Wind Power Project and illegal logging in the NC-NX Offset Site. However, formal feedback and actionable responses from the GOL remain limited to date.

1 INTRODUCTION

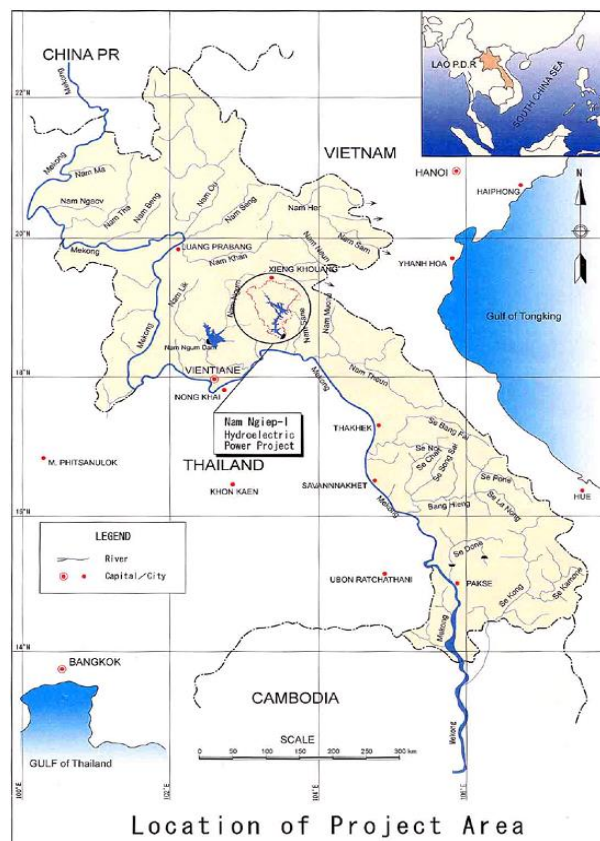
The Nam Ngiep originates in the mountains of Xiengkhouang Province, flowing through Khoun District into Thathom District of Xaysomboun Province, through Hom District and into Bolikhamxay Province. The Nam Ngiep meets the Mekong River just upstream from Pakxan in Bolikhamxay Province.

Two dams and power stations were constructed along the Ngiep River in Bolikhamxay. At the main dam site, a primary power station generated around 1,546 GWh of electricity for export to Thailand and released water to a regulating pond where a second dam and power station generate around 105 GWh of electricity for local use.

The Project Commercial Operation Date was achieved on 05 September 2019.

This Quarterly Environment Report provides a summary of environmental monitoring activities and mitigation actions during **Q2 2026**. The report is published on the Company website (<https://namngiep1.com/>).

Related construction Site Specific Environmental and Social Monitoring and Management Plans (SS-ESMMPs) are also publicly disclosed on the Company website as required under the Concession Agreement.



2 ENVIRONMENTAL MANAGEMENT AND MONITORING

The environmental management and monitoring activities reported in this section document the implementation of the relevant sub-plans and programmes of the Environmental and Social Management and Monitoring Plan for the Operation Phase during Q2 2026.

2.1 ENVIRONMENTAL MANAGEMENT SYSTEM

In Q2 2026, the implementation of activities under ISO14001:2015 continued such as the implementation of the four Environmental Management Plans (EMPs). The EMPs will be executed from January to December 2026 including EMP01: HSE awareness training for NNP1PC staff and contractors, EMP02: Food Waste-to-Compost, EMP03: Environmental Performance Audit, and EMP04: Planting of 300 CHAMPA trees (national flower). The progress of implementing the EMPs is summarized in **TABLE 2.1-1**.

TABLE 2.1-1: THE DETAILS OF EMPs 2026 IMPLEMENTATION

EMP No.	Activity Description	Key Performance Indicator (KPI)	Evaluation Date	Implementation Progress
01/2026	Provide HSE Awareness Training to NNP1PC Staff and Contractors	100% of new NNP1PC employees and contractors, and 80% of existing NNP1PC employees and contractors have undergone the HSE training in 2026.	Jan – Dec 2026	The training is ongoing (see section 2.2)
02/2026	Food Waste-to-Compost	Utilize approximately 30% of the monthly food waste for compost production.	Jan – Dec 2026	Q2 2026: 39% of the food waste converted to compost. (see section 2.2)
03/2026	Environmental Performance Audit	100% of environmental observations of noncompliance (ONCs) resolved before escalating to NCR.	Jan – Dec 2026	Q2 2026: No ONCs or NCRs have been escalated (see section 2.2)
04/2026	Planting of 300 CHAMPA trees Planting route from OSOV1 to the former RCC Plant (access road to Main Powerhouse), and from OSOV1 to the Re-regulation Powerhouse.	At least 60% of the planted trees have survived by December 2026.	Jan – Dec 2026	Stocking of plants, compost, and planting of Champa trees in progress (see Section 2.2)

2.2 EMP IMPLEMENTATION PROGRESS

2.2.1 EMP01: Provide HSE Awareness Training

From April to June 2026, training sessions covering health, safety and environment (HSE) induction and oil spill response were conducted for NNP1PC staff and contractors with a total of 95 participants. Following the implementation of the EMP from January to June 2026, training

sessions were delivered to a total of 192 participants including new hires from NNP1 and contractors. The annual HSE training session for existing NNP1PC employees and contractors is scheduled for October 2026.



Training sessions covering on Health and safety and Environment (HSE) induction to NNP1PC staff and contractors



Training on HSE induction and oil spill reponse for contractors

2.2.2 EMP02: Food Waste to Compost

The activity is ongoing. As of Q2 2026, a total of 1,031 kg of food waste from the NNP1PC canteen was collected and processed into compost and liquid fertilizer at the Phouhomxay Agriculture Center. This compost will be utilized for the planting activities outlined under EMP04, as well as for ongoing tree care and routine gardening at both OSOV and the Phouhomxay Agriculture Center.





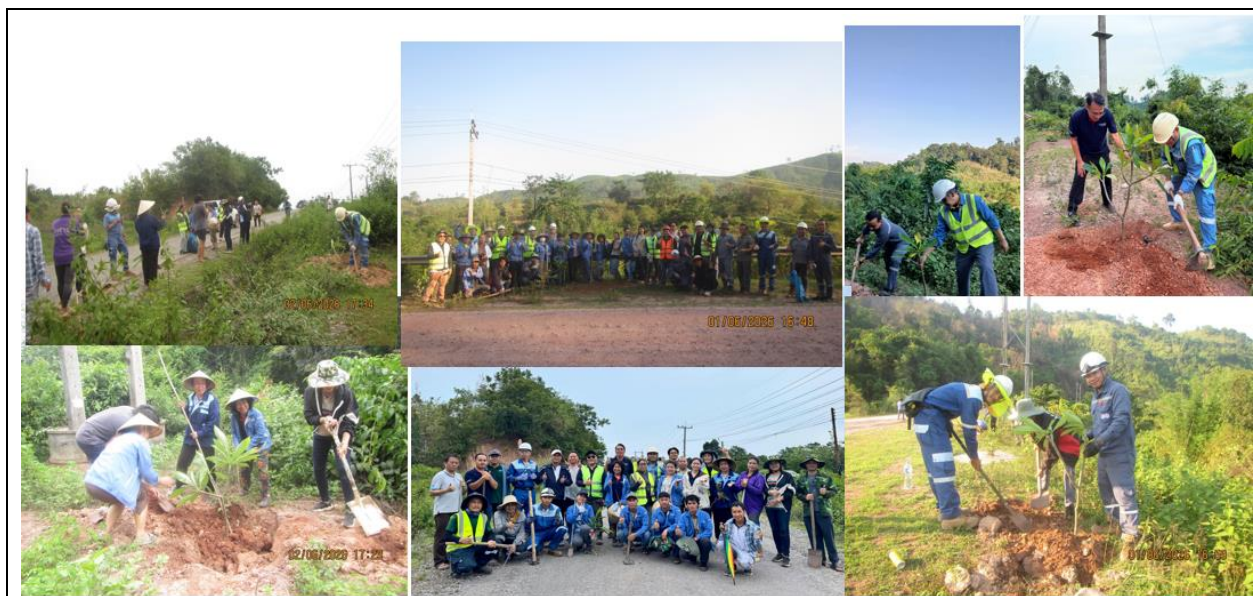
2.2.3 EMP03: Environmental Performance Audit

From April to June 2026, a total of 6 Observations of Non-Compliance (ONCs) were identified; 2 ONCs were closed and 4 remain open. In addition, one Non-compliance Report level 2 (NCR2) regarding oil spill along the road between OSVO2 and OSVO1 was issued on 12 June 2026. All non-compliances are expected to be resolved by mid-July 2026. **No ONCs or NCRs have been escalated.** Details of the ONCs and NCR are provided in **Appendix 1**.

2.2.4 EMP04: Planting 300 Champa Trees

In Q2 2026, pit preparation for Champa tree planting was completed on 21 May 2026 along the access road from OSOV1 and the former RCC plant on the way to the Main Dam, a two-day planting event took place on 01-02 June 2026, a total of 126 Champa trees were planted. Additional planting will continue throughout the 2026 wet season to achieve the annual target of 300 trees. To promote the activity, a news story was published on the NNP1 website and official Facebook page.





Champa tree-planting activity on 1–2 June 2026

2.3 CONTRACTOR SS-ESMMPs

During Q2 2026, the Environmental Management Office (EMO) reviewed Four Detailed Work Program (DWP) and Site-Specific Environmental, Social, and Monitoring Management Plans (SSESMMMPs) submitted by the contractors for approval. The review status is as follows:

No.	DWP & SSESMMMP	Review Status	Contractor
1	Real time instrument installation	No objection with no comments	UniqTek Company
2	Slope Protection on the Left Bank of the Main Dam	No objection with comments (<i>see APPENDIX 6 and 7</i>).	Song Da 5 Joint Stock Company
3	Road repairing for Main Powerhouse	No objection with no comments	PKCC Company
4	Gantry Tower Foundation Protection	No objection with no comments	SCC Company

The DWP and SS-ESMMP is provided in **APPENDIX 6: DWP and SSESMMPP for Slope Protection on the Left Bank of the Main Dam**. The EMO's comment and contractor's responses to EMO's comments are documented in **APPENDIX 7: EMO Comments & Contractor's responses to DWP and SSESMMPP**.

Subsequently, the contractor properly addressed all of the EMO's comments and the implementation of these environmental and safety measures was later verified on-site during the monthly joint site inspections.

2.4 RESULTS OF COMPLIANCE INSPECTIONS AT CONSTRUCTION SITES

During Q2 2026, three joint monthly site inspections were conducted by EMO, ADM and Technical Division (TD) to follow up on the progress of previous corrective actions and new findings. Three Site Inspection Reports (SIRs) were submitted to TD and ADM. During the inspections, six Observations of Non-Compliance (ONCs) were identified, two ONCs were resolved regarding improper management of construction waste at Main Dam Gallery Drilling Work and Hazardous waste management at LILAMA10Hazardous Material and Waste Storage Facility; and four ONCs remain open regarding the reopened of rehabilitation areas (spoil disposal no.2 and disposal area below 230 kV transmission line between tower 2-3 , OSOV1's WWTs maintenance, and concrete waste discharged along the roadside; and on 12 June 2026, one NCR level 2 was issued to the contractor regarding the oil spill along the road between OSVO2 and OSVO1 . the NCR highlighted a lack of accountability in handling hazardous materials during transportation. Furthermore, it noted that inadequate supervision from both TD and EMO following the incident resulted in improper cleanup management. This event served as a lesson learned for TD and EMO to improve their coordination and oversight. The contractor has since implemented the required corrective actions, and the NCR is now closed.

The status of the ONC and NCR reports is summarized in **Table 2.4-1**, **Figure 2.4-1** and **Figure 2.4-2**. The detailed ONCs and NCR2 are presented in **Appendix 1: The Site Inspection Results During Q2 2026**.

TABLE 2.4-1: STATUS OF ONCs AND NCRs REPORT DURING Q2 2026

Status	ONC	NCR-Level 1	NCR-Level 2	NCR-Level 3	Incident Report
Carried over ONC/NCR from the previous quarter	4	0	0	0	0
Newly opened ONC/NCR	2	0	1 ¹	0	0
Total No. of ONC/NCR	6	0	1	0	0
Resolved ONC/NCR	2	0	1	0	0
Unresolved ONC/NCR carried forward to the next quarter	4	0	0	0	0

¹ Detailed description of NCR level 2 (Ref. EMO-NCR2-TD002-26) is shown in **section 2.4.1** and the NCR2 report is attached in **APPENDIX 8: Nonconformity for oil spilled along the road between OSOV2 to OSOV1**.

FIGURE 2.4-1: STATUS OF ONCs DURING Q2 2026

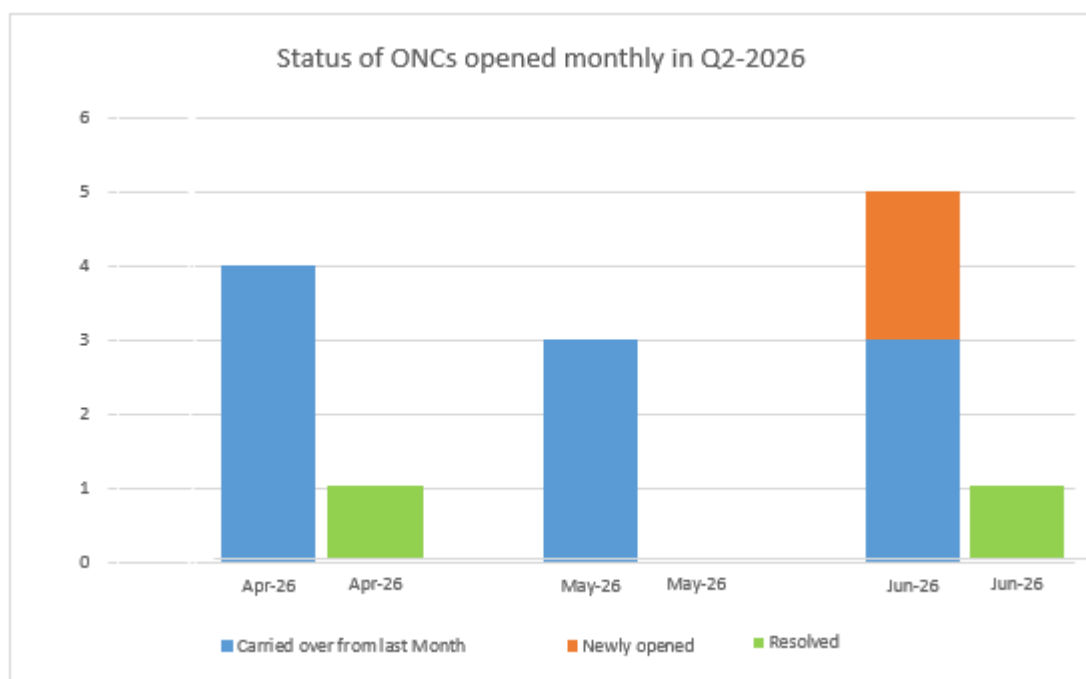
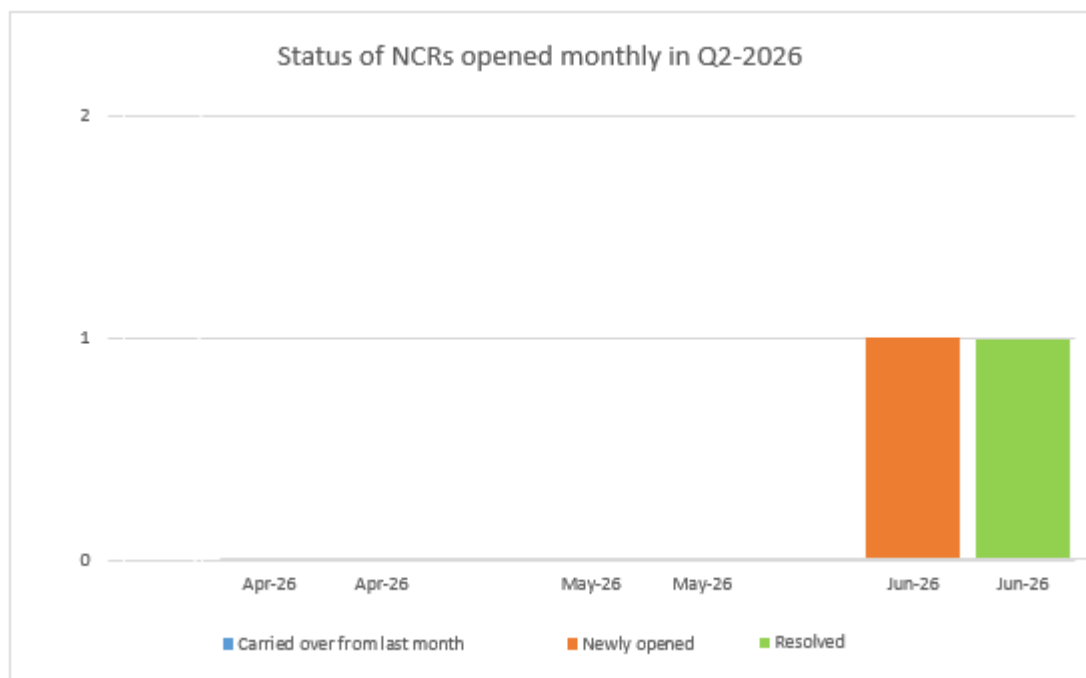


FIGURE 2.4-2: STATUS OF NCRs DURING Q2 2026



2.4.1 Brief Description of ONC and NCR

The status of the ONC and NCR reports is summarized in **Table 2.4-2**.

TABLE 2.4-2: STATUS OF ONCs AND NCRs REPORT DURING Q2 2026

ONC/NCR	Description/Comment	Status
ON-TD-0028	The rehabilitated spoil disposal area no. 02 was reopened to extract soil material for repairing the access road to the main dam powerhouse. - ADB-LTA mission on 19 March 2026, instructed NNP1-TD and EMO to coordinate with the government to seek formal recognition or approval for the continued use of this area	Pending NNP1PC (TD-EMO-ADM) was prepared and reviewed by the management in June 2026 and will be submitted further to the Ministry of Energy and Mines (MoIC) in July 2026 to seek formal recognition and approval for the continued use of this area. The ONC is expected to be cleared by mid-July 2026.
ON-TD-0031	Disposal area located under the 230-kV transmission line ROW, between Tower 03 and 04) was reopened to place excavated material from riverbed excavation at the Main Powerhouse tailrace channel. - ADB-LTA mission on 19 March 2026, instructed NNP1-TD and EMO to coordinate with the government to seek formal recognition or approval for the continued use of this area	Pending - After the riverbed excavation is completed, NNP1-TD will assess suitable rehabilitation measures. - NNP1PC (TD-EMO-ADM) was prepared and reviewed by the management in June 2026 and will be submitted further to the Ministry of Energy and Mines (MoIC) in July 2026 to seek formal recognition and approval for the continued use of this area. This ONC is expected to be cleared by mid-July 2026.
ON-TD-0033	Construction waste from the drilling work at the Main Dam has not yet been segregated and	Resolved

	transported to disposal area no.06 for proper disposal. TD was instructed to segregate and remove this construction waste to disposal of at spoil disposal area no.06, in accordance with SOP_S04_04 on Construction Waste Management (attached SOP)	(The corrective action was verified and accepted)
ON-TD-0034	The hazardous waste storage facility is nearly full. During the recent ABD and LTA mission on 19 March 2026, TD and EMO were advised to identify practical disposal options of hazardous contaminated waste.	Resolved (The corrective action was verified and accepted) On 9 June 2026, Panidtha Company transferred oil contaminated soil, sawdust, and textile materials stored in Lilama 10 Storage Facility to Vientiane steel factory for incineration in the factory furnace
ON-ADM-0034	The pipeline system was not properly distributing wastewater to the wetland ponds' surfaces as per the design drawing, and the various types of reeds were growing in and around the wetland ponds. - ADM was instructed to remove the weed in and around the wetland ponds, and to cut the reeds to prevent mosquito breeding grounds and reduce the risk of poisonous animals. - ADM was instructed to recheck the distribution pipeline system on the wetland ponds. If the system is not functioning, it must be replaced with a new spreading pipeline system to ensure proper treatment of the wastewater.	New ONC
ON-TD-0036	The concrete waste previously spilled by the contractor's concrete mixer trucks along the roadside at the Former Song Da 5 Camp, RRC Plant, and Sinohydro Camp on 17–18 June 2026 had not yet been cleaned up as required. It was also observed that this practice continues at the entrance to the Lilama storage facility TD was instructed to immediately check with the contractor, instruct them to stop this practice and ask them to clean up the concrete waste and dispose it in disposal area no. 06 (Concrete waste disposal area).	New ONC

	- TD was requested to ensure that the concrete mixer truck drivers participate in training on this matter to ensure that they are aware of how and where to dispose of concrete waste.	
NCR2-TD002-26	On 10 June 2026 at approximately 17:30, an oil spill incident caused by the PKCC contractor occurred along the road between OSOV 2 and OSOV 1. This oil spill incident is a non-compliance with ISO 14001:2015 Clause 8.1 (Operational Planning and Control) and Clause 8.2 (Emergency Preparedness and Response), as the contractor failed to maintain the necessary operational controls to prevent hazardous material leaks during transport. The oil spill is also a non-compliance with the NNP1PC's ESMMP-OP Subplan SP02 (Hazardous Materials Management), Section 1.1, which mandates the avoidance of uncontrolled releases, and Section 1.2, which enforces IFC and ADB guidelines to prevent pollution and hazardous discharges. Supervision Gap: EMO and TD were absent during the oil spill response by PKCC. PKCC contractor failed to contain the oil spill correctly. The contractor swept oil-contaminated sand to the roadside instead of proper collection and disposal. Corrective action: Focus on Accountability, Supervision, and Field Monitoring. Although, the spilled oil was contained using dry sand, PKCC contractor failed to contain the oil spill correctly (The contractor swept oil-contaminated sand to the roadside instead of proper collection and disposal). Therefore, to prevent recurrence, the PKCC must conduct the following workflows: - PKCC Required Actions Immediate Re-training: For all personnel prohibiting roadside waste sweeping. Spill Kit Deployment: absorbents, bags, shovels in oil transport vehicles. - EMO & TD Oversight Performance Record: Formal logging of failure in PKCC's environmental review.	Closed The corrective actions were taken by PKCC contractor and verified by TD and EMO - PKCC Contractor: Tidied up all equipment/tools and completed refresher hazardous management training on 18 June 2026 (eight days after oil spill incident). - EMO and TD: Improved coordination to close any supervision gaps, conducted daily and weekly inspections. General improvements were noted, with no signs of oil spill recurrence.

	Field Supervision: Ensure close, on-site oversight for all remediation. Verification: Random inspection (daily to weekly).	
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2.5 OIL LEAKAGE STATUS AT MAIN POWERHOUSE AND RE-REGULATION POWERHOUSE

The situation regarding oil leakage from the Unit 1 turbine within the main powerhouse and re-regulation dam powerhouse remains unchanged as shown in **Figure 2.5-1**, with leakage persisting at an estimated rate of 25 to 40 liters per month. A permanent solution is currently planned to be implemented during the next partial overhaul scheduled for January and February 2027.

FIGURE 2.5-1: OIL LEAKAGE FROM THE UNIT 1 TURBINE WITHIN THE MAIN POWERHOUSE AND RE-REGULATION DAM POWERHOUSE



2.5.1 Oil Handling and Storage

Because there is no immediate permanent solution for oil leak, temporary containment measures must continue. To date, the actions taken by the Technical Department (TD) to keep the situation under control have been highly successful, ensuring that no oil has reached the river. The established waste handling chain continues as follows:

- Leaking oil is actively trapped and collected directly beneath the Unit 1 turbine at main powerhouse and re-regulation powerhouse thrust bearing.
- The captured oil is initially accumulated in a temporary storage setup inside the main powerhouse and re-regulation dam powerhouse.
- The oil is then systematically transferred to the designated Hazardous Materials Storage Facility for safe containment before authorized disposal.

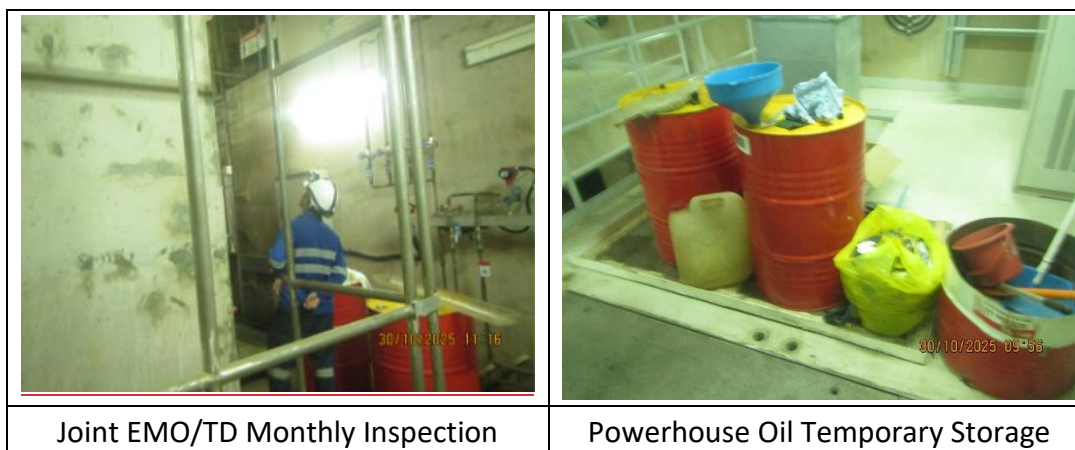
2.5.2 Joint Monthly Routine Inspection

As long as this risk remains, the Environmental Management Office (EMO) has included this site in its strict oversight routine. EMO conducts joint monthly routine inspections with the technical team to closely monitor the situation, as shown in **Figure 2.5-2**. This ongoing verification is maintained to ensure:

- The oil trapping and containment systems are managed continuously without any overflow.
- The temporary storage setups remain fully secure and clear of environmental pathways.

Spill response resources are kept fully stocked on-site to maintain an absolute safeguard for the river ecosystem.

FIGURE 2.5-2: MONTHLY ROUTINE INSPECTIONS WITH THE TECHNICAL TEAM TO CLOSELY MONITOR THE OIL LEAKAGE SITUATION.



2.6 SITE DECOMMISSIONING AND REHABILITATION

All 31 rehabilitated areas were inspected. No evidence of erosion or instability were observed at any of the inspected sites. The rehabilitation currently excludes spoil disposal area no. 02 which has been reopened by TD as a borrow pit for sourcing soil and rock for repairing of the access road to the main dam powerhouse (Ref. **Appendix 1: The Site Inspection Results During Q2 2026**).

2.7 WASTE MANAGEMENT AT THE OPERATION SITES

2.7.1 Waste Management at NNP1 Project Sites

In Q2 2026, a total of 13.93 m³ solid waste from NNP1 project sites and camps was disposed of at the NNP1 Project Landfill, an increase of 0.16 m³ compared with Q1 2026. The local waste management contractor has maintained routine waste collection and operation of the NNP1 Project Landfill management throughout Q2 2026. On 26 May 2026, the local waste management contractor conducted waste compaction and applied soil cover at the NNP1PC landfill in accordance with the landfill operation manual. **Approx. 18.52 m³** of waste was compacted.



Waste compaction and applied soil cover at NNP1PC Landfill

The amount of recyclable waste managed on site during Q2 2026 is shown in **Table 2.7-1**.

TABLE 2.7-1: AMOUNTS OF RECYCLABLE WASTE DURING Q2 2026

Source and Type of Recyclables		Unit	Carried Over from Q1 2026	Status in Q2 2026			
				Additions	Total (A)	Sold (B)	Remaining Amount (A - B)
Construction activity							
1	Scrap metal	kg	0	0	0	0	0
Sub-Total 1		kg	0	0	0	0	0
Operation camp							
2	Plastic bottle	kg	47	65	112	59	53
3	Aluminium Can	kg	N/A*	N/A	N/A*	N/A	N/A
4	Paper/Cardboard	kg	35	51	86	31	55
5	Glass	kg	50	51	101	0	101
6	Scrap metal	Kg	0	0	0	0	0
Sub-Total 2		kg	132	167	299	90	209
Grand Total (Sub-Total 1+2)		kg	132	167	299	90	209

*Please note that aluminium cans are collected and sold separately by housekeepers before storage so there is no accurate recorded quantity. The item is therefore marked Not-available (N/A).

2.7.2 Hazardous Material and Waste Management

The amounts of hazardous materials and hazardous wastes that were collected, stored and disposed of during Q2 2026 are shown in **TABLE 2.7-2** and **TABLE 2.7-3**.

TABLE 2.7-2: HAZARDOUS MATERIAL RECORDED DURING Q2 2026

No.	Type of Hazardous Material	Unit	Total in Q2 2026	Used/ Disposed	Remaining
1	Diesel	Litre	16,644	11,790	4,854
2	Gasoline	Litre	2,612	1,964	648
3	Lubricant (Turbine oil)	Litre	31	0	31
4	Colour paint	Litre	38	0	38
5	Thinner	Litre	1	0	1
6	Grease oil	Litre	745	0	745
7	Gear Oil	Litre	91	6	85
8	Chlorine Liquid	Litre	550	75	475
9	HA Cut AF	Litre	3,925	0	3,925
10	HA Cut Cat AF	Litre	373	0	373

TABLE 2.7-3: HAZARDOUS WASTE RECORDED DURING Q2 2026

No.	Type of Hazardous Waste	Unit	Total in Q2 2026	Used/ Disposed	Remaining
1	Used Oil (Hydraulic + Engine)	Litre	6,797	6,200	597
2	Used oil mixed with water	Litre	0	0	0
3	Empty used oil drum/container (drum 200L)	Unit	53	0	53
4	Used Oil Filter	Unit	31	31	0
5	Contaminated soil, sawdust and textile material	m3	5.4	5.4	0
6	Used tyre	Unit	5	5	0
7	Empty used chemical drum/container (drum 20L)	Unit	153	0	153
8	Lead acid batteries	Unit	6	6	0
9	Empty paint and spray cans	Can	167	167	0
10	Halogen/fluorescent bulbs	Unit	80	0	80
11	Empty cartridge (Ink)	Piece	141	0	141
12	Clinic Waste	Kg	10	0	10
23	Expired Chlorine Powder	Kg	65	65	0

2.7.3 Food Waste Management

The original chart (**left**) tracks the quantity of food waste collected by villagers from 2022 through Q3 2025. In contrast, the updated chart (**right**) provides a detailed breakdown by categorizing

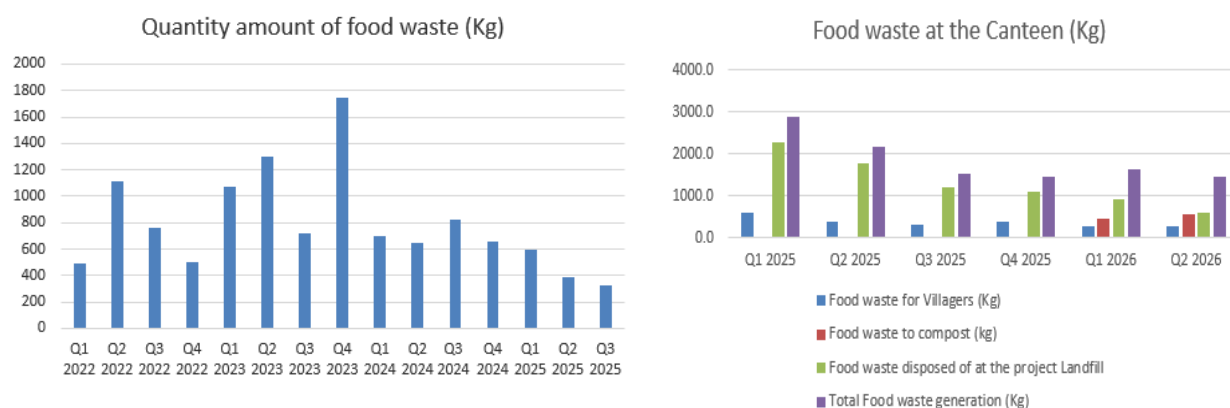
the data into Total Food Waste Generation, Food Waste for Villagers, Food waste to compost, and Food Waste Disposed of at the Project Landfill. This new format was introduced alongside an EMO intervention to highlight the specific root causes of waste generation and demonstrate how current management practices are successfully reducing landfill disposal.

