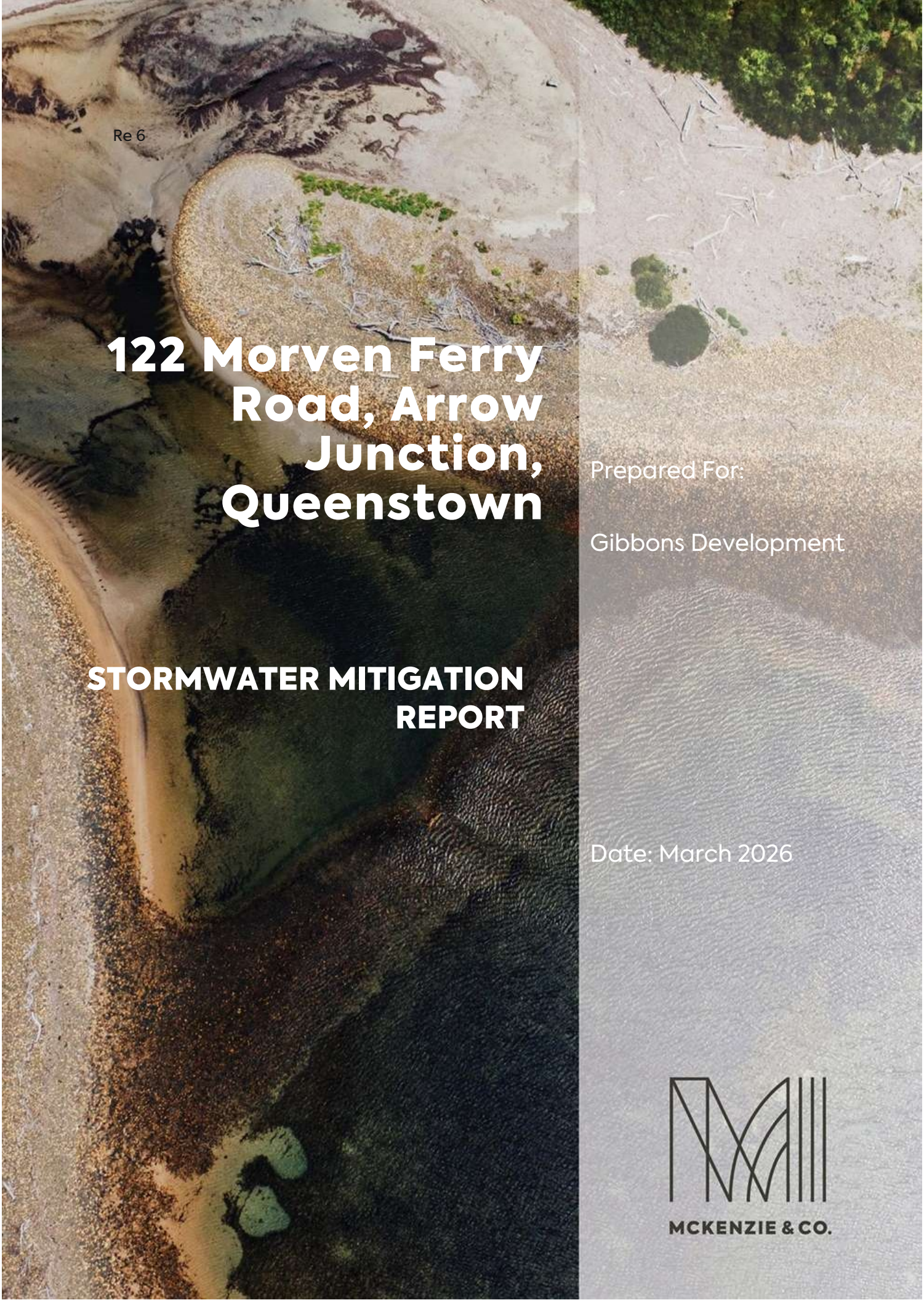


Re 6

122 Morven Ferry Road, Arrow Junction, Queenstown

Prepared For:

Gibbons Development

STORMWATER MITIGATION REPORT

Date: March 2026

MCKENZIE & CO.

DOCUMENT CONTROL RECORD

Project: 122 Morven Ferry Road Development

Project #: 4048

Client: Gibbons Development

Location: 122 Morven Ferry Road, Arrow Junction, Queenstown

Revision	Date	Originator	Checker	Approver	Description
A	24/02/26	HS	HS	SL	RESOURCE CONSENT
B	04/03/26	PK	SL	SL	RESOURCE CONSENT

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1.0 Introduction

1.1 The Application

McKenzie & Co Consultants Ltd (MCCL) has been engaged by Gibbons Development (the Applicant) to prepare this Stormwater Mitigation Report in support of the proposed development at 122 Morven Ferry Road, Arrow Junction, Queenstown (the Site).

This report summarises the existing stormwater and flood risk affecting the Site and presents the proposed stormwater management strategy to mitigate development effects and ensure compliance with the Queenstown Lakes District Council (QLDC) Land Development and Subdivision Code of Practice (2025), the National Environmental Standards for Freshwater (NES-F) 2020, and the National Policy Statement for Natural Hazards (NPS-NH) 2025.

Hydrologic and hydraulic modelling confirms that:

- The Site is influenced by significant upstream catchments.
- Post-development discharge rates to downstream properties are equal to or less than pre-development peak flows for all assessed design events.
- No adverse upstream flooding effects are created.
- Freshwater features (wetlands and intermittent streams) are retained and protected.
- The proposed stormwater system achieves hydraulic neutrality and reduces downstream flood risk.

2.0 Site Information

2.1 Site Locality

The Site comprises approximately 212.76 hectares of rural land across seven freehold titles, listed below in Table 1. It is located within the rural setting of Arrow Junction in the Wakatipu Basin near Queenstown. Morven Hill forms the highest topographical point along the western boundary.

Ground levels generally fall from the south-west toward the north-east, with surface runoff ultimately discharging to the Arrow River.

Access to the Site is provided from Morven Ferry Road, an unsealed rural road with roadside swales conveying stormwater north-east toward the Arrow River.



Figure 1: Site Location (Source: Google Earth)

Table 1 – Site Summary

EXISTING SITE SUMMARY INFORMATION		
Site Address	•	122 Morven Ferry Road, Arrow Junction, Queenstown
Legal Description	•	Lot 2 DP 601937 (RT: 1174254) – 24.7256 ha
	•	Lot 3 DP 529201 (RT: 857180) – 2.0584 ha
	•	Lot 5 DP 300661 and Sections 21, 23, 24, 64, 71 in Blocks VIII & IX Shotover SD (RT: 946021 – 82.6923 ha
	•	Section 22 Block IX Shotover SD (RT: OT406/118) – 23.0823 ha
	•	Section 23 Block IX Shotover SD (RT: OT7D/1456) – 26.5069 ha

EXISTING SITE SUMMARY INFORMATION	
	• Section 1-2 SO 478164, Section 25 Block IX Shotover SD, Lots 3-4 DP 300661 (RT: 946040) – 45.1025 ha • Section 1 SO 420327 (RT: 492534) – 8.5980 ha
Site Area	• 212.76 ha

2.2 Existing Hydrology and Freshwater Features

Three intermittent streams and four wetlands have been identified within the Site by Viridis Environmental Consultants. These features will be retained, and existing hydrological connections will be maintained.

The presence of wetlands triggers consideration under the National Environmental Standards for Freshwater (NES-F), particularly in relation to setback, diversion, and discharge requirements. The proposed development has been designed to avoid earthworks within identified wetland areas, maintain existing inflow regimes, and provide appropriate stormwater quality treatment prior to discharge.

Management measures to ensure compliance with NES-F are addressed in the Construction Management Plan.

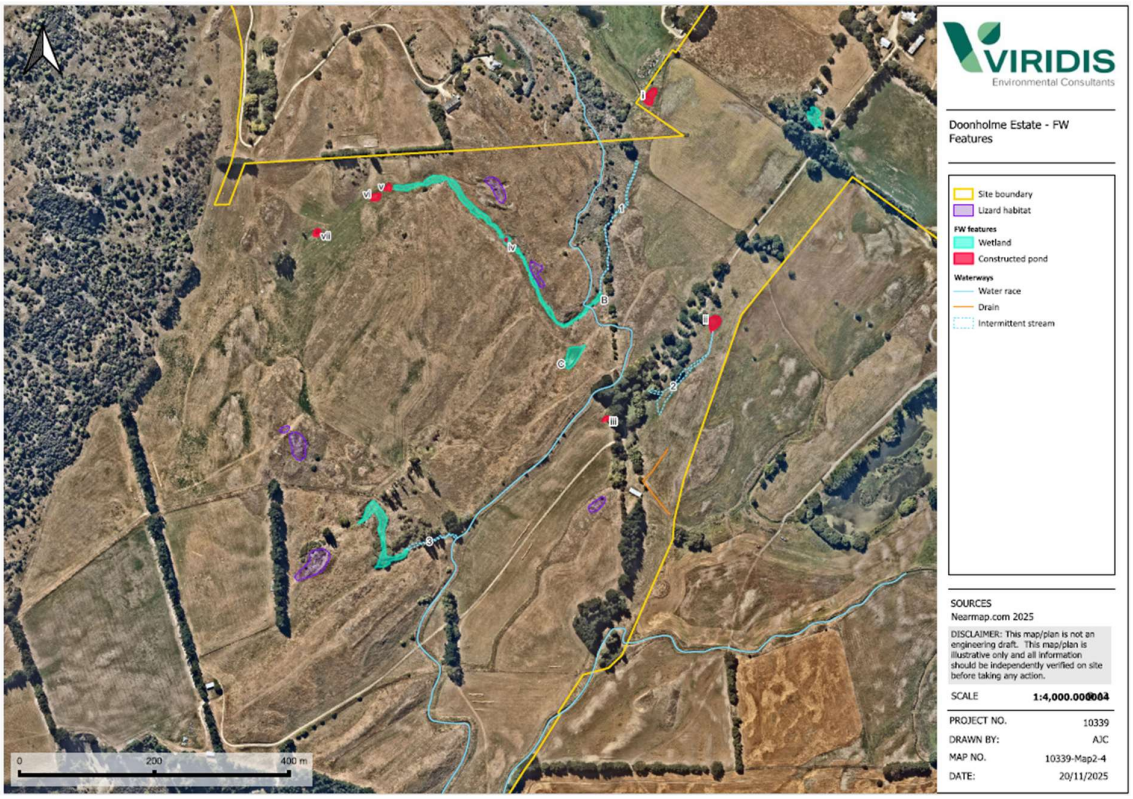


Figure 2 - Freshwater Features - Viridis, November 2025

2.3 Soils and Infiltration

Soakage testing undertaken by Kirk Roberts Consulting (Job No. 2555087, dated 28 October 2025) indicates that the underlying ground conditions exhibit generally poor infiltration capacity across the Site. Eleven test pits (SK-01 to SK-11) were assessed using falling head soakage testing.

Calculated design soakage rates (factored by a factor of safety of 2) ranged from 0.00 to 0.12 $m^3/hr/m^2$, with the majority of test locations recording design rates of 0.00–0.01 $m^3/hr/m^2$. These results confirm that stormwater disposal via infiltration is not feasible for the proposed development.

Soil Maps data for the Morven Ferry catchment identifies that the Site soils are predominantly Hydrologic Soil Group C. A Curve Number (CN) of 74 has been adopted for hydrologic modelling, consistent with pastoral land in Hydrologic Soil Group C with good grass cover.

3.0 Regulatory Framework

3.1 QLDC Land Development and Subdivision Code of Practice (2025)

- Peak discharge neutrality for key design storm events.
- Minimum 500 mm freeboard to habitable floor levels above the 1% AEP event.
- Inclusion of climate change allowances in design rainfall selection.

3.2 National Environmental Standards for Freshwater (NES-F) 2020

- Wetlands and intermittent streams retained and protected.
- No diversion, constriction, or infilling of wetland areas.
- Water quality treatment provided prior to discharge to freshwater features.

3.3 National Policy Statement for Natural Hazards (NPS-NH) 2025

Flooding is the primary natural hazard relevant to stormwater design for the Site. Flood risk has been assessed using the likelihood and consequence framework prescribed under the NPS-NH.

Consequence Level	Likelihood Level: Almost Certain	Very Likely	Likely	Possible	Unlikely	Rare	Very Rare
ARI (years)	up to 10	10-20	20-50	50-100	100-500	500-5000	> 5000
AEP	10% or more	10% to 5%	5% to 2%	2% to 1%	1% to 0.2%	0.2% to 0.02%	< 0.02%
Catastrophic	Very High	Very High	Very High	High	Medium	Medium	Medium
Major	Very High	Very High	High	High	Medium	Medium	Medium
Moderate	High	High	High	Medium	Medium	Low	Low
Minor	Medium	Medium	Medium	Medium	Low	Low	Low
Negligible	Low	Low	Low	Low	Low	Low	Low

Figure 3 Hazard Risk Assessment (Source: National Policy Statement – Natural Hazards 2025, Figure 1)

The 1% AEP (100-year ARI) event including Climate Change has been adopted as the primary benchmark for assessing flood risk and system performance. The proposed stormwater management system has been designed to ensure flooding consequences remain minor and do not result in unacceptable risk to people, property, or downstream receptors.

4.0 Hydrologic and Hydraulic Modelling

A combined hydrologic and hydraulic modelling framework has been adopted to quantify existing and post-development flood behaviour. Catchment delineation was undertaken using detailed topographic survey data and LINZ Digital Elevation Model (DEM) data.

Hydrologic modelling was undertaken using HEC-HMS applying the SCS Curve Number loss method (CN = 74). The model is shown below in Figure 4 below. Resulting hydrographs were applied to a two-dimensional TUFLOW hydraulic model to assess flood levels, extents, and velocities entering the Site, within the Site, and downstream of the Site.

Both rainfall-on-grid (direct rainfall) and lumped catchment inflow boundary condition approaches were applied. Comparison between the two approaches demonstrated good agreement, providing confidence in the predicted flood behaviour. Full model configuration, parameters, assumptions, and sensitivity testing are documented in the separate Basis of Modelling for Ridgeburn Flood Model, 2026, which is attached in Appendix A.

Detailed model calculation outputs can be found in Appendix B.

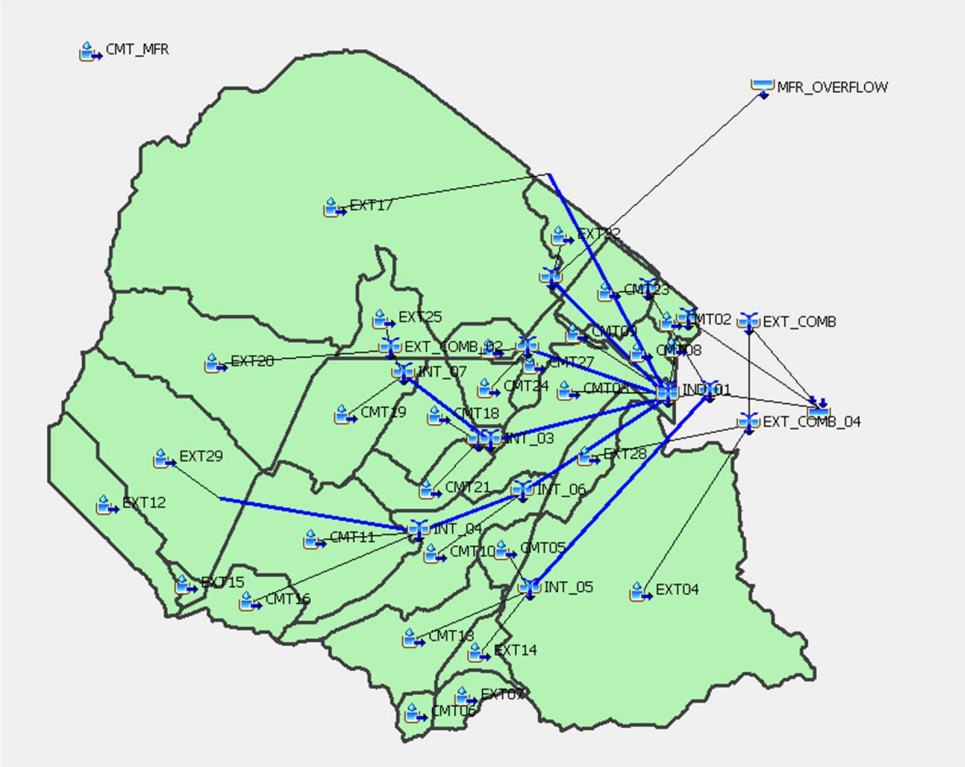


Figure 4: HEC-HMS pre-development catchments and schematics

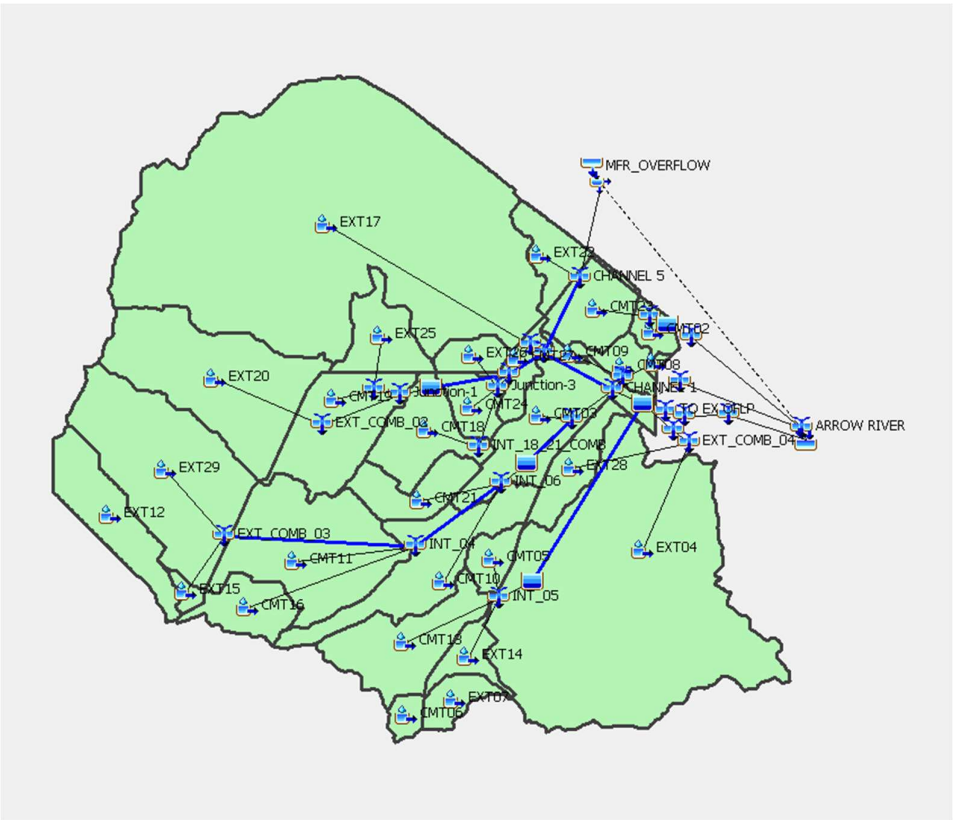


Figure 5: HEC-HMS post-development catchments and schematics

5.0 Existing Flood Hazard

The existing scenario flood model has been simulated and resultant plans are included in Appendix C, and the 1% with climate change plans, is shown below in Figure 6 – Predevelopment overland flowpathsFigure 6, notated with key overland flowpaths modelled.

Flood hazards have been identified along site boundaries and within the site. Key areas include:

1. A large upstream catchment located north of Morven Ferry Road which overtops and enters the site along the western boundary (Refer Section 5.1).
2. An overland flow path enters the western boundary, from 100 Morven Ferry Road (Refer Section 5.2).
3. Morven Ferry Hill catchment enters at south of the site, from two catchments on Morven Ferry hill (refer Section 5.3)
4. Discharge from the site, downstream into 138 Morven Ferry Road, (Refer Section 5.4)
5. Existing Overland flowpath exits the site discharging to 136 Morven Ferry Rd.
6. Ultimate discharge for all Overland Flowpaths associated with the site, adjacent to the Arrow Junction Rd/Morven Ferry Road intersection, into a tributary to the Arrow River.

These are shown below in Figure 6.

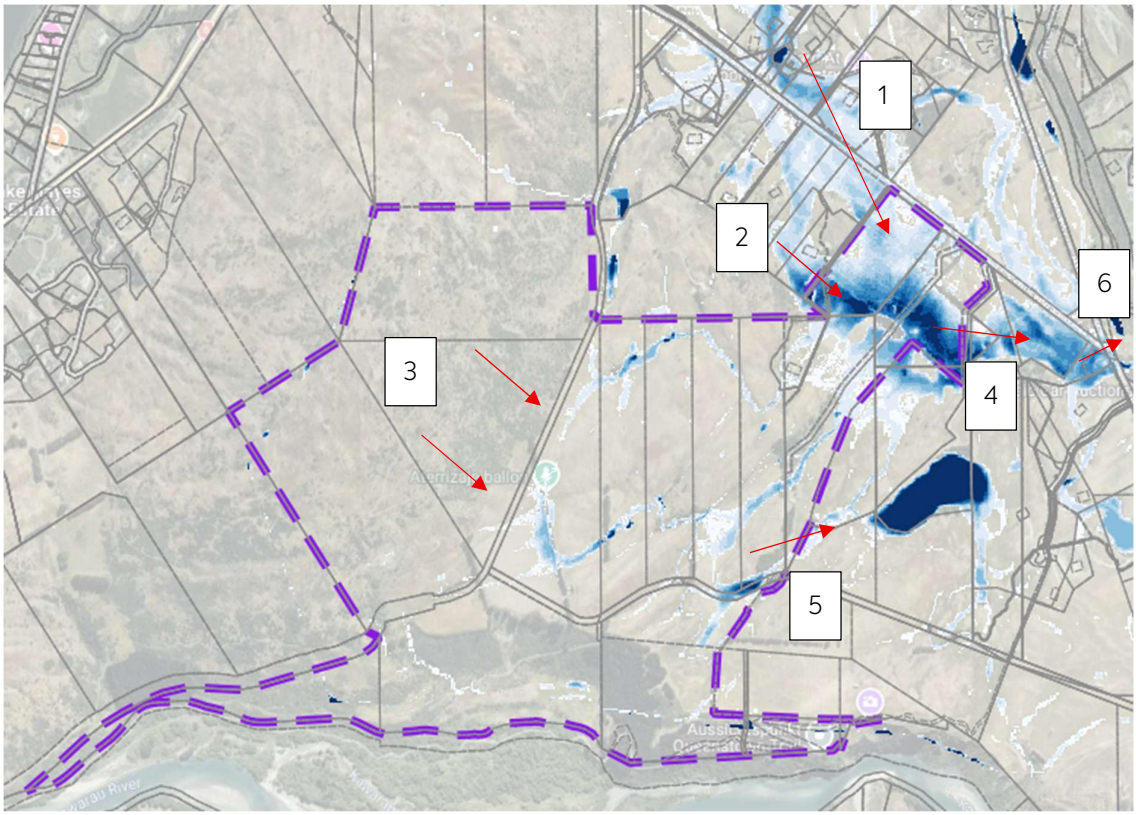
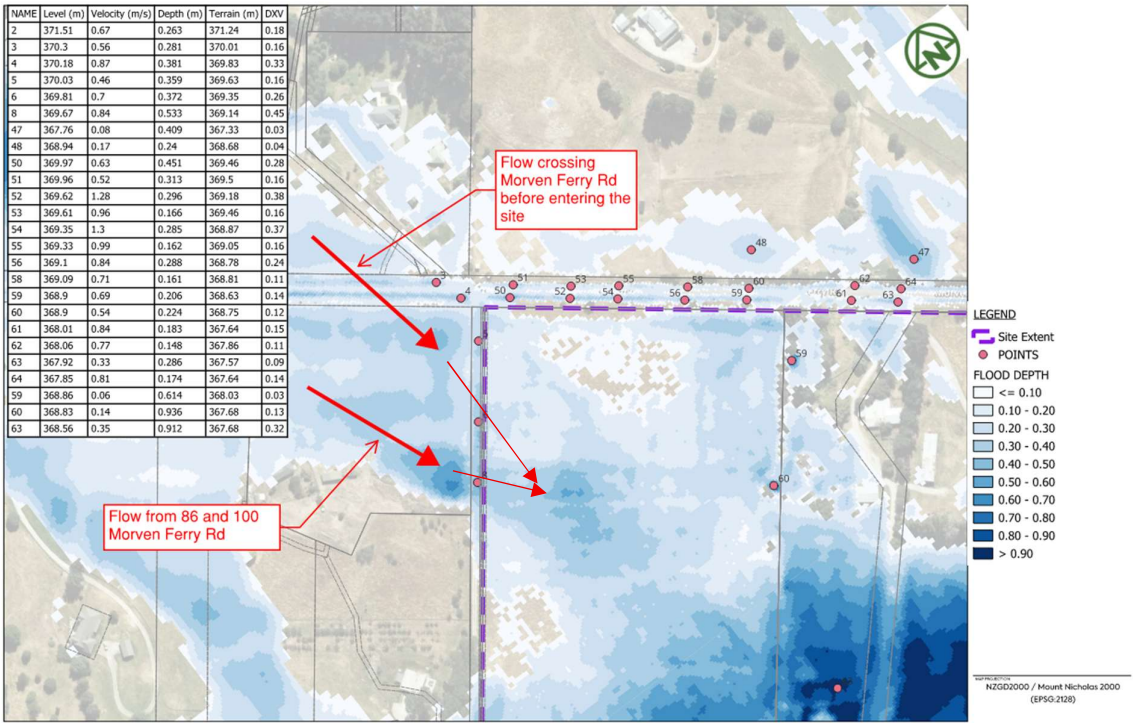


Figure 6 – Predevelopment overland flowpaths

5.1 Morven Ferry Road Inflow – North

The hydraulic model indicates that there is a large inflow from Morven Ferry Road entering 86 and 100 Morven Ferry Road before entering the site.



NAME	Level (m)	Velocity (m/s)	Depth (m)	Terrain (m)	DXV
2	371.51	0.67	0.263	371.24	0.18
3	370.3	0.56	0.281	370.01	0.16
4	370.18	0.87	0.381	369.83	0.33
5	370.03	0.46	0.359	369.63	0.16
6	369.81	0.7	0.372	369.35	0.26
8	369.67	0.84	0.533	369.14	0.45
47	367.76	0.08	0.409	367.33	0.03
48	368.94	0.17	0.24	368.68	0.04
50	369.97	0.63	0.451	369.46	0.28
51	369.96	0.52	0.313	369.5	0.16
52	369.62	1.28	0.296	369.18	0.38
53	369.61	0.96	0.166	369.46	0.16
54	369.35	1.3	0.285	368.87	0.37
55	369.33	0.99	0.162	369.05	0.16
56	369.1	0.84	0.288	368.78	0.24
58	369.09	0.71	0.161	368.81	0.11
59	368.9	0.69	0.206	368.63	0.14
60	368.9	0.54	0.224	368.75	0.12
61	368.01	0.84	0.183	367.64	0.15
62	368.06	0.77	0.148	367.86	0.11
63	367.92	0.33	0.286	367.57	0.09
64	367.85	0.81	0.174	367.64	0.14
59	368.86	0.06	0.614	368.03	0.03
60	368.83	0.14	0.936	367.68	0.13
63	368.56	0.35	0.912	367.68	0.32

Figure 7: Morven Ferry Overflow North

Table 2 – Flows taken at Figure 5

Average Recurrence Interval – ARI (Years)	Pre-Development Peak Flow Rate (m^3/s)
2	0.445
10	2.780
100	14.121

5.2 100 Morven Ferry Road South

The hydraulic model indicates a significant inflow from 100 Morven Ferry Road before discharging onto the subject site.

Table 3 – Flows taken at Figure 6,

Average Recurrence Interval – ARI (Years)	Pre-Development Peak Flow Rate (m^3/s)
2	0.547
10	1.814
100	5.825

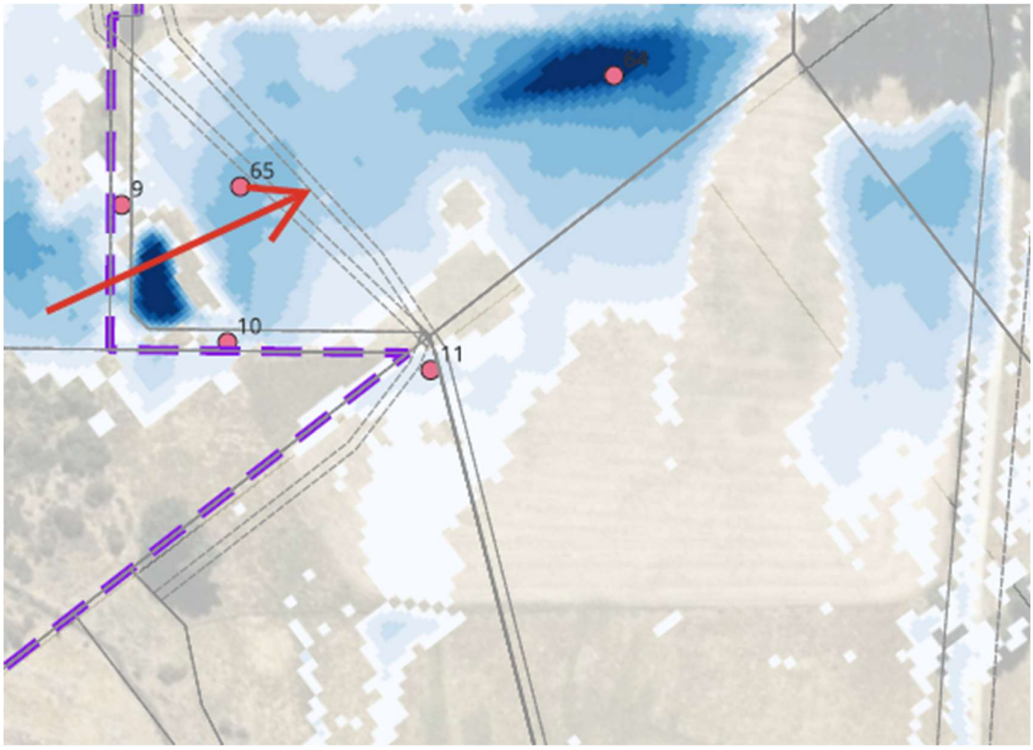


Figure 8 – 100 Morven Ferry South

5.3 Morven Hill Catchment

Two main Morven Ferry hill catchments identified per the catchment plan (**Error! Reference source not found.**), are EXT29 and EXT20. The peak flows are per follows.

Average Recurrence Interval – ARI (Years)	EXT 29 Pre-Development Peak Flow Rate (m^3/s)	EXT 20 Pre-Development Peak Flow Rate (m^3/s)
2	0.378	0.369
10	0.920	0.912
100	2.526	2.522

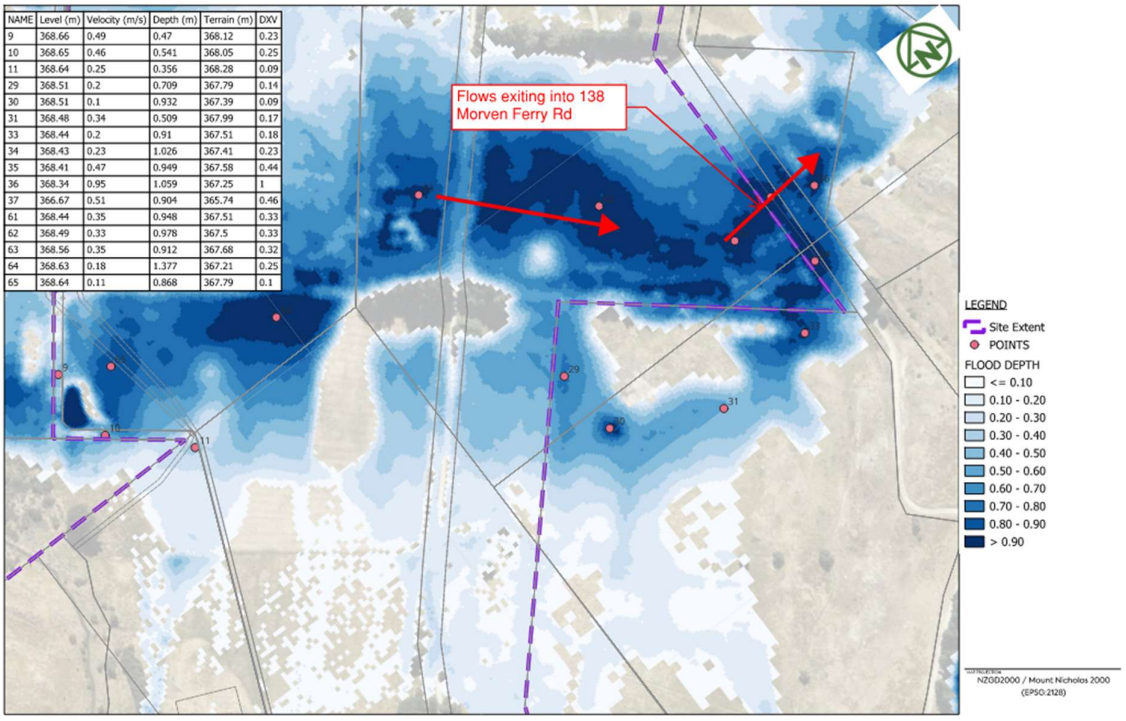
As the slope hill is steep with a spread-out terrain, there is no defined flow path entering the site. However, an intercepting channel and domed grated inlet structure are proposed to capture the flow and to be discharged in a controlled manner via a piped network.

5.4 Discharge into 138 Morven Ferry Road

Under pre-development conditions, two discharge points convey runoff from the site to downstream areas. The larger and more significant discharge is located on the southern boundary where flows exit the site onto the property at 138 Morven Ferry Road.

During a 100-year ARI storm event, approximately $22m^3/s$ of runoff discharges across this boundary. This substantial flow volume represents a key constraint for the development, as any increase to this discharge would pose an unacceptable flood hazard to the downstream property. The stormwater management strategy must ensure that post-development peak flows do not exceed pre-development levels at this critical discharge location.

Table below summarizes the pre-development peak discharges for various storm return periods.



NAME	Level (m)	Velocity (m/s)	Depth (m)	Terrain (m)	DXV
9	368.66	0.49	0.47	368.12	0.23
10	368.65	0.46	0.541	368.05	0.25
11	368.64	0.25	0.356	368.28	0.09
29	368.51	0.2	0.709	367.79	0.14
30	368.51	0.1	0.932	367.39	0.09
31	368.48	0.34	0.509	367.99	0.17
33	368.44	0.2	0.91	367.51	0.18
34	368.43	0.23	1.026	367.41	0.23
35	368.41	0.47	0.949	367.58	0.44
36	368.34	0.95	1.059	367.25	1
37	366.67	0.51	0.904	365.74	0.46
61	368.44	0.35	0.948	367.51	0.33
62	368.49	0.33	0.978	367.5	0.33
63	368.56	0.35	0.912	367.68	0.32
64	368.63	0.18	1.377	367.21	0.25
65	368.64	0.11	0.868	367.79	0.1

Figure 9: Pre-Development Discharge into 138 Morven Ferry Road

Average Recurrence Interval – ARI (Years)	Pre-Development Peak Flow Rate (m^3/s)
2	1.16
10	5.02
100	22.22

5.5 Discharge into 136 Morven Ferry Road

An existing overland flow path from the site to 136 Morven Ferry Road has been identified. This flow path will be maintained at pre-development conditions to ensure there is no increase in flow or adverse effects resulting from the proposed works.

5.6 Discharge into Arrow River Tributary

The existing overland flow path from the wider catchment discharges at the intersection of Arrow Junction Road and Morven Ferry Road, which represents the natural low point of the area. All overland flow paths within the catchment ultimately converge at this location.

It is proposed that this point will be retained as the ultimate discharge location under the proposed mitigation strategy.

6.0 Proposed Stormwater Mitigation Strategy

The proposed stormwater management strategy has been developed to address the identified flood hazards while ensuring compliance with all regulatory requirements. The strategy comprises four integrated components that work together to achieve hydraulic neutrality and environmental protection:

1. Upstream Flow Diversion: Intercepting and redirecting major external inflows before they enter the developed areas. This is noted with label 1 in Figure 10 below
2. Water Quality Treatment: Providing appropriate treatment prior to discharge to receiving environments, through wetland ponds and swales.
3. Attenuation Basin Network: Controlling peak discharge rates to maintain pre-development flow levels, shown with labels 2 – 8 in Figure 10 below by blue ponds.
4. Controlled Discharge: Ensuring flows are conveyed safely to receiving environments without causing erosion or downstream flooding, at labels A, B and C.

An overview of the strategy is shown on plan 4700, and shown below in Figure 10. The discharge locations are shown by points labelled A, B and C.



Figure 10 – Stormwater Strategy

The post development flood levels and associated flows, velocities, depths and differences are included in Appendix D and are shown below in Figure 11.

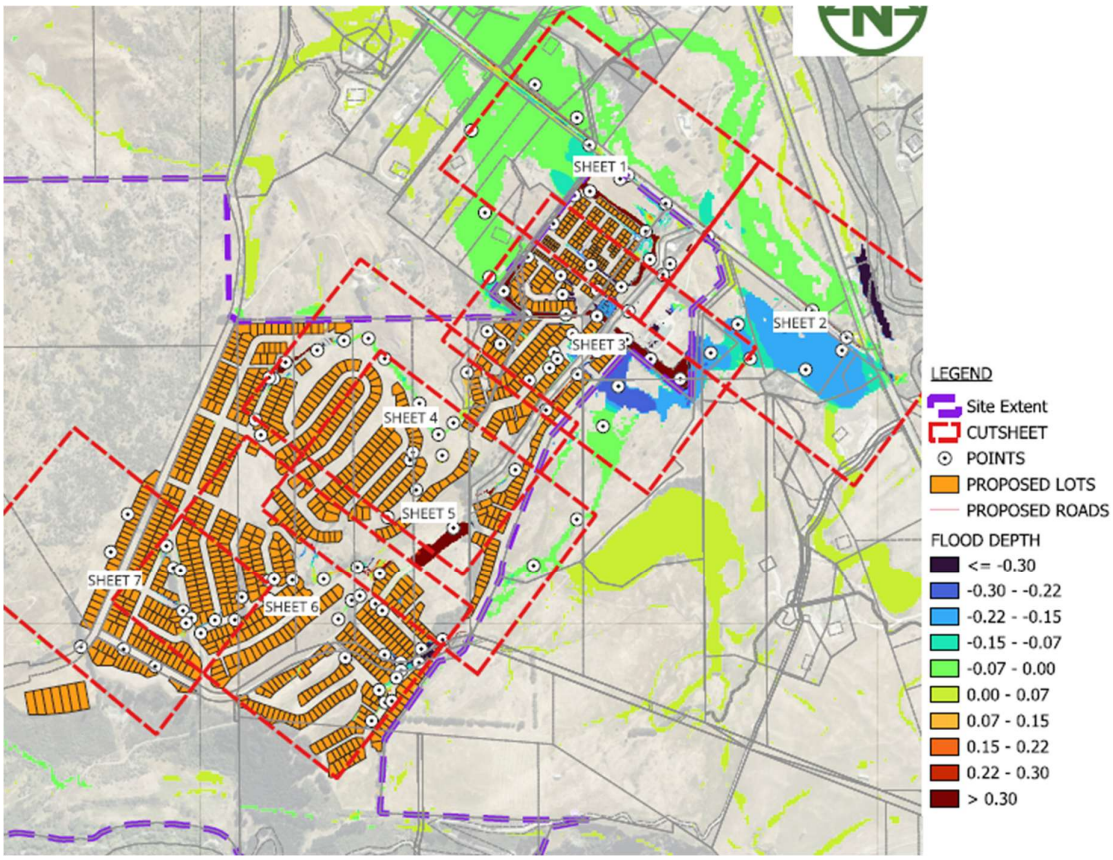


Figure 11 – Post Development Flood Difference Plan

Plans showing the differences between the pre and post development flood levels are included in Appendix E. The effects demonstrated from these model result outputs are outlined in section 7.0.

6.1 Diversion of Morven Ferry Road overflow

A series of five domed grated inlet structures, a widened large table drain and a conveyance pipe down Morven Ferry Rd to the Arrow River, is proposed to intercept and reduce the flow from entering the site along western boundary, noted as "1" on Figure 10 above. The outlet of the proposed pipe will be located at the existing overland flow path (OLFP) leading to the Arrow River near the intersection of Morven Ferry Road and Arrow Junction Road. The pipe is proposed to be 1950mm diameter currently, however this can be optimised as part of detailed design.

"At the eastern boundary a pipe and large table drain intercept and divert a significant proportion of the upstream catchment flow. For example, the inflows coming from 86 Morven

Ferry Road and 100 Morven Ferry Road has reduced from 5.8 m^3/s and 14.1m^3/s to 5.2 m^3/s and 6.6m^3/s respectively.

6.2 Stormwater Treatment (Water Quality)

Stormwater generated from developed areas will be treated prior to discharge to any sensitive receiving environment, including wetlands, intermittent streams, and downstream properties. Treatment will be achieved through a combination of constructed wetlands, bioretention systems, swales, constructed wetlands, and gross pollutant traps designed in accordance with Auckland Council Guideline Document GD01.

Where possible, constructed wetlands have been proposed to be used for attenuation also to limit peak flows to predevelopment levels.

6.3 Attenuation Basin Network

A series of attenuation basins are proposed to mitigate increases in peak discharge resulting from additional impervious surfaces. The basins will be designed to attenuate the 50%, 5% and 1% Annual Exceedance Probability (AEP) storms, with climate change allowances incorporated into storage sizing.

This reduces the peak flows generated from the increased impervious surfaces from the development. Detailed calculations and plans can be found in Appendix B.

6.4 Controlled Discharges at Arrow River

Stormwater discharge to the Arrow River will occur at the existing low point within the wider catchment at the intersection of Arrow Junction Road and Morven Ferry Road. This location represents the established discharge point for the surrounding overland flow path network, and it is proposed that this discharge point will be retained as part of the overall stormwater mitigation strategy.

An energy dissipation device is proposed at the outlet of the Morven Ferry Road stormwater network to reduce outlet velocities associated with concentrated pipe discharge. Subject to detailed design, this is anticipated to comprise a stilling basin, providing controlled discharge conditions and reducing erosion potential at the receiving environment interface.

It is noted that this discharge location corresponds to the existing overland flow path outlet, which currently has no formal erosion protection measures in place. The proposed works will therefore improve the resilience and stability of the discharge point relative to the existing situation.

Upgrades to Morven Ferry Road include improvements to the existing roadside swales to enhance hydraulic capacity and stormwater treatment performance. Treated road runoff, combined with upstream catchment flows, will discharge to the Arrow River via Discharge Point B, through a suitably designed outlet structure incorporating erosion protection and energy dissipation measures.

The proposed discharge arrangement will ensure post-development peak outflows match pre-development outflows, thereby avoiding any increase in downstream flood hazard or adverse effects on the Arrow River

6.5 Culverts

Culverts will be installed at road crossings and other key drainage locations to safely convey stormwater through the development and maintain existing overland flow conveyance. Culvert sizing will be confirmed at detailed design stage, and all culverts will be designed to convey the 1% AEP event, with a minimum 500 mm freeboard to adjacent road levels where practicable.

All culvert inlets and outlets will incorporate appropriate protection measures, including erosion control and energy dissipation, to minimise the potential for scour, instability, or sediment mobilisation. Culvert installation will be undertaken in a manner that maintains existing flow paths and avoids unintended diversion or concentration of overland flows.

Refer to the 4000-series drawings for the culvert location plan.

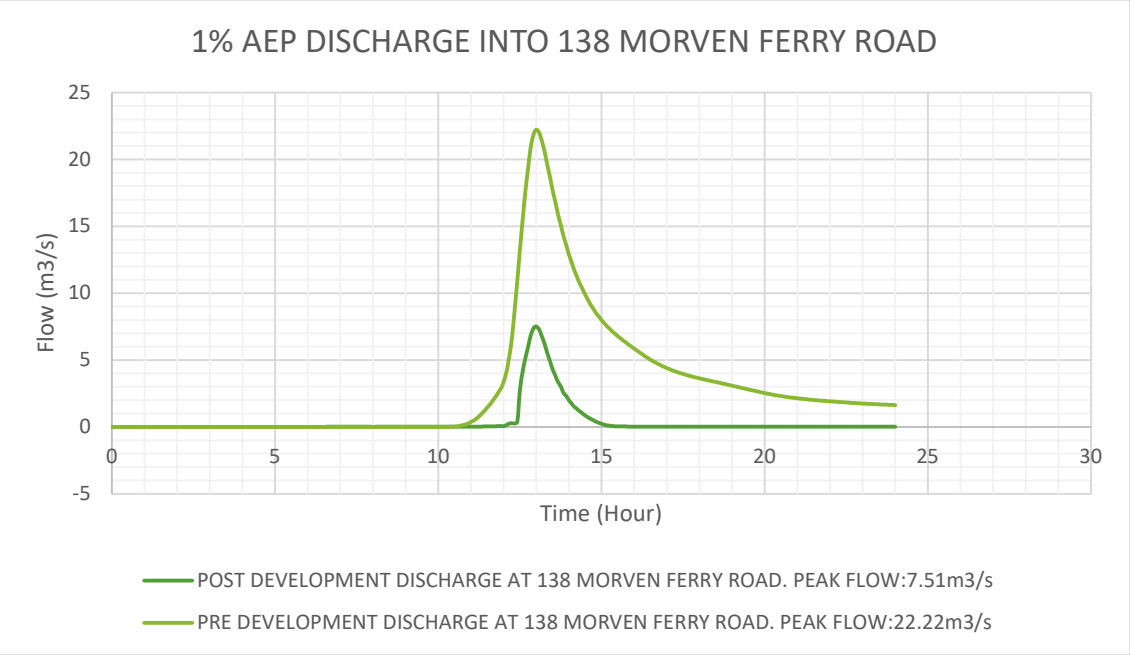
7.0 **Post-Development Effects Assessment**

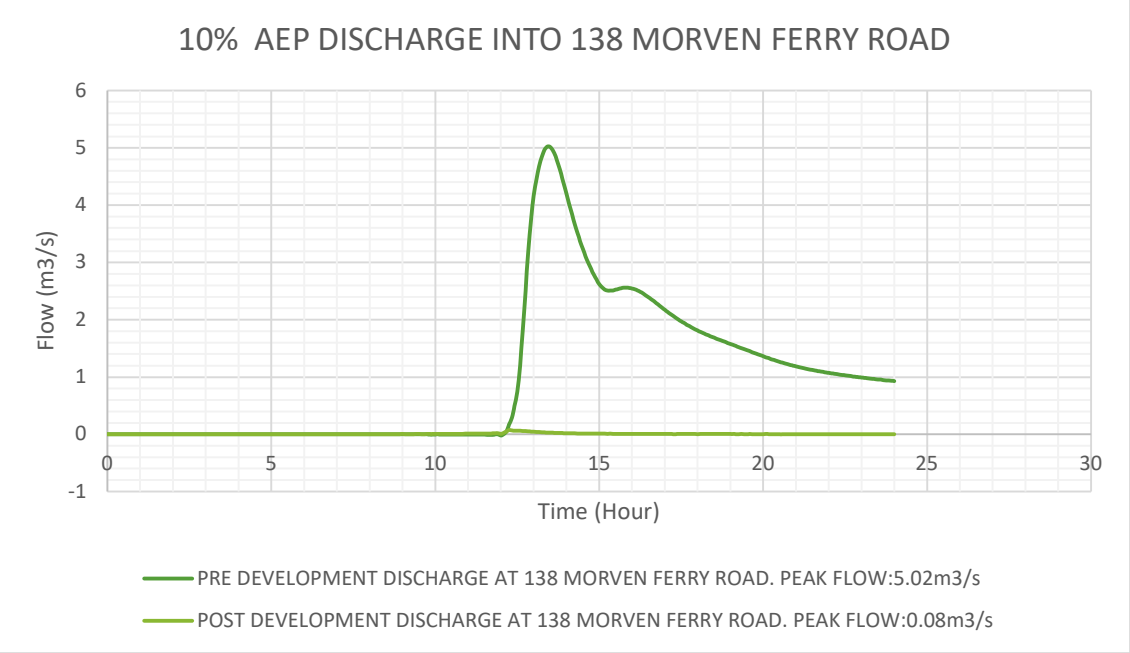
7.1 *Upstream*

Modelling indicates no increase in flood levels, velocities, or extents on upstream properties, including 86 and 100 Morven Ferry Road. The proposed interception and conveyance measures do not create adverse upstream flooding effects.

7.1 Downstream

Post-development modelling indicates that peak discharges to 138 Morven Ferry Road are reduced for all assessed design events. Flood depths and velocities downstream are also reduced relative to pre-development conditions.





For storm events less than the 10% AEP, the flow is fully conveyed by the network into the Arrow River, thus eliminating direct discharge into 138 Morven Ferry Road.

For the 1% AEP event, the peak discharge reduction of 14.71 m^3/s (≈66%). For the 10% AEP event, the peak discharge reduction of 4.94 m^3/s (≈98%).

The southern flow path has a decreased flow, which will have a decreased flood hazard. The net effect of both of these flowpaths is a reduction overall in flood effect.

A summary of the key discharges is labelled below in Table 2

Table 2 - Key discharge point pre and post development comparison, Refer to Figure 9 for label locations

Location	Pre – Development Flow m³/s	Post – Development Flow m³/s	Change m³/s
Label A – 138 Morven Ferry Rd	22.222	7.51	-14.712
Label B – Arrow River Tributary discharge	24.779	23.006	-1.773
Label C – Discharge to 136 Morven Ferry Rd	1.14	1.574	0.43



Maximum reduction in flood depth at eastern boundary: 0.18m (100yr RCP8.5).

No increase in hazard category.

7.2 OLFP Within Development

Overland flow paths within the development will be managed through naturalised swales, existing stream corridors, and defined conveyance corridors, e.g roads. Exceedance pathways have been incorporated to safely convey flows during events exceeding design capacity.

7.3 Freeboard Compliance

Freeboard for all lots along flood plains have been confirmed, and a freeboard plan has been prepared. This is included in Appendix F.

7.4 Blockage Scenario (Scenario 6)

A blockage sensitivity test (Scenario 6) has been undertaken to assess network performance under partial obstruction conditions. In this scenario, the Morven Ferry Diversion and Pond 1 pipe network were conservatively modelled with a 50% blockage factor.

For the proposed box culverts, given the upstream catchment is predominantly rural, where debris loading potential is considered low and unlikely to exceed approximately one-third of the culvert width. In accordance with the NZTA Bridge Manual, a 10% blockage factor has therefore been adopted for the box culverts. The combined assumptions represent a conservative stress test of the system under reduced conveyance conditions.

Control Dimension	At-Site Debris Potential		
	High	Medium	Low
$W < L_{10}$	100%	50%	25%
$W \geq L_{10} \leq 3*L_{10}$	20%	10%	0%
$W > 3*L_{10}$	10%	0%	0%

7.5 *Hazard mapping*

Flood hazard assessments have been prepared for both the Pre-development and Post-development 1% Annual Exceedance Probability (AEP) + Climate Change scenarios (Scenarios 1 and 6) for the site, using the criteria established in the Australian Disaster Resilience Guideline 7-3: Technical Flood Risk Management Guideline – Flood Hazard (Australian Institute for Disaster Resilience, 2014). The classification of flood hazard applied in this assessment follows the general flood hazard vulnerability categories shown in Figure 6 of the guideline (reproduced below as Figure 12), which delineate hazard levels based on combined flood depth and velocity thresholds.

Technical flood risk management guideline: Flood hazard

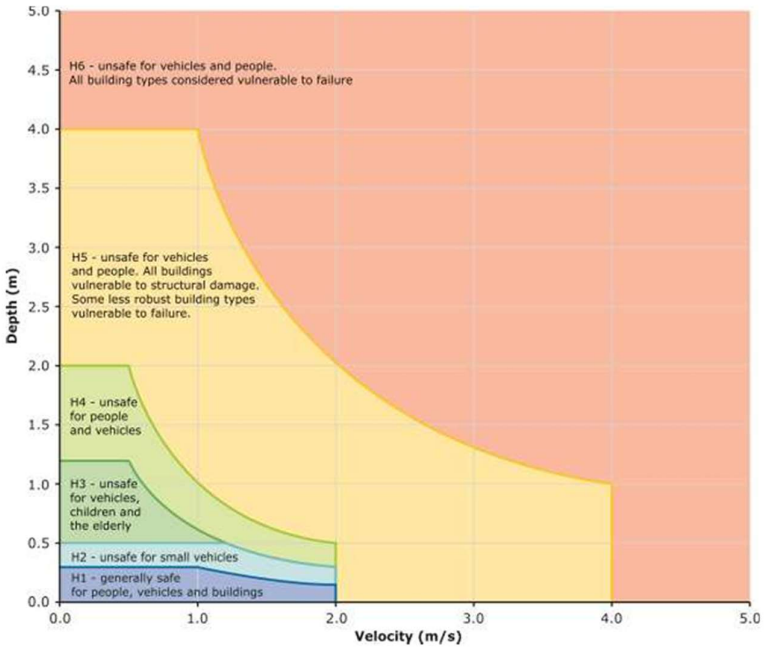


Figure 6 **General flood hazard vulnerability curves**

Figure 12 – Flood Classification from Australian Institute for Disaster Resilience (2014)

As shown below in Figure 13 and Figure 14, the flood hazard classification decreases in the post-development condition for both upstream and downstream properties as a result of the proposed stormwater mitigation strategy, which incorporates flow attenuation and upstream interception of overland flows. The mapped flood hazard outcomes for all scenarios are provided in Appendix G.

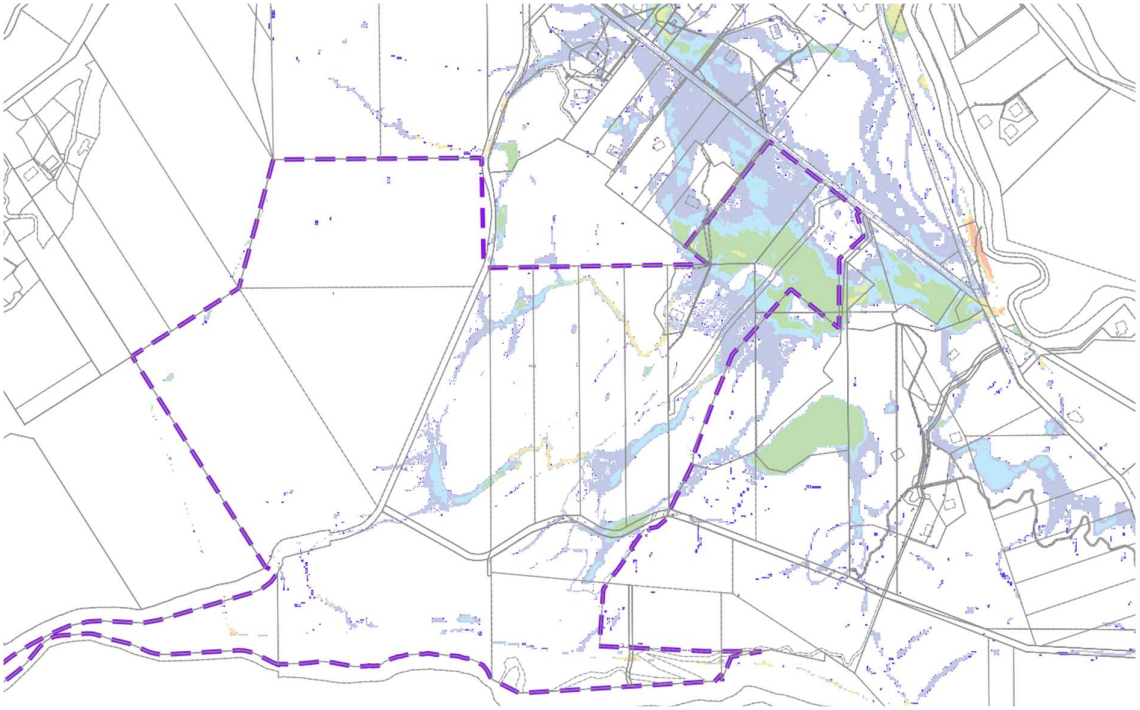


Figure 13 - Flood Hazard for Predevelopment Scenario 3

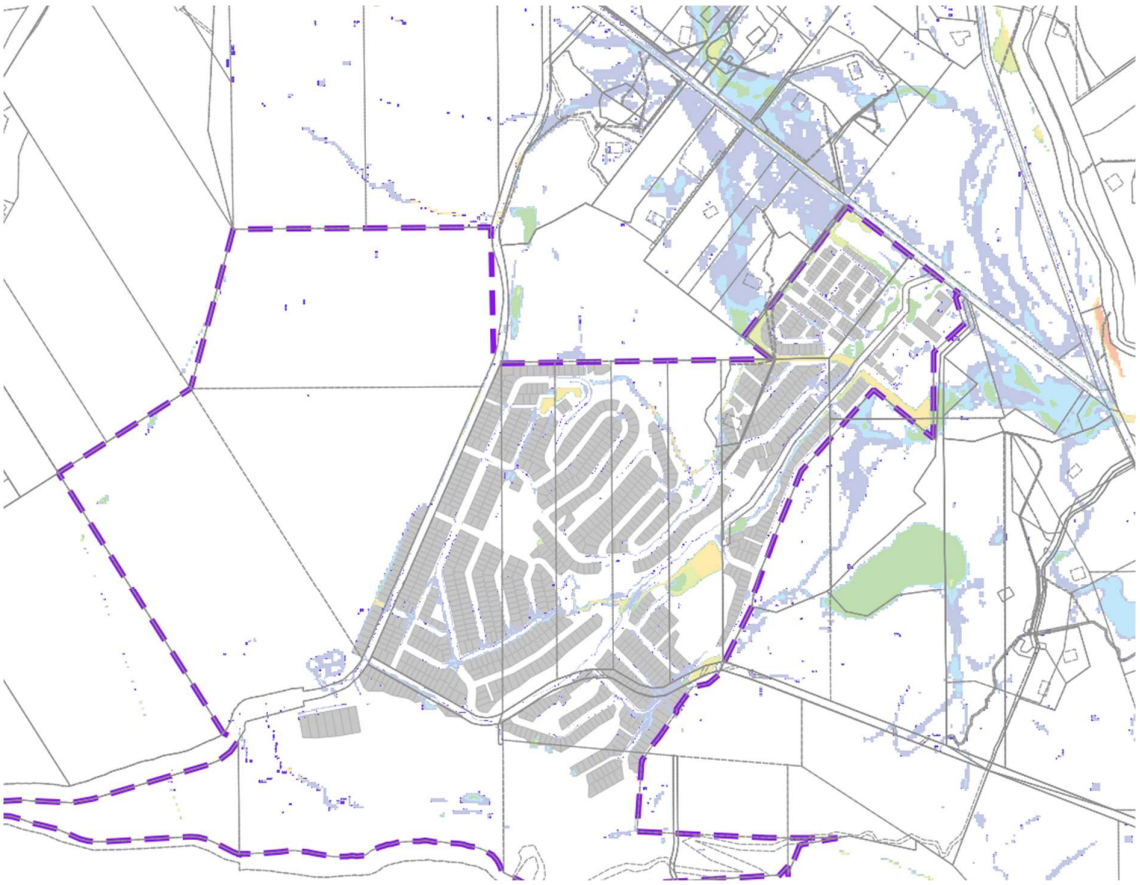


Figure 14 - Flood Hazard for Post Development Scenario 5

8.0 Maintenance and Asset Responsibility

Stormwater assets within public roads will be vested to QLDC in accordance with standard subdivision requirements. Stormwater devices located within development will be owned and maintained by the relevant entity (e.g., body corporate or landowner) under an approved maintenance plan.

Routine inspection and maintenance requirements will include sediment removal, vegetation management, inlet/outlet clearing, and periodic assessment of energy dissipation structures.

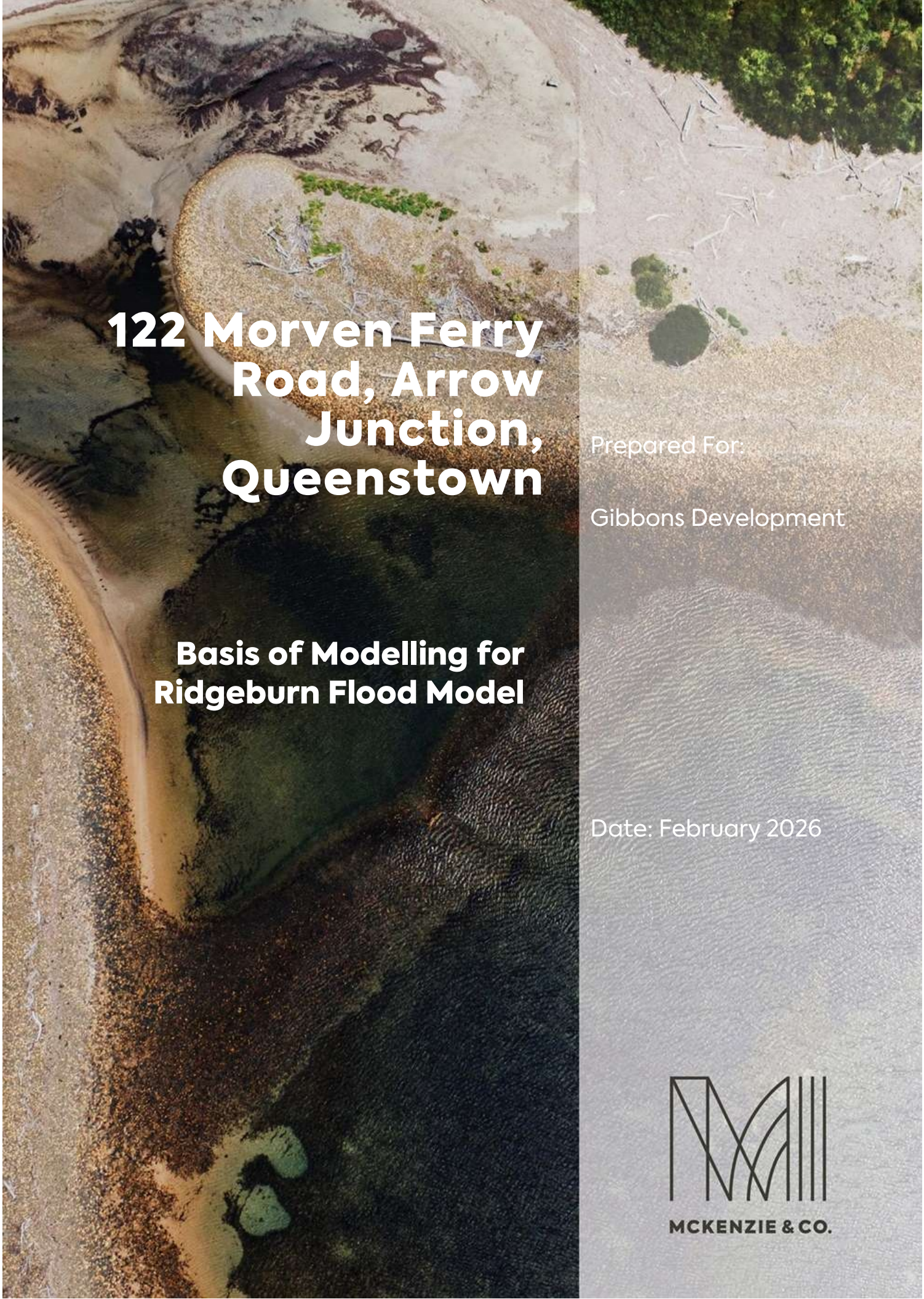
9.0 Conclusion

This Stormwater Mitigation Report has assessed existing hydrological conditions and identified key stormwater and flood-related hazards affecting the Site. Hydrologic and hydraulic modelling confirms that the proposed stormwater management strategy will maintain or reduce peak discharges at critical downstream interfaces and will not result in adverse effects upstream or downstream.

The proposed stormwater management system incorporates upstream diversion, GD01-compliant water quality treatment, attenuation basins, controlled discharge structures, and defined exceedance pathways. The design complies with QLDC Code of Practice requirements, addresses NES-F considerations for wetlands and intermittent streams, and aligns with the risk-based approach of the NPS-NH.

Overall, the proposed stormwater strategy provides a robust and resilient solution that supports the development while ensuring flood hazards are mitigated appropriately and freshwater values are protected.

APPENDIX A – BASIS OF MODEL REPORT



122 Morven Ferry Road, Arrow Junction, Queenstown

Prepared For:

Gibbons Development

Basis of Modelling for Ridgeburn Flood Model

Date: February 2026

MCKENZIE & CO.

DOCUMENT CONTROL RECORD

Project: 122 Morven Ferry Road Development

Project #: 4048

Client: Gibbons Development

Location: 122 Morven Ferry Road, Arrow Junction, Queenstown

Revision	Date	Originator	Checker	Approver	Description
A	10/11/25	HS			RESOURCE CONSENT
B	25/02/26	HS			RESOURCE CONSENT

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1.0 Introduction

1.1 The Application

McKenzie & Co Consultants Ltd (MCCL) has been engaged by Gibbons Development to undertake hydrologic and hydraulic modelling for the proposed development at 122 Morven Ferry Road, Arrow Junction.

This document constitutes the Basis of Modelling (BoM) for the flood assessment. It records the datasets, assumptions, methodologies, model configuration, computational parameters, and scenario framework adopted in the assessment

This report is intended to provide transparency to the independent peer reviewer and consenting authorities regarding how the modelling has been constructed. It does not assess design options or mitigation layouts, which are addressed separately.

1.2 Scope

The proposed modelling will cover:

- Hydrologic modelling for rainfall-runoff generation across contributing catchments
- Hydraulic modelling for conveyance, flood extent mapping, storage analysis, and overland flow paths
- Assessment of existing flood hazard and post-development flood conditions, including proposed mitigation measures
- Sensitivity analysis for extreme storm events to stress-test the proposed development

1.3 Guidelines

The approach follows the

- Queenstown Lakes District Council Code of Practice.
- ARR 2019 hazard classification
- HIRDs V4 Rainfall Data

1.4 Modelling Objectives

The specific objectives of the flood modelling are to:

- Assess existing flood hazard across the Site for a range of design storm events from 2 to 100 year storm.
- Sensitivity testing of 200-year storm to assess site resilience
- Evaluate post-development flood levels, extents, and velocities
- Test and optimise stormwater mitigation measures, including detention basins and conveyance systems
- Establish minimum habitable floor levels to ensure residences remain safe during design flood events

- Test system performance under blockage scenarios to ensure resilience.
- Demonstrate regulatory compliance with QLDC and ORC requirements

2.0 Site Information

2.1 Site Locality

The property lies in the rural setting of Arrow Junction in the Wakatipu Basin near Queenstown. It includes the prominent Morven Hill, which is a noticeable landmark when flying into Queenstown. The parcel is adjacent to important recreational features: the Twin Rivers Trail and the Arrow River Bridges Trail pass nearby. Access is via Morven Ferry Road, which is a rural access road.

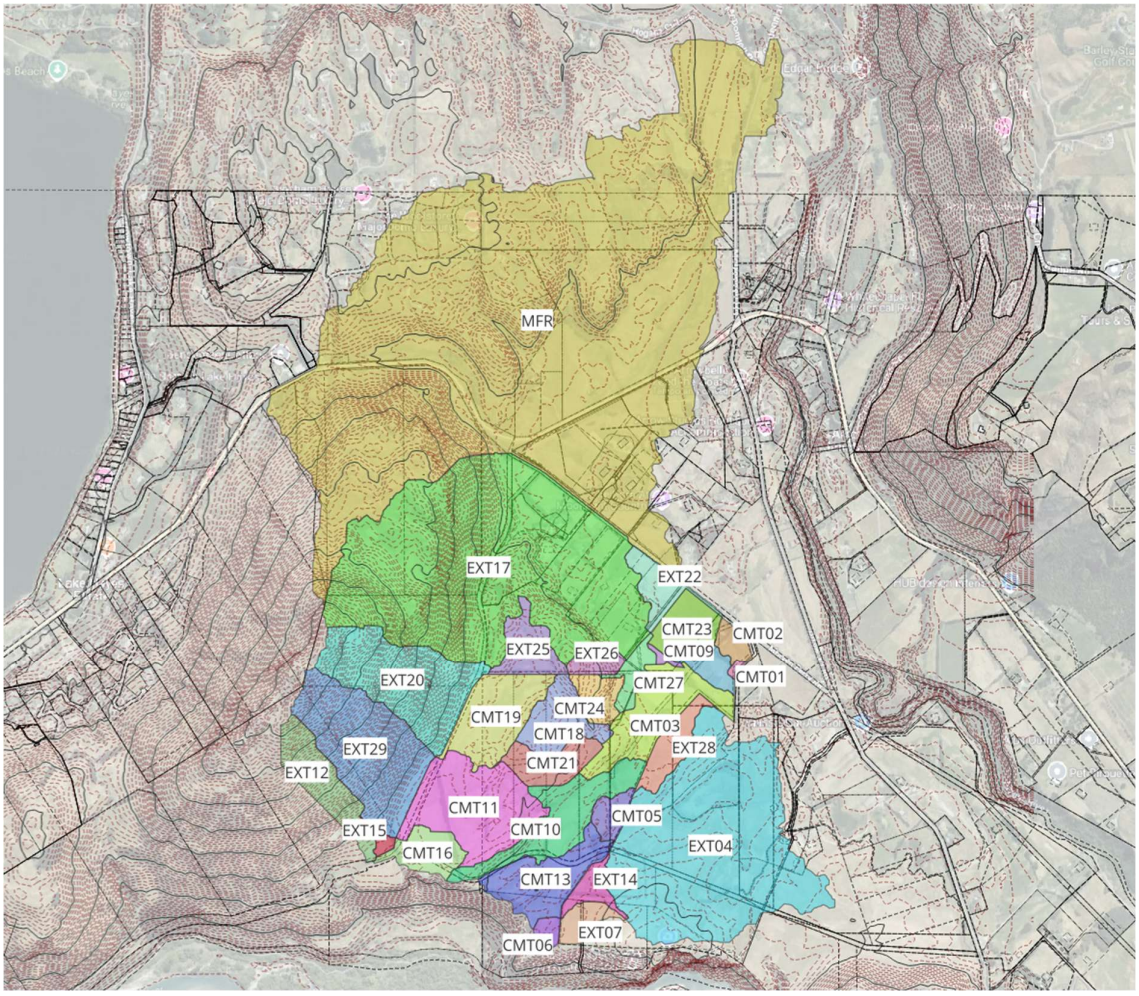
The land area is approximately 212.76 ha across seven freehold titles. Refer to Table 1. The land is currently used for pastoral/rural activity. There is an existing homestead 210 m2 floor area.

The property features historic stone walls and architecture, open farmland rising up to ridgelines. From elevated ridges the land offers extensive views over surrounding mountain ranges and across the Wakatipu Basin. Positioned close to major trails, river systems and recreation areas.



3.0 Catchments

3.1 Catchment Delineation



The stormwater catchment delineation has been undertaken using a combination of topographic survey data and LiDAR data obtained from Land Information New Zealand (LINZ). The catchment analysis identifies both external contributing catchments and internal sub-catchments within the development footprint.

3.2 External Contributing Catchments

A number of external catchments (designated with the prefix 'EXT') contribute stormwater runoff to the Site. These catchments are located on adjacent properties and upstream areas outside the development boundary. The external catchments must be appropriately conveyed through or around the development to avoid adverse flooding effects both within the Site and to downstream properties.

The key external catchments identified include:

- **EXT17 –** Main contributing catchment from 100 Morven Ferry Road. This catchment comprises steep hillside terrain that flattens as it approaches the Site. This is the largest external contributor and forms part of the Arrow River catchment system.
- **EXT20 and EXT29 –** Located on the southwestern corner of the Site, these catchments contribute runoff from adjacent hillslopes and form part of the Arrow River catchment.
- **EXT12 and EXT15 –** Similar topographic character to EXT20, however these catchments ultimately discharge southward toward the Kawarau River.
- **EXT04 and EXT28 –** These catchments enter the eastern portion of the Site before discharging to the natural outlet located on the adjacent property at 138 Morven Ferry Road.
- **MFR –** Morven Ferry Road catchments, these catchments spills into 86 & 100 Morven Ferry Road and discharges into the site.

3.3 Internal Site Catchments

The internal catchments (designated with the prefix 'CMT') represent sub-catchment areas within the development footprint. These catchments have been delineated based on existing in-land wetlands, streams, and watercourses. A small portion of the southern catchment discharges directly to the Kawarau River, with the remainder naturally exiting via 138 Morven Ferry Road before ultimately discharging to the Kawarau River.

3.4 Catchment Summary

The total contributing catchment areas are summarised in the Table below. Detailed catchment parameters, including area, imperviousness, time of concentration, and runoff coefficients, are provided in Appendix A.