The turning point in the data begins from an investigation on 13 February 2025, where EMO identified that a lack of meal pre-bookings was forcing the canteen to over-prepare food. In response, an internal notice was issued on 19 February 2025 enforcing pre-booking requirements. This action successfully stabilized meal preparation and reduced surplus waste starting in Q2 2025.

To illustrate this ongoing management practice with recent data, during Q2 2026, the canteen generated a total of 1,458.9 kg of food waste. Of this amount:

- Animal Feed: 278.0 kg (19%) was collected by villagers from Phouhomxay, Hat Gniun, and Thahuea.
- Compost Production: 575.0 kg (39%) was diverted for compost production.
- Landfill Disposal: 605.9 kg (42%) was disposed of at the project landfill.

Comparing Q2 2026 with Q4 2025—which had a similar total waste volume (~1,450 kg)—clearly shows the benefit of the compost project. Even though total food waste remained the same, landfill disposal dropped from about 1,100 kg in Q4 2025 to 605.9 kg in Q2 2026. This confirms that the reduction in landfill waste was driven by composting rather than lower overall waste generation".



Updated Chart: Q1 2025 – Present

To further reduce food waste from the canteen, EMO launched the new **EMP-02/2026 on compost production from canteen food waste** in January 2026. This activity is expected to reduce food-waste disposal at the NNP1 landfill and generate additional benefit such as improving soil quality for tree plantation areas.- see **Table 2.7-4**.

Table 2.7-4: Food waste generated in the canteen

Month	Total Food waste generation (kg) (A)	Food waste for Villagers (kg) (B)	Food waste to compost (kg) (C)	Food waste disposed of at the project Landfill (A)-(B)-(C) (kg)
January 2026	707.3	101	189	417.3
February 2026	420	63	267	90
March 2026	507.9	99	0	408.9
April 2026	497.3	82	0	415.3
May 2026	496.3	111	296	89.3
June 2026	465.3	85	279	101.3

2.8 RESERVOIR OPERATIONS

2.8.1 Main Reservoir

The water level in and inflow to the main reservoir since January 2025 are displayed in the graphs in **Figure 2.8-1** and **Figure 2.8-2**.

During Q2 2026, the mean daily inflow to the main reservoir was 83 m³/s. The minimum daily inflow was 32 m³/s, maximum daily inflow was recorded at 483 m³/s, and 25th percentile of 57 m³/s and 75th percentile of 92 m³/s. As indicated in **Figure 2.8-1**, the inflow in April and May 2026 were higher and in June 2026 was lower compared to the same period in 2025.

The water level in the main reservoir decreased with 11.6 m from El. 308.59 m asl (01 April 2026) to 296.99 m asl (28 June 2026) and then increased with 0.20 m to 297.19 m asl (30 June 2026).

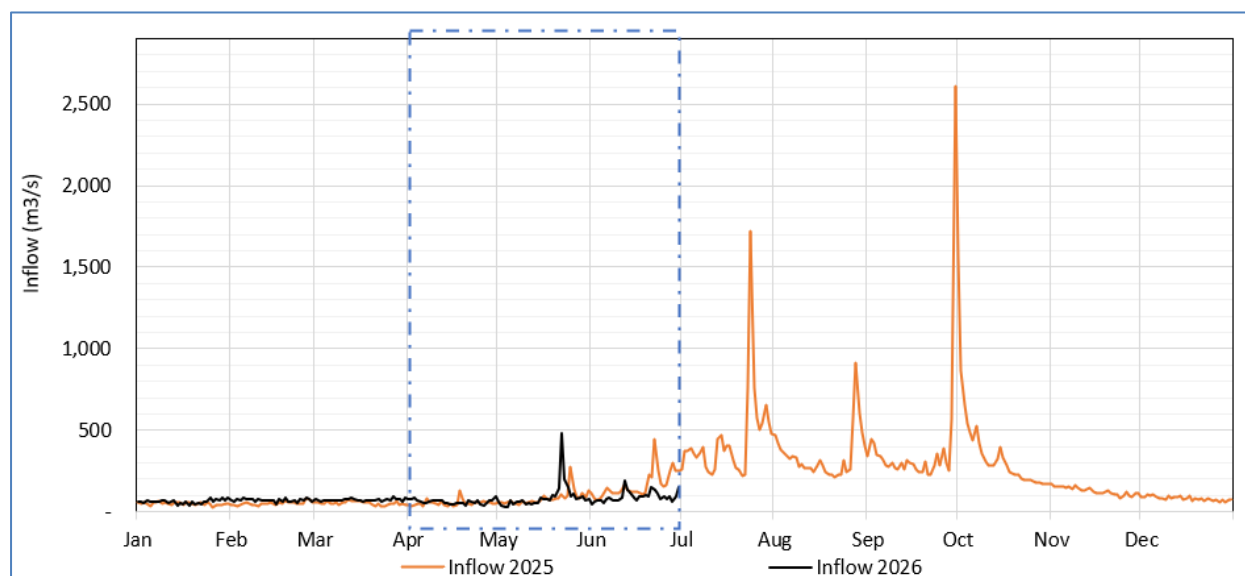
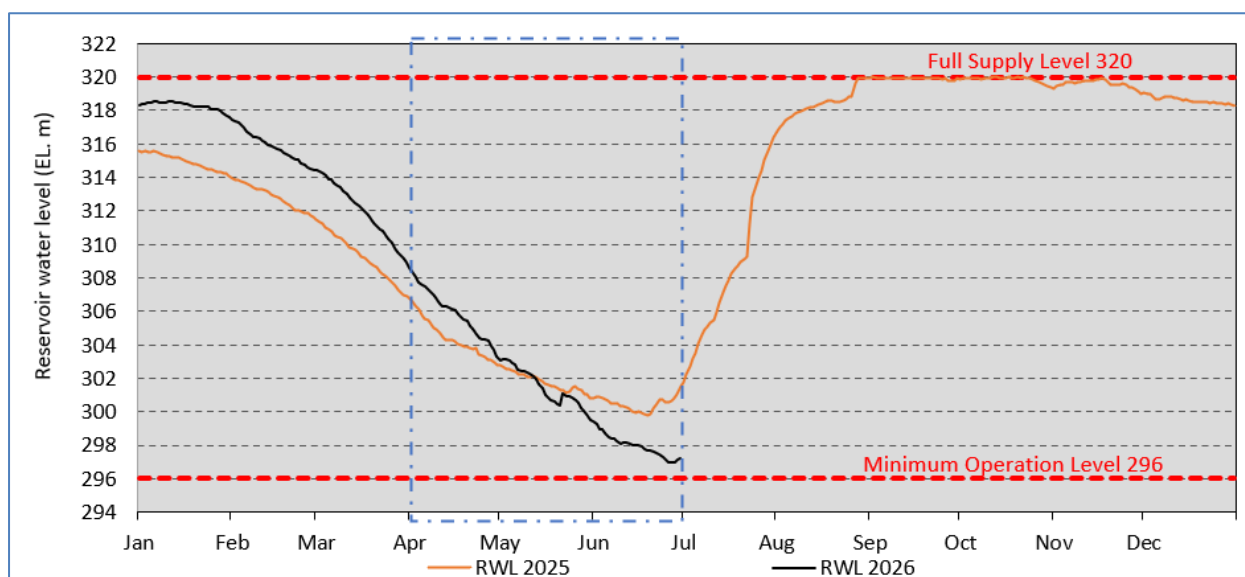
FIGURE 2.8-1: INFLOW TO THE MAIN RESERVOIR

FIGURE 2.8-2: WATER LEVEL OF THE MAIN RESERVOIR

2.8.2 Environmental Flow Requirements for the Operation Phase

NNP1PC has monitored compliance with the Environmental Flow Requirements (EFRs) stipulated in the CA, Annex C, Clause 53 (g) and as further modified in the Environmental Flow Assessment Report of July 2014 approved by MONRE. The EFRs have been monitored in accordance with the monitoring programme outlined in the ESMMP-OP 2019 (Vol. II, Part 2 on Subplan 1 on Reservoir and River Health Management), except with respect to thalweg water depth monitoring.

The results of the EFR compliance monitoring during Q2 2026 are summarized in **Table 2.8-1**.

TABLE 2.8-1: SUMMARY OF EFRs COMPLIANCE MONITORING IN Q2 2026

No	EFRs in the Downstream of the Re-regulation dam	EFRs compliance
1	Min flow 27 m ³ /s at all times	100% of observations comply
2	Thalweg water depth at least 0.5 m in the entire reach from immediately downstream of the Re-regulation dam until 4.3 km downstream the dam (measured at cross-sections where visual observations or boat navigation indicate shallow waters)	The Q2 2026 monthly thalweg monitoring missions included monitoring of navigation difficulties. Water depth measurements was carried out in April 2026 during times when the discharge from the re-regulation dam was 27 m³/s. In April 2026, 5 out of 38 monitoring points were found to have depths below the 0.5 m thalweg minimum depth requirement. However, no boat navigation difficulties were encountered during the mission. The results of previous monitoring missions, as also confirmed by the LTA, have documented that when the discharge is 30 m³/s or greater,

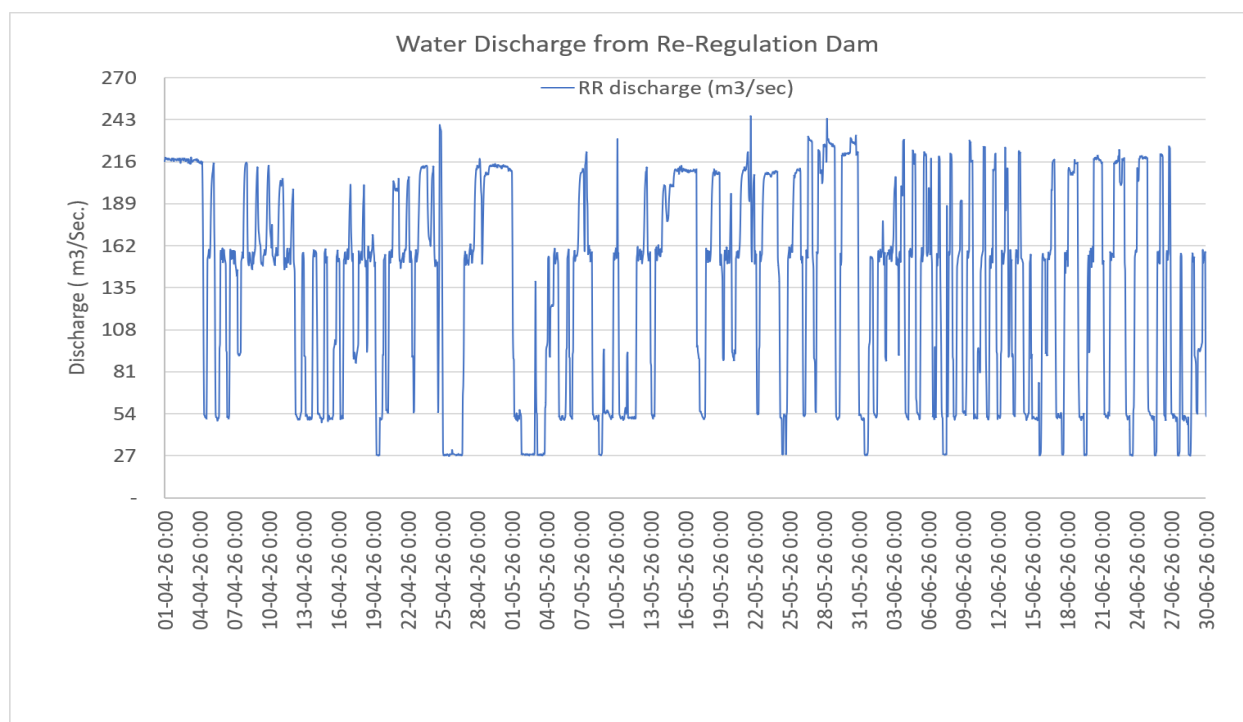
No	EFRs in the Downstream of the Re-regulation dam	EFRs compliance
		the water depth requirements are met and there are no problems with navigating the river.
3	Maximum rate of change (both rise and fall, separately) in stage of 0.6 m per hour	Five instances where the maximum rate of change was exceeded. These instances were caused by rapid increments in discharge from the Re-regulation Dam over short durations to lower the water level and facilitate safe excavations in the re-regulation reservoir downstream the main dam. However, there was no complaint or grievance risen up from downstream villages during these periods.
4	Maximum fluctuation in stage of 1.7 m over 24-hour (this requirement is about range and determines the maximum difference in stage height over 24-hour periods)	Full compliance.
5	Maximum fluctuation in stage of 1.7 m over 7-days (this requirement is about range and determines the maximum difference in stage height over 7-day periods)	Full compliance.

2.8.2.1 Minimum Flow Requirements

The discharge monitoring data for the re-regulation dam during Q2 2026 indicates that the minimum flow requirement of 27 m³/s has been met at all times. The Re-regulation Dam discharge graph can be found in **Figure 2.8-3**.

During Q2 2026, the mean discharge from the re-regulation dam was about 149 m³/s in April 2026 and about 142 m³/s and 123 m³/s in May and June 2026 respectively.

The changes in the discharge from the re-regulation dam were informed in advance to the RMU and to the heads of the downstream villages, who then announced the changes to the communities over the village speaker systems. There were no complaints related to the flow discharges or fluctuation levels downstream the Re-regulation dam during the reporting period.

FIGURE 2.8-3: DISCHARGE FROM THE RE-REGULATION DAM DURING Q2 2026

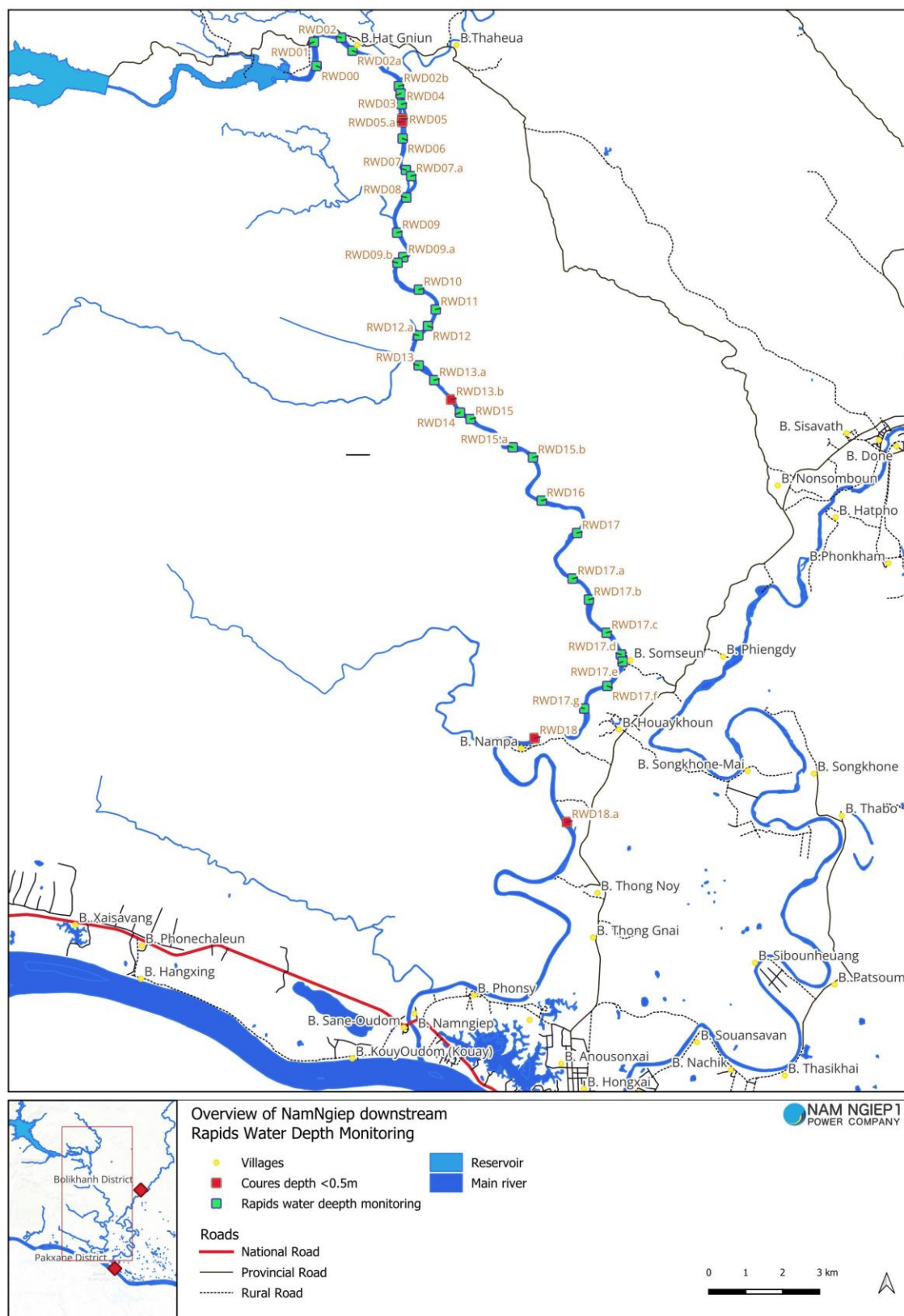
2.8.2.2 Minimum Water Depth

Since 18 July 2018, NNP1PC has carried out weekly monitoring of river depths at 19 locations downstream the re-regulation dam. Following the impacts of Typhoon Bualoi on 29 September 2025, NNP1-EMO resurveyed the entire downstream reach to assess river channel changes. This survey resulted in the identification of 38 monitoring profiles, doubling the original (19) monitoring sites as shown on **Figure 2.8-4**. These locations represent cross-sections with possible shallow water depths at low discharge rates.

The monitoring is undertaken to confirm compliance with the water depth requirements in the Concession Agreement, Annex C, and the approved Environmental Flow Assessment (Thalweg water depth at least 0.5 m in the entire reach from immediately downstream of the Re-regulation dam until 4.3 km downstream the re-regulation dam the nearest host village (Hat Gniun Village) is situated).

NNP1PC carried out three boat monitoring missions in Q2 2026. Only the mission in April 2026 was carried out during times with a discharge of less than 30 m³/s and the thalweg water depth measurements showed that 5 out of 38 monitoring points were found to have depths below the 0.5 m Thalweg minimum depth requirement. However, no boat navigation difficulties were encountered during the mission.

FIGURE 2.8-4: LOCATION MAP OF RIVER DEPTH MONITORING POINTS



2.8.2.3 Stage Height Fluctuations

The requirements on stage height fluctuations constitute a rise or a fall in water elevation and include two aspects:

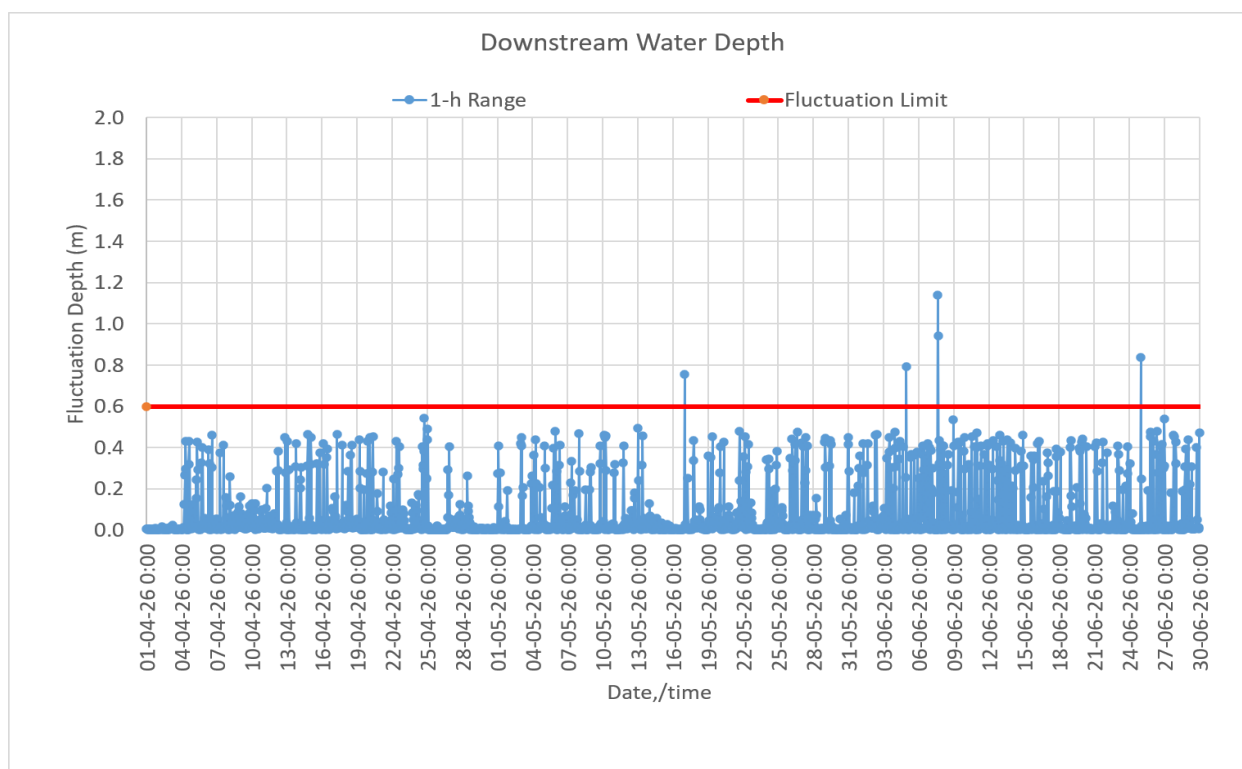
1. A requirement on the rate of change which is set at a maximum of 0.6 m per hour (calculated from the hourly water level recordings).
2. Requirements on the range in fluctuations over 24-hour periods and 7-day periods respectively, which is set at a maximum of 1.7 m for both periods. In other words, the range requirements determine the maximum difference in stage height over 24-hour periods and 7-day periods respectively.

Compliance with the 24-hour maximum fluctuation EFR is determined by calculating the difference between the maximum and the minimum stage height over each 24-hour period. In the same way, the 7-day maximum fluctuation EFR, is determined by calculating the difference between the maximum and the minimum stage height over each 7-day period. There is no compulsion for the Company to meet the stage height fluctuation requirements after a high flow event passes over the Re-regulation dam spillway.

In practice, meeting stage height fluctuation EFRs are managed through controlling the rate of change in discharge from the re-regulation dam/powerhouse. This is done using established rating relationships between stage height and discharge, as set out in the Re-regulation dam operation manual. These relationships are regularly checked and revised as necessary, as they would change whenever the channel morphology changes due to significant erosion or deposition.

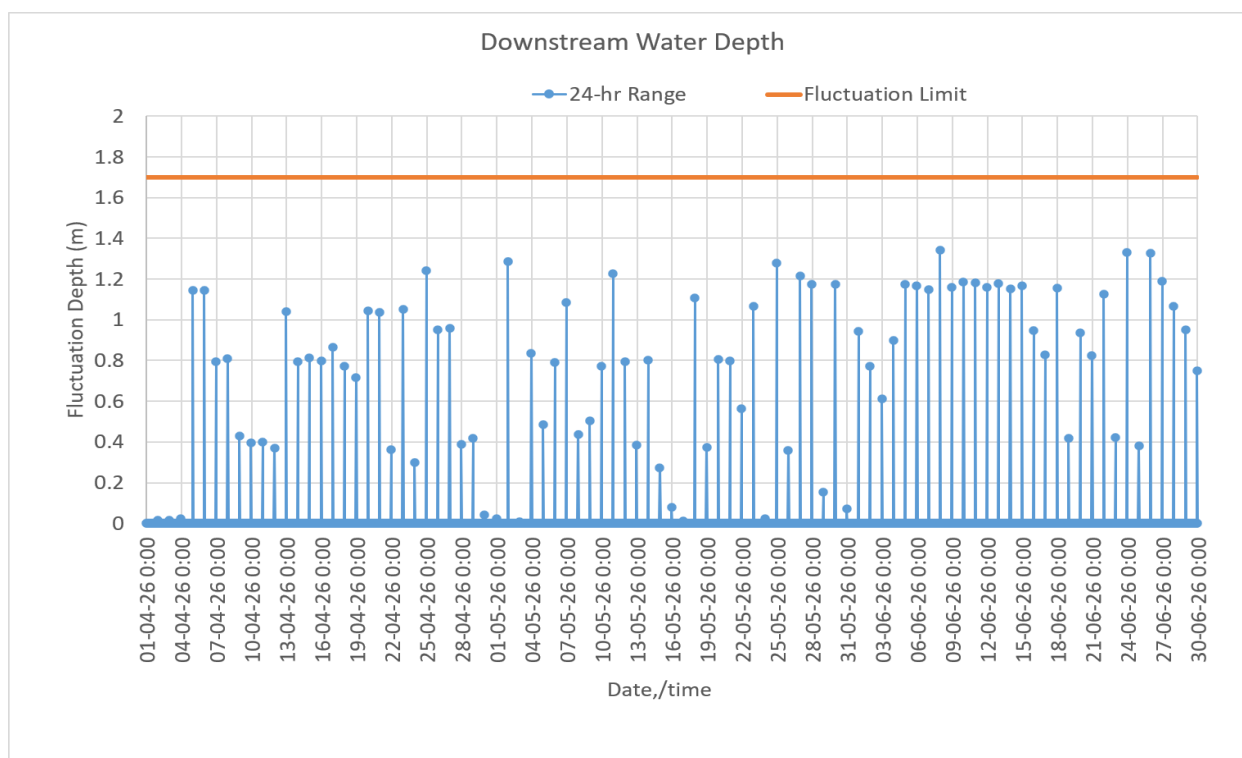
During Q2 2026, the maximum allowed rate of change of 0.6 m over 1-hour was complied with for all hourly periods, except on 17 May, 04, 07 and 25 Jun 2026 due to rapid increments in discharge from the Re-regulation Dam over short durations to lower the water level in the Re-regulation Reservoir and facilitate safe excavations and boulder breaking works downstream of the Main Dam. During this activity, the water discharge temporarily exceeded the maximum allowable limit, though only for a short duration. The results are presented in **Figure 2.8-5**.

Because these were planned events, all changes in discharge were communicated in advance to the RMU and to the heads of the downstream villages, who then broadcast the announcements to the communities over the village speaker systems. No negative impacts were observed, and no grievances or negative reports were received from the affected communities regarding these events.

FIGURE 2.8-5: HOURLY STAGE HEIGHT FLUCTUATIONS DURING Q2 2026

During Q2 2026, the maximum allowed difference in stage height of 1.7 m over 24-hour periods was complied with for all 24-hour periods (00:00 – 23:59).

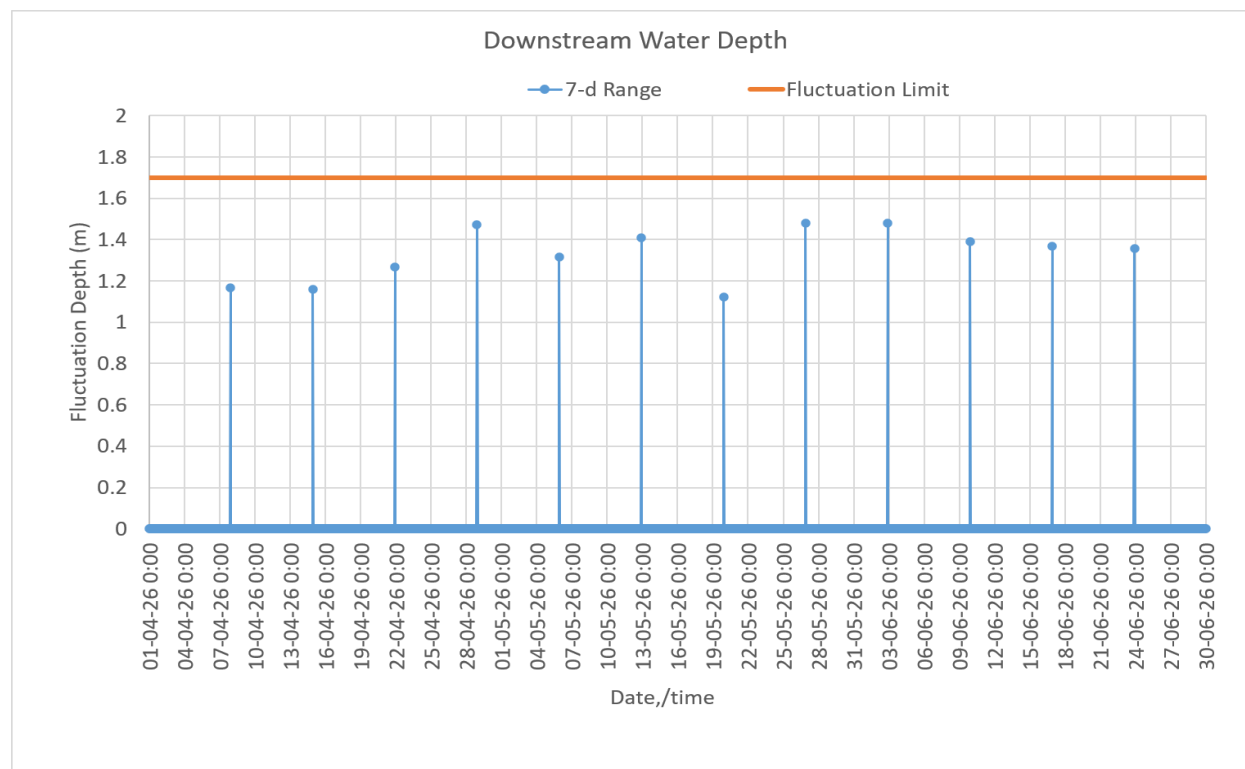
The results of the monitoring are presented in **Figure 2.8-6**.

FIGURE 2.8-6: 24-HOUR STAGE HEIGHT DIFFERENCE (M) DURING Q2 2026

During Q2 2026, the maximum difference in stage height of 1.7 m over 7-days was complied with for all 7-day periods.

The results are presented in **Figure 2.8-7**.

FIGURE 2.8-7: 7-DAY STAGE HEIGHT DIFFERENCE (M) DURING Q2 2026



2.9 WATER QUALITY MONITORING

2.9.1 Surface Water (River) and Depth Profile Water Quality

Descriptions of each monitoring station, surface water and depth profile water quality monitoring parameters, and the location of sampling map can be found in **Appendix 3** and all surface water quality data for Q2 2026 are listed in **Appendix 5-1**.

Dissolved Oxygen (DO)

The results of DO measurements for the station immediately upstream of the main dam (R05 – intake at 276 m asl.) and immediately downstream of the re-regulation dam (NNG05) are presented in **Figure 2.9-1**, the DO long profile measurement as timeseries are presented in **Figure 2.9-2**, and the full set of DO surface water quality data are shown in **Table 2.9-1**.

The water temperature and DO depth profiles in the main reservoir at R05 during Q2 2025, Q1 2026 and Q2 2026 are presented in **Figure 2.9-4** to **Figure 2.9-6**.