Catchment ID	Type	Area (ha)	Description
EXT17	External	TBC	Main upstream hillside
EXT20	External	TBC	Western hillslope
CMT Area	Internal	TBC	Development footprint

4.0 Design Criteria

4.1 Design Events

The following design storm events have been adopted for the hydraulic modeling, with climate change allowances factored into the design rainfall in accordance with QLDC Code of Practice requirements:

Design Storm Event	Climate Change	Purpose
2	RCP 6.0	Design Storm Minor – Assess mitigation and effects
10	RCP 6.0	Design Storm Minor – Assess mitigation and effects
100	RCP 8.5	Design Storm Major – Assess mitigation and effects
200	RCP 8.5	Sensitivity analysis, assessing Floor levels within development

4.2 Design Rainfall

Design rainfall intensities have been extracted from the NIWA High Intensity Rainfall Design System (HIRDS v4) for the Site location. The rainfall depths are presented in table below and incorporate the appropriate climate change adjustments as specified in the QLDC Code of Practice.

In accordance with QLDC requirements, the rainfall profile is based on a 24-hour duration nested storm. The Alternating Block Method has been employed to develop the hyetograph, with the peak storm intensity positioned at 50% of the total duration, representing a mid-storm peak.

	RCP 6.0				RCP 8.5	
	Primary				Secondary	Sensitivity
Year	2	5	10	20	100	200
Time (mins) /AEP	50%	20%	10%	5%	1%	0.5%
10	3.8	5.4	6.8	8.3	14.2	16.6
20	5.7	8.1	10.1	12.3	20.6	23.9
30	7.3	10.3	12.7	15.4	25.6	29.5
60	11.0	15.2	18.7	22.5	36.7	42.0
120	16.2	22.2	26.9	32.1	51.3	58.4

180	19.9	27.0	32.6	38.7	61.0	69.1
360	28.2	37.7	45.2	53.3	81.9	92.1
720	38.3	50.7	60.2	70.3	105.0	117.0
1440	50.1	65.3	76.9	89.0	129.0	143.0

5.0 Hydrological Modelling

5.1 Methodology

Runoff calculations have been undertaken using the Soil Conservation Service (SCS) Curve Number method, which is the standard approach specified in the QLDC Code of Practice. This method accounts for rainfall losses due to infiltration, interception, and surface storage.

5.2 SCS Curve Number (CN)

A Curve Number (CN) of 74 has been adopted based on geotechnical borehole assessment prepared by Kirk Roberts Consulting and available information from New Zealand Soil Classification maps. This CN value corresponds to pastoral lands in hydrologic soil group C (moderately low infiltration rates) with good grass cover, which is representative of the existing site conditions.

For post-development scenarios, adjusted CN values have been calculated for each sub-catchment based on the proportion of impervious surfaces (such as roofs, roads, and driveways) and pervious areas (including landscaping and reserves).

5.3 Time of Concentration

The time of concentration (Tc) for each sub-catchment has been calculated using a combination of the Bransby Williams and Ramser Kirpich methods. The average of the two methods has been adopted as the representative Tc for use in the hydrologic model.

5.4 Hydrologic Model Setup

The hydrologic modelling has been undertaken using HEC-HMS (Hydrologic Engineering Centre - Hydrologic Modelling System). The model has been configured with the following key parameters:

- Basin model comprising all delineated catchments (both external and internal)
- SCS Unit Hydrograph transform method with calculated Tc values
- SCS Curve Number loss method with calibrated CN values
- Routing reaches modelled using the Muskingum-Cunge method where applicable
- Storage facilities (detention basins) modelled using elevation-storage-discharge relationships

5.5 Hydrologic Model Scenarios

Scenario Number	SCENARIO_ID	ARI (Year)	AEP (%)	CLIMATE CHANGE
1	EX_RCP6_002ARI	2	50%	RCP6.0
2	EX_RCP6_020ARI	20	5%	RCP6.0
3	EX_RCP6_100ARI	100	1%	RCP6.0
4	RDEV_RCP6_002ARI	2	50%	RCP6.0
5	RDEV_RCP6_020ARI	20	5%	RCP6.0
6	RDEV_RCP8P5_100ARI	100	1%	RCP8.5
7	RDEV_RCP8P5_200ARI	200	1%	RCP8.5

6.0 Hydraulic Modelling

6.1 Model Extent and Approach

The hydraulic model encompasses the entire development site and surrounding areas that may influence or be influenced by the proposed development. The model utilizes a two-dimensional (2D) approach implemented in Tuflow HPC to represent overland flow paths, storage areas, and flood extents.

Two approaches have been employed:

1) Rainfall on grid (Direct Rainfall)
    a. Used for pre-development baseline scenarios (all events)
    b. Used for post-development 100-year and 200-year events to test critical infrastructure and blockages scenarios.
    c. Captures true overland flow behaviour without catchment lumping assumptions
2) Lumped Catchments inflow boundary conditions – From hydrographs modelled in HEC-HMS.
    a. Used for post-development 2-,10 and 100-year scenarios
    b. Allows direct comparison of peak flows (pre vs post) at discharge points

6.2 Topographic Data

The hydraulic model is based on detailed topographic data from the following sources:

- Site-specific topographic survey undertaken by McKenzie & Co
- LINZ 1m LiDAR data for areas outside the detailed survey extent
- Proposed development grading plans prepared by the civil design team

6.3 Model Grid and Resolution

A computational base grid cell size of 6m x 6m has been adopted for the model. The model also uses Tuflow Quadtree nesting to give more refinement on the subject site. Three level of nesting adopted per the table below.

Nesting Level	Mesh Size	Location
1	6x6m	All other locations within model extent
2	3x3m	Proposed Ridgeburn site.
3	1.5x1.5m	Existing and Proposed Roads, Proposed stormwater reserves

Sub-Grid Sampling: 0.25 m (250 mm) – captures fine-scale topographic features within each cell for improved accuracy

This resolution provides an appropriate balance between model accuracy and computational efficiency, allowing adequate representation of site features, including roads, lot platforms, and drainage pathways, while maintaining acceptable model run times.

6.4 Boundary Conditions

6.4.1 Rain-on Grid

A rainfall polygon based on the rainfall data in section 4.2 was applied to the rain on grid only model. The model applied a 24-hour nested storm profile.

6.4.1 Upstream Boundary

Upstream boundary conditions are represented by the lumped external catchments delineated in Section 3.1. Inflow hydrographs generated from the HEC-HMS hydrologic model are applied at the upstream model boundaries corresponding to each external catchment entry point.

The time of concentration has been calculated using the Bransby Williams and Ramser Kirpich method and an average of the two methods is used as the time of concentration for the sub-catchment.

6.4.2 Downstream Boundary

Downstream boundary conditions have been set as normal depth boundaries. Review of flood modelling data provided by Otago Regional Council for the Arrow River indicates that water levels in the receiving waterways during design storm events are significantly lower than the model domain extent. No backwater effects from the Arrow River are anticipated to influence flooding within the Site during design storm events.

6.5 Roughness Parameters

The land cover data was obtained from Land Cover Database V6 (LCDB V6) with modifications made to account for existing houses. The post development land cover is based on the pre-development land cover with modifications made within the Ridgeburn site based on the provided Masterplan.

The table below outlines the adopted Mannings value and the impervious fraction (rainfall on grid) for the model.

Description	Mannings (n)	Impervious (%)
Buildings	0.1	100%
Built-up Area (settlement)	0.06	10%
Deciduous Hardwoods	0.07	0%

Depleted Grassland	0.06	0%
Driveway	0.035	45%
Exotic Forest	0.1	0%
Forest - Harvested	0.1	0%
Gorse and/or Broom	0.06	0%
Gravel and Rock	0.05	50%
High Producing Exotic Grassland	0.06	0%
Hill	0.035	15%
Indigenous Forest	0.1	0%
Lake or Pond	0.06	100%
Landslide	0.04	0%
Low Producing Grassland	0.06	0%
Manuka and/or Kanuka	0.06	0%
Matagouri or Grey Scrub	0.06	0%
Mixed Exotic Shrubland	0.06	0%
Orchard, Vineyard or Other Perennial Crop	0.06	10%
Pads	0.035	50%
River	0.06	100%
Road	0.03	90%
Road Parcel	0.03	70%
Short-rotation Cropland	0.06	0%
Urban Parkland/Open Space	0.06	0%
Proposed Commercial	0.1	100%
Proposed Lots	0.1	70%
Proposed Road	0.03	70%
Proposed SW Reserve	0.06	10%
Reserve	0.06	0%
Proposed Carpark	0.03	100%

6.6 Hydraulic Structures

In the pre-development scenarios, no significant engineered hydraulic structures are present. For post-development scenarios, the following structures have been incorporated:

1) Pre-Development Scenarios
    a. No hydraulic structures modelled
2) Post-Development
    a. Stormwater pipeline networks on Morven Ferry Road for intercepting and conveying runoff from the Morven Ferry Catchments
    b. Box culverts and pipe culverts for road crossings and conveyance of external flows
    c. Stormwater network for the slope hill catchments

6.7 Model Scenarios

A total of 12 primary scenarios has been modelled to assess pre-development baseline, post-development performance, and sensitivity to blockages.

Table 1: Rain on Grid Scenarios

Scenario Number	Terrain	Average Reccurance Interval (Years)	Climate Change (RCP)	Duration (Hours)	Hydraulic Model Method	Model ID	Purpose
1	Pre-Development	2	RCP6	24	Rain on Grid	EX01_ROG_50p_24hr	Assessing pre-development baseline for 2 Year ARI Storm
2	Pre-Development	10	RCP6	24	Rain on Grid	EX01_ROG_10p_24hr	Assessing pre-development baseline for 10 Year ARI Storm
3	Pre-Development	100	RCP8.5	24	Rain on Grid	EX01_ROG_01p_24hr	Assessing pre-development baseline for 100 Year ARI Storm
4	Pre-Development	200	RCP8.5	24	Rain on Grid	EX01_ROG_0p5p_24hr	Assessing pre-development baseline for 200 Year ARI Storm
5	Post-Development	100	RCP8.5	24	Rain on Grid	PD01_ROG_01p_24hr	Assesing critical infrastructure for 100 Year ARI Storm
6	Post-Development	200	RCP8.5	24	Rain on Grid	PD01_ROG_0p5p_24hr	Assesing critical infrastructure for 200 Year ARI Storm
7	Post-Development	100	RCP8.5	24	Rain on Grid	PD01_ROG_01p_24hr_BL02	Sensitivy Testing for full blockage scenario - 100 Year Storm
8	Post-Development	200	RCP8.5	24	Rain on Grid	PD01_ROG_0p5p_24hr_BL02	Sensitivy Testing for full blockage scenario - 200 Year Storm

Table 2: Lumped Catchments

Scenario Number	Terrain	Average Reccurance Interval (Years)	Climate Change (RCP)	Duration (Hours)	Hydraulic Model Method	Model ID	Purpose
9	Post-Development	2	RCP6	24	Inflow BC	PD01_LBC_50p_24hr	Comparison against Scenario 1
10	Post-Development	10	RCP6	24	Inflow BC	PD01_LBC_10p_24hr	Comparison against Scenario 2
11	Post-Development	100	RCP8.5	24	Inflow BC	PD01_LBC_01p_24hr	Comparison against Scenario 3
12	Post-Development	100	RCP8.5	24	Inflow BC	PD01_LBC_01p_24hr_BL01	Sensitivity Check for partially blocked culverts and network. Refer to the blockage matrix table below.

Table 3: Blockage Matrix

Blockage Conditions	Blockage Percentage - Morven Ferry Network	Blockage Percentage -Culvert 1	Pond 1 Network	All other culverts
BL01	50%	10%	50%	Unblocked
BL02	100%	100%	100%	Fully Blocked

7.0 Model QA

7.1 Mass Balance

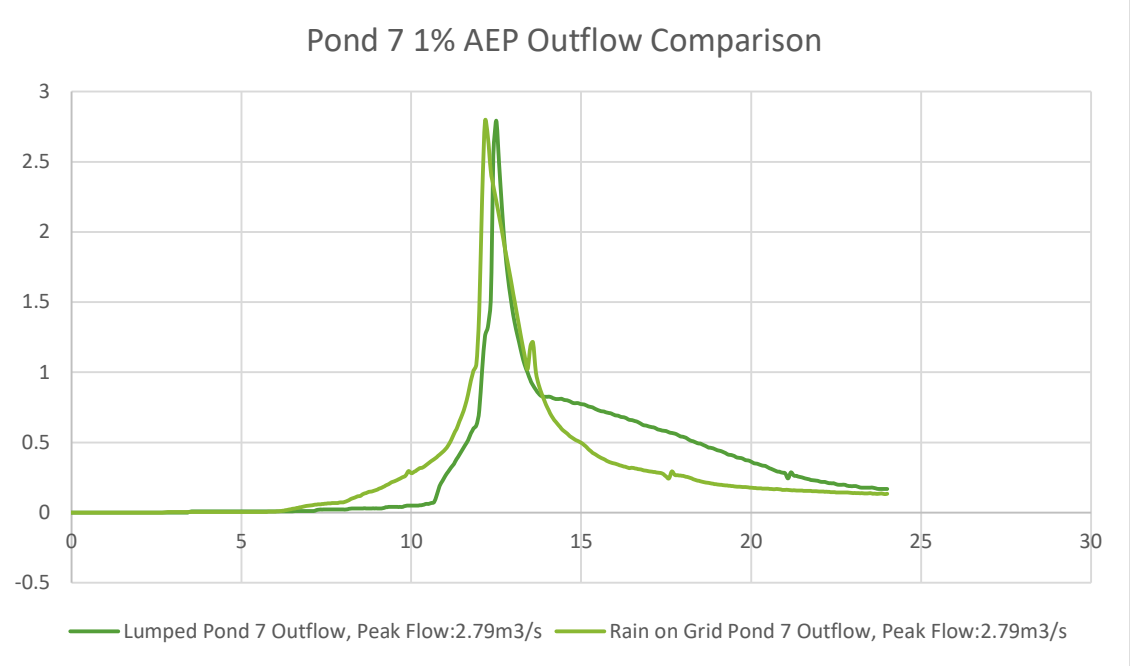
All model scenarios are required to achieve a mass balance volumetric error of 1% or less in accordance with hydraulic modelling best practice.

7.2 Sensitivity Analysis – Rain on Grid vs Lumped Catchment Approach

A sensitivity assessment was undertaken to confirm that the calculated inflow and attenuation design produces consistent output with the rain on grid model.

A comparison was made using scenario 11 and scenario 5, at the following locations

- Discharge point of Pond 7
- Flow at 138 Morven Ferry Road



Outflow from Pond 7 shows consistency between the lumped model and the rain on grid model with both reporting a peak discharge rate of 2.79m3/s.

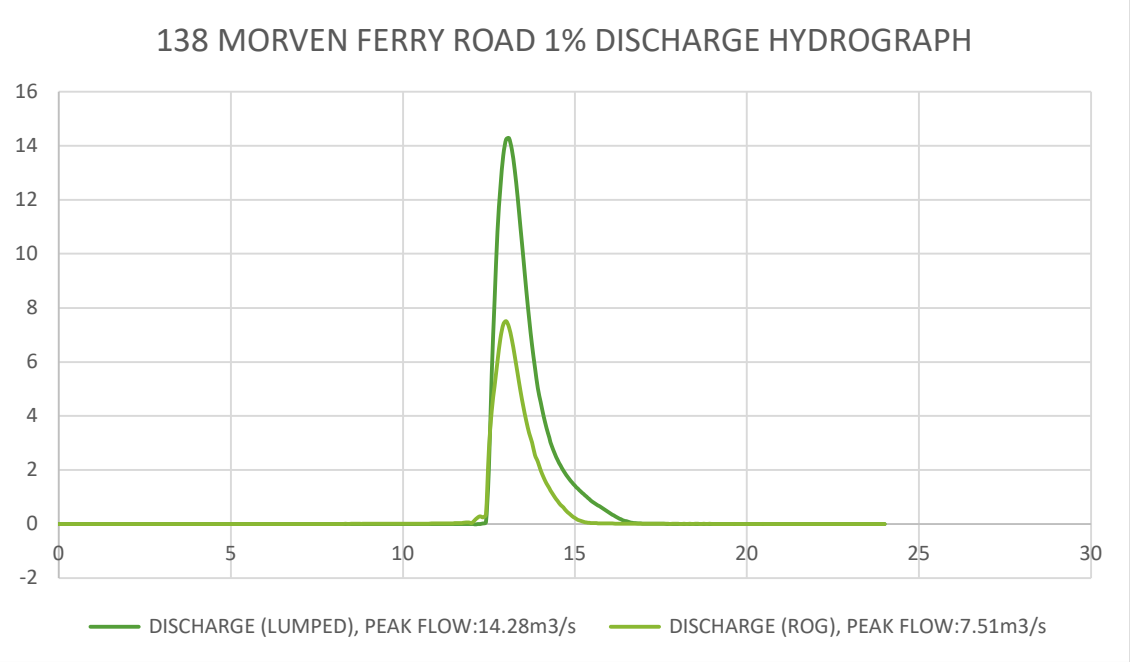
At 138 Morven Ferry Road, the lumped model predicts a higher peak discharge than the ROG model:

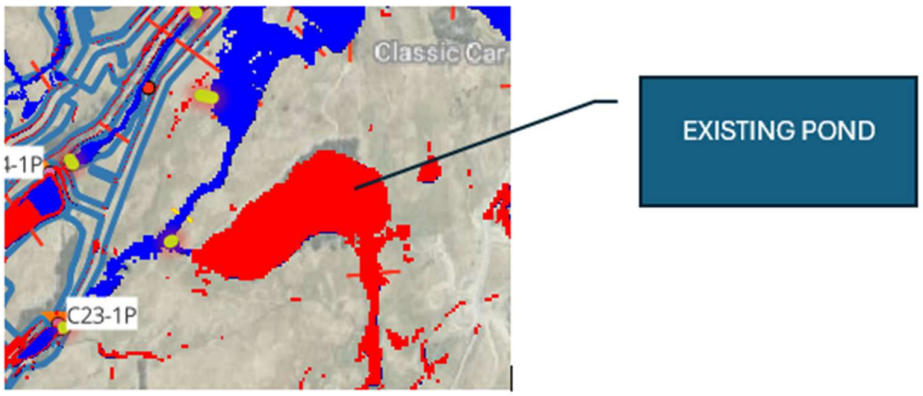
- Lumped model: 14.5 m^3/s
- ROG model: 7.5 m^3/s

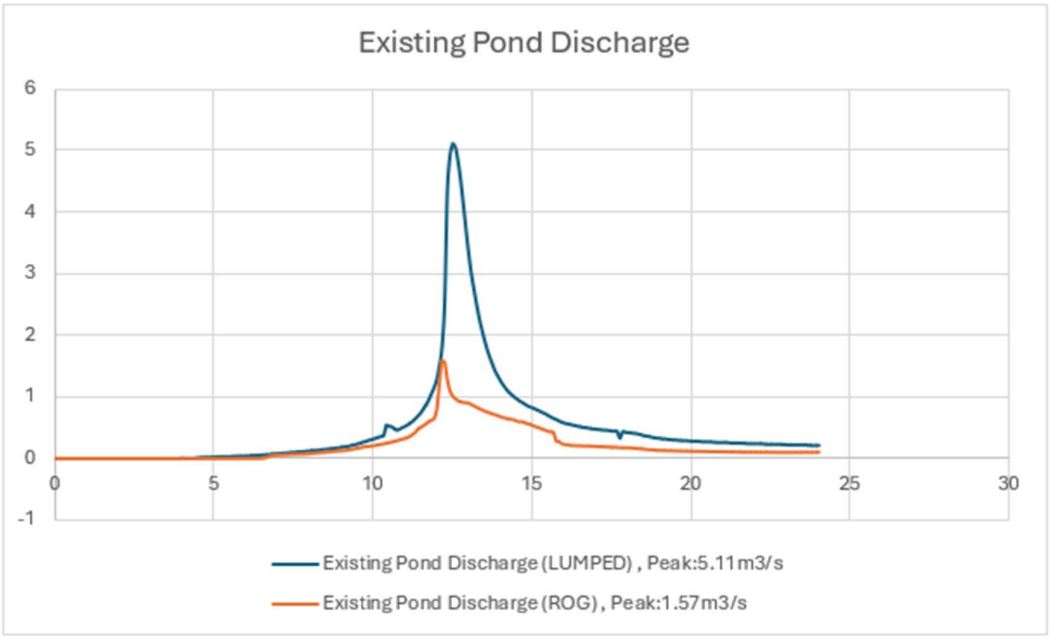
The higher peak flow predicted by the lumped model is attributable to the exclusion of the eastern neighbouring pond storage within the hydrological model setup. As a result, the lumped approach does not account for the dynamic storage and attenuation effects provided by the existing off-site pond.

Conversely, the ROG model explicitly simulates overland routing and pond storage interaction, thereby capturing the attenuation effects of the existing eastern pond and reducing the downstream peak discharge.

The difference therefore reflects a modelling representation difference rather than a deficiency in the attenuation design.







Despite localised differences in peak discharge at 138 Morven Ferry Road, the total post-development discharge remains lower than the corresponding pre-development scenario (22.2m3/s) for both modelling approaches.

The lumped hydrological model is therefore considered conservative at the downstream location, while the ROG model provides a more hydraulically representative simulation of storage interactions.

7.3 External Peer Review

The hydraulic model and associated stormwater management approach will undergo independent peer review by a suitably qualified and experienced hydraulic engineer. The peer reviewer will be engaged by Gibbons Co to provide an independent assessment of the modelling methodology, assumptions, and results.

8.0 Acceptance Criteria

8.1 Peak Discharge Criteria

The proposed stormwater management system is to demonstrate that the peak discharges exiting the site are equal to or less than the pre-development outflow rates for the 2-, 10- and 100-year ARI storm events. This criterion ensures that the development does not increase flood risk to downstream properties and the receiving environment.

8.2 Minimum Floor Level

All habitable floor areas must be established at a level that provides adequate freeboard above the 1% AEP (100-year) flood level. A minimum freeboard of 500mm is required in accordance with QLDC Code of Practice and New Zealand Building Code requirements.

The hydraulic model will be used to determine maximum flood levels for each proposed building platform. These flood levels, plus the required freeboard, will establish the minimum habitable floor level for each dwelling. The model has been stress-tested using the 0.5% AEP (200-year) event to ensure that floor areas remain habitable and dry during extreme storm events beyond the design event.

8.3 Flood Hazard

Flood hazard for the 1% AEP event will be assessed using the methodology presented in Australian Rainfall and Runoff (2019). Hazard is classified based on the product of flood depth and velocity (DxV), with hazard categories ranging from H1 (low hazard) to H5-H6 (extreme hazard).

The development will be designed to ensure that:

- Building platforms, roads and access ways are located outside high hazard zones (H4-H6)
- Primary overland flow paths are maintained and enhanced to safely convey flows around developed areas
- Flood-sensitive infrastructure is protected from unacceptable hazard

9.0 Limitations and Assumptions

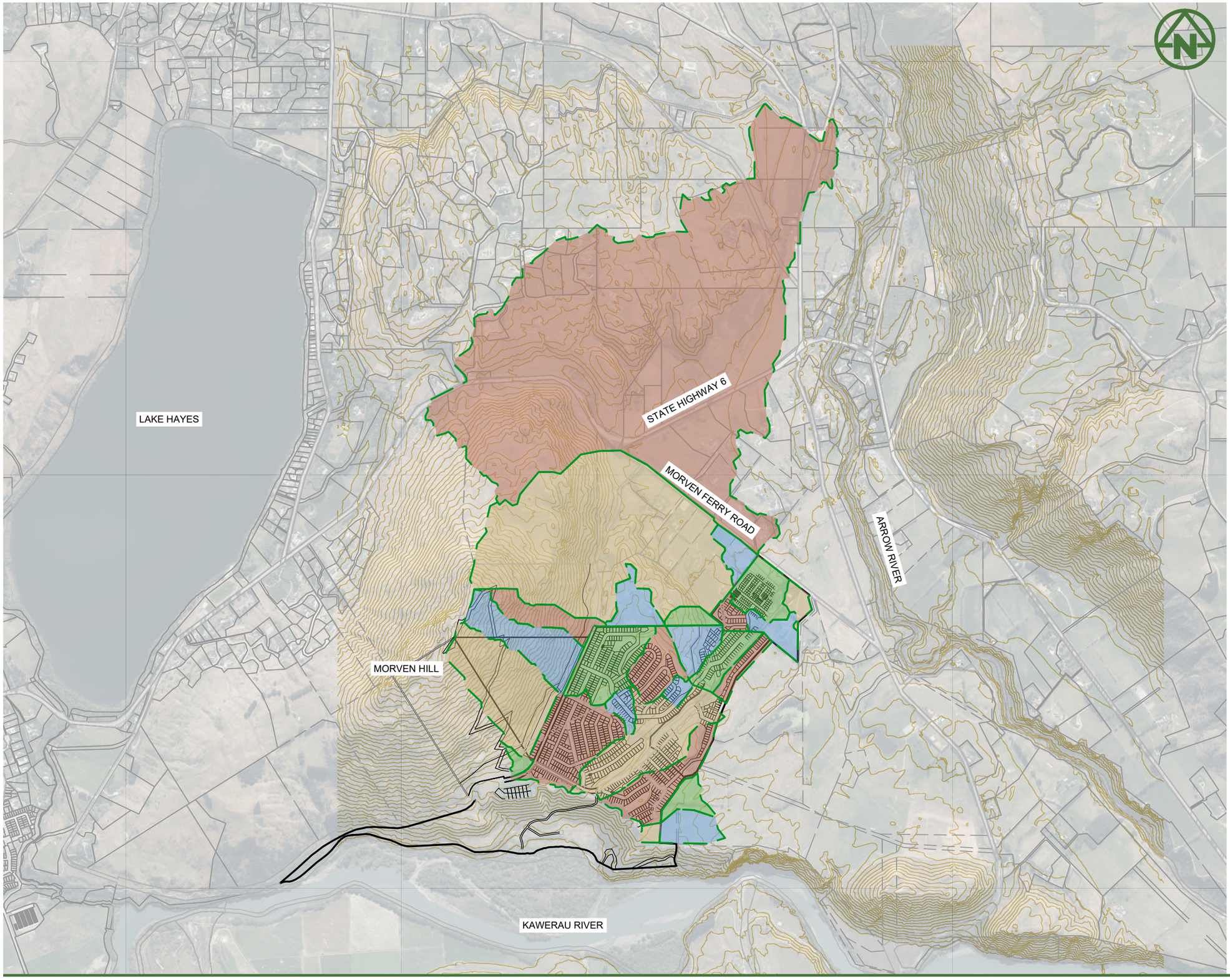
The hydraulic modelling documented in this Basis of Design Report is based on a series of assumptions and is subject to certain limitations:

- The model is based on the best available topographic data at the time of preparation. Final as-built surveys may reveal minor variations in site levels that could influence local drainage patterns.

- Design rainfall is based on statistical analysis of historical rainfall records and incorporates climate change projections. Actual future rainfall patterns may vary from these projections.
- Hydrological parameters (curve numbers, roughness coefficients) are based on published values and professional judgment. Site-specific calibration data is not available for an undeveloped rural site.
- Downstream boundary conditions assume normal water levels in receiving systems. Extreme events that cause elevated tailwater levels could influence site flooding beyond what is modelled.

The model results are intended to demonstrate the hydraulic performance and flood risk of the proposed development at 122 Morven Ferry Road. Results should not be used for purposes beyond the scope of this project without additional assessment and validation

APPENDIX B – MODEL CALCULATIONS AND OUTPUTS



NOTES

1. DATA RECEIVED FROM VIRIDIS ON 04/11/2025. REFER TO VIRIDIS DRAWING 10339-MAP2-3 FOR DETAILS.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE ENGINEERING INFRASTRUCTURE AND SERVICING REPORT.
3. COORDINATE REFERENCE SYSTEM IS EPSG:2128 - NZGD2000 / MOUNT NICHOLAS 2000.
4. CATCHMENTS DELINEATED IN QGIS WERE USED TO COMPUTE EXISTING WETLAND FLOWS FOR PRE- AND POST-DEVELOPMENT USING TP108 HYDROLOGY PARAMETERS MODELLED IN HEC-HMS.

LEGEND:

SITE BOUNDARY

PROPOSED PRE-DEVELOPMENT CATCHMENT BOUNDARY

EXISTING CONTOUR (1.0m)

CATCHMENT AREAS

MCKENZIE & CO.

REV	DESCRIPTION	DRN BY	CHK BY	APP BY	DATE
A	FIRST ISSUE	TDW	TDW		12/02/26

CLIENT: RIDGEBURN LTD

PROJECT: RIDGEBURN
122 MORVEN FERRY ROAD
ARROW JUNCTION
QUEENSTOWN

TITLE: STORMWATER
1% AEP PRE DEVELOPMENT
OVERLAND FLOW PATH
CATCHMENT PLAN - OVERALL

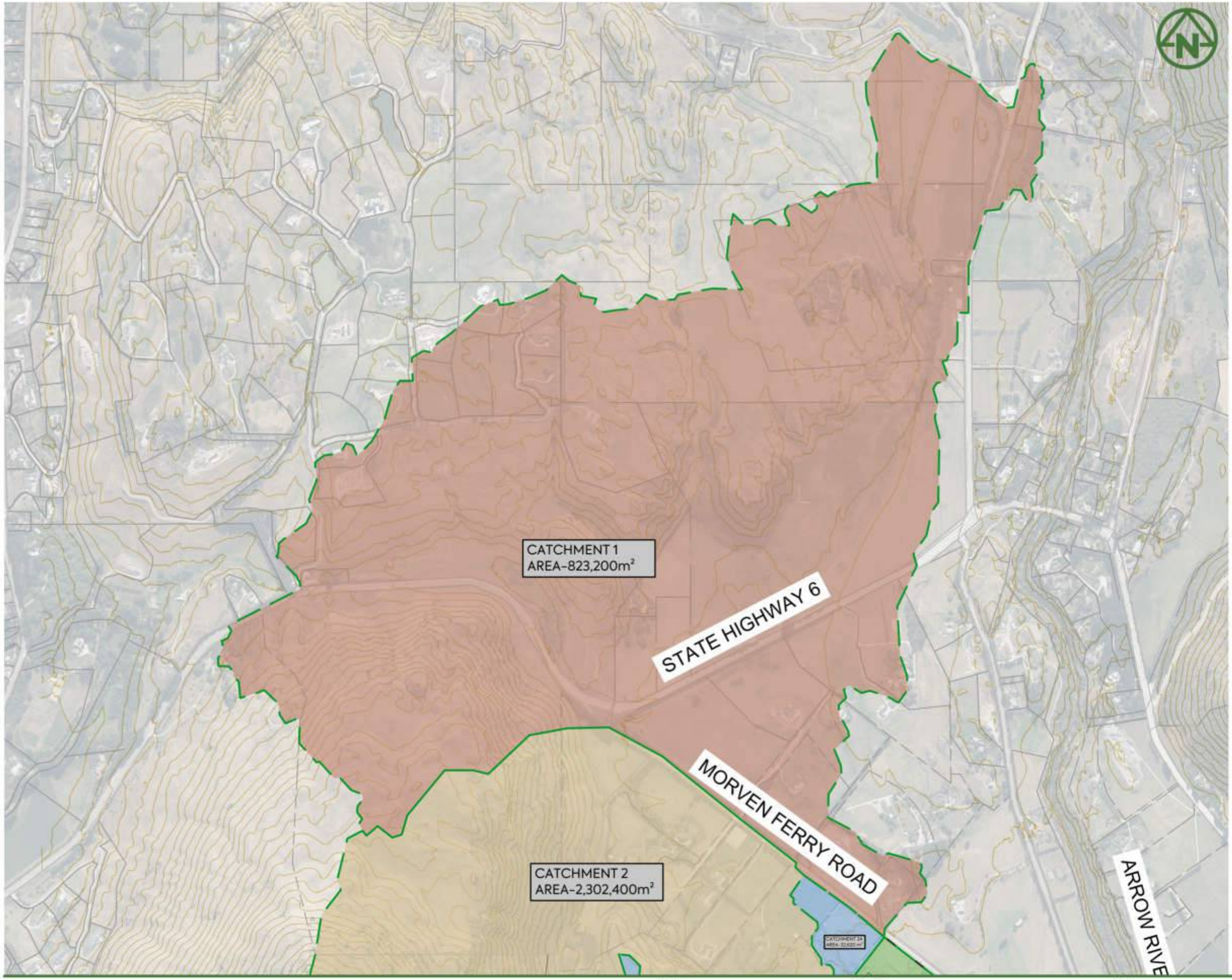
PURPOSE OF ISSUE: FOR INFORMATION

SCALE: 1:20000m @ A3
DO NOT SCALE

DRAWING NO: 4048-0-4502

REV: A

THIS DRAWING IS SOLELY FOR USE BY THE CLIENT ON THIS PROJECT ONLY. NO LIABILITY IS ACCEPTED IN ITS USE BY ANY OTHER ENTITY OR FOR ANY OTHER PURPOSE



NOTES

1. DATA RECEIVED FROM VIRIDIS ON 04/11/2025. REFER TO VIRIDIS DRAWING 10339-MAP2-3 FOR DETAILS.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE ENGINEERING INFRASTRUCTURE AND SERVICING REPORT.
3. COORDINATE REFERENCE SYSTEM IS EPSG:2128 - NZGD2000 / MOUNT NICHOLAS 2000.
4. CATCHMENTS DELINEATED IN QGIS WERE USED TO COMPUTE EXISTING WETLAND FLOWS FOR PRE- AND POST-DEVELOPMENT USING TP108 HYDROLOGY PARAMETERS MODELLED IN HEC-HMS.

LEGEND:

SITE BOUNDARY

PROPOSED PRE-DEVELOPMENT CATCHMENT BOUNDARY

EXISTING CONTOUR (1.0m)

CATCHMENT AREAS

MCKENZIE & CO.

REV	DESCRIPTION	DRN BY	CHK BY	APP BY	DATE
A	FIRST ISSUE	TDW	TDW		12/02/26

CLIENT: RIDGEBURN LTD

PROJECT: RIDGEBURN
122 MORVEN FERRY ROAD
ARROW JUNCTION
QUEENSTOWN

TITLE: STORMWATER
1% AEP PRE DEVELOPMENT
OVERLAND FLOW PATH
CATCHMENT PLAN - SHEET 1

PURPOSE OF ISSUE: FOR INFORMATION

SCALE: 1:10000m @ A3
DO NOT SCALE

DRAWING NO: 4048-0-4503

REV: A

PLOT DATE: 2026-02-25 15:35:21 WWW.MCKENZIEANDCO.CO.NZ THIS DRAWING IS SOLELY FOR USE BY THE CLIENT ON THIS PROJECT ONLY. NO LIABILITY IS ACCEPTED IN ITS USE BY ANY OTHER ENTITY OR FOR ANY OTHER PURPOSE.
C:\12025\DATA\MCKT\SITW\4048-0 RIDGEBURN OVERALL_BOBA.DWG ENGINEERING DESIGN\4500 DRAWINGS\4503.DWG

MORVEN FERRY ROAD

CATCHMENT 2
AREA-2,302,400m²

CATCHMENT 24
AREA-32,620 m²

CATCHMENT 9
AREA-68,553m²

CATCHMENT 10
AREA-19,270 m²

CATCHMENT 3
AREA-65,886 m²

CATCHMENT 6
AREA-49,349m²

CATCHMENT 7
AREA-21,637 m²

CATCHMENT 8
AREA-22,751 m²

CATCHMENT 11
AREA-35,530 m²

CATCHMENT 14
AREA-49,319m²

CATCHMENT 13
AREA-50,515m²

CATCHMENT 4
AREA-123,900 m²

CATCHMENT 16
AREA-116,200m²

KAWERAU RIVER

N

NOTES

1. DATA RECEIVED FROM VIRIDIS ON 04/11/2025. REFER TO VIRIDIS DRAWING 10339-MAP2-3 FOR DETAILS.
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4. CATCHMENTS DELINEATED IN QGIS WERE USED TO COMPUTE EXISTING WETLAND FLOWS FOR PRE- AND POST-DEVELOPMENT USING TP108 HYDROLOGY PARAMETERS MODELLED IN HEC-HMS.

LEGEND:

SITE BOUNDARY

PROPOSED PRE-DEVELOPMENT CATCHMENT BOUNDARY

EXISTING CONTOUR (1.0m)

CATCHMENT AREAS

MCKENZIE & CO.

REV	DESCRIPTION	DRN BY	CHK BY	APP BY	DATE
A	FIRST ISSUE	TDW	TDW		12/02/26

CLIENT: RIDGEBURN LTD

PROJECT: RIDGEBURN
122 MORVEN FERRY ROAD
ARROW JUNCTION
QUEENSTOWN

TITLE: STORMWATER
1% AEP PRE DEVELOPMENT
OVERLAND FLOW PATH
CATCHMENT PLAN-SHEET 2

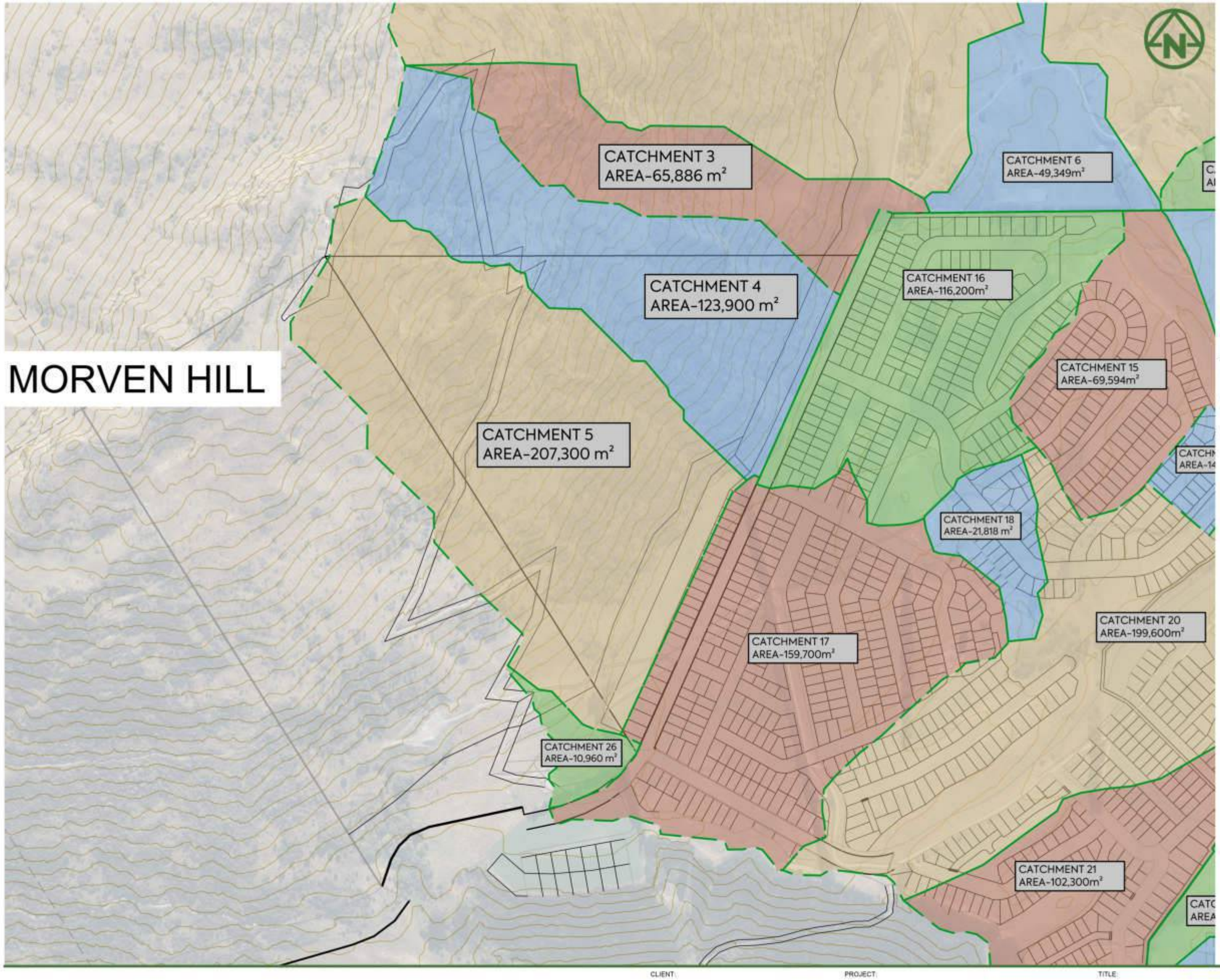
PURPOSE OF ISSUE: RESOURCE CONSENT

SCALE: 1:5000m @ A3
DO NOT SCALE

DRAWING NO: 4048-0-4504

REV: A

PLOT DATE: 2026-02-25 18:25:44 WWW.MCKENZIEANDCO.CO.NZ THIS DRAWING IS SOLELY FOR USE BY THE CLIENT ON THIS PROJECT ONLY. NO LIABILITY IS ACCEPTED IN ITS USE BY ANY OTHER ENTITY OR FOR ANY OTHER PURPOSE.



NOTES

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4. CATCHMENTS DELINEATED IN QGIS WERE USED TO COMPUTE EXISTING WETLAND FLOWS FOR PRE- AND POST-DEVELOPMENT USING TP108 HYDROLOGY PARAMETERS MODELLED IN HEC-HMS.

LEGEND:

- SITE BOUNDARY
- PROPOSED PRE-DEVELOPMENT CATCHMENT BOUNDARY
- EXISTING CONTOUR (1.0m)
- CATCHMENT AREAS

MCKENZIE & CO.

REV	DESCRIPTION	DRN BY	CHK BY	APP BY	DATE
A	FIRST ISSUE	TDW	TDW		12/02/26

CLIENT: RIDGEBURN LTD

PROJECT: RIDGEBURN
122 MORVEN FERRY ROAD
ARROW JUNCTION
QUEENSTOWN

TITLE: STORMWATER
1% AEP PRE DEVELOPMENT
OVERLAND FLOW PATH
CATCHMENT PLAN-SHEET 3

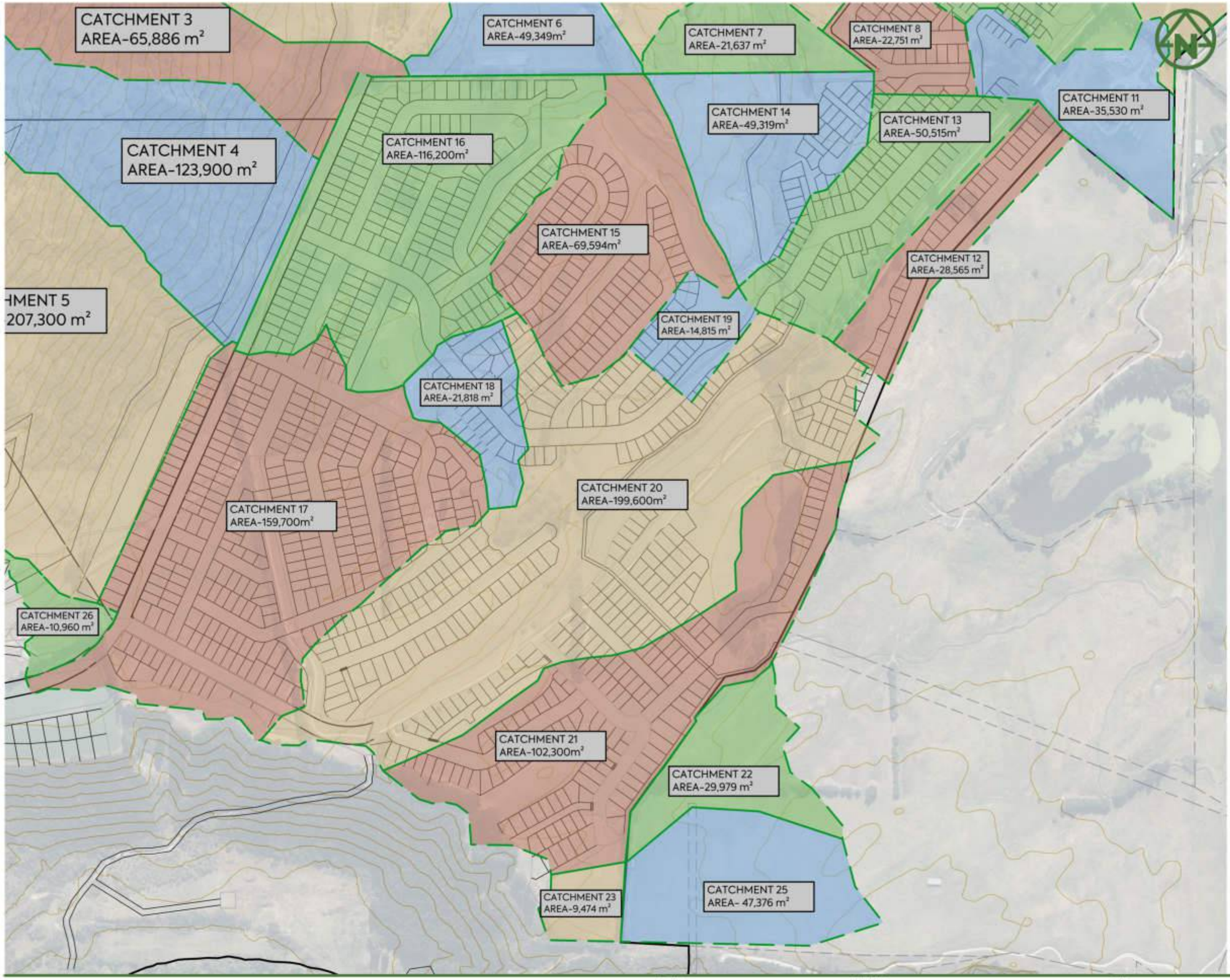
PURPOSE OF ISSUE: RESOURCE CONSENT

SCALE: 1:5000m @ A3
DO NOT SCALE

DRAWING NO: 4048-0-4505

REV: A

PLOT DATE: 2026-02-25 18:26:04 WWW.MCKENZIEANDCO.CO.NZ THIS DRAWING IS SOLELY FOR USE BY THE CLIENT ON THIS PROJECT ONLY. NO LIABILITY IS ACCEPTED IN ITS USE BY ANY OTHER ENTITY OR FOR ANY OTHER PURPOSE.
C:\12D\DATA\MCKE\SITES\4048-0 RIDGEBURN OVERALL_80844\9000_ENGINEERING DESIGN\9505_DRAWINGS\4505.DWG



NOTES

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3. COORDINATE REFERENCE SYSTEM IS EPSG:2128 - NZGD2000 / MOUNT NICHOLAS 2000.
4. CATCHMENTS DELINEATED IN QGIS WERE USED TO COMPUTE EXISTING WETLAND FLOWS FOR PRE- AND POST-DEVELOPMENT USING TP108 HYDROLOGY PARAMETERS MODELLED IN HEC-HMS.

LEGEND:

SITE BOUNDARY

PROPOSED PRE-DEVELOPMENT CATCHMENT BOUNDARY

EXISTING CONTOUR (1.0m)

CATCHMENT AREAS

MCKENZIE & CO.

REV	DESCRIPTION	DRN BY	CHK BY	APP BY	DATE
A	FIRST ISSUE	TDW	TDW		12/02/26

CLIENT: RIDGEBURN LTD

PROJECT: RIDGEBURN
122 MORVEN FERRY ROAD
ARROW JUNCTION
QUEENSTOWN

TITLE: STORMWATER
1% AEP PRE DEVELOPMENT
OVERLAND FLOW PATH
CATCHMENT PLAN-SHEET 4

PURPOSE OF ISSUE: RESOURCE CONSENT

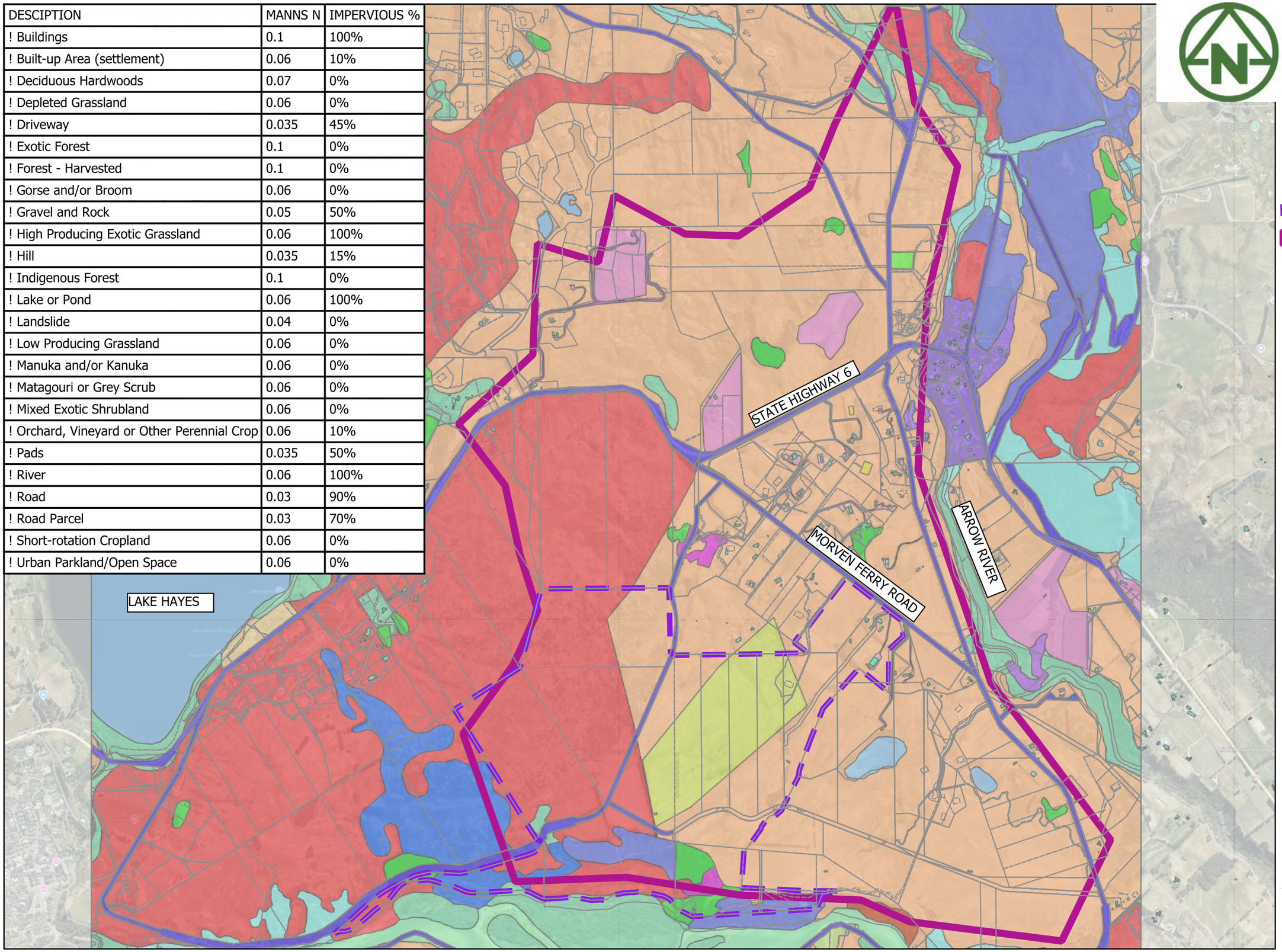
SCALE: 1:5000m @ A3
DO NOT SCALE

DRAWING NO: 4048-0-4506

REV: A

PLOT DATE: 2026.02.20 15:37:23 WWW.MCKENZIEANDCO.CO.NZ THIS DRAWING IS SOLELY FOR USE BY THE CLIENT ON THIS PROJECT ONLY. NO LIABILITY IS ACCEPTED IN ITS USE BY ANY OTHER ENTITY OR FOR ANY OTHER PURPOSE.
C:\12DSDATA\MCKF\60\4048-0 RIDGEBURN OVERALL_60840600\ENGINEERING DESIGN\4500_DRAWINGS\4506.DWG

DESCIPTION	MANNS N	IMPERVIOUS %
! Buildings	0.1	100%
! Built-up Area (settlement)	0.06	10%
! Deciduous Hardwoods	0.07	0%
! Depleted Grassland	0.06	0%
! Driveway	0.035	45%
! Exotic Forest	0.1	0%
! Forest - Harvested	0.1	0%
! Gorse and/or Broom	0.06	0%
! Gravel and Rock	0.05	50%
! High Producing Exotic Grassland	0.06	100%
! Hill	0.035	15%
! Indigenous Forest	0.1	0%
! Lake or Pond	0.06	100%
! Landslide	0.04	0%
! Low Producing Grassland	0.06	0%
! Manuka and/or Kanuka	0.06	0%
! Matagouri or Grey Scrub	0.06	0%
! Mixed Exotic Shrubland	0.06	0%
! Orchard, Vineyard or Other Perennial Crop	0.06	10%
! Pads	0.035	50%
! River	0.06	100%
! Road	0.03	90%
! Road Parcel	0.03	70%
! Short-rotation Cropland	0.06	0%
! Urban Parkland/Open Space	0.06	0%



LEGEND

- SITE EXTENT
- MODEL EXTENT

LC_Existing_Modded

- Buildings
- Built-up Area (settlement)
- Deciduous Hardwoods
- Depleted Grassland
- Driveway
- Exotic Forest
- Forest - Harvested
- Gorse and/or Broom
- Gravel and Rock
- High Producing Exotic Grassland
- Hill
- Indigenous Forest
- Lake or Pond
- Landslide
- Low Producing Grassland
- Manuka and/or Kanuka
- Matagouri or Grey Scrub
- Mixed Exotic Shrubland
- Orchard, Vineyard or Crop
- Pads
- River
- Road
- Road Parcel
- Short-rotation Cropland
- Urban Parkland/Open Space

MAP PROJECTION:
NZGD2000 / Mount Nicholas 2000 (EPSG:2128)

REV	DESCRIPTION	DRN	CHK	APP	DATE
A	FIRST ISSUE	PK	SL	JK	11/02/2026

PLOT DATE ----

MCKENZIE & CO.

WWW.MCKENZIEANDCO.CO.NZ

CLIENT: RIDGEBURN LTD

PROJECT: RIDGEBURN
122 MORVEN FERRY ROAD
ARROW JUNCTION
QUEENSTOWN

TITLE: STORMWATER
PRE-DEVELOPMENT
LAND COVER PLAN

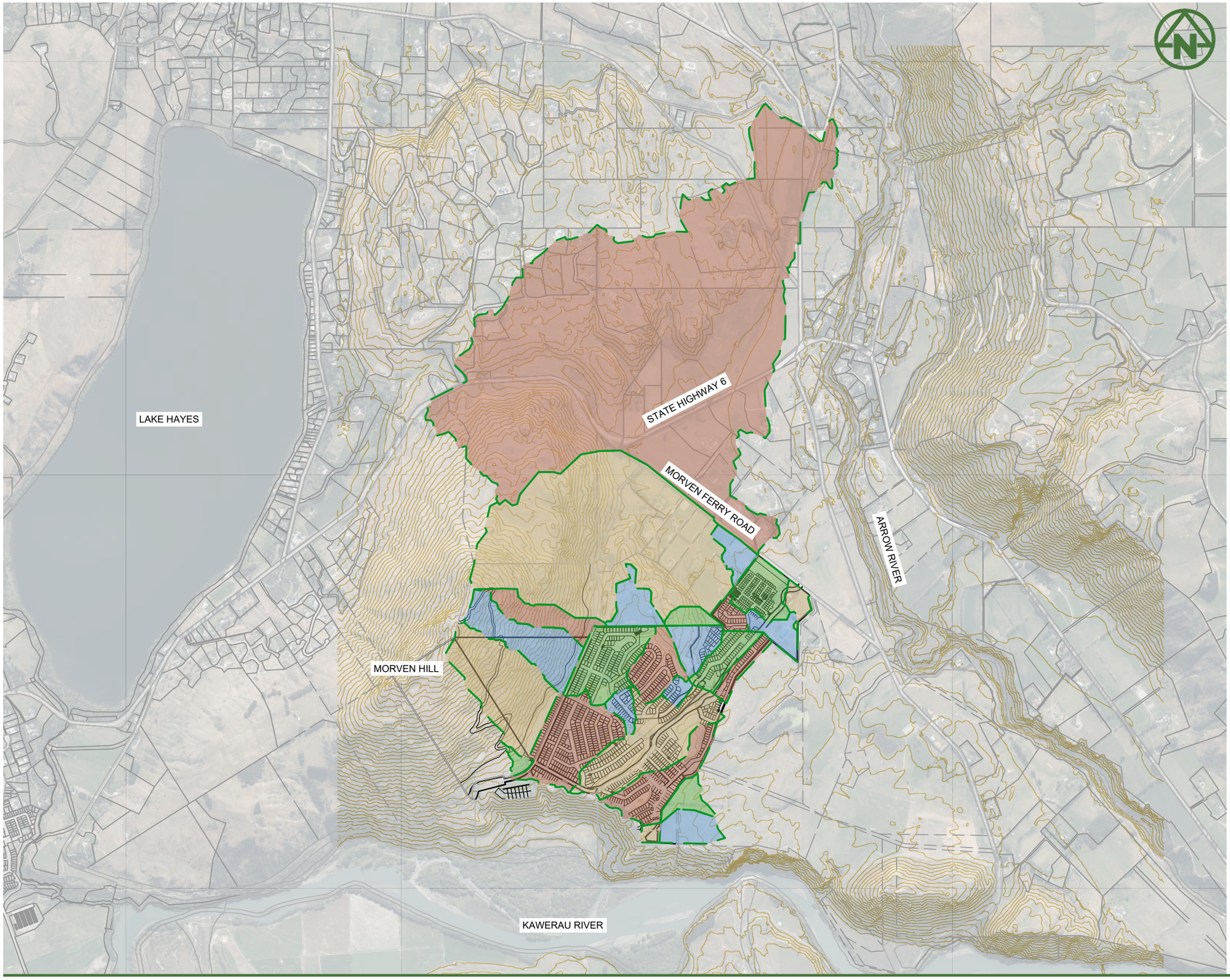
PURPOSE OF ISSUE: RESOURCE CONSENT

SCALE: 1:25,000

DRAWING NO: 4048-0-4501

REV: A

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NOTES

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4. CATCHMENTS DELINEATED IN QGIS WERE USED TO COMPUTE EXISTING WETLAND FLOWS FOR PRE- AND POST-DEVELOPMENT USING TP108 HYDROLOGY PARAMETERS MODELLED IN HEC-HMS.

LEGEND:

SITE BOUNDARY

PROPOSED PRE-DEVELOPMENT CATCHMENT BOUNDARY

EXISTING CONTOUR (1.0m)

CATCHMENT AREAS

MCKENZIE & CO.

REV	DESCRIPTION	DRN BY	CHK BY	APP BY	DATE
A	FIRST ISSUE	TDW	TDW		12/02/26

CLIENT: RIDGEBURN LTD

PROJECT: RIDGEBURN
122 MORVEN FERRY ROAD
ARROW JUNCTION
QUEENSTOWN

TITLE: STORMWATER
1% AEP PRE DEVELOPMENT
OVERLAND FLOW PATH
CATCHMENT PLAN - OVERALL

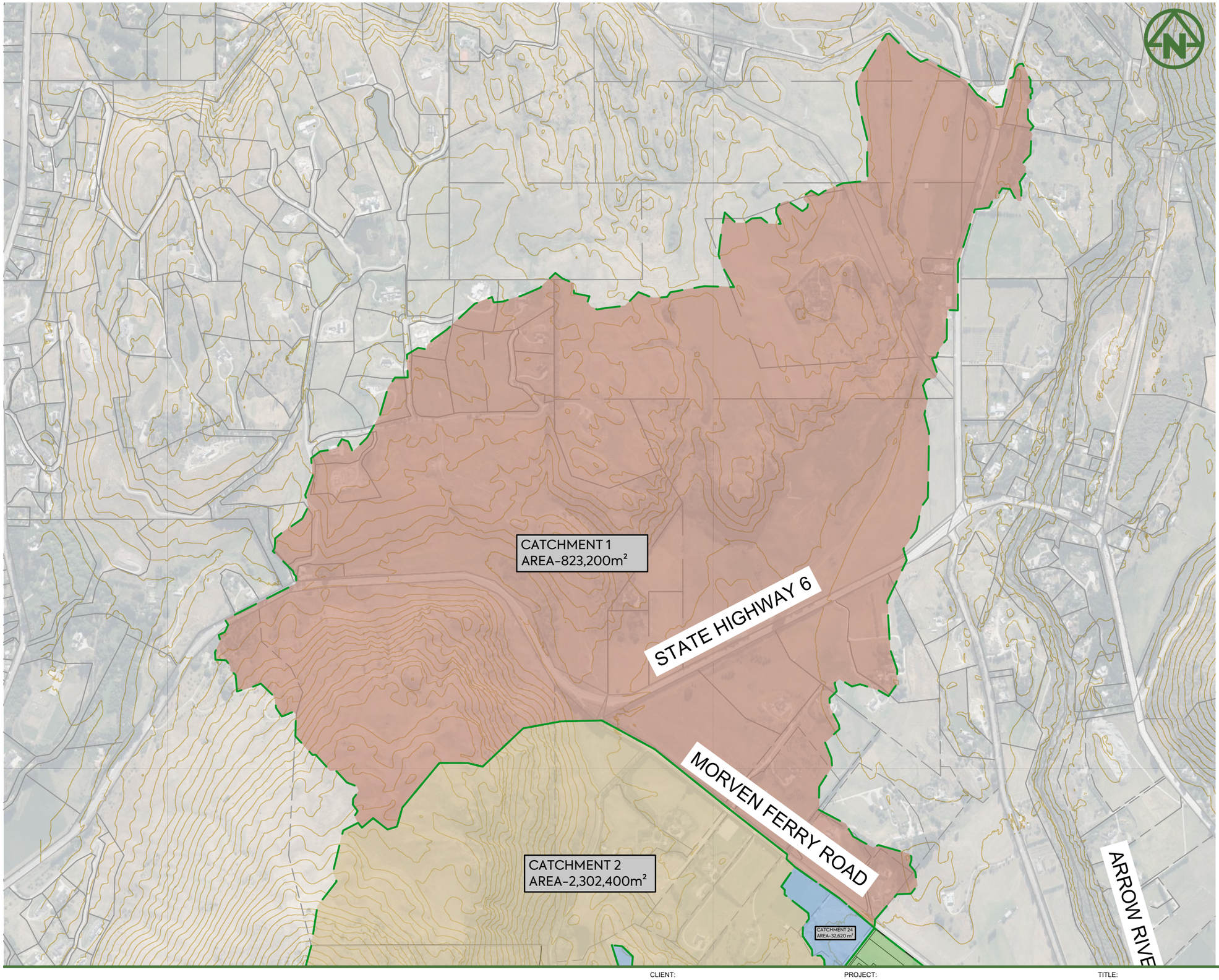
PURPOSE OF ISSUE: FOR INFORMATION

SCALE: 1:20000m @ A3
DO NOT SCALE

DRAWING NO: 4048-0-4502

REV: A

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LEGEND:

SITE BOUNDARY

PROPOSED PRE-DEVELOPMENT CATCHMENT BOUNDARY

EXISTING CONTOUR (1.0m)

CATCHMENT AREAS

MCKENZIE & CO.

REV	DESCRIPTION	DRN BY	CHK BY	APP BY	DATE
A	FIRST ISSUE	TDW	TDW		12/02/26

CLIENT: RIDGEBURN LTD

PROJECT: RIDGEBURN
122 MORVEN FERRY ROAD
ARROW JUNCTION
QUEENSTOWN

TITLE: STORMWATER
1% AEP PRE DEVELOPMENT
OVERLAND FLOW PATH
CATCHMENT PLAN - SHEET 1

PURPOSE OF ISSUE: FOR INFORMATION

SCALE: 1:10000m @ A3
DO NOT SCALE

DRAWING NO: 4048-0-4503

REV: A

PLOT DATE 2026-02-18 11:53:59 WWW.MCKENZIEANDCO.CO.NZ THIS DRAWING IS SOLELY FOR USE BY THE CLIENT ON THIS PROJECT ONLY. NO LIABILITY IS ACCEPTED IN ITS USE BY ANY OTHER ENTITY OR FOR ANY OTHER PURPOSE

MORVEN FERRY ROAD

CATCHMENT 2
AREA-2,302,400m²

CATCHMENT 24
AREA-32,620 m²

CATCHMENT 9
AREA-68,553m²

CATCHMENT 10
AREA-19,270 m²

CATCHMENT 3
AREA-65,886 m²

CATCHMENT 6
AREA-49,349m²

CATCHMENT 7
AREA-21,637 m²

CATCHMENT 8
AREA-22,751 m²

CATCHMENT 11
AREA-35,530 m²

CATCHMENT 14
AREA-49,319m²

CATCHMENT 13
AREA-50,515m²

CATCHMENT 4
AREA-123,900 m²

CATCHMENT 16
AREA-116,200m²

KAWERAU RIVER

NOTES

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LEGEND:

SITE BOUNDARY

PROPOSED PRE-DEVELOPMENT CATCHMENT BOUNDARY

EXISTING CONTOUR (1.0m)

CATCHMENT AREAS

MCKENZIE & CO.

REV	DESCRIPTION	DRN BY	CHK BY	APP BY	DATE
A	FIRST ISSUE	TDW	TDW		12/02/26

CLIENT: RIDGEBURN LTD

PROJECT: RIDGEBURN
122 MORVEN FERRY ROAD
ARROW JUNCTION
QUEENSTOWN

TITLE: STORMWATER
1% AEP PRE DEVELOPMENT
OVERLAND FLOW PATH
CATCHMENT PLAN-SHEET 2

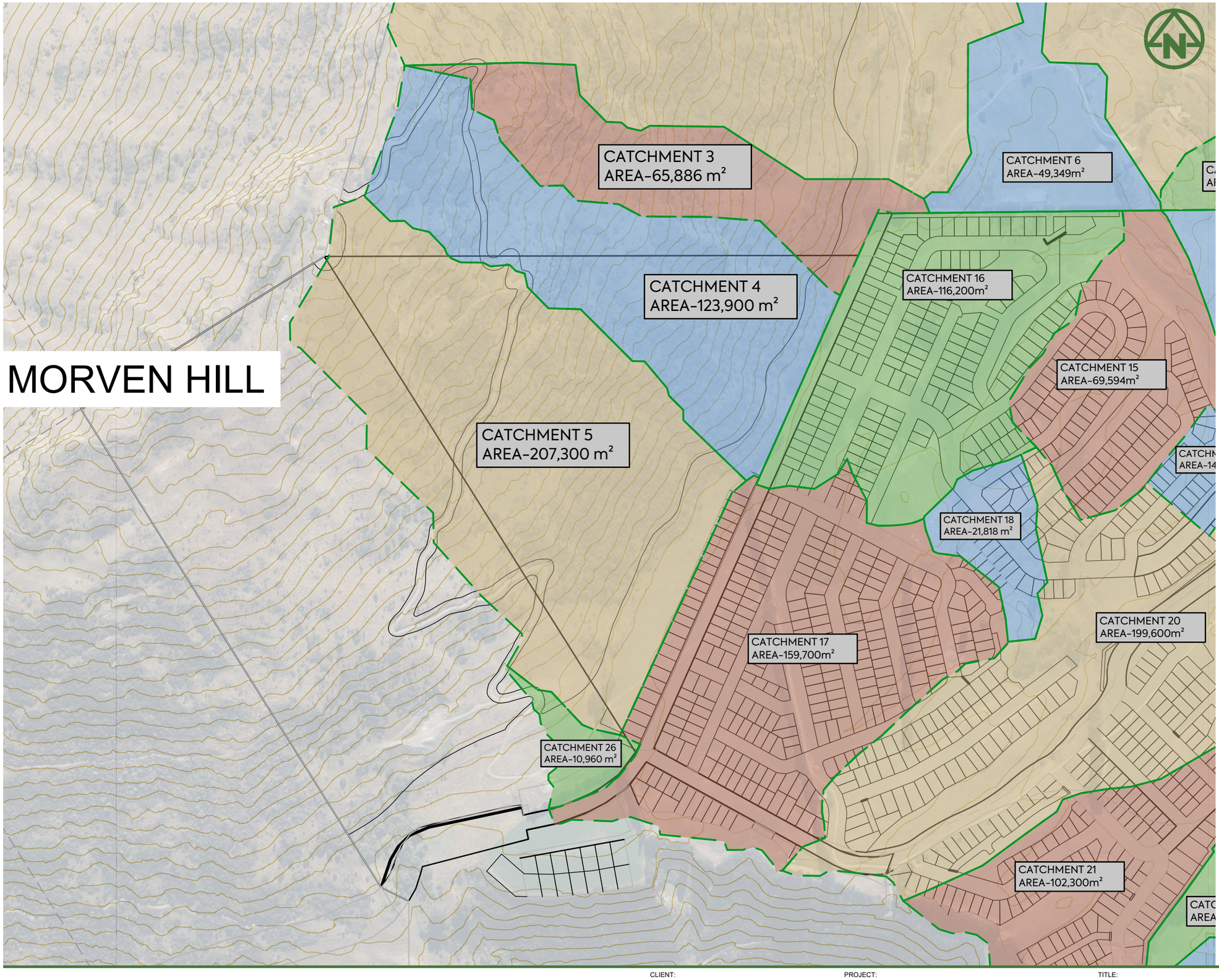
PURPOSE OF ISSUE: RESOURCE CONSENT

SCALE: 1:5000m @ A3
DO NOT SCALE

DRAWING NO: 4048-0-4504

REV: A

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LEGEND:

SITE BOUNDARY

PROPOSED PRE-DEVELOPMENT CATCHMENT BOUNDARY

EXISTING CONTOUR (1.0m)

CATCHMENT AREAS

MCKENZIE & CO.

REV	DESCRIPTION	DRN BY	CHK BY	APP BY	DATE
A	FIRST ISSUE	TDW	TDW		12/02/26

CLIENT: RIDGEBURN LTD

PROJECT: RIDGEBURN
122 MORVEN FERRY ROAD
ARROW JUNCTION
QUEENSTOWN

TITLE: STORMWATER
1% AEP PRE DEVELOPMENT
OVERLAND FLOW PATH
CATCHMENT PLAN-SHEET 3

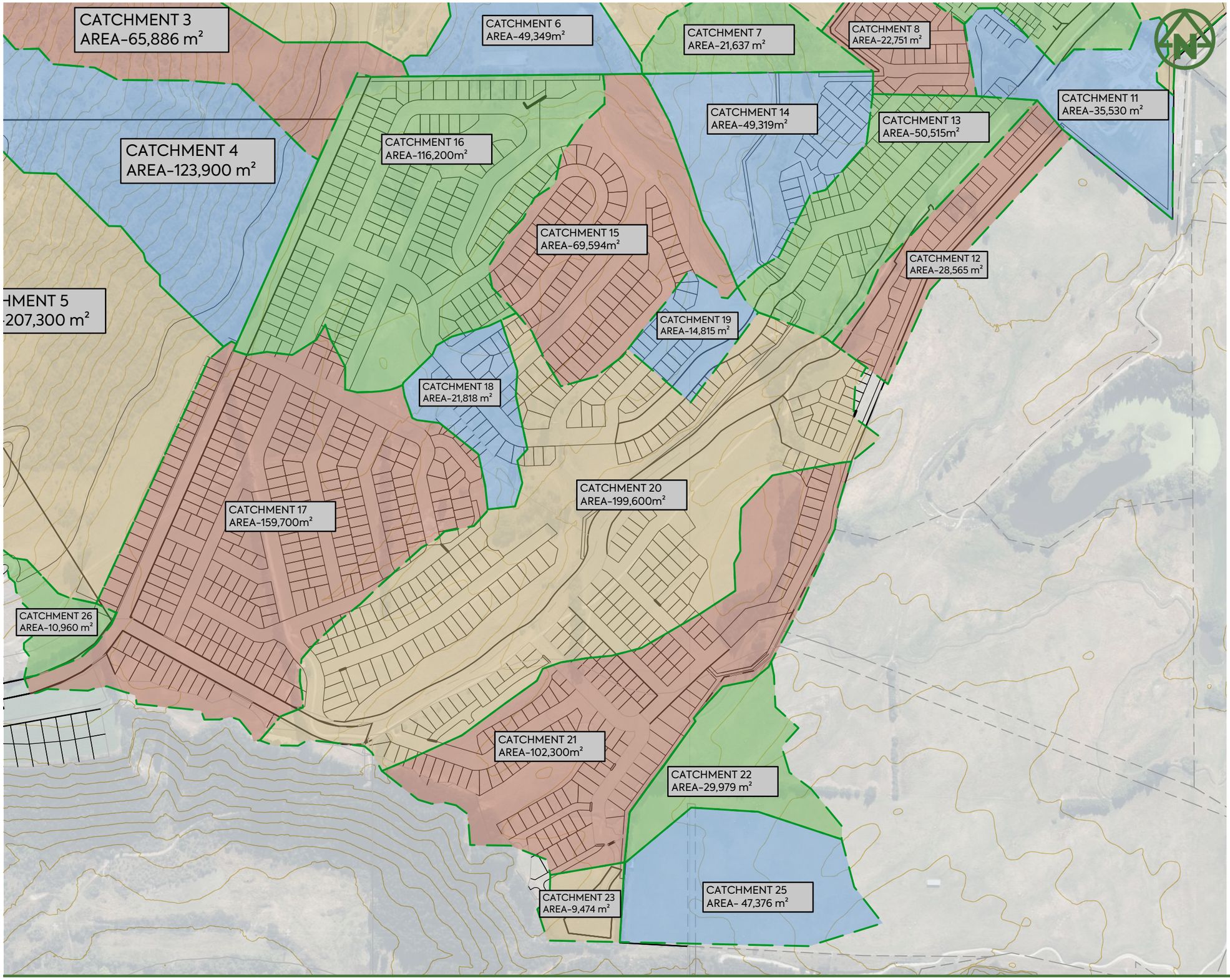
PURPOSE OF ISSUE: RESOURCE CONSENT

SCALE: 1:5000m @ A3
DO NOT SCALE

DRAWING NO: 4048-0-4505

REV: A

PLOT DATE 2026-02-18 11:54:31 WWW.MCKENZIEANDCO.CO.NZ THIS DRAWING IS SOLELY FOR USE BY THE CLIENT ON THIS PROJECT ONLY. NO LIABILITY IS ACCEPTED IN ITS USE BY ANY OTHER ENTITY OR FOR ANY OTHER PURPOSE



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4. CATCHMENTS DELINEATED IN QGIS WERE USED TO COMPUTE EXISTING WETLAND FLOWS FOR PRE- AND POST-DEVELOPMENT USING TP108 HYDROLOGY PARAMETERS MODELLED IN HEC-HMS.

LEGEND:

SITE BOUNDARY

PROPOSED PRE-DEVELOPMENT CATCHMENT BOUNDARY

EXISTING CONTOUR (1.0m)

CATCHMENT AREAS

MCKENZIE & CO.

REV	DESCRIPTION	DRN BY	CHK BY	APP BY	DATE
A	FIRST ISSUE	TDW	TDW		12/02/26

CLIENT: RIDGEBURN LTD

PROJECT: RIDGEBURN
122 MORVEN FERRY ROAD
ARROW JUNCTION
QUEENSTOWN

TITLE: STORMWATER
1% AEP PRE DEVELOPMENT
OVERLAND FLOW PATH
CATCHMENT PLAN-SHEET 4

PURPOSE OF ISSUE: RESOURCE CONSENT

SCALE: 1:5000m @ A3
DO NOT SCALE

DRAWING NO: 4048-0-4506

REV: A

PLOT DATE 2026-02-18 11:54:48 WWW.MCKENZIEANDCO.CO.NZ THIS DRAWING IS SOLELY FOR USE BY THE CLIENT ON THIS PROJECT ONLY. NO LIABILITY IS ACCEPTED IN ITS USE BY ANY OTHER ENTITY OR FOR ANY OTHER PURPOSE

Project: Ponds Finish Surface
Simulation Run: 2 YR
Simulation Start: 31 December 2025, 24:00
Simulation End: 1 January 2026, 24:00

HMS Version: 4.13
Executed: 11 February 2026, 01:32

Global Parameter Summary - Reach

	Downstream
Element Name	**Downstream**
Reach - CHANNEL 1	Junction - POND 1
Reach - CHANNEL 2	Junction - POND 1
Reach - CHANNEL 3	Junction - POND 6
Reach - CHANNEL 4	Junction - CHANNEL 1
Reach - CHANNEL 5	Junction - CHANNEL 1
Reach - POND 5 OLFP	Junction - EXIT OLFP
Reach - CHANNEL 6	Junction - POND 7
Reach - CHANNEL 8	Junction - CHANNEL 3
Reach - WETLAND B	Junction - CHANNEL 4
Reach - MORVEN FERRY SWALE	Olfp outflow

Route: Muskingum Cunge

Element Name	Method	Channel	Length (M)	Energy Slope (M/M)	Mannings n	Bottom Width (M)	Side Slope (M/M)	Initial Variable	Space - Time Method	Index Parameter Type	Index Flow	I El
Reach - CHANNEL 1	Muskingum Cunge	Trapezoid	300	0.01	0.06	20	3	Combined Inflow	Automatic DX and DT	Index Flow	15	
Reach - CHANNEL 2	Muskingum Cunge	Trapezoid	520	0.01	0.06	20	3	Combined Inflow	Automatic DX and DT	Index Flow	15	
Reach - CHANNEL 3	Muskingum Cunge	Trapezoid	340	0.01	0.06	20	3	Combined Inflow	Automatic DX and DT	Index Flow	15	
Reach - CHANNEL 4	Muskingum Cunge	Trapezoid	200	0.03	0.06	20	3	Combined Inflow	Automatic DX and DT	Index Flow	15	
Reach - CHANNEL 5	Muskingum Cunge	Trapezoid	300	0	0.06	20	3	Combined Inflow	Automatic DX and DT	Index Flow	15	
Reach - POND 5 OLFP	Muskingum Cunge	Trapezoid	737.85	0.01	0.06	20	3	Combined Inflow	Automatic DX and DT	Index Flow	15	
Reach - CHANNEL 6	Muskingum Cunge	Trapezoid	300	0.02	0.06	20	3	Combined Inflow	Automatic DX and DT	Index Flow	15	
Reach - CHANNEL 8	Muskingum Cunge	Trapezoid	660	0.03	0.06	20	3	Combined Inflow	Automatic DX and DT	Index Flow	15	
Reach - WETLAND B	Muskingum Cunge	Trapezoid	630	0.08	0.06	20	3	Combined Inflow	Automatic DX and DT	Index Flow	15	
Reach - MORVEN FERRY SWALE	Muskingum Cunge	Trapezoid	770	0.01	0.06	20	3	Combined Inflow	Automatic DX and DT	Index Flow	15	

Global Parameter Summary - Subbasin

	Location	
Element Name	Longitude Degrees	Latitude Degrees
Difference pond 1 internal	168.84	-44.99
Difference pond 1 upstream	168.84	-44.99
Difference pond 1 upstream s	168.85	-44.99
Difference pond 2 internal	168.85	-44.99
Difference pond 2 upstream	168.85	-44.99
Difference pond 2 south	168.85	-44.99
Difference pond 5 internal	168.84	-45
Difference pond 5 upstream	168.84	-45
Difference pond 6 upstream	168.83	-44.99
Difference pond 6 internal	168.84	-45
Difference pond 6 south	168.84	-45
Difference pond 7 upstream	168.83	-44.99
Difference pond 7 internal	168.84	-44.99
Difference wetland b upstre	168.84	-44.99
Difference wetland b intern	168.84	-44.99
Morven ferry vectorised	168.84	-44.98
Difference downstream exit	168.85	-45

Area (KM2)

Element Name	Area (KM2)
Difference pond 1 internal	0.21
Difference pond 1 upstream	0.86
Difference pond 1 upstream s	0.01
Difference pond 2 internal	0.03
Difference pond 2 upstream	0.03
Difference pond 2 south	0.02
Difference pond 5 internal	0.11
Difference pond 5 upstream	0.03
Difference pond 6 upstream	0.2
Difference pond 6 internal	0.29
Difference pond 6 south	0.07
Difference pond 7 upstream	0.16
Difference pond 7 internal	0.09
Difference wetland b upstre	0.1
Difference wetland b intern	0.08
Morven ferry vectorised	1.8
Difference downstream exit	0.6

Downstream

Element Name	Downstream
Difference pond 1 internal	Junction - POND 1
Difference pond 1 upstream	Junction - CHANNEL 1
Difference pond 1 upstream s	Junction - POND 1
Difference pond 2 internal	Junction - POND 2
Difference pond 2 upstream	Pond 3 drybasin
Difference pond 2 south	Junction - POND 2
Difference pond 5 internal	Pond 5
Difference pond 5 upstream	Pond 5
Difference pond 6 upstream	Reach - CHANNEL 8
Difference pond 6 internal	Junction - CHANNEL 3
Difference pond 6 south	Junction - POND 6
Difference pond 7 upstream	Reach - CHANNEL 6
Difference pond 7 internal	Junction - POND 7
Difference wetland b upstre	Junction - CHANNEL 4
Difference wetland b intern	Junction - CHANNEL 4
Morven ferry vectorised	Swale morven ferry l
Difference downstream exit	Junction - EXIT OLFP

Loss Rate: Scs

Element Name	Percent Impervious Area	Curve Number	Initial Abstraction
Difference pond 1 internal	0	90.8	1.29
Difference pond 1 upstream	0	75.2	4.19
Difference pond 1 upstream s	0	74	4.46
Difference pond 2 internal	0	94.4	0.75
Difference pond 2 upstream	0	78.8	3.42
Difference pond 2 south	0	98	0
Difference pond 5 internal	0	87.2	1.86
Difference pond 5 upstream	0	74	4.46
Difference pond 6 upstream	0	74	4.46
Difference pond 6 internal	0	88.4	1.67
Difference pond 6 south	0	74	4.46
Difference pond 7 upstream	0	74	4.46
Difference pond 7 internal	0	90.1	1.4
Difference wetland b upstre	0	75.2	4.19
Difference wetland b intern	0	88.4	1.67
Morven ferry vectorised	0	75.2	4.19
Difference downstream exit	0	75.7	4.08

Transform: Scs

Element Name	Lag	Unitgraph Type
Difference pond 1 internal	15.03	Standard
Difference pond 1 upstream	15.18	Standard
Difference pond 1 upstream s	8.07	Standard
Difference pond 2 internal	9.53	Standard
Difference pond 2 upstream	11.22	Standard
Difference pond 2 south	6.97	Standard
Difference pond 5 internal	12.18	Standard
Difference pond 5 upstream	3.21	Standard
Difference pond 6 upstream	3.86	Standard
Difference pond 6 internal	16.51	Standard
Difference pond 6 south	10.61	Standard
Difference pond 7 upstream	3.16	Standard
Difference pond 7 internal	11.53	Standard
Difference wetland b upstre	6.14	Standard
Difference wetland b intern	6.97	Standard
Morven ferry vectorised	30.44	Standard
Difference downstream exit	26.55	Standard

Global Results Summary

Hydrologic Element	Drainage Area (KM2)	Peak Discharge (M3/S)	Time of Peak	Volume (MM)
Swale morven ferry l	1.8	2.12	01Jan2026, 12:40	15.9
Pond 1	2.08	2.19	01Jan2026, 12:40	20.09
Pond 2	1.88	0.27	01Jan2026, 12:15	3.85
Pond 3 drybasin	1.83	0.13	01Jan2026, 19:15	2.84
Pond 5	0.14	0.23	01Jan2026, 12:30	22.36
Pond 6	0.56	0.56	01Jan2026, 13:00	18.09
Pond 7	0.25	0.1	01Jan2026, 15:05	15.57
Reach - CHANNEL 1	1.3	1.82	01Jan2026, 12:20	20.02
Reach - CHANNEL 2	0.56	0.55	01Jan2026, 13:05	18.02
Reach - CHANNEL 3	0.49	1.13	01Jan2026, 12:20	22.97
Reach - CHANNEL 4	0.43	0.55	01Jan2026, 12:15	18.2
Reach - CHANNEL 5	0	0.2	01Jan2026, 19:25	Not specified
Reach - POND 5 OLFP	0.14	0.22	01Jan2026, 12:40	22.29
Reach - CHANNEL 6	0.16	0.33	01Jan2026, 12:10	15.39
Reach - CHANNEL 8	0.2	0.42	01Jan2026, 12:15	15.37
Reach - WETLAND B	0.25	0.1	01Jan2026, 15:10	15.51
Reach - MORVEN FERRY SWALE	0	0	31Dec2025, 24:00	Not specified
Difference pond 1 internal	0.21	0.69	01Jan2026, 12:20	31.72
Difference pond 1 upstream	0.86	1.38	01Jan2026, 12:20	16.09
Difference pond 1 upstream s	0.01	0.02	01Jan2026, 12:15	15.36
Difference pond 2 internal	0.03	0.11	01Jan2026, 12:15	37.64
Difference pond 2 upstream	0.03	0.07	01Jan2026, 12:15	18.81

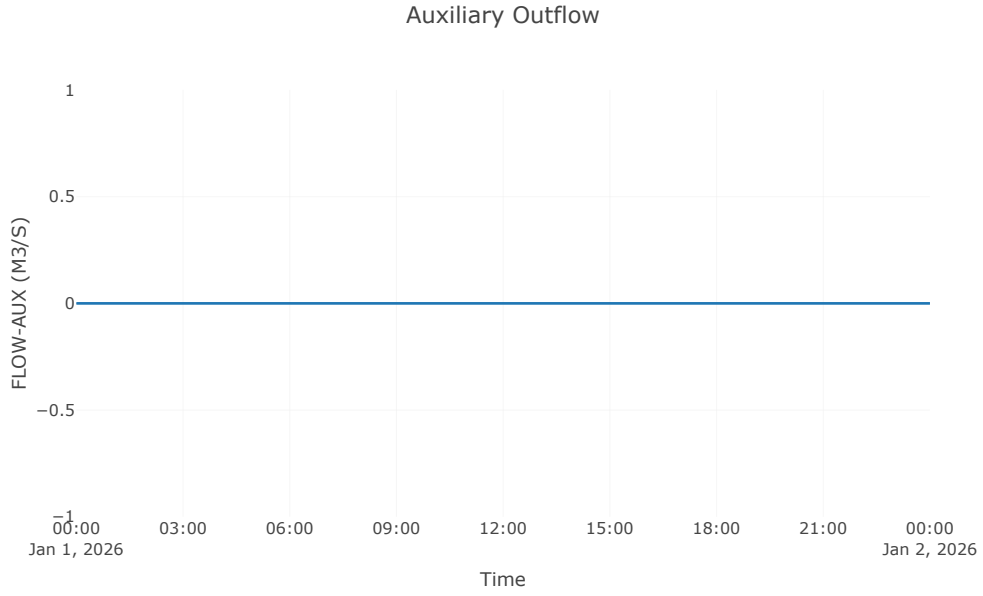
Difference pond 2 south	0.02	0.13	01Jan2026, 12:10	45.27
Difference pond 5 internal	0.11	0.33	01Jan2026, 12:15	27.03
Difference pond 5 upstream	0.03	0.06	01Jan2026, 12:10	15.41
Difference pond 6 upstream	0.2	0.45	01Jan2026, 12:10	15.4
Difference pond 6 internal	0.29	0.8	01Jan2026, 12:20	28.44
Difference pond 6 south	0.07	0.13	01Jan2026, 12:15	15.33
Difference pond 7 upstream	0.16	0.36	01Jan2026, 12:10	15.41
Difference pond 7 internal	0.09	0.3	01Jan2026, 12:15	30.77
Difference wetland b upstre	0.1	0.21	01Jan2026, 12:10	16.19
Difference wetland b intern	0.08	0.31	01Jan2026, 12:10	28.58
Morven ferry vectorised	1.8	2.13	01Jan2026, 12:35	15.93
Difference downstream exit	0.6	0.76	01Jan2026, 12:35	16.32
Junction - POND 1	2.08	2.82	01Jan2026, 12:20	20.65
Junction - CHANNEL 1	1.3	1.83	01Jan2026, 12:15	20.08
Junction - POND 2	1.88	0.3	01Jan2026, 12:10	3.86
Junction - CHANNEL 3	0.49	1.15	01Jan2026, 12:15	23
Junction - CHANNEL 4	0.43	0.58	01Jan2026, 12:10	18.23
Junction - CHANNEL 5	0	0.2	01Jan2026, 19:15	Not specified
Junction - POND 6	0.56	1.24	01Jan2026, 12:20	21.98
Junction - POND 7	0.25	0.6	01Jan2026, 12:15	20.73
Junction - POND 1 SPILL	0	0	31Dec2025, 24:00	Not specified
Junction - POND 2 SPILL	0	0	31Dec2025, 24:00	Not specified
Junction - PIPE MORVEN FERRY L	0	2.12	01Jan2026, 12:40	Not specified
Junction - MORVEN FERRY PIPE R	3.96	2.36	01Jan2026, 12:35	12.38
Junction - MORVEN FERRY ROAD	0.74	0.99	01Jan2026, 12:35	17.44
Junction - EXIT OLFP	0.74	0.99	01Jan2026, 12:35	17.44
Pipe outflow	3.96	4.47	01Jan2026, 12:40	17.23
Olfp outflow	0.74	0.99	01Jan2026, 12:35	17.44
Downstream exit	4.7	5.43	01Jan2026, 12:40	17.26

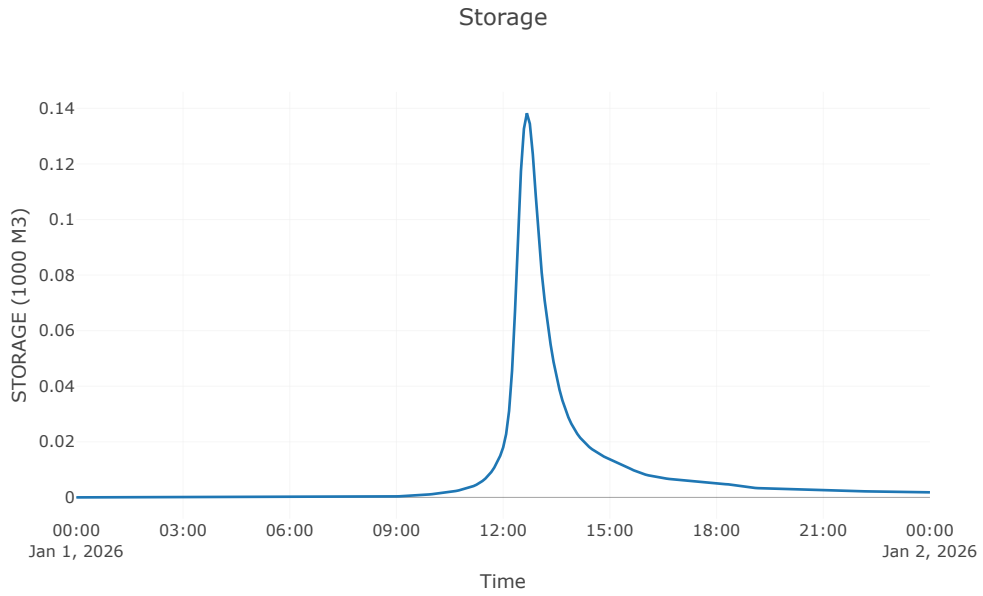
Reservoir: SWALE MORVEN FERRY L

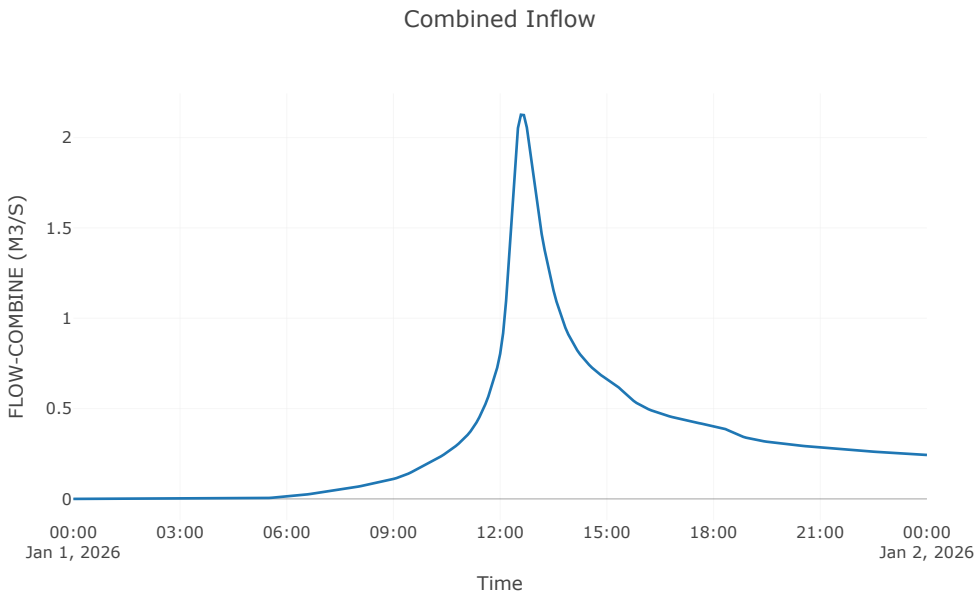
Downstream : Diversion - PIPE MORVEN FRY L

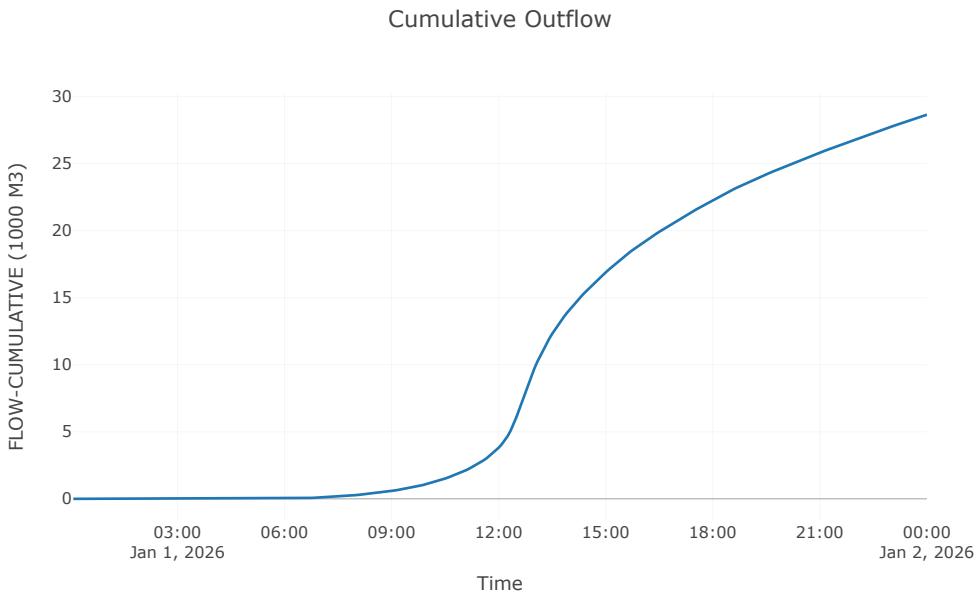
Results: SWALE MORVEN FERRY L

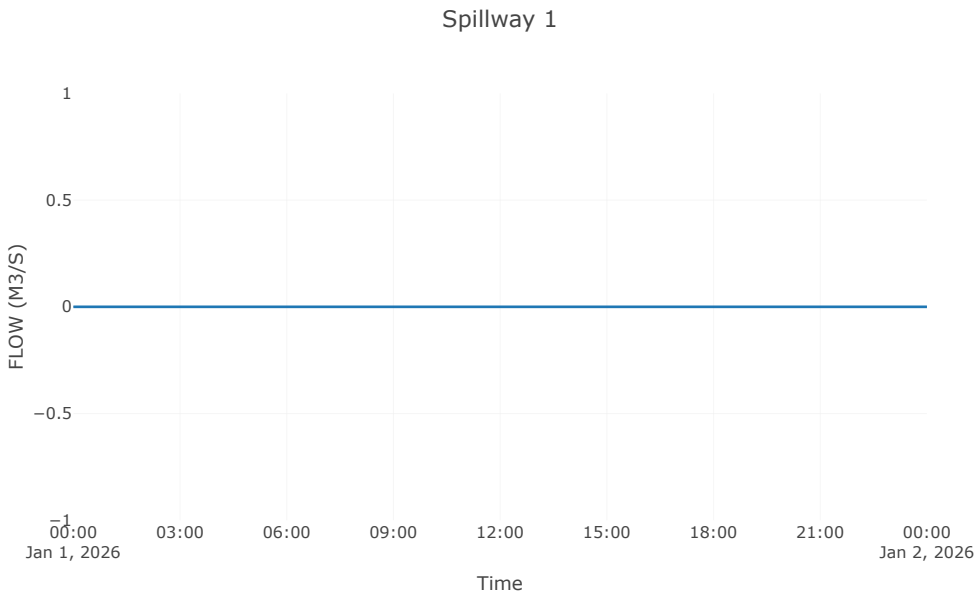
Peak Discharge (M3/S)	2.12
Time of Peak Discharge	01Jan2026, 12:40
Volume (MM)	15.9
Peak Inflow (M3/S)	2.13
Time of Peak Inflow	01Jan2026, 12:35
Inflow Volume (M3)	28704.91
Maximum Storage (M3)	138.24
Peak Elevation (M)	0.09
Discharge Volume (M3)	28648.83

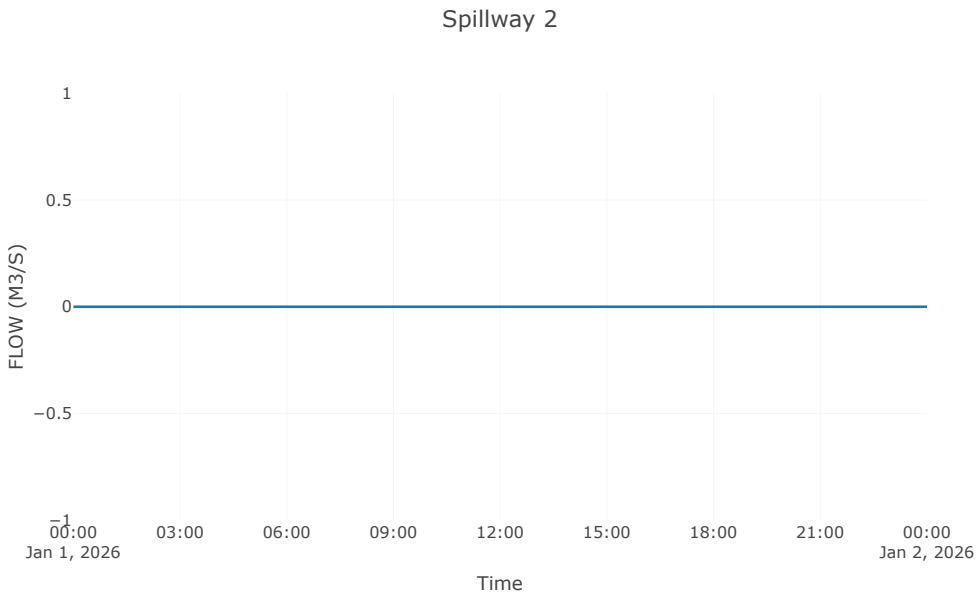


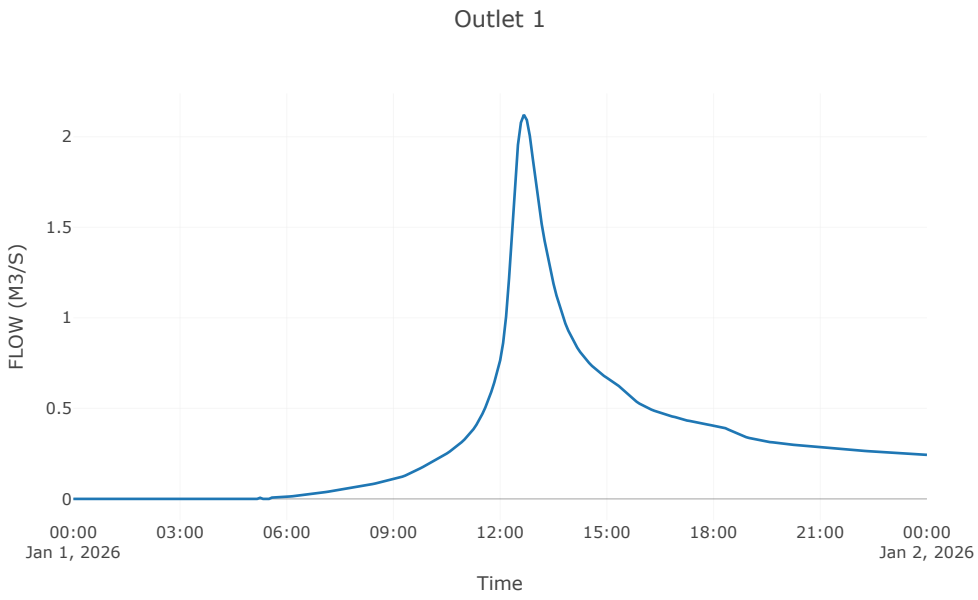


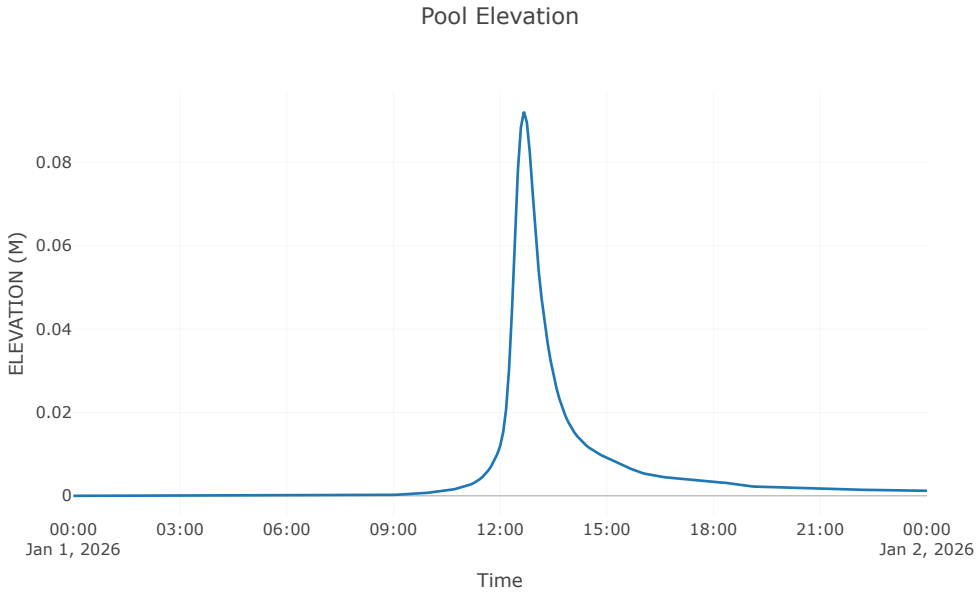

Combined Inflow
FLOW-COMBINE (M3/S)
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

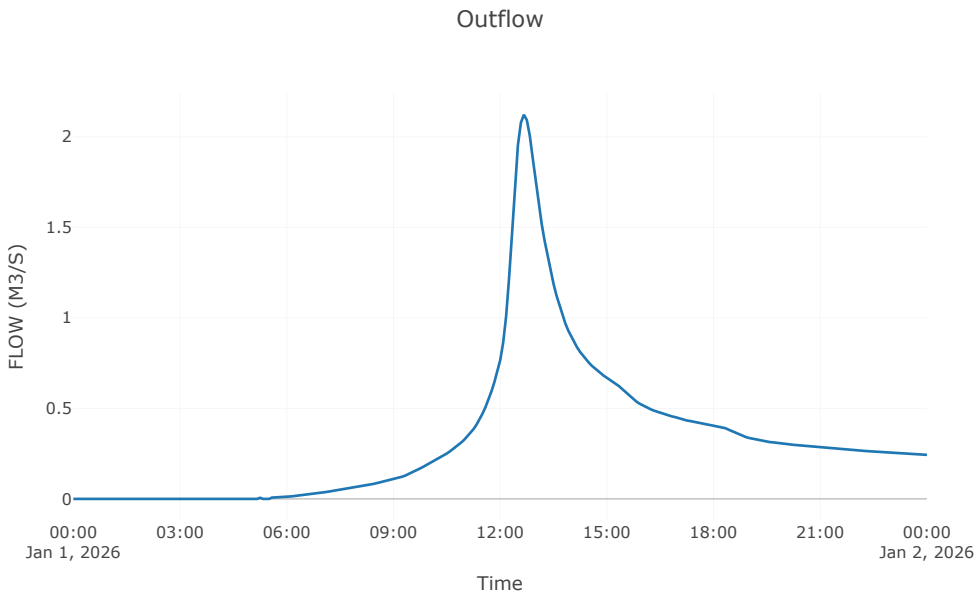

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
30
25
20
15
10
5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Spillway 1
1
0.5
0
−0.5
−1
FLOW (M3/S)
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Spillway 2
1
0.5
0
−0.5
−1
FLOW (M3/S)
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 1
FLOW (M3/S)
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Pool Elevation
ELEVATION (M)
0.08
0.06
0.04
0.02
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

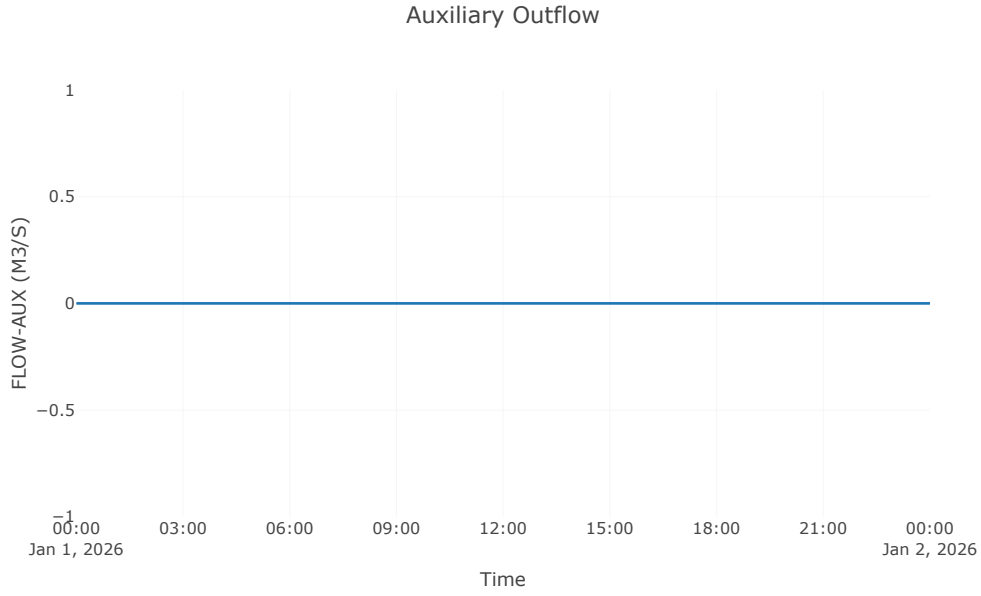

Outflow
FLOW (M3/S)
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

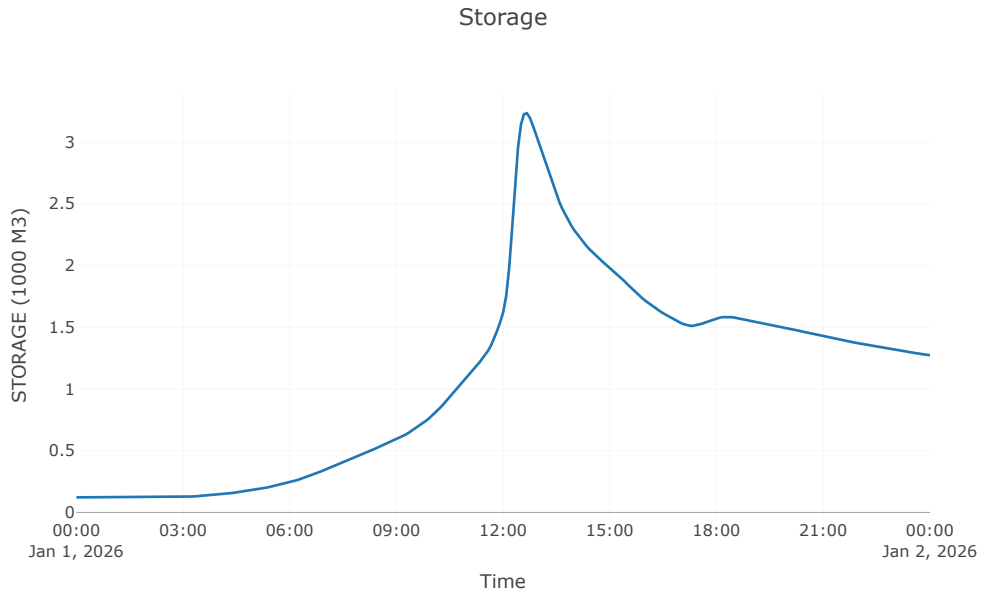
Reservoir: POND 1

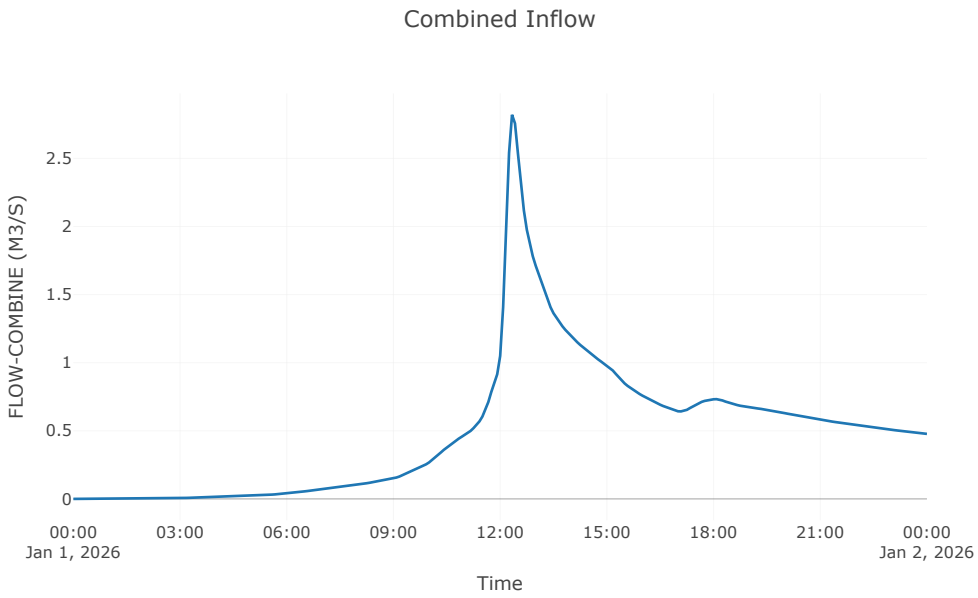
Downstream : Junction - MORVEN FERRY PIPE R

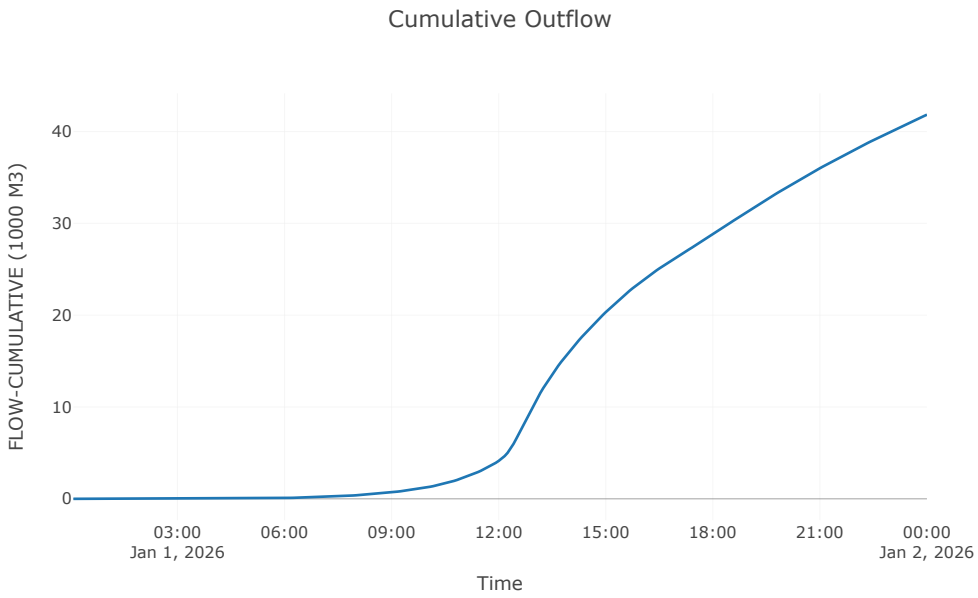
Results: POND 1

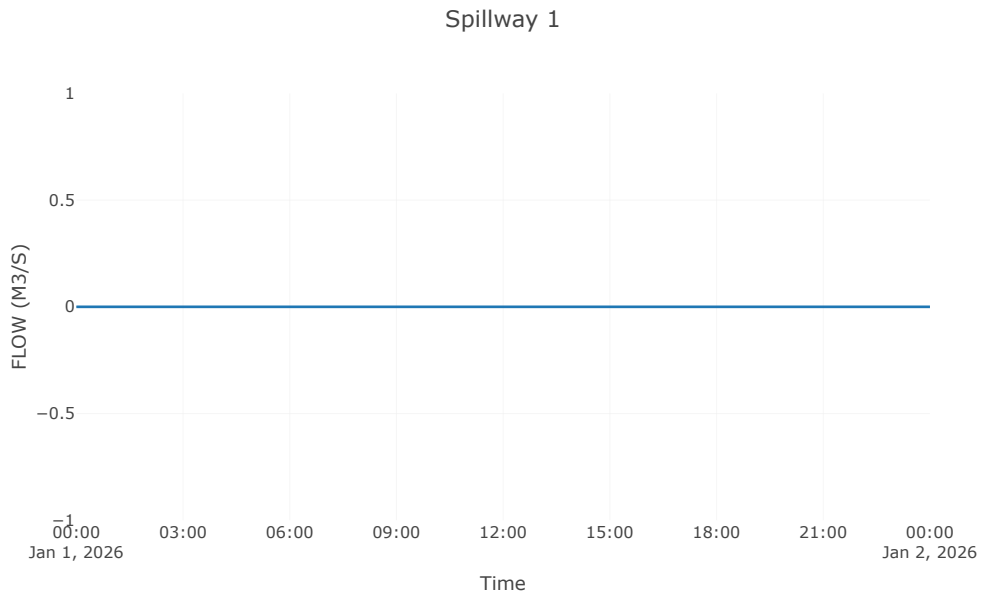
Peak Discharge (M3/S)	2.19
Time of Peak Discharge	01Jan2026, 12:40
Volume (MM)	20.09
Peak Inflow (M3/S)	2.82
Time of Peak Inflow	01Jan2026, 12:20
Inflow Volume (M3)	42995.94
Maximum Storage (M3)	3233.37
Peak Elevation (M)	1.12
Discharge Volume (M3)	41836.57

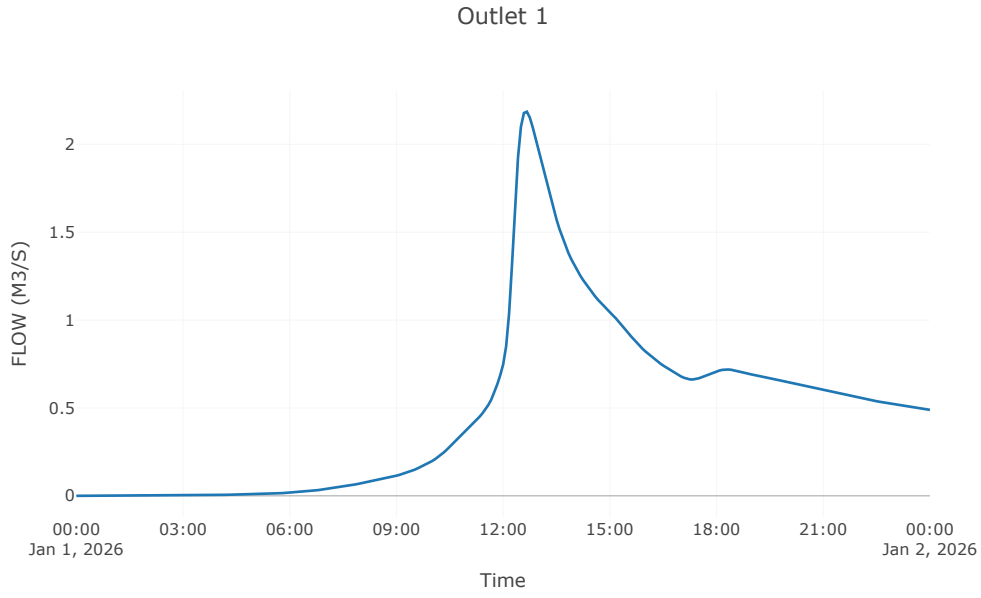


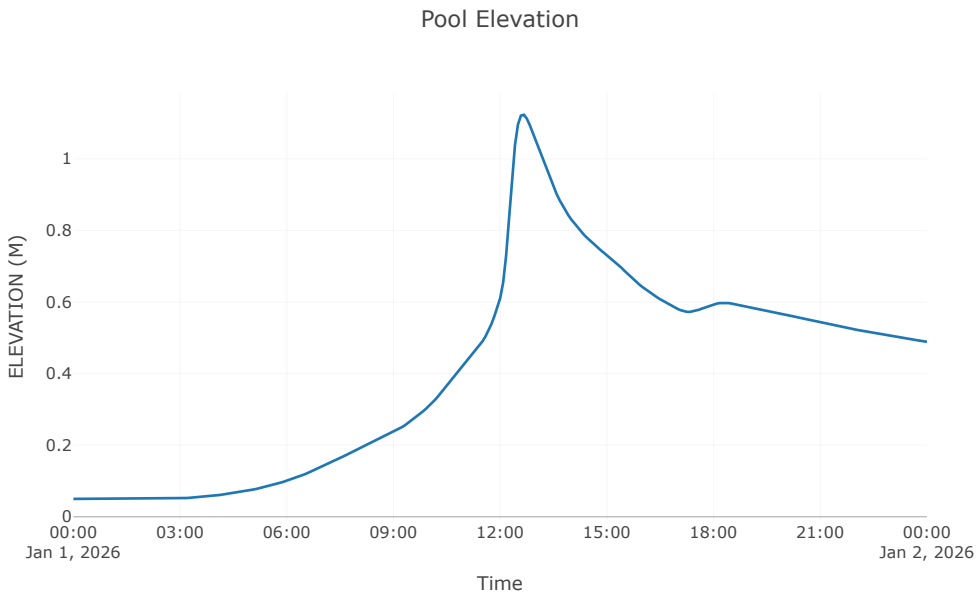


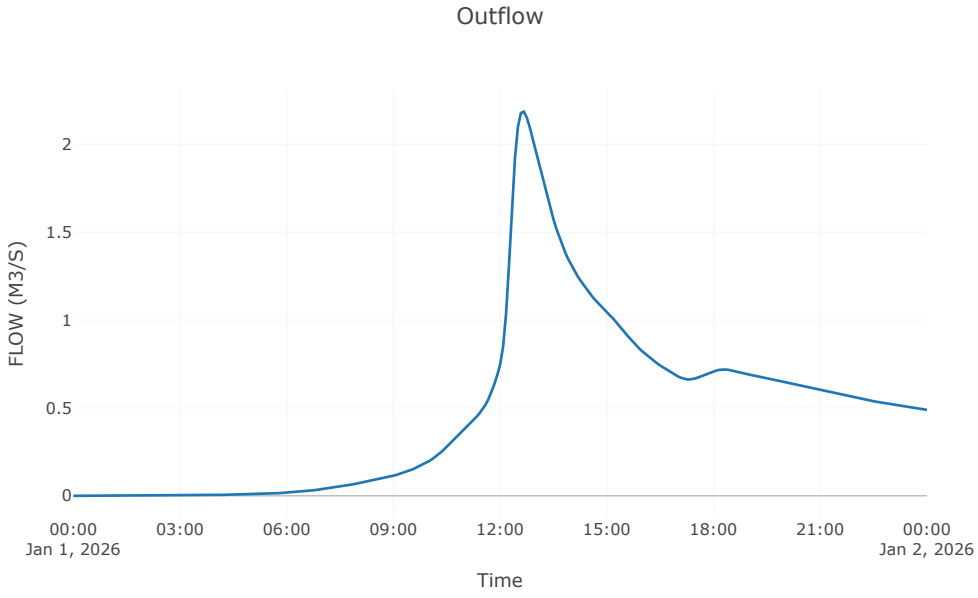

Combined Inflow
FLOW-COMBINE (M3/S)
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
40
30
20
10
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Spillway 1
1
0.5
0
−0.5
−1
FLOW (M3/S)
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 1
2
1.5
1
0.5
0
FLOW (M3/S)
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Pool Elevation
ELEVATION (M)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

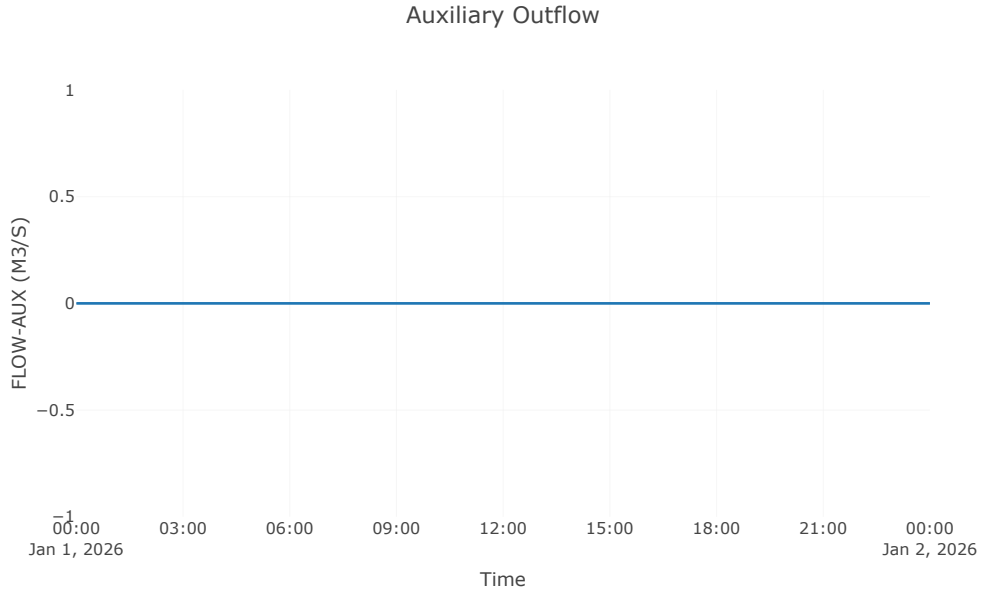

Outflow
FLOW (M3/S)
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

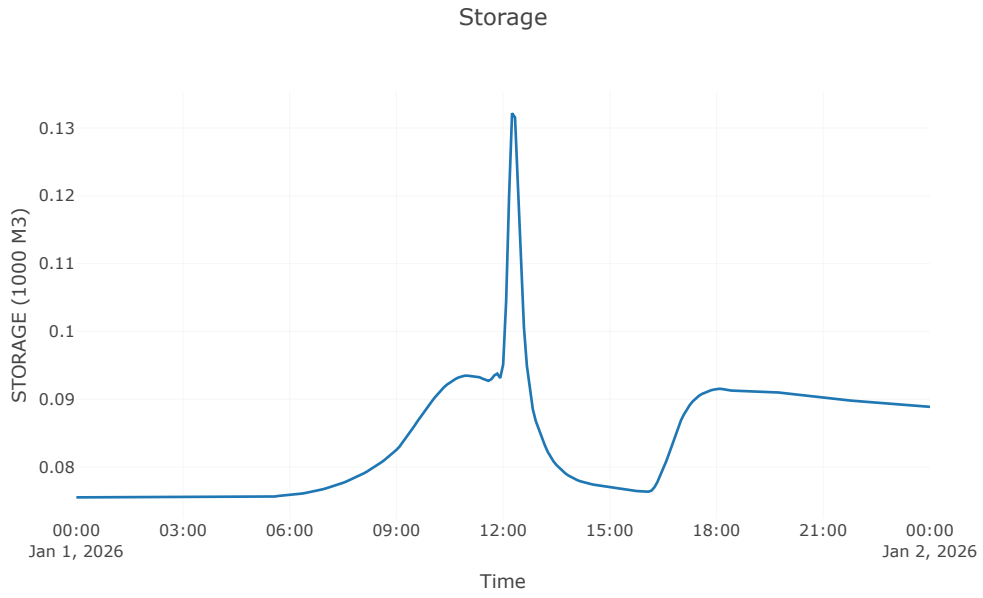
Reservoir: POND 2

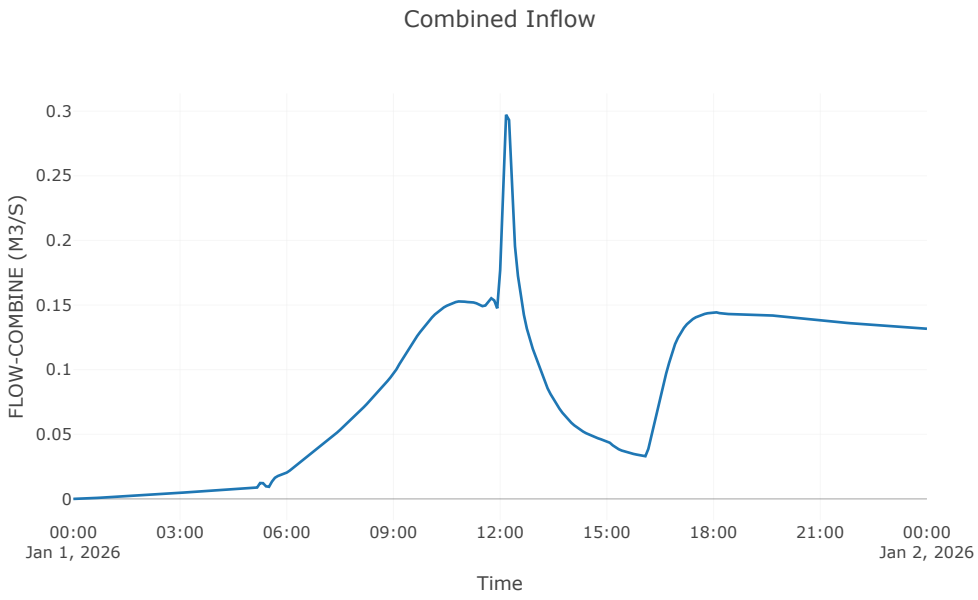
Downstream : Junction - MORVEN FERRY PIPE R

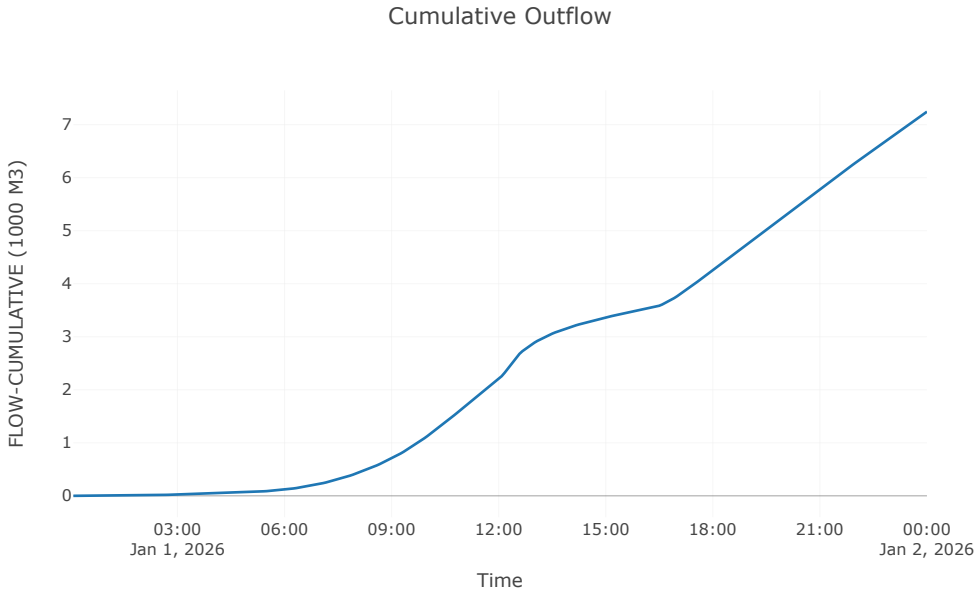
Results: POND 2

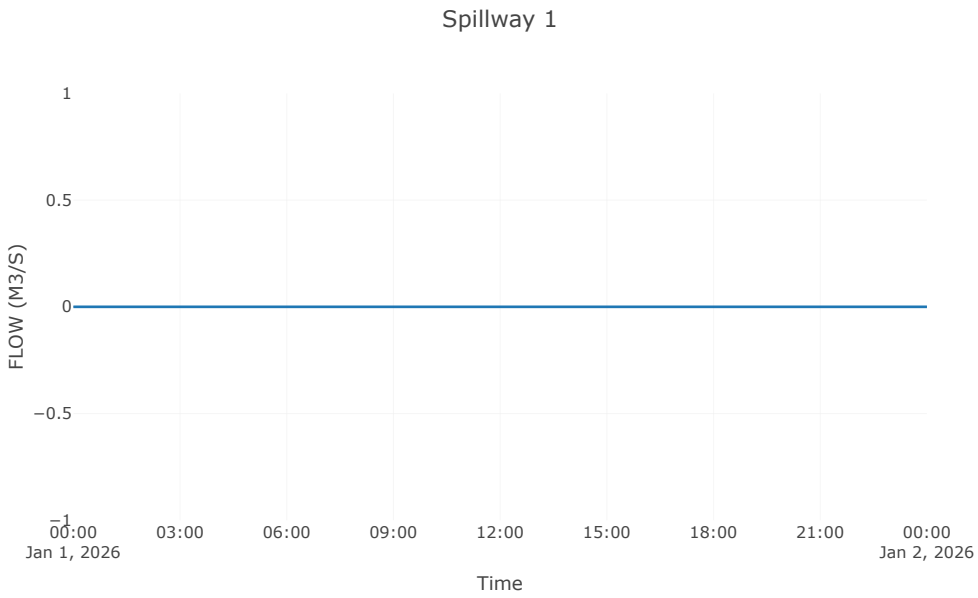
Peak Discharge (M3/S)	0.27
Time of Peak Discharge	01Jan2026, 12:15
Volume (MM)	3.85
Peak Inflow (M3/S)	0.3
Time of Peak Inflow	01Jan2026, 12:10
Inflow Volume (M3)	7261.56
Maximum Storage (M3)	132.18
Peak Elevation (M)	0.26
Discharge Volume (M3)	7244.2

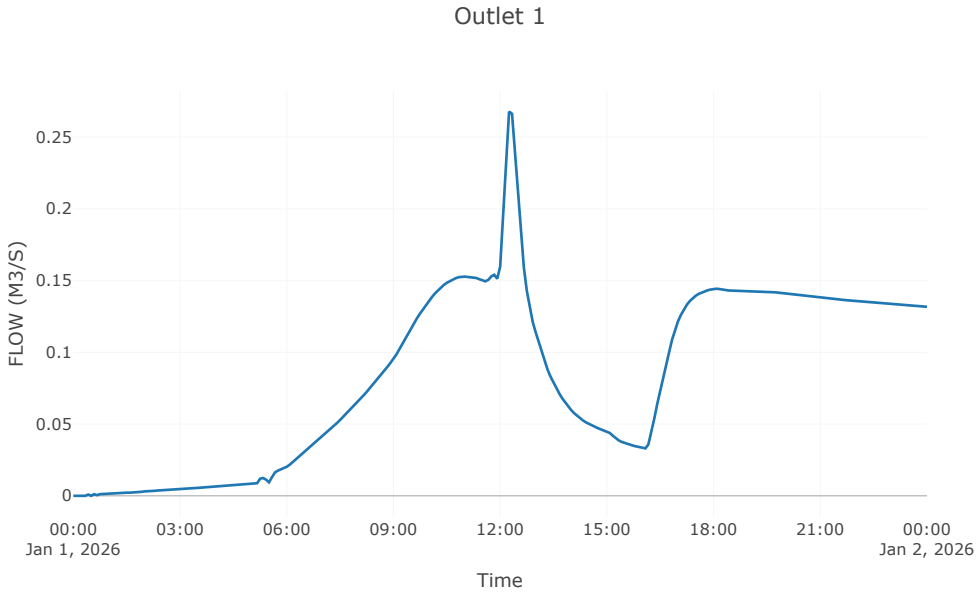


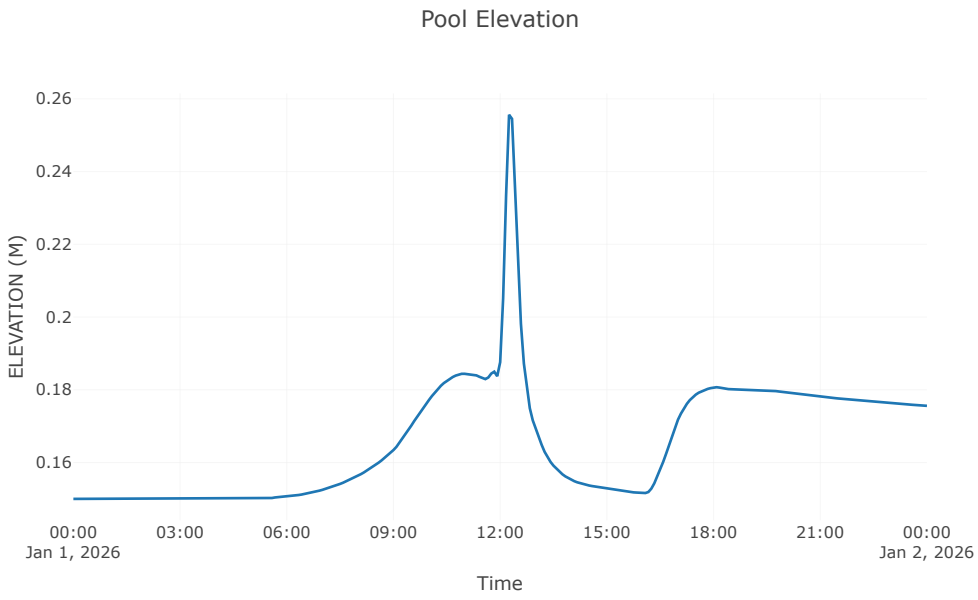


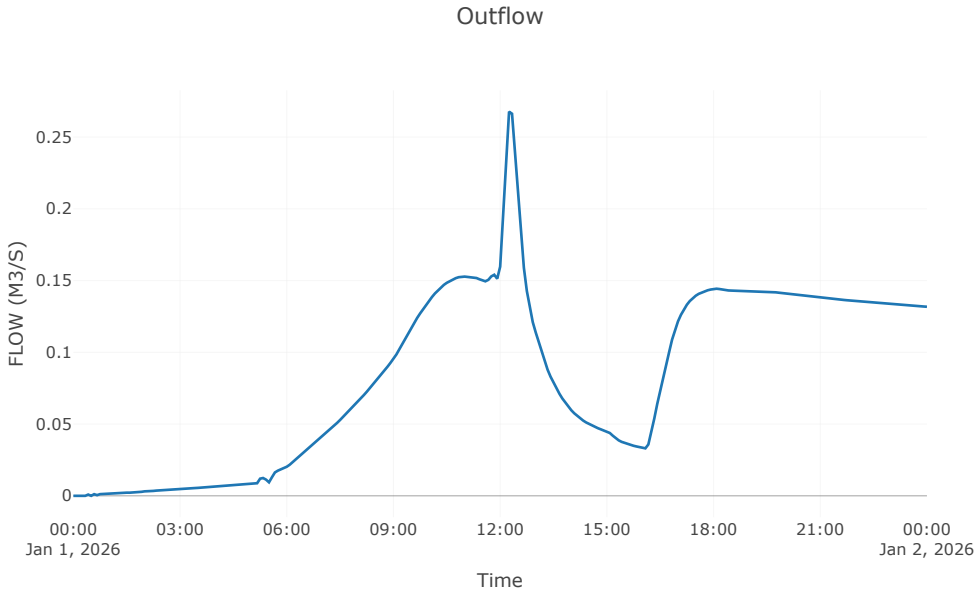

Combined Inflow
FLOW-COMBINE (M3/S)
0.3
0.25
0.2
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
7
6
5
4
3
2
1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Spillway 1
1
0.5
0
−0.5
−1
FLOW (M3/S)
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 1
0.25
0.2
0.15
0.1
0.05
0
FLOW (M3/S)
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Pool Elevation
ELEVATION (M)
0.26
0.24
0.22
0.2
0.18
0.16
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

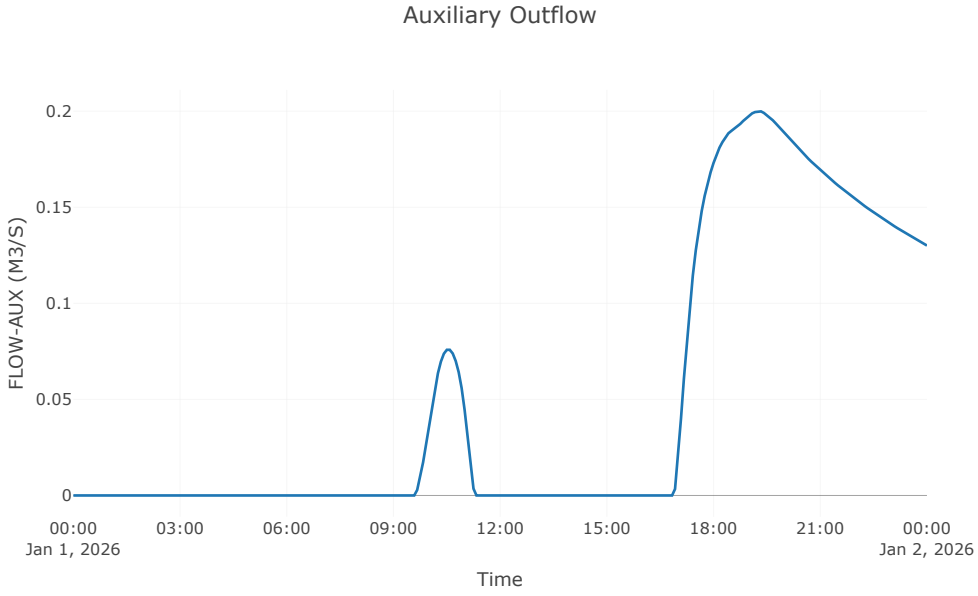

Outflow
FLOW (M3/S)
0.25
0.2
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

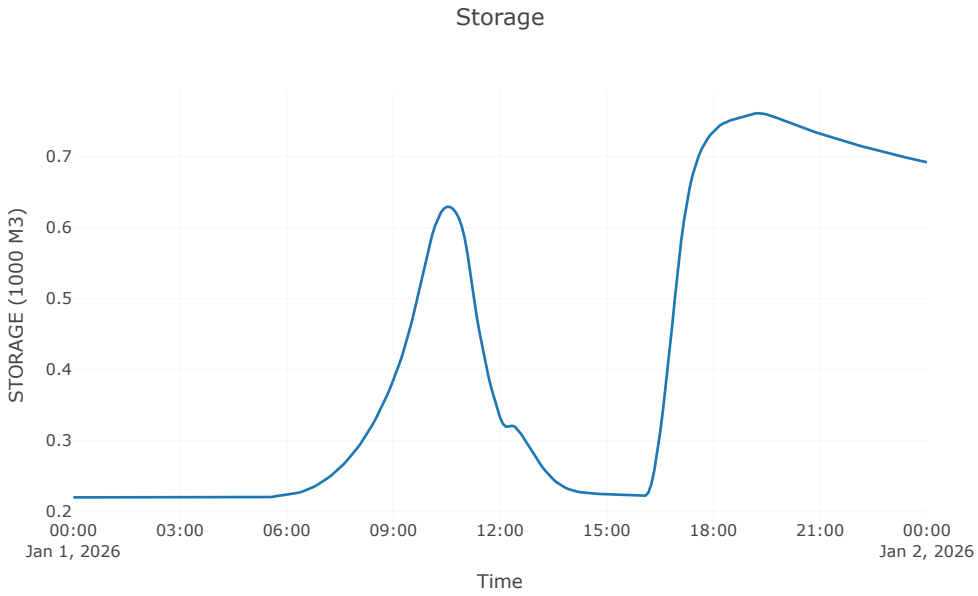
Reservoir: POND 3 DRYBASIN

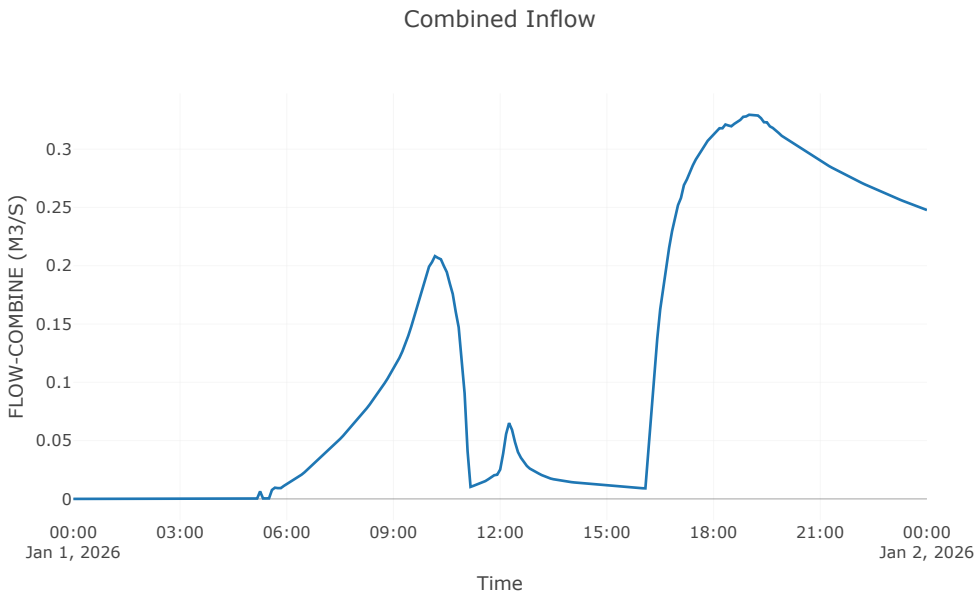
Downstream : Junction - POND 2

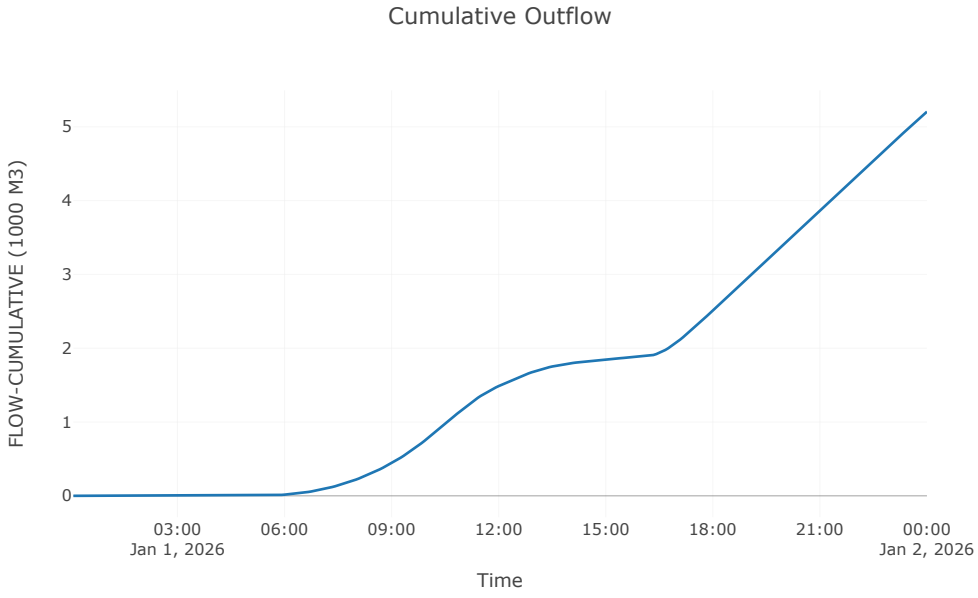
Results: POND 3 DRYBASIN

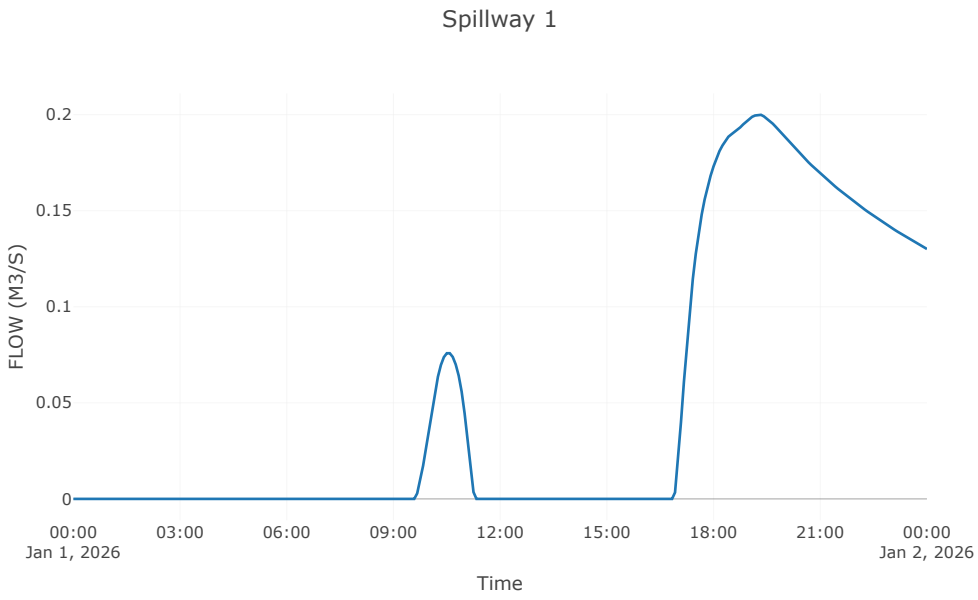
Peak Discharge (M3/S)	0.13
Time of Peak Discharge	01Jan2026, 19:15
Volume (MM)	2.84
Peak Inflow (M3/S)	0.33
Time of Peak Inflow	01Jan2026, 19:00
Inflow Volume (M3)	9998.69
Maximum Storage (M3)	761.38
Peak Elevation (M)	0.18
Discharge Volume (M3)	5204.76