FIGURE 2.9-1: DISSOLVED OXYGEN IMMEDIATELY UPSTREAM AND DOWNSTREAM OF THE MAIN DAM

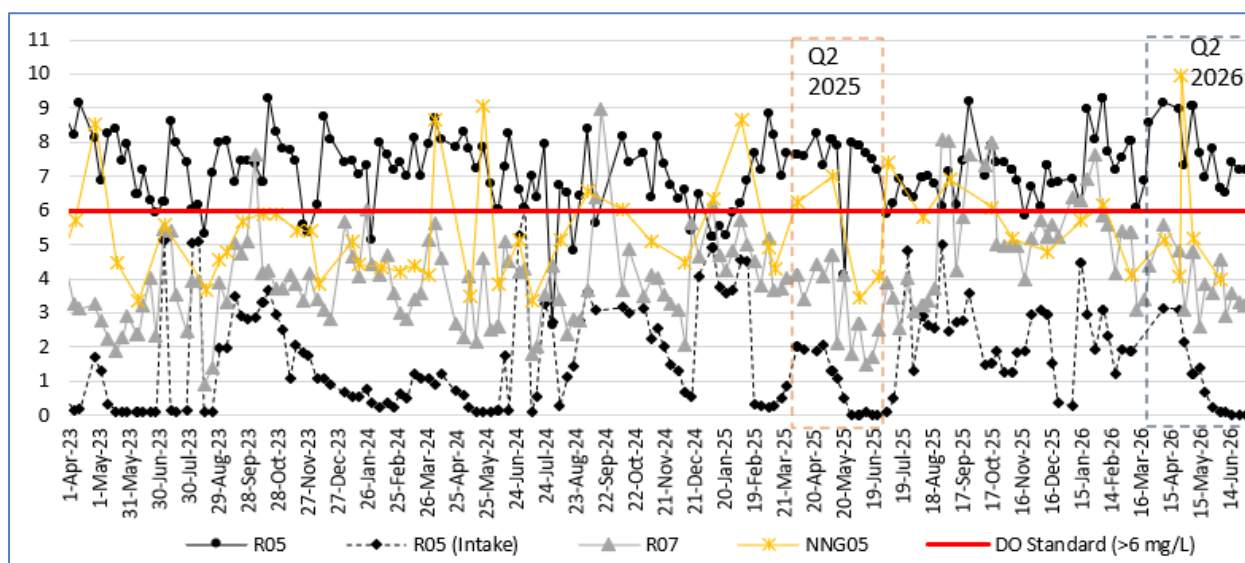
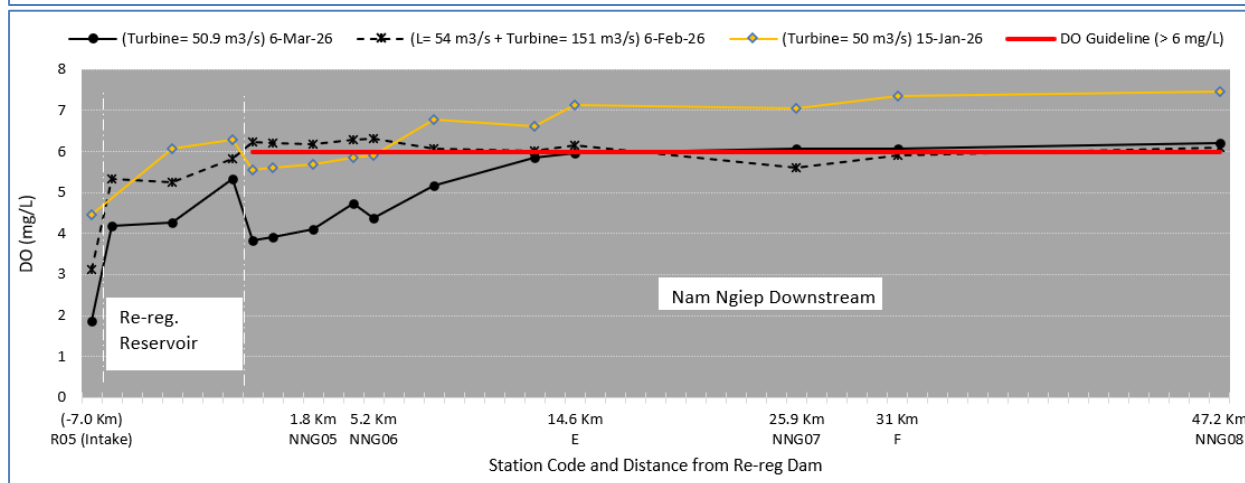
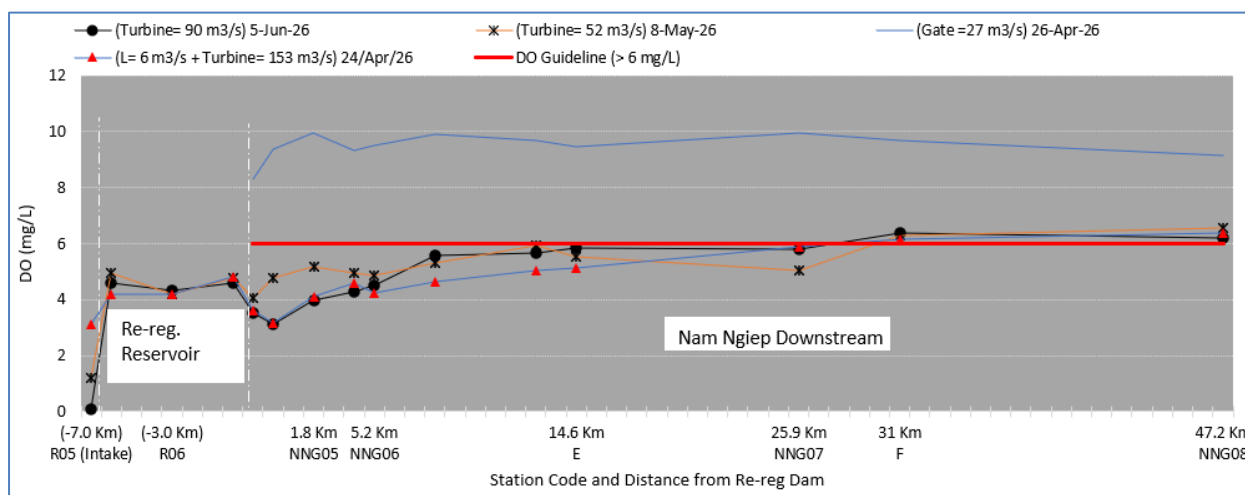


FIGURE 2.9-2: DISSOLVED OXYGEN LONG PROFILE MEASUREMENT FROM IMMEDIATELY UPSTREAM THE MAIN DAM TO LOWER NAM NGIEP (Q1 AND Q2 2026)



Main Reservoir

Figure 2.9-6 and **Figure 2.9-7** present the DO and water temperature depth profile timeseries in the Main Reservoir (R04 and R05) from September 2018 to June 2026, the graphs clearly show seasonal variations in water temperatures and a deepening of the thermocline during periods with cooler water leading to a corresponding deepening of the oxycline.

The depth profile monitoring during Q2 2026 indicates formation of thermoclines and oxyclines in the main reservoir at the monitored stations at different depths.

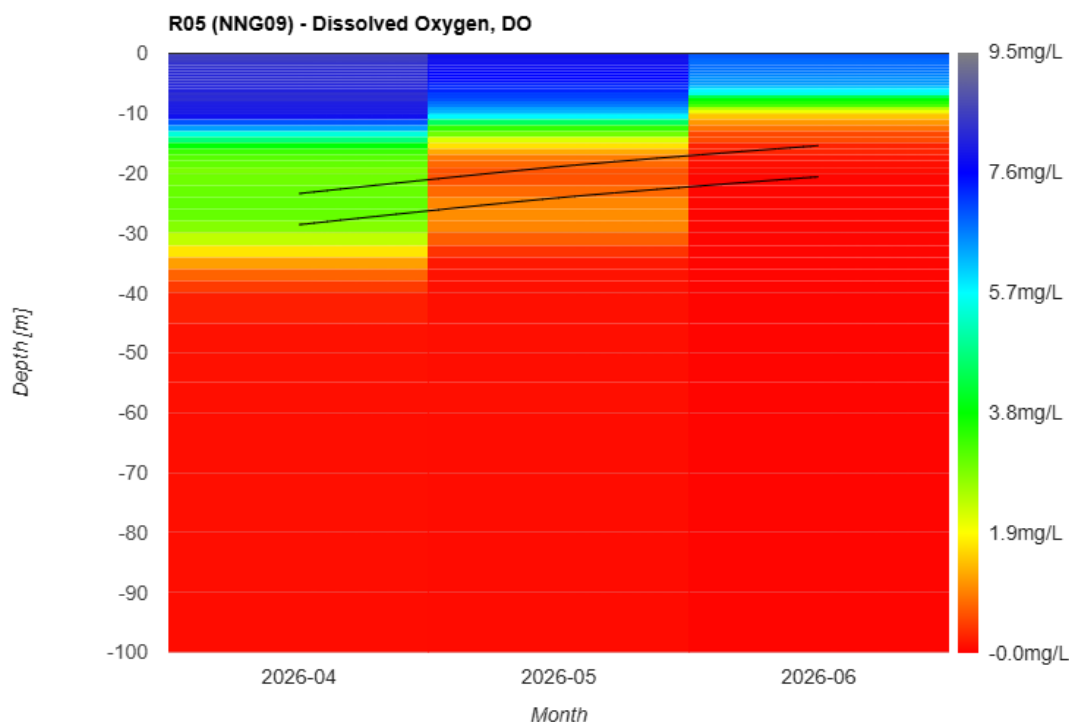
At R05, when comparing Q2 2026 with Q2 2025, the thermocline and oxycline show similar patterns.

Figure 2.9-5 shows the mean DO and water temperature depth profiles for Q2 2025, Q1 2026 and Q2 2026 at R05. As expected, the profiles for Q1 2026 and Q2 2026 show increasing water temperatures over Q2, formation of an oxycline occurred at depths between 7.5 m and 14 m. The profiles for Q2 2026 indicate that oxygen depletion (about 2 mg/L DO) is found at about 34 m below surface in April 2026 and decreasing to a depth of about 16 m in May 2026 and about 10 m in June 2026. Compared to Q2 2025, there are no obvious improvements in the DO levels.

The monthly mean DO concentration at the intake level decreased from 3.05 mg/L in April 2026 to 0.61 mg/L in May 2026 and 0.10 mg/L in June 2026. Anoxic levels were found at decreasing depths from about 40 m in April 2026 (about 12 m below the intake sill) to a depth of about 34 m in May 2026 (about 12 m below the intake sill) and a depth of about 16 m in June 2026 (about 4 m above the intake sill), with a peak in DO of 0.56 mg/L to 0.74 mg/L at about 15 m depth followed by a drop in DO down to anoxic levels at 40 m depth (see **Figure 2.9-3**).

The DO concentrations at R04 showed a similar pattern to R05.

FIGURE 2.9-3 MONTHLY MEAN CONCENTRATIONS OF DISSOLVED OXYGEN IN R05



At R03, during Q2 2026, DO concentrations varied between 5.0 mg/L and 8.6 mg/L with an average of 7.4 mg/L in the upper 6.0 m and at depths from 6.5 m to about 45 m below surface the DO varied between 0.04 mg/L and 6.3 mg/L. Anoxic conditions were only found at the depths from 13 m to bottom in April 2026, at the depths from 12 m to bottom in May 2026 and at depths from 18 m to bottom in June 2026.

At R02, during Q2 2026, DO concentrations varied between 4.5 mg/L and 7.3 mg/L with an average of 6.5 mg/L in the upper 3.5 m and at depths from 4.0 m to about 20 m below surface the DO varied between 0.1 mg/L and 5.9 mg/L. Anoxic condition (less than 0.5 mg/L) was only found at the depths from 18 m to bottom in April 2026.

At R01, the mean DO concentration throughout the quarter was about 6.4 mg/L over the entire water column with no measurements below 6.1 mg/L.

Re-regulation Reservoir (R06 and R07)

The depth profiles at R06 and R07 in the Re-regulation Reservoir showed no indications of a thermocline, because the Re-regulation Reservoir behaves more like a river than a lake.

The mean monthly DO concentrations at R06 over the entire water column decreased from 4.0 mg/L in April to 2.9 mg/L in May 2026 and then increased to 3.1 mg/L in June 2026. A similar pattern was found at R07. The DO concentrations in R06 and R07 are likely linked to the DO concentrations at the intake level in the main reservoir. It should be noted that the actual flow patterns and movements of water from R05 to the intake is not known and is likely rather complex with circulation patterns or other complex water movements near the intake, which adds uncertainties to correlating water quality data at or near the intake depth at R05 in the main reservoir with water quality data in the Re-regulation Reservoir.

Nam Ngiep Upstream and Tributaries

The Nam Ngiep Upstream station (NNG01), the station in Nam Chian (NCH01) a left bank tributary and station in Nam Phouan (NPH01) a right bank tributary of the main reservoir had DO concentrations above 6 mg/L during Q2 2026

Downstream Stations

During Q2 2026, a total of four monitoring missions were conducted. All four monitoring missions were undertaken during discharges of 27 m³/s and greater than 27 m³/s (complied with the minimum environmental flow requirement).

As indicated in **Figure 2.9-2**, during combination of turbine and labyrinth discharge on 24 April 2026 and turbine discharges in May and June 2026, the DO concentrations varied between 3.1 mg/L and 5.9 mg/L in contradiction to the National Surface Water Quality Standard of 6 mg/L for the first 25.9 km and then increasing to above 6 mg/L.

During gate discharge on 26 April 2026, DO concentrations in all downstream stations varied between 8.3 mg/L and 9.9 mg/L in compliance with the National Surface Water Quality Standard.

No dead fish was observed in Nam Ngiep downstream during Q2 2026.

FIGURE 2.9-4: MAIN RESERVOIR DISSOLVED OXYGEN AT THE END OF Q2 2026

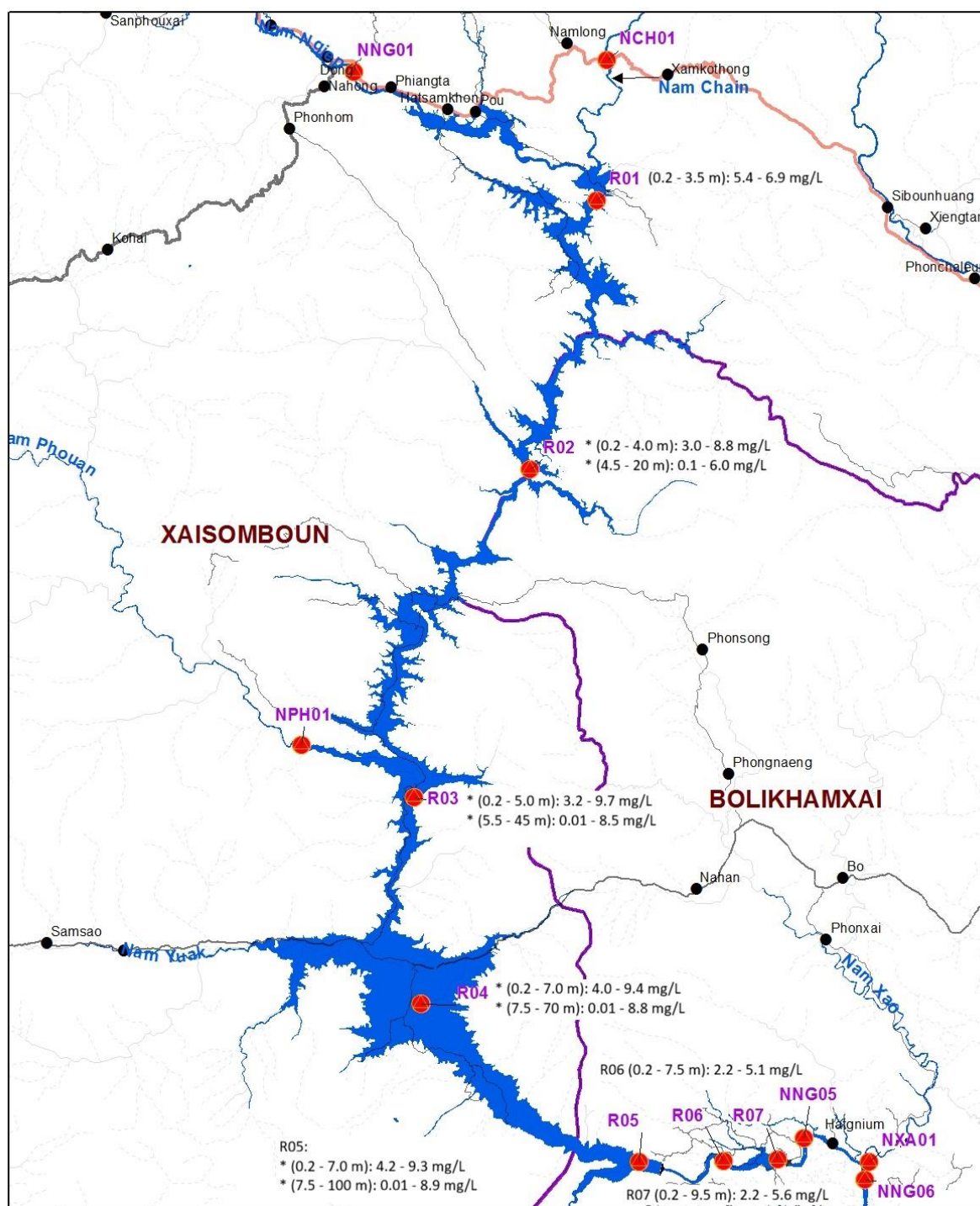


FIGURE 2.9-5: MEAN WATER TEMPERATURE AND DISSOLVED OXYGEN – DEPTH PROFILES IN THE MAIN RESERVOIR IMMEDIATELY UPSTREAM OF THE MAIN DAM (R05)

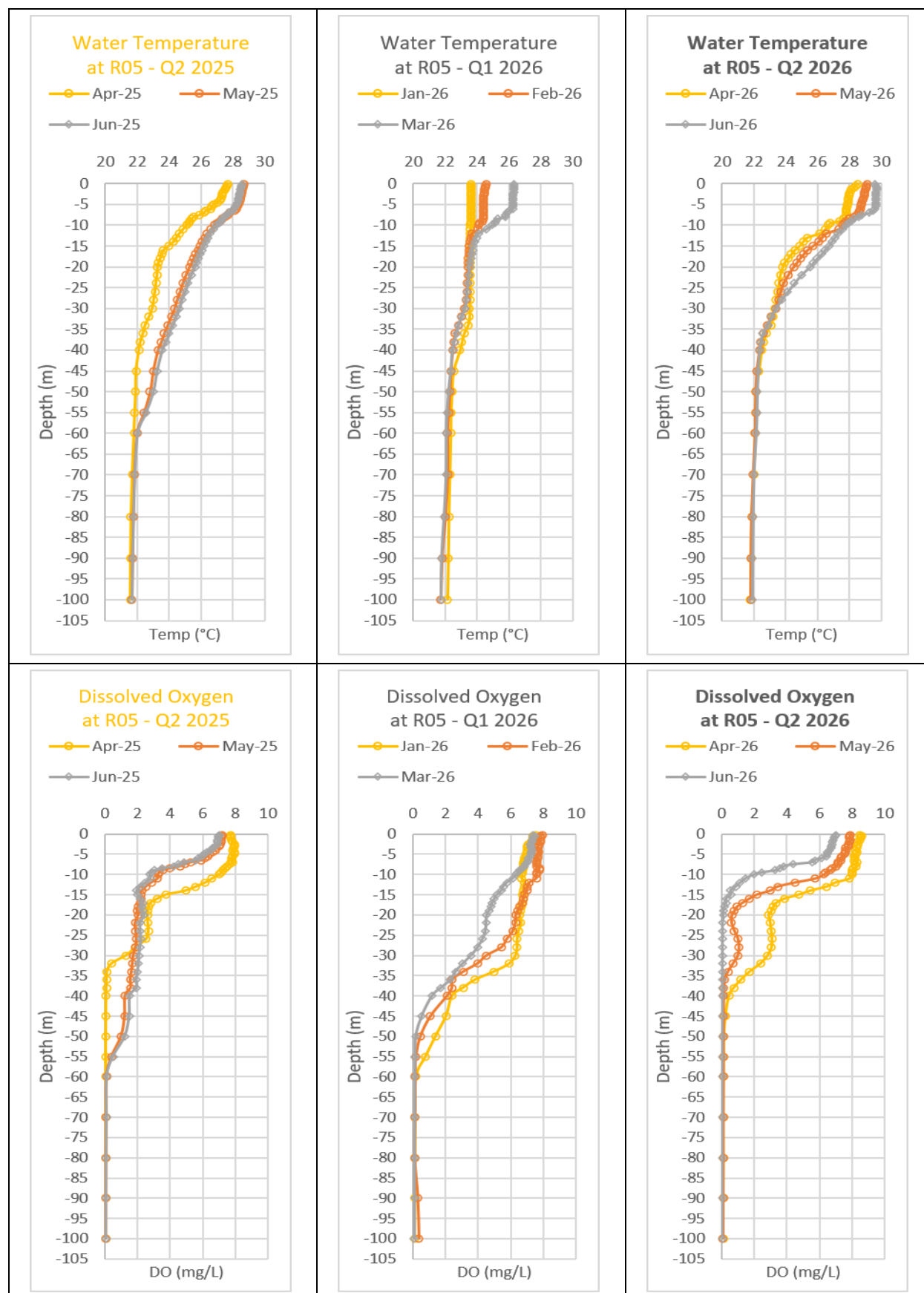


FIGURE 2.9-6: WATER TEMPERATURE AND DO DEPTH PROFILES IN THE MAIN RESERVOIR (R04 - R05), WITH POSITION OF INTAKE AT THE ACTUAL WATER LEVEL DURING SEPTEMBER 2018 – JUNE 2026

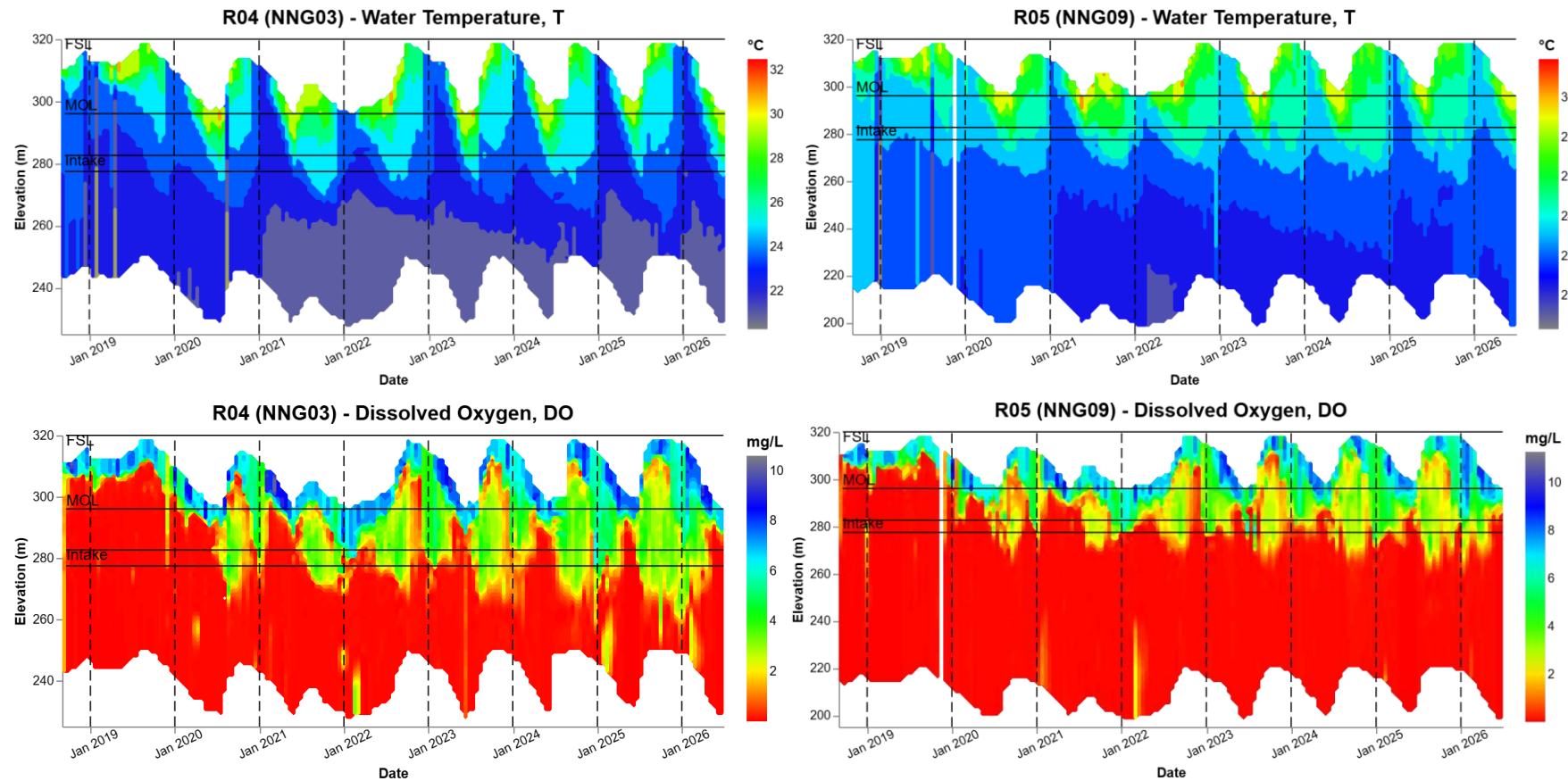


FIGURE 2.9-7: THE STRAIGHT-LINE GRAPH OF MONTHLY AVERAGED DO AND WATER TEMPERATURE AT R04 AND R05

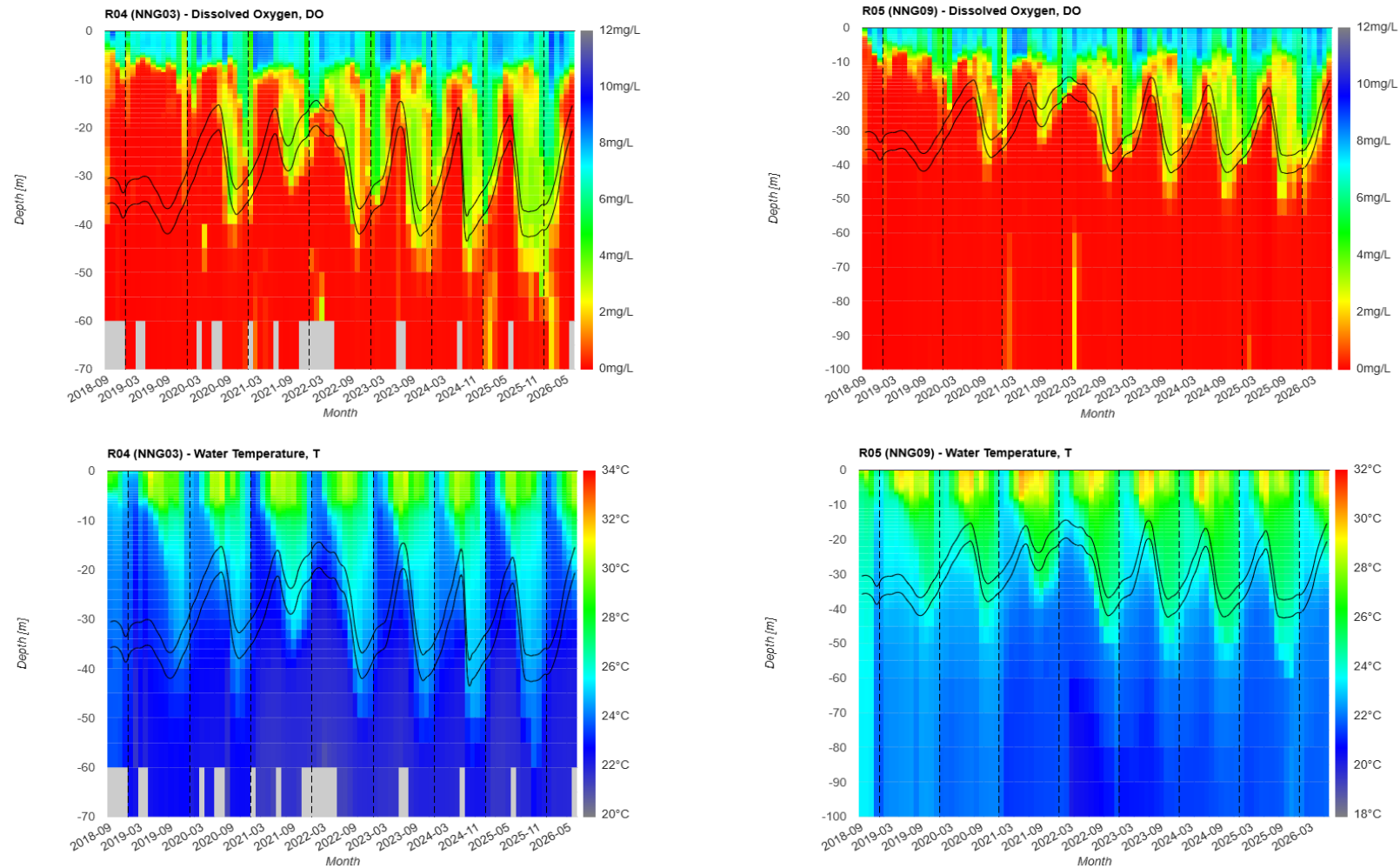


TABLE 2.9-1: DO (MG/L) RESULTS OF SURFACE WATER IN MAIN RESERVOIR, DO (MG/L) RESULTS OF R05 AT INTAKE DEPTH, RE-REGULATION RESERVOIR, NAM NGIEP AND ITS MAIN TRIBUTARIES MONITORED IN Q2 2026**(NATIONAL SURFACE WATER QUALITY STANDARD FOR DISSOLVED OXYGEN: ≥ 6 MG/L)**

Station Code	NNG01	R01	R02	R03	R04	R05 Intake	R05	R06	R07	NNG05	NNG06	NNG07	NNG08	NCH01	NPH01	NXA01	NHS01
8-Apr-26						3.15	9.16	5.04	5.59								
9-Apr-26																6.09	6.15
21-Apr-26	6.3													6.35			
22-Apr-26		6.64	6.6	7.04											6.99		
23-Apr-26					9.26	3.11	8.98	4.18	4.82								
24-Apr-26										4.09	4.22	5.88	6.36			6.08	6.5
26-Apr-26										9.96	9.52	9.95	9.13			7.49	6.9
28-Apr-26		6.92	7.42	8.79	7.63												
29-Apr-26						2.13	7.32	3.1	3.08								
5-May-26	6.08													6.57			
6-May-26		6.55	6.72	7.98											7.69		
7-May-26					8.41	1.22	9.08	4.21	4.79								
8-May-26										5.18	4.85	5.04	6.55			6.34	6.67
13-May-26		6.22	8.49	8.47	8.14										7.26		
14-May-26						1.39	7.68	2.89	2.62								
19-May-26		6.23	6.6	7.18	6.67												
20-May-26						0.66	6.98	2.7	3.83								
26-May-26		6.09	6.12	6.46	6.23												
27-May-26						0.24	7.82	3.87	3.6								

Station Code	NNG01	R01	R02	R03	R04	R05 Intake	R05	R06	R07	NNG05	NNG06	NNG07	NNG08	NCH01	NPH01	NXA01	NHS01
2-Jun-26	6.1													6.58			
3-Jun-26		5.44	7.38	8.34											8.1		
4-Jun-26					6.04	0.08	6.65	4.32	4.58								
5-Jun-26										3.97	4.5	5.8	6.19			6.25	6.07
9-Jun-26		6.17	6.94	7.02	6.52												
10-Jun-26						0.11	6.54	2.52	2.93								
16-Jun-26						0.02	7.41	2.96	3.56								
17-Jun-26		6.56	7.56	7.91	7.3												
23-Jun-26		6.48	7.91	8.25	7.65												
24-Jun-26						0.01	7.17	3.2	3.29								
29-Jun-26						0.02	7.18	3.04	3.22								
30-Jun-26		6.01	5.39	7.82	7.14												

Ammonia Nitrogen

In Q2 2026, Ammonia Nitrogen complied with the National Surface Water Quality Standard (<0.2 mg/L) in all monitored stations.