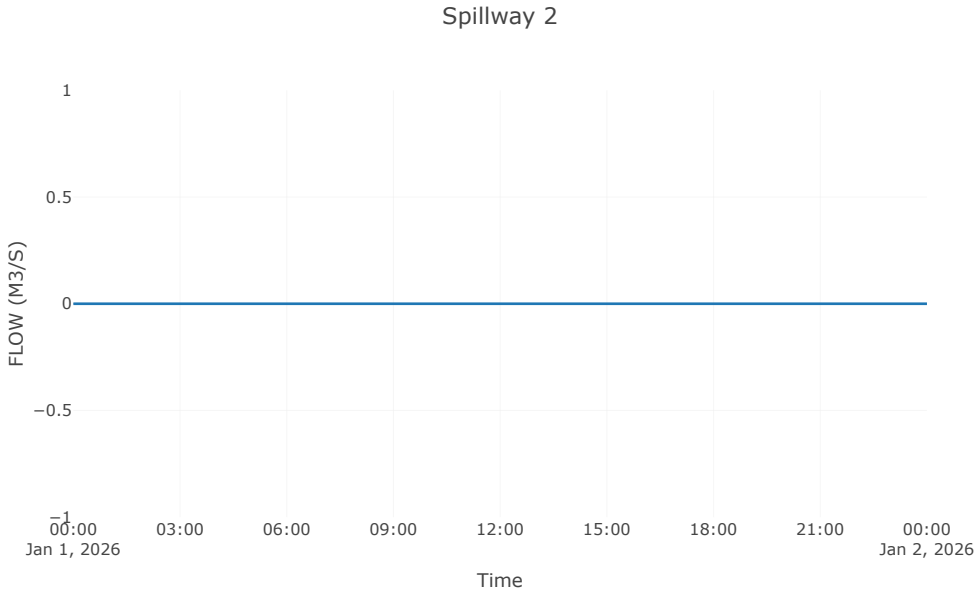


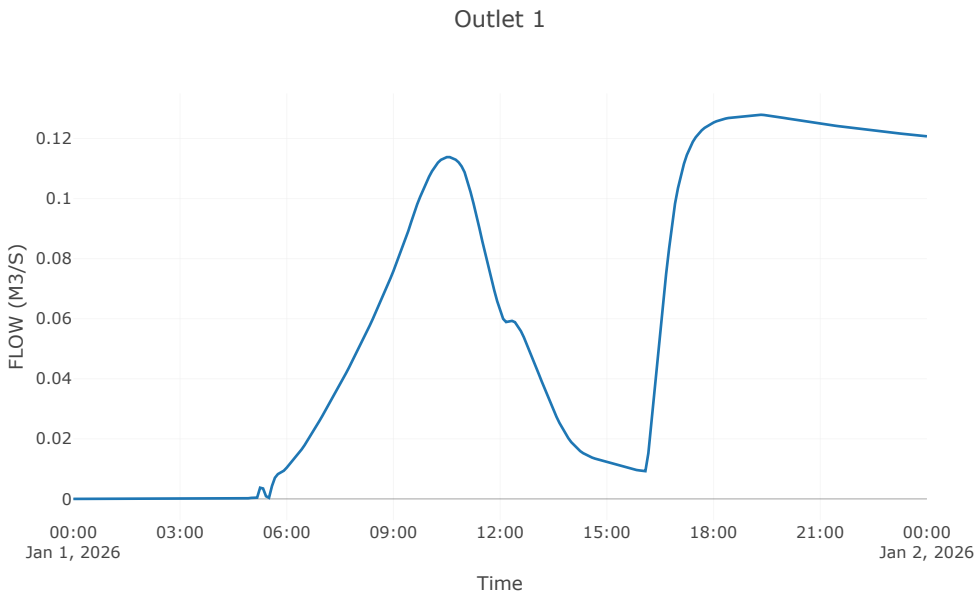


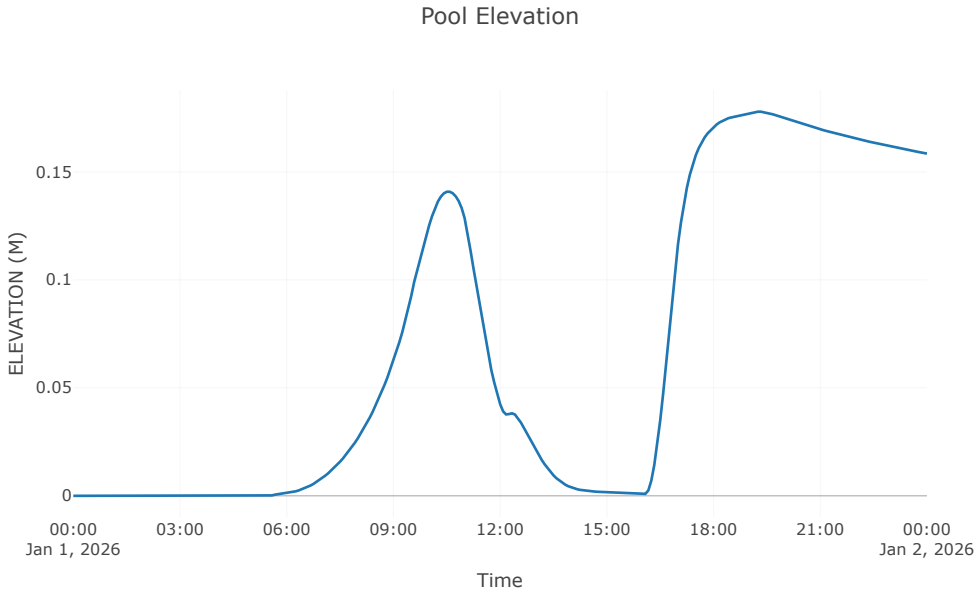

Combined Inflow
FLOW-COMBINE (M3/S)
0.3
0.25
0.2
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

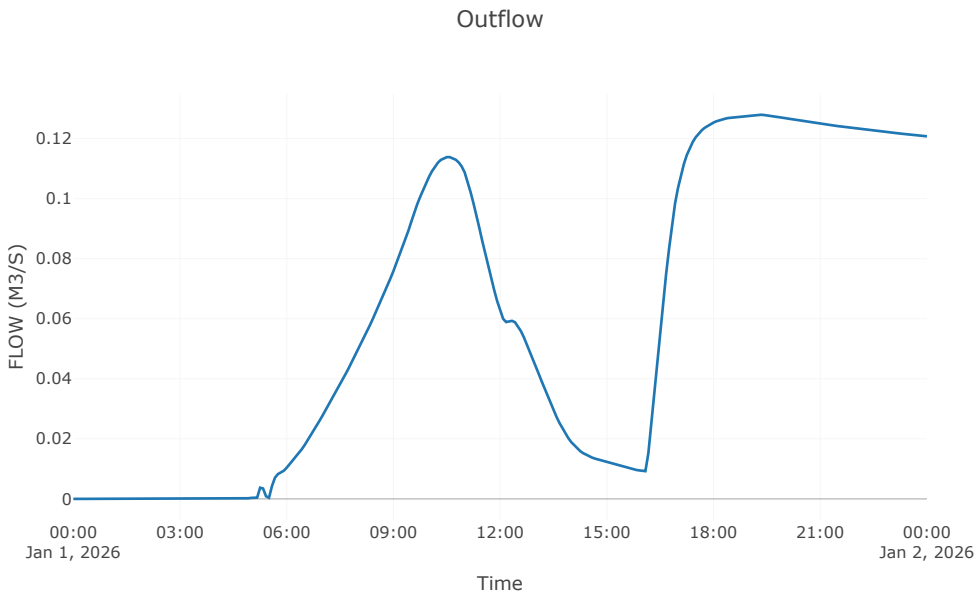

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
5
4
3
2
1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Spillway 1
0.2
0.15
0.1
0.05
0
FLOW (M3/S)
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Spillway 2
1
0.5
0
−0.5
−1
FLOW (M3/S)
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 1
FLOW (M3/S)
0.12
0.1
0.08
0.06
0.04
0.02
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

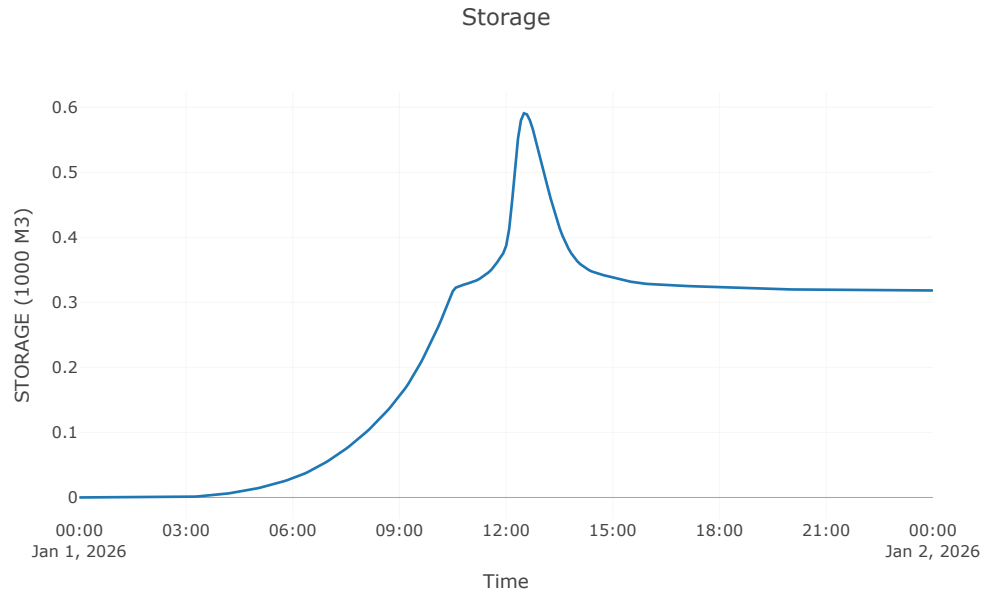

Pool Elevation
ELEVATION (M)
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

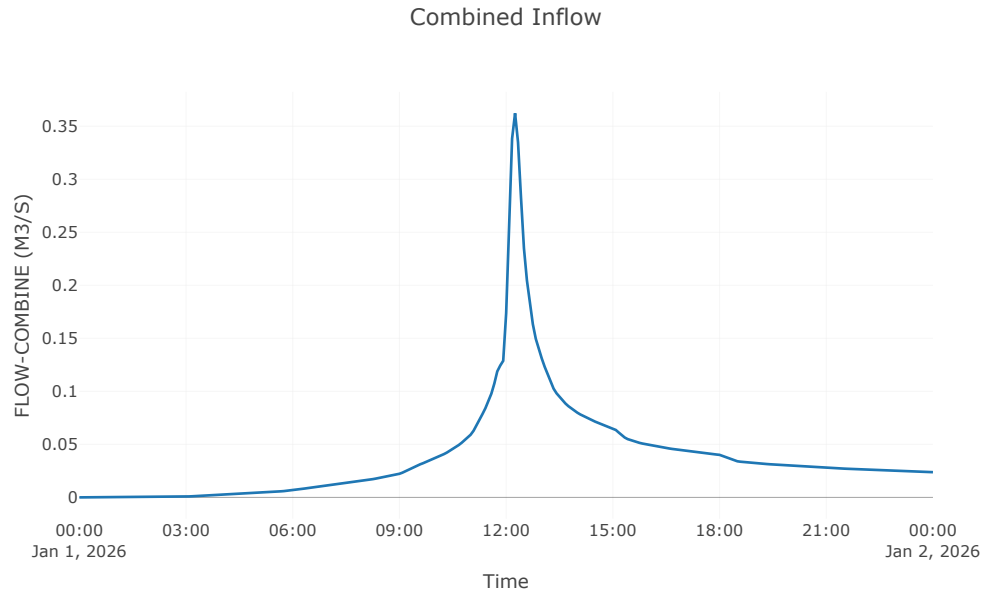

Outflow
FLOW (M3/S)
0.12
0.1
0.08
0.06
0.04
0.02
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

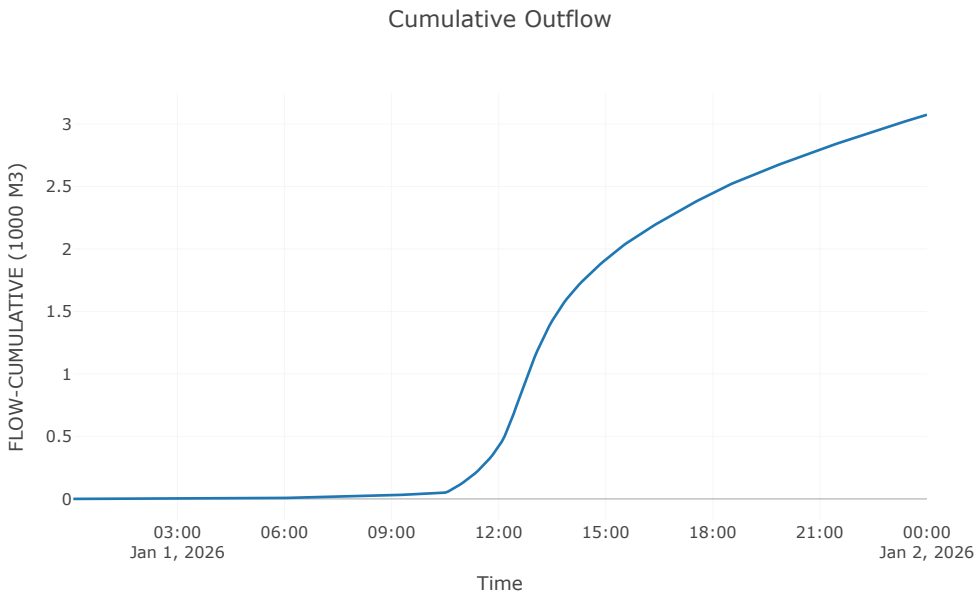
Reservoir: POND 5

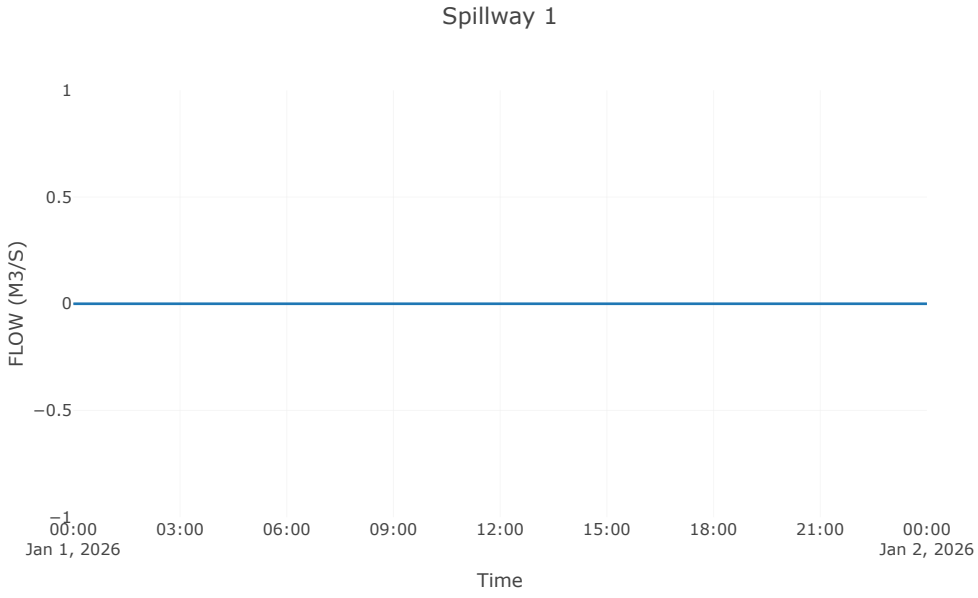
Downstream : Reach - POND 5 OLFP

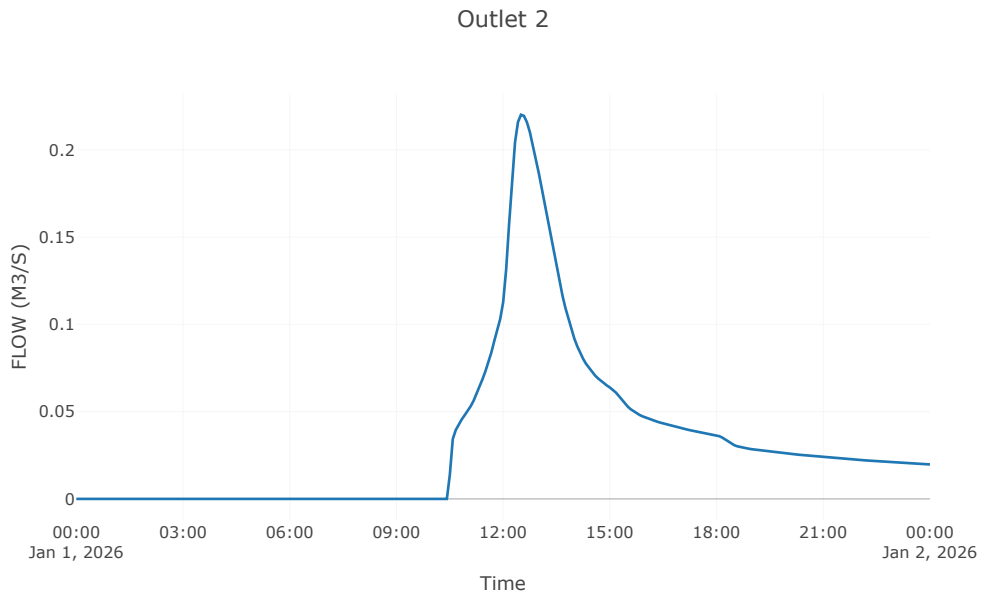
Results: POND 5	
Peak Discharge (M3/S)	0.23
Time of Peak Discharge	01Jan2026, 12:30
Volume (MM)	22.36
Peak Inflow (M3/S)	0.36
Time of Peak Inflow	01Jan2026, 12:15
Inflow Volume (M3)	3392.13
Maximum Storage (M3)	590.66
Peak Elevation (M)	0.37
Discharge Volume (M3)	3074.21

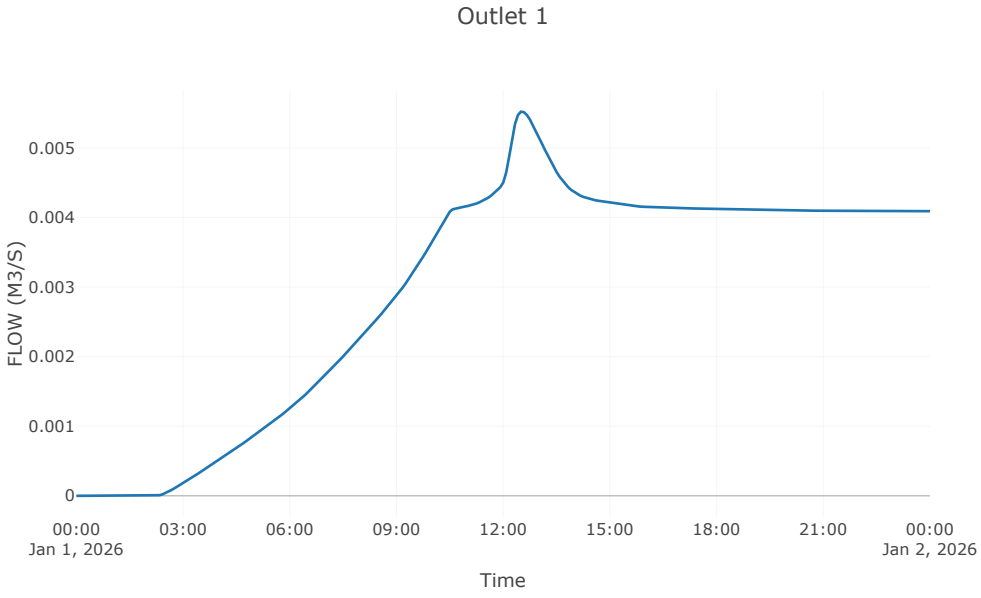


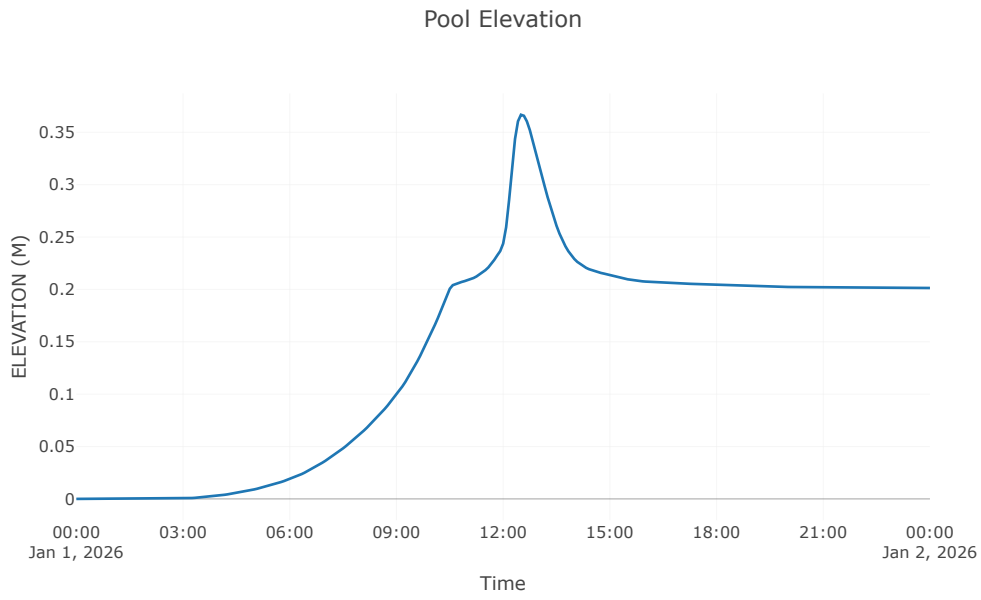


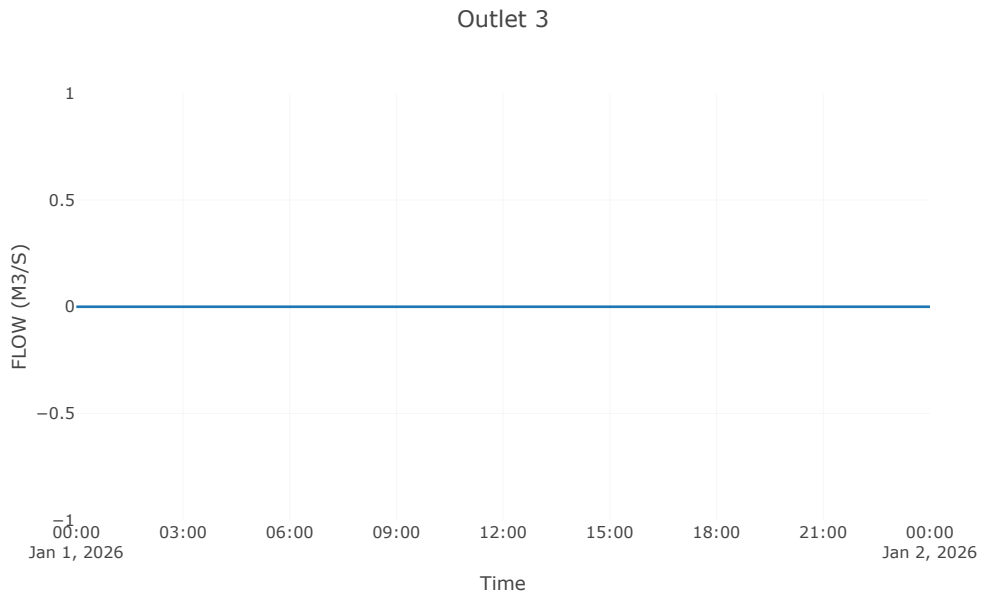

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
3
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

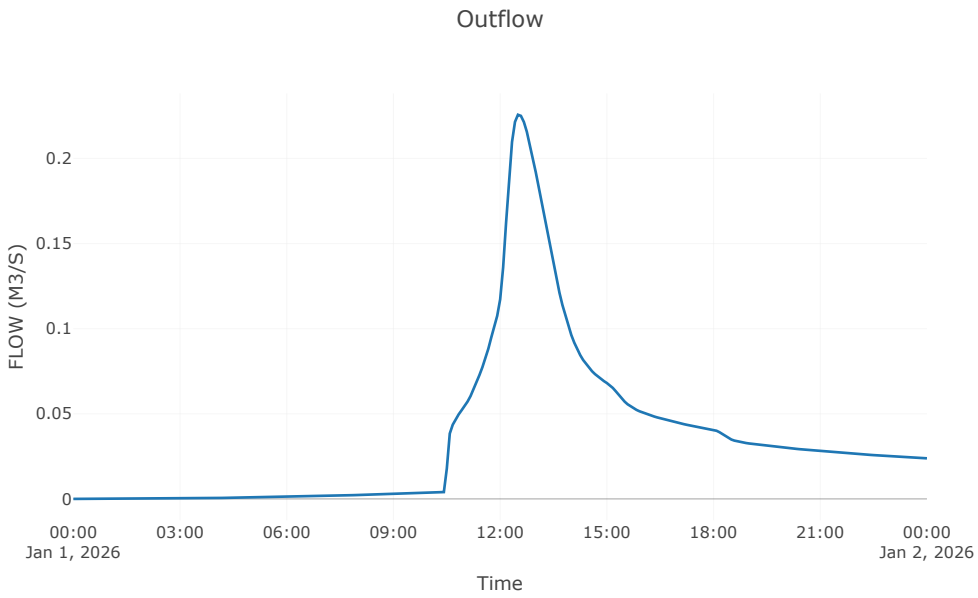

Spillway 1
FLOW (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 2
FLOW (M3/S)
0.2
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 1
FLOW (M3/S)
0.005
0.004
0.003
0.002
0.001
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Pool Elevation
ELEVATION (M)
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 3
FLOW (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

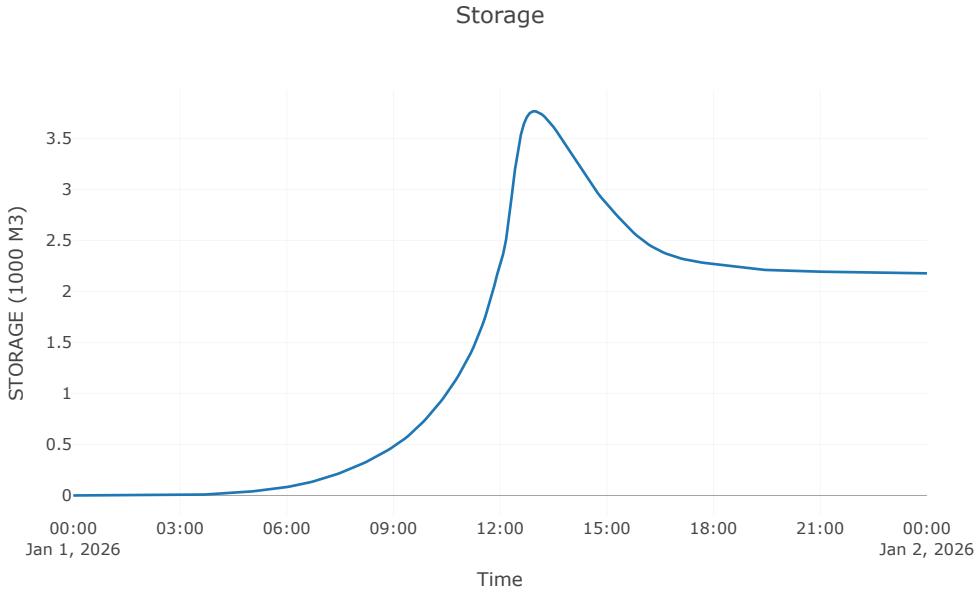

Outflow
FLOW (M3/S)
0.2
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

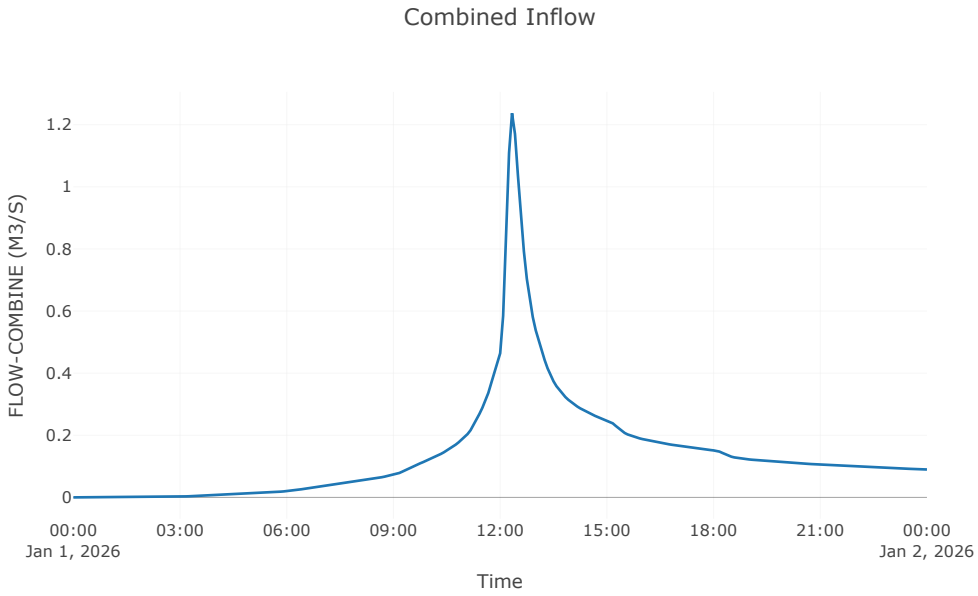
Reservoir: POND 6

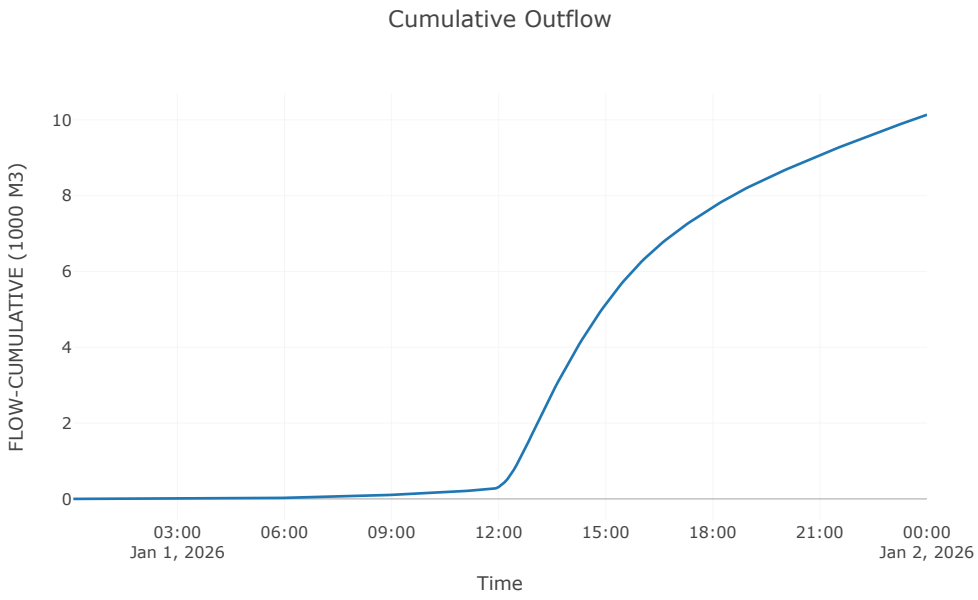
Downstream : Reach - CHANNEL 2

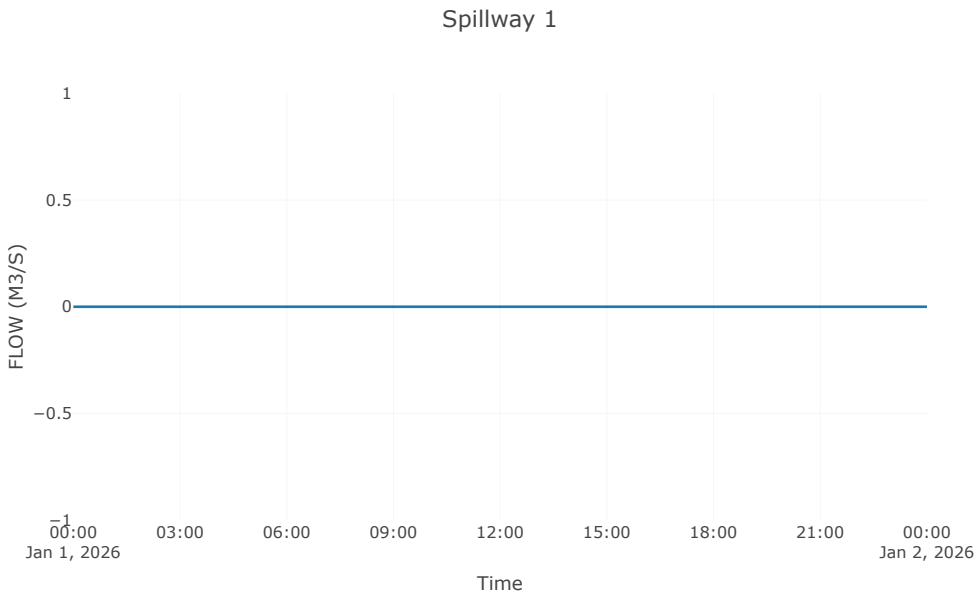
Results: POND 6

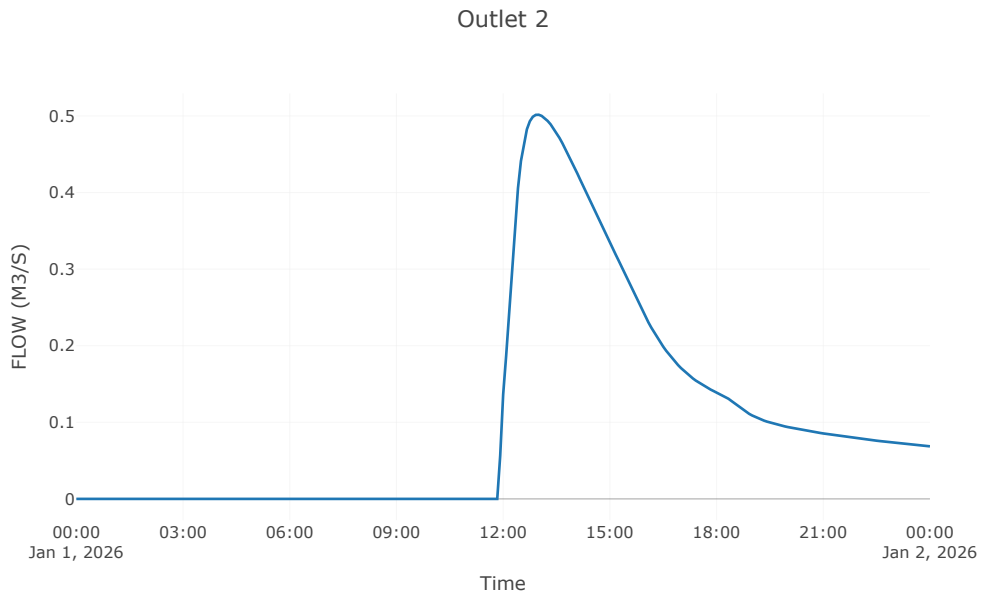
Peak Discharge (M3/S)	0.56
Time of Peak Discharge	01Jan2026, 13:00
Volume (MM)	18.09
Peak Inflow (M3/S)	1.24
Time of Peak Inflow	01Jan2026, 12:20
Inflow Volume (M3)	12313.83
Maximum Storage (M3)	3766.91
Peak Elevation (M)	1.02
Discharge Volume (M3)	10136

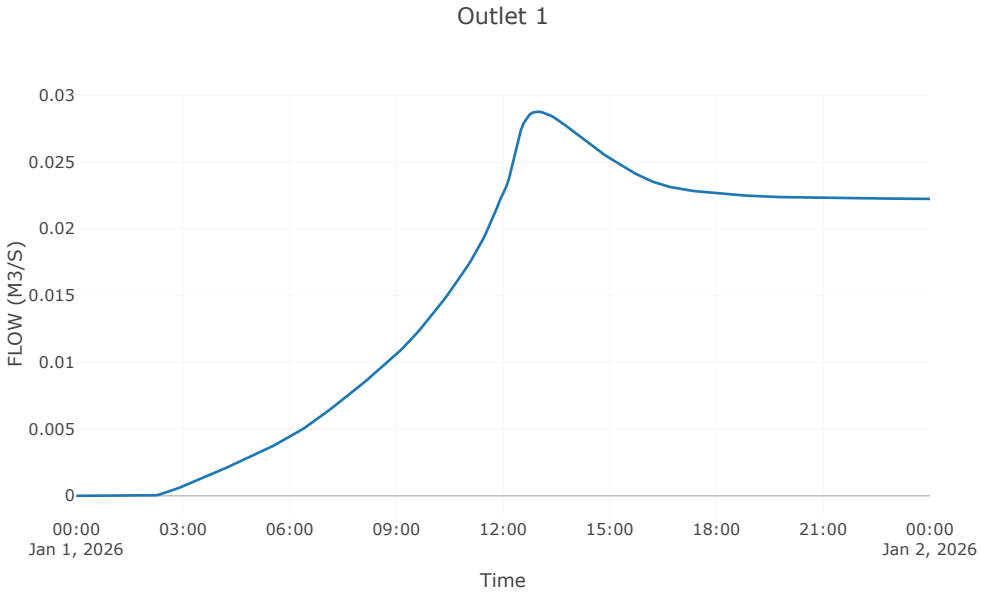


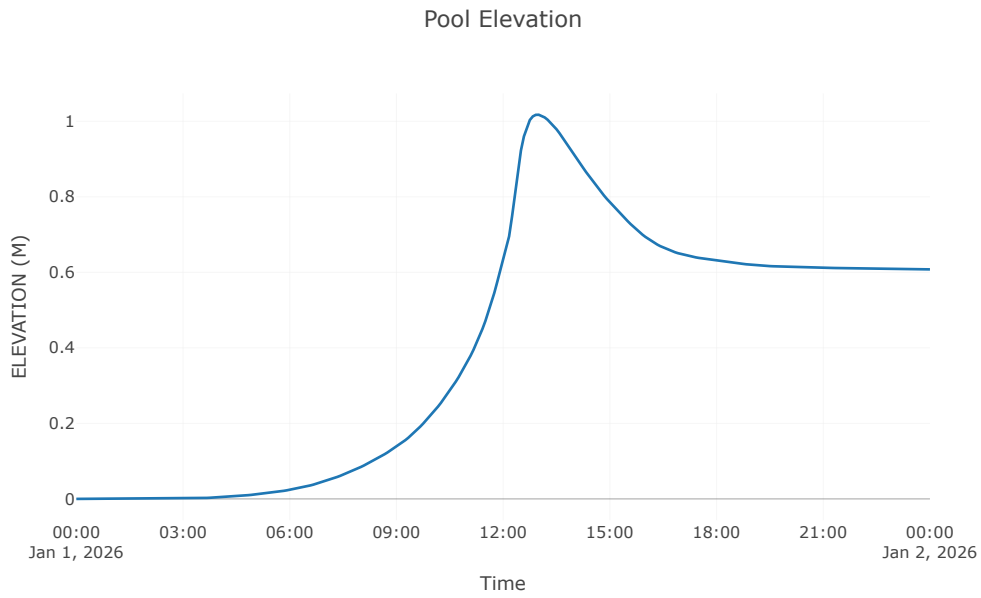


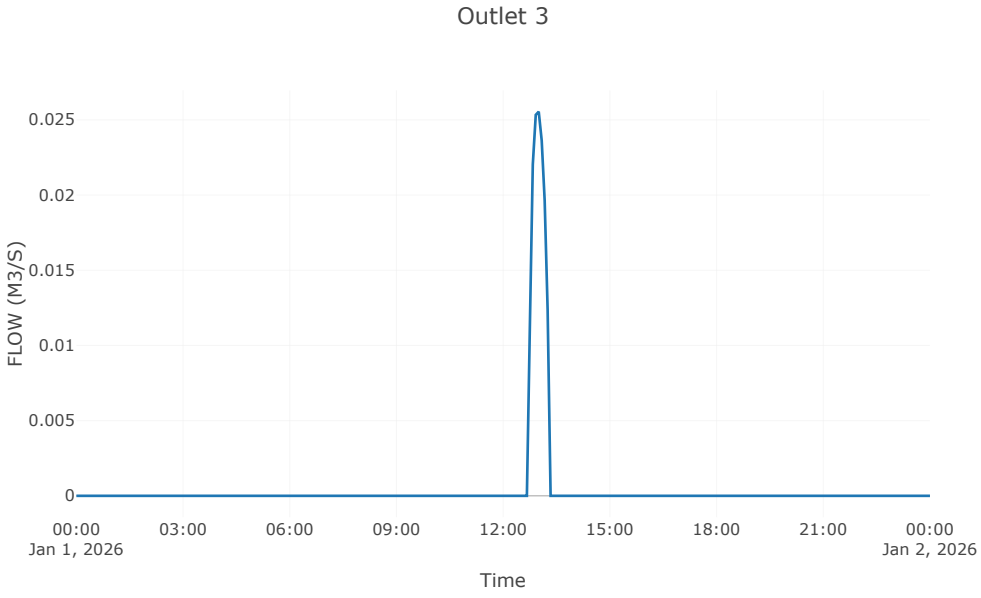

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
10
8
6
4
2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

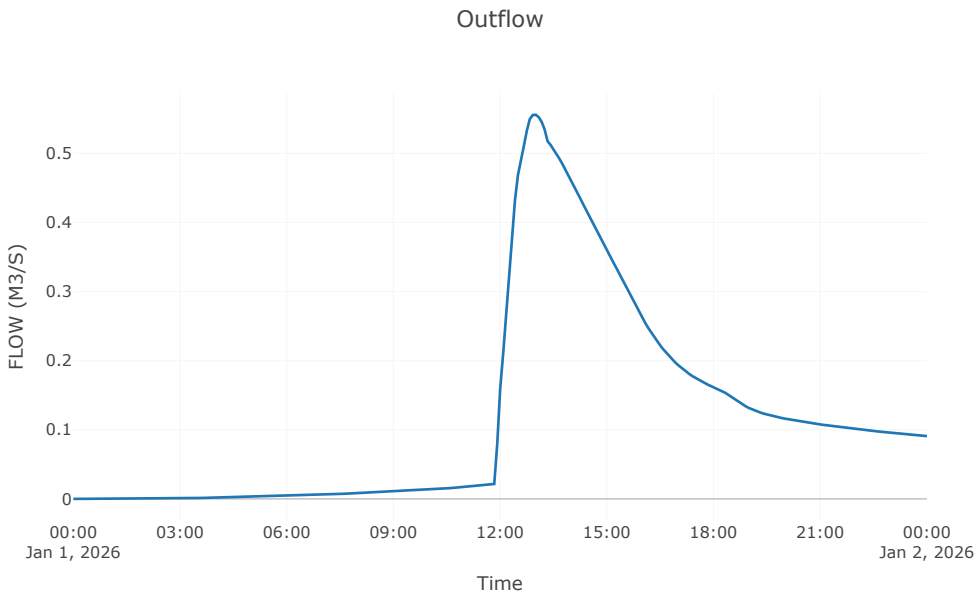

Spillway 1
FLOW (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 2
FLOW (M3/S)
0.5
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 1
FLOW (M3/S)
0.03
0.025
0.02
0.015
0.01
0.005
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Pool Elevation
ELEVATION (M)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 3
FLOW (M3/S)
0.025
0.02
0.015
0.01
0.005
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

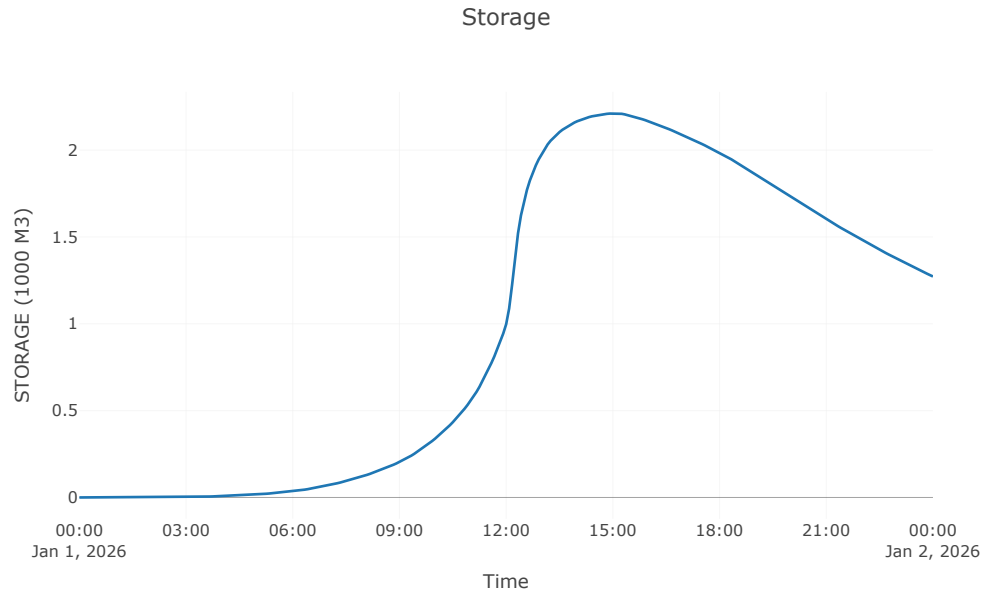

Outflow
FLOW (M3/S)
0.5
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

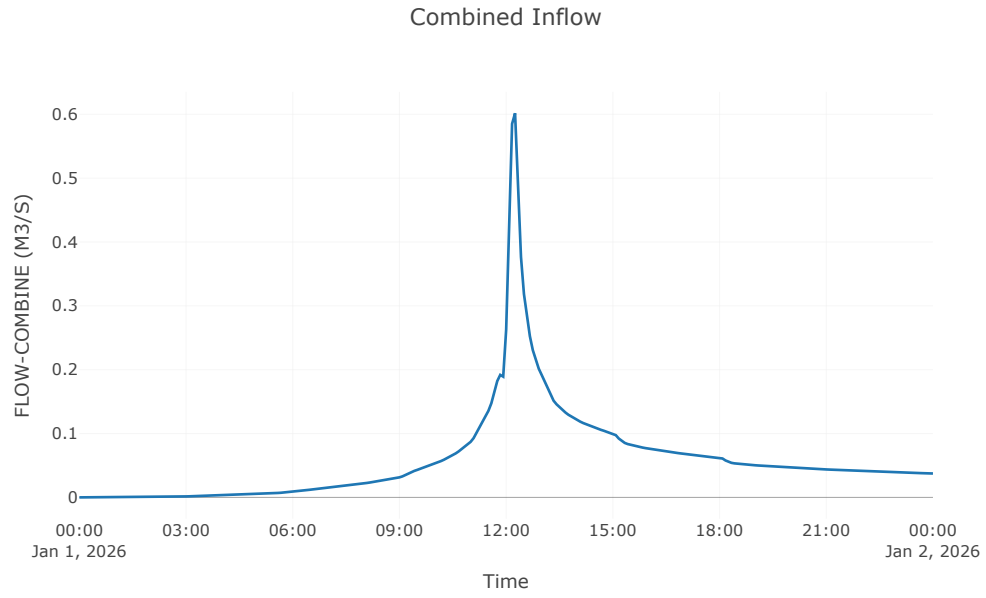
Reservoir: POND 7

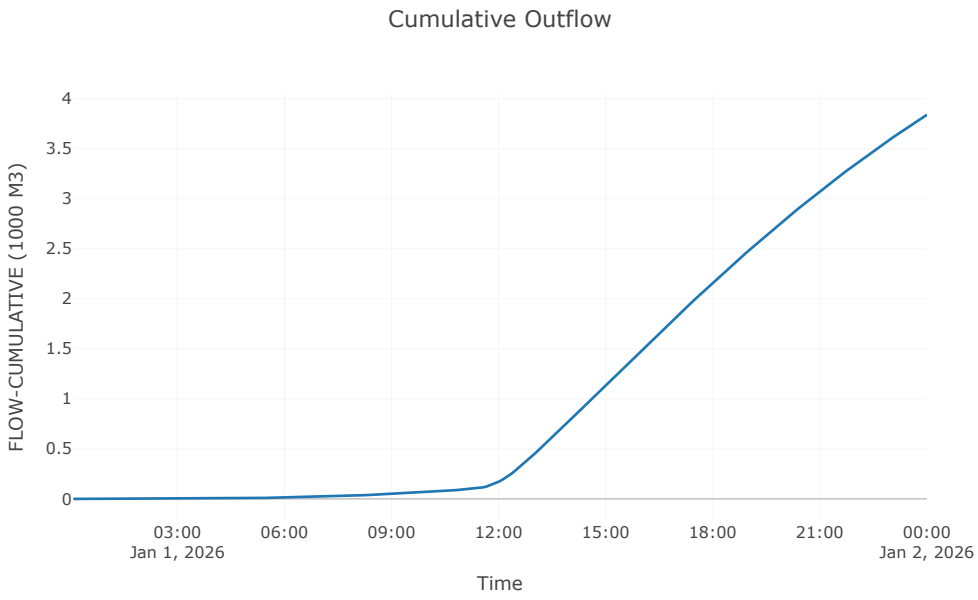
Downstream : Reach - WETLAND B

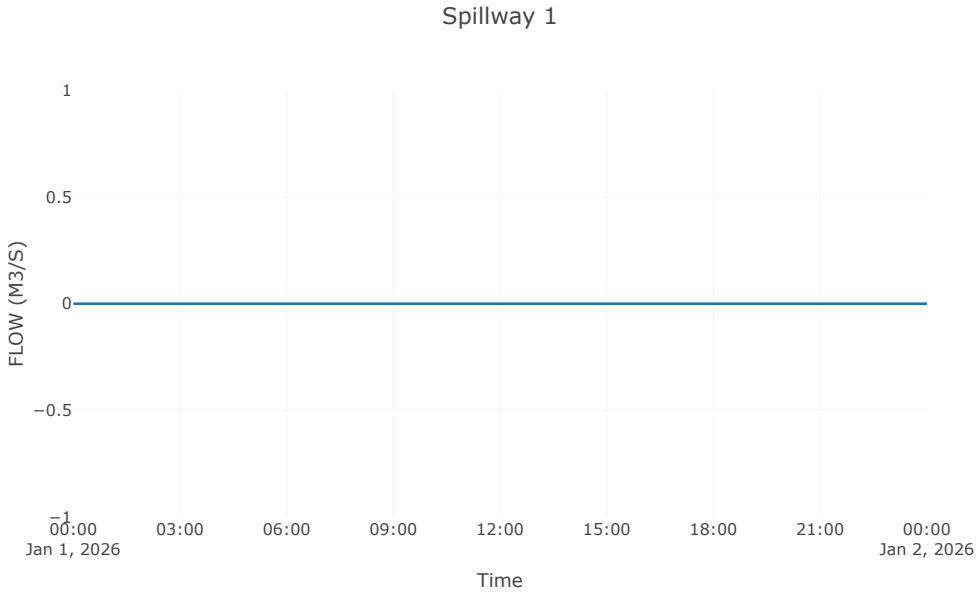
Results: POND 7

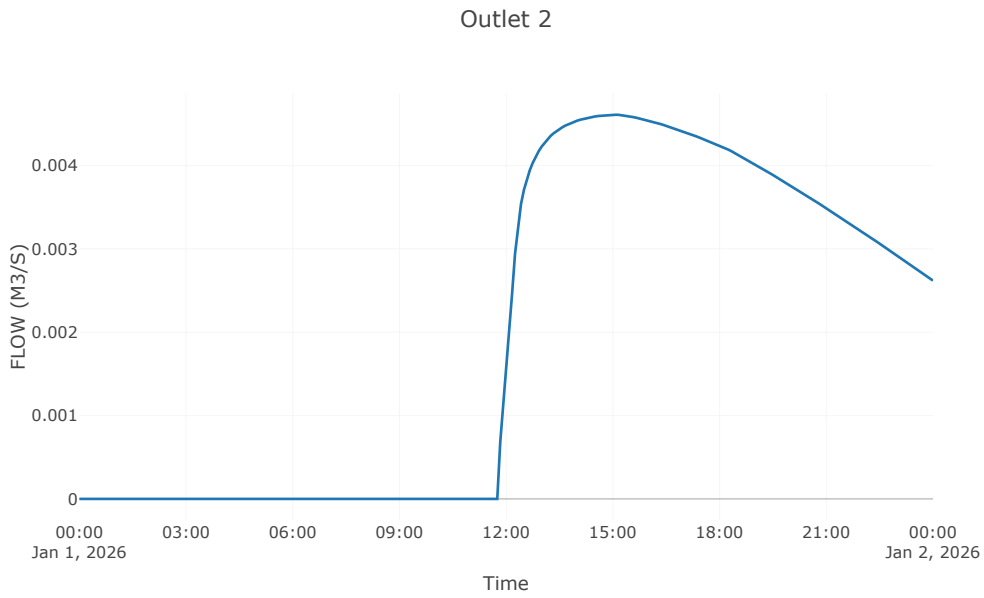
Peak Discharge (M3/S)	0.1
Time of Peak Discharge	01Jan2026, 15:05
Volume (MM)	15.57
Peak Inflow (M3/S)	0.6
Time of Peak Inflow	01Jan2026, 12:15
Inflow Volume (M3)	5113.07
Maximum Storage (M3)	2211.87
Peak Elevation (M)	1.33
Discharge Volume (M3)	3840.3

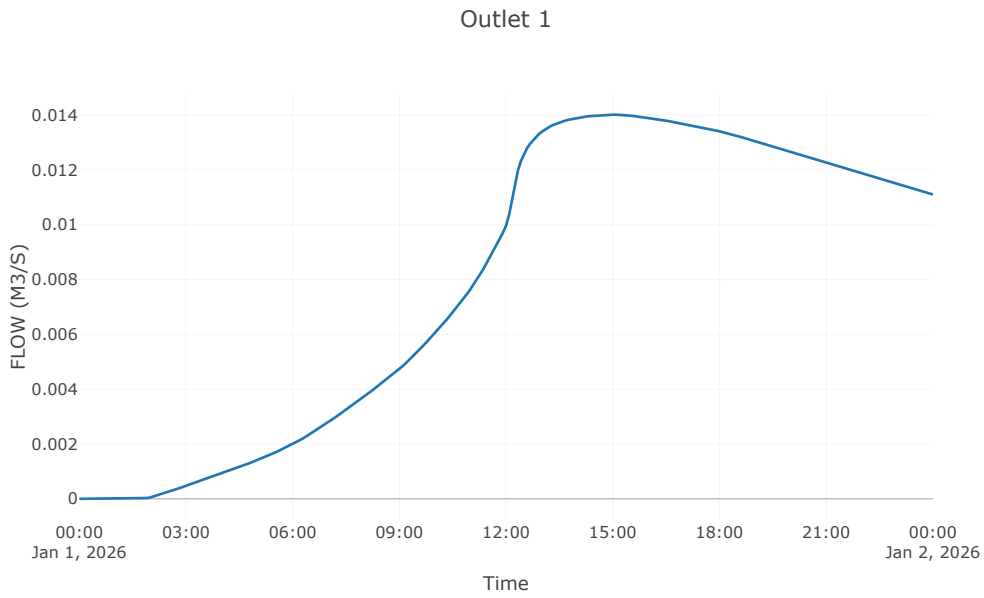


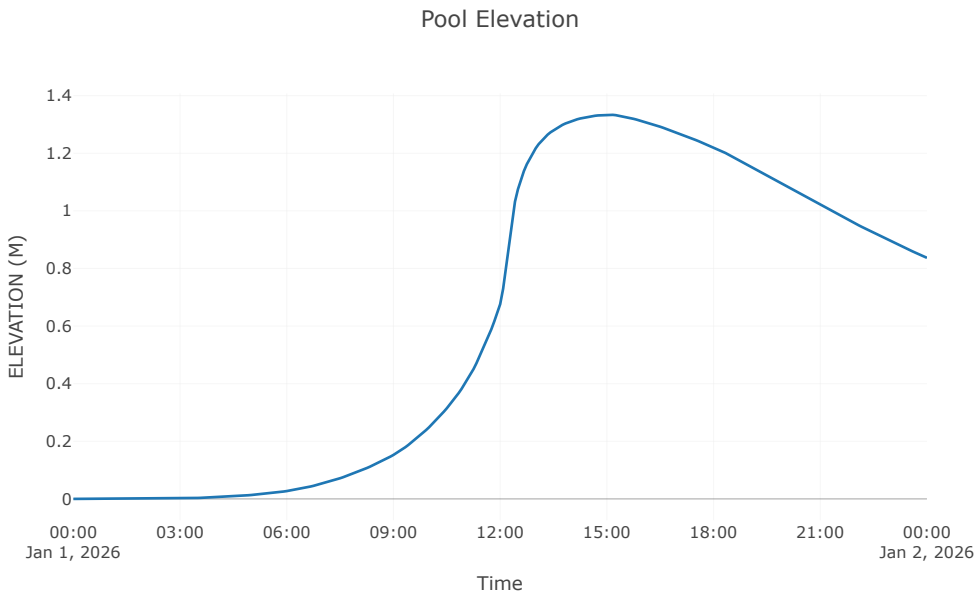


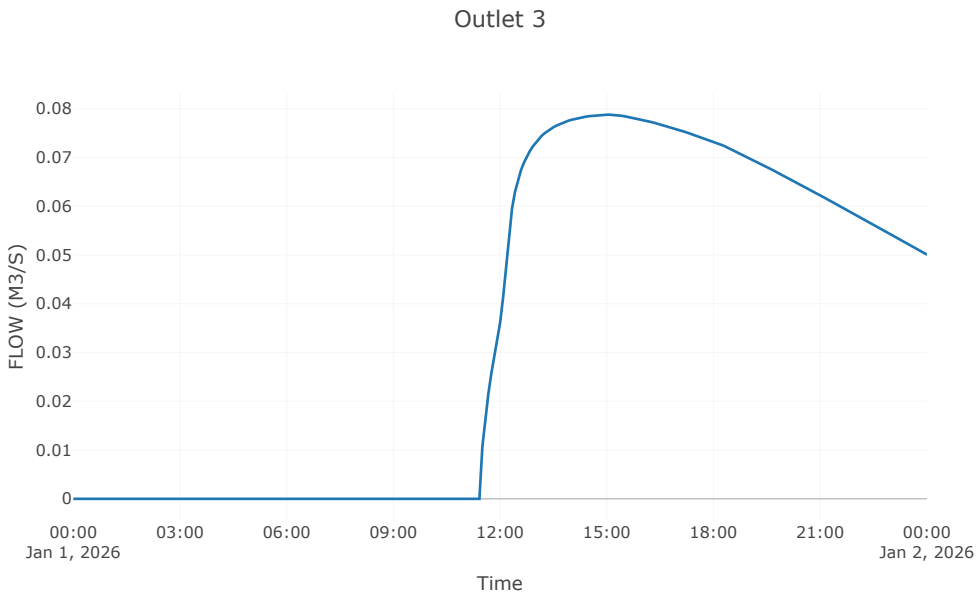

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
4
3.5
3
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

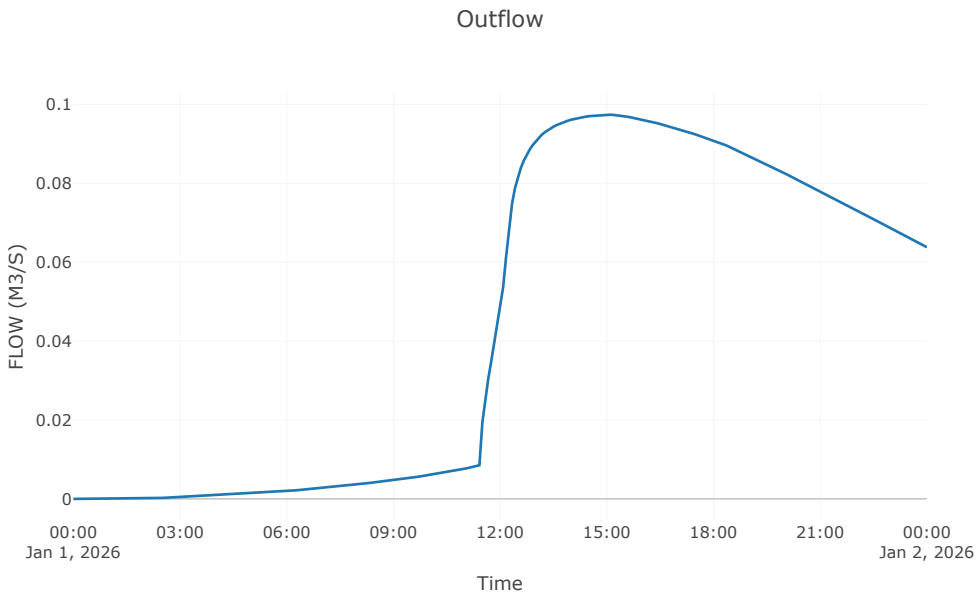

Spillway 1
FLOW (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 2
FLOW (M3/S)
0.004
0.003
0.002
0.001
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 1
FLOW (M3/S)
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Pool Elevation
ELEVATION (M)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 3
FLOW (M3/S)
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

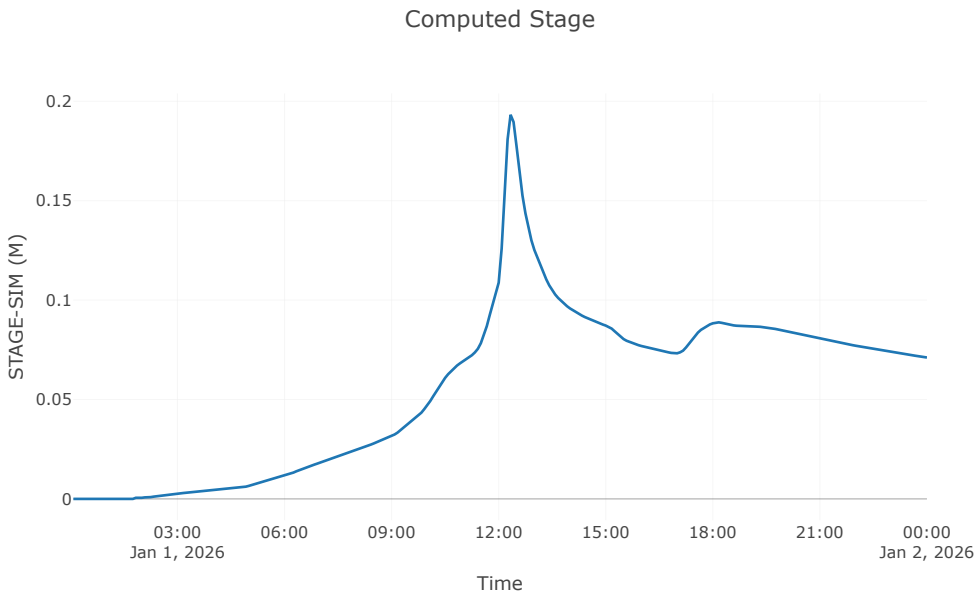

Outflow
0.1
0.08
0.06
0.04
0.02
0
FLOW (M3/S)
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

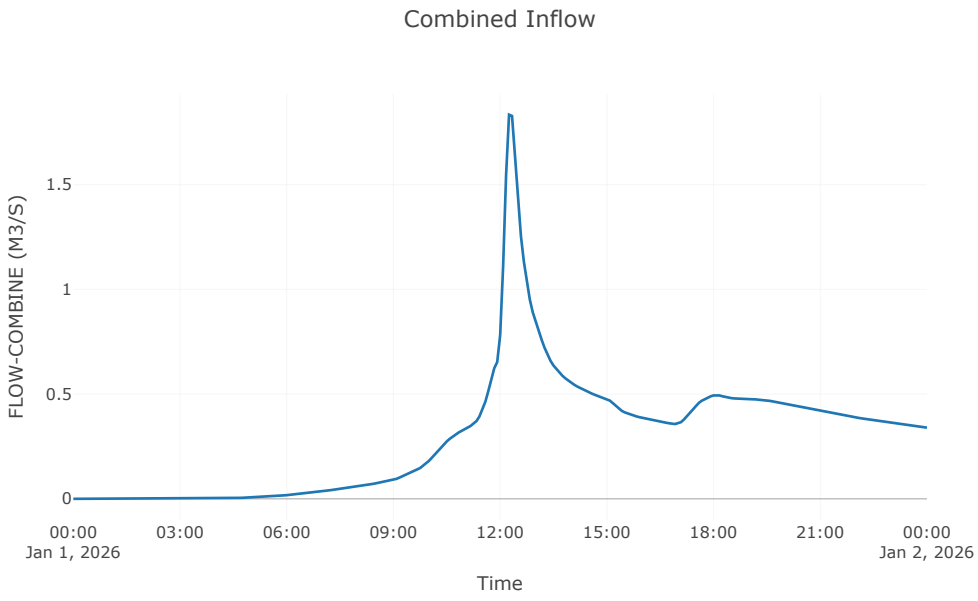
Reach: Reach-CHANNEL 1

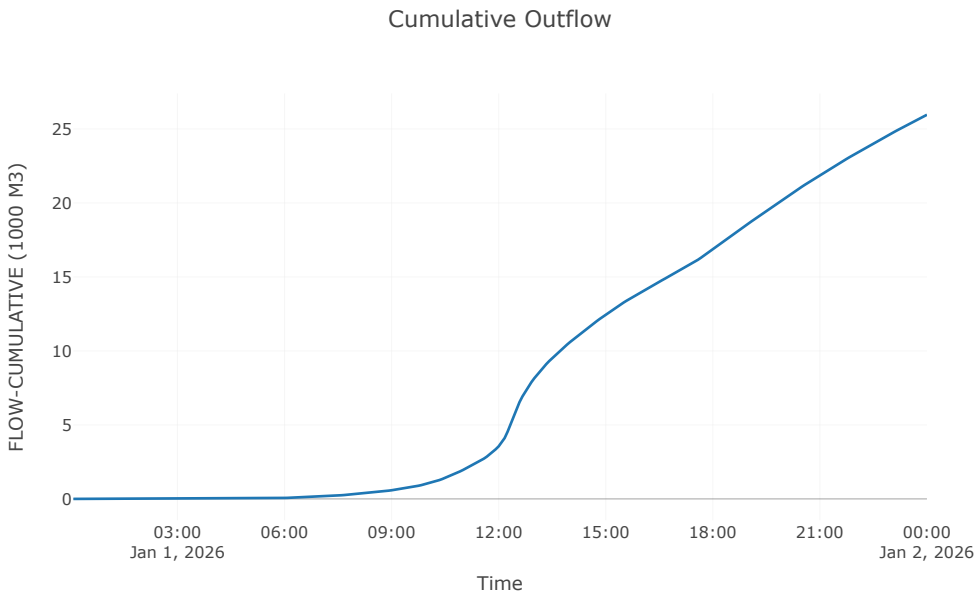
Downstream : Junction - POND 1

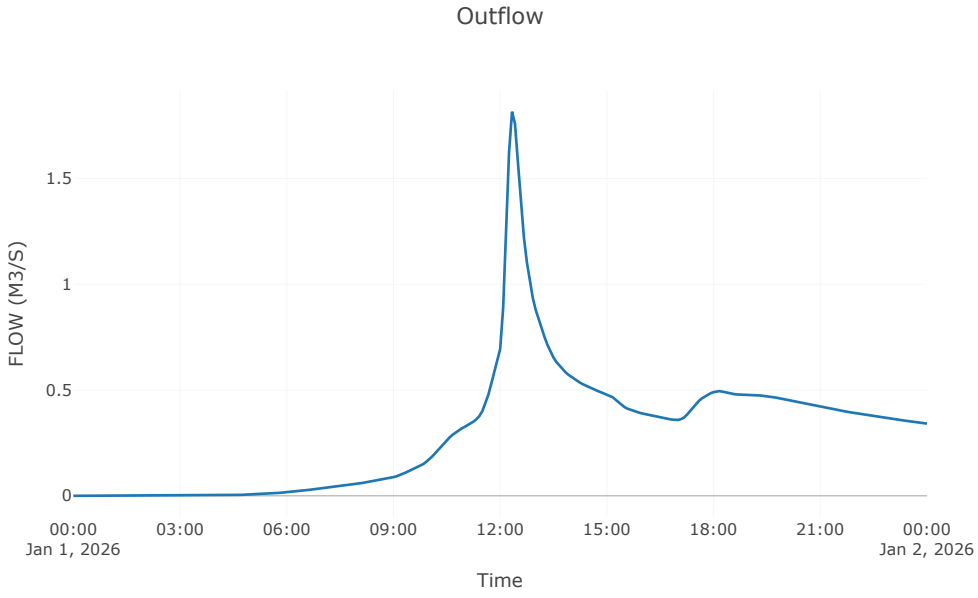
Route: Muskingum Cunge	
Method	Muskingum Cunge
Channel	Trapezoid
Length (M)	300
Energy Slope (M/M)	0.01
Mannings n	0.06
Bottom Width (M)	20
Side Slope (M/M)	3
Initial Variable	Combined Inflow
Space - Time Method	Automatic DX and DT
Index Parameter Type	Index Flow
Index Flow	15
Invert Elevation	0
Maximum Depth Iterations	20
Maximum Route Step Iterations	30

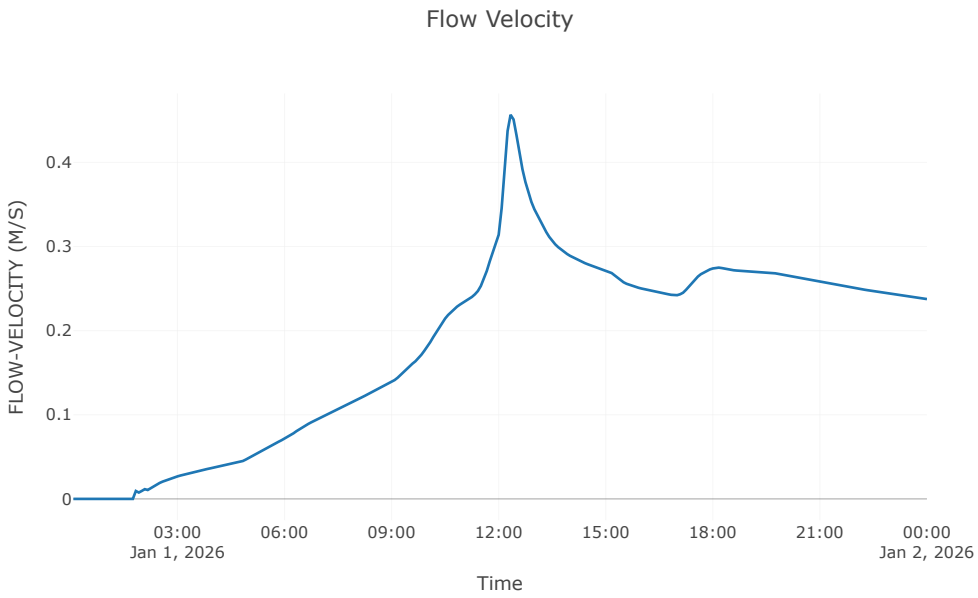
Results: Reach-CHANNEL 1	
Peak Discharge (M3/S)	1.82
Time of Peak Discharge	01Jan2026, 12:20
Volume (MM)	20.02
Peak Inflow (M3/S)	1.83
Inflow Volume (M3)	26039.6


Computed Stage
STAGE-SIM (M)
0.2
0.15
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Combined Inflow
FLOW-COMBINE (M3/S)
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
25
20
15
10
5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outflow
FLOW (M3/S)
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

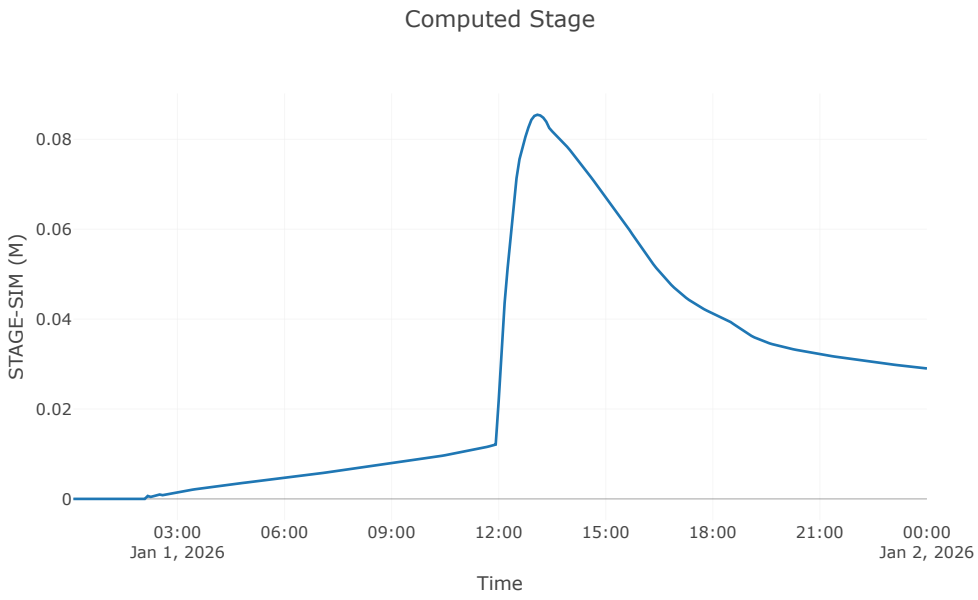

Flow Velocity
FLOW-VELOCITY (M/S)
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

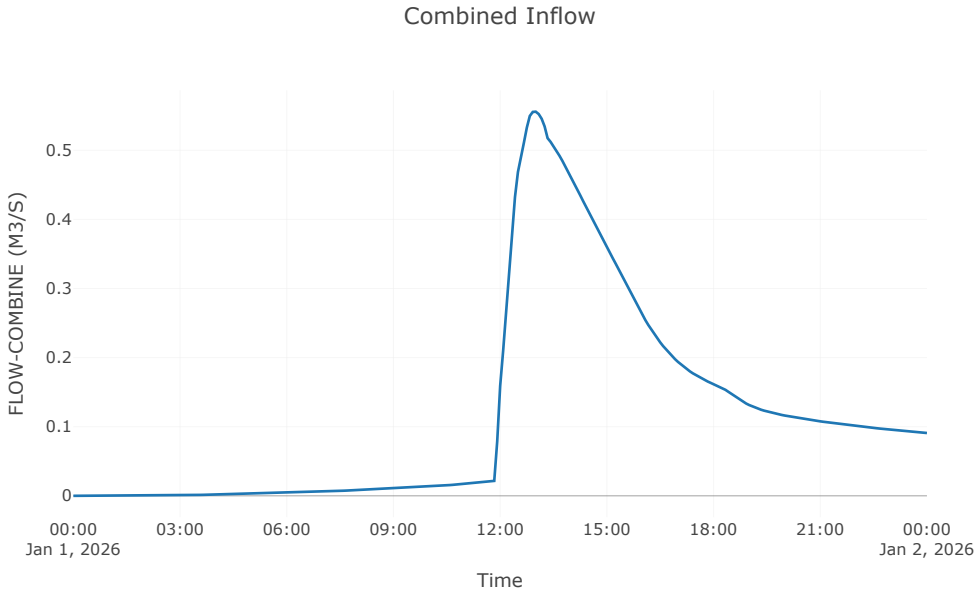
Reach: Reach-CHANNEL 2

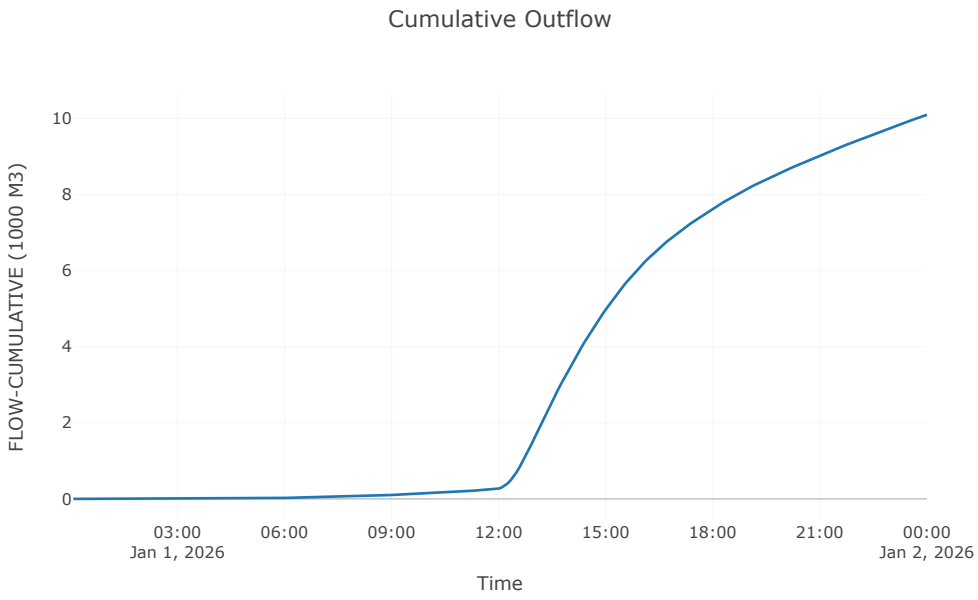
Downstream : Junction - POND 1

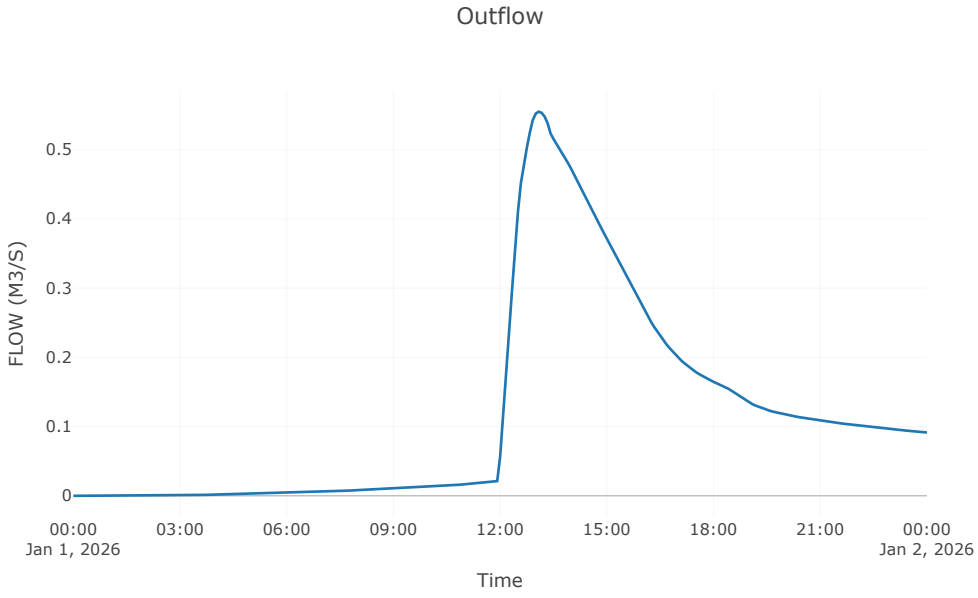
Route: Muskingum Cunge	
Method	Muskingum Cunge
Channel	Trapezoid
Length (M)	520
Energy Slope (M/M)	0.01
Mannings n	0.06
Bottom Width (M)	20
Side Slope (M/M)	3
Initial Variable	Combined Inflow
Space - Time Method	Automatic DX and DT
Index Parameter Type	Index Flow
Index Flow	15
Invert Elevation	0
Maximum Depth Iterations	20
Maximum Route Step Iterations	30

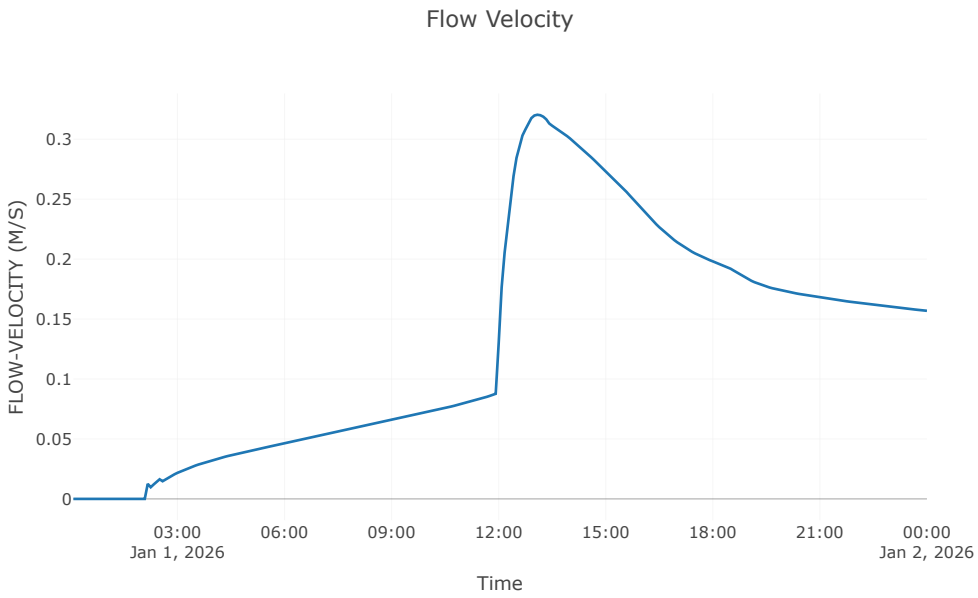
Results: Reach-CHANNEL 2	
Peak Discharge (M3/S)	0.55
Time of Peak Discharge	01Jan2026, 13:05
Volume (MM)	18.02
Peak Inflow (M3/S)	0.56
Inflow Volume (M3)	10136


Computed Stage
STAGE-SIM (M)
0.08
0.06
0.04
0.02
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Combined Inflow
FLOW-COMBINE (M3/S)
0.5
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
10
8
6
4
2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outflow
FLOW (M3/S)
0.5
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

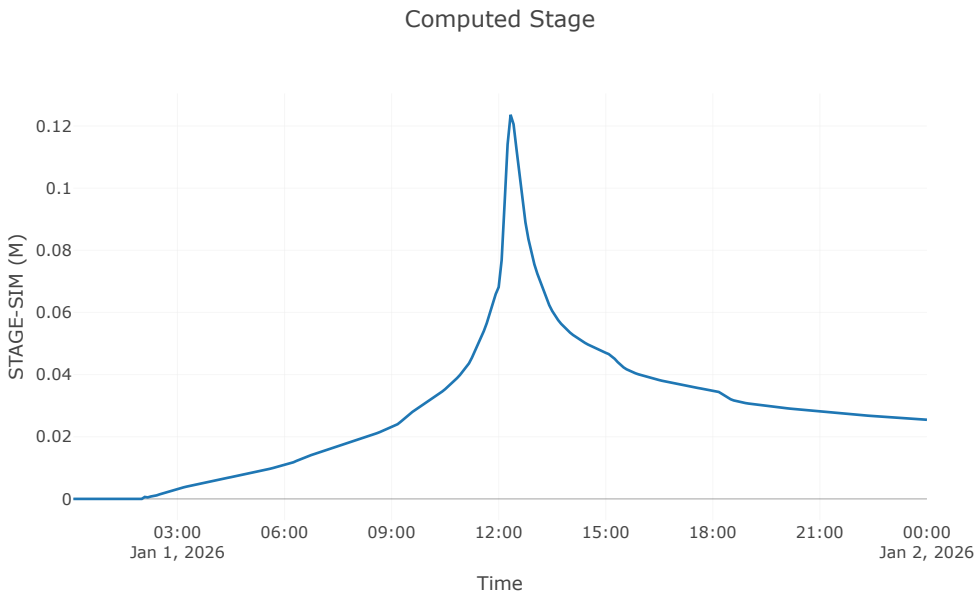

Flow Velocity
FLOW-VELOCITY (M/S)
0.3
0.25
0.2
0.15
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

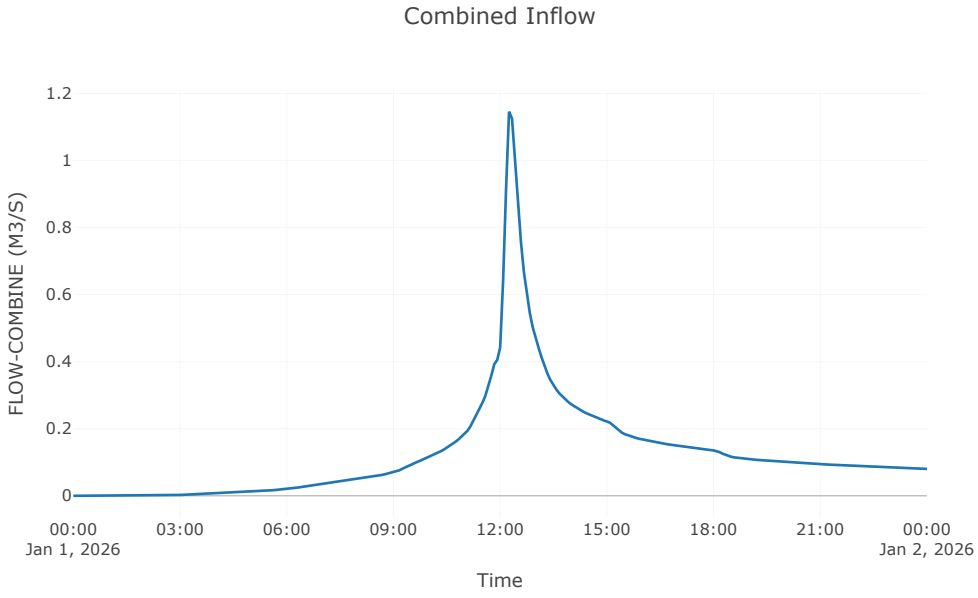
Reach: Reach-CHANNEL 3

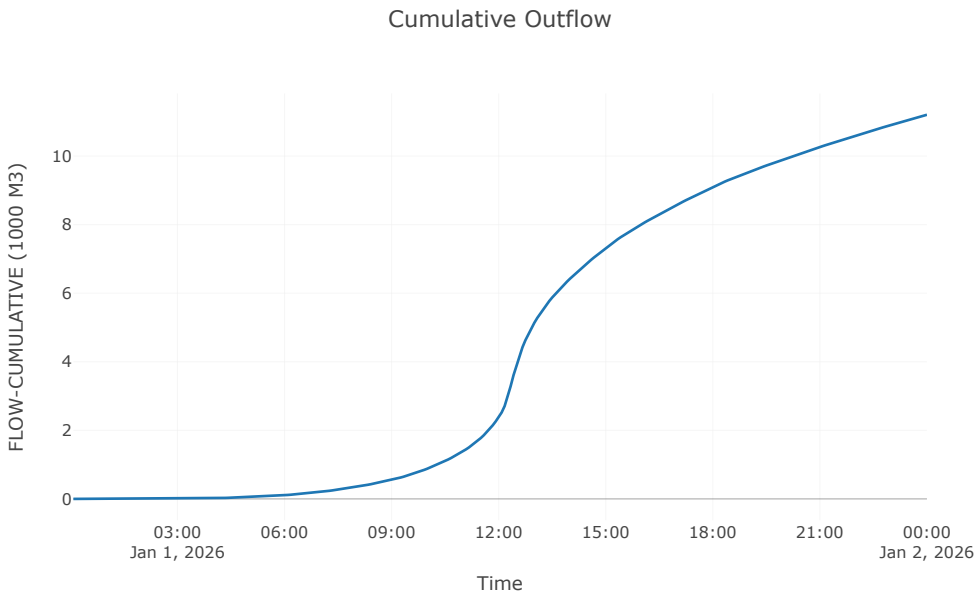
Downstream : Junction - POND 6

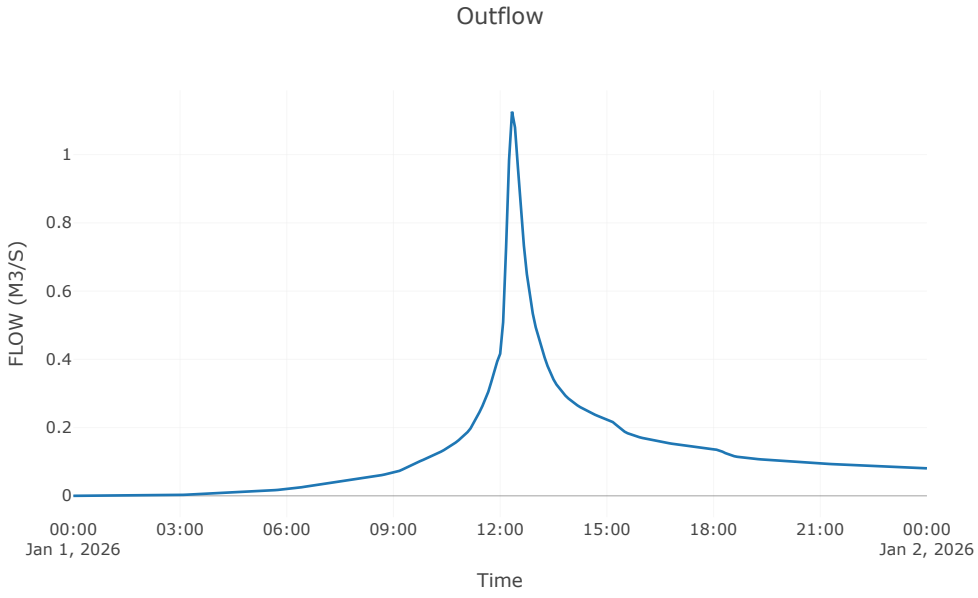
Route: Muskingum Cunge	
Method	Muskingum Cunge
Channel	Trapezoid
Length (M)	340
Energy Slope (M/M)	0.01
Mannings n	0.06
Bottom Width (M)	20
Side Slope (M/M)	3
Initial Variable	Combined Inflow
Space - Time Method	Automatic DX and DT
Index Parameter Type	Index Flow
Index Flow	15
Invert Elevation	0
Maximum Depth Iterations	20
Maximum Route Step Iterations	30

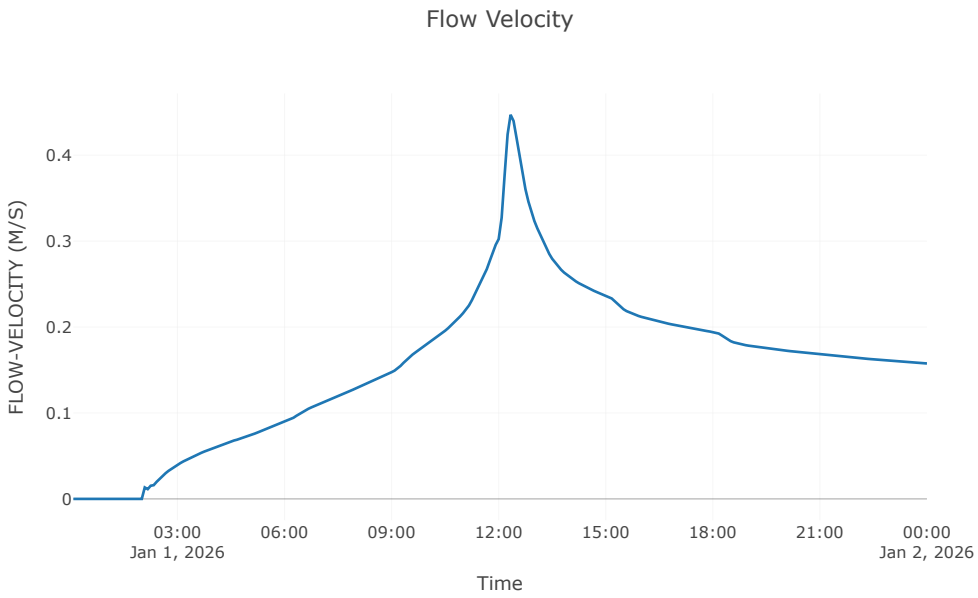
Results: Reach-CHANNEL 3	
Peak Discharge (M3/S)	1.13
Time of Peak Discharge	01Jan2026, 12:20
Volume (MM)	22.97
Peak Inflow (M3/S)	1.15
Inflow Volume (M3)	11223.54


Computed Stage
STAGE-SIM (M)
0.12
0.1
0.08
0.06
0.04
0.02
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Combined Inflow
FLOW-COMBINE (M3/S)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
10
8
6
4
2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outflow
FLOW (M3/S)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

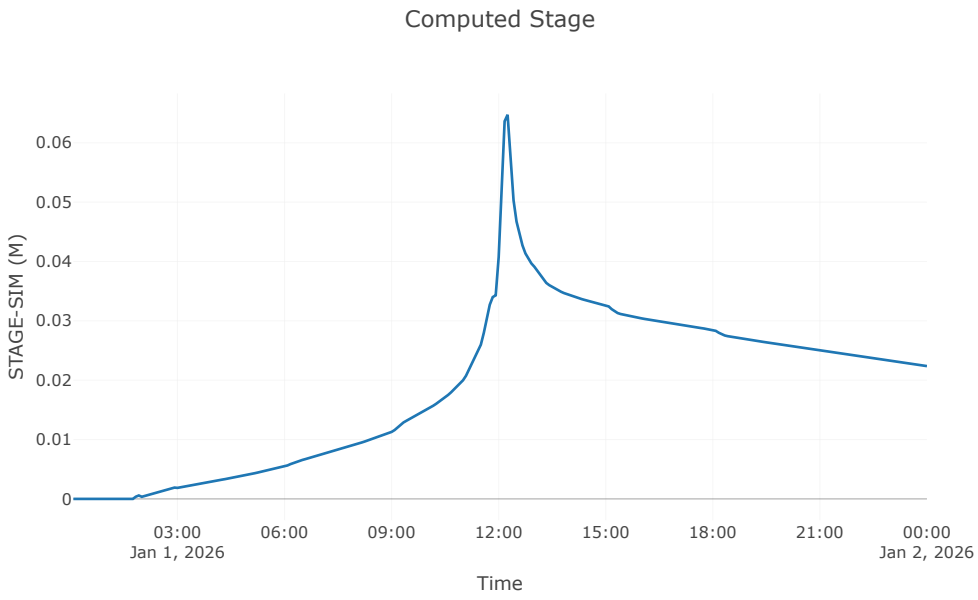

Flow Velocity
FLOW-VELOCITY (M/S)
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

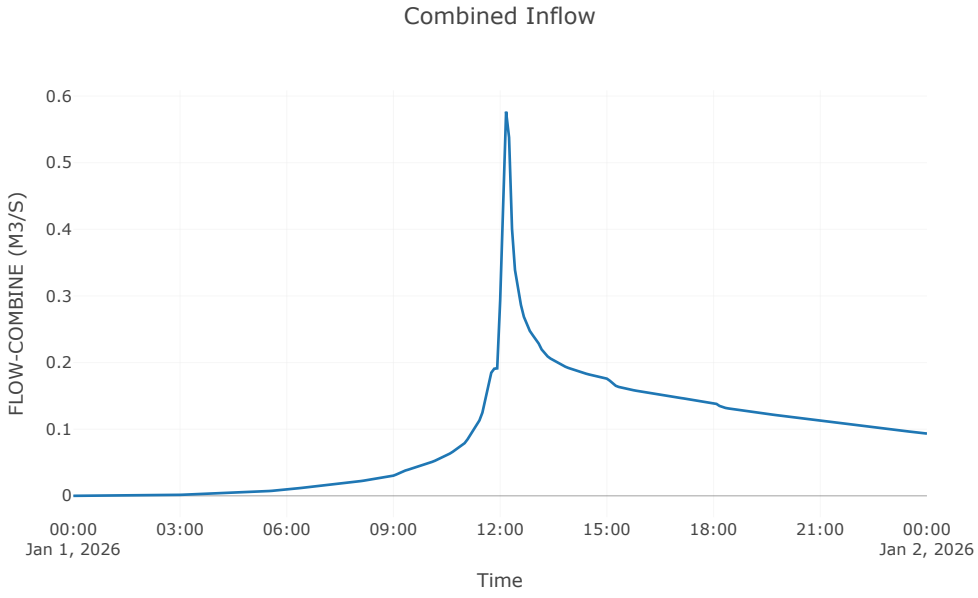
Reach: Reach-CHANNEL 4

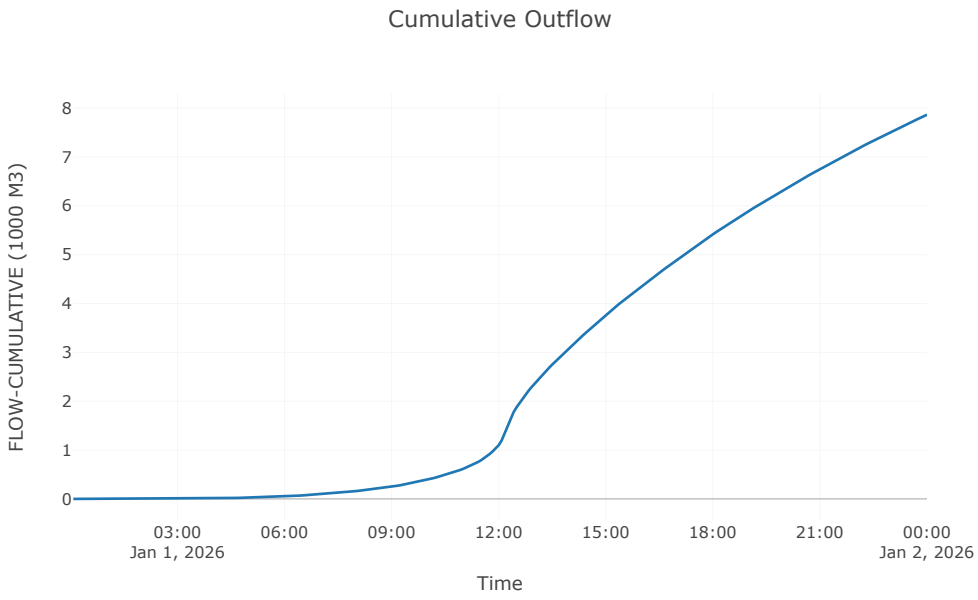
Downstream : Junction - CHANNEL 1

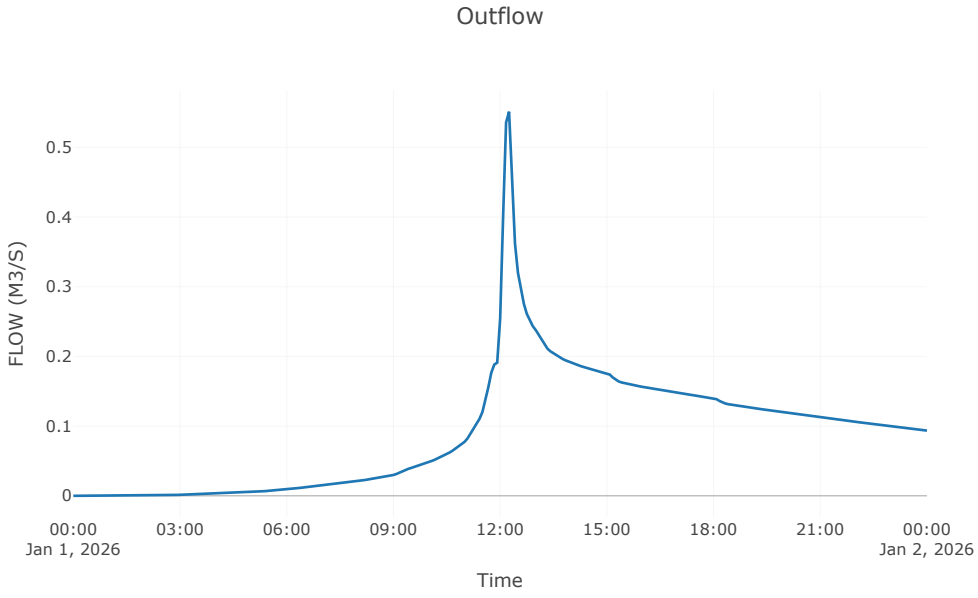
Route: Muskingum Cunge	
Method	Muskingum Cunge
Channel	Trapezoid
Length (M)	200
Energy Slope (M/M)	0.03
Mannings n	0.06
Bottom Width (M)	20
Side Slope (M/M)	3
Initial Variable	Combined Inflow
Space - Time Method	Automatic DX and DT
Index Parameter Type	Index Flow
Index Flow	15
Invert Elevation	0
Maximum Depth Iterations	20
Maximum Route Step Iterations	30

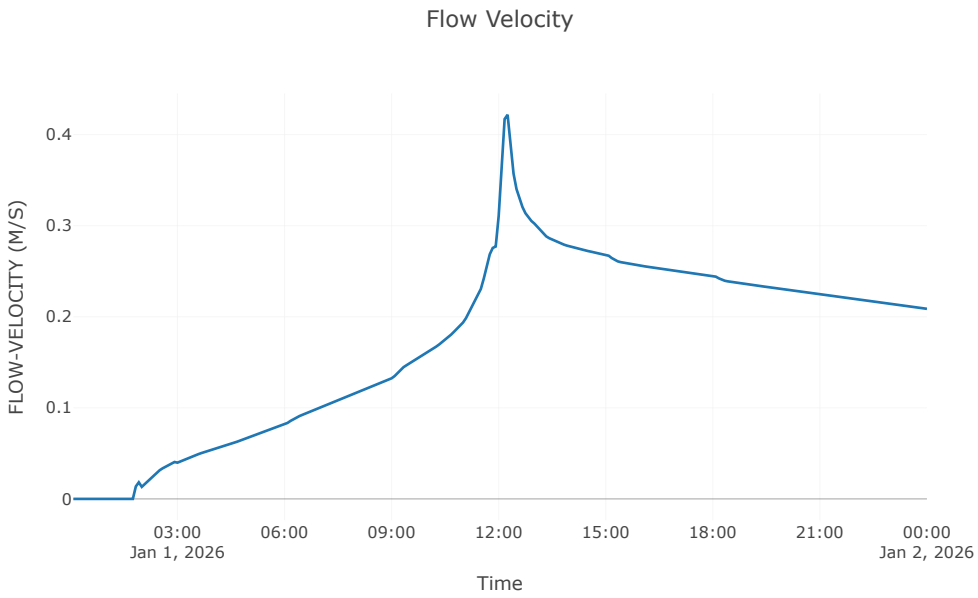
Results: Reach-CHANNEL 4	
Peak Discharge (M3/S)	0.55
Time of Peak Discharge	01Jan2026, 12:15
Volume (MM)	18.2
Peak Inflow (M3/S)	0.58
Inflow Volume (M3)	7875.47


Computed Stage
STAGE-SIM (M)
0.06
0.05
0.04
0.03
0.02
0.01
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Combined Inflow
FLOW-COMBINE (M3/S)
0.6
0.5
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
0
1
2
3
4
5
6
7
8
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outflow
FLOW (M3/S)
0
0.1
0.2
0.3
0.4
0.5
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

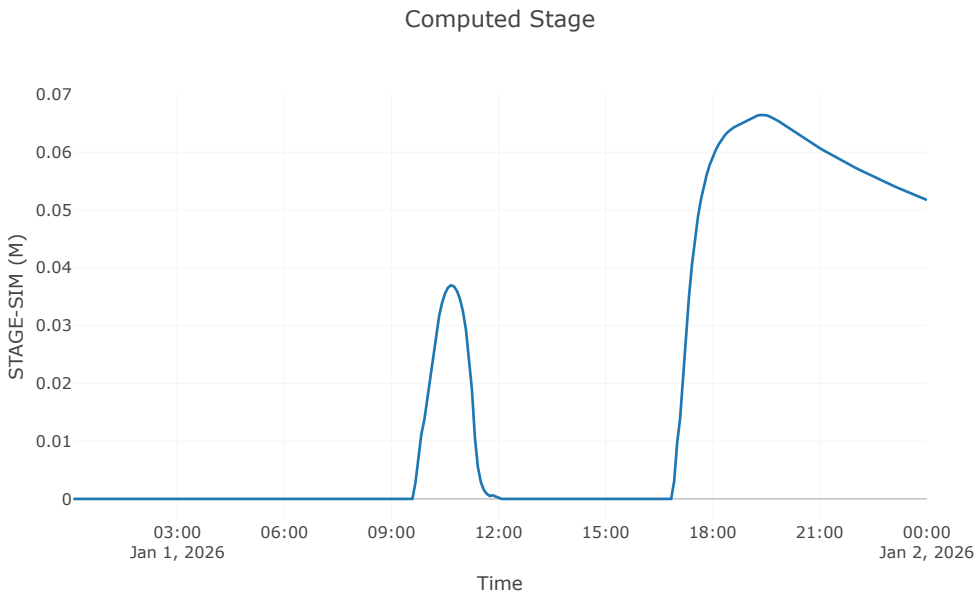

Flow Velocity
FLOW-VELOCITY (M/S)
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

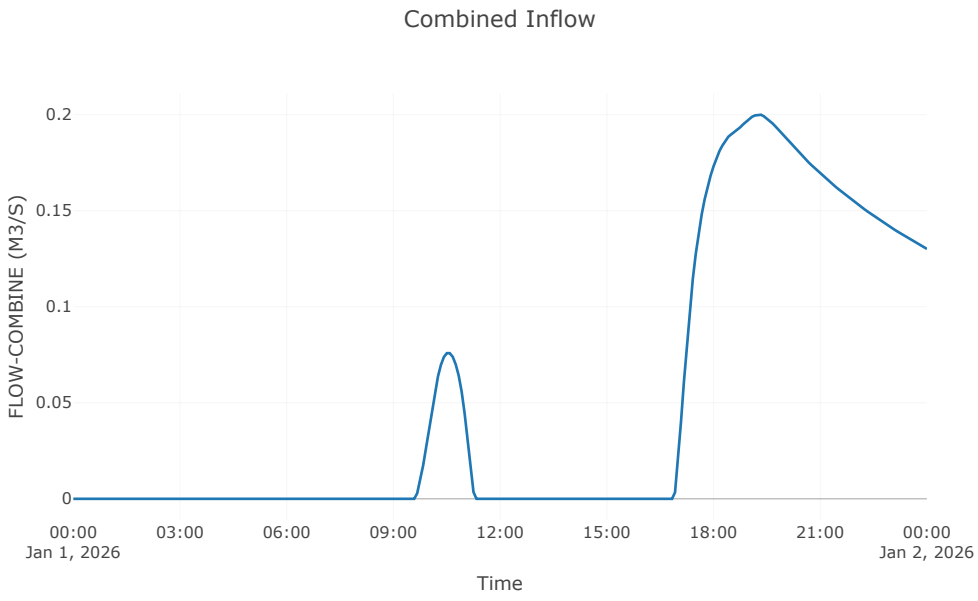
Reach: Reach-CHANNEL 5

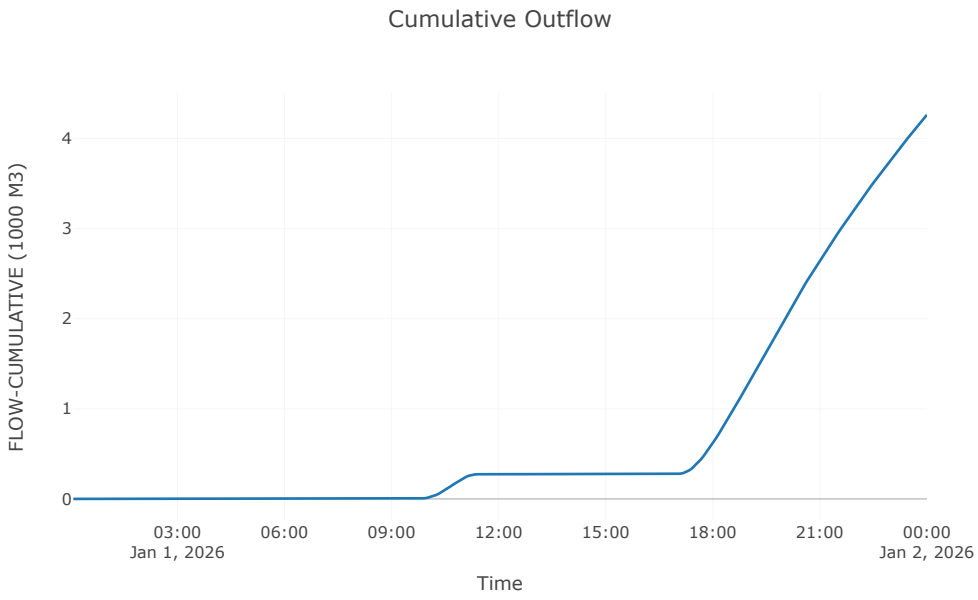
Downstream : Junction - CHANNEL 1

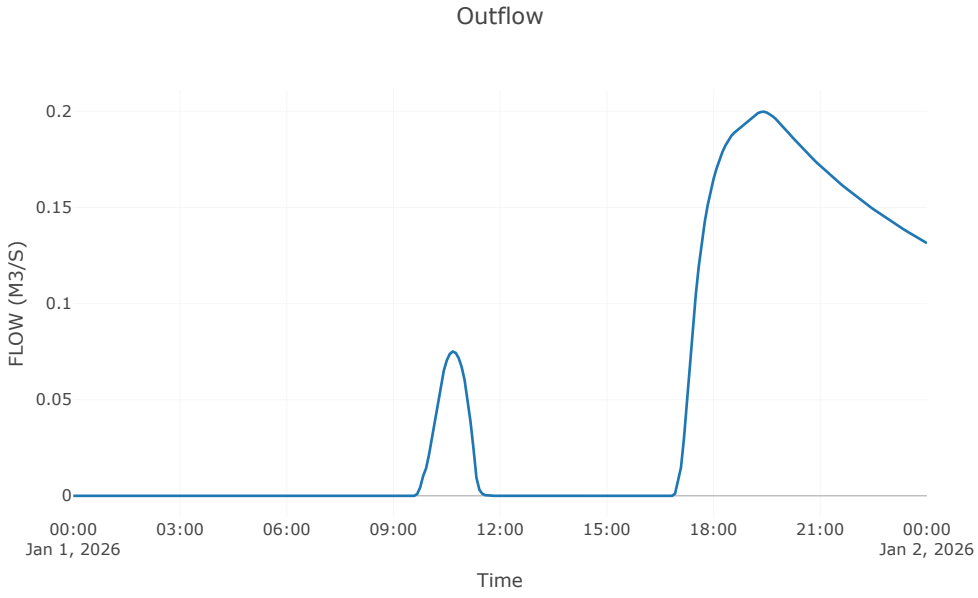
Route: Muskingum Cunge	
Method	Muskingum Cunge
Channel	Trapezoid
Length (M)	300
Energy Slope (M/M)	0
Mannings n	0.06
Bottom Width (M)	20
Side Slope (M/M)	3
Initial Variable	Combined Inflow
Space - Time Method	Automatic DX and DT
Index Parameter Type	Index Flow
Index Flow	15
Invert Elevation	0
Maximum Depth Iterations	20
Maximum Route Step Iterations	30

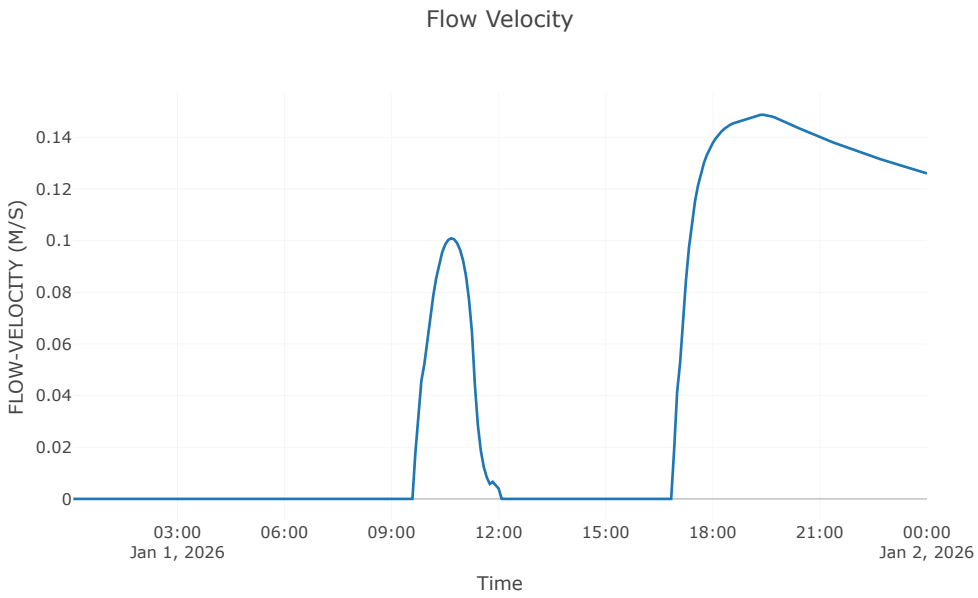
Results: Reach-CHANNEL 5	
Peak Discharge (M3/S)	0.2
Time of Peak Discharge	01Jan2026, 19:25
Peak Inflow (M3/S)	0.2
Inflow Volume (M3)	4321.83


Computed Stage
STAGE-SIM (M)
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Combined Inflow
FLOW-COMBINE (M3/S)
0.2
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
0
1
2
3
4
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outflow
FLOW (M3/S)
0
0.05
0.1
0.15
0.2
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

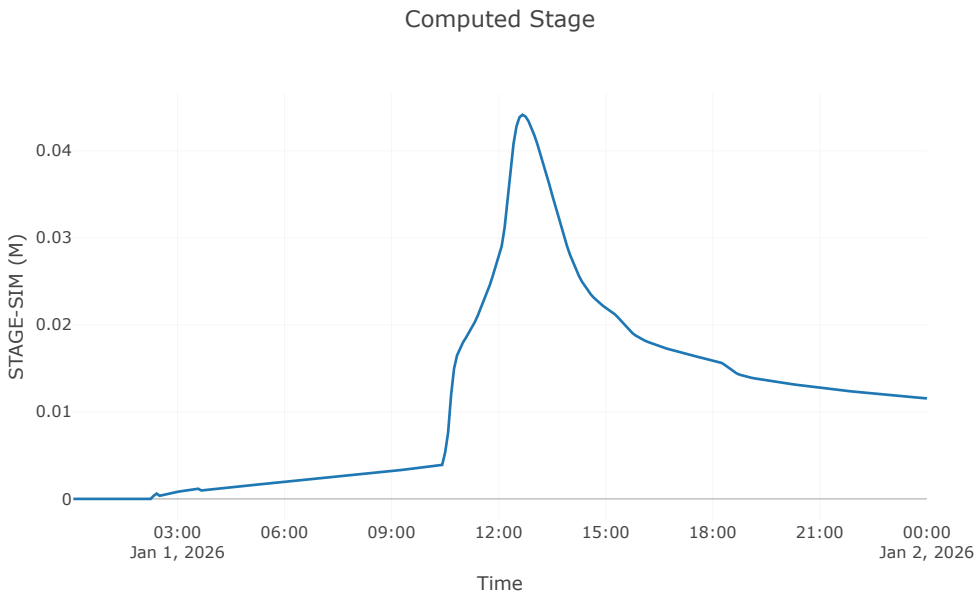

Flow Velocity
FLOW-VELOCITY (M/S)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

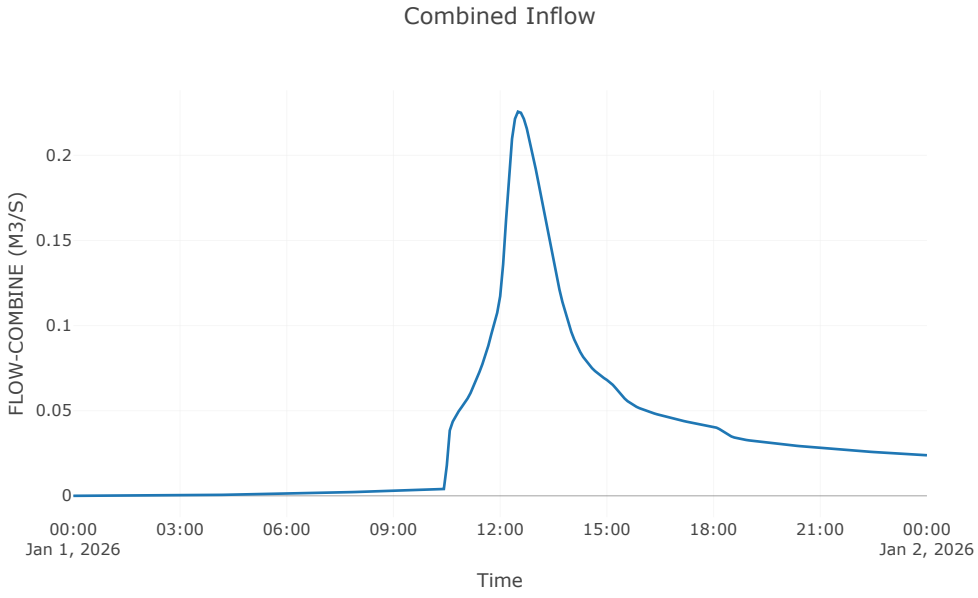
Reach: Reach-POND 5 OLFP

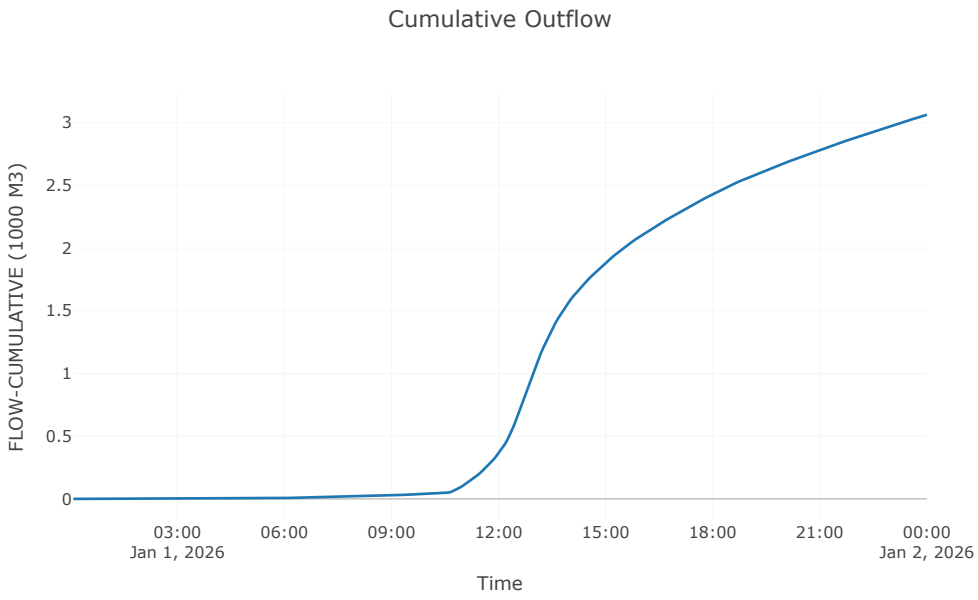
Downstream : Junction - EXIT OLFP

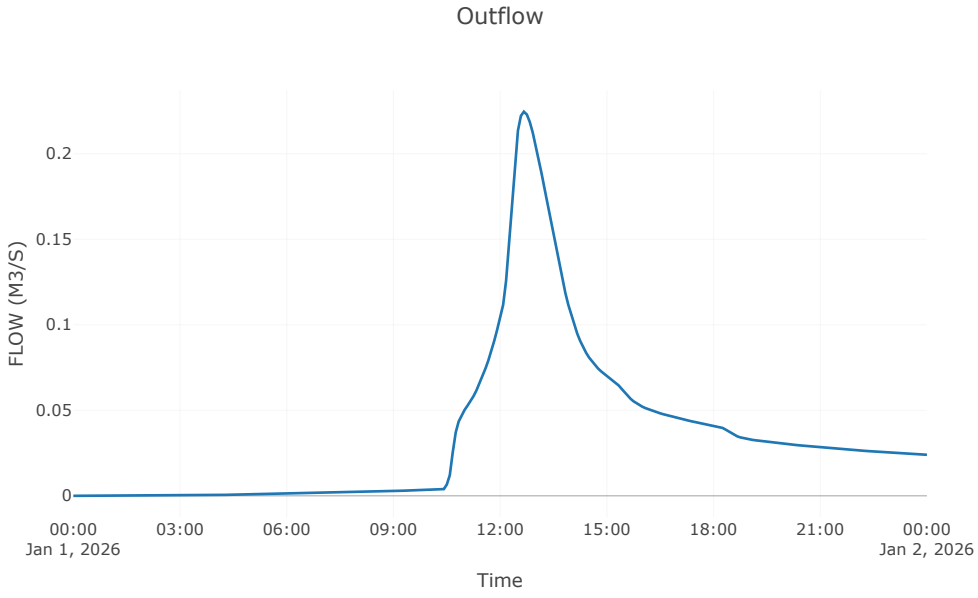
Route: Muskingum Cunge	
Method	Muskingum Cunge
Channel	Trapezoid
Length (M)	737.85
Energy Slope (M/M)	0.01
Mannings n	0.06
Bottom Width (M)	20
Side Slope (M/M)	3
Initial Variable	Combined Inflow
Space - Time Method	Automatic DX and DT
Index Parameter Type	Index Flow
Index Flow	15
Invert Elevation	0
Maximum Depth Iterations	20
Maximum Route Step Iterations	30

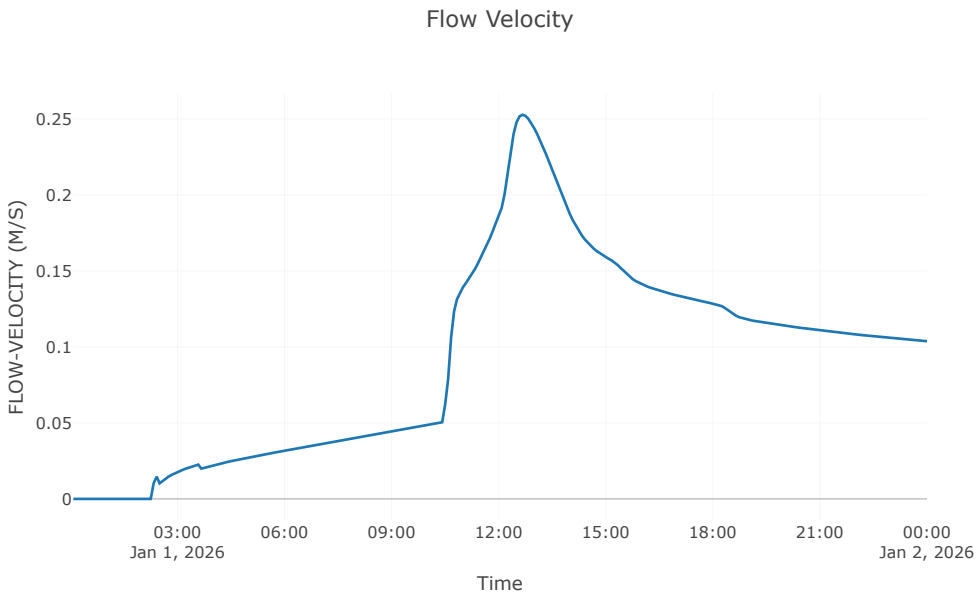
Results: Reach-POND 5 OLFP	
Peak Discharge (M3/S)	0.22
Time of Peak Discharge	01Jan2026, 12:40
Volume (MM)	22.29
Peak Inflow (M3/S)	0.23
Inflow Volume (M3)	3074.21


Computed Stage
STAGE-SIM (M)
0.04
0.03
0.02
0.01
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Combined Inflow
FLOW-COMBINE (M3/S)
0.2
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
3
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outflow
FLOW (M3/S)
0.2
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

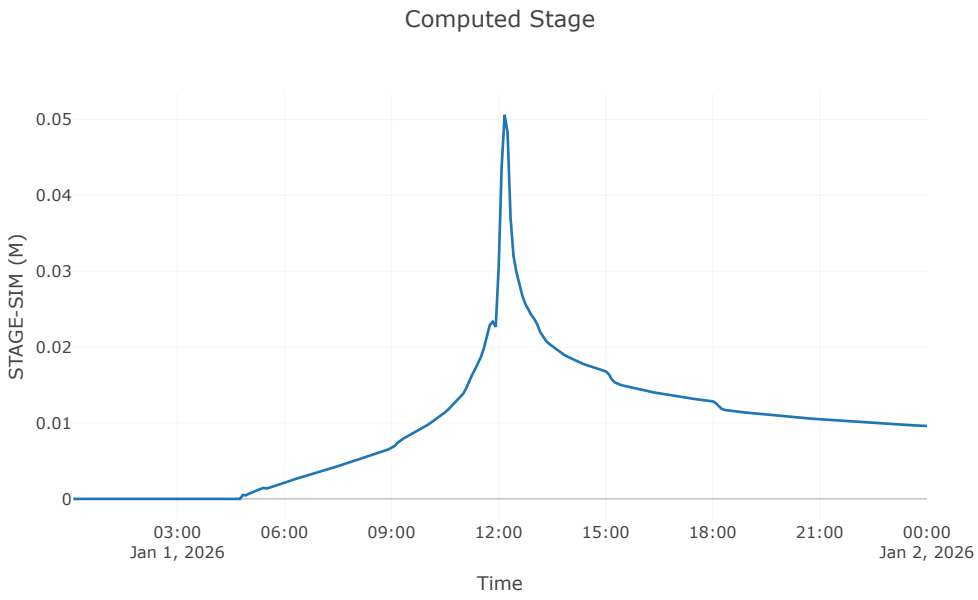

Flow Velocity
FLOW-VELOCITY (M/S)
0.25
0.2
0.15
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

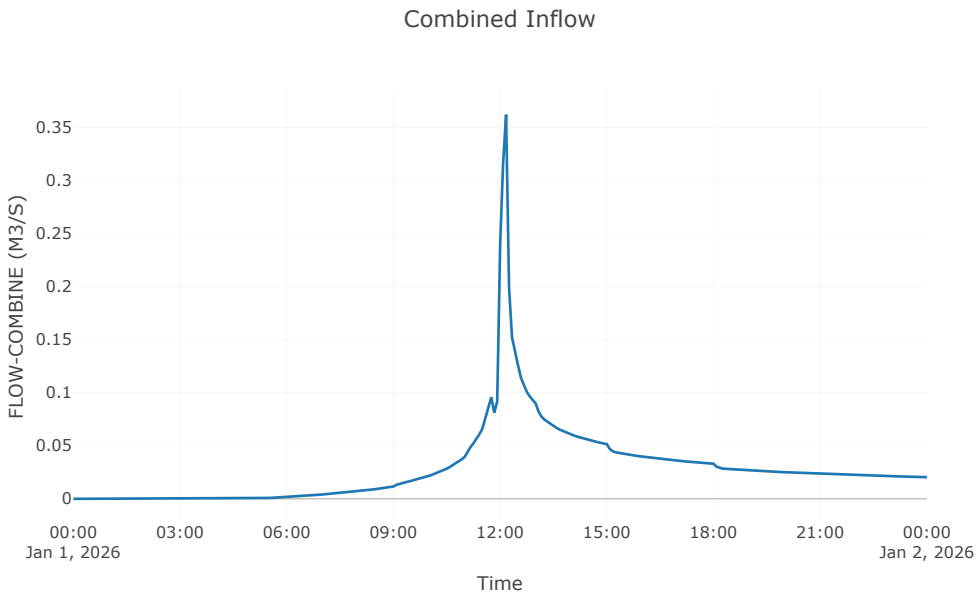
Reach: Reach-CHANNEL 6

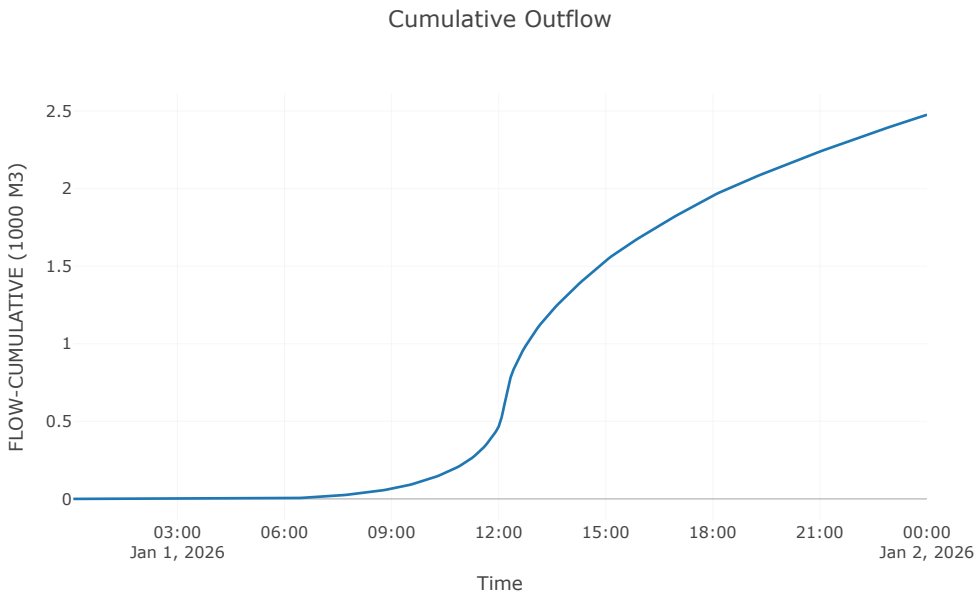
Downstream : Junction - POND 7

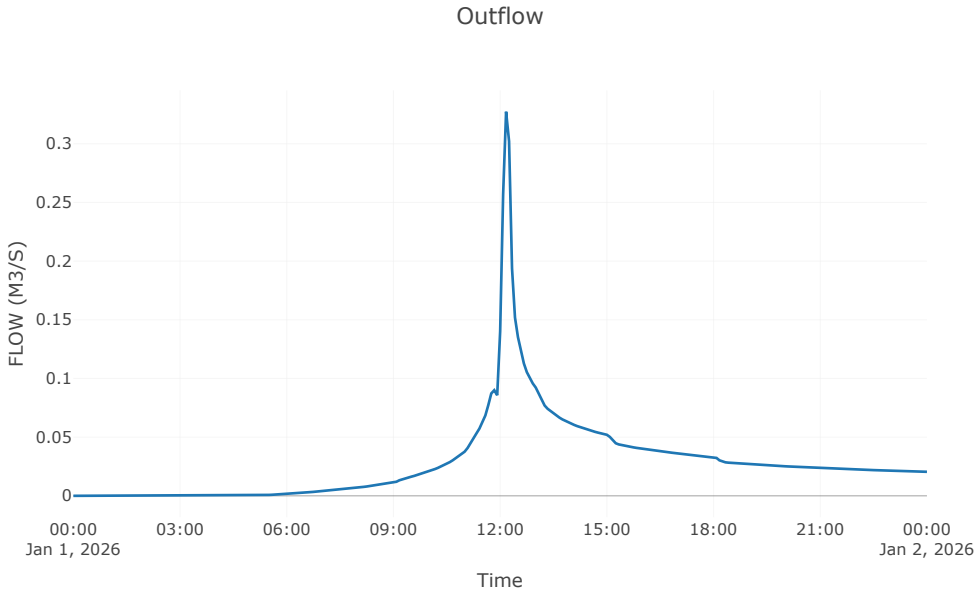
Route: Muskingum Cunge	
Method	Muskingum Cunge
Channel	Trapezoid
Length (M)	300
Energy Slope (M/M)	0.02
Mannings n	0.06
Bottom Width (M)	20
Side Slope (M/M)	3
Initial Variable	Combined Inflow
Space - Time Method	Automatic DX and DT
Index Parameter Type	Index Flow
Index Flow	15
Invert Elevation	0
Maximum Depth Iterations	20
Maximum Route Step Iterations	30

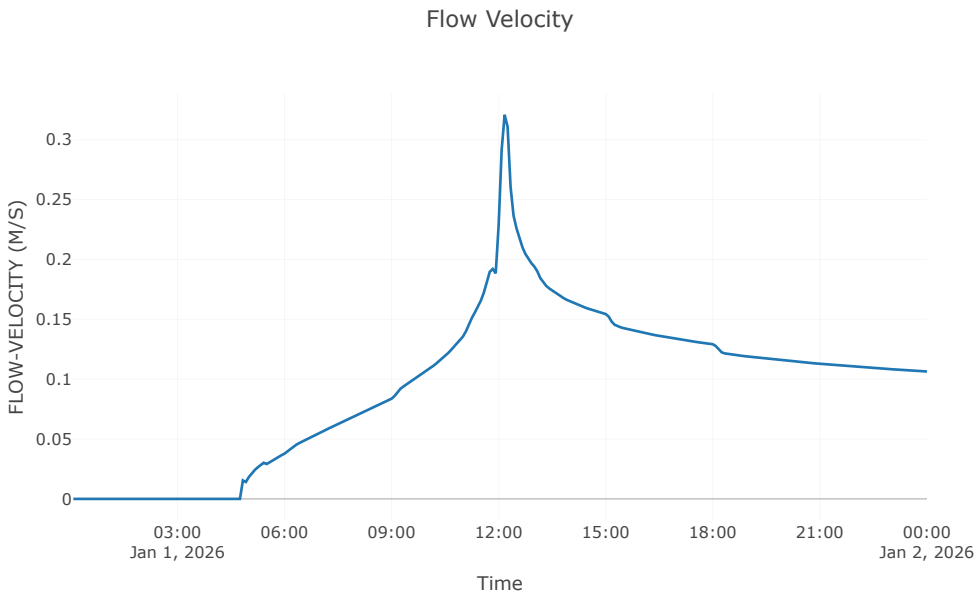
Results: Reach-CHANNEL 6	
Peak Discharge (M3/S)	0.33
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	15.39
Peak Inflow (M3/S)	0.36
Inflow Volume (M3)	2478.9


Computed Stage
STAGE-SIM (M)
0.05
0.04
0.03
0.02
0.01
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Combined Inflow
FLOW-COMBINE (M3/S)
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outflow
FLOW (M3/S)
0.3
0.25
0.2
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

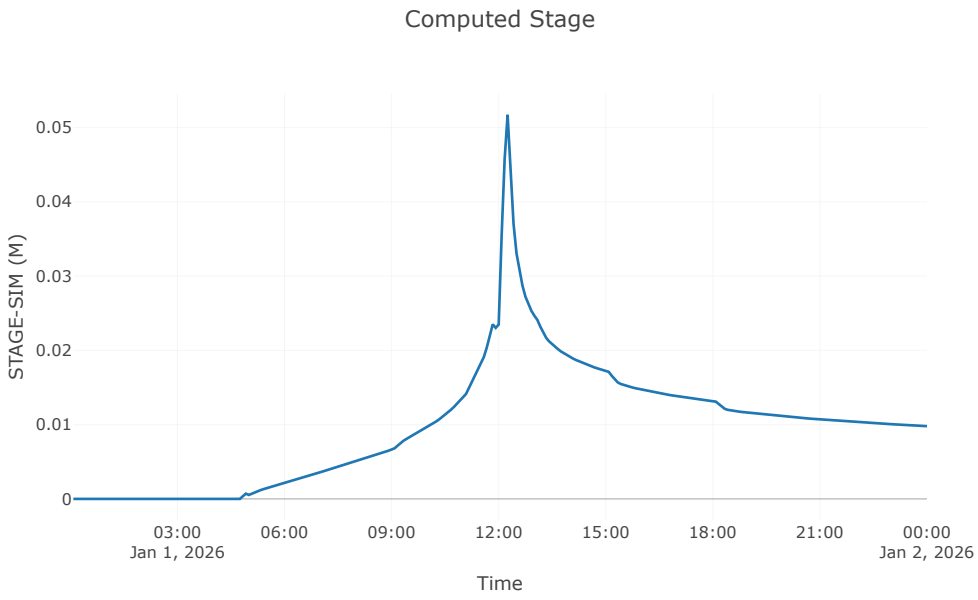

Flow Velocity
FLOW-VELOCITY (M/S)
0.3
0.25
0.2
0.15
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

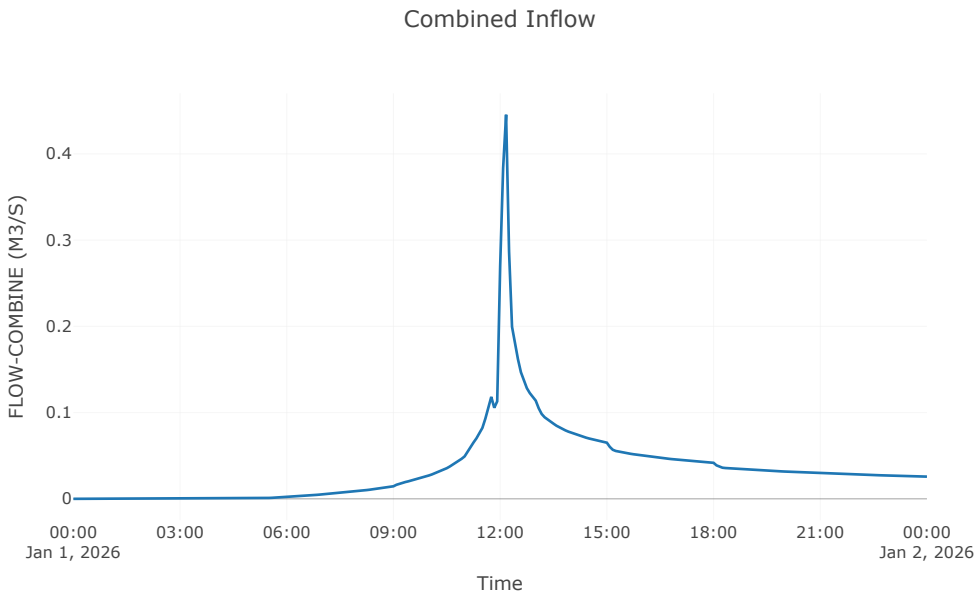
Reach: Reach-CHANNEL 8

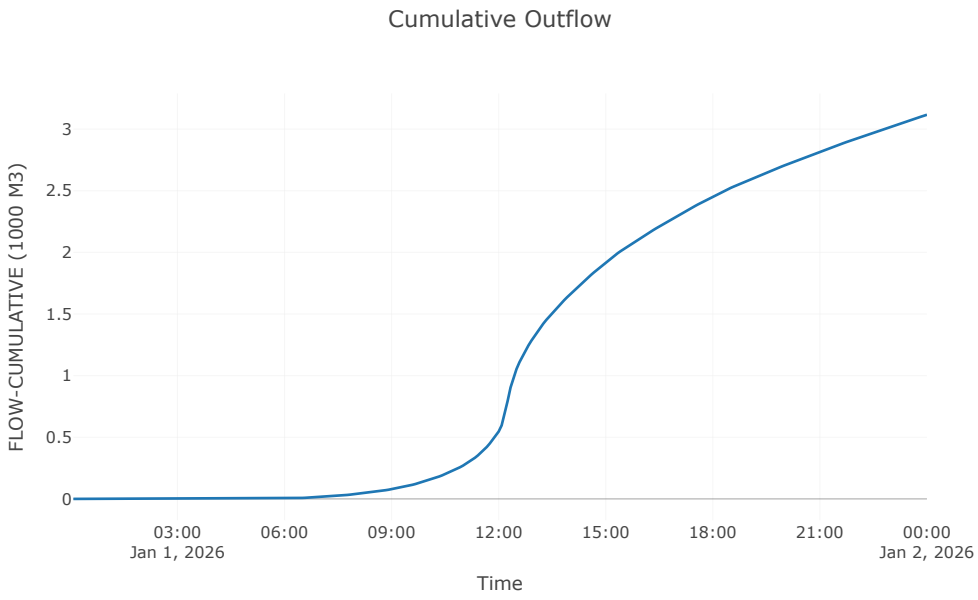
Downstream : Junction - CHANNEL 3

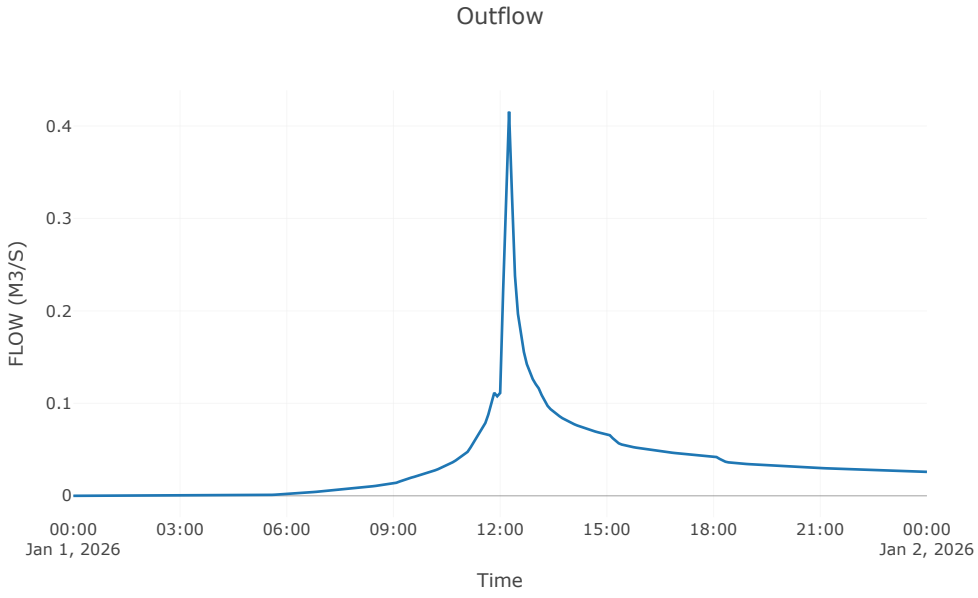
Route: Muskingum Cunge	
Method	Muskingum Cunge
Channel	Trapezoid
Length (M)	660
Energy Slope (M/M)	0.03
Mannings n	0.06
Bottom Width (M)	20
Side Slope (M/M)	3
Initial Variable	Combined Inflow
Space - Time Method	Automatic DX and DT
Index Parameter Type	Index Flow
Index Flow	15
Invert Elevation	0
Maximum Depth Iterations	20
Maximum Route Step Iterations	30

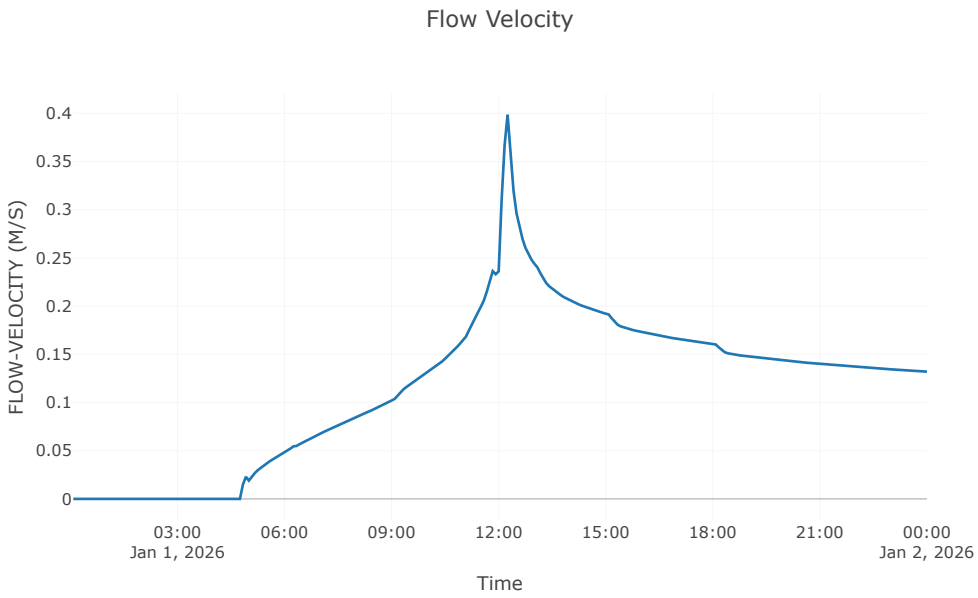
Results: Reach-CHANNEL 8	
Peak Discharge (M3/S)	0.42
Time of Peak Discharge	01Jan2026, 12:15
Volume (MM)	15.37
Peak Inflow (M3/S)	0.45
Inflow Volume (M3)	3123.06