TABLE 2.9-2: AMMONIA NITROGEN (MG/L) RESULTS FOR THE SURFACE WATER IN NAM NGIEP AND ITS MAIN TRIBUTARIES MONITORED IN Q2 2026

(NATIONAL SURFACE WATER QUALITY STANDARD FOR AMMONIA NITROGEN: <0.2 MG/L)

Station Code	NNG01	R01	R02	R03	R04	R05	R06	R07	NN G05	NN G06	NN G07	NN G08	NCH01	NPH01	NX A01	NHS 01
21-Apr-26	<0.05												<0.05			
22-Apr-26		<0.05		<0.05										<0.05		
23-Apr-26					<0.05	<0.05										
5-May-26	<0.05												<0.05			
6-May-26		<0.05		<0.05										<0.05		
7-May-26					<0.05	<0.05										
2-Jun-26	<0.05												<0.05			
3-Jun-26		<0.05		<0.05										<0.05		
4-Jun-26					<0.05	<0.05										

Biochemical Oxygen Demand (BOD₅)

Since 2014, the Biochemical Oxygen Demand (BOD₅) values in the Nam Ngiep River and its tributaries have generally been below the detection limit (< 1 mg/L). The results for Q2 2026 indicate that the BOD₅ levels are compliant with the standard at all stations, except NNG01 (05 May 2026) and NHS01 (08 May 2026).

In addition, NNP1PC continues to carefully compile and assess all monitoring data to determine if any additional water aeration measures may be necessary to improve the DO levels in Nam Ngiep River downstream the Re-regulation Dam.

TABLE 2.9-3: BOD₅ (MG/L) RESULTS FOR THE SURFACE WATER IN NAM NGIEP AND ITS MAIN TRIBUTARIES MONITORED IN Q2 2026**(NATIONAL SURFACE WATER QUALITY STANDARD FOR BOD₅: <1.5 MG/L)**

Station Code	NN G01	R01	R02	R03	R04	R05	R06	R07	NN G05	NN G06	NN G07	NN G08	NC H01	NPH 01	NXA 01	NHS 01
21-Apr-26	<1												<1			
22-Apr-26		3.22		<1										<1		
22-Apr-26 Bottom				3.4												
23-Apr-26					<1	<1	<1	<1								
23-Apr-26 Bottom					3.2	<1										
24-Apr-26									<1	<1	<1	<1			<1	<1
5-May-26	4.87												<1			
6-May-26		2.39		<1										<1		
6-May-26 Bottom				4.3												
7-May-26					<1	<1	<1	<1								
7-May-26 Bottom					<1	<1										
8-May-26									<1	<1	<1	<1			<1	1.64
2-Jun-26	<1												<1			
3-Jun-26		<1		<1										<1		
3-Jun-26 Bottom				5.0												
4-Jun-26					<1	<1	<1	<1								
4-Jun-26 Bottom					<1	<1										
5-Jun-26									<1	<1	<1	<1			<1	<1

Chemical Oxygen Demand (COD)The COD measurements in Q2 2026 are presented in **TABLE 2.9-4**.

TABLE 2.9-4: COD (MG/L) RESULTS FOR THE SURFACE WATER IN NAM NGIEP AND ITS MAIN TRIBUTARIES IN Q2 2026**(NATIONAL SURFACE WATER QUALITY STANDARD FOR COD: < 5 MG/L)**

Station Code	NNG 01	R0 1	R0 2	R 03	R 04	R0 5	R06	R0 7	NNG 05	NNG 06	NN G07	NNG 08	NC H01	NPH 01	NX A01	NHS 01
21-Apr-26	18												26			
22-Apr-26														29.4		
23-Apr-26							6.4	29								
24-Apr-26									25.6	28.2	33.3	33.3			32	20.5
5-May-26	16.6												15			
6-May-26														32		
7-May-26							12.8	16								
8-May-26									12.8	3.84	10.2	48.6			24.3	14.1
2-Jun-26	12.8												8.9			
3-Jun-26														20.5		
4-Jun-26							22	5.1								
5-Jun-26									2.56	10.2	28.1	6.4			14.1	20.4

Faecal Coliform Bacteria

The results of the faecal coliform analyses in Q2 2026 are presented in **TABLE 2.9-5**.

During the Q2 2026, the surface water quality standard for Faecal coliform was complied with in all stations, except in NNG01 (April and June 2026) and NCH01 (April 2026).

The data indicates that the concentrations of faecal coliform bacteria in the re-regulation reservoir (R06 and R07) and at R05 in the main reservoir are well below the surface water quality standard (and within typical standards for excellent inland bathing waters¹).

Overall, the data indicates that NNP1 is not causing any increase in faecal coliform bacteria neither in the re-regulation reservoir nor in Nam Ngiep downstream the re-regulation dam. On the contrary, the concentrations of faecal coliform bacteria typically increase from rather low levels at the stations closest to the re-regulation dam (NNG05 and NNG06) to rather high levels further downstream.

¹ *E. Coli* < 500 cfu/100 mL, <https://environment.data.gov.uk/bwq/profiles/help-understanding-data.html>

TABLE 2.9-5: FAECAL COLIFORMS (MPN/100 ML) RESULTS IN NAM NGIEP AND ITS MAIN TRIBUTARIES IN Q2 2026**(NATIONAL SURFACE WATER QUALITY STANDARD FOR TOTAL COLIFORMS: <1,000 MPN/100 ML)**

Station Code	NNG 01	R 01	R 02	R 03	R 04	R 05	R 06	R 07	NN G 05	NN G06	NNG 07	NNG 08	NCH 01	NP H01	NX A01	NHS 01
21-Apr-26	1,600												1,600			
22-Apr-26														920		
23-Apr-26						0	2	2								
24-Apr-26									5	8	14	26			170	920
5-May-26	79												220			
6-May-26														350		
7-May-26						0	2	4								
8-May-26									17	34	47	47			350	280
2-Jun-26	1,600												140			
3-Jun-26														140		
4-Jun-26						0	5	8								
5-Jun-26									11	27	140	350			920	920

Total Coliform Bacteria

The results of measurements for total coliform bacteria are presented in **TABLE 2.9-6**. The results indicate a similar pattern and same tendency as for faecal coliform bacteria. There were no exceedances of the National Surface Water Quality Standard (<5,000 MPN/100 mL) for total coliform bacteria.

TABLE 2.9-6: TOTAL COLIFORM (MPN/100 ML) RESULTS IN NAM NGIEP AND ITS MAIN TRIBUTARIES IN Q2 2026**(NATIONAL SURFACE WATER QUALITY STANDARD FOR TOTAL COLIFORMS: <5,000 MPN/100 ML)**

Station Code	NNG 01	R 01	R 02	R 03	R 04	R 05	R 06	R 07	NN G05	NN G06	NNG 07	NNG 08	NCH 01	NPH 01	NXA 01	NHS 01
21-Apr-26	1,600												1,600			
22-Apr-26														1,600		
23-Apr-26						0	5	5								
24-Apr-26									11	17	220	350			280	920
5-May-26	110												350			
6-May-26														350		
7-May-26						0	5	11								
8-May-26									34	170	280	920			1,600	1,600
2-Jun-26	1,600												920			
3-Jun-26														140		
4-Jun-26						0	5	8								
5-Jun-26									79	140	1,600	1,600			1,600	1,600

2.9.2 Compliance Monitoring of Effluents from Camps

A total of 03 sites discharged effluents in Q2 2026, including 02 camps (OSO V1 and OSOV2) and at the Wastewater Treatment System of the Main Powerhouse. The effluent monitoring location sites can be found in **Figure 2.9-8**.

The results are described in **TABLE 2.9-7** and the full data set is in **Appendix 5-2**.

The status of compliance as of 30 June 2026 can be summarized as follows:

- Non-compliance with total nitrogen for the wastewater treatment systems in the Main Powerhouse (EF19) and OSOV2 Camp (EF13);
- Non-compliance with faecal coliform and total coliform for the wastewater treatment systems in OSOV1 Camp (EF01);
- Non-compliance with total phosphorus at Main Powerhouse (EF19).

FIGURE 2.9-8: LOCATION OF EFFLUENT MONITORING POINTS

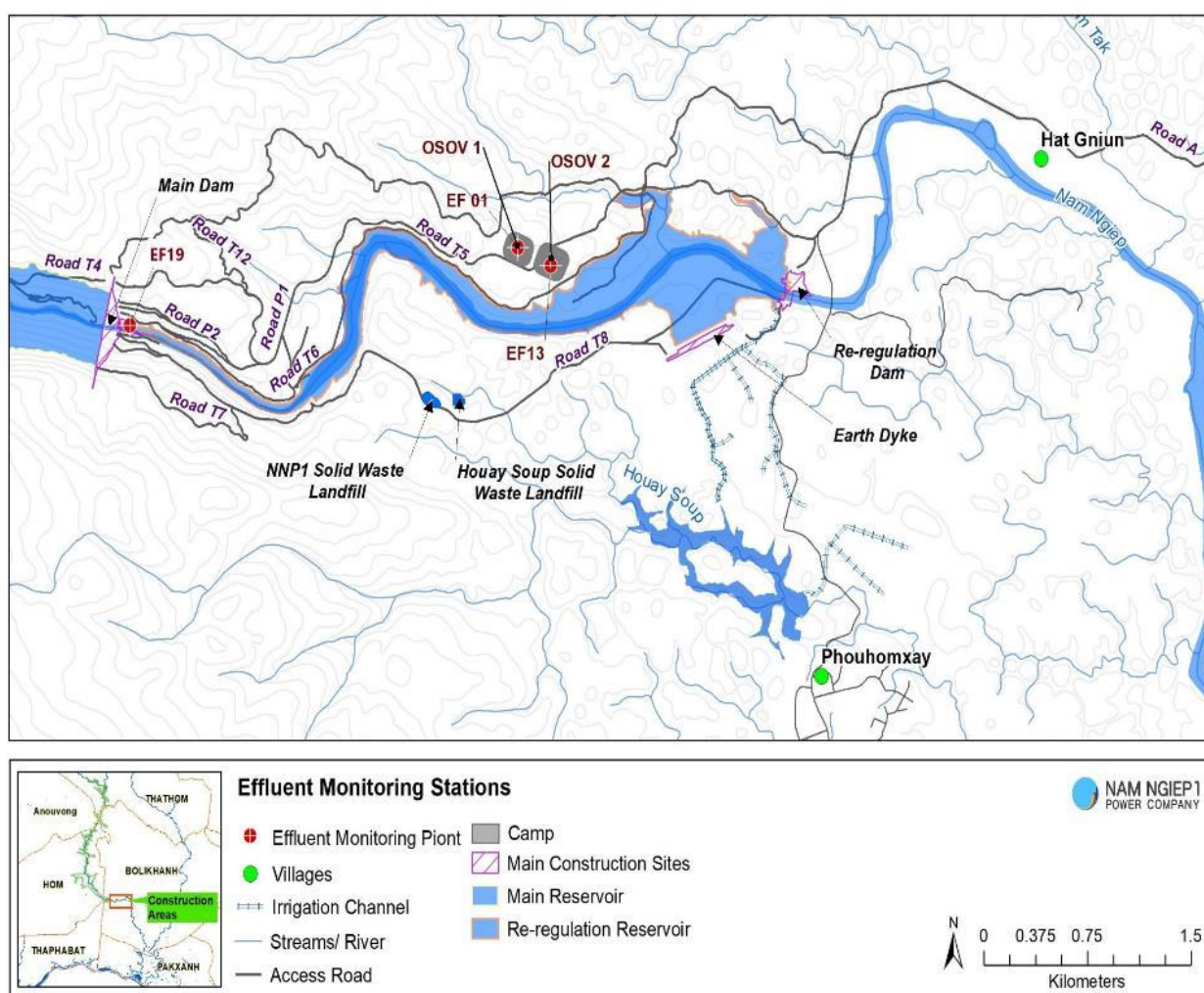


TABLE 2.9-7: RESULTS OF THE EFFLUENT WATER QUALITY MONITORING OF THE CAMPS IN Q2 2026 (NON-COMPLIANCE PARAMETERS ONLY)

Date	Parameter (Unit)	Site Name	OSOV1	OSOV 2	Main Powerhouse
		Station Code	EF01	EF13	EF19
		Guideline in the CA			
21-Apr-26	Total Nitrogen (mg/L)	<10.0	9.0	18.0	81.0
05-May-26	Total Nitrogen (mg/L)	<10.0	5.0	12.0	17.0
18-May-26	Total Nitrogen (mg/L)	<10.0	7.2	8.0	64.0
02-Jun-26	Total Nitrogen (mg/L)	<10.0	9.0	14.0	33.0
15-Jun-26	Total Nitrogen (mg/L)	<10.0	4.0	11.0	34.0
21-Apr-26	Total Phosphorus (mg/L)	<2	1.05	1.4	7.1
05-May-26	Total Phosphorus (mg/L)	<2	1.18	1.0	6.6
18-May-26	Total Phosphorus (mg/L)	<2	0.85	0.7	8.1
02-Jun-26	Total Phosphorus (mg/L)	<2	0.91	0.8	7.8
15-Jun-26	Total Phosphorus (mg/L)	<2	0.77	1.3	8.1
21-Apr-26	Faecal Coliform (MPN/100 mL)	<400	1,600	0	0
05-May-26	Faecal Coliform (MPN/100 mL)	<400	220	0	0
18-May-26	Faecal Coliform (MPN/100 mL)	<400	5,400	0	0
02-Jun-26	Faecal Coliform (MPN/100 mL)	<400	1,600	0	0
15-Jun-26	Faecal Coliform (MPN/100 mL)	<400	1,600	0	0
21-Apr-26	Total coliform (MPN/100 mL)	<400	1,600	0	0
05-May-26	Total coliform (MPN/100 mL)	<400	1,600	0	0
18-May-26	Total coliform (MPN/100 mL)	<400	9,200	0	0
02-Jun-26	Total coliform (MPN/100 mL)	<400	1,600	0	0
15-Jun-26	Total coliform (MPN/100 mL)	<400	1,600	350	0

TABLE 2.9-8: COMPLIANCE STATUS OF EFFLUENT DISCHARGE FROM THE CAMPS IN Q2-2026

Site	ID	WWTS	Key Non-Compliance Issues ² in Q2-2026	Corrective Actions
OSOV 1 (Owner's Site Office and Village)	EF01	- Septic tanks (kitchen and black water) and wetland (grey water), discharge: 70 m³/day. - The effluent from this site flows into the Re-regulation Reservoir.	- Faecal coliform (<400 MPN/100 mL): Non-compliance in 4 out of 5 samplings. Q2 mean 2,084 MPN/100 mL. - Total coliform (<400 MPN/100 mL): Non-compliance in all 5 samplings. Q2 mean 3,120 MPN/100 mL. -	ADM conducts a monthly inspections and clean-ups of septic tanks and the annual septic tank maintenance was carried out in June 2026. EMO will continue monitoring the wastewater treatment system and share the results to ADM and EMO-Environmental Compliance to optimize system maintenance.
OSOV 2 (ESD Camp)	EF13	- Septic tanks (kitchen and black water) and SBR with chlorination system. - The effluent from this site is led into a ditch connected to the Re-regulation reservoir, however,	- Total nitrogen (<10 mg/L): Non-compliance in 4 out of 5 samplings. Q2 mean 12.6 mg/L.	ADM conducts weekly routine checks on chlorine dosing, monthly inspections and clean-ups of septic tanks, and the annual septic tank maintenance was

² The values in brackets indicate the applicable standard

Site	ID	WWTS	Key Non-Compliance Issues ² in Q2-2026	Corrective Actions
		due to low quantities of effluent, the liquid is absorbed in the soil before reaching the reservoir.		carried out in June 2026. EMO will continue monitoring the wastewater treatment system and share the results to ADM and EMO-Environmental Compliance to optimize system maintenance.
Main Powerhouse	EF19	- Septic tanks (grey and black water), biofilm tank and chlorination tank. - The effluent from this site flows into the tailrace of the Main Powerhouse and then into the Re-regulation Reservoir.	- Total nitrogen (<10 mg/L): Non-compliance in all 5 samplings. Q2 mean 45.8 mg/L. - Total Phosphorus (<2 mg/L): Non-compliance in all 5 samplings. Q2 mean 7.5 mg/L. -	As above

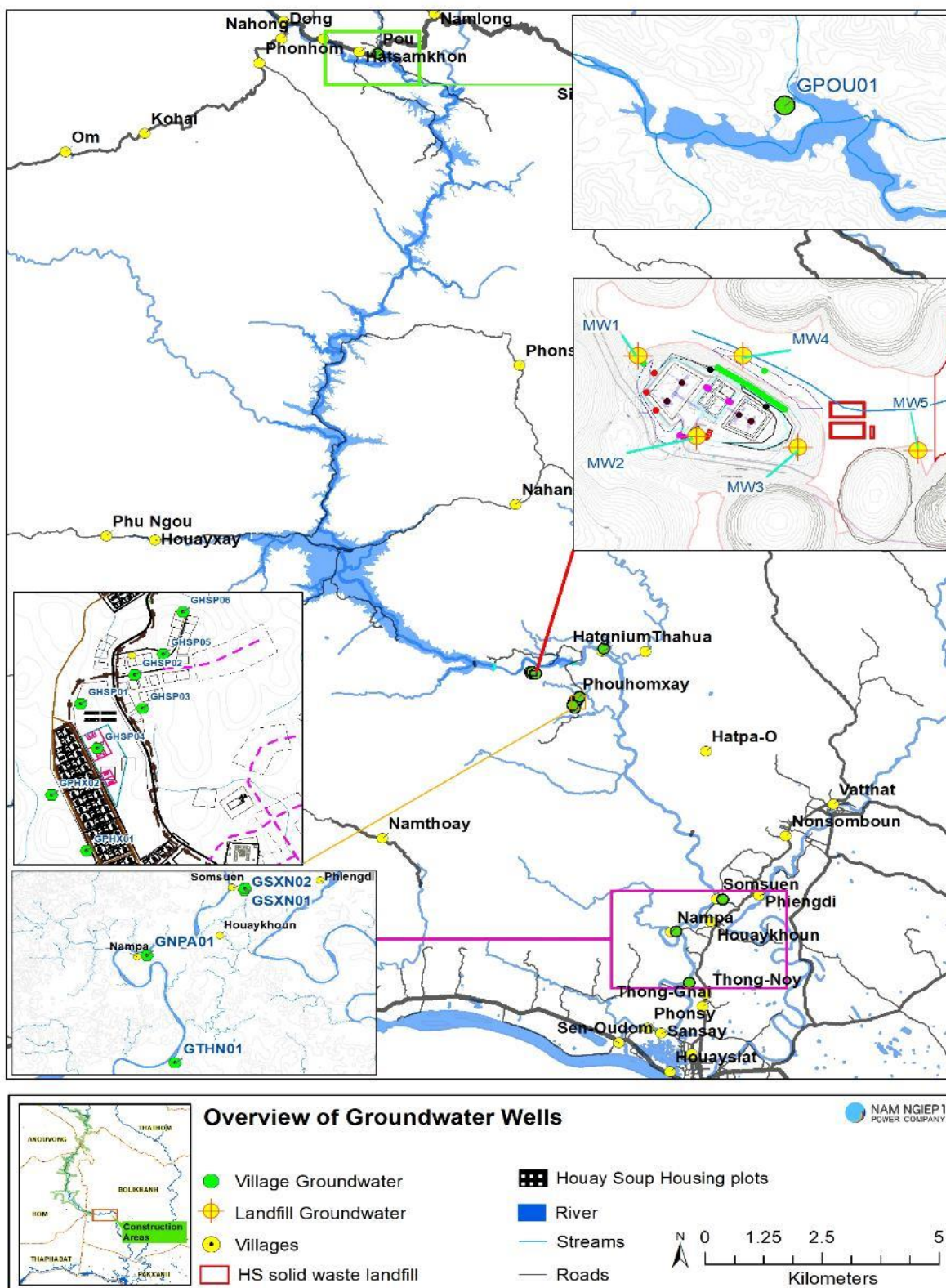
2.9.3 Groundwater Quality Monitoring

During Q2 2026, five boreholes at Somseun, Nam Pa, Thong Noy and Pou Villages have been monitored for the following parameters:

- a. *Monthly:* pH, DO (%), DO (mg/L), Conductivity ($\mu\text{S}/\text{cm}$), Temperature ($^{\circ}\text{C}$), Turbidity (NTU), Faecal Coliform (MPN/100 mL) and *E. coli* (MPN/100 mL);
- b. *Annually (This Quarter only to confirm the non-compliance in GPOU01 for Pou Village):* Arsenic (mg/L), Total Iron (mg/L), Magnesium (mg/L), Fluoride (mg/L), Total Hardness (mg/L), Nitrate (mg/L), Nitrite (mg/L) and Lead (mg/L).

The groundwater sampling locations are displayed in **Figure 2.9-9** and the groundwater monitoring data is presented in **Appendix 5-3**.

FIGURE 2.9-9: GROUNDWATER SAMPLING LOCATIONS



Key findings from the groundwater quality monitoring are summarized as the follows:

Thong Noy Village: all monitored parameters complied with the standard, except faecal coliform and *E. coli* bacteria in Q2 2026.

Somseun Village: all monitored parameters complied with the standard, except faecal coliform in April and May 2026.

Nampa Village: all monitored parameters complied with the standard, except faecal coliform and *E. coli* bacteria in May 2026.

Pou Village: all monitored parameters complied with the standards, except faecal coliform in May 2026 for GPOU01, faecal coliform and *E. coli* bacteria in April 2026 for GPOU02. In addition, in April 2026, NNP1PC sampled water for heavy metal analyses including lead to verify non-compliant lead results in the March 2026 monitoring round in GPOU01. The results of the April 2026 water quality analyses for GPOU01 complied with the Standard for lead.

The villagers were advised to boil water before drinking. This advice is in accordance with the Law on Hygiene, Disease Prevention and Health Promotion No 01/NA of 10 April 2001, which states that domestic water supply for daily use is not required to be readily drinkable but would normally have to be boiled or otherwise treated before it would be suitable for drinking.

There are two types of water supply systems in Lao PDR:

- (A) Nam Papa systems (water supply)** – water from natural water sources that has gone through a treatment process to become clean and safe water in compliance with the drinking water quality standards. These systems are managed by the Department of Water Supply, Ministry of Public Works and Transport; and
- (B) Nam Sa-at Systems (domestic water supply)** – provide water to rural areas that are not connected to Nam Papa systems. Nam Sa-at systems include gravity fed systems and boreholes with motorised pumps or hand pumps. These systems are managed by the Centre for Environmental Health and Water Supply (Nam Sa-at) under the Department of Hygiene and Health Promotion, Ministry of Health.

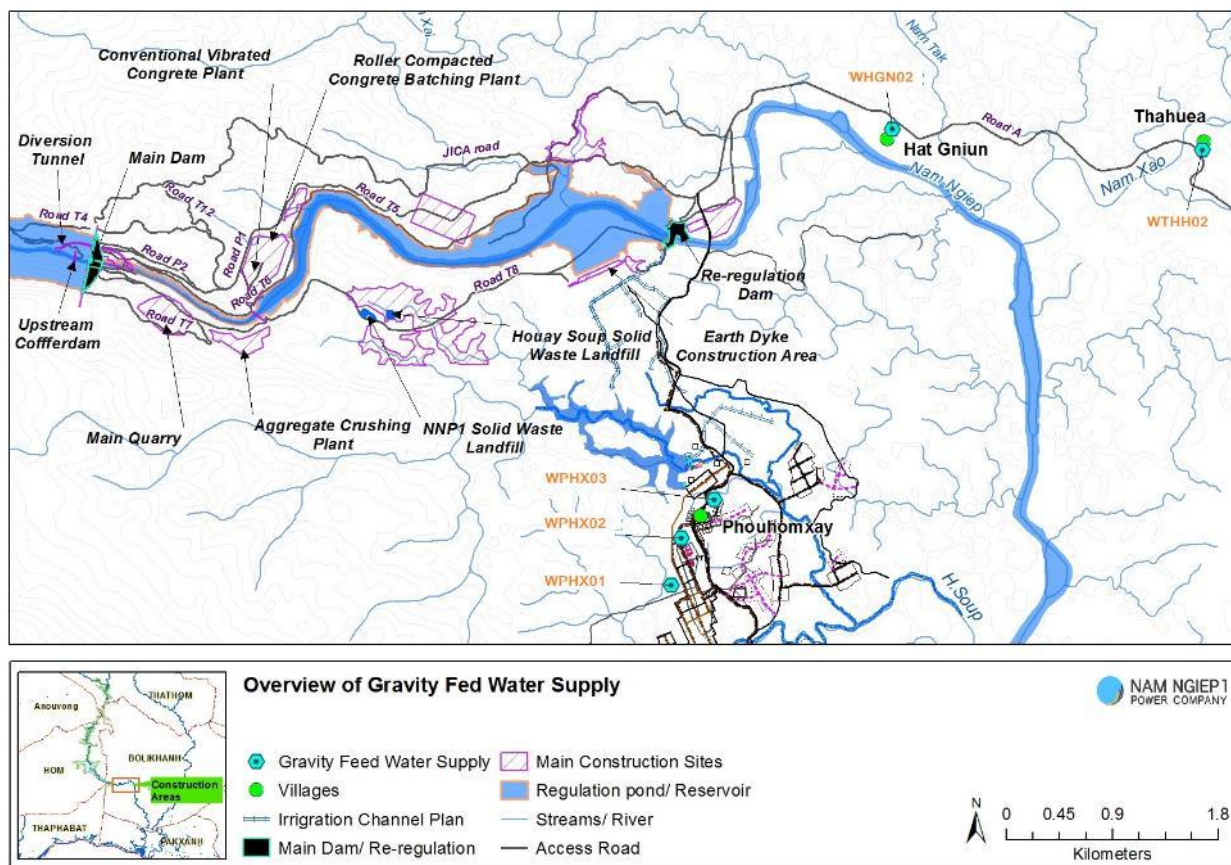
The community water supply systems related to the NNP1 hydropower project are under Nam Sa-at system with the monitoring requirements identify in the Minister's Decision on the Water Quality Standard Management for Drinking and Domestic Use, No. 561/MoH dated 27 February 2014.

The issue of bacterial contamination in the communities' water supply has been investigated by ESD team together with the respective local authorities and the villagers to find the likely root causes. A series of actions have been taken to prevent the contamination according to the Water Safety Plans (WSP); however, the Project, Nam Sa-at (GOL) and the villagers considered that disinfection treatment processes (e.g., chlorination, ceramic filtration) would not be sustainable and cost effective in a long run. It is well understood and agreed with the villagers that the water shall be boiled before drinking as mentioned above. It is also noted that boiling of water from domestic water supply (Nam Sa-at) systems before drinking is a general practice in the rural areas of Lao PDR.

2.9.4 Gravity Fed Water Supply (GFWS) Monitoring

The monitoring of the GFWS aims to assess the quality of water that is being used for bathing and washing by villagers at Hat Gniun, Thahuea and Phouhomxay villages. The gravity fed water supply system at Phouhomxay Village has been in use since December 2017.

FIGURE 2.9-10: OVERVIEW OF GRAVITY FED WATER SUPPLY



Water samples were taken from the taps for analysis during the reported period and selected results are shown in **TABLE 2.9-9**. The full set of data is presented in **Appendix 5-4**.

TABLE 2.9-9: THE GFWS MONITORING RESULT IN Q2 2026

Date	Parameter (Unit)	Site Name	Tha Heua Village	Hat Gniun Village	Phouhomxay Village	
		Station	WTHH02	WHGN02	WPHX02	WPHX03
		Guideline				
27-Apr-26	Faecal Coliform (MPN/100 mL)	0	17	4.5	79	79
11-May-26		0	33	79	7.8	11
22-Jun-26		0	13	280	13	17
27-Apr-26	E. Coli Bacteria (MPN/100 mL)	0	11	4.5	27	27
11-May-26		0	11	17	4.5	4.5
22-Jun-26		0	4.5	280	4.5	17

Thahuea Village (WTHH02): all parameters complied with the standard, except for faecal coliform and *E. coli*.

Hat Gniun Village (WHGN02): all parameters complied with the standard, except for faecal coliform and *E. coli*.

Phouhomxay Village (WPHX02-tap water at primary school; and **WPHX03**-tap water at a villager's house): all parameters complied with the standard, except faecal coliform and *E. coli* in the Q2 2026 samples. Note here that during sampling of tap water in Phouhomxay Village, surface water from Houay Soup Stream was still supplied into the system.

As observed in the field during water sample collection, livestock is roaming around in the water intake areas which may have contributed to the presence of Faecal Coliform Bacteria and *E. coli* in GFWS samples. According to the 2019 site condition survey, it is not feasible to fence off the upstream water course due to cattle having access from all directions along the stream. The villagers generally use tap water for washing and cleaning. They were informed about the monitoring results and were advised to prevent the bacterial contamination by removing livestock from the intake areas and boil water before drinking. The advice to boil the water is in accordance with the Law on Hygiene, Disease Prevention and Health Promotion No 01/NA of 10 April 2001, which states that domestic water supply for daily use is not required to be readily drinkable but would normally have to be boiled or otherwise treated before it would be suitable for drinking.

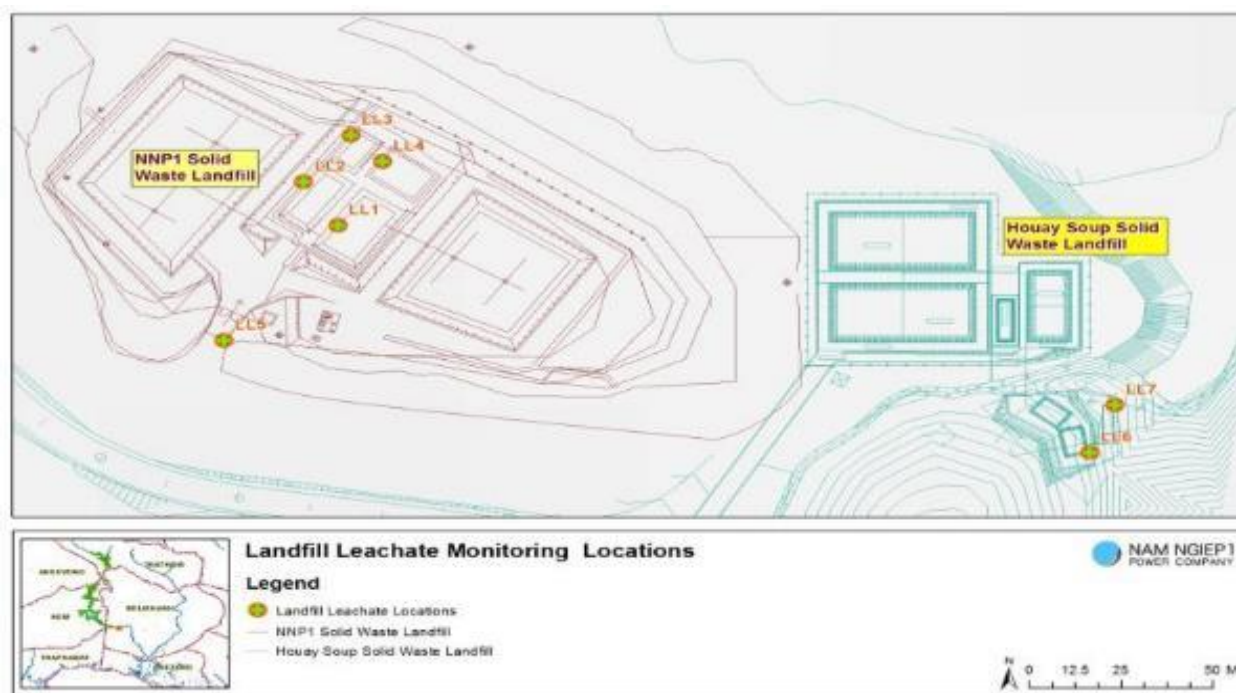
As mentioned in **section 2.9.3**, the gravity fed system is a domestic water supply managed by the Centre for Environmental Health and Water Supply (Nam Sa-at) under the Department of Hygiene and Health Promotion, Ministry of Health. It is well understood and agreed with the villagers that the water shall be boiled before drinking.

For Phouhomxay Village, the villagers requested NNP1PC and the District Water Supply Office during a meeting in March 2022 to reuse the Gravity Fed System (GFS) as a main supply and reserve the existing ground water supply system for times when the GFS would have to be repaired. The water from the gravity fed system needs to be boiled before drinking but may be used directly for other purposes such as washing, feeding animals, watering the garden, and other households' activities.