Computed Stage
STAGE-SIM (M)
0.05
0.04
0.03
0.02
0.01
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Combined Inflow
FLOW-COMBINE (M3/S)
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
3
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outflow
FLOW (M3/S)
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

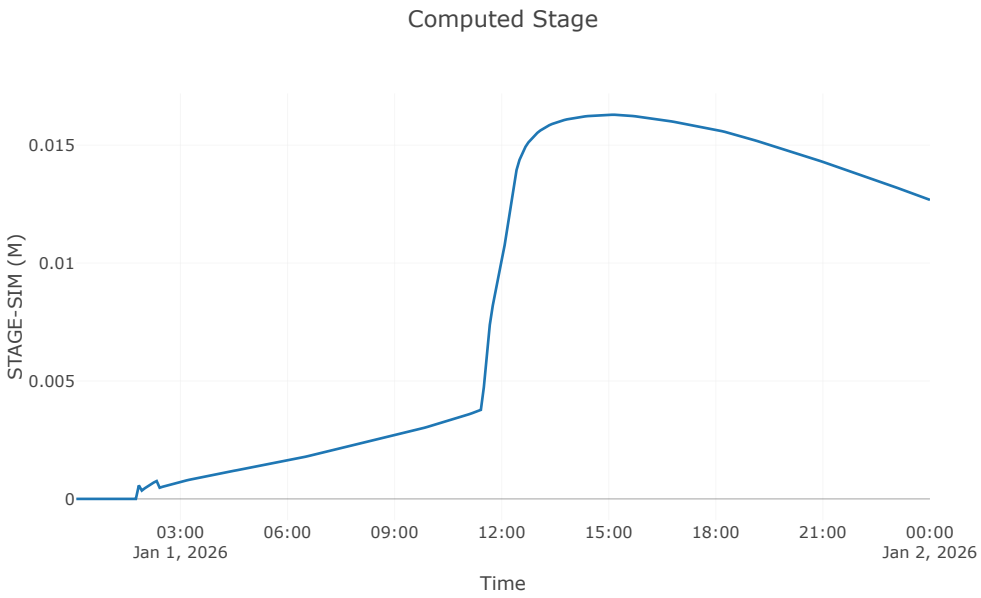

Flow Velocity
FLOW-VELOCITY (M/S)
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

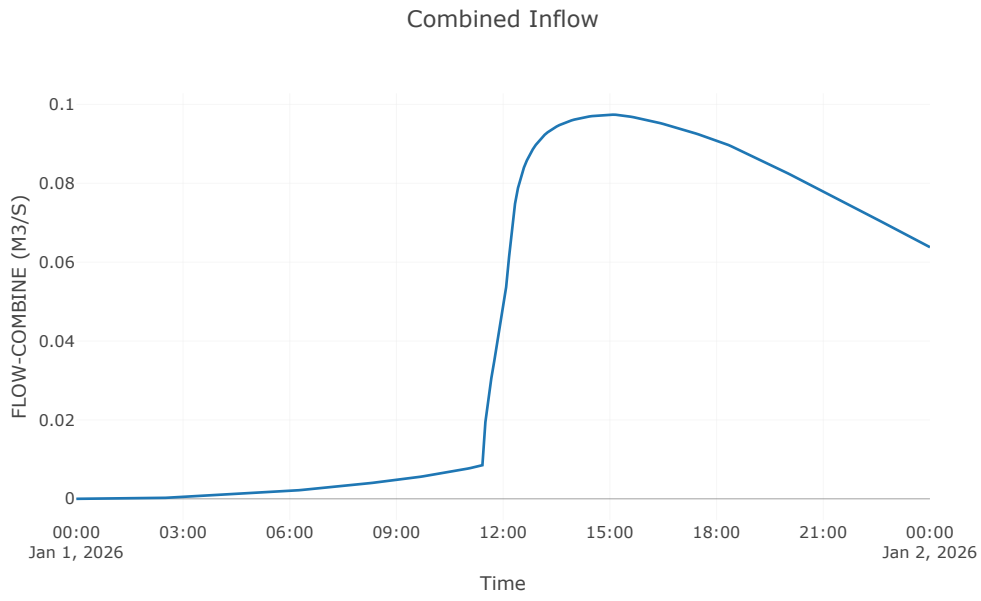
Reach: Reach-WETLAND B

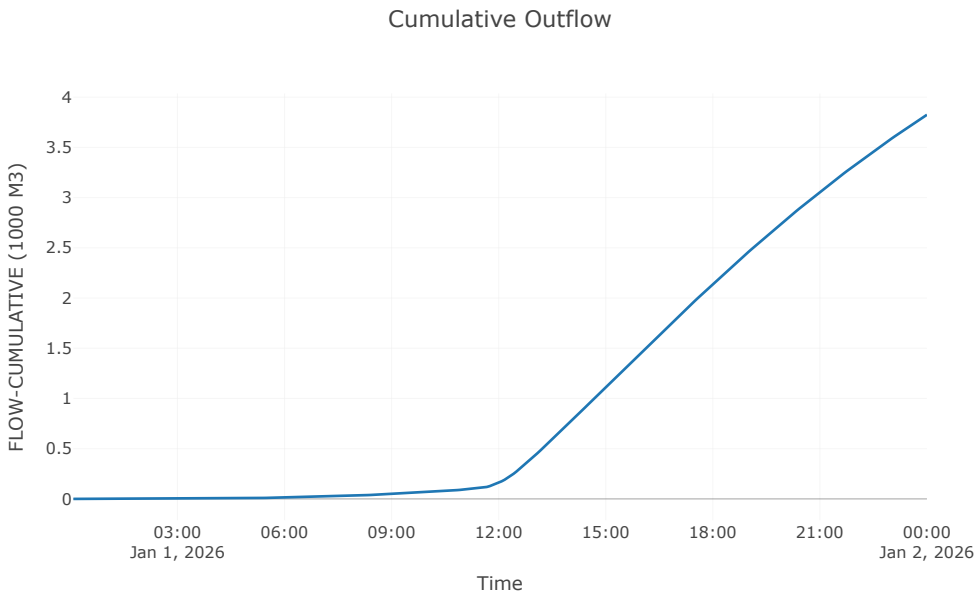
Downstream : Junction - CHANNEL 4

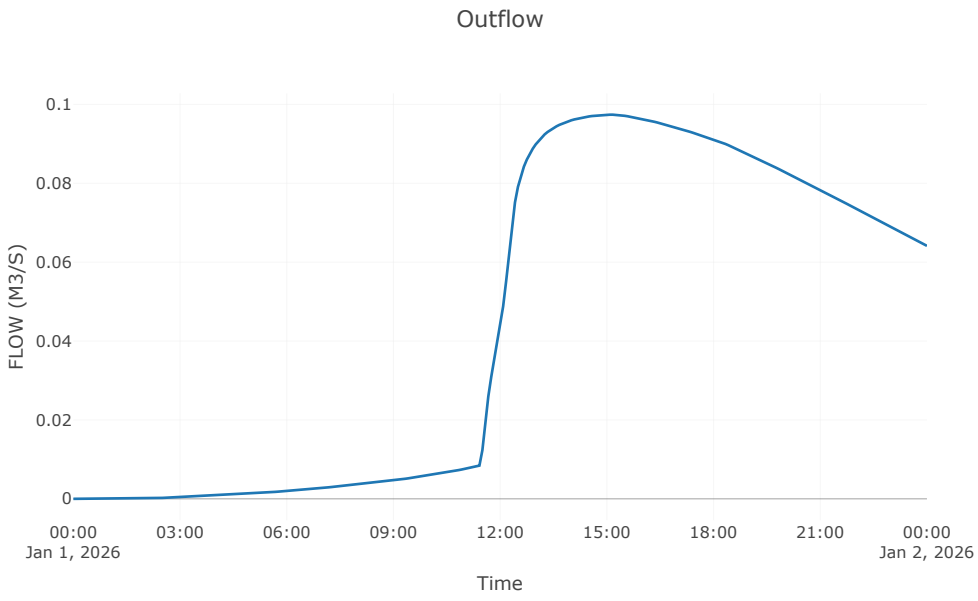
Route: Muskingum Cunge	
Method	Muskingum Cunge
Channel	Trapezoid
Length (M)	630
Energy Slope (M/M)	0.08
Mannings n	0.06
Bottom Width (M)	20
Side Slope (M/M)	3
Initial Variable	Combined Inflow
Space - Time Method	Automatic DX and DT
Index Parameter Type	Index Flow
Index Flow	15
Invert Elevation	0
Maximum Depth Iterations	20
Maximum Route Step Iterations	30

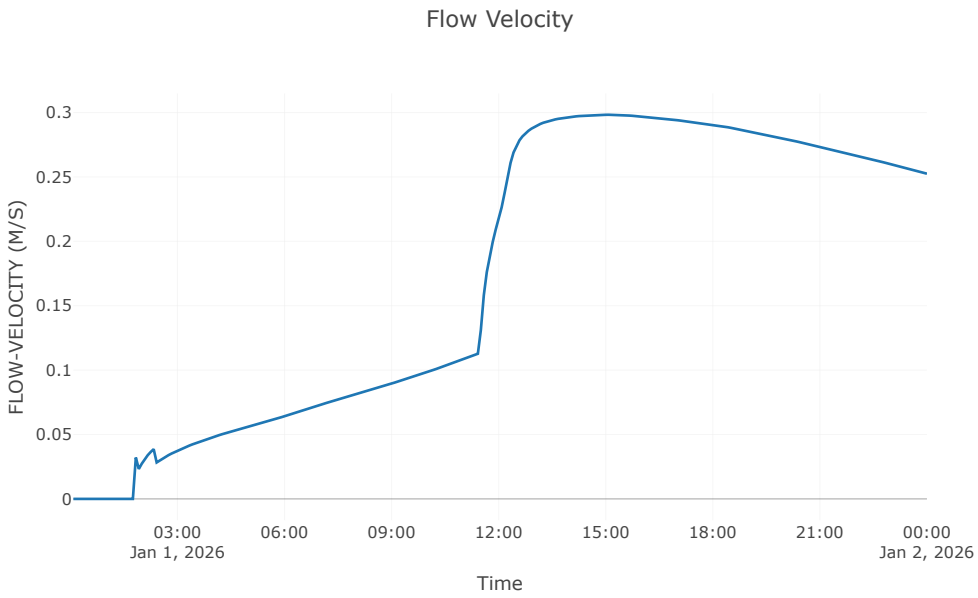
Results: Reach-WETLAND B	
Peak Discharge (M3/S)	0.1
Time of Peak Discharge	01Jan2026, 15:10
Volume (MM)	15.51
Peak Inflow (M3/S)	0.1
Inflow Volume (M3)	3840.3


Computed Stage
0.015
0.01
0.005
0
STAGE-SIM (M)
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Combined Inflow
0.1
0.08
0.06
0.04
0.02
0
FLOW-COMBINE (M3/S)
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
4
3.5
3
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outflow
FLOW (M3/S)
0.1
0.08
0.06
0.04
0.02
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

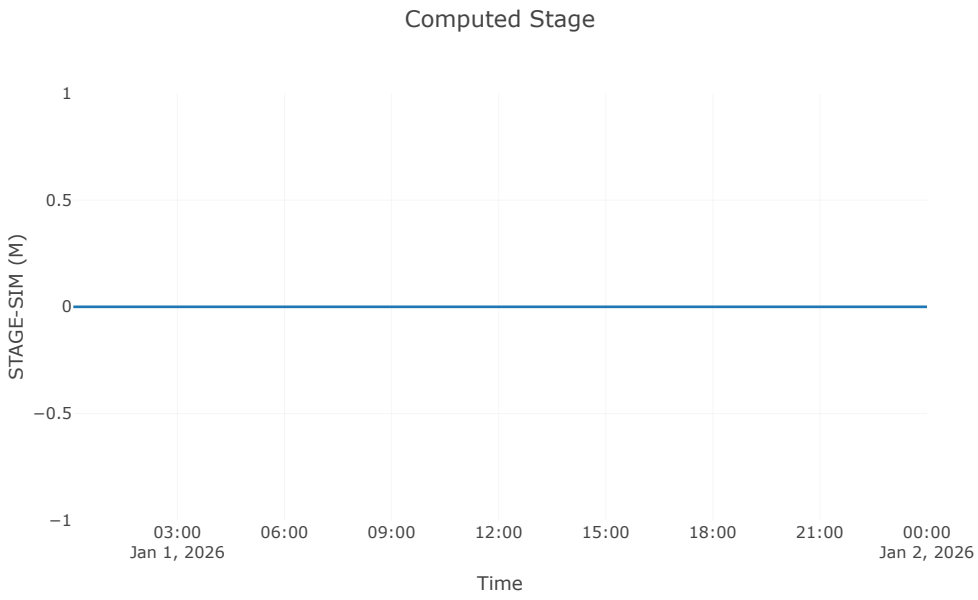

Flow Velocity
FLOW-VELOCITY (M/S)
0.3
0.25
0.2
0.15
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

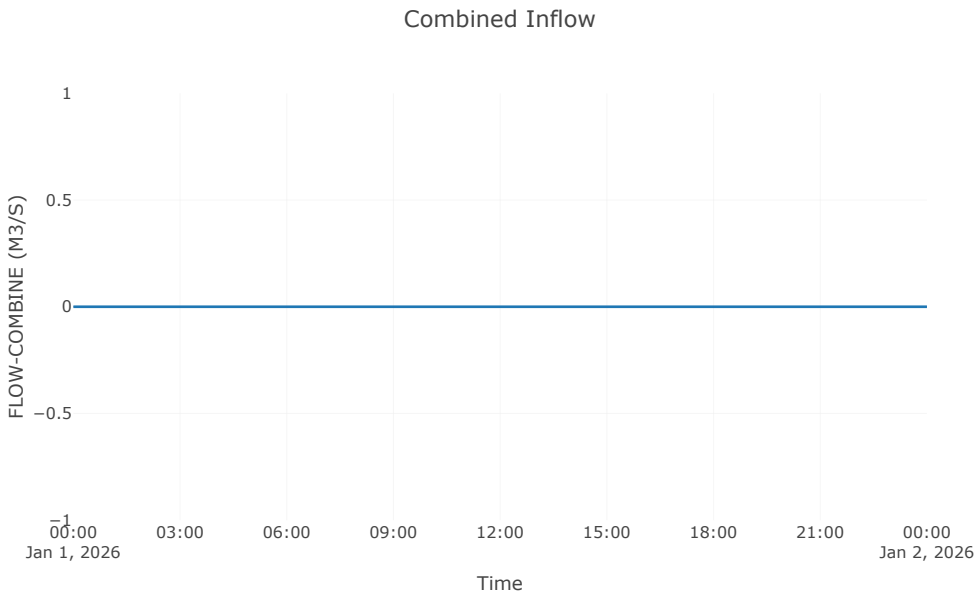
Reach: Reach-MORVEN FERRY SWALE

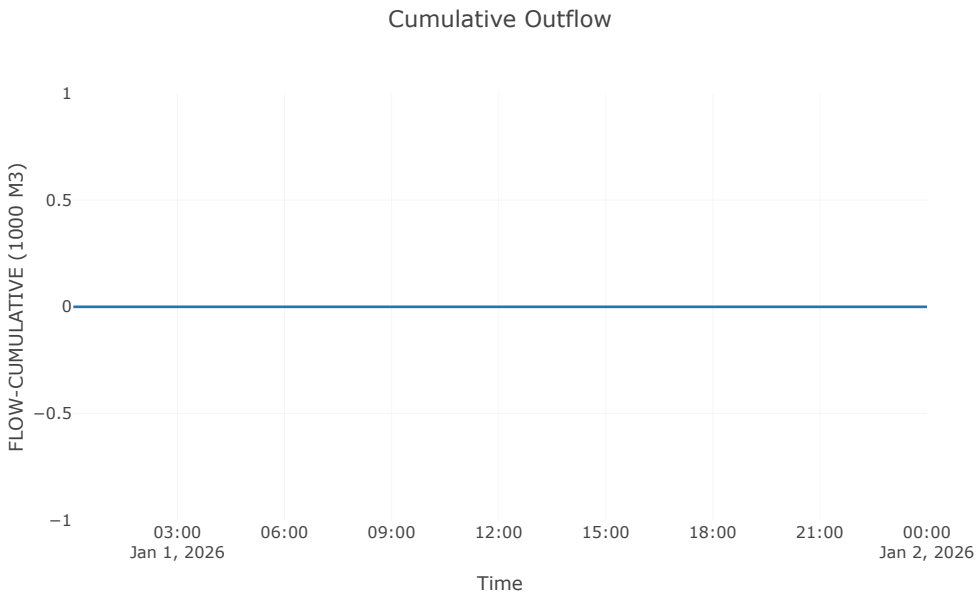
Downstream : Olfp outflow

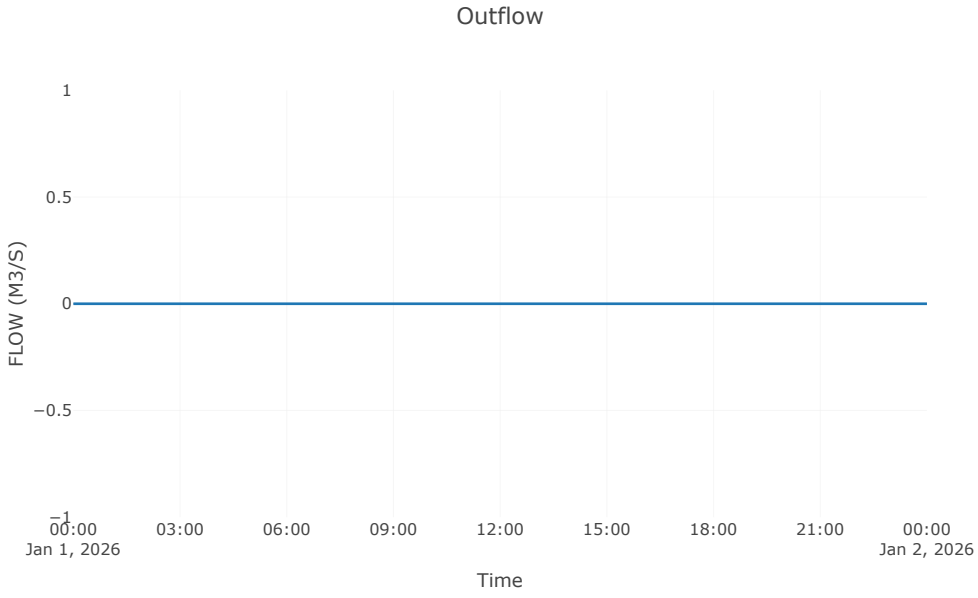
Route: Muskingum Cunge	
Method	Muskingum Cunge
Channel	Trapezoid
Length (M)	770
Energy Slope (M/M)	0.01
Mannings n	0.06
Bottom Width (M)	20
Side Slope (M/M)	3
Initial Variable	Combined Inflow
Space - Time Method	Automatic DX and DT
Index Parameter Type	Index Flow
Index Flow	15
Invert Elevation	0
Maximum Depth Iterations	20
Maximum Route Step Iterations	30

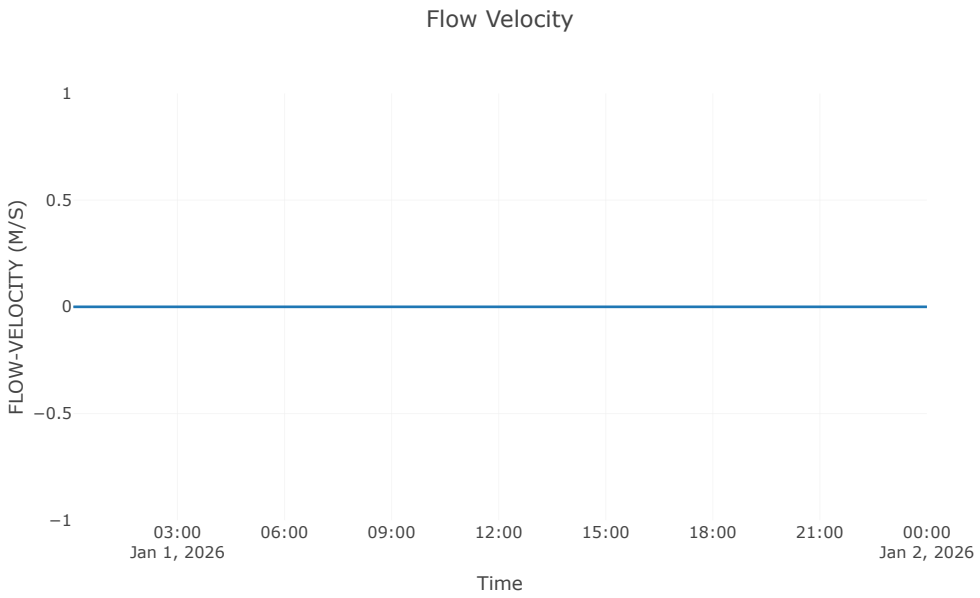
Results: Reach-MORVEN FERRY SWALE	
Peak Discharge (M3/S)	0
Time of Peak Discharge	31Dec2025, 24:00
Peak Inflow (M3/S)	0
Inflow Volume (M3)	0


Computed Stage
STAGE-SIM (M)
1
0.5
0
−0.5
−1
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Combined Inflow
FLOW-COMBINE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
1
0.5
0
−0.5
−1
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outflow
FLOW (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Flow Velocity
FLOW-VELOCITY (M/S)
1
0.5
0
−0.5
−1
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

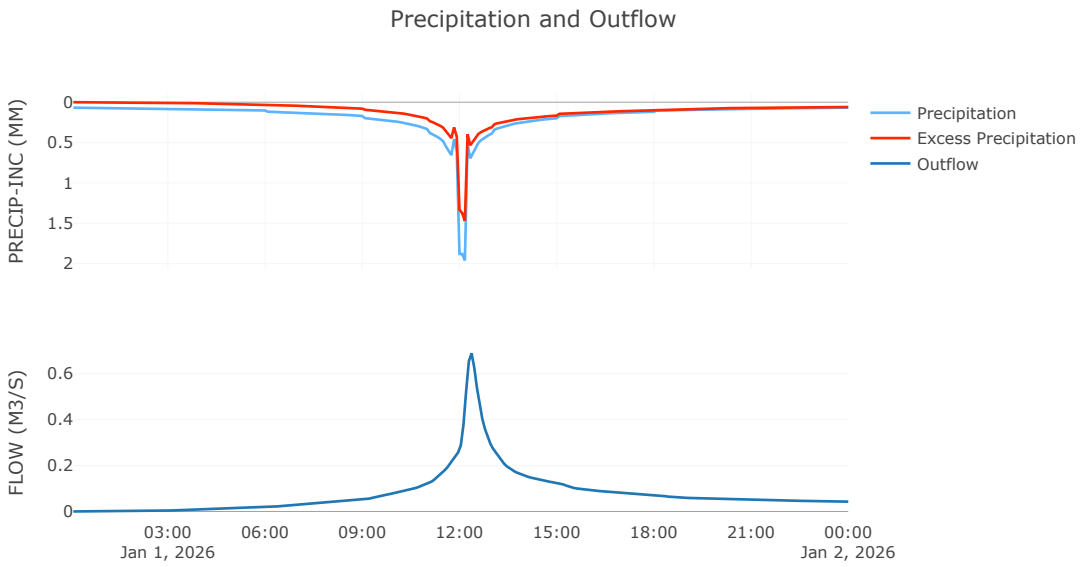
Subbasin: DIFFERENCE POND 1 INTERNAL

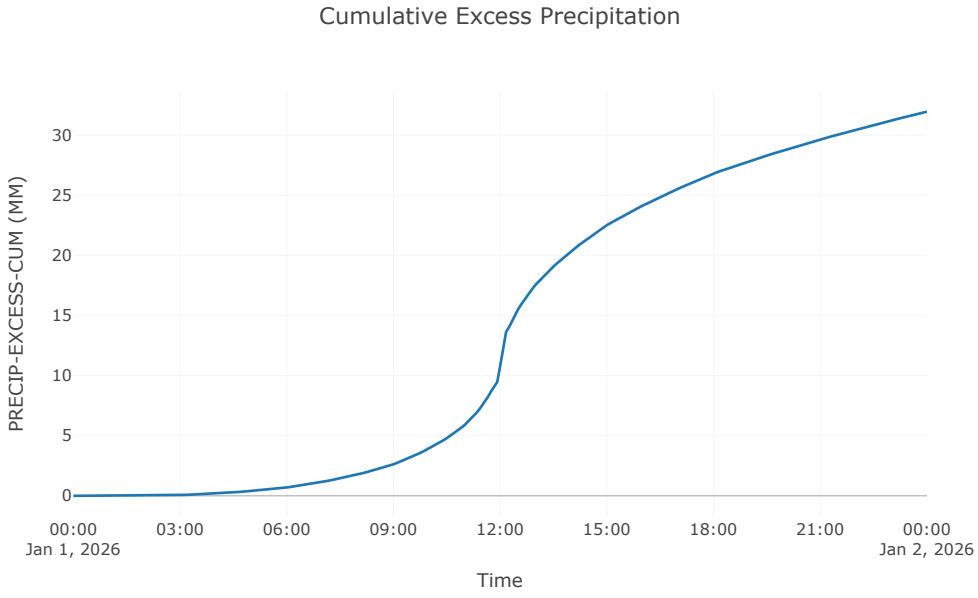
Area (KM2) : 0.21
Latitude Degrees : -44.99
Longitude Degrees : 168.84
Downstream : Junction - POND 1

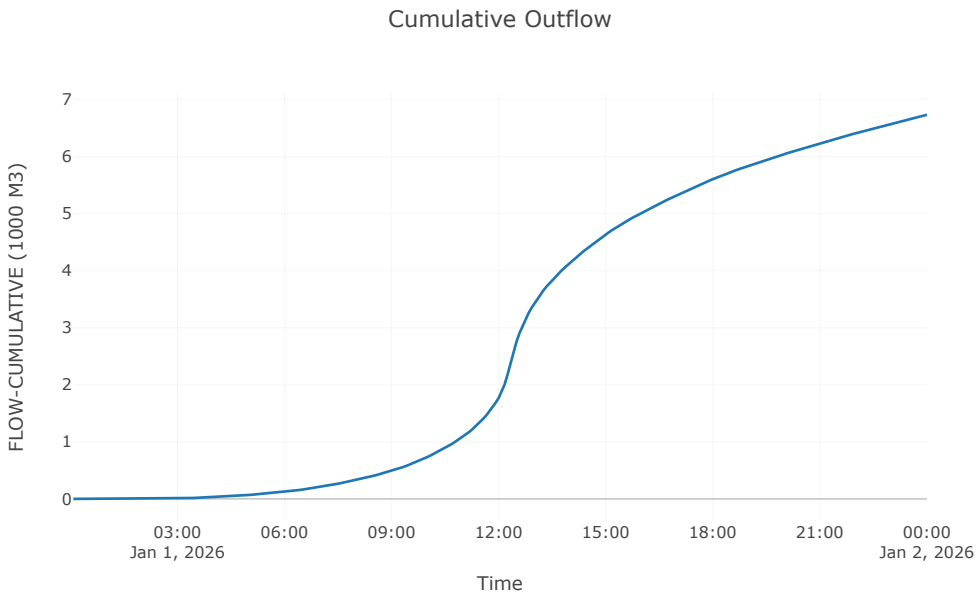
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	90.8
Initial Abstraction	1.29

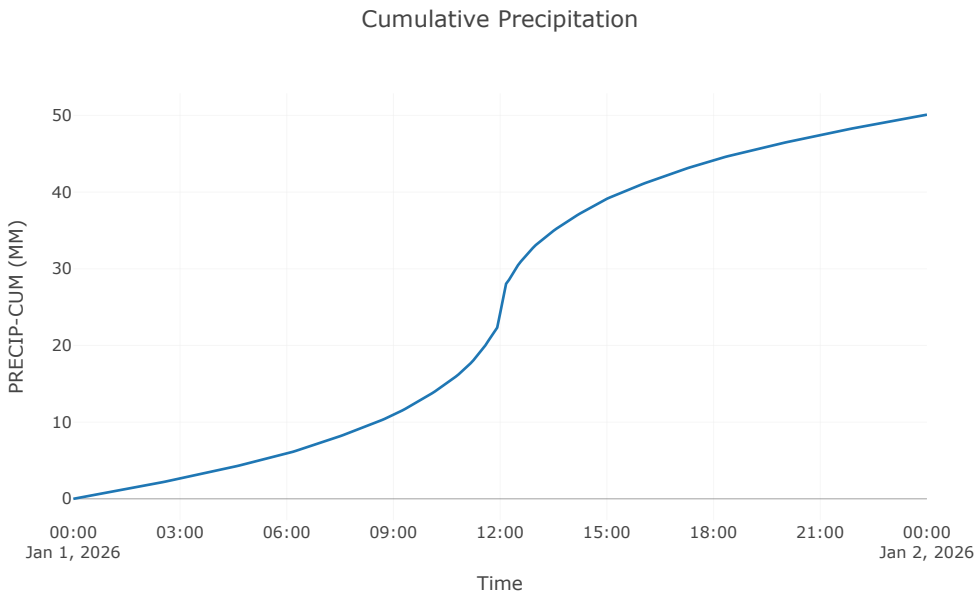
Transform: Scs	
Lag	15.03
Unitgraph Type	Standard

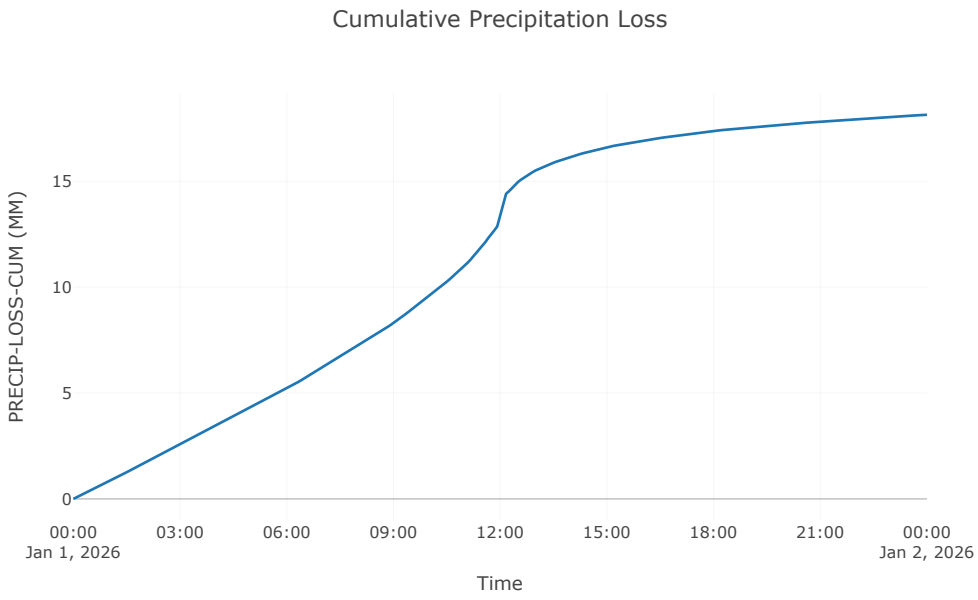
Results: DIFFERENCE POND 1 INTERNAL	
Peak Discharge (M3/S)	0.69
Time of Peak Discharge	01Jan2026, 12:20
Volume (MM)	31.72
Precipitation Volume (M3)	10636.23
Loss Volume (M3)	3851.3
Excess Volume (M3)	6784.93
Direct Runoff Volume (M3)	6733.57
Baseflow Volume (M3)	0

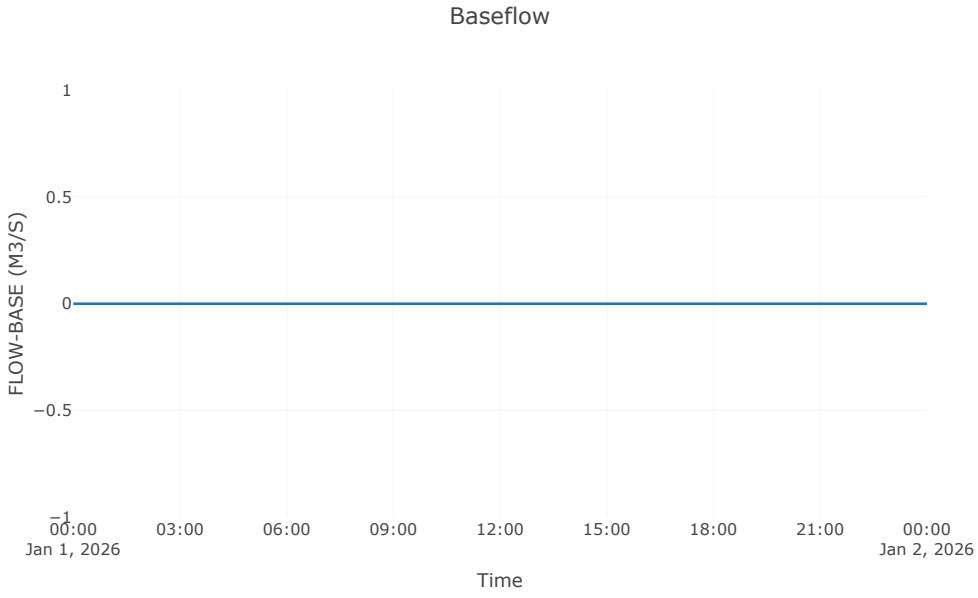

Precipitation and Outflow
PRECIP-INC (MM)
0
0.5
1
1.5
2
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

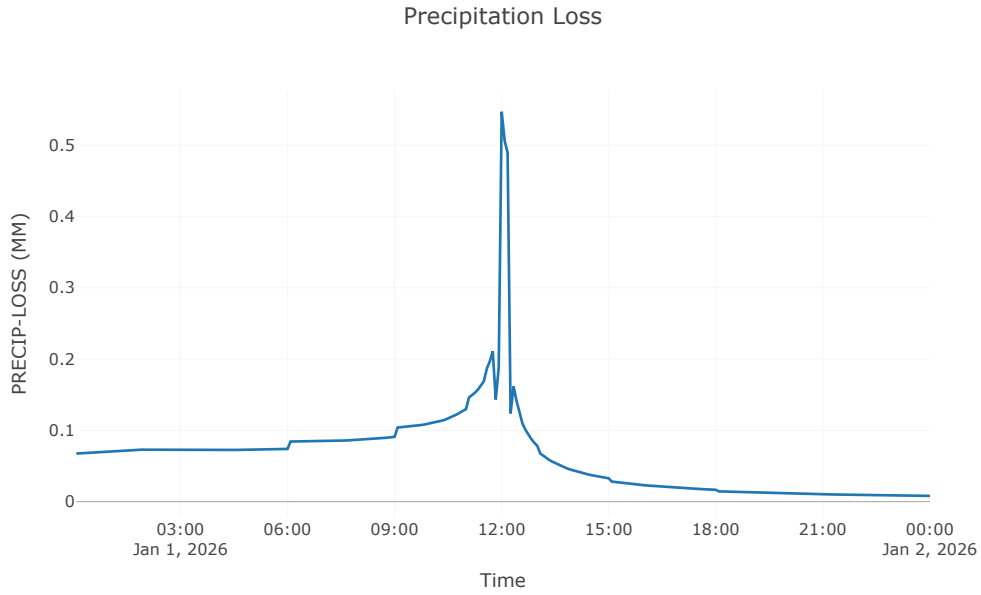

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
30
25
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

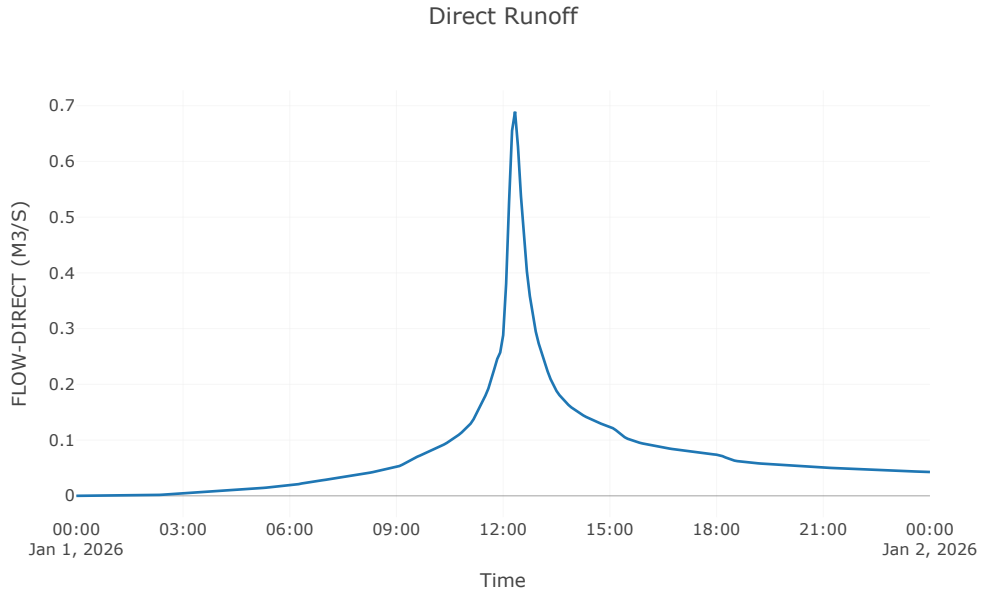

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
0
1
2
3
4
5
6
7
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

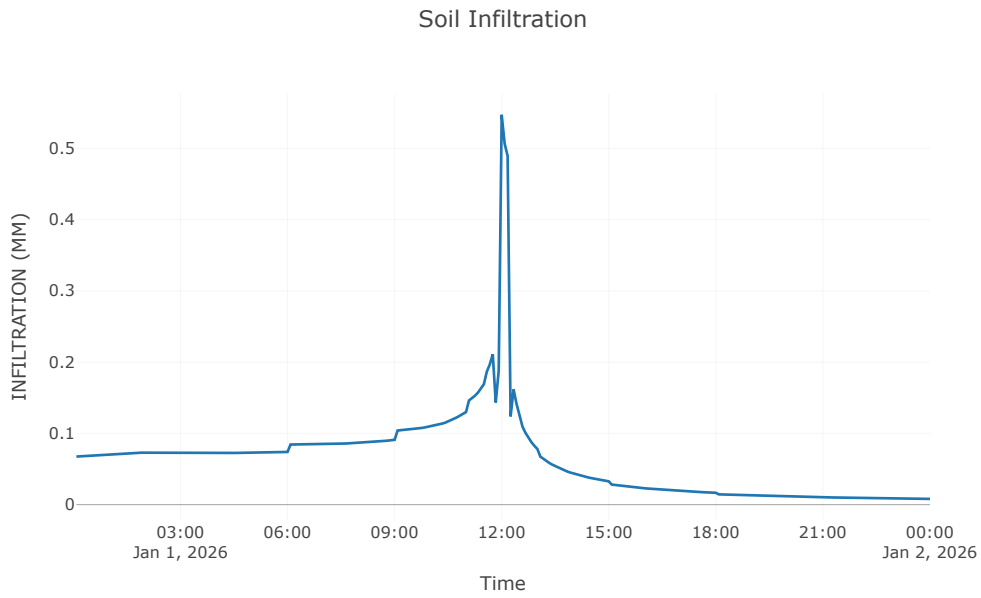

Cumulative Precipitation
PRECIP-CUM (MM)
0
10
20
30
40
50
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
0.5
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
0.5
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

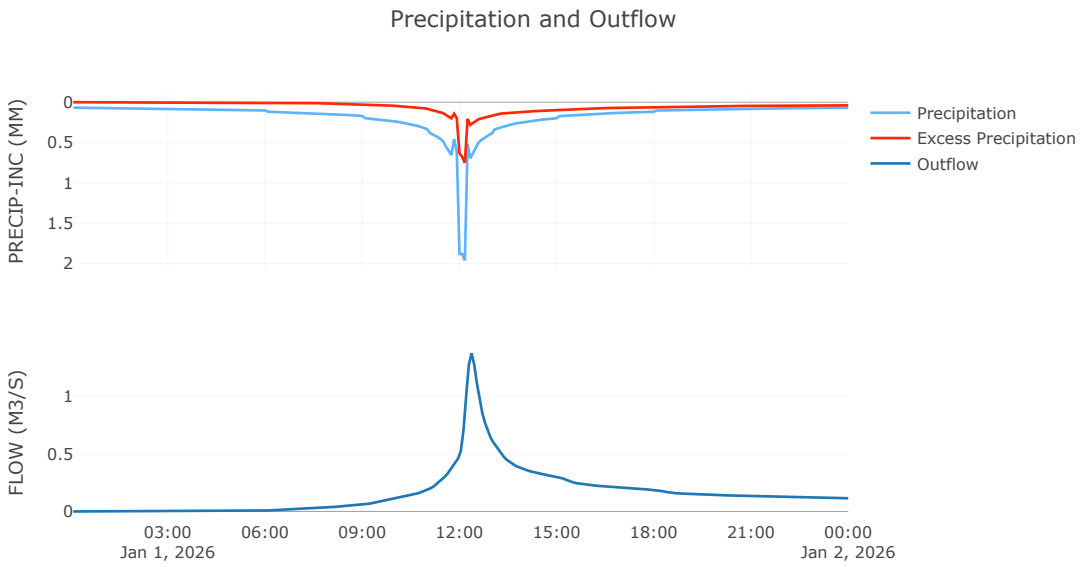
Subbasin: DIFFERENCE POND 1 UPSTREAM

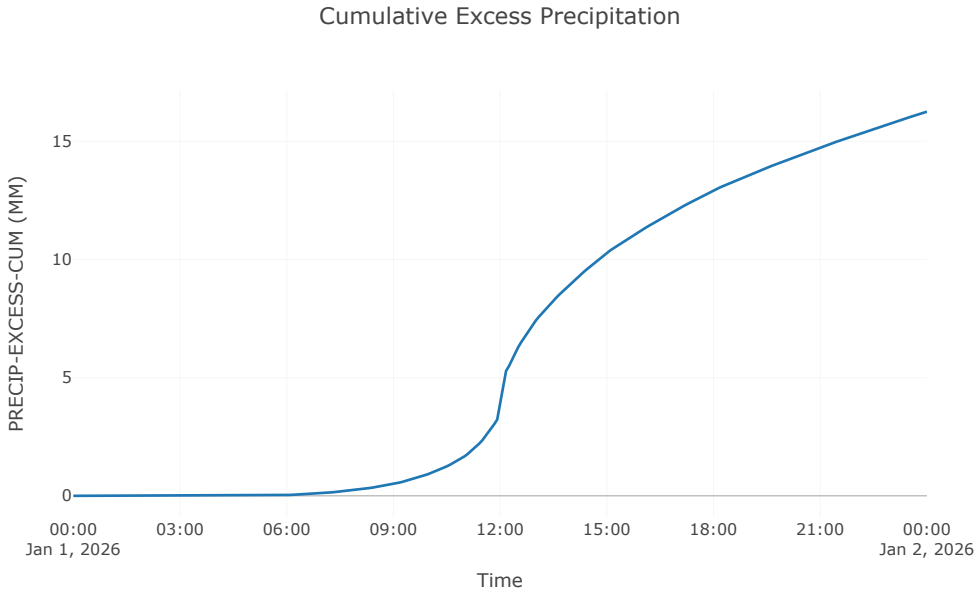
Area (KM2) : 0.86
Latitude Degrees : -44.99
Longitude Degrees : 168.84
Downstream : Junction - CHANNEL 1

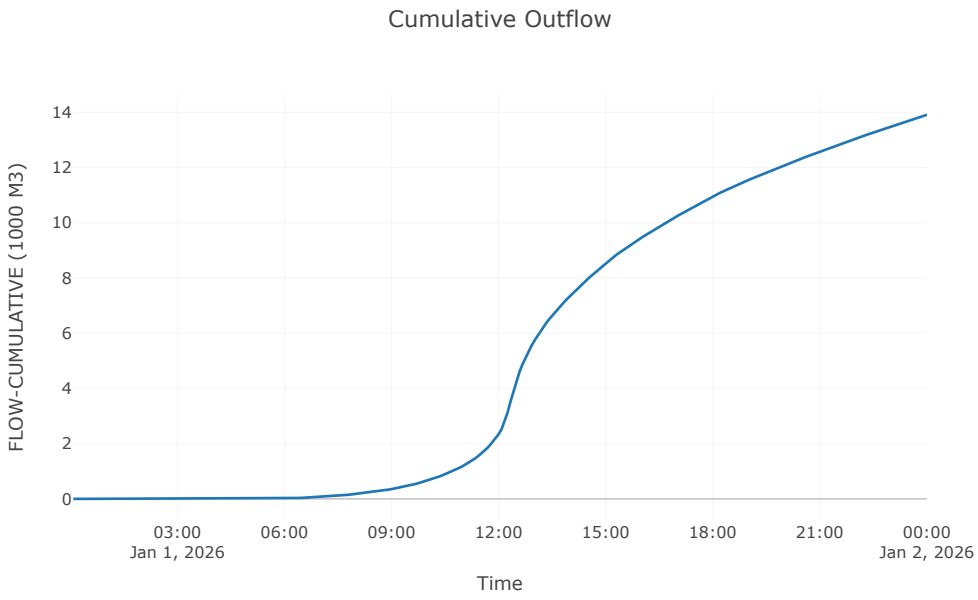
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	75.2
Initial Abstraction	4.19

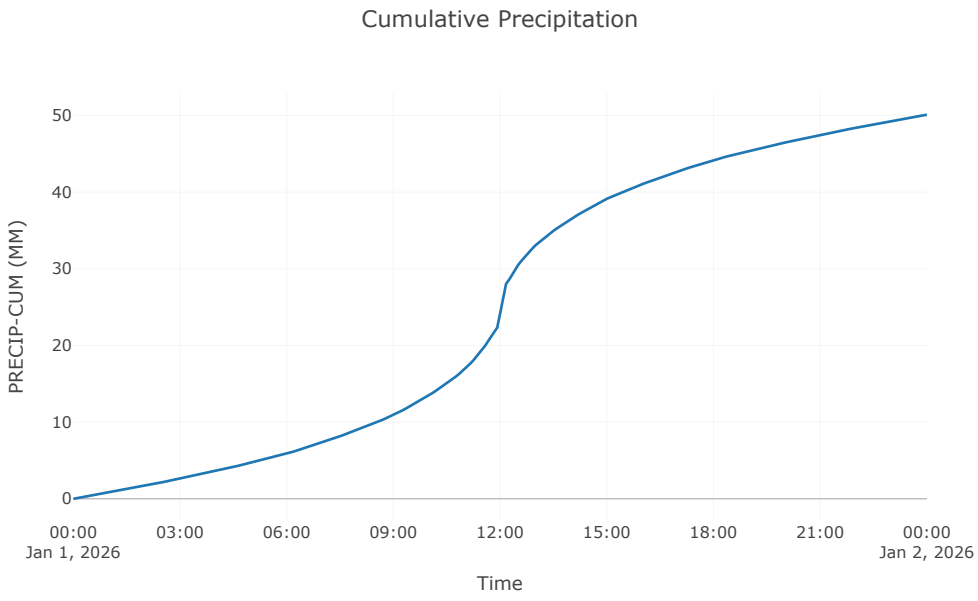
Transform: Scs	
Lag	15.18
Unitgraph Type	Standard

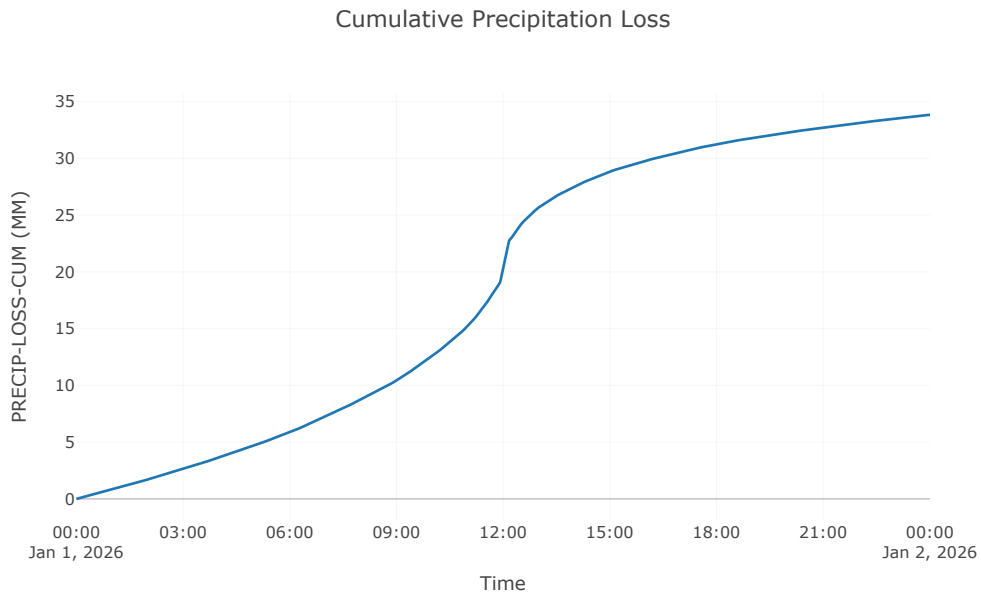
Results: DIFFERENCE POND 1 UPSTREAM	
Peak Discharge (M3/S)	1.38
Time of Peak Discharge	01Jan2026, 12:20
Volume (MM)	16.09
Precipitation Volume (M3)	43311.45
Loss Volume (M3)	29260.03
Excess Volume (M3)	14051.42
Direct Runoff Volume (M3)	13911.93
Baseflow Volume (M3)	0

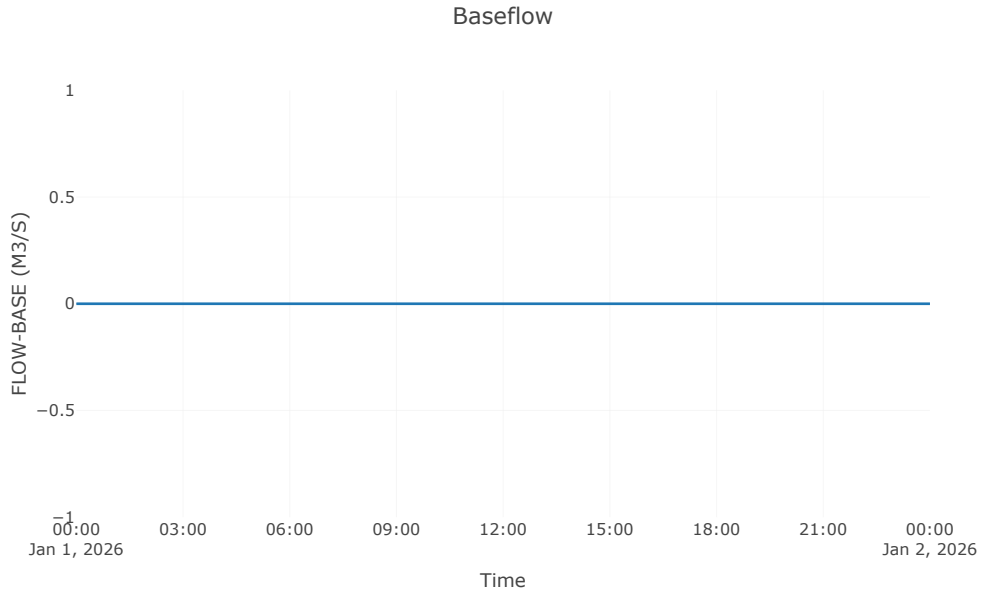

Precipitation and Outflow
PRECIP-INC (MM)
0
0.5
1
1.5
2
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

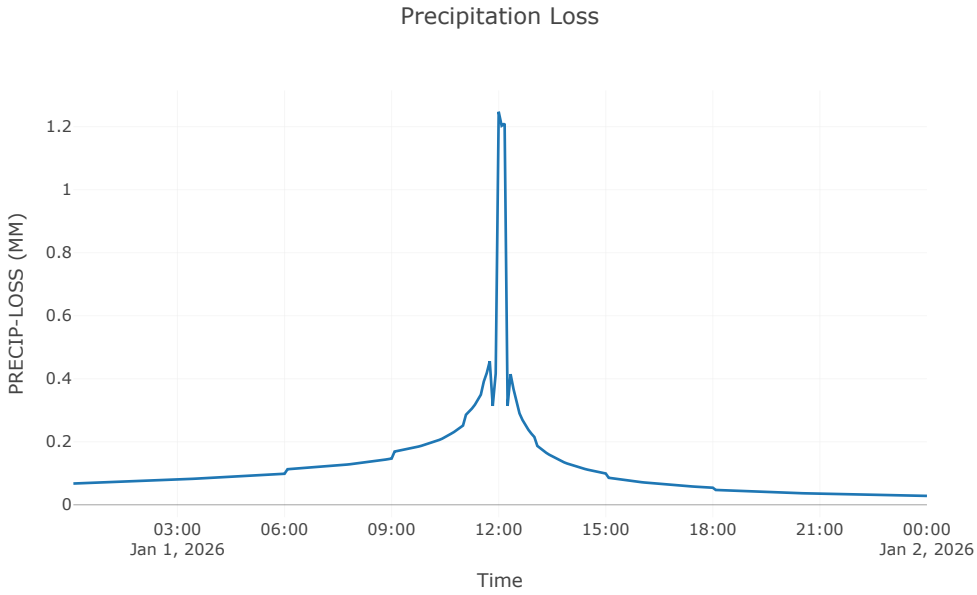

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

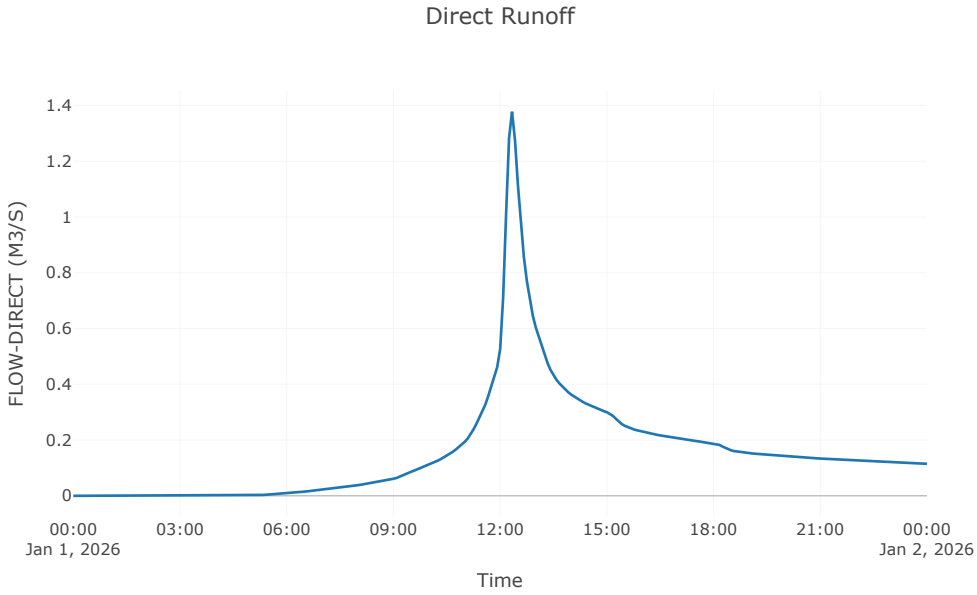

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
14
12
10
8
6
4
2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

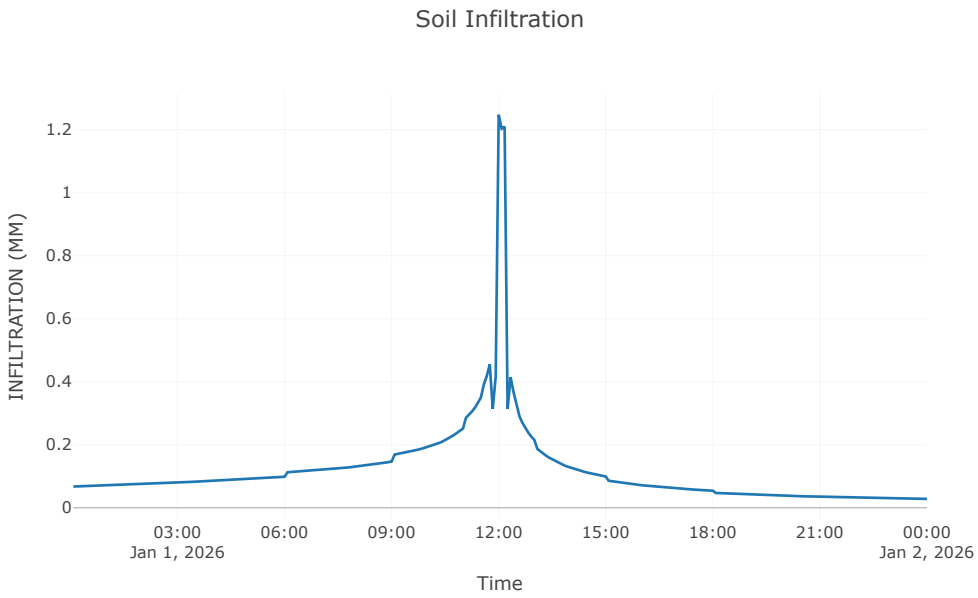

Cumulative Precipitation
PRECIP-CUM (MM)
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
35
30
25
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
1.2
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
1.2
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

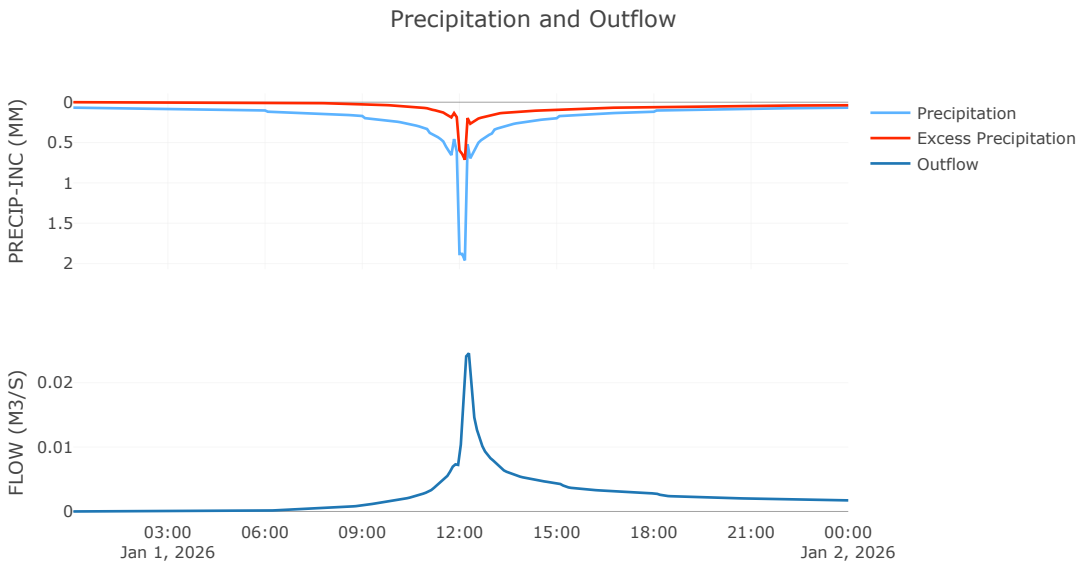
Subbasin: DIFFERENCE POND 1 UPSTREAM S

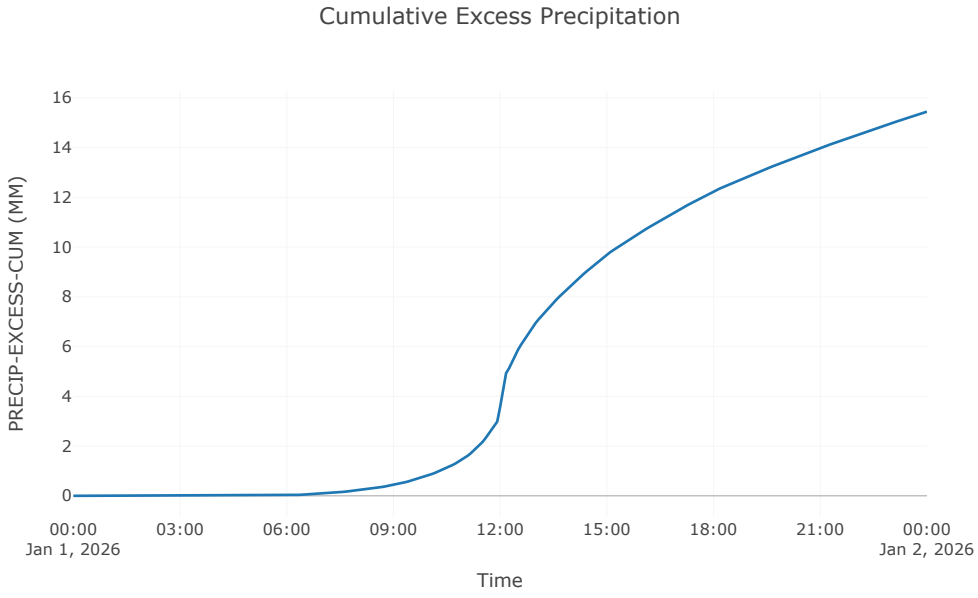
Area (KM2) : 0.01
Latitude Degrees : -44.99
Longitude Degrees : 168.85
Downstream : Junction - POND 1

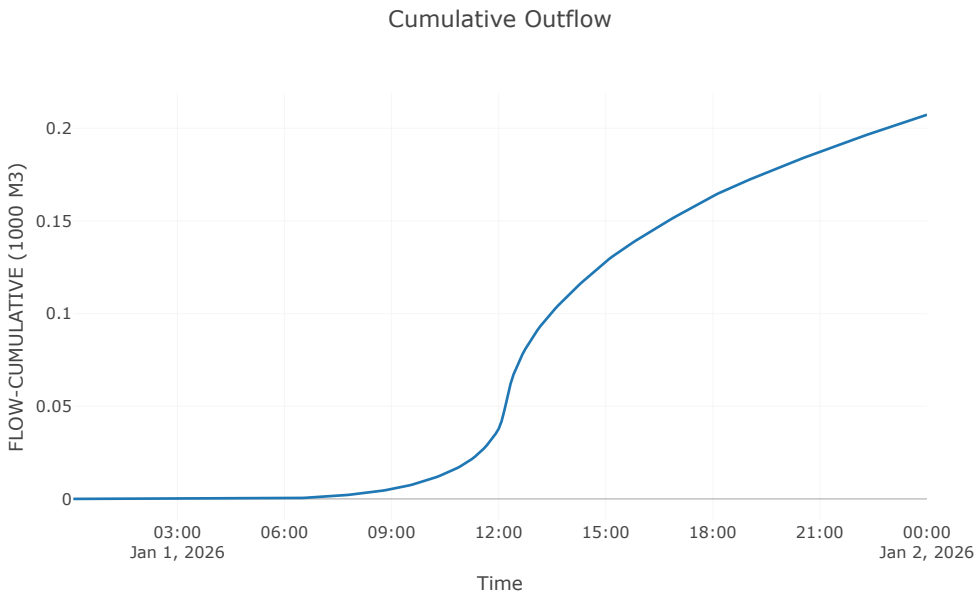
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	74
Initial Abstraction	4.46

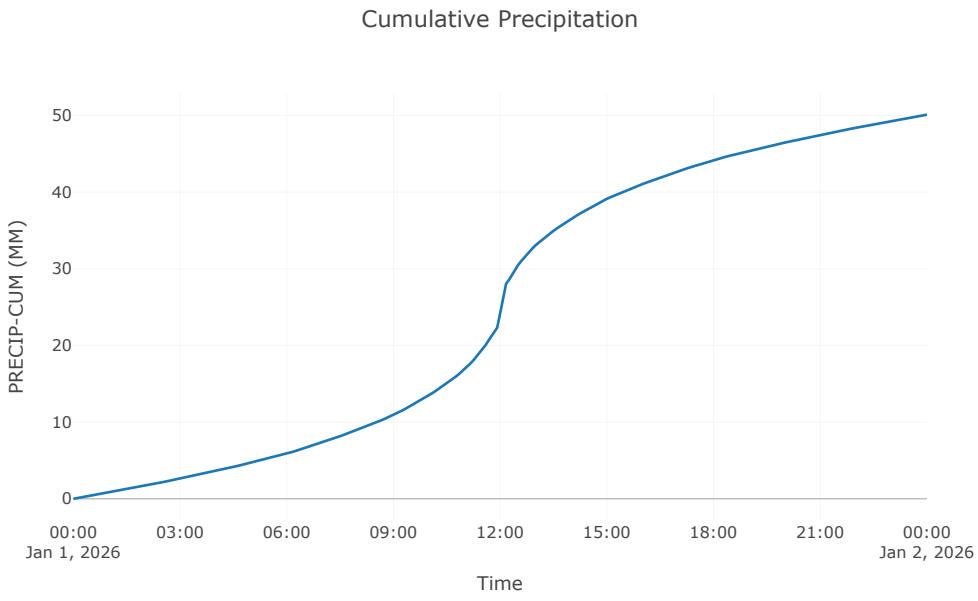
Transform: Scs	
Lag	8.07
Unitgraph Type	Standard

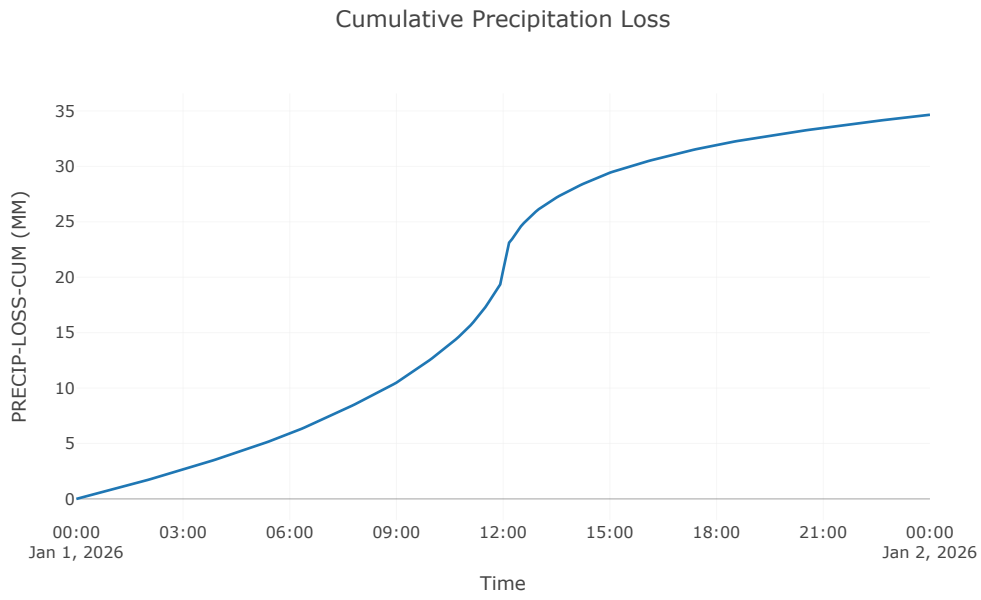
Results: DIFFERENCE POND 1 UPSTREAM S	
Peak Discharge (M3/S)	0.02
Time of Peak Discharge	01Jan2026, 12:15
Volume (MM)	15.36
Precipitation Volume (M3)	676.35
Loss Volume (M3)	467.87
Excess Volume (M3)	208.48
Direct Runoff Volume (M3)	207.32
Baseflow Volume (M3)	0

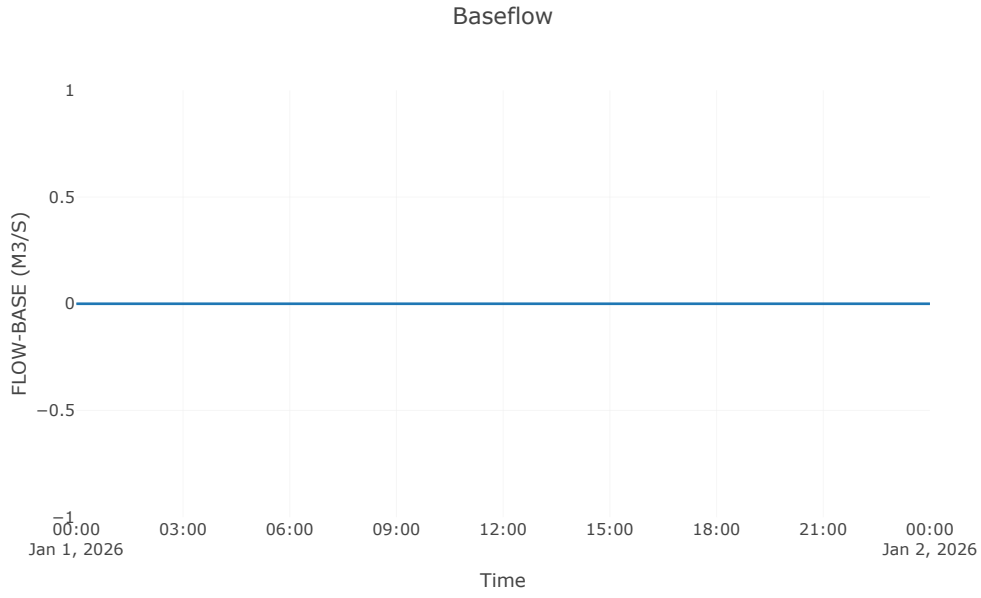

Precipitation and Outflow
PRECIP-INC (MM)
0
0.5
1
1.5
2
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
0.02
0.01
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

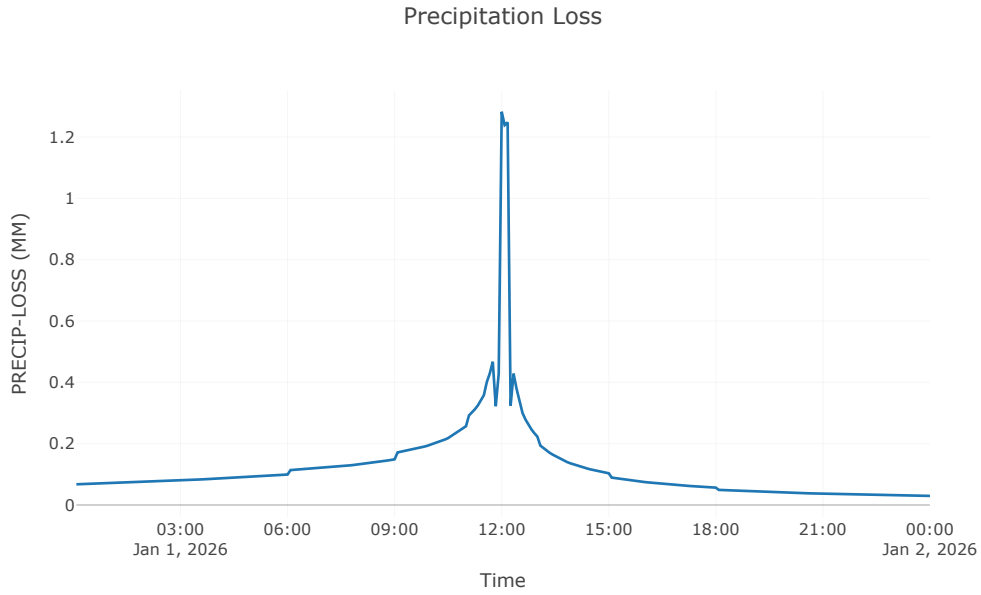

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
16
14
12
10
8
6
4
2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

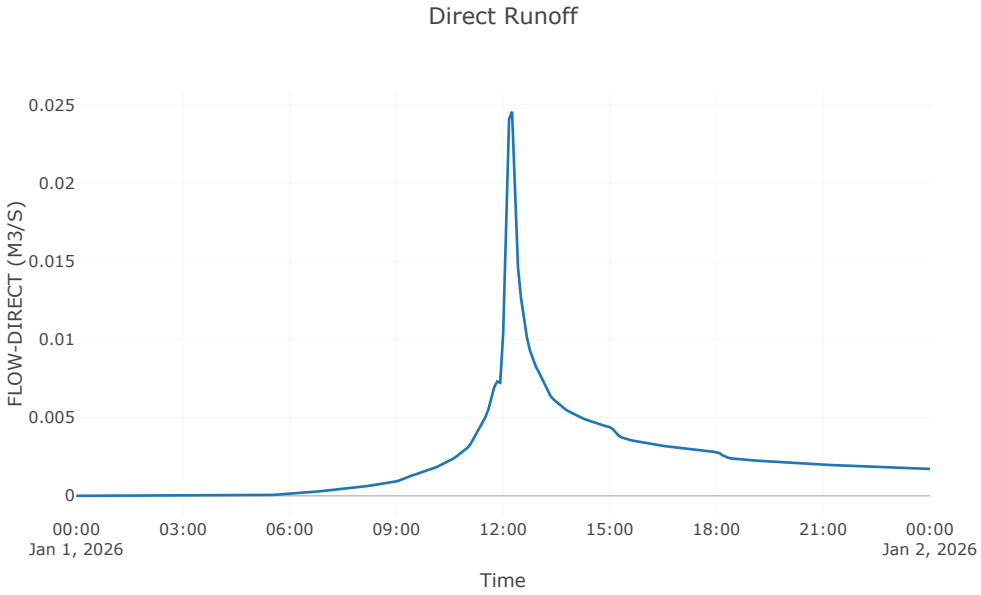

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
0.2
0.15
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