In addition, to ensure sufficient water quantity, the ESD will work with the District Water Supply Office to improve the water intake of the GFS under NNP1PC's Corporate Social Responsibility (CSR). For the presence of bacteria, the community confirmed that they will boil water before drinking. It is also noted that boiling domestic water supply (Nam Sa-at) before drinking is a general practice in the rural areas of Lao PDR.

2.9.5 Landfill Leachate Monitoring

The landfill leachate treatment systems at NNP1 Project landfill and Houay Soup landfill are monitored to control the functioning of the treatment process and ensure compliance with effluent standards. Due to low rainfall during Q2 2026, the sampling of effluent could only be carried out in June 2026. The monitoring locations are presented in the **Figure 2.9-11**.

FIGURE 2.9-11: LANDFILL LEACHATE MONITORING LOCATION

The monitoring results in June 2026 indicate compliance with the applicable standards for all parameters for both NNP1 Landfill Leachate and Houay Soup Landfill Leachate. The monitoring data can be found in **Appendix 5-5**.

2.9.6 Water Quality Compliance Monitoring

The water quality non-compliance issues in Q2 2026 are summarized in **TABLE 2.9-10**.

TABLE 2.9-10: NON-COMPLIANCES RELATING TO WATER QUALITY MONITORING IN Q2 2026

No	Non-compliance Issues	Corrective Actions	Status
1	During turbine discharges (May and June 2026) and combined discharges of turbined and labyrinth (24 April 2026), Dissolved Oxygen (DO) in the Nam Ngiep River downstream for the first 25.9 Km from the Re-regulation Dam was lower than the National Surface Water Quality Standard (6 mg/L)	- NNP1PC has continued implementing the water quality monitoring program and discussed the results with the LTA during the May 2023 visit; - LTA recommended to maintain the monitoring program, and concluded that other measures aiming at an improvement, like e.g. the possibility of artificial re-aeration of the water in the re-regulation pond for increasing oxygen content, are not required.	- Closely monitoring
2	Effluents discharged from the Wastewater Treatment Systems (WWTS) at OSOV1, OSOV2 and the Main Dam	In April, May and June 2026, EMO, ADM and TD conducted a monthly joint	- Closely monitoring the system

No	Non-compliance Issues	Corrective Actions	Status
	exceeded the National Effluent Standard Guideline for faecal coliform, total coliform, total nitrogen and total phosphorus	inspection for the operation and maintenance of the WWTS: - All 17 septic tanks and air blowers at OSOV1 were checked on monthly basis by the ADM staff and they are functioning properly. The sludge in these tanks are cleaned up yearly. - Wetland maintenance at OSOV1 including filtration material and weeds were implemented. - The new control panel installed in OSOV2's WWTS still functioning properly. - Closely monitor the residual chlorine content and chlorination dosage adjustment for the effluents of the Main Powerhouse WWTS.	operation and maintenance.
3	Groundwater quality monitored for the communities (Somsuen, Pou, Nam Pa and Thong Noy Villages) were not in compliance with the National Groundwater Quality Standard for drinking purpose on Faecal Coliform and <i>E. coli</i> .	- A full inspection of the water supply systems in Som Seun, Nam Pa and Thong Noy Village was conducted in September 2020 by NNP1PC team including consultations with the Village Water Use Committee (VWUC) and also interviews with some consumers (detailed in Q4 2020 Report). - Potential contamination sources of coliform were identified and recommendations on operation and maintenance of the water supply system were provided to the involved parties. - The villagers were informed about the monitoring results and were advised to boil water before drinking in accordance with the Law on Hygiene, Disease Prevention and Health Promotion No 01/NA of 10 April 2001, which states that domestic water supply for daily use is not required to be readily drinkable	- The villagers were advised and encouraged to boil water before drinking. - Continue to monitor.

No	Non-compliance Issues	Corrective Actions	Status
		but would normally have to be boiled or otherwise treated before it would be suitable for drinking. - Water samples for lead parameter in GPOU01 (Pou Village) was resampled in April 2026 and the lead parameter result complied with the Standard.	
4	Gravity Fed Water Supply monitored for the communities (Thahuea, Hat Gniun, and Phouhomxay Village) were not complied with the National Drinking Water Quality Standard on Faecal Coliform and <i>E. coli</i>	- Site observations were conducted during the routine water sampling; it was observed that livestock was roaming around the water intake areas and faeces from livestock and birds may contribute to the presence of bacterial contamination. It is not feasible to fence off the upstream water course due to cattle having access from all directions along the stream. The villagers were informed about the monitoring results and were advised to boil water before drinking.	- The villagers generally use tap water for washing and cleaning, and were encouraged to boil water before drinking. - Continue monitoring.

3 WATERSHED AND BIODIVERSITY MANAGEMENT

3.1 WATERSHED MANAGEMENT

3.1.1 Implementation of Watershed Management Plan

3.1.1.1 Xaysomboun Watershed and Reservoir Protection Office (WRPO)

a) Fishery Co-Management Plan (FCMP):

The Fishery Co-Management Plan and its regulation (Fishery Co-Management Regulation) were finalized and are now ready for implementation. EMO discussed FCMP activities with WRPO of XSB and incorporated them into the 2026 Annual Implementation Plan. Additionally, EMO collaborated closely with SMO team to ensure that these specific fishery activities directly benefit Project Affected Persons (PAPs).

b) NNP1 Watershed TPZs Encroachment Resolution

Following the unauthorized construction of an 11-km village access road into the NNP1 watershed TPZ1 by 39 households, district authorities instructed DAEO to convene a consultation meeting and communicate with NNP1 to install signs and remove people from the encroached land. However, the head of DAEO requested a further postponement of both meeting and installation due to exhaustion of budget. The activity will be resumed once the funds under AIP 2026 is received.

c) Construction of Reservoir Checkpoints:

Xaysomboun Watershed and Reservoir Office (XSB WRPO) completed the construction of downstream checkpoints. The staff based in the upstream checkpoint were withdrawn because the funds allocated under the previous Annual Implementation Plans (AIPs) have been fully depleted, leaving no available budget to maintain their presence.

The staff deployment to the reservoir checkpoints will be further discussed and is expected to be resumed once the annual implementation plan for 2026 has been initiated and approved.

d) Patrolling:

XSB WRPO remained inactive with no patrolling conducted and field sub-office staff withdrawn due to the budget was exhaustion. The patrol and field sub-office operation are schedule to resume once the Annual Implementation Plan for 2026 is approved.



Completed construction of the downstream checkpoint

3.1.1.2 Bolikhamxay Watershed and Reservoir Protection Office (WRPO)

In Q2 2026, Bolikhamxay Provincial Watershed and Reservoir Office was unable to implement any activities due exhaustion of budget. Implementation of activities will be resumed once the fund of 2026 annual implementation plan is received.

3.1.1.3 NNP1PC EMO**a. Investigation of Fish Kill Incident**

In May 2026, a villager from Homthad village reported dead fish along Nam Phouan Noi suspecting that upstream gold mining activity could be the cause of the fish kill.

NNP1 EMO then carried out a boat survey in the reservoir from NNP1 main to Nam Phouan confluence and found 3 dead fish. One specimen matched with the one showed in a video recorded by the Homthad villager and the other two specimens appeared to be gillnet bycatch. No other mortality and unusual issues were reported by local fishermen. EMO's report on survey findings was shared with NNP1 specialist, LTA, IAP, ADB, XSB WRPO and DEM/MOIC for feedback and action.

XSB WRPO had not received any request for intervention on the incident from Hom District Authorities. The head of Xaysomboun Provincial Agriculture and Environment Office serving as

deputy head of XSB Watershed and Reservoir Committee instructed XSB WRPO to coordinate with NNP1 EMO on a joint field assessment to identify any mining activities, verify the cause of the recent fish kill incident, trace the upstream source of pollution (if any), and evaluate ongoing environmental risks in the watershed areas. NNP1 EMO agreed with the proposal and it is expected that the field assessment will be conducted in July 2026.



First fish dead specimen



Second fish dead specimen



Third fish dead specimen



Local fishermen interview

b. Livelihood Support Activities for Watershed Villages.

NNP1 EMO, together with the Hom and Thathom District Agriculture and Environment Offices and district officials conducted a joint site visit and monitoring for livelihood support activities for the watershed village in Hom and Thathom Districts of Xaysomboun Province. The key outcomes are summarized below:

- In April 2026, an outbreak of a plant disease occurred in pineapple plantations in PhouNgou and Houayxay villages in Hom District. Hom District Agriculture and Environment Office reached out to Xaysomboun Provincial Agriculture and Environment Office and the Department of Disease Control; however, no effective solution has been found yet. EMO and Hom District Agriculture and Environment Office continue to explore possible solutions.
- In late April, EMO distributed greenhouse plastic materials to a pilot household in Nahong village to boost food security and income. The rattan handicraft group is preparing to

showcase products at an upcoming Agro Exhibition in Xaysomboun Province expected to take place in Q3 2026.

- In May, EMO and Thathom District Industrial and Commercial Office (DICO) met with Viengkham DICO-VTE and Xaykham Rattan Factory to discuss provision of technical training and explore marketing/distribution partnerships for the Nahong handicraft group in Thathom District. A training is expected to be organized in Q3 2026.
- In June, NNP1 EMO discussed a possible purchase agreement with the Daohueang Factory in Bachieng District of Champasak Province with Hom District Industrial and Commercial Office, and Pineapple Production Group. The results of the discussions indicated that the purchase agreement was likely not feasible because the factory had not entered into any formal contract with specific pineapple groups since it began operations. The main barriers include incompatibility of available pineapple varieties, fruit size, supply volume and substandard quality of local products. However, the factory remains open to future agreements if the factory requires significant supply volume of pineapple. The Hom district officials and pineapple group were advised to consider introducing better pineapple varieties, and to seek alternative buyers to reduce reliance on one purchaser.
- In late June, field visits with local authorities identified three households interested in the greenhouse vegetable garden pilot program. The procurement of material is expected to be processed in Q3 2026.



Pineapple disease field monitoring



Rattan handicraft monitoring



Greenhouse plastic distribution to a villager



Meeting with Rattan Factory on possibility of training and future partnership



Interview and obtain interest household for greenhouse vegetable production activity



Exchange with the Daohueang Factory on feasibility of pineapple purchase agreement

3.1.2 Preparation of Annual Implementation Plan (AIP)

TABLE 3.1-1 provides an overview of the progress in preparing the Annual Implementation Plans (AIP) for 2026 by Xaysomboun WRPO and Bolikhamxay WRPO and highlights of fund preparation, approvals, and transfer status.

TABLE 3.1-1 ANNUAL IMPLEMENTATION PLAN PREPARATION STATUS

Watershed and Reservoir Protection Office (WRPO)	Preparation of Annual Implementation Plan (AIP) 2026
Xaysomboun WRPO	In April 2026, XSB WRPO began preparing its activities for 2026, followed by a joint review conducted with representatives from the Hom, Thathom, and Anouvong District Agriculture and Environment Offices and NNP1 EMO on 7 May 2026. The draft plan is currently under review by the Head of XSB WRPO, with submission to NNP1 EMO expected by Q3 2026. Preparation was delayed by coordination challenges and pending financial reports from previous AIPs. As stated in the NNP1 Financial Management Manual (FMM), these past reports must be submitted before new plans can be advanced.
Bolikhamxay WRPO	The 2026 AIP of BLX WRPO finalized and submitted to the Department of Forestry (DoF), Ministry of Agriculture and Environment (MoAE) for fund disbursement in May 2026; NNP1 EMO received the fund disbursement request letter in Jun 2026. The funds are expected to be transferred to Department of Forestry (DoF, Ministry of Agriculture and Environment (MoAE), by Q3 2026. The 2026 AIP was originally scheduled for completion before the start of the implementation period. However, the timeline was delayed by operational challenges within the BLX WRPO, where plan approval fell behind schedule due to an extensive review and revision process

3.2 BIODIVERSITY OFFSET MANAGEMENT

3.2.1 Implementation of Biodiversity Offset Management Plan

Progresses on the implementation of activities by component in Q2 2026 are described as below:

a. Component 1 - Spatial Planning and Regulation

The Participatory Land Use Plans (PLUPs) for Sopkhone and Phonmeung Villages, Xaychamphone District were finalized on 28 January 2026 and officially endorsed by the District Governor of Xaychamphone on 12 February 2026. BOMU handed over and disseminated the endorsed PLUPs to the villages in May 2026.

b. Component 2 - Law Enforcement

Bolikhamxay BOMU conducted forest patrols in the highest and high-priority areas of the NC-NX Totally Protected Zone (TPZ) in May and June 2026 and guarded the patrol sub-stations from April to June 2026. The patrolling and law enforcement results of May and June 2026 are presented in **TABLE 3.2-1**.

TABLE 3.2-1: MAY AND JUNE 2026 PATROLLING AND LAW ENFORCEMENT RESULTS

Team	Patrol days	Distance (Km)	Observations			Law enforcement
			Hunting	Fishing	Logging	
1	32	217	0	0	6	Three people involved in illegal logging were fined and educated
2	16	97	0	2	16	
3	25	232	3	1	8	
4	0	0	0	0	0	
Total	74	546	3	3	30	



	
People involved in illegal logging were apprehended and fined in the TPZ highest priority area in May 2026	Illegal logging camp detected and destroyed by patrol team in the TPZ high priority area in May 2026
	
NC-NX and Pu Mat National Park joint patrol team in June 2026	Illegal logging detected during the joint patrolling in June 2026

c. Component 4 - Conservation linked livelihood

Community Development Plan (CDP): NNP1-EMO shared the draft activity budget with BOMU and BSP-WCS on 19 February 2026. The draft was reviewed by both BOMU and BSP-WCS and confirmed with no further comments. It was presented to ADB/LTA during the ADB's XARR mission from 21–26 March 2026 and was also reviewed by NNP1 SMO. The draft was submitted to ADB/LTA Social on 15 May 2026 and, as of the end of Q2 2026, it remains under review by ADB/LTA. Upon receiving ADB/LTA's no-objection, the draft will be submitted to the Bolikhamxay Provincial Department of Agriculture and Environment for approval.

Community Conservation Agreement (CCA): From 23-28 May 2026, BOMU, NNP1-EMO and the District Agriculture and Environment Office (DAEO) of Viengthong and Xaychamphone jointly conducted monitoring and follow-up training of the CCA funds, which were handed over to the six NC-NX villages in February 2026.

The monitoring found that only Meungcham village had utilized its CCA funds, while the funds allocated to the remaining five villages had not yet been used. In addition, the fund management committees had not been using the provided financial management forms correctly. The monitoring team therefore provided refresher training on the proper use of the forms and fund

management procedures. Continued monitoring and technical support are recommended during Q3 2026 to ensure effective implementation and proper management of the CCA funds.



CCA monitoring and follow-up training in Vangphieng village



CCA monitoring and follow-up training in Natan village

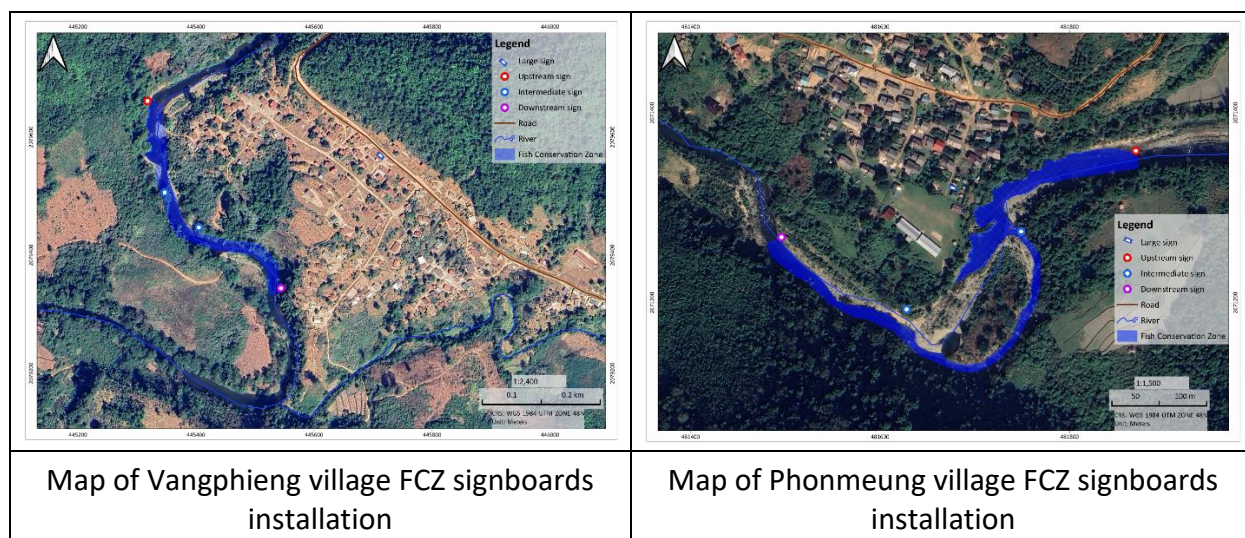
Village Fish Conservation Zone (FCZ): BOMU, NNP1-EMO, the District Agriculture and Environment Office (DAEO) of Viengthong and Xaychamphone, and village authorities jointly conducted the installation of the FCZ signboards in the six NC-NX villages from 5-11 May 2026. In each village, one big signboard (1.2 x 2.4 m) was installed at the village centre or other easily visible access points, while four smaller signboards (20 x 40 cm) were installed to demarcate the village FCZ boundaries. Awareness discussions were also conducted with villagers during the installation process to reinforce the objectives of the FCZs, including aquatic biodiversity conservation, sustainable fisheries management, and compliance with village regulations. Village authorities and villagers expressed their support for the initiative and recognized the importance of the signboards in enhancing public awareness and discouraging illegal fishing activities within protected areas.



FCZ signboard installation in Na Ghang village



FCZ signboard installation in Sopkhone village



Community Snare Removal: There were no snare removal patrols in the reporting period. The activity is expected to resume after BSP-WCS's contract settlement and completion of the assessment by the Snare Removal Team in Q3 2026.

d. Component 5 - Coordination and collaboration

BOMU organized coordination meetings with Border Military Unit 257 in Xaychamphone District and Border Military Unit 251 in Viengthong District on 12 and 15 May 2026, respectively. The meetings aimed to strengthen coordination and cooperation between BOMU and the two military units on natural resource management within the NC-NX Biodiversity Offset Site.

During the meetings, both military units agreed to strengthen coordination and collaboration with BOMU in preventing and addressing threats to biodiversity and natural resources in the NC-NX Biodiversity Offset Site. They also committed to assigning military personnel to support NC-NX patrol teams whenever required. In addition, both units agreed to further coordinate with their counterpart Vietnam Border Military Units along the shared border to enhance transboundary collaboration on biodiversity conservation and natural resource management.

e. Component 6 – Monitoring and reporting

The data analysis and reporting of the gibbon monitoring survey conducted in the NC-NX Biodiversity Offset Site between January and March 2026 are still being prepared by the expert from the University of St Andrews. The report is expected to be finalized in Q3 2026.

3.2.2 NC-NX AIP2026 preparation

BOMU submitted the first draft AIP2026 to NNP1-EMO and BSP-WCS on 11 March 2026. NNP1-EMO and BSP-WCS reviewed the draft and provided comments to BOMU on 13 and 16 March 2026, respectively.

BOMU submitted the revised AIP to NNP1-EMO on 3 April 2026. However, it was noted that many of NNP1-EMO's comments had not been addressed. NNP1-EMO subsequently provided additional comments on 8 April 2026 for further revision.

BOMU and NNP1-EMO held a meeting on 28 April 2026 to review the comments in detail. NNP1-EMO received the revised AIP from BOMU on 7 May 2026. The AIP was submitted to ADB and IAP on 30 June 2026 for their review. The plan approval and fund disbursement are expected in Q3 2026.

3.2.3 Phakhao Wind Power Project

Based on field verification and the analysis of satellite imagery, it was found that from April 2025 to April 2026, the wind power project has constructed a total of 13 access roads with a combined length of approximately 213 km. Of these, six roads, with a total length of approximately 99 km, extend into the NC-NX TPZ. The construction of these access roads has resulted in direct impacts on forest resources and the surrounding ecosystem through forest clearance, habitat fragmentation, and disturbance to wildlife habitats. More importantly, the road network has significantly increased access to previously remote forest areas, facilitating illegal harvesting of non-timber forest products (NTFPs) and illegal logging. This includes the illegal felling of cypress trees, which are one of the key conservation target species under the NC-NX Biodiversity Offset Management Plan.

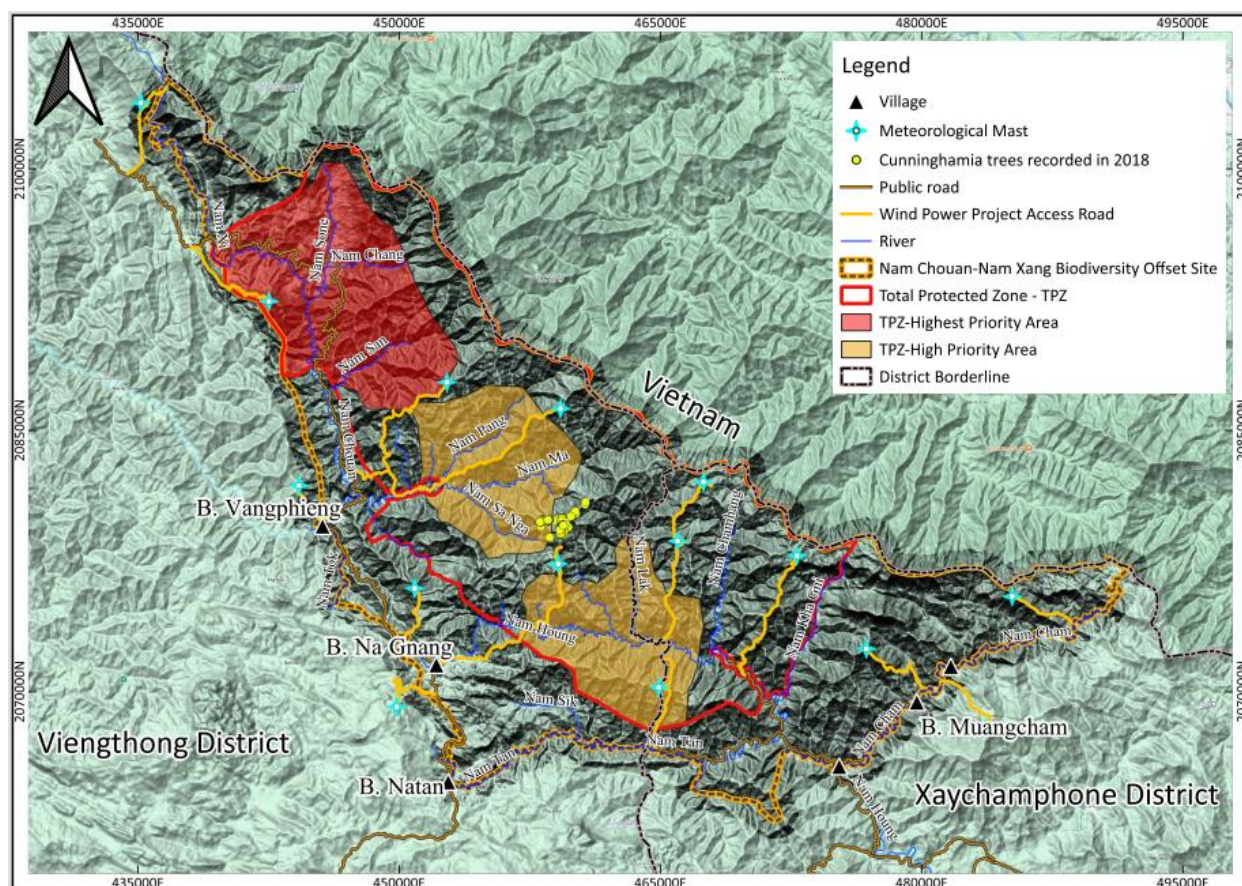


FIGURE 3.2-3: THE WIND POWER PROJECT'S ACCESS ROADS

To prevent further impacts and damage to the NC-NX Offset Site, the following actions were taken by NNP1:

- **At National level:**
 - On 6 May 2026, NNP1 reported the potential impacts of the project to the Department of Enterprise Management, Ministry of Industry and Commerce (DOEM-MOIC), and requested project related information and documents;
 - In May-June 2026, NNP1-EMO reported project impacts to the Department of Enterprise Management (DOEM-MOIC) through a dedicated WhatsApp group.

- In June 2026, an official letter requesting sharing of project information and coordination to address threats related to the project access road construction was being prepared and will be submitted to DOEM-MOIC in early July 2026.
- **At Provincial level**
 - On 19 June 2026, NNP1 submitted an official letter to Bolikhamxay Provincial Department of Agriculture and Environment (PDAE) requesting sharing of project information and coordination to address threats related to the project access road construction;
 - On 29 June 2026, NNP1 was informed that BOMU was requesting the information, assessing potential impacts, and will share the findings with NNP1 and BLX PDEO. A meeting may be arranged if required.

NNP1 will follow-up with BLX PAEO and DOEM-MOIC on the requested information and progress of the wind power project.

4 FISHERY MONITORING

4.1 SUMMARY

The first bi-annual fisheries panel interview was implemented in March 2026, representing the dry season. The monitoring data includes 7-day catch periods for the involved fishing households on fishing days, fish catch and main species caught, fishing habitats, boat/motorised boat use, fishing gears, disposal of fish and other aquatic animals.

The percentage of active fishing households in March 2026 for all 3 fishing zones is between 68 and 100%, and the average fishing days is 1-3 days per week. The average catch in the upper reservoir (UR) area is the highest with an average catch of 11 kg/HH/day, while the average catch in the lower reservoir (LR) area is only 1.59 kg/HH/day. Most of the fish catch is used for consumption in the LR and downstream (DS) areas, while 80% of the catch in UR is sold. For OAA, only LR area reported collection of Other Aquatic Animals (OAA) with 21% of the total catch being OAA.

The fish species dominating the fish catch by weight in March 2026 include *Oxyeleotris marmorata*, *Systomus orphoides*, and three species group of Hampala, Hemibagrus, and *Barbonymus gonionotus* and *Hypsibarbus* which are classified as Least Concern (LC) according to the IUCN Red List of Threatened Species.

Main fishing habitat for the UR area is Nam Ngiep reservoir, while Nam Ngiep, and tributaries and small streams are the main fishing location for the DS and LR areas. Gillnet is the main fishing gear for all three fishing zones (70%).

4.2 INTRODUCTION

The fisheries panel interviews are planned to implement twice a year covering the dry and wet seasons. The first survey was conducted from 23 to 27 March 2026 by fisheries monitoring consultants, Ms. Natkritta Wongyai and Mrs. Vongduean Phiakeo. The main objective of the interviews is to report on key fisheries data obtained from the involved fishing households on fishing days, fish catch and species, fishing habitats, boat/motorised boat use, fishing gears, and disposal of fish and OAA.

4.3 METHOD

The bi-annual fisheries assessment is implemented on a random sample of highly dependent fishers or full-time fishers to monitor trends in the fisheries on a bi-annual basis covering the critical dry and wet season periods. The surveys will focus on average daily catch, average number of fishing days, boat/engine use, main gear(s) and fishing habitats, disposal of fish and OAA over a 7-day period.

This survey includes a total of 42 households, 16 households in the upper reservoir (Pou, Hatsamkhone and Piengta village), 10 households in the lower reservoir zone (Nahan village) and 16 households in the downstream area (Hat Gnuin, Nampa and Nam Ngiep village) - see **TABLE 4.3-1**. The intake interview for the Household Selection Interview (HSI) is done for all new households. The survey took place from 23-27 March 2026 by using structured interviews.

TABLE 4.3-1: TARGET HOUSEHOLDS FOR BI-ANNUAL FISHERIES PANEL INTERVIEW, DRY SEASON IN 2026

Zone	#Target HH by zone	Village	#HH
UR	16	Pou	8
		Hatsamkhone	4
		Piengta	4
LR	10	Nahan	10
DS	16	Hat Gnuin	5
		Nampa	5
		Nam Ngiep	6
Total			42



FIGURE 4.3-1: INTAKE THE BI-ANNUAL FISHERIES PANEL INTERVIEW IN MARCH 2026

4.4 RESULTS

4.4.1 Active Fishing Households

TABLE 4.4-1 shows the proportion of total number of households actively fishing by fishing zone. The percentage of active fishing households in March 2026 is 100%, 81% and 68% for LR, DS and UR respectively.

TABLE 4.4-1: PROPORTION OF ACTIVE FISHING HOUSEHOLDS BY FISHING ZONES

Fishing zone	Total HH	Fishing HH	% Fishing HH
UR	16	11	68.75%
LR	10	10	100.00%
DS	16	13	81.25%
Total	42	37	88.10%

4.4.2 Fishing Dat and Fish Catch

The average (mean) and median fishing days for the 7-day catch period in March 2026 for UR, LR and DS areas are presented in **TABLE 4.4-2**. The average number of fishing days is around 3 days a week for UR and LR areas and 2 days a week for DS area. Most of the households go fishing around 1-3 days a week with some constraints due to the cassava planting season and fuel shortage (for those using motorised-boats).

TABLE 4.4-2: AVERAGE AND MEDIAN REPORTED NUMBER OF FISHING DAYS FOR 7-DAY PERIOD BY FISHING ZONE

Fishing zone	Average fishing day	Median fishing day
UR	3.10	1.5
LR	3.60	3.5
DS	1.92	2

The average household fish catch in March 2026 for the UR, LR and DS area are presented in **TABLE 4.4-3**. UR zone has the highest average catch with around 11 kg/HH/day, while the average catch in LR and DS are 1.59 kg/HH/day and 4.42 kg/HH/day respectively.

TABLE 4.4-3: AVERAGE AND MEDIAN REPORTED FISH CATCH FOR 7-DAY PERIOD BY FISHING ZONE

Fishing zone	Total catch (kg)	Average catch (kg)	Median Catch (Kg)
UR	343	11.23	9
LR	57.3	1.59	1.5
DS	107	4.42	3.25

Species abundance and occurrence is based on the 7-day reported catch from the bi-annual fisheries panel interview in March 2025. Main biodiversity indicators in March 2026 for upper reservoir, Lower reservoir and downstream area are presented in **TABLE 4.4-4**.

TABLE 4.4-4: MAIN BIODIVERSITY INDICATORS FOR MARCH 2026

Biodiversity Indicators	UR	LR	DS
Total number of species and groups recorded	15	12	25
Single species	7	9	21
Species groups	8	3	4
Total reported weight	343.00	57.30	107.00
Proportion for species groups	66.47%	15.18%	9.81%
Diversity index (Shannon)	1.7713	1.9438	2.7843

The fish species dominating the fish catch by weight in March 2026 are listed in **TABLE 4.4-5**. All species are classified as Least Concern (LC) according to the IUCN Red List of Threatened Species³.

TABLE 4.4-5: FISH SPECIES DOMINATING THE FISH CATCH IN MARCH 2026

Species	Lao Name	Fish Catch (kg)	IUCN Red List Classification
<i>Hampala dispar</i> , <i>Hampala macrolepidota</i>	ປາສູດ	120	LC
<i>Oxyeleotris marmorata</i>	ປາບູ່	94	LC
<i>Hemibagrus nemurus</i> , <i>Hemibagrus filamentus</i>	ປາກິດ	61	LC
<i>Barbonymus gonionotus</i> , <i>Hypsibarbus malcolmi</i> , <i>Hypsibarbus vernayi</i> , <i>Hypsibarbus wetmorei</i>	ປາປາກ	29	LC
<i>Systomus orphoides</i>	ປາປິກ	26.4	LC

³ The IUCN Red List of Threatened Species is the world's most comprehensive inventory and classification of threatened species. The Red List classifies species into nine groups: Extinct (EX), Extinct in the wild (EW), Critically endangered (CR), Endangered (EN), Vulnerable (VU), Near threatened (NT), Least concern (LC), Data deficient (DD), and Not Evaluated (NE). The term "Threatened" includes Critically Endangered, Endangered, and Vulnerable.