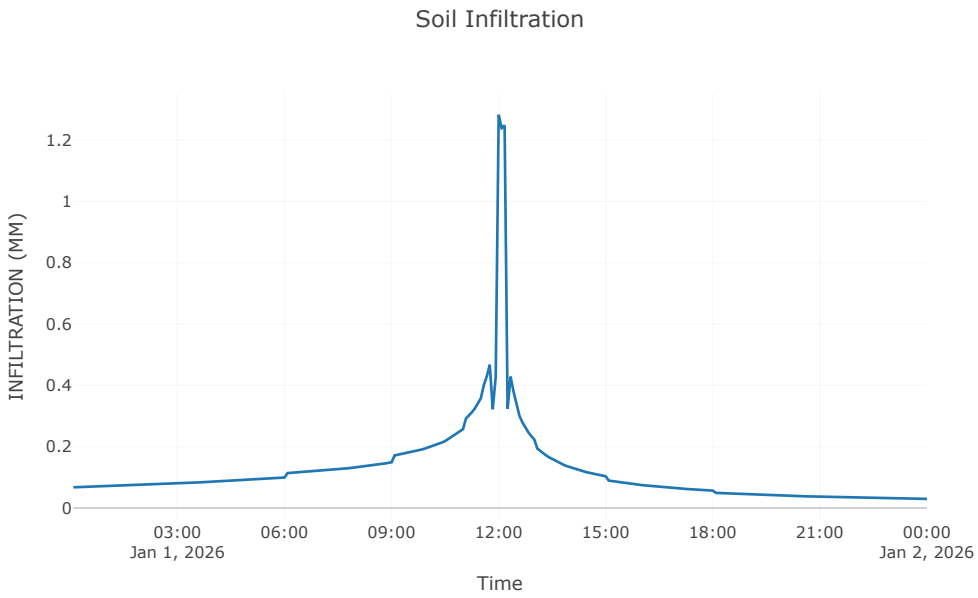

Cumulative Precipitation
PRECIP-CUM (MM)
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
35
30
25
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
1.2
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
0.025
0.02
0.015
0.01
0.005
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
1.2
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

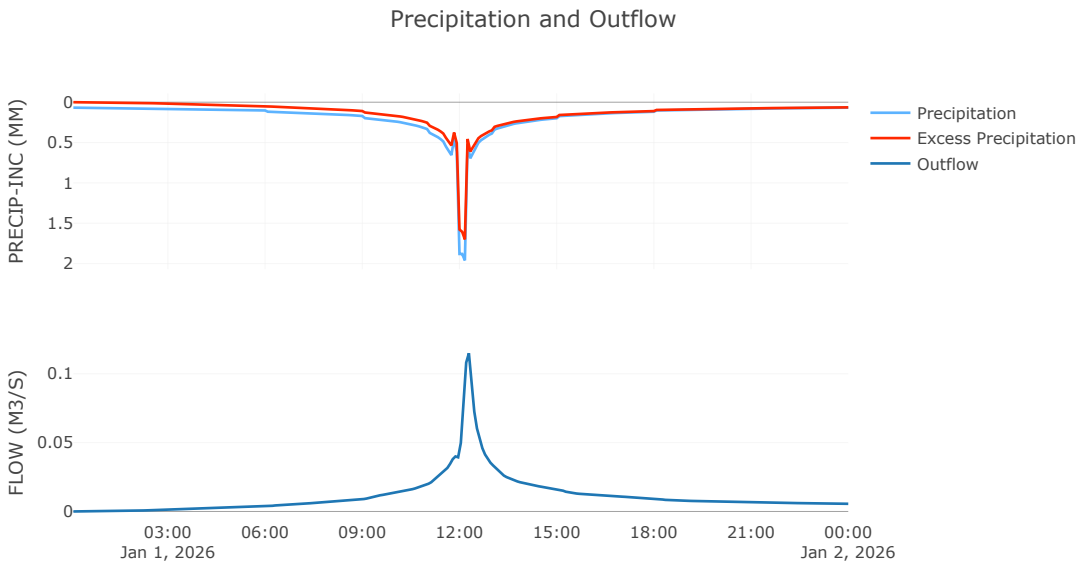
Subbasin: DIFFERENCE POND 2 INTERNAL

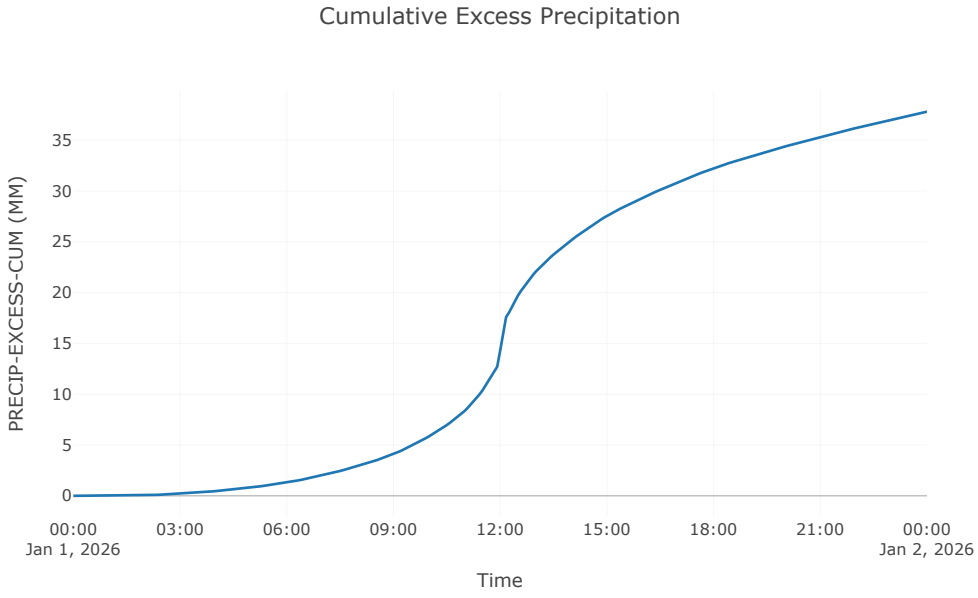
Area (KM2) : 0.03
Latitude Degrees : -44.99
Longitude Degrees : 168.85
Downstream : Junction - POND 2

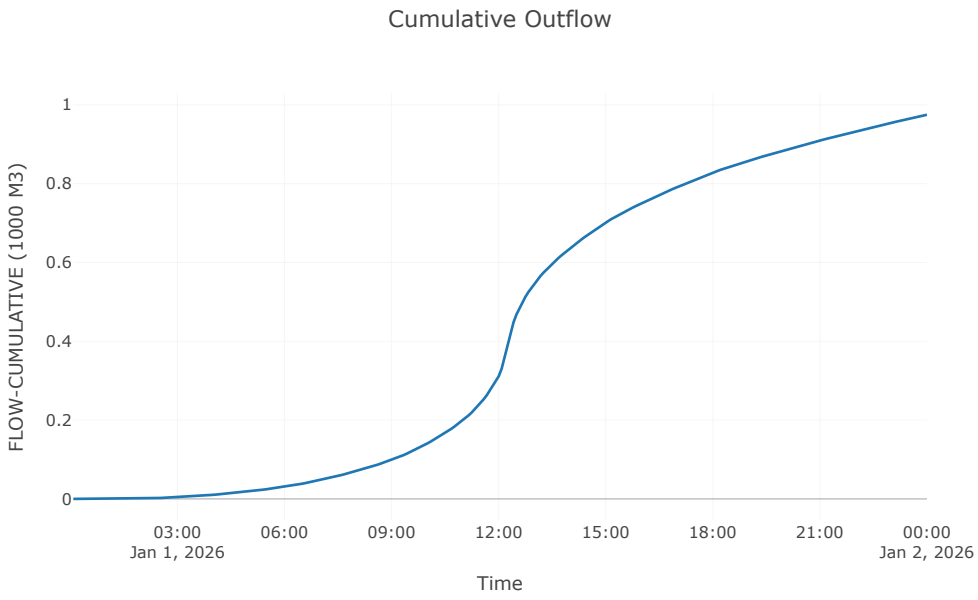
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	94.4
Initial Abstraction	0.75

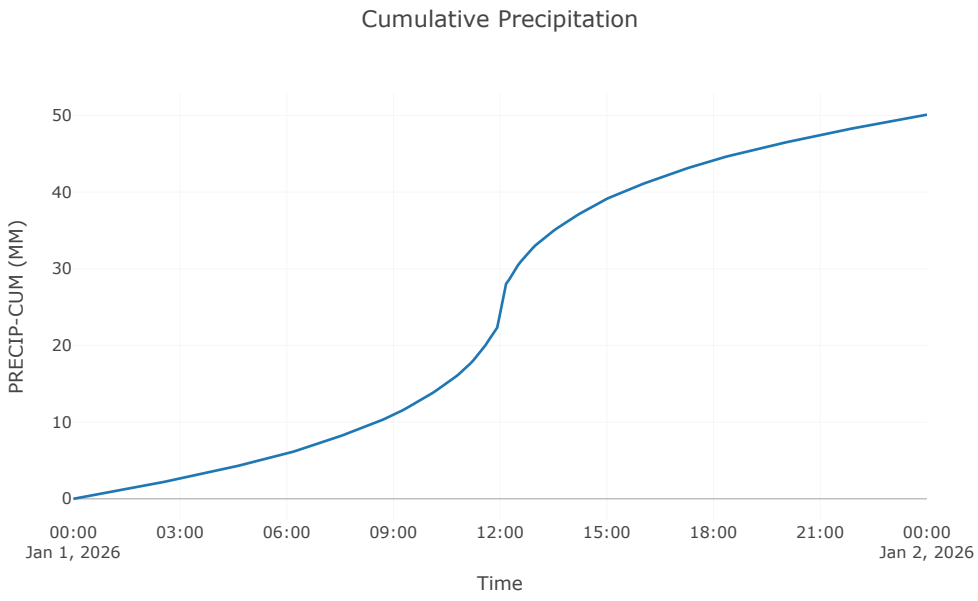
Transform: Scs	
Lag	9.53
Unitgraph Type	Standard

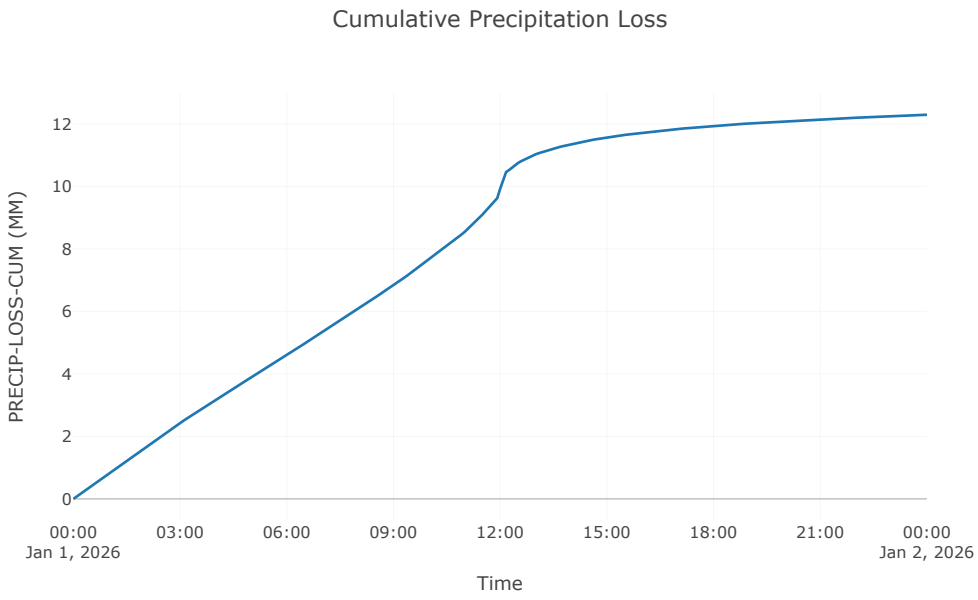
Results: DIFFERENCE POND 2 INTERNAL	
Peak Discharge (M3/S)	0.11
Time of Peak Discharge	01Jan2026, 12:15
Volume (MM)	37.64
Precipitation Volume (M3)	1297.59
Loss Volume (M3)	318.4
Excess Volume (M3)	979.19
Direct Runoff Volume (M3)	974.84
Baseflow Volume (M3)	0

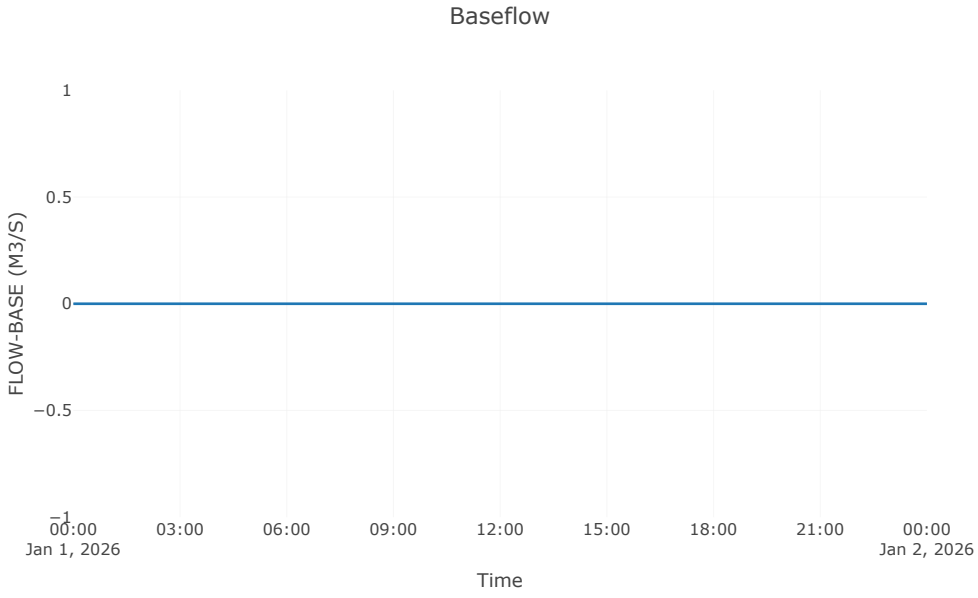

Precipitation and Outflow
PRECIP-INC (MM)
0
0.5
1
1.5
2
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

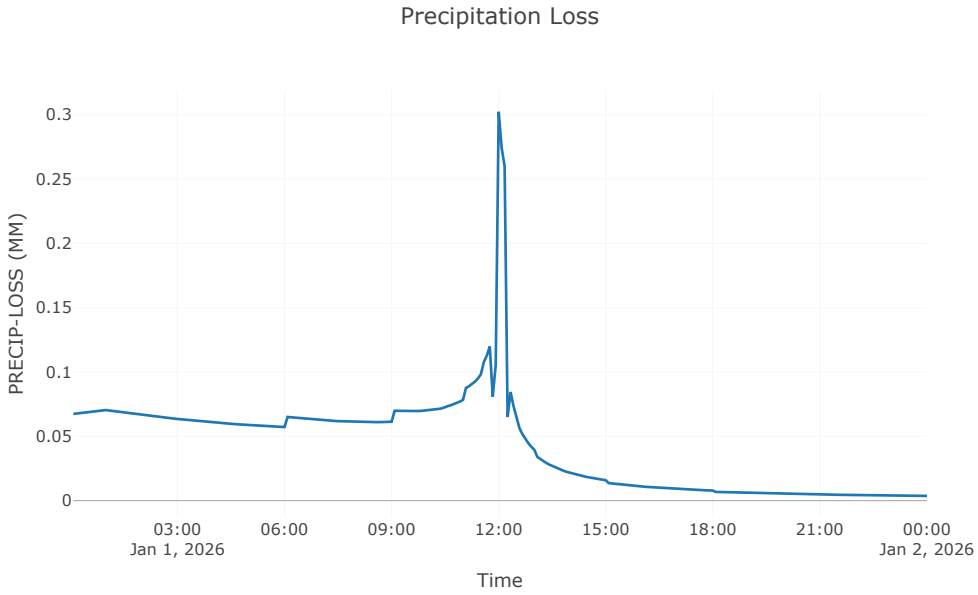

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
35
30
25
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

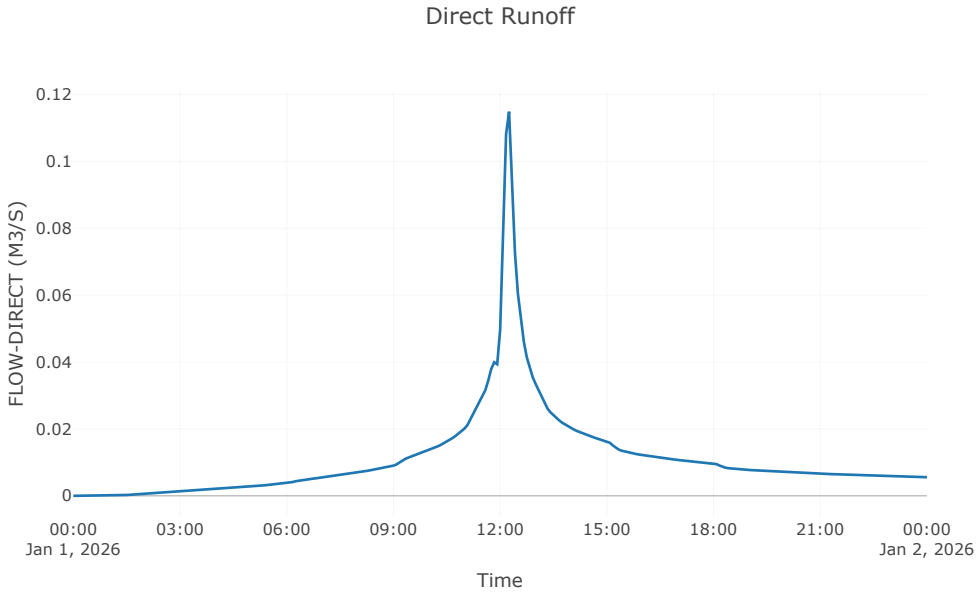

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

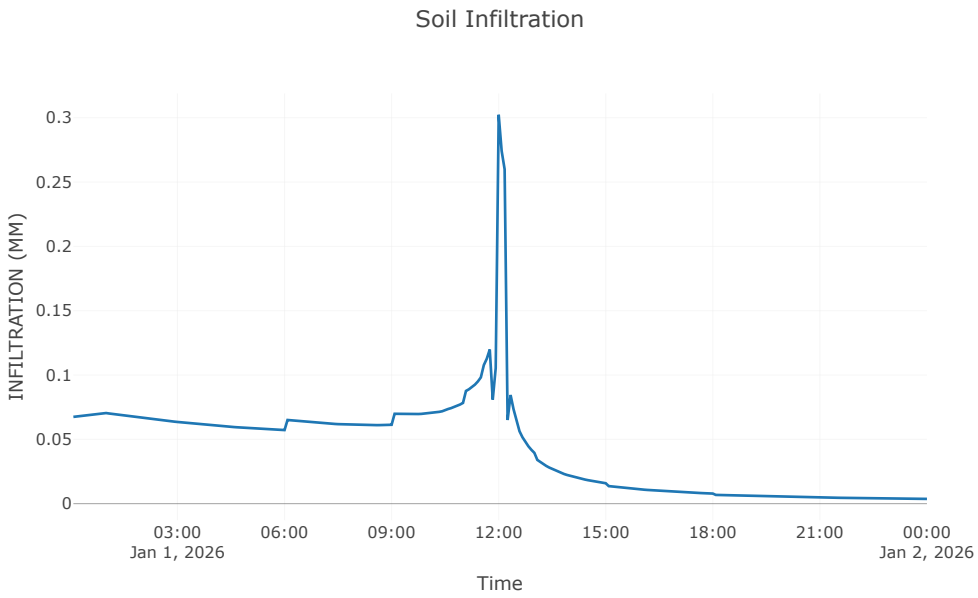

Cumulative Precipitation
PRECIP-CUM (MM)
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
12
10
8
6
4
2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
0.3
0.25
0.2
0.15
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
0.12
0.1
0.08
0.06
0.04
0.02
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
0.3
0.25
0.2
0.15
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

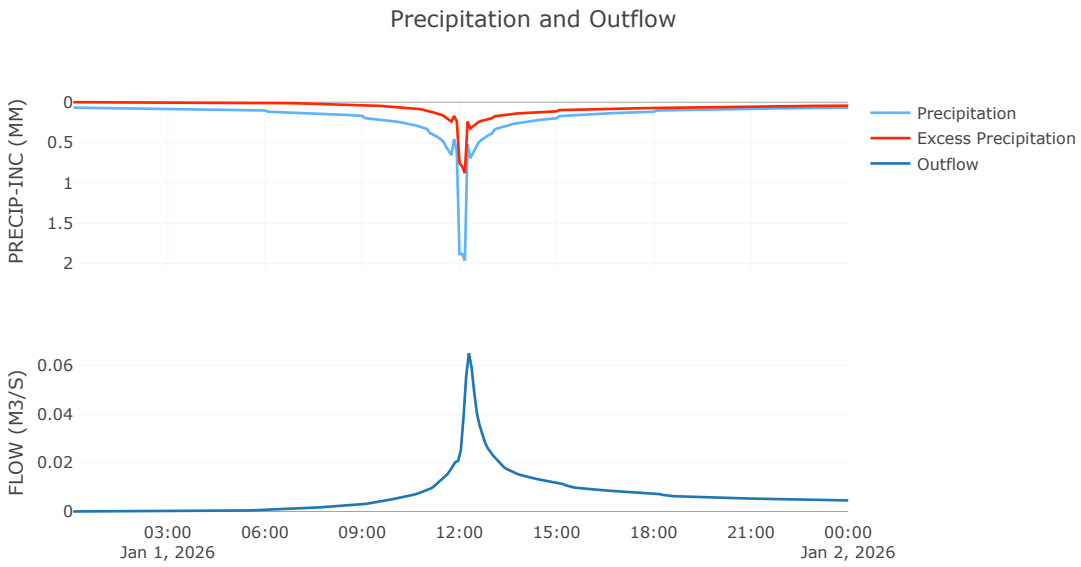
Subbasin: DIFFERENCE POND 2 UPSTREAM

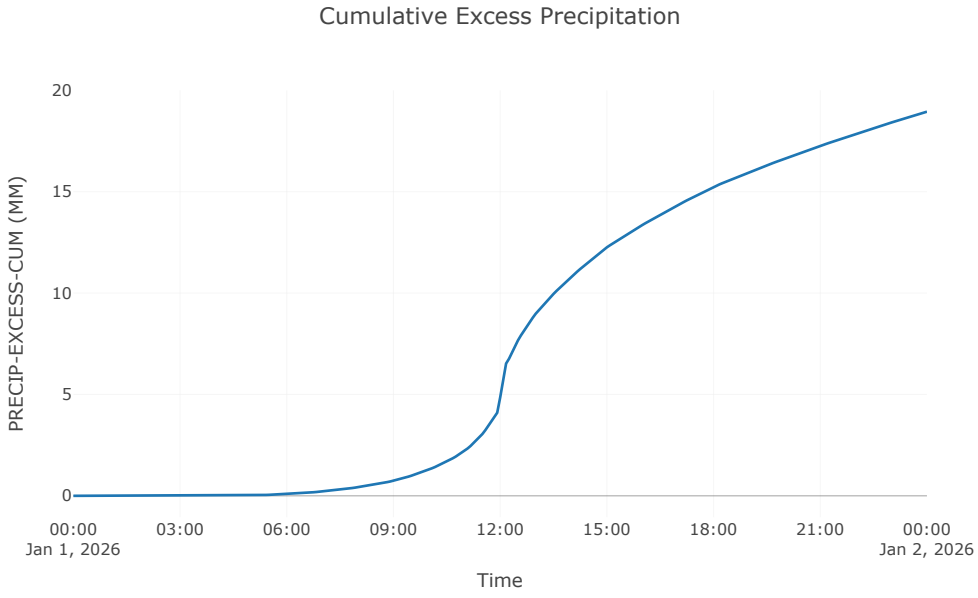
Area (KM2) : 0.03
Latitude Degrees : -44.99
Longitude Degrees : 168.85
Downstream : Pond 3 drybasin

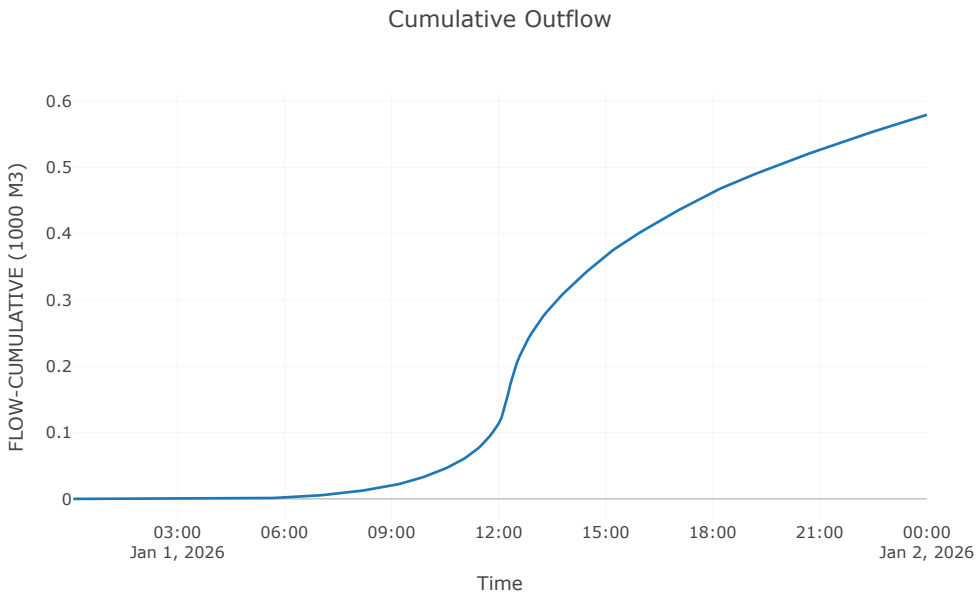
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	78.8
Initial Abstraction	3.42

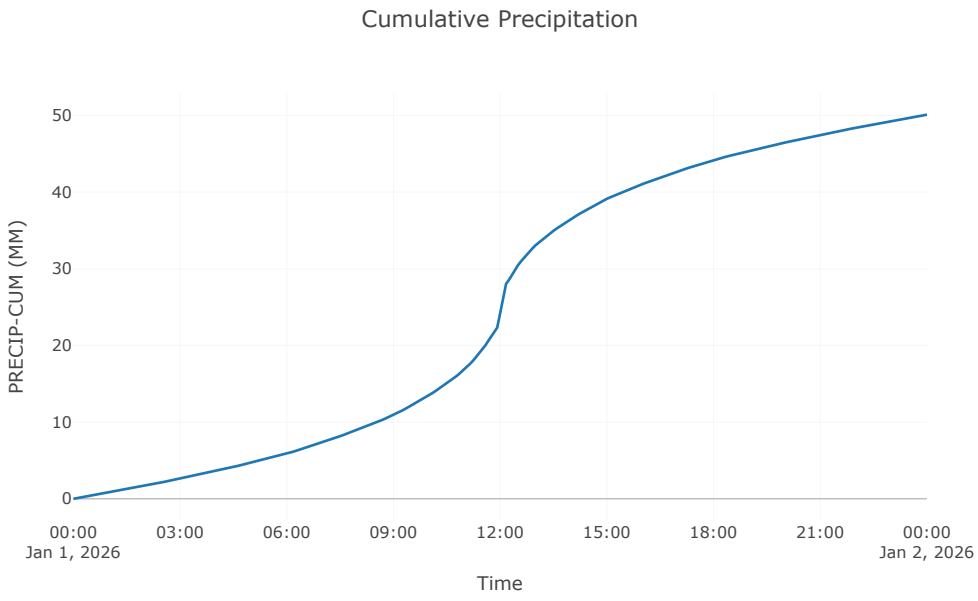
Transform: Scs	
Lag	11.22
Unitgraph Type	Standard

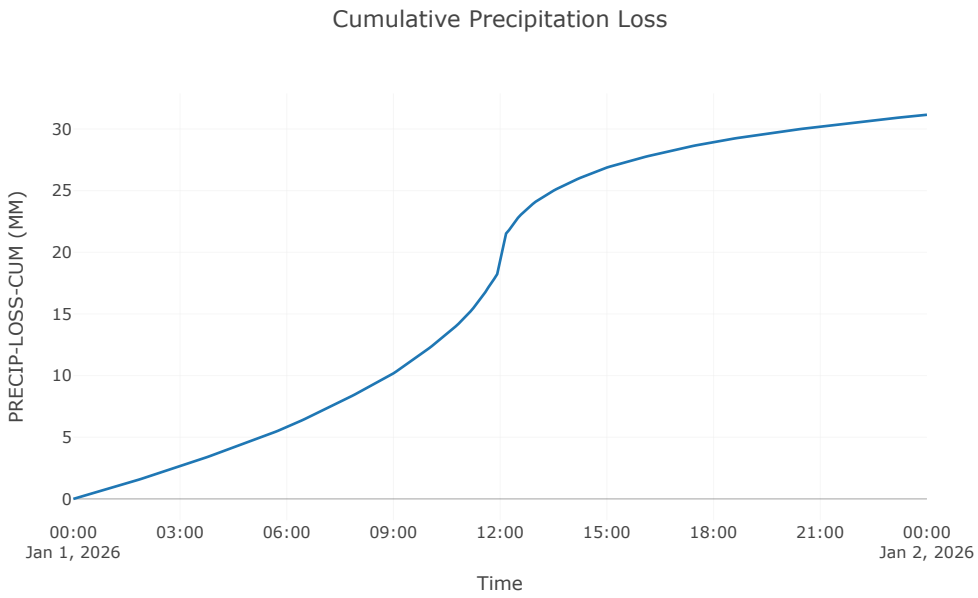
Results: DIFFERENCE POND 2 UPSTREAM	
Peak Discharge (M3/S)	0.07
Time of Peak Discharge	01Jan2026, 12:15
Volume (MM)	18.81
Precipitation Volume (M3)	1543.08
Loss Volume (M3)	959.56
Excess Volume (M3)	583.52
Direct Runoff Volume (M3)	579.39
Baseflow Volume (M3)	0

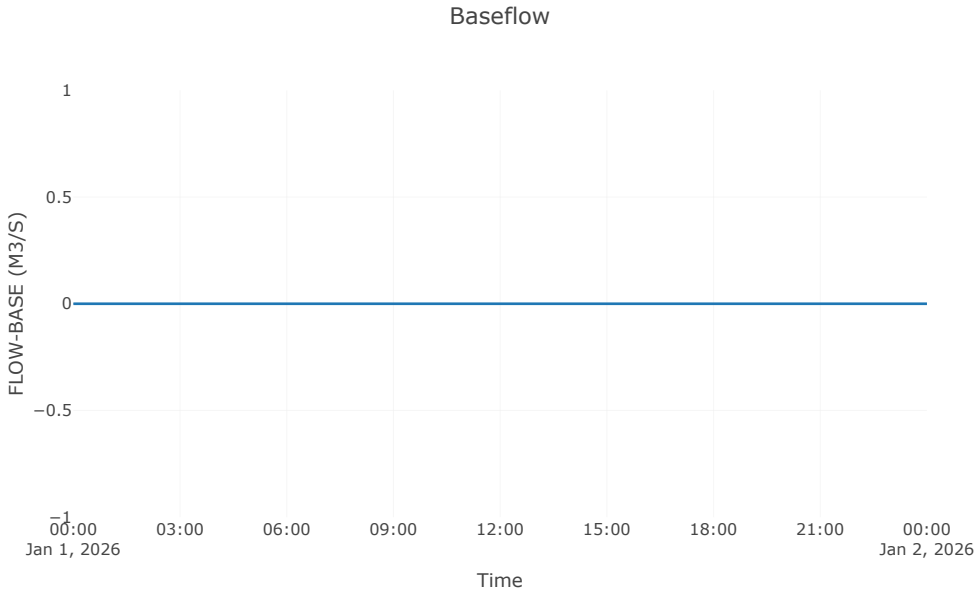

Precipitation and Outflow
PRECIP-INC (MM)
0
0.5
1
1.5
2
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
0.06
0.04
0.02
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

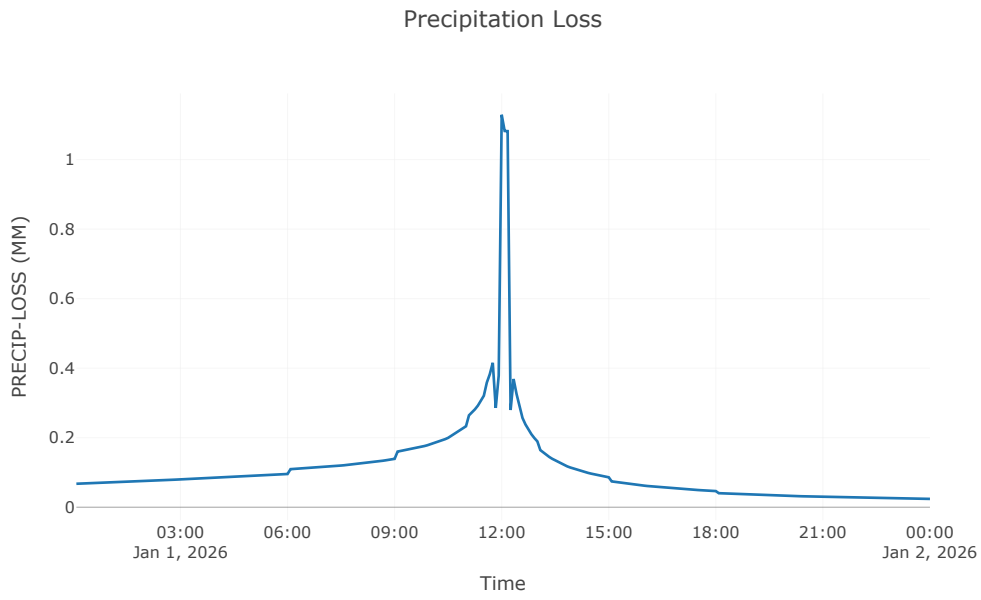

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

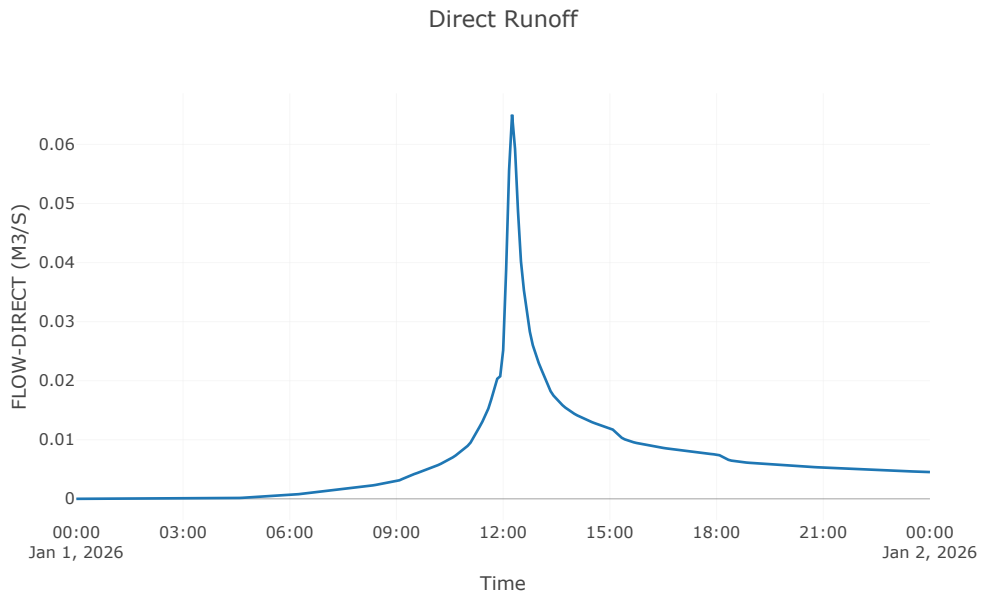

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
0.6
0.5
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

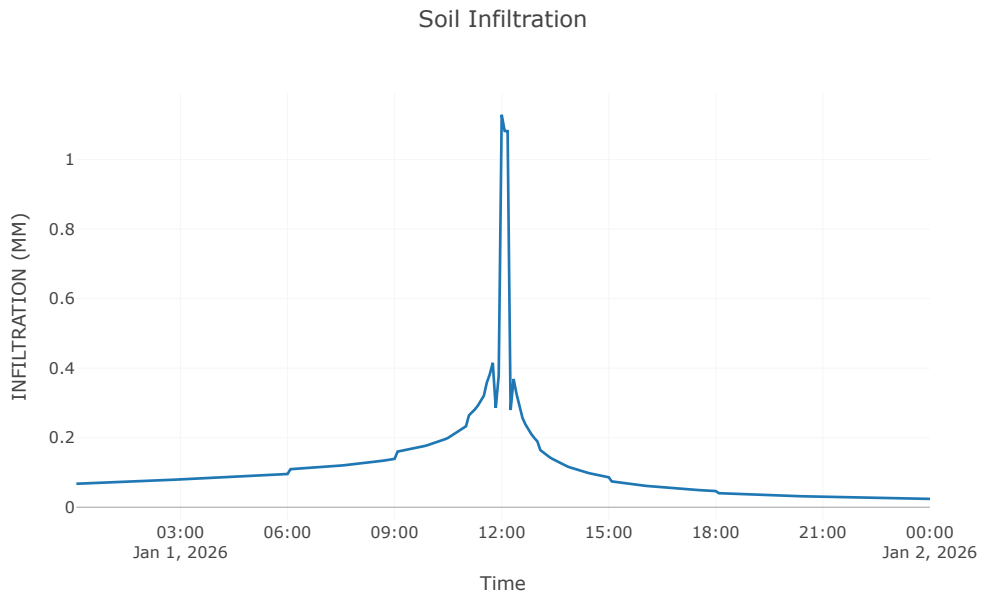

Cumulative Precipitation
PRECIP-CUM (MM)
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
30
25
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
0.06
0.05
0.04
0.03
0.02
0.01
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

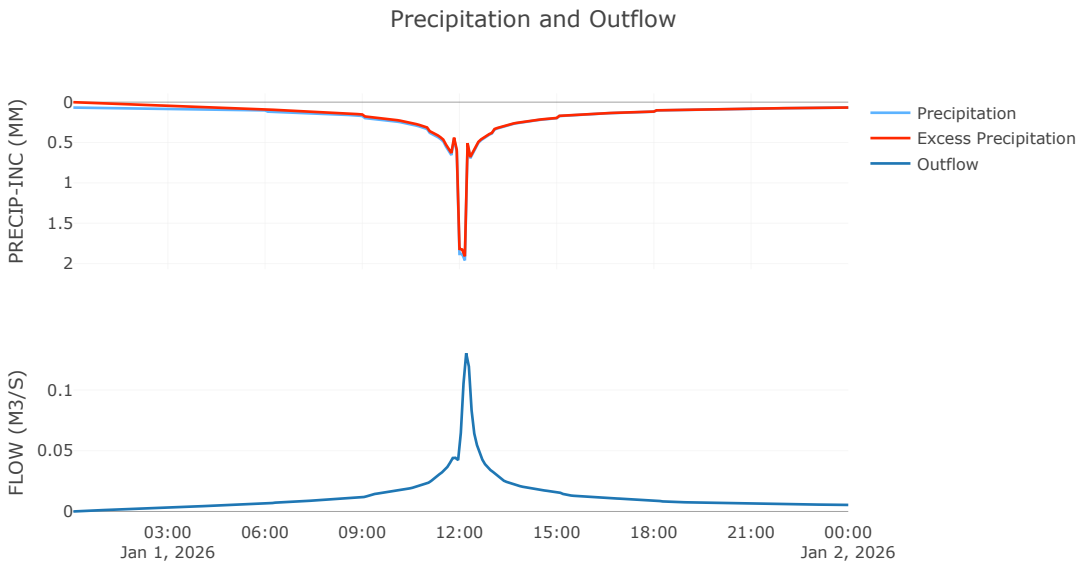
Subbasin: DIFFERENCE POND 2 SOUTH

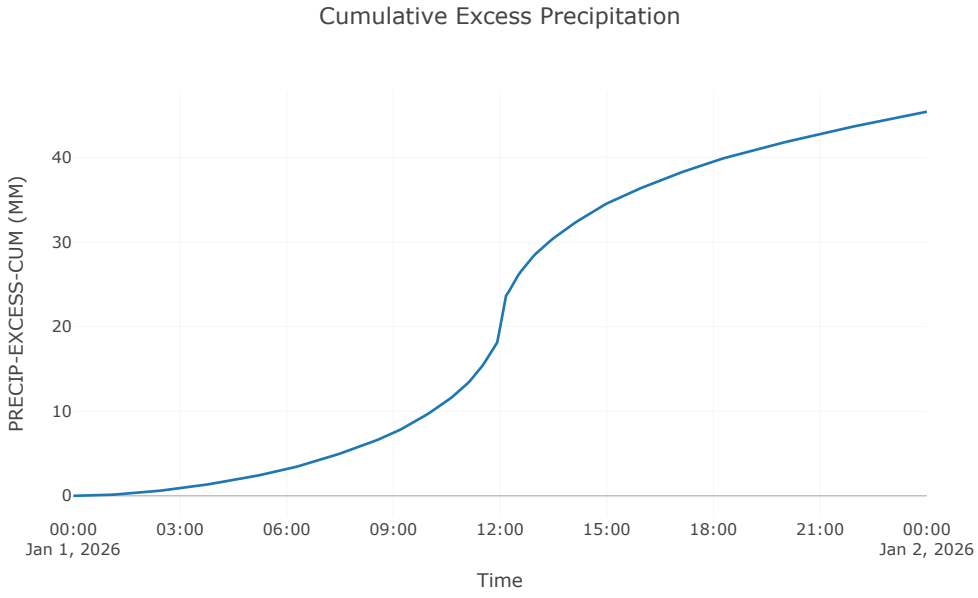
Area (KM2) : 0.02
Latitude Degrees : -44.99
Longitude Degrees : 168.85
Downstream : Junction - POND 2

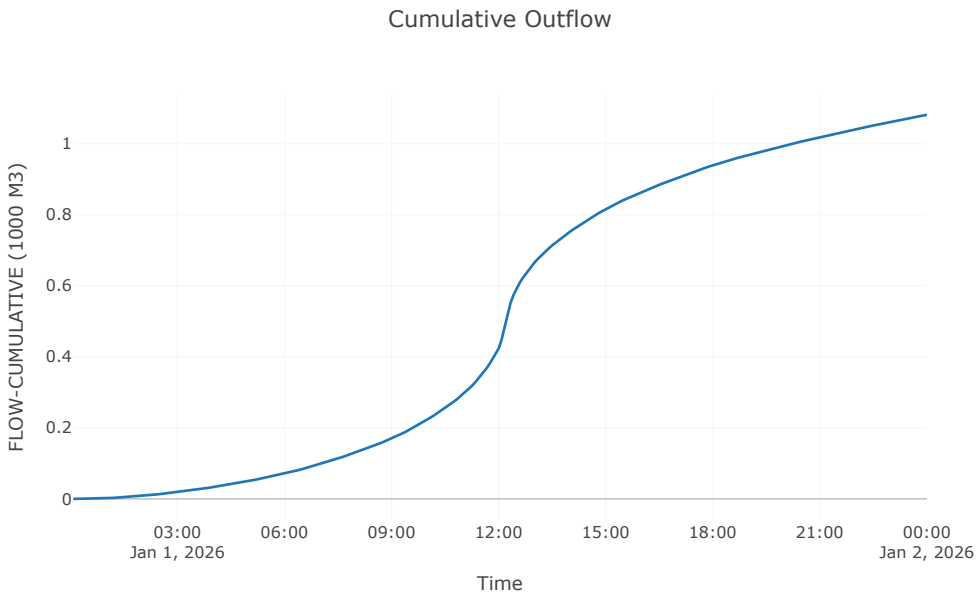
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	98
Initial Abstraction	0

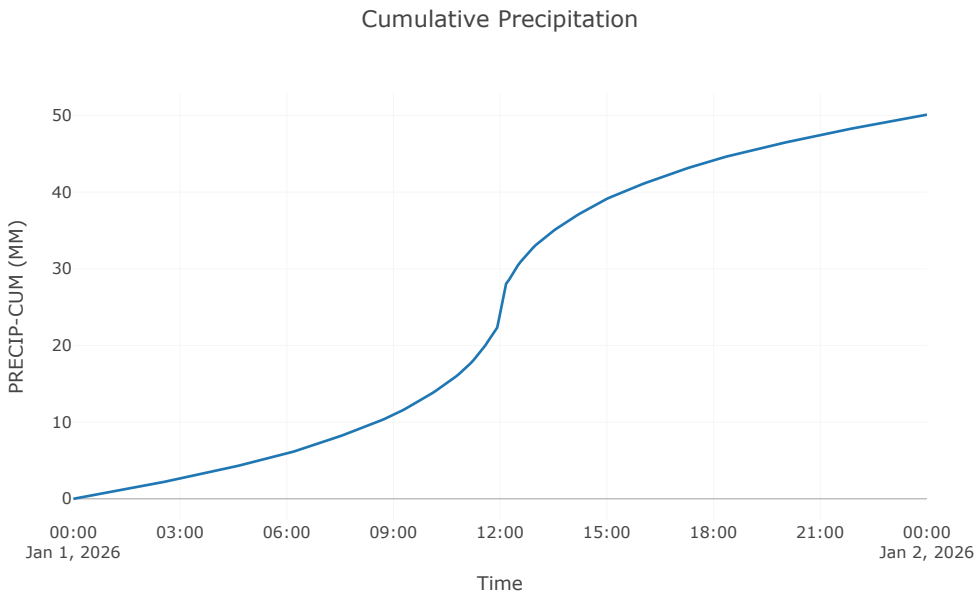
Transform: Scs	
Lag	6.97
Unitgraph Type	Standard

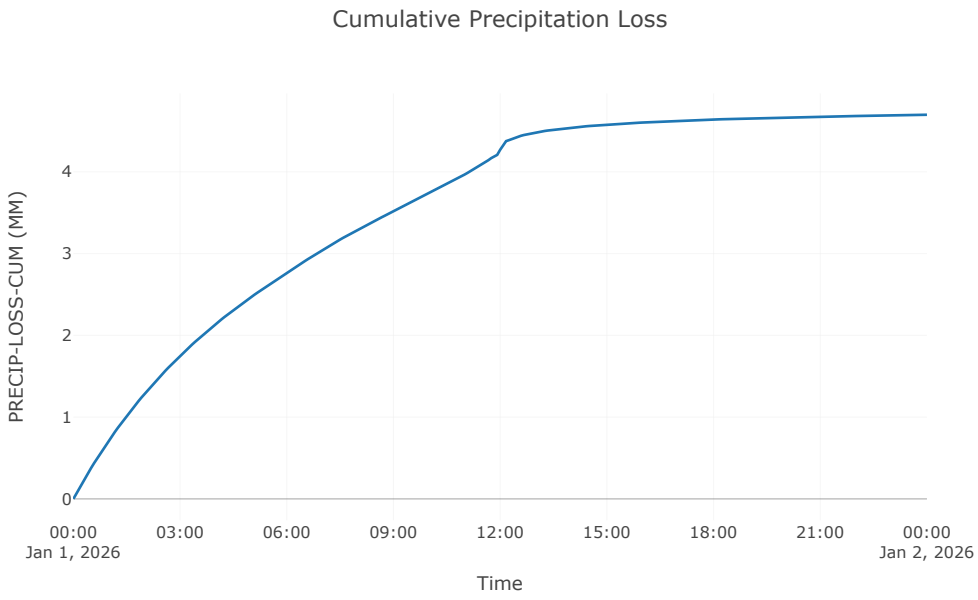
Results: DIFFERENCE POND 2 SOUTH	
Peak Discharge (M3/S)	0.13
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	45.27
Precipitation Volume (M3)	1197.39
Loss Volume (M3)	112.27
Excess Volume (M3)	1085.12
Direct Runoff Volume (M3)	1081.96
Baseflow Volume (M3)	0

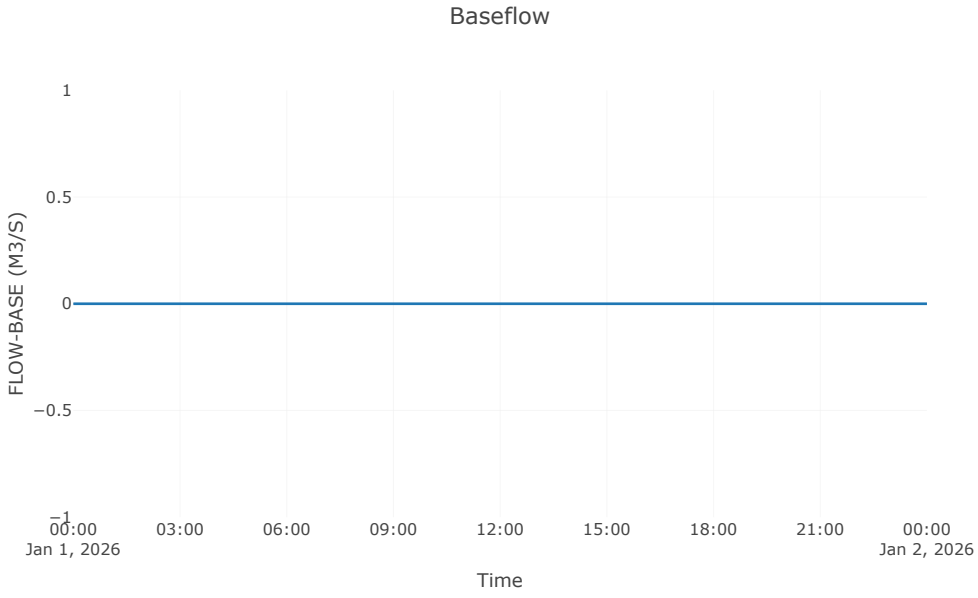

Precipitation and Outflow
PRECIP-INC (MM)
0
0.5
1
1.5
2
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

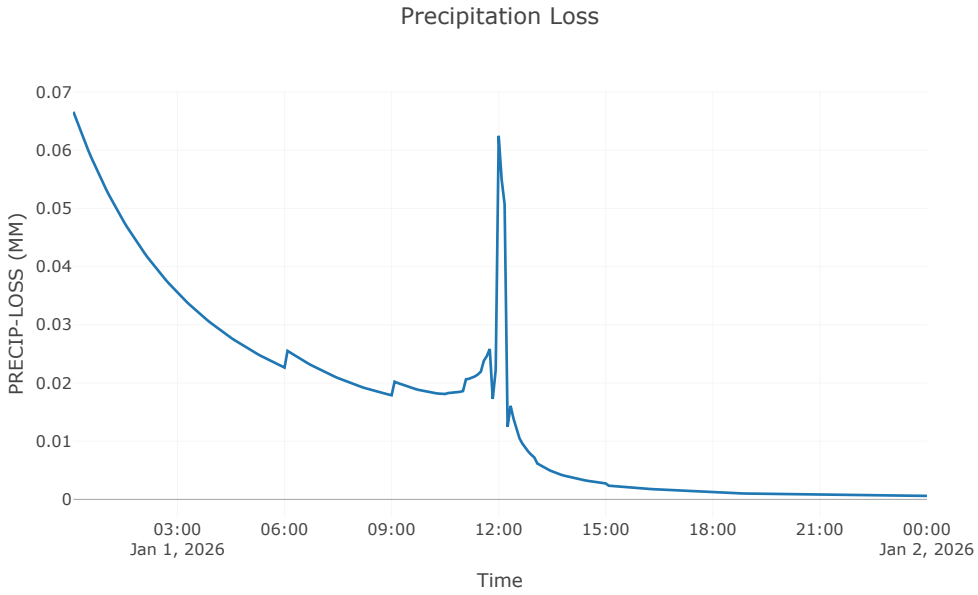

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

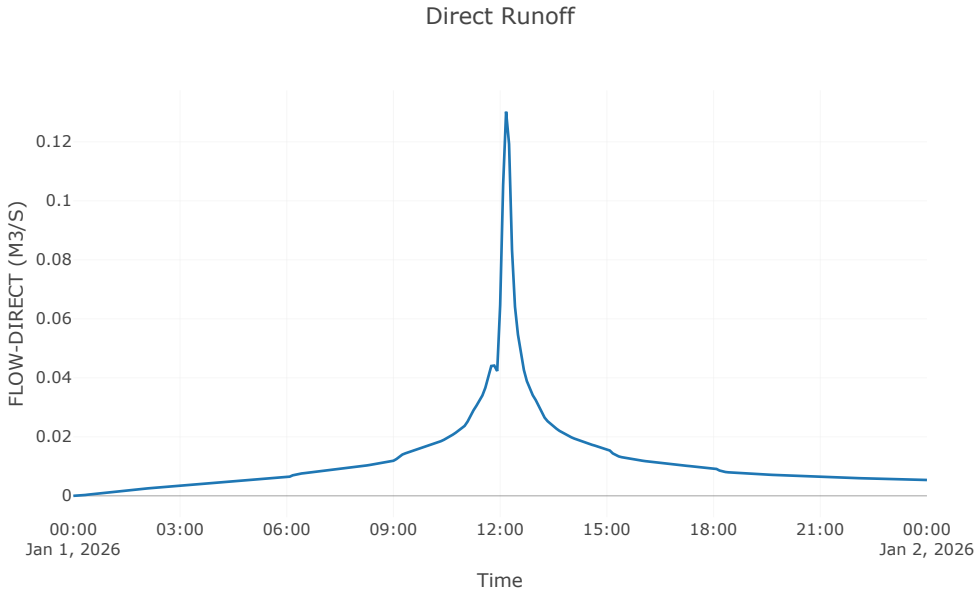

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

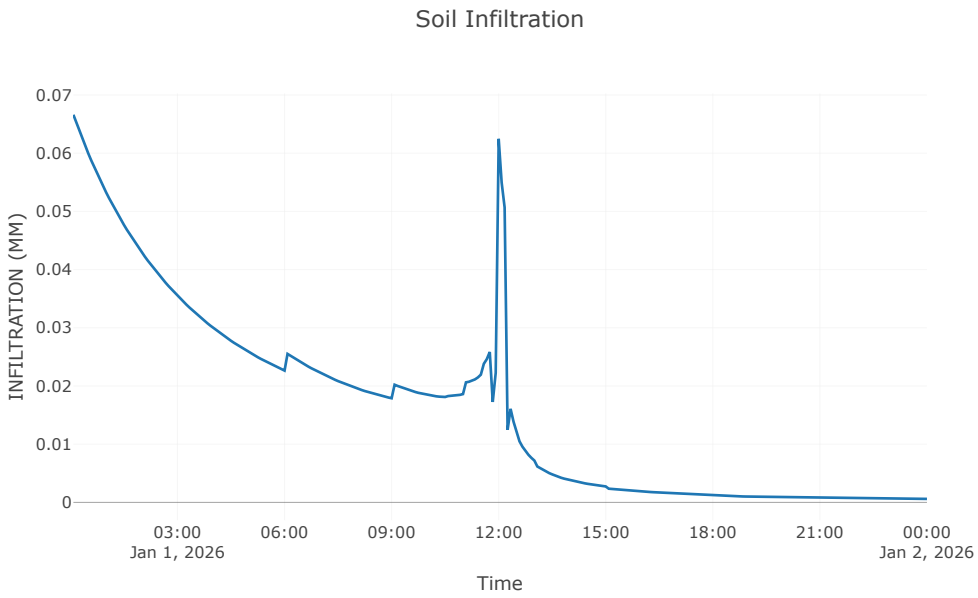

Cumulative Precipitation
PRECIP-CUM (MM)
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
4
3
2
1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
0.12
0.1
0.08
0.06
0.04
0.02
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

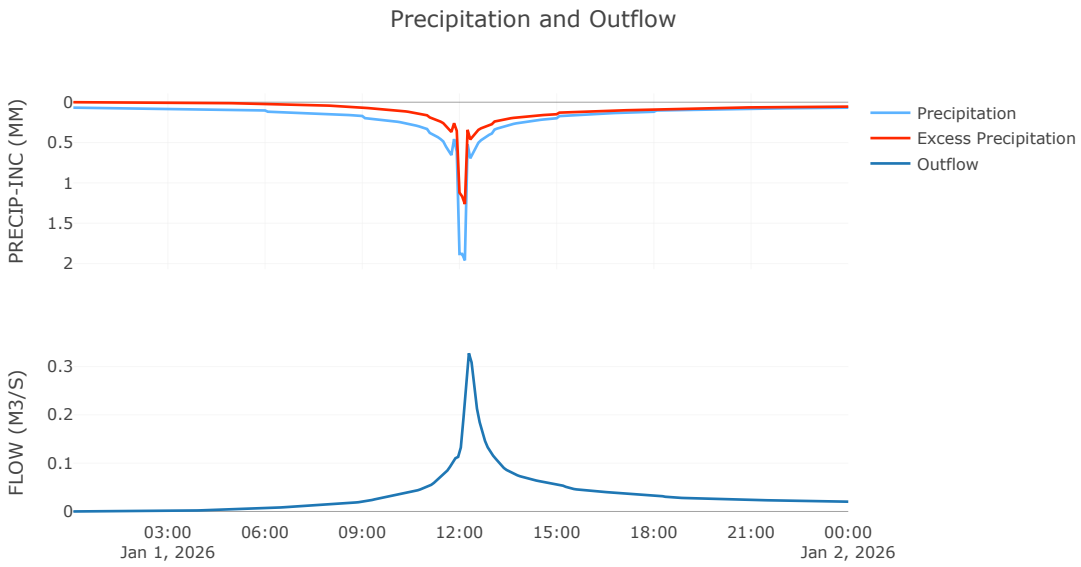
Subbasin: DIFFERENCE POND 5 INTERNAL

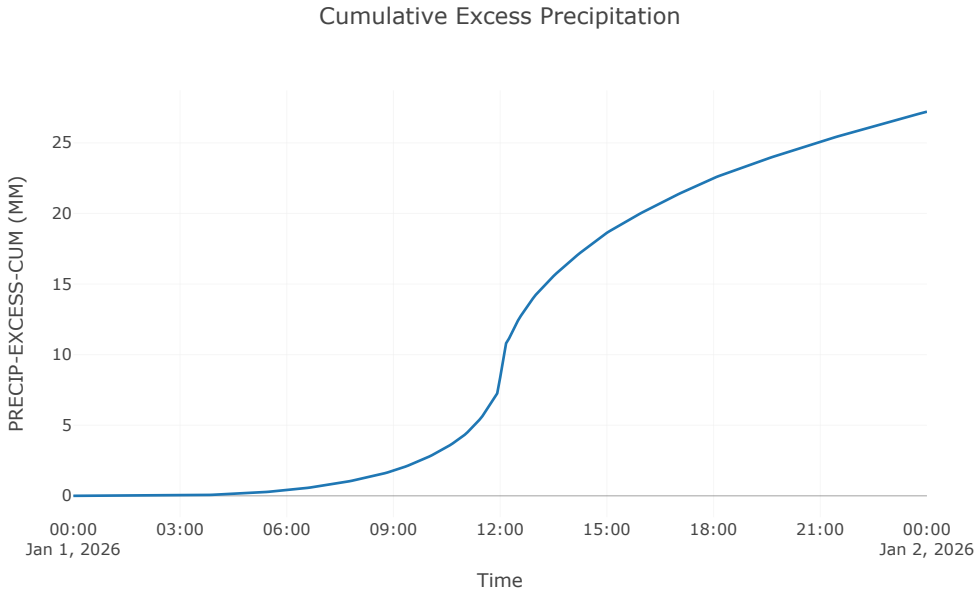
Area (KM2) : 0.11
Latitude Degrees : -45
Longitude Degrees : 168.84
Downstream : Pond 5

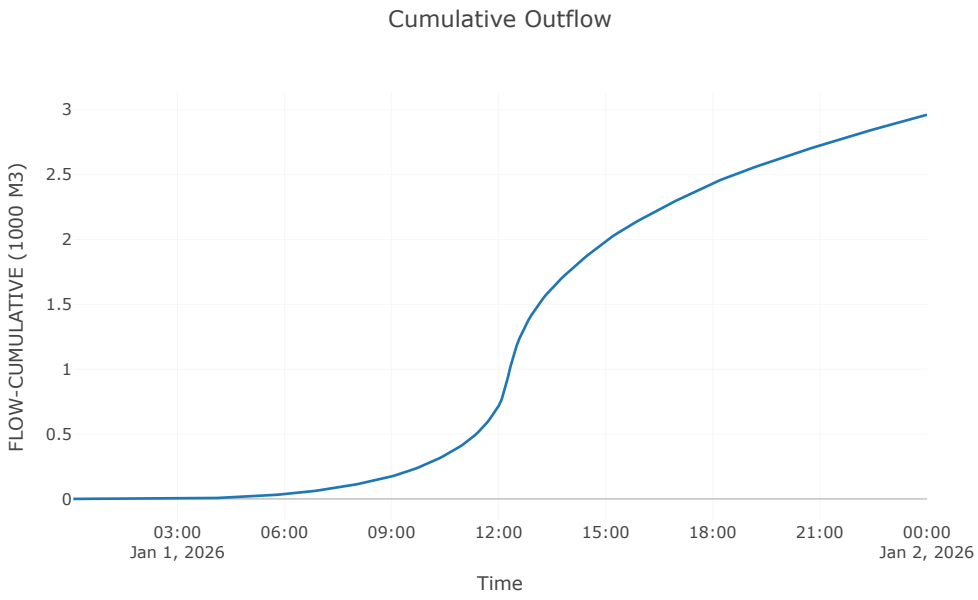
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	87.2
Initial Abstraction	1.86

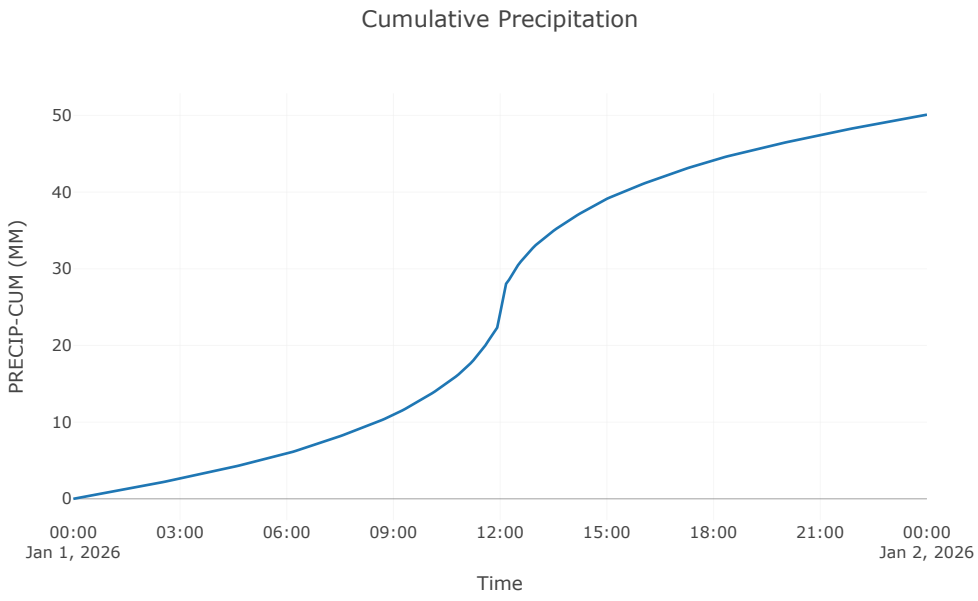
Transform: Scs	
Lag	12.18
Unitgraph Type	Standard

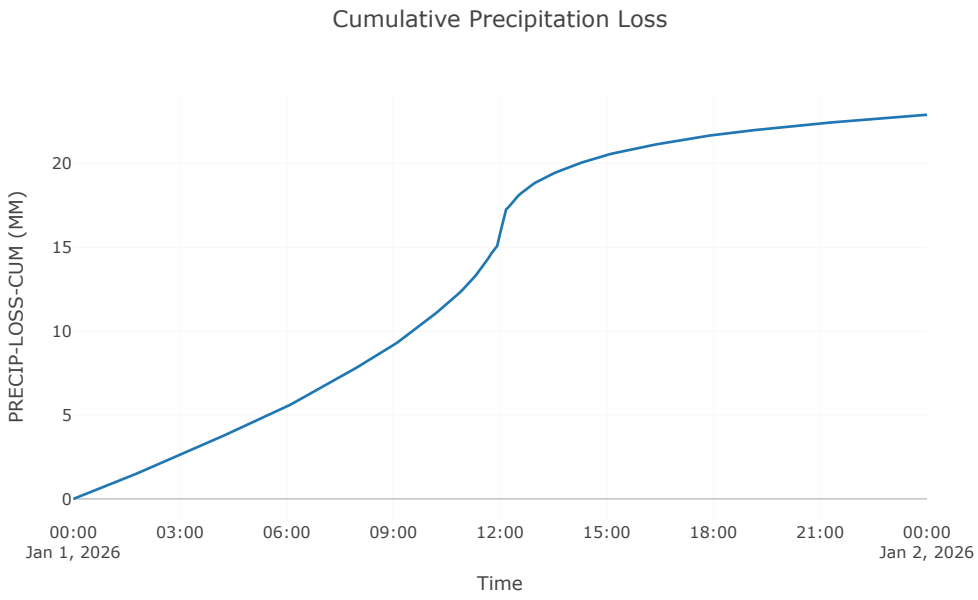
Results: DIFFERENCE POND 5 INTERNAL	
Peak Discharge (M3/S)	0.33
Time of Peak Discharge	01Jan2026, 12:15
Volume (MM)	27.03
Precipitation Volume (M3)	5490.96
Loss Volume (M3)	2508.77
Excess Volume (M3)	2982.19
Direct Runoff Volume (M3)	2962.3
Baseflow Volume (M3)	0

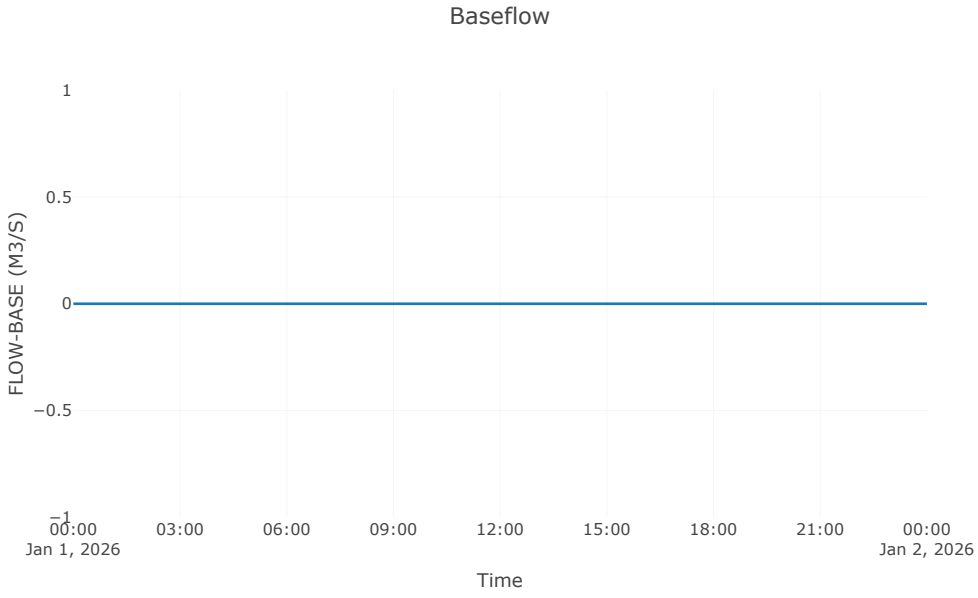

Precipitation and Outflow
PRECIP-INC (MM)
0
0.5
1
1.5
2
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

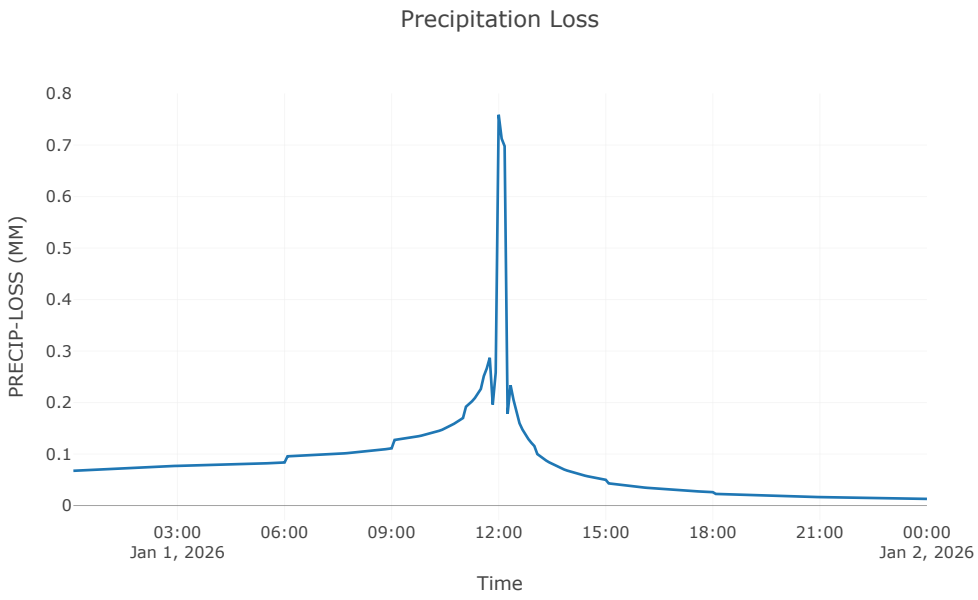

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
25
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

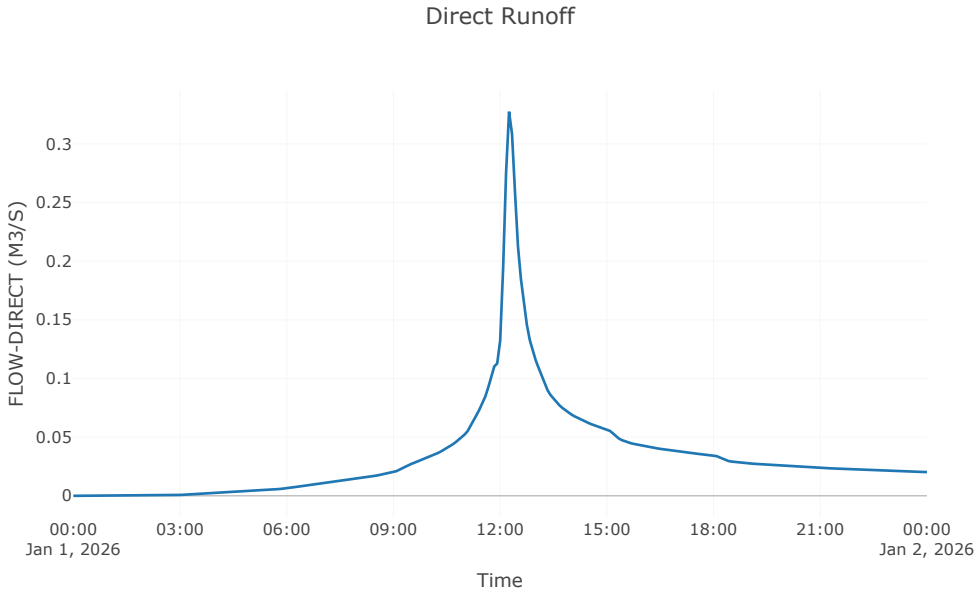

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
3
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