4.4.3 Fishing Habitat

The survey results indicate that reservoir is main fishing habitat for UR, while the main fishing habitat for LR and DS is tributaries and streams, and Nam Ngiep respectively. The proportion of fishing habitats in March 2026 is displayed in **TABLE 4.4-6**.

TABLE 4.4-6: PROPORTION OF THE CATCH REPORTED BY MAIN HABITATS IN MARCH 2026

Habitat	UR	LR	DS
Mekong	0.00%	0.00%	26.89%
Nam Ngiep	2.01%	0.00%	51.42%
Reservoir	97.70%	7.84%	0.00%
Tributaries and streams	0.29%	92.16%	21.70%

4.4.4 Boat and engine use

Dependency on fishing with boat for fishing household in UR, LR and DS area is shown in **TABLE 4.4-7**. This is calculated by fishing day. About 90% of the fishing days in the LR area is done without using boats because the fishing habitats for the fishers in Nahan village are small streams and only few houses own a boat and engine. Almost all of the fishing households in UR and DS have motorised boats and they use motorized boats for most of the fishing except when fishing in Nam Ngiep nearby a village.

TABLE 4.4-7: USING BOAT, ENGINE AND WITHOUT BOAT

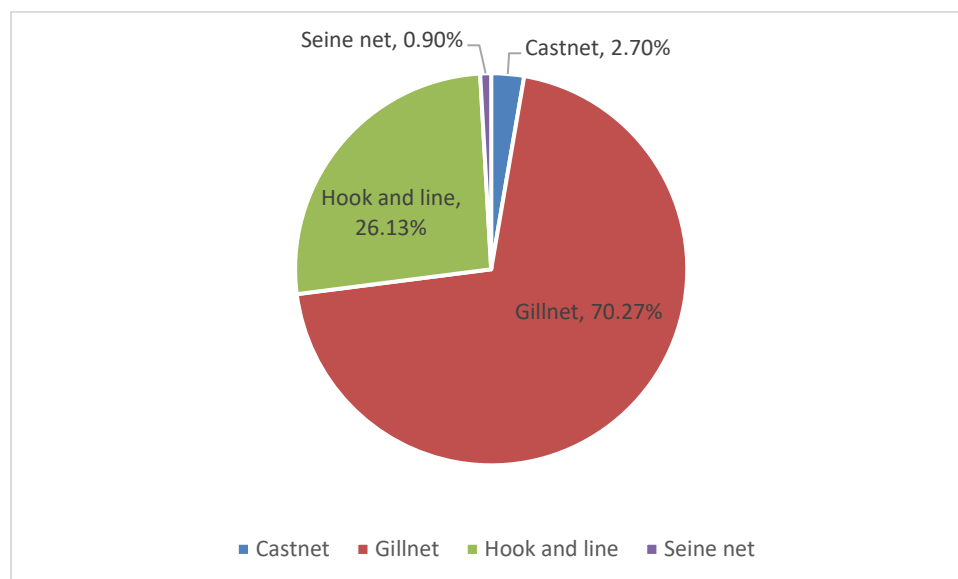
Fishing zone	Without boat		Motorised boat		Non-motorised boat	
	Fishing day	%	Fishing day	%	Fishing day	%
UR	5	16.13%	26	83.87%	0	0.00%
LR	33	91.67%	2	5.56%	1	2.78%
DS	0	0.00%	24	96.00%	1	4.00%
Total	38	41.30%	52	56.52%	2	2.17%

4.4.5 Fishing gear

The main fishing gear for all zones is gillnet, around 58-96%. For UR, the reported gear use included gillnet, hook and line, cast net and seine net, while LR and DS used mainly gillnet and hook and line. The proportion of gear use by fishing zone is displayed in **TABLE 4.4-8** and **FIGURE 4.4-1**.

TABLE 4.4-8: PROPORTION OF GEAR USE BY FISHING ZONES

Fishing zone	Cast net	Gillnet	Hook and line	Seine net
UR	7.89%	68.42%	21.05%	2.63%
LR	0.00%	58.33%	41.67%	0.00%
DS	0.00%	96.00%	4.00%	0.00%
Total	2.70%	70.27%	26.13%	0.90%

**FIGURE 4.4-1: FISHING GEAR USE MARCH 2026 FOR ALL NAM NGIEP FISHING ZONE**

4.4.6 Fish disposal

The proportion of the main fish disposal is shown in **TABLE 4.4-9**. Fish sold is the highest for UR zone (80%), while around 98% and 53% of catch is consumed for LR and DS zones respectively. A small proportion of fish is processed for DS, around 7%.

TABLE 4.4-9: DISPOSAL PROPORTION OF FISH CATCH BY FISHING ZONE

Fishing zone	%Sold	Consumed	Processed
DS	39.15%	53.30%	7.55%
LR	1.74%	98.26%	0.00%
UR	80.17%	19.83%	0.00%
Total	62.87%	35.57%	1.56%

4.4.7 Other aquatic animals (OAA)

Collecting other aquatic animal is reported only in LR area, 21.7 kg which is mainly snails (**TABLE 4.4-10**) and the proportion of OAA and fish by fishing zone is shown in **TABLE 4.4-11**.

TABLE 4.4-10: OTHER AQUATIC ANIMALS CATCH (KG) FOR THE LOWER RESERVOIR AREA IN MARCH 2026

HH ID	Zone	Other aquatic animals Catch (kg)				
		Snails	Crabs	Shrimp	Frog	Insect
94742	LR	2				
94710	LR	2				
94729	LR	10			1.5	
94730	LR	2	0.5			0.1
94732	LR	1	0.2	0.3	0.1	
94724	LR	2				
Total		19	0.7	0.3	1.6	0.1

TABLE 4.4-11: OTHER AQUATIC ANIMAL PROPORTION BY FISHING ZONE

Fishing zone	Fish Catch (kg)	OAA catch (Kg)	%OAA/Fish
UR	348	0	0.00
LR	57.4	21.7	27.43
DS	106	0	0.00
Total	511.4	21.7	4.07

5 HEALTH AND SAFETY

5.1 RELATED TO NNP1PC HEALTH AND SAFETY

A summary of the safety incidents reported during the Operation Phase (September 2019 to June 2026) is provided in **TABLE 5.1-1**.

TABLE 5.1-1: SAFETY INCIDENTS REPORTED DURING THE OPERATION PHASE (SEPTEMBER 2019 TO JUNE 2026)

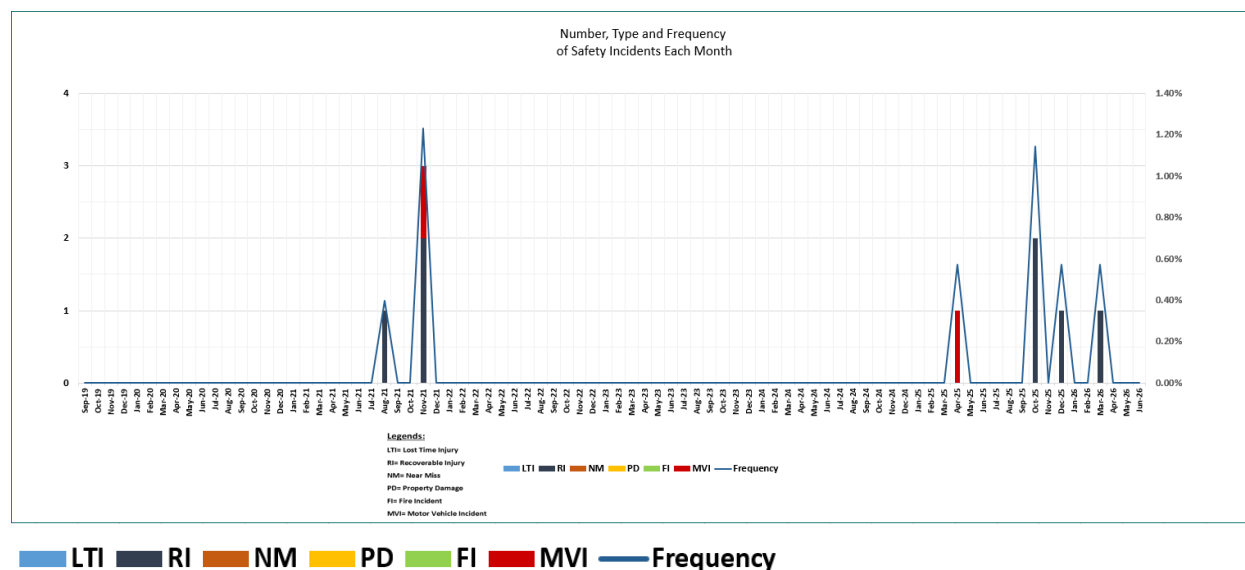
Type of Incidents	LTI	RI	NM	PD	FI	MVI	Total
No. of Incidents in Q2 2026	0	0	0	0	0	0	0
Cumulative Total Incidents to 30 June 2026	0	7	0	0	0	2	9

LTI: Lost Time Incident; **RI:** Recordable Injury; **NM:** Near Miss; **PD:** Property Damage; **FI:** Fire Incident; **MVI:** Motor Vehicle Incident

There were no incidents or accident reported in Q2 2026.

The histogram below in **Figure 5.1-1** shows the number of reported incidents in each month since the start of the Operation Phase (September 2019) with the colour indicating the type of incident including near misses. The graph superimposed on the histogram shows the frequency of incidents, including reported near misses, with the number of incidents occurring each month expressed as a percentage of the total number of Project workers employed in each month being the total man-months.

All reported incidents that have involved the Owner and its Contractors and Subcontractors are included in the histogram and shown graphically below.



LTI: Lost Time Incident; **RI:** Recordable Injury; **NM:** Near Miss; **PD:** Property Damage; **FI:** Fire Incident; **MVI:** Motor Vehicle Incident

FIGURE 5.1-1: NUMBER, TYPE AND FREQUENCY OF SAFETY INCIDENTS FROM SEPTEMBER 2019 TO JUNE 2026

In Q3 and Q4 of 2021, Q4 2025, and Q1 2026 there were a total of seven cases of Recordable Injury (RI) and in Q4 2021 and Q2 2025 there were a total of two cases of Motor Vehicle Incident (MVI) have been recorded.

5.1.1 Health and Safety Training and Emergency Drills in the Project site

During Q2 2026, Health and Safety and Environmental (HSE) inductions were conducted for the contractors' new staff staffs. The primary objective of these inductions is to ensure that all new personnel understand the HSE policy, measures and practices.



FIGURE 5.1-2: REPRESENTATIVE PHOTOS OF THE HSE INDUCTION TRAINING FOR NEW CONTRACTOR STAFFS DURING Q2 2026

5.2 RELATED TO COVID-19

- The pandemic-related measures remain in effect. No COVID-19 infections were reported in Q2 2026.

6 External missions and visits

There was no external mission during the reporting period.

APPENDICES

APPENDIX 1: THE SITE INSPECTION RESULTS DURING Q2 2026

No	Issue ID	Inspection Date	Site Name	Issue/Description	Action Required/Recommendation	Deadline	Latest Follow-up Date	Status
1	ON-TD-0028	27-Nov-25	Spoil disposal area no. 02	It was observed that a part of spoil disposal area no. 2 was reopened to extract soil material for repairing the access road to the main dam powerhouse. This activity has not been provided in the submitted DWP &SSES MMP. During the site inspection on 21 January 2026, TD informed that soil material from Spoil Disposal Area No. 2 had previously been sourced by the LSEP contractor for repairing the access road to the main powerhouse. The contractor is currently finalizing the work quantities with the Owner (NNP1PC). At present, the remaining part for	TD has confirmed that the rehabilitation of the excavated area will be undertaken by NNP1 (TD) using rental equipment from another contractor. The schedule for this work has not yet been clearly determined, but it is expected to be around the middle of March 2026 as the contractor is currently prioritizing other urgent tasks planned to take place during the power outage period. During the ADB-LTA mission on 19 March 2026, NNP1-TD and EMO were instructed to coordinate with the government to seek formal recognition or approval for the continued use of this area and ensure that reopening and use of these areas is acceptable from regulatory compliance perspective. NNP1PC (TD-EMO-ADM) are preparing an official letter to seek formal recognition and	By mid-Jul,26	24 June 2026	Pending issue since Nov 2025 and expected to be resolved in Q3 2026

No	Issue ID	Inspection Date	Site Name	Issue/Description	Action Required/Recommendation	Deadline	Latest Follow-up Date	Status
				repairing the access road has been handed over to the other contractor (PKCC) to dispose excavated material from riverbed excavation work.	approval for the continued use of this area by June 2026. The ONC is expected to be cleared by mid-July 2026.			
2	ON-TD-0031	21-Jan-26	Disposal area located under the 230-kV transmission line ROW, between Tower 03 and 04)	The disposal area for excavated material from the riverbed works at the former SINO Camp is already full, NNP1 has instructed the contractor (PKCC) to place the excavated material in the designated area (under the 230-kV transmission line ROW, between Tower 03 and 04). The activity followed TD guidance, and the observation has been recorded for future rehabilitation activities.	According to TD, after the riverbed excavation is completed, NNP1-TD will assess suitable rehabilitation measures, as most of the material consists of large rock. During the ADB-LTA mission on 19 March 2026, NNP1-TD and EMO were instructed to coordinate with the government to seek formal recognition or approval for the continued use of this area and ensure that reopening and use of these areas is acceptable from regulatory compliance perspective. NNP1PC (TD-EMO-ADM) are preparing an official letter to seek formal recognition and approval for the continued use	By mid-Jul,26	24 June 26	Pending issue since Jan 2026 (Pending NNP1PC (TD-EMO-ADM) was prepared and reviewed by the management in June 2026 and will be submitted further to the Ministry of Energy and Mines (MoIC) in July 2026 to seek formal recognition and approval for the continued use of this area. The ONC is expected to be

No	Issue ID	Inspection Date	Site Name	Issue/Description	Action Required/Recommendation	Deadline	Latest Follow-up Date	Status
					of this area by June 2026. The ONC is expected to be cleared by mid-July 2026.			cleared by mid-July 2026.)
3	ON-TD-0033	25-Mar-26	Main Dam Horizontal Gallery EL.193 (Drilling work)	During this joint site inspection, it was observed that the construction waste from the drilling work has not yet been segregated and transported to disposal area no.06 for proper disposal, despite the drilling activities having been completed several weeks ago.	TD was instructed to segregate and remove this construction waste for disposal in spoil disposal area no.06, in accordance with SOP_S04_04 on Construction Waste Management (attached SOP)	By 31-Mar-26	22 April 26	Resolved (The corrective action was verified and accepted)
4	ON-TD-0034	25-Mar-26	LILAMA10_ Hazardous Material and Waste Storage Facility	The contaminated-waste storage area is nearly full. During the recent ABD and LTA mission on 19 March 2026, TD and EMO were advised to identify practical disposal options of hazardous contaminated waste.	During ABD and LTA mission on 19 March 2026, both TD and EMO teams agreed to identify practical disposal options and expect to complete the disposal of hazardous contaminated waste by June 2026. For the pending disposal of 250 kg of contaminated waste , EMO has provided TD with the disposal details, and TD will instruct the	By 30-Jun-26	24 June 26	Resolved (The corrective action was verified and accepted)

No	Issue ID	Inspection Date	Site Name	Issue/Description	Action Required/Recommendation	Deadline	Latest Follow-up Date	Status
				In addition, about 250 kg of contaminated waste from the main dam gallery oil-spill cleanup is still awaiting disposal. This was recorded under NCR Level 2 (NC No: EMO-NCR2-TD001-26), issued on 24 Feb 2026 and closed with conditions on 13 Mar 2026.	contractor to complete disposal before leaving the NNP1 site			
5	ON-ADM-0035	24-Jun-26	OSOV1_WWTS operation and maintenance	During this joint site inspection, it was observed that the pipeline system was not properly distributing wastewater to the wetland ponds' surfaces as per the design drawing, and that various types of reeds were growing in and around the wetland ponds.	ADM was instructed to conduct weed clearance in and around the wetland ponds, and cutting reeds to prevent mosquito breeding grounds and reduce the risk of poisonous animals. ADM was instructed to recheck the distributing pipeline system at the wetland ponds' surface. If it is not functioning, it is required to replace the new spreading pipeline system to ensure the WWTs system functions.	By mid-July 2026	24 June 2026	New ONC

No	Issue ID	Inspection Date	Site Name	Issue/Description	Action Required/Recommendation	Deadline	Latest Follow-up Date	Status
6	ON-TD-0036	24-Jun-26	Along the road (Former SongDa 5 camp, RRC Plant, Sinohydro Camp, and entry Lilama storage facility)	During this joint site inspection, it still observed that the issue concrete waste discharged along the road side by the contractor concrete mixer truck since 17-18 June 2026 at Former SongDa 5 camp, RRC Plant, Sinohydro Camp were not taking the corrective action yet. Also, observed this practice continue discharged at entry Lilama storage facility.	TD was instructed to immediately check with the contractor, instruct them to stop this practice and ask them to clean up these concrete wastes then remove to disposal of at disposal area no. 06 (Concrete waste disposal area). TD was requested to call the contractor mixer truck driver to participate the training on this matter to ensure that they are aware of where is the proper disposal of concrete waste location.	Immediately	24 June 2026	New ONC

APPENDIX 2: ENVIRONMENTAL MONITORING CORRECTIVE ACTIONS Q2 2026

No.	Issue	Action Item	Timing	NNP1 Responses and Status (as of May 2026)
1	Delayed government action on biodiversity and watershed issues	Issue a formal notification letter outlining required actions, timelines, and responsibilities Consult with internal legal to confirm whether the issues are considered material (under CA) and whether these could qualify as a breach of the CA	End of April 2026	Completed - A formal notification letter outlining the biodiversity and watershed issues, required actions, proposed timelines for further consultation meetings with relevant parties, and the need to identify appropriate solutions was submitted to the Department of Enterprise Management (DOEM), Ministry of Industry and Commerce (MOIC), on 22 April 2026. - Following the submission of the notification letter, a consultative meeting with DOEM regarding watershed and biodiversity management challenges and CA compliance was held on 6 May 2026. The outcomes of the meeting are summarized in the Meeting Minutes. - Regarding the “material” breach, NNP1PC understands that events having a material adverse effect on the Project could be considered a material breach. In this context, if such events affect the Project’s ability to operate and/or the financial viability of the Project, including the Project Company’s ability to meet its financial obligations, these events could be considered material. Ongoing - As the next step, NNP1PC will work closely with DOEM to hold further meetings and discussions with relevant GOL offices and related project developers to confirm the current status of each project and further assess the impacts on the NNP1 watershed, biodiversity, and project operations. This will include discussions on compensation measures and/or implementation of mitigation activities, as well as clarification of roles and responsibilities. The

No.	Issue	Action Item	Timing	NNP1 Responses and Status (as of May 2026)
				target timeline to complete these next-step actions is within Q3 2026.
2	Risk to No Net Loss (NNL) objectives due to ongoing encroachment and new developments within or near the concession area threaten achievement of NNL commitments	Share the information on remaining budget for NNL to help inform the future discussions.	End of March 2026	Completed - During the ADB–LTA–IAP mission conducted from 16–20 March 2026, NNP1-EMO provided a summary of the remaining NNL budget for watershed and NC–NX offset management. The updated remaining budget as of 12 May 2026 has been shared with ADB on 13 May 2026.
3	Gaps identified during recent typhoon response, particularly on the issues noted with muster point access, warning systems, and community response (gaps despite recent drills)	Incorporate in the next revision of the EAP, the lessons from the recent flood event, including the validated muster points to ensure they are accessible and sufficiently elevated, if possible, considering the worst-case scenario (dam break).	End of June 2026 (Muster point is not just for vulnerable)	Ongoing - The updated EAP and Dam Breach Analysis Report were submitted to the relevant GOL authorities (Department of Energy (DOE), MOIC) on 27 April 2026 for review and approval.- Based on lessons learned from the previous typhoon event, a new muster point at HatGniun Village is being considered and discussed to ensure its suitability. The EAP will be further updated after agreement on the new muster points is reached with the GOL and village authorities, which is expected to be completed by the end of June 2026. - Agreement on the new muster points was reached in Jun 2026, clearance of the new muster point was completed at the end of August 2026 and the EAP update is Currently underway.
		Consult communities on how emergency response can be improved, particularly while recent typhoon experience is still fresh.	End of May 2026	Completed - Consultation meetings are completed in the first week of May 2026. The MOM will be shared by end of May 2026.

No.	Issue	Action Item	Timing	NNP1 Responses and Status (as of May 2026)
		Replacement of the warning system (e.g., siren).	End of July 2026	Ongoing - The loudspeaker systems will be improved and installed to ensure readiness before the 2026 rainy season, with target completion by the end of July 2026. - A siren system is planned to be installed at HatGniun Village as a trial for this year. Following testing and evaluation of the system's operational effectiveness, installation at other locations will be considered. Currently, the procurement of equipment by NNP1PC has been completed, and the installation is planned to be completed in the first week of June 2026.
4	Limited effectiveness of community emergency drills due to low participation due to competing community activities (e.g., planting season, school was closed)	Adjust timing and frequency of drills	End of June 2026	Completed - The drill across all 13 villages (18 sites) were completed by 24 June 2026.
		Consider conducting desktop emergency communication drills (announced and unannounced) to test message dissemination, acknowledgment, and action. Identify alternate village contact persons.	mid-July 2026	Ongoing - The desktop emergency communication drill is scheduled to be conducted after completion of the downstream community drills planned for May–June 2026, in order to enhance villagers' understanding and preparedness.

No.	Issue	Action Item	Timing	NNP1 Responses and Status (as of May 2026)
5	Spillway capacity of HS Reservoir unconfirmed. Need to verify adequacy of spillway to safely manage extreme rainfall events.	Consult a qualified specialist to confirm spillway capacity and dam safety under heavy rainfall scenarios.	End of July 2026	Ongoing - NNP1-TD confirmed that the spillway has sufficient capacity, with a design capacity exceeding 31 m³/s, while the maximum discharge under the Probable Maximum Precipitation (PMP) scenario is estimated at 8.5 m³/s. - The study has been completed, and the report is currently pending GOL review and acknowledgement. - The English-translated version will be shared with ADB and LTA by July 2026.
6	No alert system for Livelihood Center to ensure timely warning and response in the event of any unexpected incidents related to the HS Reservoir.	Establish an alert system for the Phouhomxay Resource Center	End of July 2026	Ongoing - The alert system for the Resource Center is currently under planning to determine the most appropriate system configuration. - Procurement of the related equipment (e.g., amplifier, speakers, microphones, etc.) is scheduled for May - June 2026 to ensure that installation and implementation are completed by the end of July 2026.
7	Flood and typhoon impact not clearly highlighted in SSMR	Include a dedicated section in quarterly reports describing events, response actions, and lessons learned.	End of April 2026 (Standalone report, temporal analysis)	Completed - A report on the flooding event downstream of the NNP1 Hydropower Project during 30 September - 2 October 2025 was prepared and shared with ADB, LTA, and IAP on 6 February 2026. - From 2026 onward, any similar events will be documented in the monthly and water quality monitoring reports.
8	Propose review of environmental/minimum flow as current	Prepare and submit a formal request to authorities and ADB to conduct an environmental	mid-April 2026	Completed (by postponement of the plan)

No.	Issue	Action Item	Timing	NNP1 Responses and Status (as of May 2026)
	minimum flow is considered conservative	flow trial with monitoring and safeguards. The request will clearly describe the trial objectives, duration, monitoring arrangements, risk mitigation measures, and stakeholder engagement plan.		- The EFR Reduction Proposal was submitted to ADB and LTA on 9 April 2026. LTA supported the proposed trial commencing at 14.4 m³/s. - The formal EFR Reduction Proposal was translated into Lao language and submitted to the Department of Water Resources (DWR), MONRE, to request approval for the trial. This was followed by 2 consultative meetings with DWR on 30 April and 7 May 2026 to explain the proposal, including its objectives, trial and monitoring plan, and risk mitigation measures. - During the meeting on 7 May 2026, DWR confirmed that NNP1 is required to complete the official reporting template provided by DWR for their review and decision-making on the approval. - Preparation of the required report will take time due to data compilation, and as the rainy season is approaching, the trial cannot commence in the current dry season. The report is expected to be completed by Q3 2026 and will be shared with ADB and LTA for review. - Approval for conducting the trial is anticipated in Q4 2026 to start the trial during dry season 2027.
		Only proceed with the trial upon receipt of written concurrence from all required authorities.	End of April 2026	
		Following the trial, document and share the results with ADB and relevant government authorities to inform any future decision regarding environmental flow requirements	End of Q3 2026	
		Accompany any trial by close and continuous monitoring, particularly focusing on downstream river users who are directly affected.	After get approval within May 2026	
		Include clear thresholds and procedures for immediate suspension should any adverse	mid-April 2026	

No.	Issue	Action Item	Timing	NNP1 Responses and Status (as of May 2026)
		environmental or social impacts be detected.		
9	Post-typhoon changes in reservoir and river conditions as observed changes river morphology following the typhoon event (eroded embankments and possibly sediment redistribution).	Revalidate thalweg profiles under dry season in coordination with the technical team.	End of May 2026	Completed - NNP1 considers that conducting detailed cross-section surveys after every flood event is impractical and costly. Therefore, NNP1-EMO focuses on water depth surveys at existing monitoring sections and additional suspected areas, as water depth is considered the key required information rather than detailed cross-sectional data. - On 26 April 2026, NNP1-EMO surveyed the full downstream reach and identified 38 monitoring profiles, doubling the original 19 monitoring sites to strengthen the monitoring coverage.
		Collect feedback from local river users to assess any impacts on navigation and river access.	End of June 2026	Ongoing - To be updated accordingly.
		Undertake additional monitoring during future wet seasons or extreme events to strengthen baseline data and, if required, implement adaptive management.	Starting from the 2026 wet season	Ongoing - Turbidity monitoring during the normal wet season will be incorporated into the water quality monitoring plan to maintain baseline turbidity data for comparison with heavy rainfall events.
10	Reopened and reused rehabilitated areas without formal confirmation from the government.	Coordinate with the government to seek formal recognition or approval for the continued use of identified areas.	End of June 2026	Completed: - In November 2024, NNP1 submitted a letter to DEB regarding the handover of non-exclusive land use areas to the Government after COD.

No.	Issue	Action Item	Timing	NNP1 Responses and Status (as of May 2026)
				- As some rehabilitated areas have since been reopened, the letter was updated and resubmitted for formal confirmation from the GOL on 28 July 2026.
		Share with ADB the relevant supporting documents include previous correspondence and the latest ESMMP-OP to confirm that reopening and use of these areas is acceptable from regulatory compliance perspective.	Completed	Completed - During the ADB–LTA–IAP mission from 16–20 March 2026, NNP1-EMO shared the relevant supporting documents, including the final draft ESMMP-OP Subplan 8 on Site Decommissioning and Rehabilitation and the Site Decommissioning and Rehabilitation Plan (SDRP).
		Maintain detailed documentation for all rehabilitated/decommissioned sites, including maps, clear description of the site's original condition, past use, remaining structures, rehabilitation measures undertaken, and the current status of the area. This documentation will ensure institutional memory and safe land use in the future.	Completed	Completed - This detailed information is provided in ESMMP-OP Subplan 8 on Site Decommissioning and Rehabilitation.
11	Ongoing oil leakage and housekeeping issues at the power house area	Continue monitoring and reporting the oil leakage volumes and maintain the interim mitigation	To be reported in Q1 2026 EMR	Ongoing

No.	Issue	Action Item	Timing	NNP1 Responses and Status (as of May 2026)
		Implement as scheduled the planned improvements (to further reduce the leaks) in 2027, pending the permanent repair during the major overhaul in 2030.	Tentatively planned for 2027	- In response to the LTA comment, a chapter on oil leakage has been included since Q1 2026 Quarterly Environment Monitoring Report (See section 2.7). - NNP1-TD and EMO conduct monthly inspections, and the chapter is regularly updated and reported in the monthly and quarterly reports.
		Improve housekeeping by properly segregating and regularly removing wastes and excess materials. Store chemical containers in designated locations with secondary containment and clear labelling, away from drainage channels.	End of May 2026	- A permanent solution is currently planned to be implemented during the next partial overhaul scheduled for January and February 2027.
12	Disorganized hazardous materials storage area (buoys and hazardous drums improperly stacked and adequacy of secondary containment needs to be verified)	Organize and properly stack buoys. Ensure all containers are clearly labelled and improve housekeeping.	End of June 2026	Completed: - During the ADB and LTA mission on 19 March 2026, both the TD and EMO teams agreed to identify practical disposal options and target completion of the disposal of hazardous contaminated waste by June 2026. - The hazardous wastes stored in Lilama 10 Storage Facility were safely transferred offsite by Panidtha Company on 9 June 2026, for controlled incineration. Therefore, this issue is considered closed.
		Verify and document that secondary containment capacity is sufficient for the volume and type of materials stored.	End of June 2026	

No.	Issue	Action Item	Timing	NNP1 Responses and Status (as of May 2026)
13	Subplan 08 on the 115 kV transmission line will be removed from the OESMP list.	Maintain oversight through regular review of inspection and monitoring plans for the associated facility.	End of March 2026	Completed - This sub-plan has been reinserted into the updated ESMMP-OP. The measures remain unchanged, including the review of EDL maintenance plans and monitoring reports, as well as participation in joint environmental monitoring activities.

APPENDIX 3: SITE CODES, LOCATIONS AND MONITORING PARAMETERS OF THE SURFACE WATER QUALITY MONITORING

SITE CODES AND LOCATION STATION FOR SURFACE WATER QUALITY MONITORING

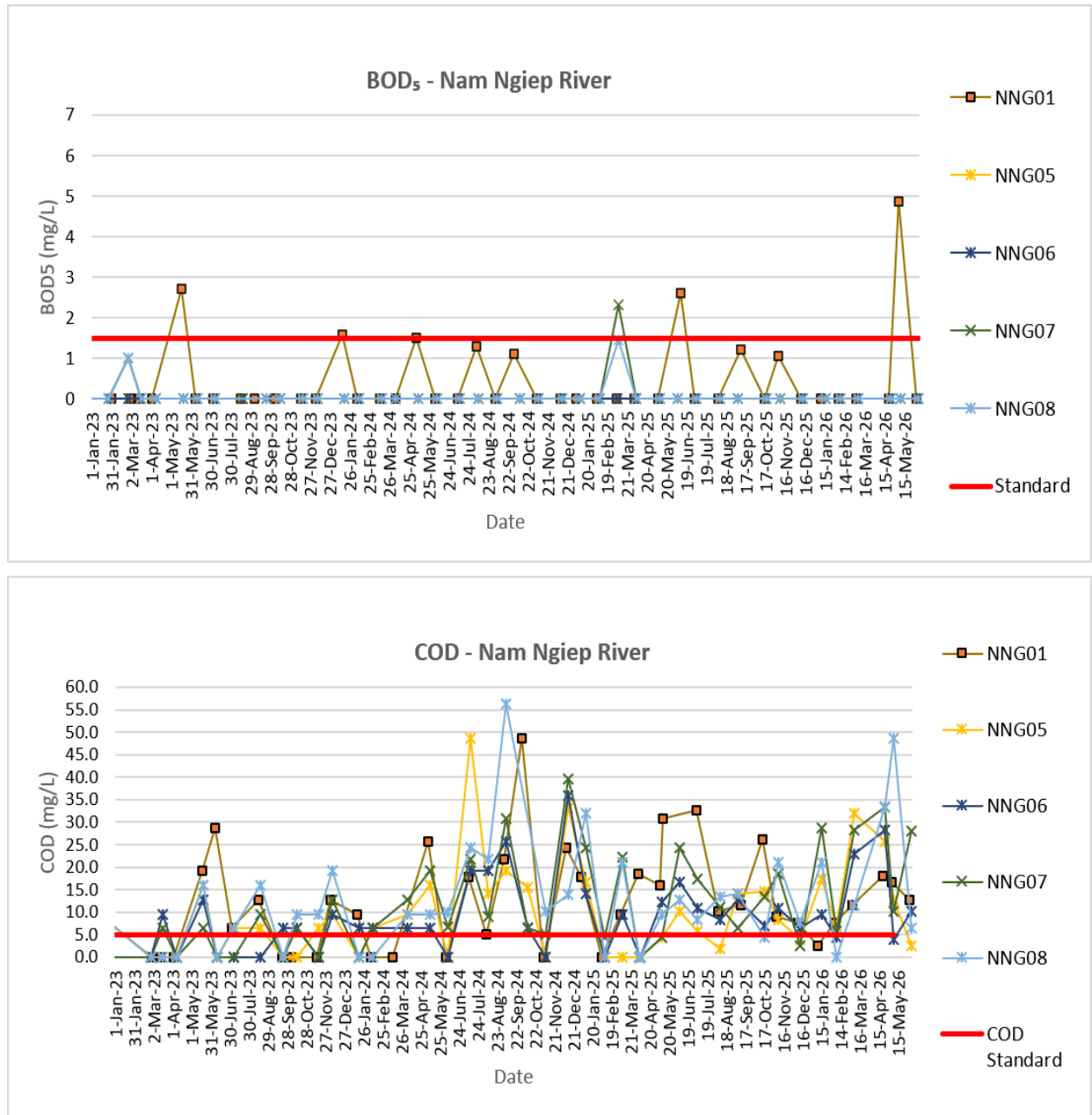
Site Code	Location station	Zone
NNG01	Nam Ngiep Upstream of Phiengta Village	Upstream Project Construction Site
R01	Main reservoir upstream main dam approx. 50 Km.	
R02	Main reservoir upstream main dam approx. 35 Km.	
NNG02/R03	Nam Ngiep Upstream of Nam Phouan Confluence / Main reservoir upstream main dam approx. 21 Km.	
NNG03/R04	Nam Ngiep Downstream of Sopyouak Village/ Main reservoir upstream main dam approx. 13 Km.	
NNG09/R05	Nam Ngiep Upstream Main Dam / Main reservoir upstream main dam approx. 0.5 Km	
NNG04/R06	Nam Ngiep Downstream RT Camp (Middle Re-regulation Reservoir)	Within Project Construction Site
R07	Reservoir Upstream Re-Regulation Dam	
NNG05	Nam Ngiep Upstream of Hat Gniun Village	Downstream Project Construction Site
NNG06	Nam Ngiep Downstream of Nam Xao Confluence	
NNG07	Nam Ngiep at Somsuen Village	
NNG08	Nam Ngiep at the Bridge of Road 13	
NCH01	Nam Chiane at the Bridge of Road 1D	Tributaries Upstream of Project Construction Site
NPH01	Nam Phouan Upstream of Nam Ngiep Confluence	
NXA01	Nam Xao Upstream of Nam Ngiep Confluence	Tributaries Downstream of Project Construction Site
NSH01	Nam Houay Soup Upstream Nam Ngiep Confluence	

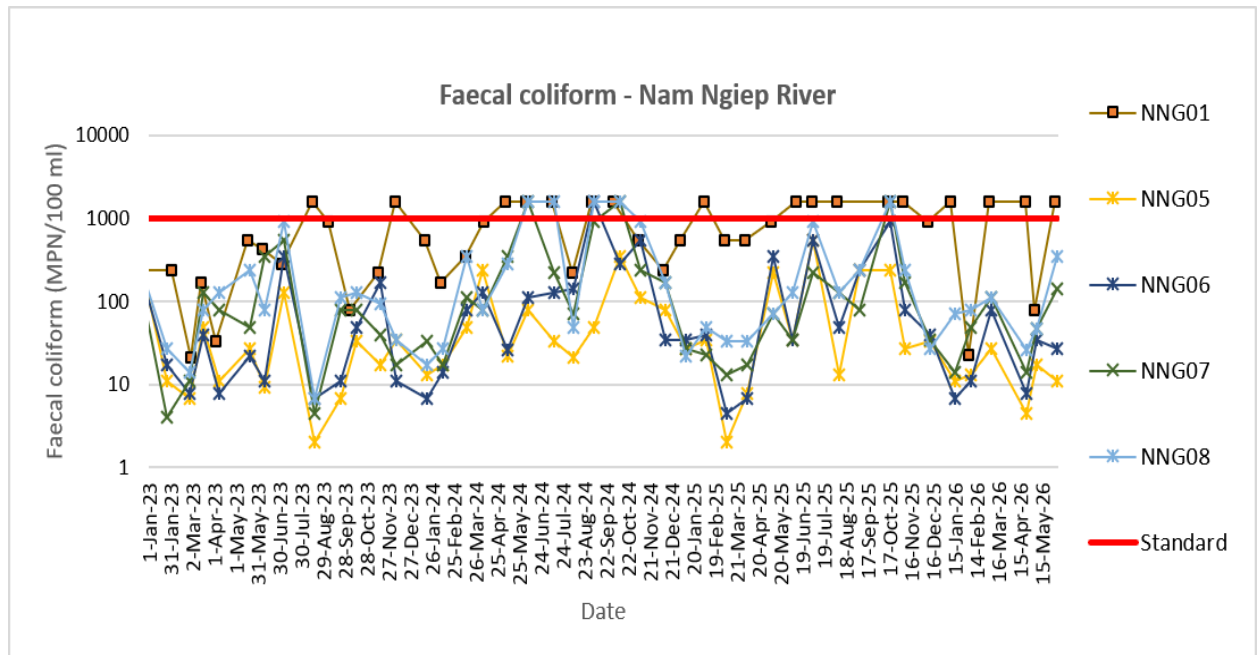
MONITORING FREQUENCY FOR SURFACE WATER QUALITY PARAMETERS

Frequency of Monitoring	Parameters (Unit)	Monitoring Sites
Weekly	pH, DO (%), DO (mg/L), Conductivity ($\mu\text{S}/\text{cm}$), Temperature ($^{\circ}\text{C}$), Turbidity (NTU).	- Main Reservoir: R01, R02, R03, R04, R05; - Re-regulation Reservoir: R06 and R07.
Monthly	pH, DO (%), DO (mg/L), Conductivity ($\mu\text{S}/\text{cm}$), Temperature ($^{\circ}\text{C}$), Turbidity (NTU).	- NNG01, NCH01, NPH01, NNG05, NNG06, NNG07, NNG08, NXA01 and NHS01
Monthly	TSS (mg/L), BOD ₅ (mg/L), COD (mg/L), NH ₃ -N (mg/L), NO ₃ -N (mg/L), total coliform (MPN/100 mL), faecal coliform (MPN/100 mL), Chlorophyll a, TOC and TKN.	As per ESMMP-OP. Noted: Hydrogen sulphide and Phytoplankton biomass remained in the analysis program for Q1 2023, but they were no longer monitored starting from Q2 2023.

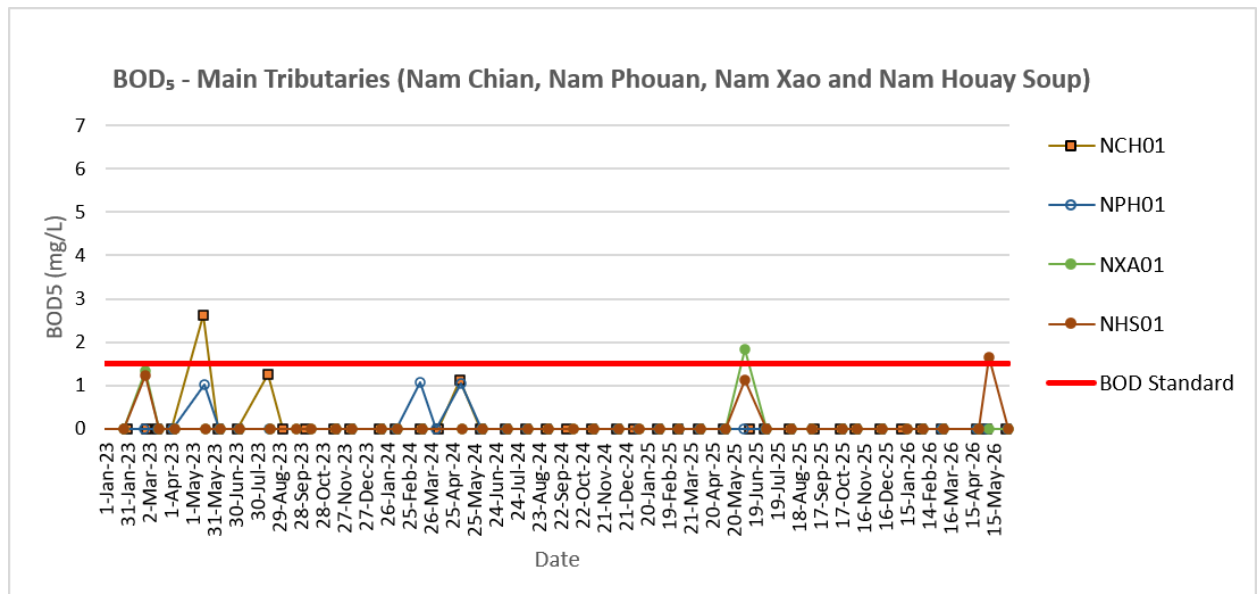
APPENDIX 4: KEY TRENDS OF WATER QUALITY MONITORING FROM JANUARY 2023 TO END OF JUNE 2026 (ONLY PARAMETERS THAT EXCEEDED THE STANDARDS)

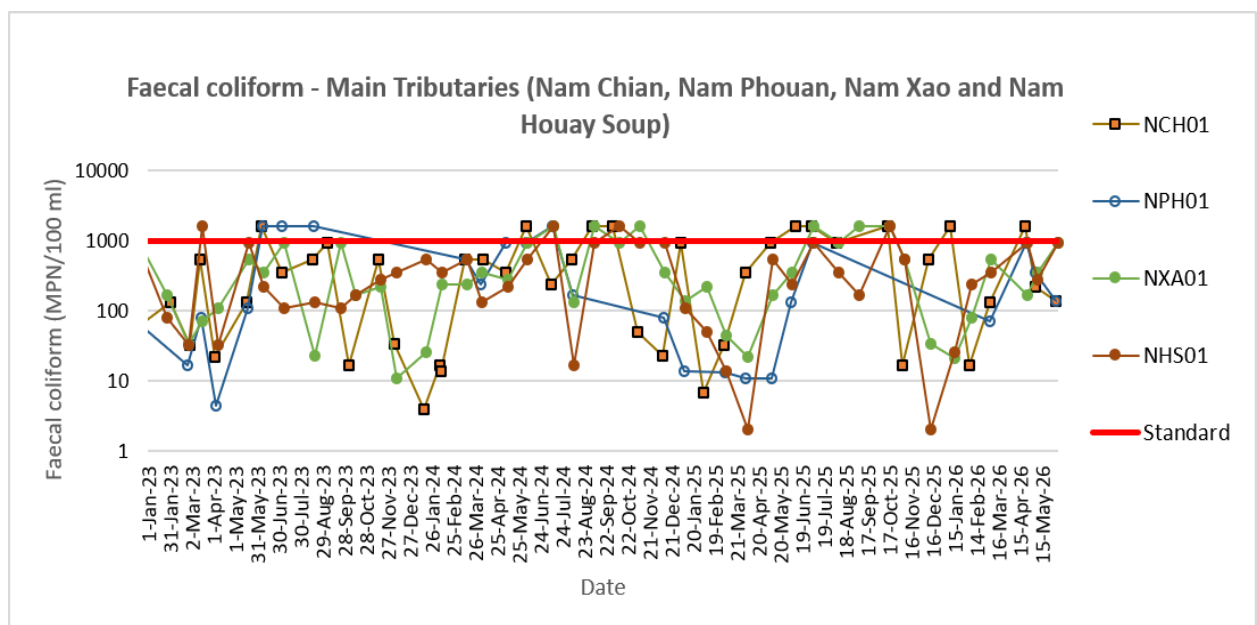
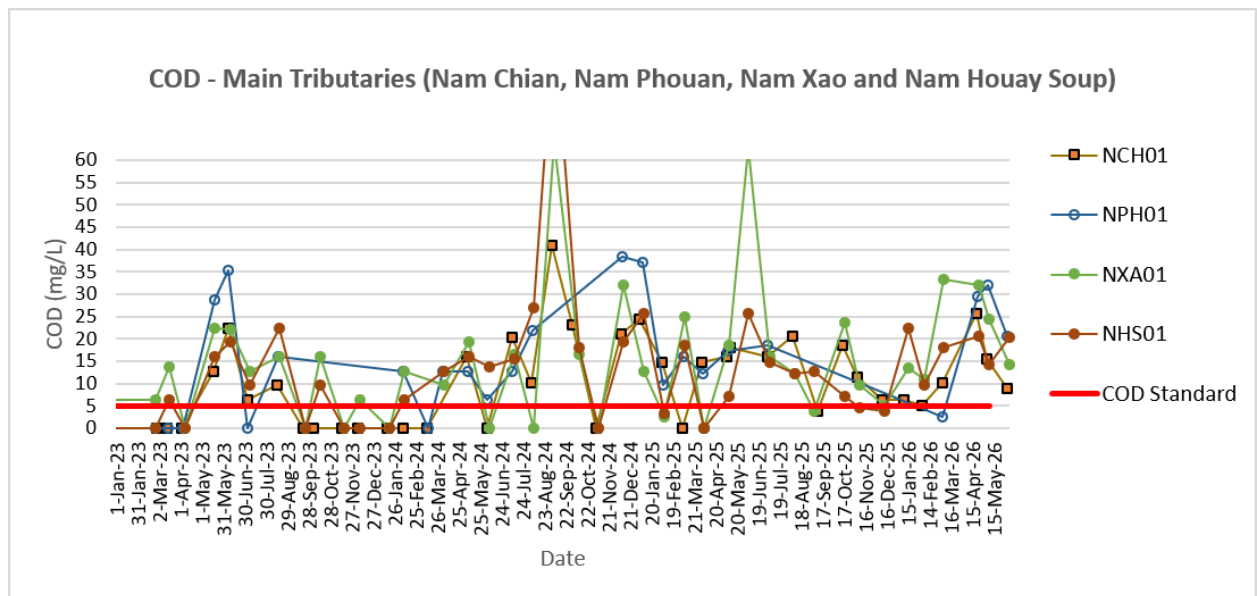
Nam Ngiep Surface Water

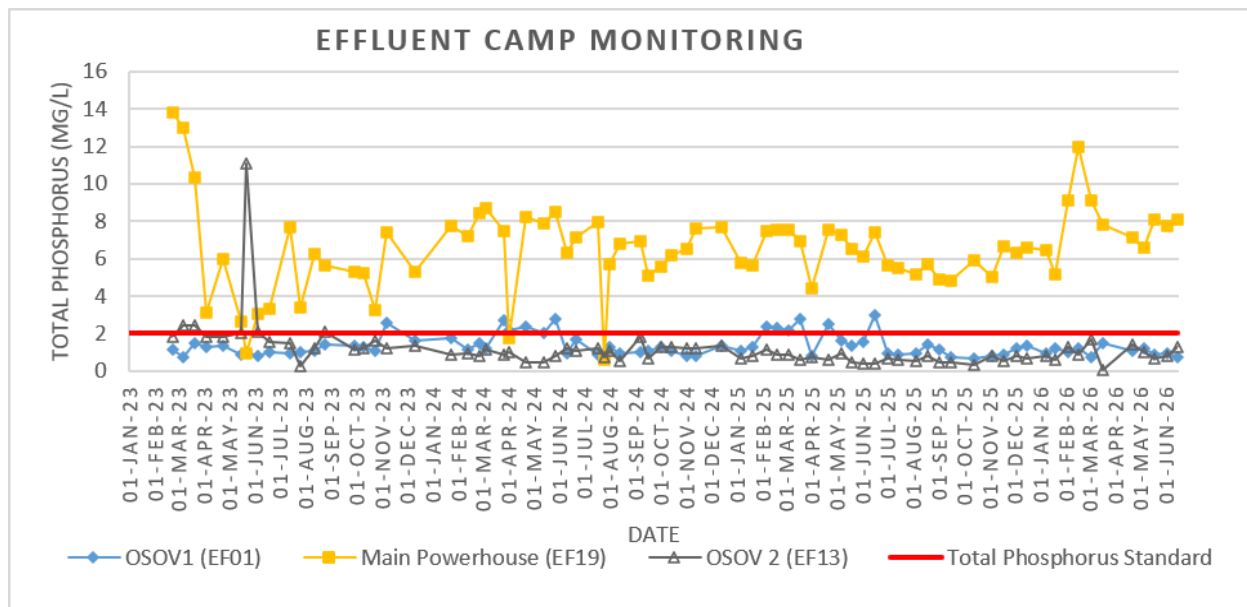
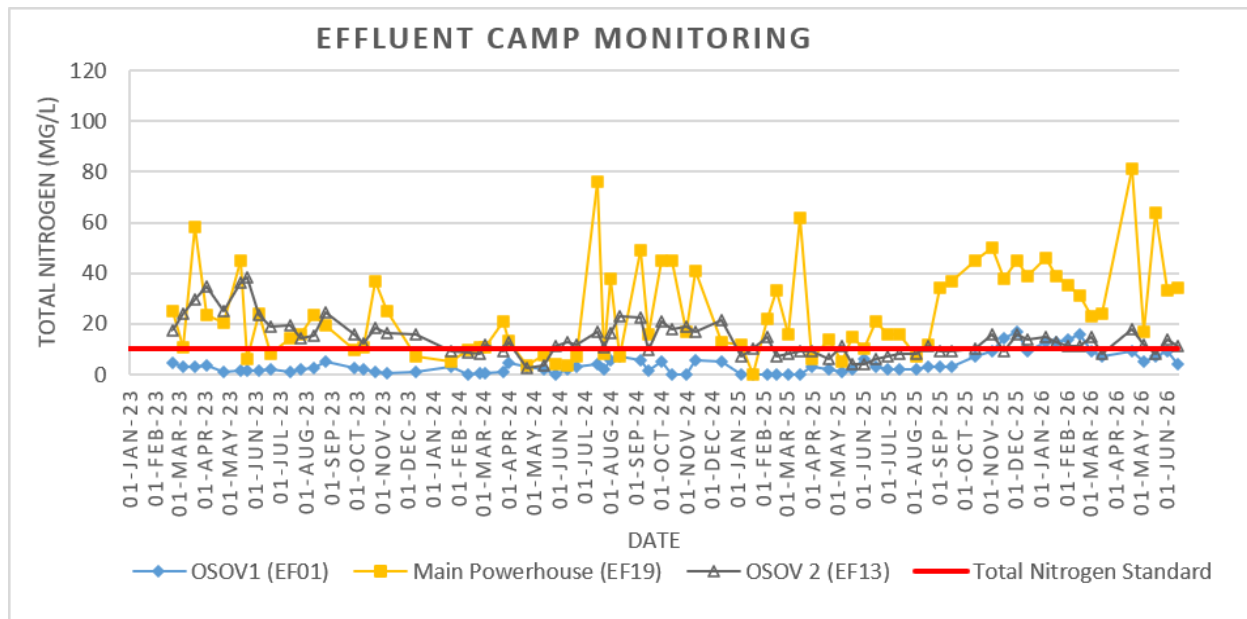


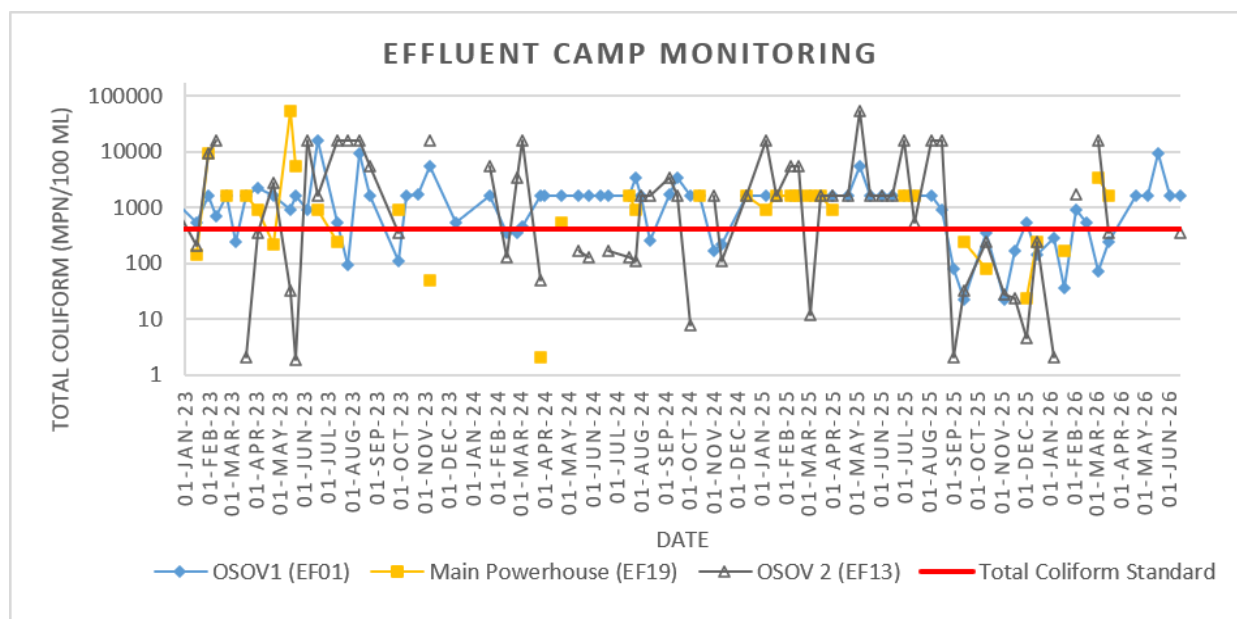


Key Water Quality Parameters for the Nam Ngiep Tributaries: Nam Chian, Nam Phouan, Nam Xao, Nam Houay Soup





Camps' Effluent Water Quality Trends (Since January 2023 to June 2026)



APPENDIX 5: WATER QUALITY MONITORING DATA**APPENDIX 5-1: SURFACE WATER QUALITY MONITORING – Q2 2026**

		River Name	Nam Ngiep												Nam Chain	Nam Phouan	Nam Xao	Nam Houay Soup
		Zone	Location Refer to Construction Sites												Location Refer to Construction Sites			
			Upstream/Main Reservoir						Re-Regulation Reservoir/Within		Downstream				Tributaries Upstream		Tributaries Downstream	
		Station Code	NNG01	R01	R02	R03	R04	R05	R06	R07	NNG05	NNG06	NNG07	NNG08	NCH01	NPH01	NXA01	NHS01
Date	Parameters (Unit)	Guideline																
8-Apr-26	pH	5.0 - 9.0						7	7.7	7.5								
9-Apr-26	pH	5.0 - 9.0									7.3	7.1	6.7	6.5			6.7	6.5
21-Apr-26	pH	5.0 - 9.0	8.3												7.7			
22-Apr-26	pH	5.0 - 9.0		7.5	8.3	8.4										6.8		
23-Apr-26	pH	5.0 - 9.0					8.5	8.6	7.5	7.4								
24-Apr-26	pH	5.0 - 9.0									7.4	7.2	6.8	6.5			7	6.7
26-Apr-26	pH	5.0 - 9.0									7.6	7.4	6.8	7.5			7.4	7.1
28-Apr-26	pH	5.0 - 9.0		7.8	7.9	8.1	8											
29-Apr-26	pH	5.0 - 9.0						7.7	7.9	7.2								
5-May-26	pH	5.0 - 9.0	7.6												7.9			
6-May-26	pH	5.0 - 9.0		7.7	7.4	7.19										8.2		
7-May-26	pH	5.0 - 9.0					7.03	2.15	13.7	3.13								
8-May-26	pH	5.0 - 9.0									7.2	6.8	7.5	7.7			6.9	6.7
13-May-26	pH	5.0 - 9.0		8.2	8.3	8.5	8.4									7.4		
14-May-26	pH	5.0 - 9.0						8.1	7.9	7.8								
19-May-26	pH	5.0 - 9.0		8.4	8.1	8.5	8.3											
20-May-26	pH	5.0 - 9.0						8	7.5	7.6								
26-May-26	pH	5.0 - 9.0		7.3	8.1	7.5	7.9											
27-May-26	pH	5.0 - 9.0						7.7	6.9	7								

River Name	Nam Ngiep												Nam Chain	Nam Phouan	Nam Xao	Nam Houay Soup
Zone	Location Refer to Construction Sites												Location Refer to Construction Sites			
	Upstream/Main Reservoir						Re-Regulation Reservoir/Within		Downstream				Tributaries Upstream		Tributaries Downstream	
Station Code	NNG01	R01	R02	R03	R04	R05	R06	R07	NNG05	NNG06	NNG07	NNG08	NCH01	NPH01	NXA01	NHS01
Guideline																
5.0 - 9.0	6.8												7.1			
5.0 - 9.0																
5.0 - 9.0																
5.0 - 9.0																
5.0 - 9.0																
5.0 - 9.0																
5.0 - 9.0						6.98	6.71	6.77								
5.0 - 9.0		6.9	7.12	6.97	6.97											
5.0 - 9.0		6.95	7.1	7.12	7.17											
5.0 - 9.0						7.25	6.57	6.93								
5.0 - 9.0							6.69	7.01								
5.0 - 9.0		6.59	6.74	6.73	7.04	6.61										
						120.7	59.3	67.1								
									61.2	59.6	70.1	72.9			75.2	76.4
	73.1												76.3			
		80.1	86.3	91.9										88.3		
					120.4	115.7	49.5	57.8								
									48.8	49.9	68.2	75.9			72.5	77.1
									119.8	114.5	124.8	118.4			97.2	86.9
		84.8	96.1	116.6	97.9											
						92.6	36.8	36.6								
	71.5												76.5			

Date	Parameters (Unit)	River Name	Nam Ngiep												Nam Chain	Nam Phouan	Nam Xao	Nam Houay Soup
		Zone	Location Refer to Construction Sites												Location Refer to Construction Sites			
			Upstream/Main Reservoir						Re-Regulation Reservoir/Within		Downstream				Tributaries Upstream		Tributaries Downstream	
Station Code			NNG01	R01	R02	R03	R04	R05	R06	R07	NNG05	NNG06	NNG07	NNG08	NCH01	NPH01	NXA01	NHS01
Guideline																		
6-May-26	Sat. DO (%)			75	81.1	108.62										89.5		
7-May-26	Sat. DO (%)						109.4	117.7	4.21	4.79								
8-May-26	Sat. DO (%)										62.9	58.4	61.1	80.7			79.1	82.8
13-May-26	Sat. DO (%)			78.9	113.6	114.4	107.9									89.7		
14-May-26	Sat. DO (%)							99.3	34.8	31.8								
19-May-26	Sat. DO (%)			77	87.5	96.4	88.2											
20-May-26	Sat. DO (%)							89.9	32.4	46.2								
26-May-26	Sat. DO (%)			79.2	82.2	86.5	83.2											
27-May-26	Sat. DO (%)							103.1	46.9	44.1								
2-Jun-26	Sat. DO (%)		73.3												80.3			
3-Jun-26	Sat. DO (%)			71.1	104.7	114										108.8		
4-Jun-26	Sat. DO (%)						82	90	52.4	56.9								
5-Jun-26	Sat. DO (%)										48.9	55.4	71.3	76.4			80.8	75.8
9-Jun-26	Sat. DO (%)			78.1	93.6	94.1	86.7											
10-Jun-26	Sat. DO (%)							83.2	30.9	36.2								
16-Jun-26	Sat. DO (%)							100.85	37.57	45.64								
17-Jun-26	Sat. DO (%)			85	103.9	110.5	100.2											
23-Jun-26	Sat. DO (%)			85.5	109.5	115.4	105.3											
24-Jun-26	Sat. DO (%)							97.3	41.2	43.4								
29-Jun-26	Sat. DO (%)								39.3	41.9								
30-Jun-26	Sat. DO (%)			76.3	71.8	109.3	98.51	97.4										
8-Apr-26	DO (mg/L)	>6.0						9.16	5.04	5.59								

River Name	Nam Ngiep												Nam Chain	Nam Phouan	Nam Xao	Nam Houay Soup
Zone	Location Refer to Construction Sites												Location Refer to Construction Sites			
	Upstream/Main Reservoir						Re-Regulation Reservoir/Within		Downstream				Tributaries Upstream		Tributaries Downstream	
Station Code	NNG01	R01	R02	R03	R04	R05	R06	R07	NNG05	NNG06	NNG07	NNG08	NCH01	NPH01	NXA01	NHS01
Guideline																
>6.0															6.09	6.15
>6.0	6.3												6.35			
>6.0		6.64	6.6	7.04										6.99		
>6.0					9.26	8.98	4.18	4.82								
>6.0									4.09	4.22	5.88	6.36			6.08	6.5
>6.0									9.96	9.52	9.95	9.13			7.49	6.9
>6.0		6.92	7.42	8.79	7.63											
>6.0						7.32	3.1	3.08								
>6.0	6.08												6.57			
>6.0		6.55	6.72	7.98										7.69		
>6.0					8.41	9.08	4.21	4.79								
>6.0									5.18	4.85	5.04	6.55			6.34	6.67
>6.0		6.22	8.49	8.47	8.14									7.26		
>6.0						7.68	2.89	2.62								
>6.0		6.23	6.6	7.18	6.67											
>6.0						6.98	2.7	3.83								
>6.0		6.09	6.12	6.46	6.23											
>6.0						7.82	3.87	3.6								
>6.0	6.1												6.58			
>6.0		5.44	7.38	8.34										8.1		
>6.0					6.04	6.65	4.32	4.58								
>6.0									3.97	4.5	5.8	6.19			6.25	6.07

River Name	Nam Ngiep												Nam Chain	Nam Phouan	Nam Xao	Nam Houay Soup
Zone	Location Refer to Construction Sites												Location Refer to Construction Sites			
	Upstream/Main Reservoir						Re-Regulation Reservoir/Within		Downstream				Tributaries Upstream		Tributaries Downstream	
Station Code	NNG01	R01	R02	R03	R04	R05	R06	R07	NNG05	NNG06	NNG07	NNG08	NCH01	NPH01	NXA01	NHS01
Guideline																
>6.0		6.17	6.94	7.02	6.52											
>6.0						6.54	2.52	2.93								
>6.0						7.41	2.96	3.56								
>6.0		6.56	7.56	7.91	7.3											
>6.0		6.48	7.91	8.25	7.65											
>6.0						7.17	3.2	3.29								
>6.0						7.18	3.04	3.22								
>6.0		6.01	5.39	7.82	7.14											
						71	73	74								
									76	79	79	77			138	51
	125												50			
		130	89	69										69		
					71	72	75	78								
									80	74	78	72			135	74
									80	81	82	91			186	79
		137	92	69	69											
						67	75	76								
	146												135			
		132	90	70										75		
					68	72	78	74								
									76	76	78	82			136	67
		138	88	71	69									75		

River Name	Nam Ngiep												Nam Chain	Nam Phouan	Nam Xao	Nam Houay Soup
Zone	Location Refer to Construction Sites												Location Refer to Construction Sites			
	Upstream/Main Reservoir						Re-Regulation Reservoir/Within		Downstream				Tributaries Upstream		Tributaries Downstream	
Station Code	NNG01	R01	R02	R03	R04	R05	R06	R07	NNG05	NNG06	NNG07	NNG08	NCH01	NPH01	NXA01	NHS01
Guideline																
						69	76	76								
		74	104	73	69											
						69	76	76								
		83	88	72	69											
						68	78	82								
	178												28			
		108	92	70										69		
					69	70	86	85								
									87	85	83	76			156	31
		104	91	74	70											
						70	81	81								
						70	80	80								
		69	96	72	71											
		96	90	73	72											
						73	82	83								
							85	85								
		85	94	71	71	72										
						29.66	23.51	24.75								
									23.66	23.68	23.98	24.1			26.93	26.26
	24.12												24.58			
		26.41	29.29	29.19										27.71		
					28.93	28.43	23.83	24.51								

River Name	Nam Ngiep												Nam Chain	Nam Phouan	Nam Xao	Nam Houay Soup
Zone	Location Refer to Construction Sites												Location Refer to Construction Sites			
	Upstream/Main Reservoir						Re-Regulation Reservoir/Within		Downstream				Tributaries Upstream		Tributaries Downstream	
Station Code	NNG01	R01	R02	R03	R04	R05	R06	R07	NNG05	NNG06	NNG07	NNG08	NCH01	NPH01	NXA01	NHS01
Guideline																
									23.81	23.8	23.93	24.26			26.59	26.25
									24.67	24.62	27.04	28.97			29.06	27.72
		25.66	28.88	30.05	28.23											
						27.39	23.96	24.01								
	23.42												24.96			
		25.19	24.76	29.46										23.83		
					29.1	28.77	24.77	26.27								
									24.8	24.74	25.12	25.66			28.96	27.33
		27.51	30.64	31.23	30.11									26.2		
						29.06	24.65	25.14								
		26.18	30.14	30.88	29.88											
						28.42	24.68	24.81								
		26.89	31.37	30.67	30.56											
						30.15	25.14	25.71								
	26.64												25.45			
		29.62	34.4	31.9										30.26		
					31.57	30.62	25.64	26.18								
									25.84	25.99	25.89	26.01			30.61	26.7
		27.5	31.1	30.64	30.28											
						29.89	25.7	26.08								
						29.36	26.22	26.72								
		26.61	29.88	30.9	29.84											

River Name	Nam Ngiep												Nam Chain	Nam Phouan	Nam Xao	Nam Houay Soup
Zone	Location Refer to Construction Sites												Location Refer to Construction Sites			
	Upstream/Main Reservoir						Re-Regulation Reservoir/Within		Downstream				Tributaries Upstream		Tributaries Downstream	
Station Code	NNG01	R01	R02	R03	R04	R05	R06	R07	NNG05	NNG06	NNG07	NNG08	NCH01	NPH01	NXA01	NHS01
Guideline																
		27.52	30.32	31.16	29.91											
						29.04	26.96	27.78								
							26.88	27.33								
		25.31	27.91	30.57	30.03	29.14										
						1.5	2.73	1.52								
									2.53	2.24	3.19	4.31			2.88	3.83
	30.9												14.8			
		342	8.74	3.38										422		
					7.31	3.2	1.76	1.82								
									2.29	2.08	4.37	9.22			3.7	33.2
									59.96	68.7	4.09	11.3			4.69	13.2
		849	16.8	2.74	2.7											
						2.7	1.74	2.22								
	854												4.89			
		878	9.11	5.69										168		
					7.03	2.15	13.7	3.13								
									4.08	3.27	4.22	5.37			3.58	3.97
		2230	7.23	4.48	4.22									608		
						2.38	1.38	2.28								
		1200	24.2	5.35	3.81											
						2.22	3.87	5.84								
		1060	10.1	4.47	3.31											

River Name	Nam Ngiep												Nam Chain	Nam Phouan	Nam Xao	Nam Houay Soup
Zone	Location Refer to Construction Sites												Location Refer to Construction Sites			
	Upstream/Main Reservoir						Re-Regulation Reservoir/Within		Downstream				Tributaries Upstream		Tributaries Downstream	
Station Code	NNG01	R01	R02	R03	R04	R05	R06	R07	NNG05	NNG06	NNG07	NNG08	NCH01	NPH01	NXA01	NHS01
Guideline																
						2.4	5.52	28.2								
	218												87.2			
		2770	44.3	15.2										240		
					4.12	3.63	3.36	8.02								
									6.35	15	20.4	27.1			38.5	127
		1100	16.4	9.87	8.54											
						3.33	8.63	8.96								
						3.02	9.57	8.91								
		1280	31.7	4.86	5.08											
		1030	9.07	7.5	6.77											
						3.15	14.1	15.1								
							14.2	12.8								
		1780	92.9	9.18	6.03	4.68										
	27.31												6.4			
		276		13.8										497.62		
					<5	<5	<5	<5								
									<5	<5	6.97	12.4			<5	19
	426.7												<5			
		870.2		7.2										365.45		
					<5	<5	21.9	<5								
									<5	<5	<5	<5			<5	<5
	132.4												42.56			

River Name	Nam Ngiep												Nam Chain	Nam Phouan	Nam Xao	Nam Houay Soup
Zone	Location Refer to Construction Sites												Location Refer to Construction Sites			
	Upstream/Main Reservoir						Re-Regulation Reservoir/Within		Downstream				Tributaries Upstream		Tributaries Downstream	
Station Code	NNG01	R01	R02	R03	R04	R05	R06	R07	NNG05	NNG06	NNG07	NNG08	NCH01	NPH01	NXA01	NHS01
Guideline																
		1712		16.67										324.77		
					5.24	<5	<5	6								
									<5	6	12.2	16.6			29.29	56.67
<1.5	<1												<1			
<1.5		3.22		<1										<1		
<1.5					<1	<1	<1	<1								
<1.5									<1	<1	<1	<1			<1	<1
<1.5	4.87												<1			
<1.5		2.39		<1										<1		
<1.5					<1	<1	<1	<1								
<1.5									<1	<1	<1	<1			<1	1.64
<1.5	<1												<1			
<1.5		<1		<1										<1		
<1.5					<1	<1	<1	<1								
<1.5									<1	<1	<1	<1			<1	<1
<5.0	18												25.6			
<5.0														29.4		
<5.0							6.4	29.4								
<5.0									25.6	28.2	33.3	33.3			32	20.5
<5.0	16.6												15.4			
<5.0														32		
<5.0							12.8	16.6								

River Name	Nam Ngiep												Nam Chain	Nam Phouan	Nam Xao	Nam Houay Soup
Zone	Location Refer to Construction Sites												Location Refer to Construction Sites			
	Upstream/Main Reservoir						Re-Regulation Reservoir/Within		Downstream				Tributaries Upstream		Tributaries Downstream	
Station Code	NNG01	R01	R02	R03	R04	R05	R06	R07	NNG05	NNG06	NNG07	NNG08	NCH01	NPH01	NXA01	NHS01
Guideline																
<5.0									12.8	3.84	10.2	48.6			24.3	14.1
<5.0	12.8												8.96			
<5.0														20.5		
<5.0							22	5.12								
<5.0									2.56	10.2	28.1	6.4			14.1	20.4
<0.2	<0.05												<0.05			
<0.2		<0.05		<0.05										<0.05		
<0.2					<0.05	<0.05										
<0.2	<0.05												<0.05			
<0.2		<0.05		<0.05										<0.05		
<0.2					<0.05	<0.05										
<0.2	<0.05												<0.05			
<0.2		<0.05		<0.05										<0.05		
<0.2					<0.05	<0.05										
<5.0	1.23												0.2			
<5.0		1.66		0.12										0.15		
<5.0					0.14	0.11										
<5.0	1.52												0.22			
<5.0		1.5		0.2										0.41		
<5.0					0.12	0.18										
<5.0	1.56												0.12			
<5.0		1.13		0.14										0.13		

		River Name	Nam Ngiep												Nam Chain	Nam Phouan	Nam Xao	Nam Houay Soup
		Zone	Location Refer to Construction Sites												Location Refer to Construction Sites			
			Upstream/Main Reservoir						Re-Regulation Reservoir/Within		Downstream				Tributaries Upstream		Tributaries Downstream	
		Station Code	NNG01	R01	R02	R03	R04	R05	R06	R07	NNG05	NNG06	NNG07	NNG08	NCH01	NPH01	NXA01	NHS01
Date	Parameters (Unit)	Guideline																
4-Jun-26	NO ₃ -N (mg/L)	<5.0					0.11	0.3										
21-Apr-26	Faecal coliform (MPN/100 mL)	<1,000	1,600											1,600				
22-Apr-26	Faecal coliform (MPN/100 mL)	<1,000													920			
23-Apr-26	Faecal coliform (MPN/100 mL)	<1,000						0	2	2								
24-Apr-26	Faecal coliform (MPN/100 mL)	<1,000									5	8	14	26			170	920
5-May-26	Faecal coliform (MPN/100 mL)	<1,000	79												220			
6-May-26	Faecal coliform (MPN/100 mL)	<1,000														350		
7-May-26	Faecal coliform (MPN/100 mL)	<1,000						0	2	4								
8-May-26	Faecal coliform (MPN/100 mL)	<1,000									17	34	47	47			350	280
2-Jun-26	Faecal coliform (MPN/100 mL)	<1,000	1,600												140			
3-Jun-26	Faecal coliform (MPN/100 mL)	<1,000														140		
4-Jun-26	Faecal coliform (MPN/100 mL)	<1,000						0	5	8								
5-Jun-26	Faecal coliform (MPN/100 mL)	<1,000									11	27	140	350			920	920

		River Name	Nam Ngiep												Nam Chain	Nam Phouan	Nam Xao	Nam Houay Soup
		Zone	Location Refer to Construction Sites												Location Refer to Construction Sites			
			Upstream/Main Reservoir						Re-Regulation Reservoir/Within		Downstream				Tributaries Upstream		Tributaries Downstream	
		Station Code	NNG01	R01	R02	R03	R04	R05	R06	R07	NNG05	NNG06	NNG07	NNG08	NCH01	NPH01	NXA01	NHS01
Date	Parameters (Unit)	Guideline																
21-Apr-26	Total Coliform (MPN/100 mL)	<5,000	1,600											1,600				
22-Apr-26	Total Coliform (MPN/100 mL)	<5,000													1,600			
23-Apr-26	Total Coliform (MPN/100 mL)	<5,000						0	5	5								
24-Apr-26	Total Coliform (MPN/100 mL)	<5,000									11	17	220	350			280	920
5-May-26	Total Coliform (MPN/100 mL)	<5,000	110											350				
6-May-26	Total Coliform (MPN/100 mL)	<5,000													350			
7-May-26	Total Coliform (MPN/100 mL)	<5,000						0	5	11								
8-May-26	Total Coliform (MPN/100 mL)	<5,000									34	170	280	920			1,600	1,600
2-Jun-26	Total Coliform (MPN/100 mL)	<5,000	1,600											920				
3-Jun-26	Total Coliform (MPN/100 mL)	<5,000													140			
4-Jun-26	Total Coliform (MPN/100 mL)	<5,000						0	5	8								
5-Jun-26	Total Coliform (MPN/100 mL)	<5,000									79	140	1,600	1,600			1,600	1,600
21-Apr-26	TKN		2											<1				

River Name	Nam Ngiep												Nam Chain	Nam Phouan	Nam Xao	Nam Houay Soup
Zone	Location Refer to Construction Sites												Location Refer to Construction Sites			
	Upstream/Main Reservoir						Re-Regulation Reservoir/Within		Downstream				Tributaries Upstream		Tributaries Downstream	
Station Code	NNG01	R01	R02	R03	R04	R05	R06	R07	NNG05	NNG06	NNG07	NNG08	NCH01	NPH01	NXA01	NHS01
Guideline																
		2		<1		<1								1		
	1												2			
		<1		1										1		
					<1	<1										
	5												4			
		8		4										3		
					3	3										
	3.26												2.54			
														1.65		
							2.44	2.31								
									1.65	3.06	1.63	2.17			3.03	4.51
	3.07												2.28			
														1.76		
							2.15	2.1								
									1.59	1.64	1.97	1.8			2.76	3.5
	1.96												2.22			
														2.21		
							2.11	3.3								
									1.55	1.77	2.53	2.17			3.18	5.54
	0.08												0.06			
		0.11		0.07										0.18		

River Name	Nam Ngiep												Nam Chain	Nam Phouan	Nam Xao	Nam Houay Soup
Zone	Location Refer to Construction Sites												Location Refer to Construction Sites			
	Upstream/Main Reservoir						Re-Regulation Reservoir/Within		Downstream				Tributaries Upstream		Tributaries Downstream	
Station Code	NNG01	R01	R02	R03	R04	R05	R06	R07	NNG05	NNG06	NNG07	NNG08	NCH01	NPH01	NXA01	NHS01
Guideline																
					0.07	0.05										
	0.09												0.06			
		0.08		0.07										0.11		
					0.06	0.07										
	0.07												0.09			
		0.06		0.05										0.07		
					0.06	0.07										
	0.04												0.07			
		0.06		0.05										0.09		
					0.05	0.04										
	0.06												0.05			
		0.06		0.06										0.08		
					0.07	0.06										
	0.07												0.08			
		0.06		0.07										0.06		

River Name	Nam Ngiep												Nam Chain	Nam Phouan	Nam Xao	Nam Houay Soup
Zone	Location Refer to Construction Sites												Location Refer to Construction Sites			
	Upstream/Main Reservoir						Re-Regulation Reservoir/Within		Downstream				Tributaries Upstream		Tributaries Downstream	
Station Code	NNG01	R01	R02	R03	R04	R05	R06	R07	NNG05	NNG06	NNG07	NNG08	NCH01	NPH01	NXA01	NHS01
Guideline																
					0.05	0.05										
				8.52												
					15.5	16.6										
				17.7												
					73	14.8										
				46.9												
					26.9	3.66										
				6.22												
					5.26	8.44										
				<5												
					44.2	<5										
				6.2												
					8.57	25.21										
				3.18												
					3.16	<1										
				4.28												
					<1	<1										
				5.04												
					<1	<1										
						0										

River Name	Nam Ngiep												Nam Chain	Nam Phouan	Nam Xao	Nam Houay Soup
Zone	Location Refer to Construction Sites												Location Refer to Construction Sites			
	Upstream/Main Reservoir						Re-Regulation Reservoir/Within		Downstream				Tributaries Upstream		Tributaries Downstream	
Station Code	NNG01	R01	R02	R03	R04	R05	R06	R07	NNG05	NNG06	NNG07	NNG08	NCH01	NPH01	NXA01	NHS01
Guideline																
						0										
						0										
						0										
						0										
						0										
				<0.05												
					<0.05	<0.05										
				<0.05												
					<0.05	<0.05										
				<0.05												
					<0.05	<0.05										
				0.32												
					0.14	0.19										
				0.19												
					0.13	0.15										
				0.08												
					0.14	0.09										
				1												

River Name	Nam Ngiep												Nam Chain	Nam Phouan	Nam Xao	Nam Houay Soup
Zone	Location Refer to Construction Sites												Location Refer to Construction Sites			
	Upstream/Main Reservoir						Re-Regulation Reservoir/Within		Downstream				Tributaries Upstream		Tributaries Downstream	
Station Code	NNG01	R01	R02	R03	R04	R05	R06	R07	NNG05	NNG06	NNG07	NNG08	NCH01	NPH01	NXA01	NHS01
Guideline																
					<1	<1										
				2												
					<1	2										
				3												
					3	4										
				0.05												
					0.04	0.06										
				0.05												
					0.06	0.06										
				0.08												
					0.05	0.05										
				0.06												

		River Name	Nam Ngiep												Nam Chain	Nam Phouan	Nam Xao	Nam Houay Soup
		Zone	Location Refer to Construction Sites												Location Refer to Construction Sites			
			Upstream/Main Reservoir						Re-Regulation Reservoir/Within		Downstream				Tributaries Upstream		Tributaries Downstream	
		Station Code	NNG01	R01	R02	R03	R04	R05	R06	R07	NNG05	NNG06	NNG07	NNG08	NCH01	NPH01	NXA01	NHS01
Date	Parameters (Unit)	Guideline																
23-Apr-26	Total Phosphorus (mg/L)-bottom						0.05	0.07										
6-May-26	Total Phosphorus (mg/L)-bottom					0.06												
7-May-26	Total Phosphorus (mg/L)-bottom						0.07	0.07										
3-Jun-26	Total Phosphorus (mg/L)-bottom					0.08												
4-Jun-26	Total Phosphorus (mg/L)-bottom						0.07	0.09										
22-Apr-26	Chlorophyll-A-bottom					0.0005												
23-Apr-26	Chlorophyll-A-bottom						0.0003	0.0008										
6-May-26	Chlorophyll-A-bottom					<0.0001												
7-May-26	Chlorophyll-A-bottom						<0.0001	<0.0001										
3-Jun-26	Chlorophyll-A-bottom					0.0003												
4-Jun-26	Chlorophyll-A-bottom						0.0005	0.0008										
22-Apr-26	Chlorophyll-A			0.0006		0.0009												
23-Apr-26	Chlorophyll-A						0.0012	0.0011										
6-May-26	Chlorophyll-A			<0.0001		<0.0001												
7-May-26	Chlorophyll-A						<0.0001	<0.0001										

		River Name	Nam Ngiep												Nam Chain	Nam Phouan	Nam Xao	Nam Houay Soup
		Zone	Location Refer to Construction Sites												Location Refer to Construction Sites			
			Upstream/Main Reservoir						Re-Regulation Reservoir/Within		Downstream				Tributaries Upstream		Tributaries Downstream	
		Station Code	NNG01	R01	R02	R03	R04	R05	R06	R07	NNG05	NNG06	NNG07	NNG08	NCH01	NPH01	NXA01	NHS01
Date	Parameters (Unit)	Guideline																
3-Jun-26	Chlorophyll-A			0.0006		0.0007												
4-Jun-26	Chlorophyll-A						0.0011	0.0012										

APPENDIX 5-2: EFFLUENT CAMP MONITORING RESULTS – Q2 2026

		Site Name	OSOV1	OSOV 2	Main Powerhouse
		Station Code	EF01	EF13	EF19
Date	Parameter (Unit)	Guideline in the CA			
21-Apr-26	pH	6.0 - 9.0	6.8	7.4	7.1
05-May-26	pH	6.0 - 9.0	7.8	7.5	8
18-May-26	pH	6.0 - 9.0	7	7.6	8.1
02-Jun-26	pH	6.0 - 9.0	7.1	7	7.4
21-Apr-26	Sat. DO (%)		42.2	69.4	24.4
05-May-26	Sat. DO (%)		78.4	92.2	31.5
18-May-26	Sat. DO (%)		84.7	68	64
02-Jun-26	Sat. DO (%)		51.1	73.2	23.5
15-Jun-26	Sat. DO (%)		51.4	62.1	24.1
21-Apr-26	DO (mg/L)		3.26	6.3	1.83
05-May-26	DO (mg/L)		6.07	7.17	2.39
18-May-26	DO (mg/L)		6.59	5.3	4.8
02-Jun-26	DO (mg/L)		3.85	5.49	1.74
15-Jun-26	DO (mg/L)		3.91	4.8	1.81
21-Apr-26	Conductivity (µs/cm)		332	353	1365
05-May-26	Conductivity (µs/cm)		339	319	864
18-May-26	Conductivity (µs/cm)		338	270	1344
02-Jun-26	Conductivity (µs/cm)		352	316	1167
15-Jun-26	Conductivity (µs/cm)		299	282	1008
21-Apr-26	Temperature (°C)		29.55	29.31	30.9
05-May-26	Temperature (°C)		28.88	28.28	29.25
18-May-26	Temperature (°C)		28.57	28.21	30.13
02-Jun-26	Temperature (°C)		30.26	30.41	31.41
15-Jun-26	Temperature (°C)		29.5	28.75	30.48
21-Apr-26	Turbidity (NTU)		2.4	9.57	21.1
05-May-26	Turbidity (NTU)		1.77	5.73	13
18-May-26	Turbidity (NTU)		1.97	4.58	21.4
02-Jun-26	Turbidity (NTU)		2.44	4.15	17.7
15-Jun-26	Turbidity (NTU)		1.52	6.01	18.1
21-Apr-26	TSS (mg/L)	<50	<5	10.83	20.57
05-May-26	TSS (mg/L)	<50	<5	<5	12.43
18-May-26	TSS (mg/L)	<50	<5	<5	14.29
02-Jun-26	TSS (mg/L)	<50	<5	<5	15.87
15-Jun-26	TSS (mg/L)	<50	<5	5.51	9.67
21-Apr-26	BOD ₅ (mg/L)	<30	<6	<6	<6
05-May-26	BOD ₅ (mg/L)	<30	<6	<6	<6
18-May-26	BOD ₅ (mg/L)	<30	<6	<6	<6
02-Jun-26	BOD ₅ (mg/L)	<30	<6	<6	<6
15-Jun-26	BOD ₅ (mg/L)	<30	<6	<6	<6
21-Apr-26	COD (mg/L)	<125	44.8	42.2	115
05-May-26	COD (mg/L)	<125	23	25.6	35
18-May-26	COD (mg/L)	<125	34.5	52.5	26
02-Jun-26	COD (mg/L)	<125	18	20.5	32

		Site Name	OSOV1	OSOV 2	Main Powerhouse
		Station Code	EF01	EF13	EF19
Date	Parameter (Unit)	Guideline in the CA			
15-Jun-26	COD (mg/L)	<125	3.84	80.6	45
21-Apr-26	NH ₃ -N (mg/L)	<10.0	<0.05	0.1	<0.05
05-May-26	NH ₃ -N (mg/L)	<10.0	<0.05	0.1	<0.05
18-May-26	NH ₃ -N (mg/L)	<10.0	<0.1	0.1	8.1
02-Jun-26	NH ₃ -N (mg/L)	<10.0	<0.05	<0.05	<0.05
15-Jun-26	NH ₃ -N (mg/L)	<10.0	<0.05	0.1	0.6
21-Apr-26	Total Nitrogen (mg/L)	<10.0	9.0	18.0	81.0
05-May-26	Total Nitrogen (mg/L)	<10.0	5.0	12.0	17.0
18-May-26	Total Nitrogen (mg/L)	<10.0	7.2	8.0	64.0
02-Jun-26	Total Nitrogen (mg/L)	<10.0	9.0	14.0	33.0
15-Jun-26	Total Nitrogen (mg/L)	<10.0	4.0	11.0	34.0
21-Apr-26	Total Phosphorus (mg/L)	<2	1.05	1.4	7.1
05-May-26	Total Phosphorus (mg/L)	<2	1.18	1.0	6.6
18-May-26	Total Phosphorus (mg/L)	<2	0.85	0.7	8.1
02-Jun-26	Total Phosphorus (mg/L)	<2	0.91	0.8	7.8
15-Jun-26	Total Phosphorus (mg/L)	<2	0.77	1.3	8.1
21-Apr-26	Faecal Coliform (MPN/100 mL)	<400	1,600	0	0
05-May-26	Faecal Coliform (MPN/100 mL)	<400	220	0	0
18-May-26	Faecal Coliform (MPN/100 mL)	<400	5,400	0	0
02-Jun-26	Faecal Coliform (MPN/100 mL)	<400	1,600	0	0
15-Jun-26	Faecal Coliform (MPN/100 mL)	<400	1,600	0	0
21-Apr-26	Total coliform (MPN/100 mL)	<400	1,600	0	0
05-May-26	Total coliform (MPN/100 mL)	<400	1,600	0	0
18-May-26	Total coliform (MPN/100 mL)	<400	9,200	0	0
02-Jun-26	Total coliform (MPN/100 mL)	<400	1,600	0	0
15-Jun-26	Total coliform (MPN/100 mL)	<400	1,600	350	0
21-Apr-26	Oil & Grease (mg/L)	<10.0	<0.7	1.2	<0.7
05-May-26	Oil & Grease (mg/L)	<10.0	<0.7	<0.7	<0.7
18-May-26	Oil & Grease (mg/L)	<10.0	<0.7	3.66	0.9
02-Jun-26	Oil & Grease (mg/L)	<10.0	<0.7	<0.7	<0.7
15-Jun-26	Oil & Grease (mg/L)	<10.0	<0.7	0.66	0.7

APPENDIX 5-3: COMMUNITY GROUNDWATER QUALITY MONITORING RESULTS – Q2 2026

Month Year	Parameter (Unit)	Site Name	Somseun Village	NamPa Village	ThongNoy Village	Pou Village	
		Station	GSXN01	GNPA01	GTHN01	GPOU01	GPOU02
21-Apr-26	pH	6.5 - 9.2				6.5	6.6
27-Apr-26	pH	6.5 - 9.2	6.9	7.5	7		
11-May-26	pH	6.5 - 9.2	7.8	8	7.1		
02-Jun-26	pH	6.5 - 9.2				6.5	
22-Jun-26	pH	6.5 - 9.2	7.5	7.1	6.6		
21-Apr-26	Sat. DO (%)					81	77.6
27-Apr-26	Sat. DO (%)		78.6	82.6	72.4		
11-May-26	Sat. DO (%)		78.4	81.5	76		
02-Jun-26	Sat. DO (%)					96	
22-Jun-26	Sat. DO (%)		80.2	76.8	78		
21-Apr-26	DO (mg/l)					6.99	6.5
27-Apr-26	DO (mg/l)		6.57	6.82	6.04		
11-May-26	DO (mg/l)		6.72	6.6	6.16		
02-Jun-26	DO (mg/l)					7.74	
22-Jun-26	DO (mg/l)		6.35	6.02	6.12		
21-Apr-26	Conductivity (µS/cm)					23	282
27-Apr-26	Conductivity (µS/cm)		368	370	325		
11-May-26	Conductivity (µS/cm)		427	386	397		
02-Jun-26	Conductivity (µS/cm)					19	
22-Jun-26	Conductivity (µS/cm)		389	371	211		
21-Apr-26	Temperature (°C)					25.83	25.55
27-Apr-26	Temperature (°C)		28.12	28.52	28.18		
11-May-26	Temperature (°C)		29.75	30.72	28.22		
02-Jun-26	Temperature (°C)					26.35	
22-Jun-26	Temperature (°C)		28.66	30.25	28.56		
21-Apr-26	Turbidity (NTU)	<20				1.75	0.63
27-Apr-26	Turbidity (NTU)	<20	0.37	1.25	1.56		
11-May-26	Turbidity (NTU)	<20	0.7	0.64	1.43		
02-Jun-26	Turbidity (NTU)	<20				1.72	
22-Jun-26	Turbidity (NTU)	<20	0.77	2.39	2.41		
21-Apr-26	Fecal coliform (MPN/100 mL)	0				0	49
22-Apr-26	Fecal coliform (MPN/100 mL)	0	79	0	240		
11-May-26	Fecal coliform (MPN/100 mL)	0	2	7.8	7.8		
02-Jun-26	Fecal coliform (MPN/100 mL)	0				2	
22-Jun-26	Fecal coliform (MPN/100 mL)	0	0	0	240		
21-Apr-26	E.coli Bacteria (MPN/100 mL)	0				0	49
27-Apr-26	E.coli Bacteria (MPN/100 mL)	0	27	0	34		

		Site Name	Somseun Village	NamPa Village	ThongNoy Village	Pou Village	
Month Year	Parameter (Unit)	Station	GSXN01	GNPA01	GTHN01	GPOU01	GPOU02
11-May-26	E.coli Bacteria (MPN/100 mL)	0	0	7.8	7.8		
02-Jun-26	E.coli Bacteria (MPN/100 mL)	0				2	
22-Jun-26	E.coli Bacteria (MPN/100 mL)	0	0	0	130		
21-Apr-26	Arsenic (mg/l)	<0.05				<0.0002	
21-Apr-26	Cadmium (mg/l)	<0.01				0.0003	
21-Apr-26	Total Iron (mg/l)	<1				<0.1	
21-Apr-26	Manganese (mg/l)	<0.5				<0.1	
21-Apr-26	Mercury (mg/l)	<0.01				<0.0005	
21-Apr-26	Lead (mg/l)	<0.05				<0.003	

APPENDIX 5-4: GRAVITY FED WATER SUPPLY QUALITY MONITORING RESULTS – Q2 2026

		Site Name	Thaheau Village	Hat Gnuin Village	Phouhomxay Village	
		Station	WTHH02	WHGN02	WPHX02	WPHX03
Date	Parameter (Unit)	Guideline				
27-Apr-26	pH	6.5 - 8.5	7.3	7.4	6.7	6.6
11-May-26	pH	6.5 - 8.5	8.1	7.5	7.4	7.3
22-Jun-26	pH	6.5 - 8.5	7.4	7.0	7.7	7.6
27-Apr-26	Sat. DO (%)		80.2	73.9	86.4	84.6
11-May-26	Sat. DO (%)		75.9	78.2	88.1	82.1
22-Jun-26	Sat. DO (%)		83.7	79.2	85.9	89.8
27-Apr-26	DO (mg/L)		6.72	6.11	7.25	7.12
11-May-26	DO (mg/L)		6.41	6.22	6.96	6.14
22-Jun-26	DO (mg/L)		6.68	6.2	6.72	6.94
27-Apr-26	Conductivity (µS/cm)	<1,000	75	344	21	22
11-May-26	Conductivity (µS/cm)	<1,000	67	233	21	20
22-Jun-26	Conductivity (µS/cm)	<1,000	67	297	10	10
27-Apr-26	Temperature (°C)	<35	27.17	27.62	28.88	27.73
11-May-26	Temperature (°C)	<35	28.31	29.46	29.62	29.79
22-Jun-26	Temperature (°C)	<35	28.41	28.68	30.09	29.25
27-Apr-26	Turbidity (NTU)	<10	3.35	0.89	1.66	1.44
11-May-26	Turbidity (NTU)	<10	2.5	0.78	1.57	1.76
22-Jun-26	Turbidity (NTU)	<10	3.19	8	2.81	2.12
27-Apr-26	Faecal Coliform (MPN/100 mL)	0	17	4.5	79	79
11-May-26	Faecal Coliform (MPN/100 mL)	0	33	79	7.8	11
22-Jun-26	Faecal Coliform (MPN/100 mL)	0	13	280	13	17
27-Apr-26	E.coli Bacteria (MPN/100 mL)	0	11	4.5	27	27
11-May-26	E.coli Bacteria (MPN/100 mL)	0	11	17	4.5	4.5
22-Jun-26	E.coli Bacteria (MPN/100 mL)	0	4.5	280	4.5	17

APPENDIX 5-5: LANDFILL LEACHATE QUALITY MONITORING RESULTS – Q2 2026

		Site Name	NNP1 Landfill Leachate					Houay Soup Landfill	
			Pond No.01	Pond No.02	Pond No.03	Pond No.04	Discharge Point	Last pond	Discharged Point
			LL1	LL2	LL3	LL4	LL5	LL6	LL7
			LL1	LL2	LL3	LL4	LL5	LL6	LL7
Date	Parameter (Unit)	Guideline							
2-Jun-26	pH	6.0-9.0				6.5		6.6	
2-Jun-26	Sat. DO (%)					74.1		94	
2-Jun-26	DO (mg/L)					5.18		6.33	
2-Jun-26	Conductivity (µS/cm)					59		98	
2-Jun-26	Temperature (°C)					34.74		36.9	
2-Jun-26	Turbidity (NTU)					13.2		11.2	
2-Jun-26	BOD5 (mg/L)	<30				<6		<6	
2-Jun-26	COD (mg/L)	<125				55		34.5	
2-Jun-26	Faecal Coliform (MPN/100mL)	<400				2		23	
2-Jun-26	Total Coliform (MPN/100mL)	<400				23		23	
2-Jun-26	Total Nitrogen (mg/L)	<10				4		5	
2-Jun-26	Lead (mg/L)	<0.2				<0.02		<0.02	
2-Jun-26	Copper (mg/L)					<0.1		<0.1	
2-Jun-26	Iron (mg/L)					0.3		0.34	
2-Jun-26	Ammonia nitrogen (mg/L)	<10				<0.1		<0.1	
2-Jun-26	Oil & Grease (mg/L)	<10				<0.7		<0.7	

APPENDIX 6: DWP AND SSESMP FOR SLOPE PROTECTION ON THE LEFT BANK OF THE MAIN DAM

NN1-SD5-DWP-SP-0
001 DETAIL WORK PI



NN1-SD5-ESM-SP-0
001 SS-ESMMP FOR

APPENDIX 7: EMO COMMENTS & CONTRACTOR'S RESPONSES TO DWP AND SSESMP FOR SLOPE PROTECTION ON THE LEFT BANK OF THE MAIN DAM

DAS and EMO
Comments_DWP&SS



NN1-SD5-DWP-SP-0
001 DETAIL WORK PI



NN1-SD5-ESM-SP-0
001 SS-ESMMP FOR

APPENDIX 8: NONCONFORMITY FOR OIL SPILLED ALONG THE ROAD BETWEEN OSOV2 TO OSOV1



FR_S10-01_NCR for
Oil Spilled along the