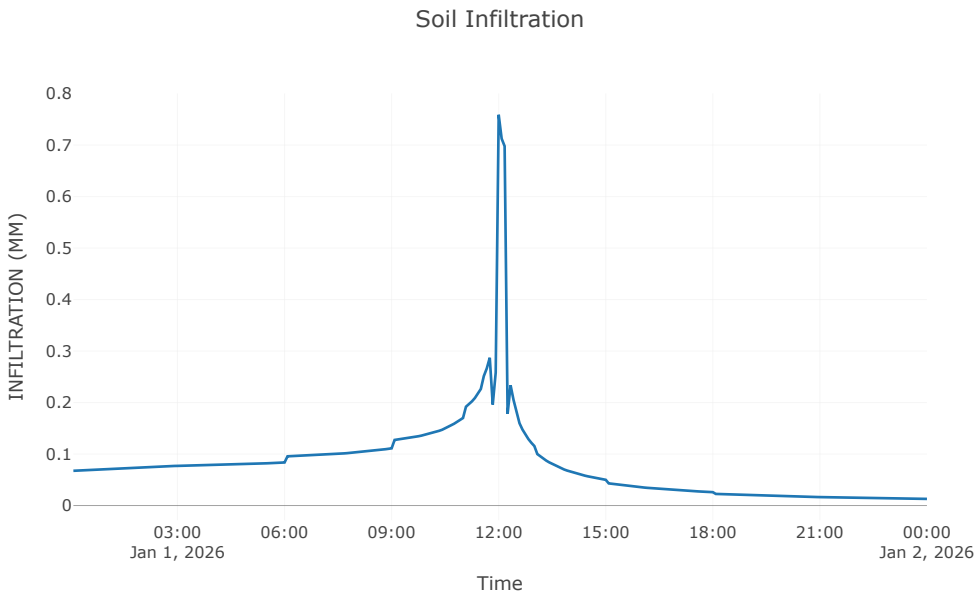

Cumulative Precipitation
PRECIP-CUM (MM)
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
0.3
0.25
0.2
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

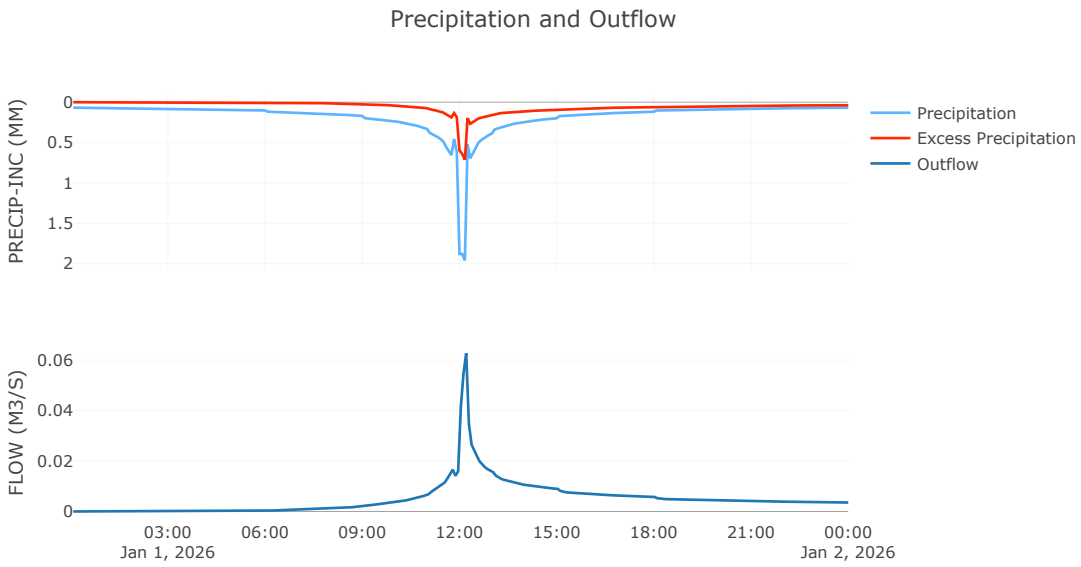
Subbasin: DIFFERENCE POND 5 UPSTREAM

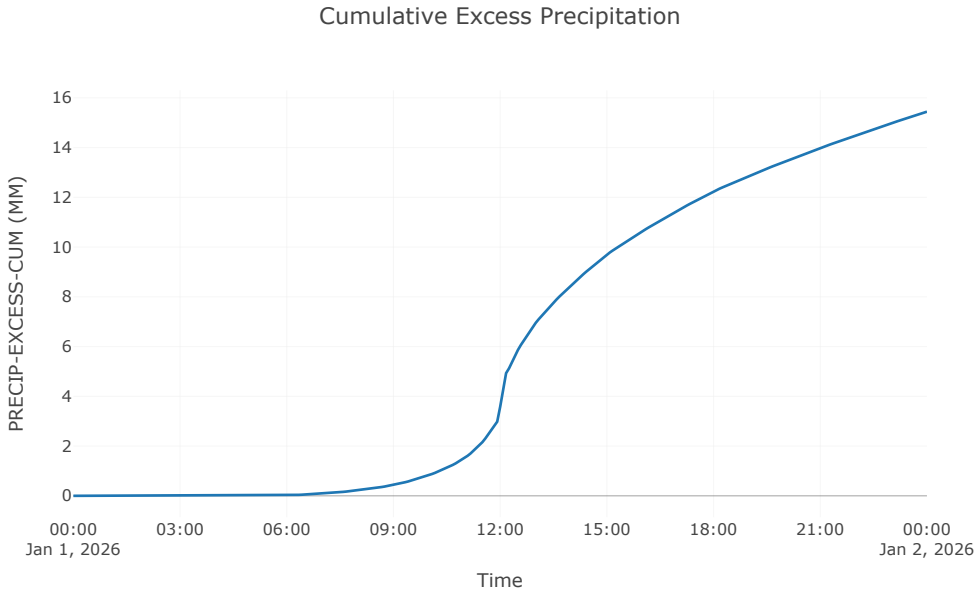
Area (KM2) : 0.03
Latitude Degrees : -45
Longitude Degrees : 168.84
Downstream : Pond 5

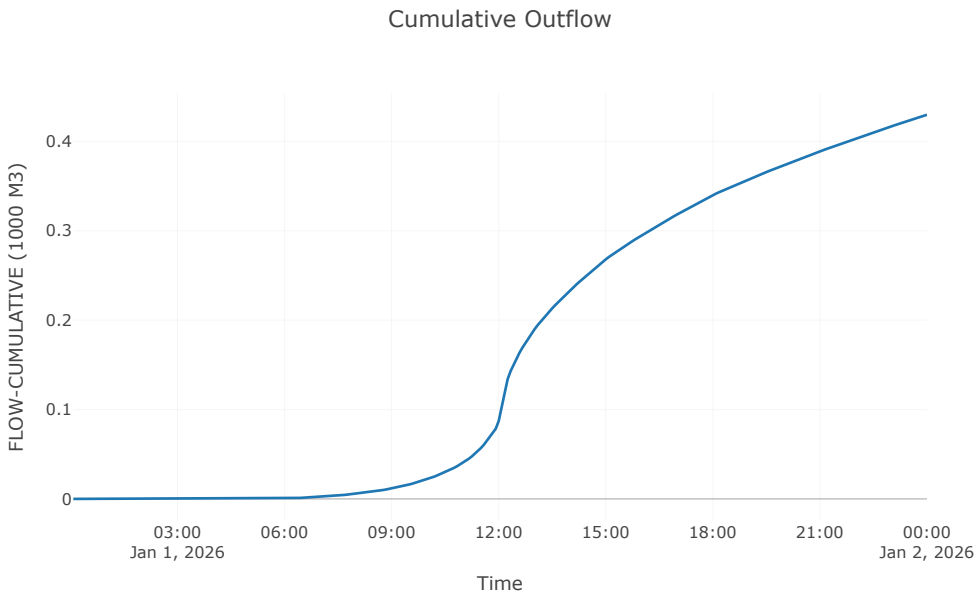
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	74
Initial Abstraction	4.46

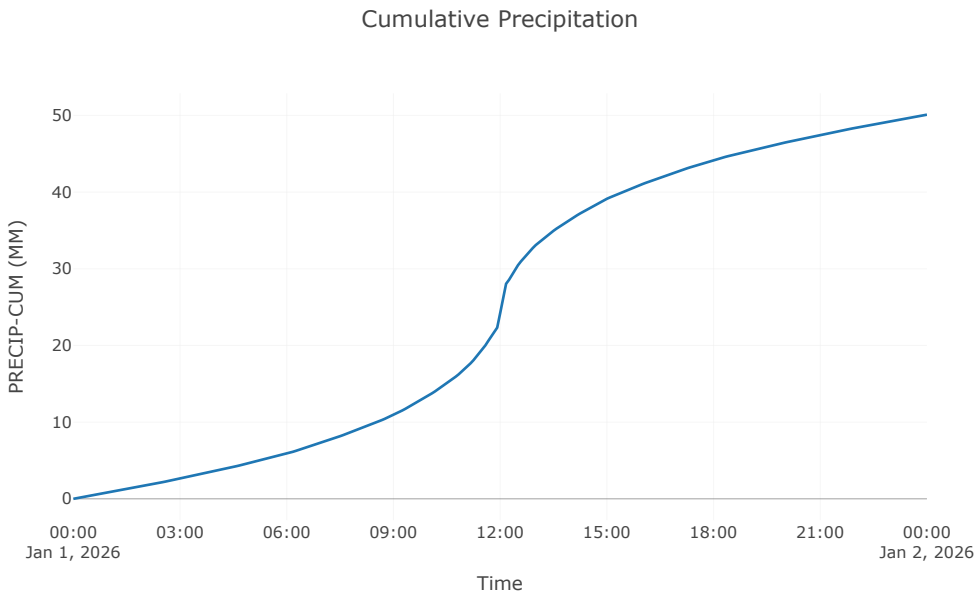
Transform: Scs	
Lag	3.21
Unitgraph Type	Standard

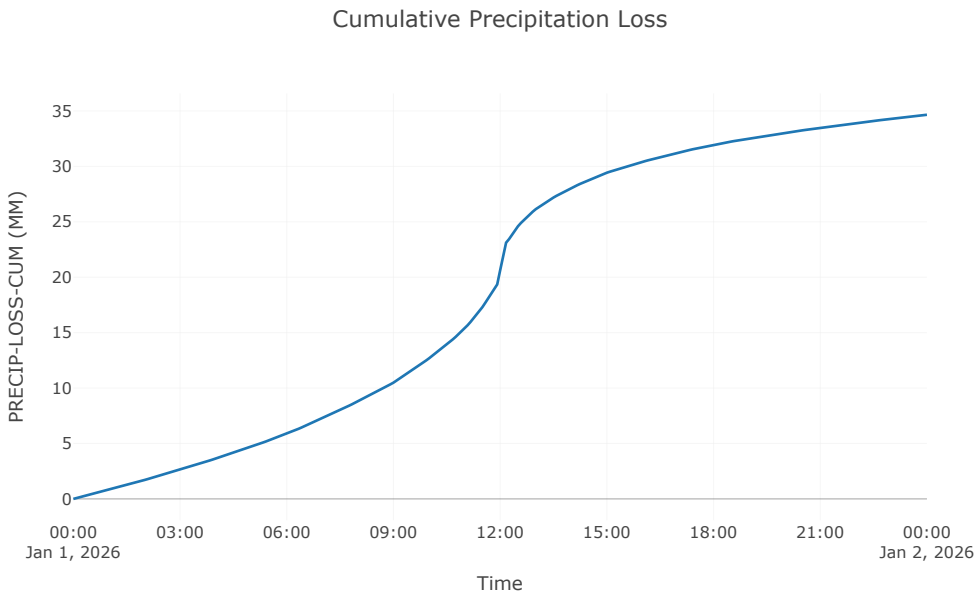
Results: DIFFERENCE POND 5 UPSTREAM	
Peak Discharge (M3/S)	0.06
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	15.41
Precipitation Volume (M3)	1397.79
Loss Volume (M3)	966.93
Excess Volume (M3)	430.86
Direct Runoff Volume (M3)	429.83
Baseflow Volume (M3)	0

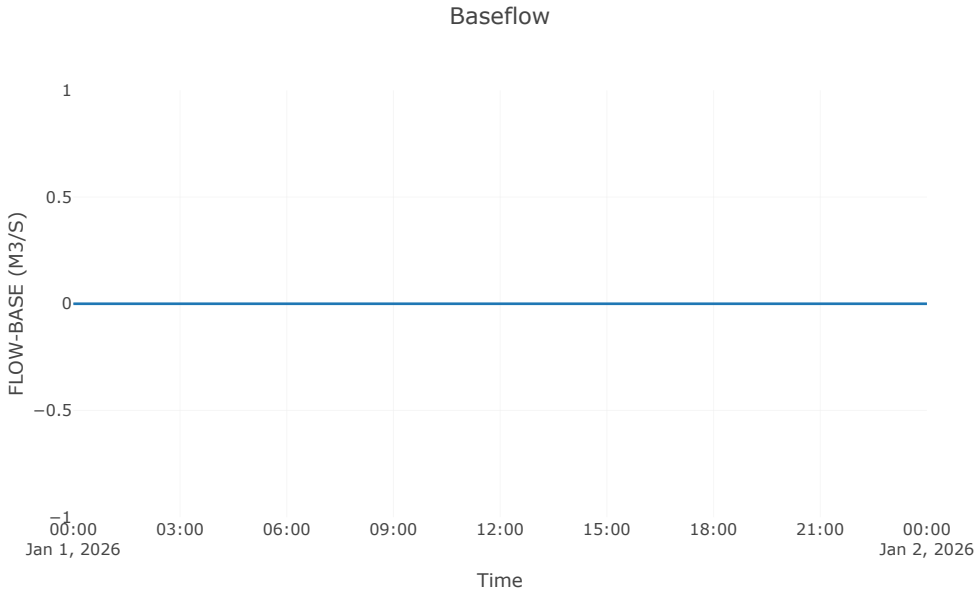

Precipitation and Outflow
PRECIP-INC (MM)
0
0.5
1
1.5
2
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
0.06
0.04
0.02
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

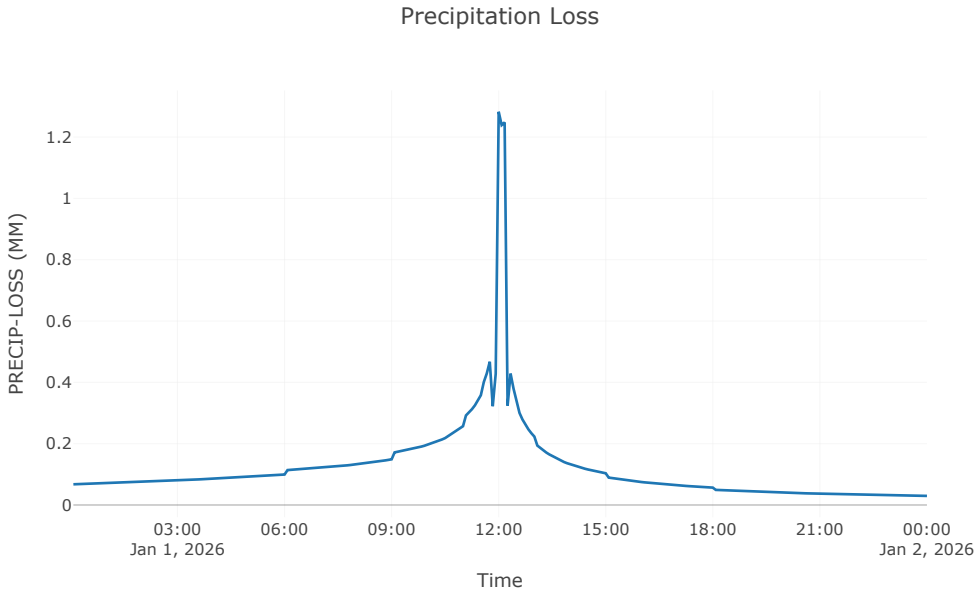

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
16
14
12
10
8
6
4
2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

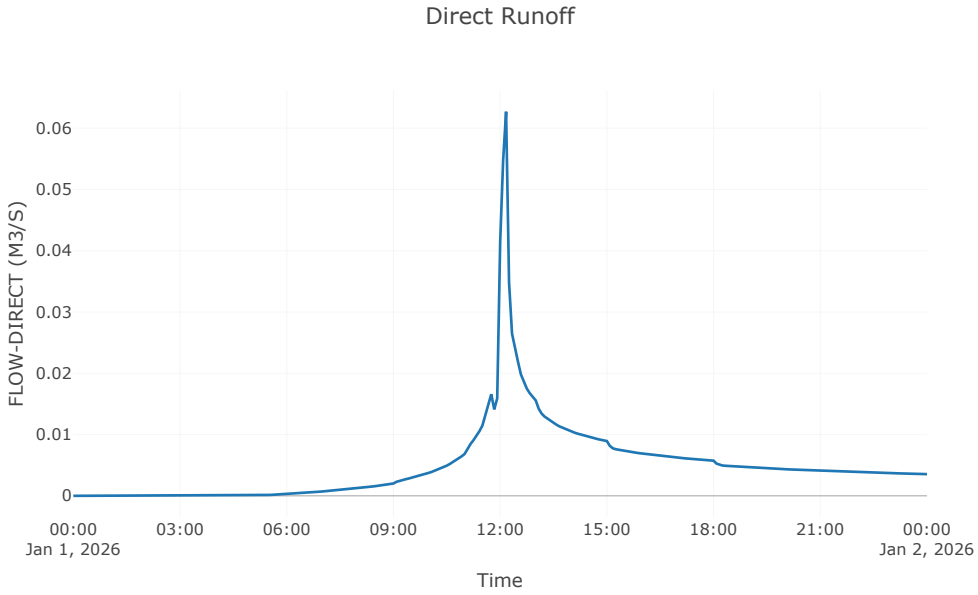

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

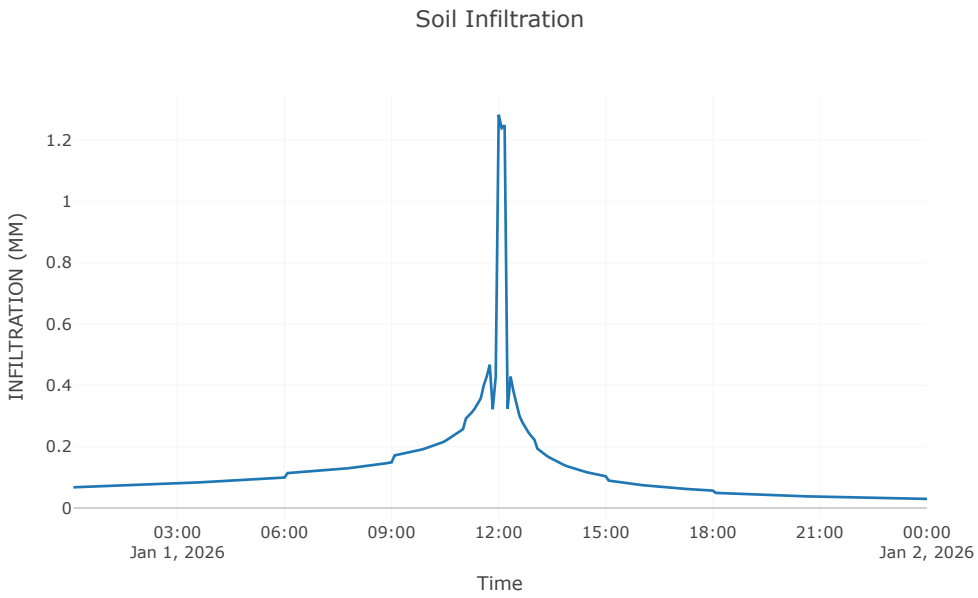

Cumulative Precipitation
PRECIP-CUM (MM)
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
35
30
25
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
1.2
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
0.06
0.05
0.04
0.03
0.02
0.01
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
1.2
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

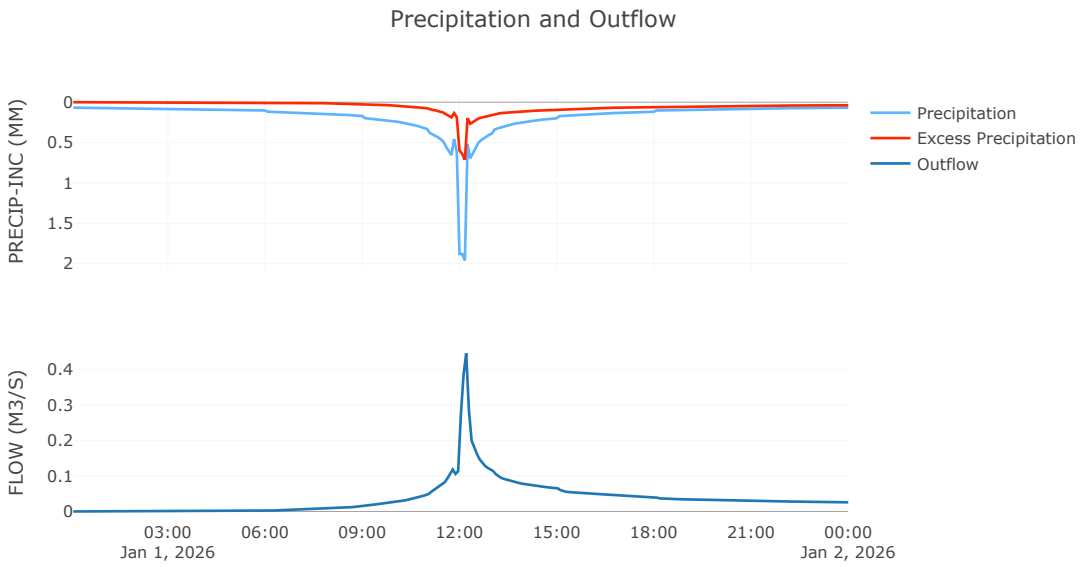
Subbasin: DIFFERENCE POND 6 UPSTREAM

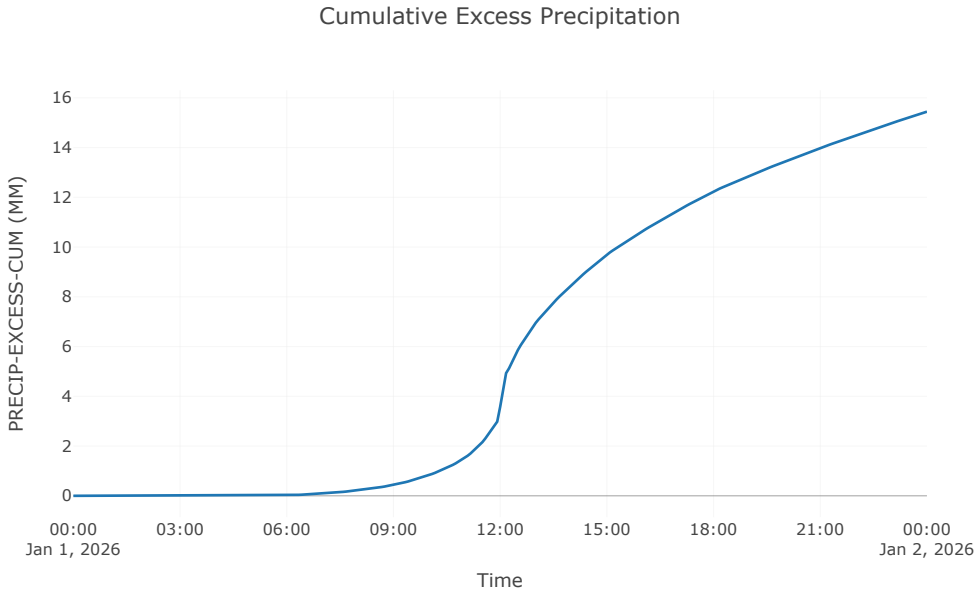
Area (KM2) : 0.2
Latitude Degrees : -44.99
Longitude Degrees : 168.83
Downstream : Reach - CHANNEL 8

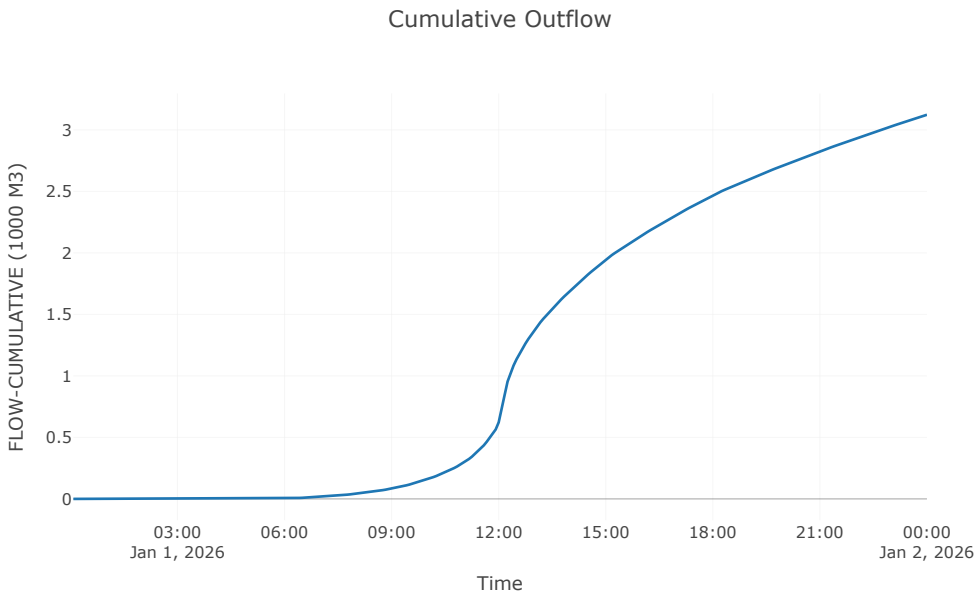
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	74
Initial Abstraction	4.46

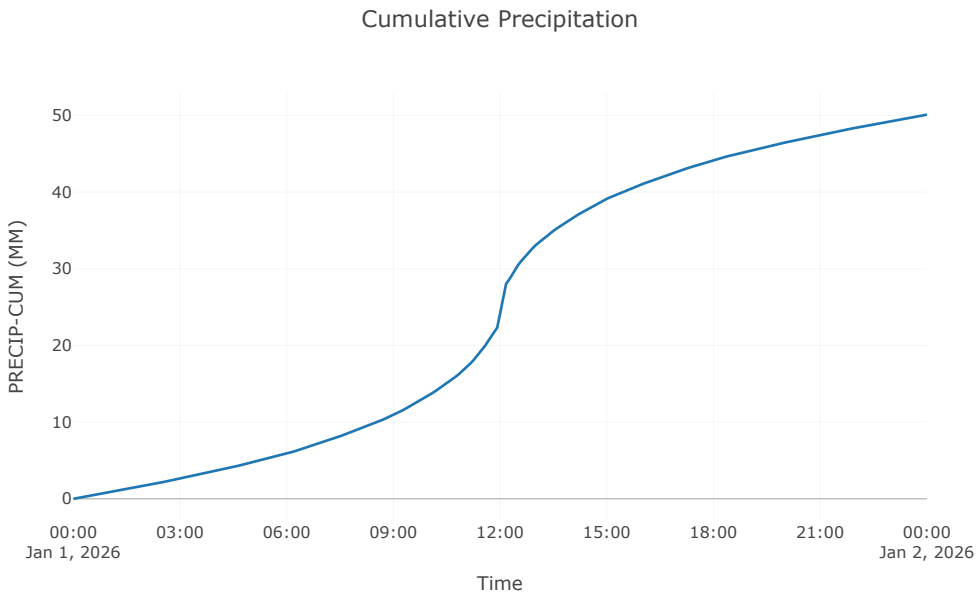
Transform: Scs	
Lag	3.86
Unitgraph Type	Standard

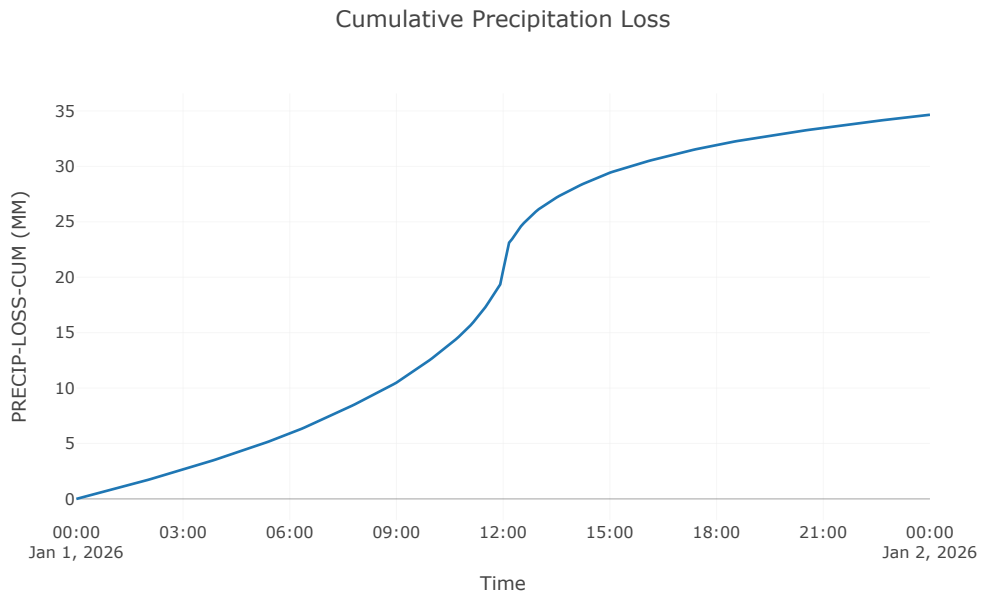
Results: DIFFERENCE POND 6 UPSTREAM	
Peak Discharge (M3/S)	0.45
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	15.4
Precipitation Volume (M3)	10160.28
Loss Volume (M3)	7028.43
Excess Volume (M3)	3131.85
Direct Runoff Volume (M3)	3123.06
Baseflow Volume (M3)	0

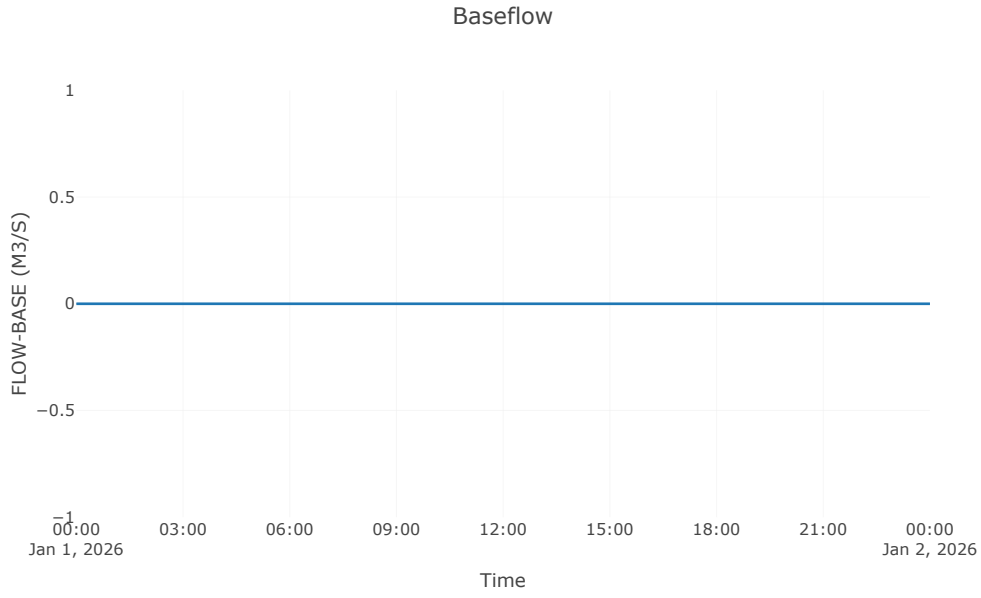

Precipitation and Outflow
PRECIP-INC (MM)
0
0.5
1
1.5
2
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

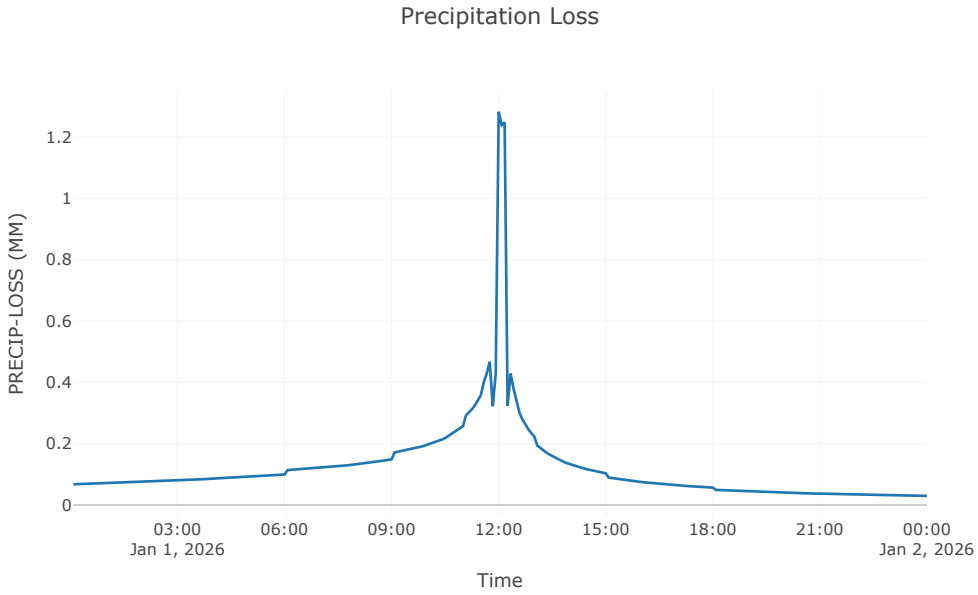

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
16
14
12
10
8
6
4
2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

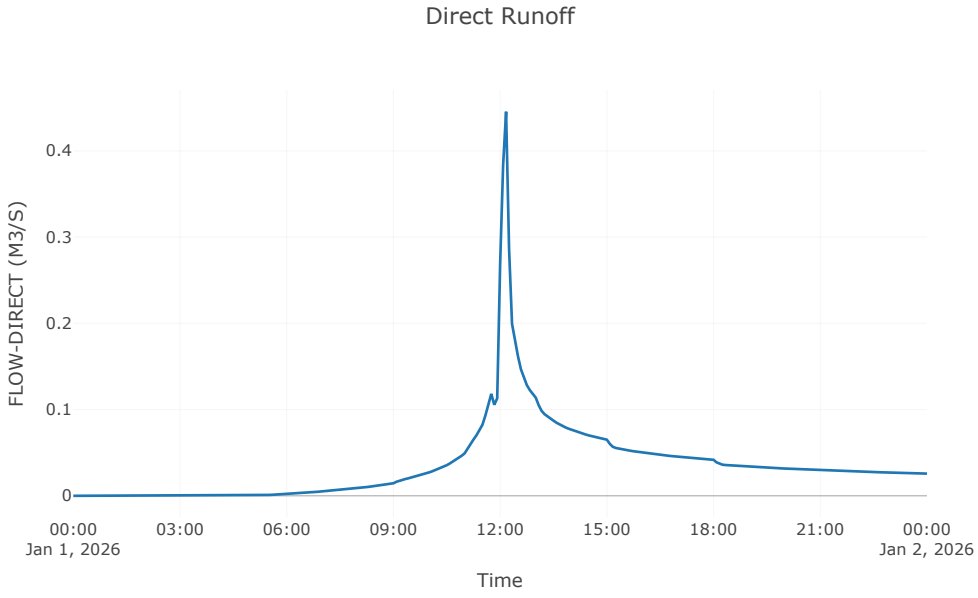

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
3
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

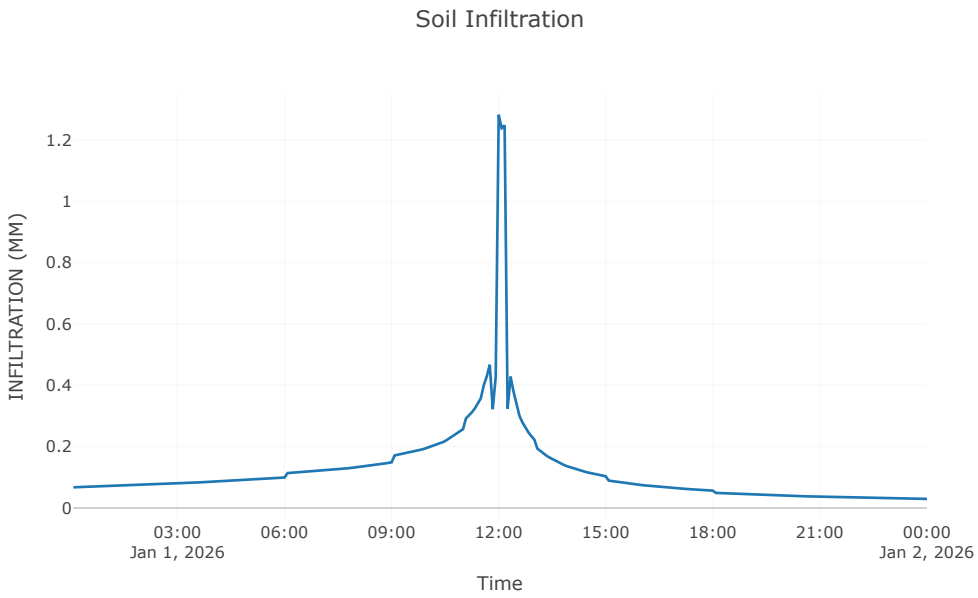

Cumulative Precipitation
PRECIP-CUM (MM)
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
35
30
25
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
1.2
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
1.2
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

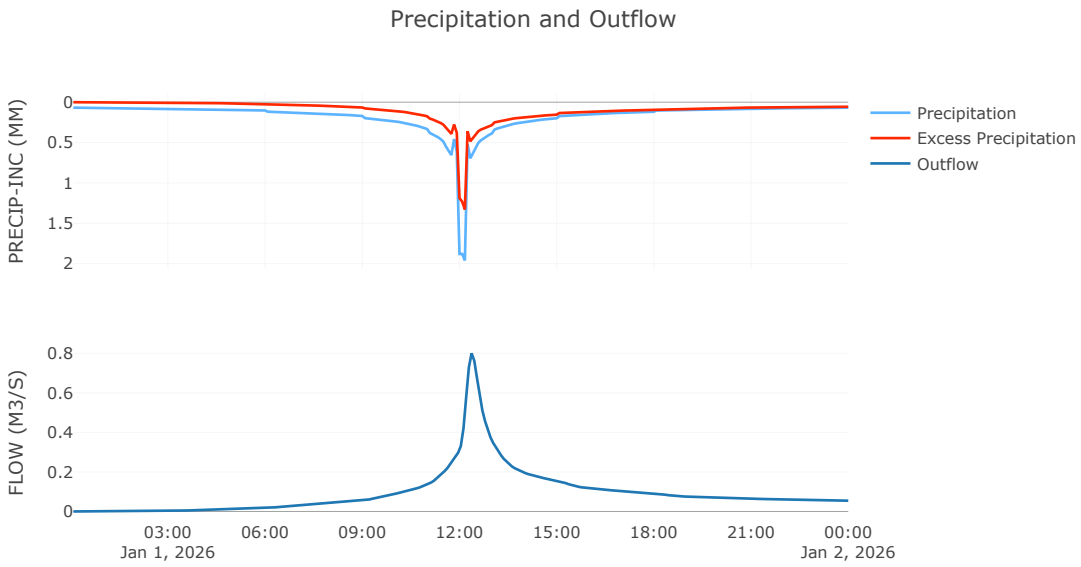
Subbasin: DIFFERENCE POND 6 INTERNAL

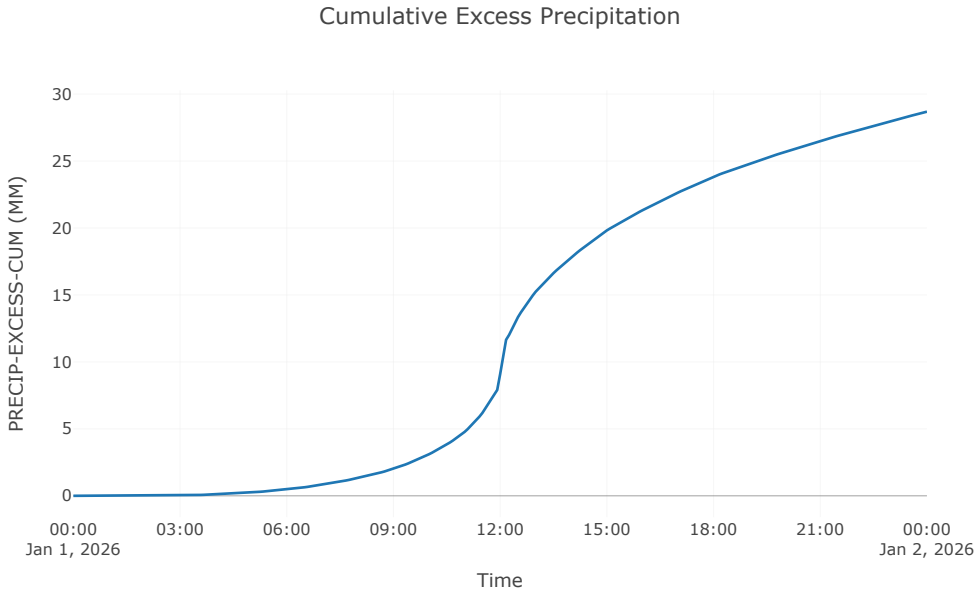
Area (KM2) : 0.29
Latitude Degrees : -45
Longitude Degrees : 168.84
Downstream : Junction - CHANNEL 3

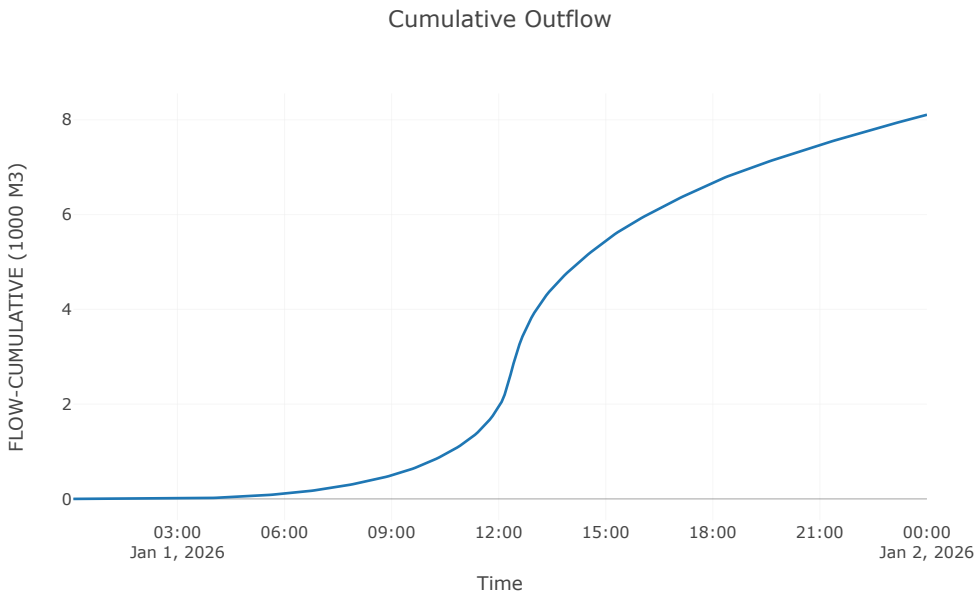
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	88.4
Initial Abstraction	1.67

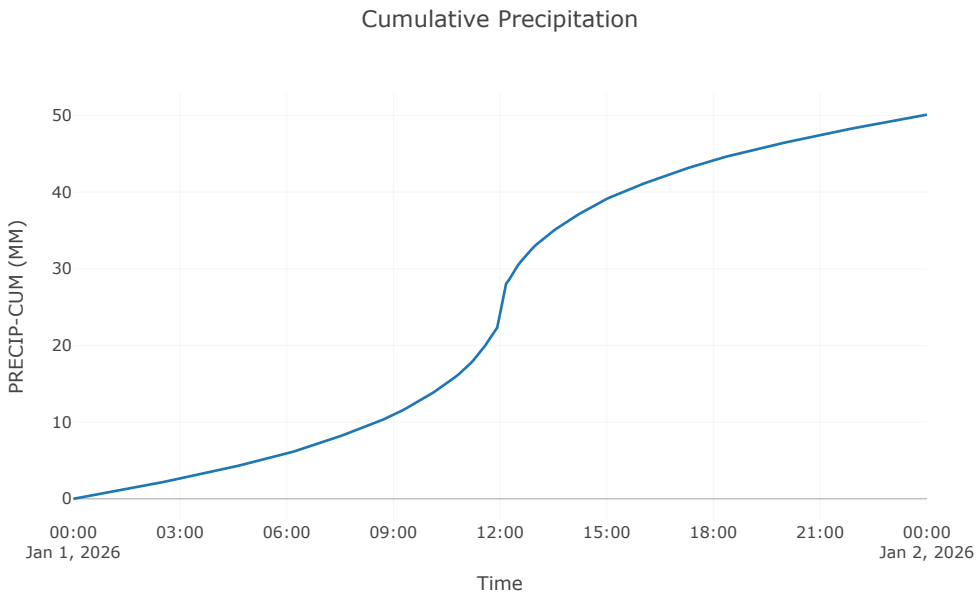
Transform: Scs	
Lag	16.51
Unitgraph Type	Standard

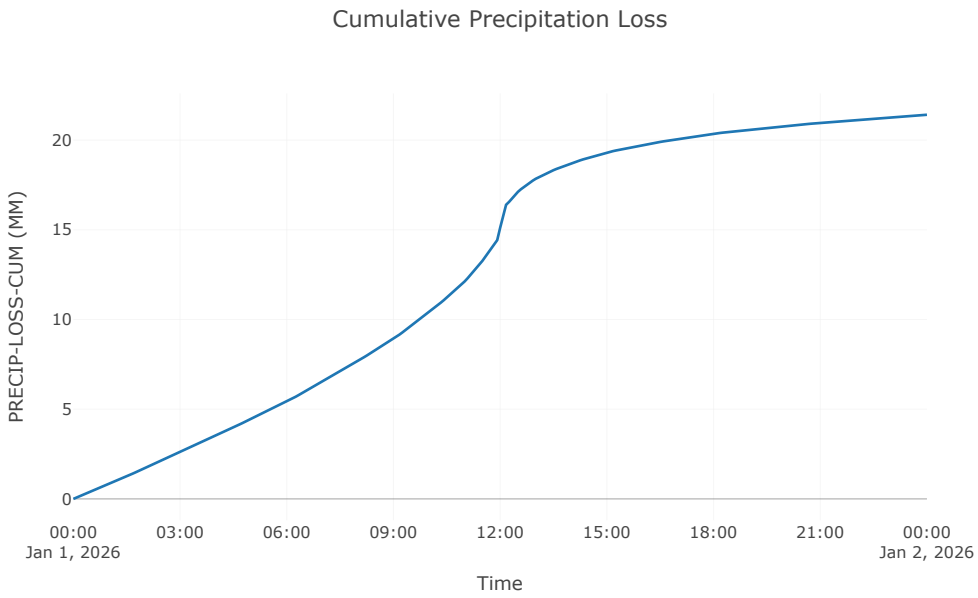
Results: DIFFERENCE POND 6 INTERNAL	
Peak Discharge (M3/S)	0.8
Time of Peak Discharge	01Jan2026, 12:20
Volume (MM)	28.44
Precipitation Volume (M3)	14283.51
Loss Volume (M3)	6104.82
Excess Volume (M3)	8178.69
Direct Runoff Volume (M3)	8107.11
Baseflow Volume (M3)	0

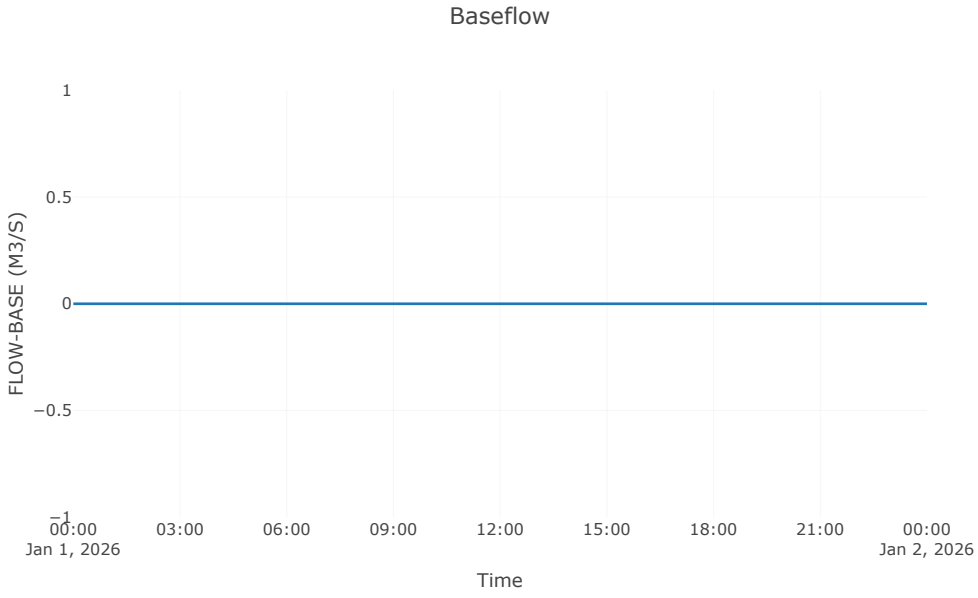

Precipitation and Outflow
PRECIP-INC (MM)
0
0.5
1
1.5
2
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

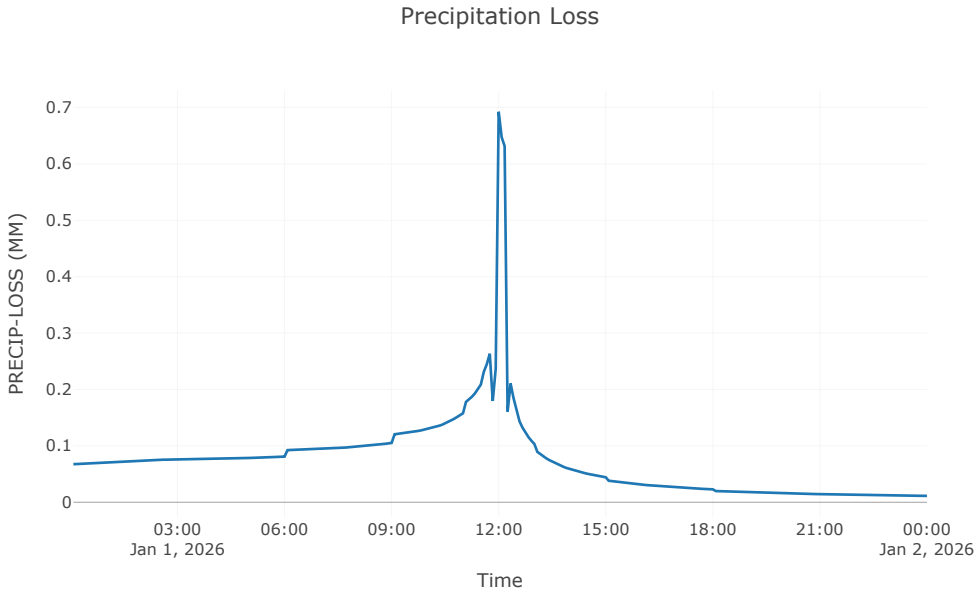

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
30
25
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

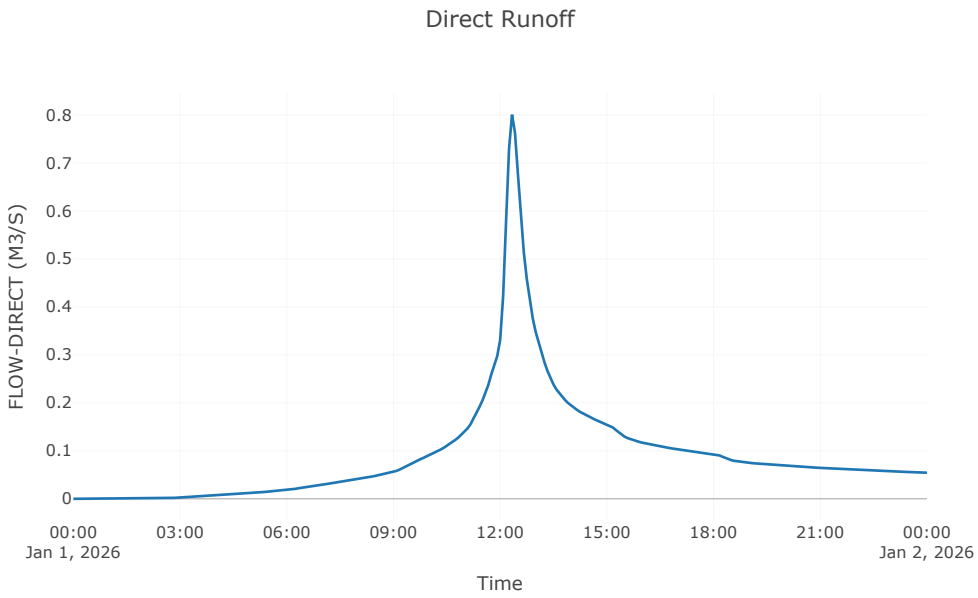

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
8
6
4
2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

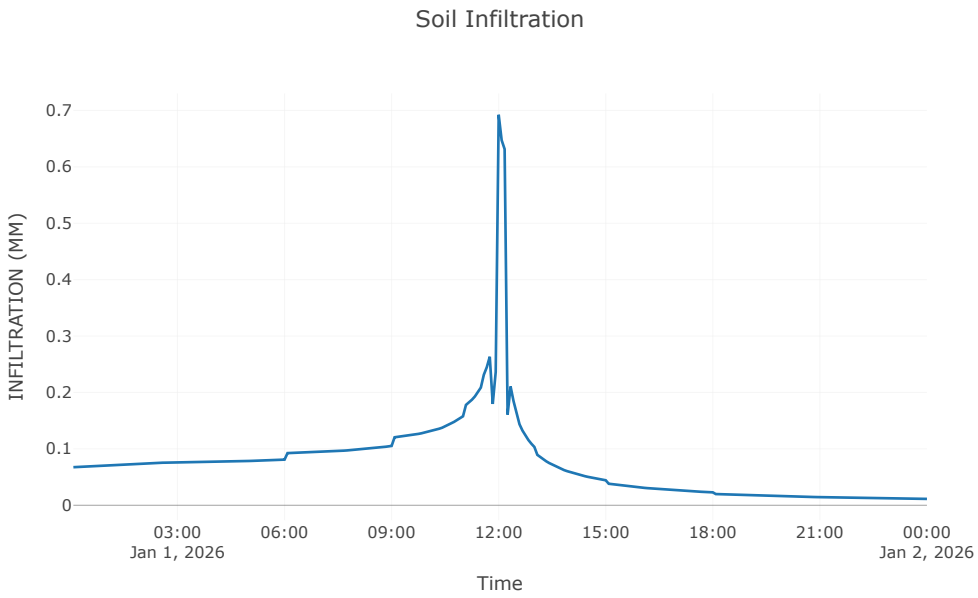

Cumulative Precipitation
PRECIP-CUM (MM)
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

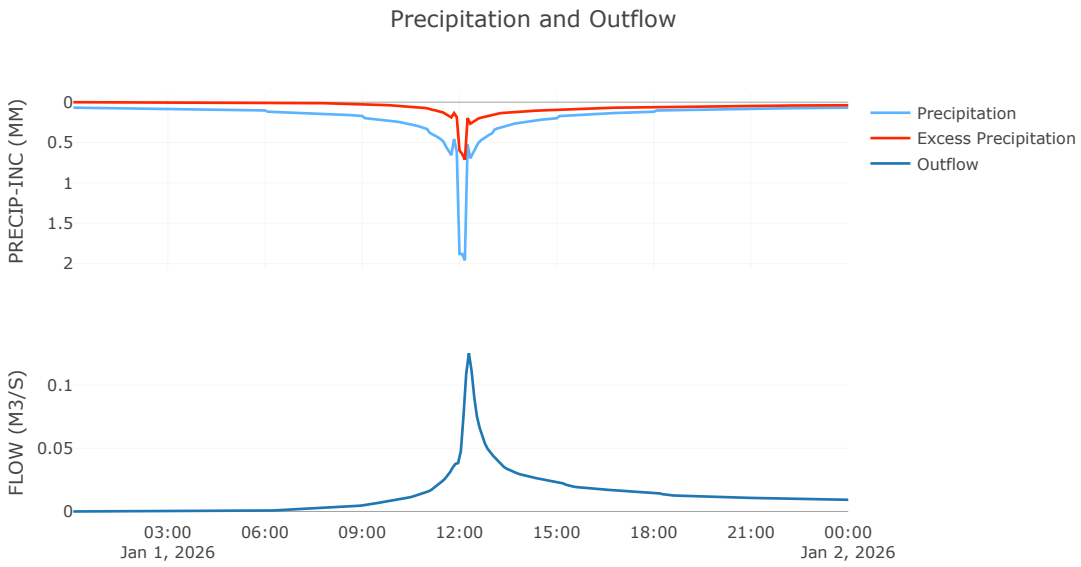
Subbasin: DIFFERENCE POND 6 SOUTH

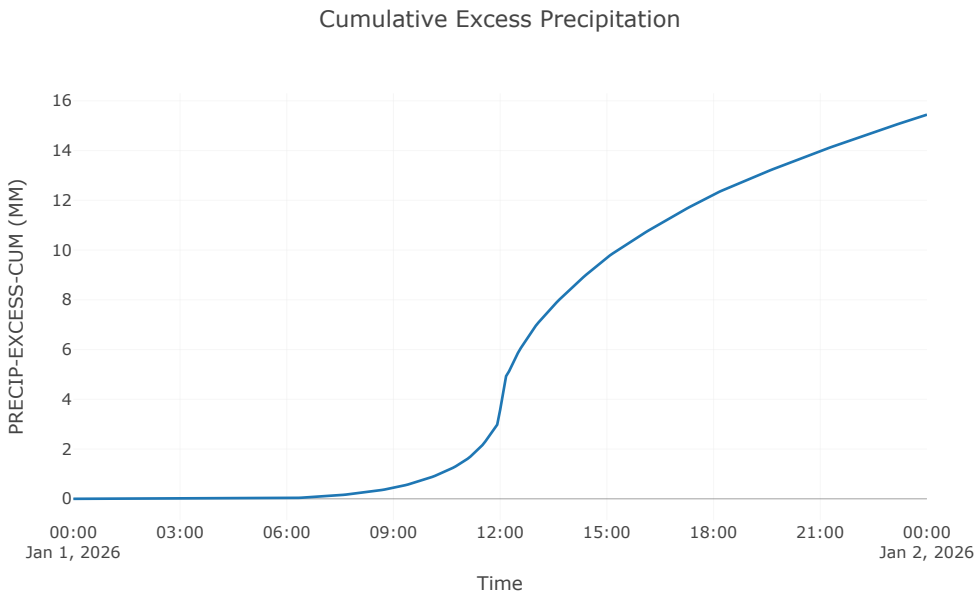
Area (KM2) : 0.07
Latitude Degrees : -45
Longitude Degrees : 168.84
Downstream : Junction - POND 6

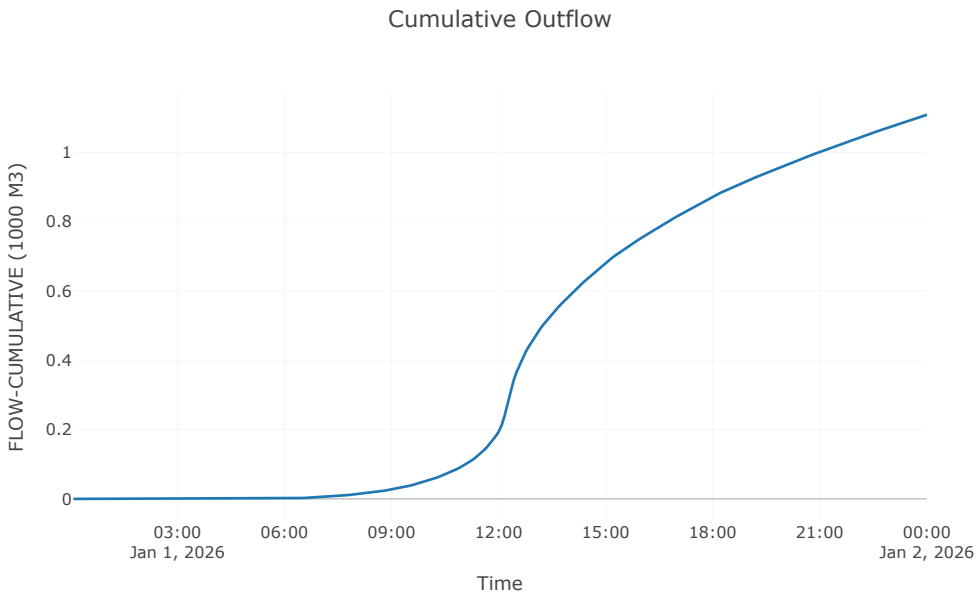
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	74
Initial Abstraction	4.46

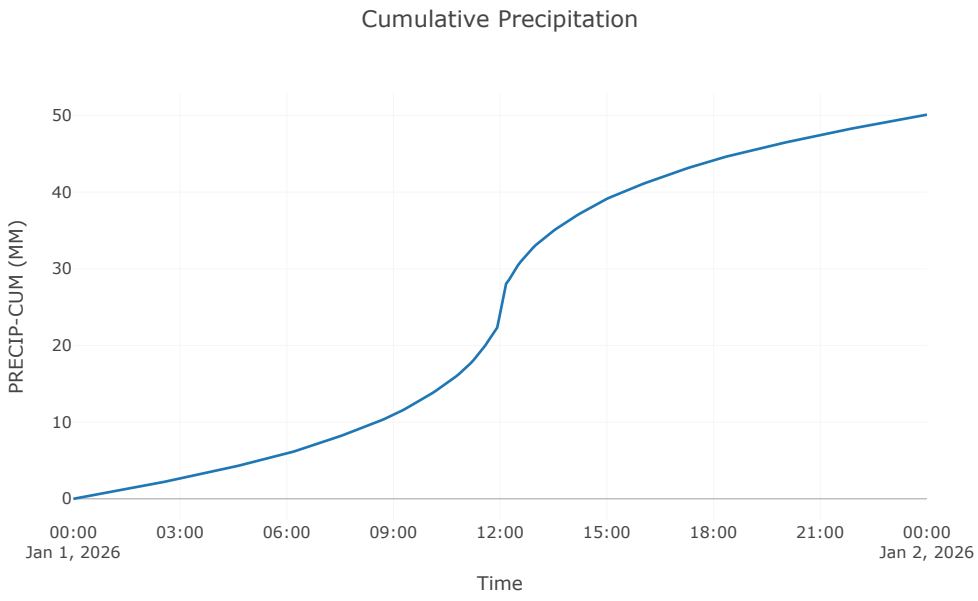
Transform: Scs	
Lag	10.61
Unitgraph Type	Standard

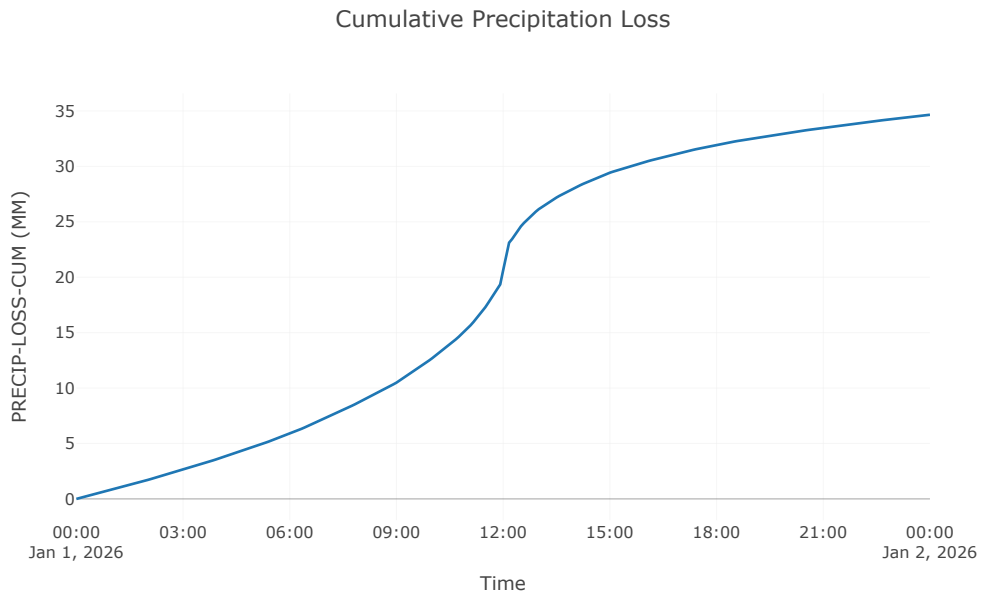
Results: DIFFERENCE POND 6 SOUTH	
Peak Discharge (M3/S)	0.13
Time of Peak Discharge	01Jan2026, 12:15
Volume (MM)	15.33
Precipitation Volume (M3)	3622.23
Loss Volume (M3)	2505.7
Excess Volume (M3)	1116.53
Direct Runoff Volume (M3)	1108.53
Baseflow Volume (M3)	0

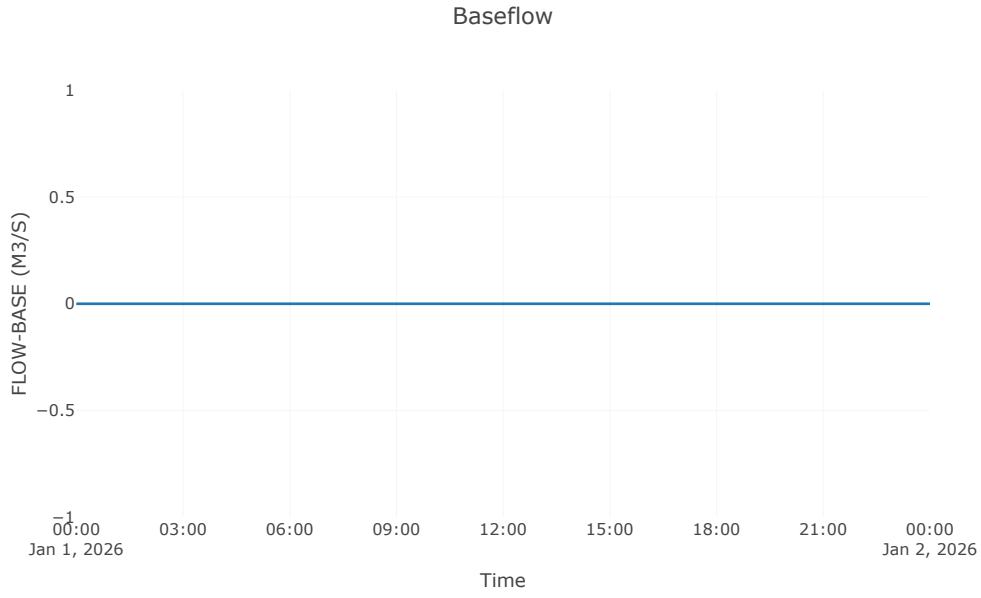

Precipitation and Outflow
PRECIP-INC (MM)
0
0.5
1
1.5
2
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

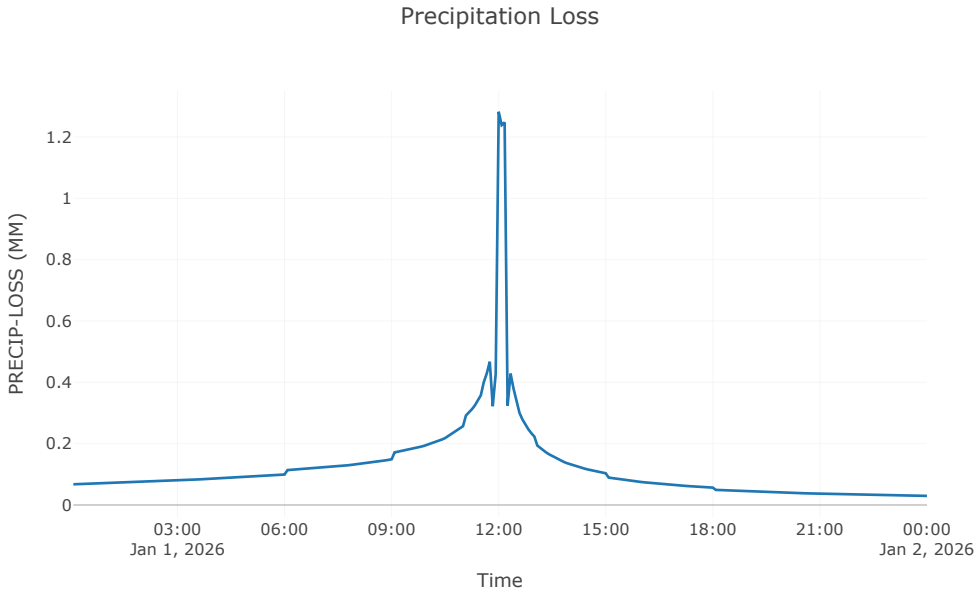

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
16
14
12
10
8
6
4
2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

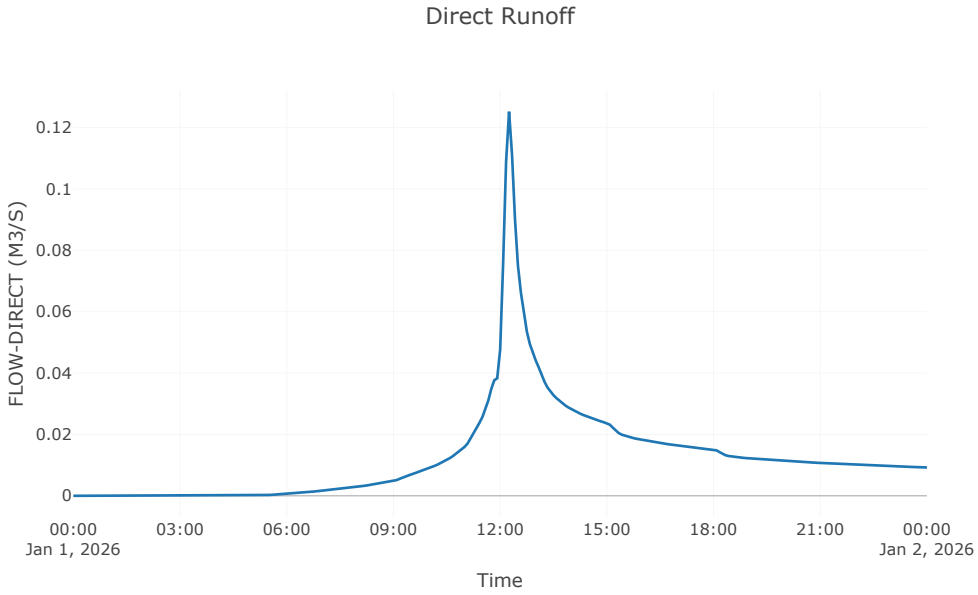

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

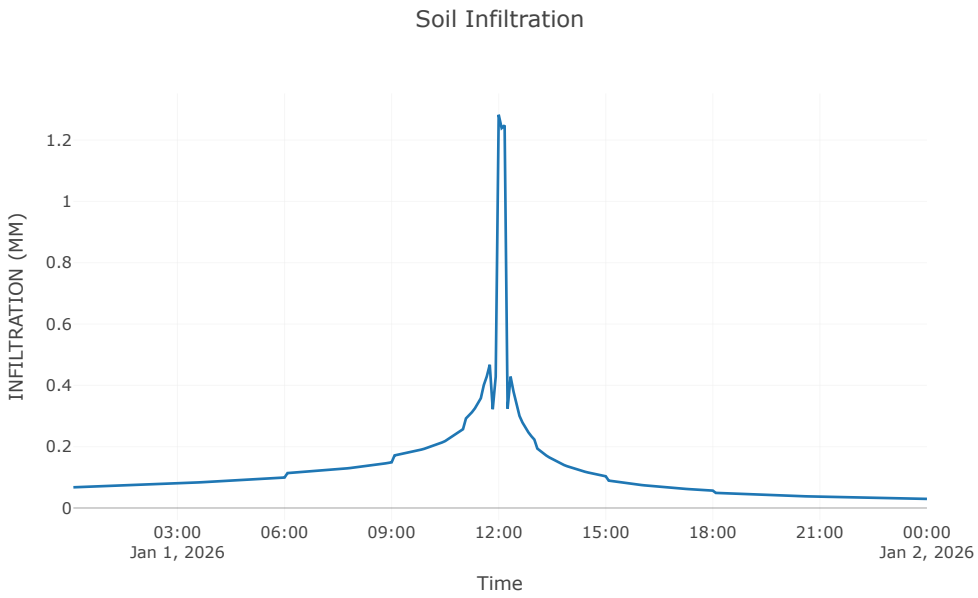

Cumulative Precipitation
PRECIP-CUM (MM)
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
35
30
25
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
1.2
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
0.12
0.1
0.08
0.06
0.04
0.02
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
1.2
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

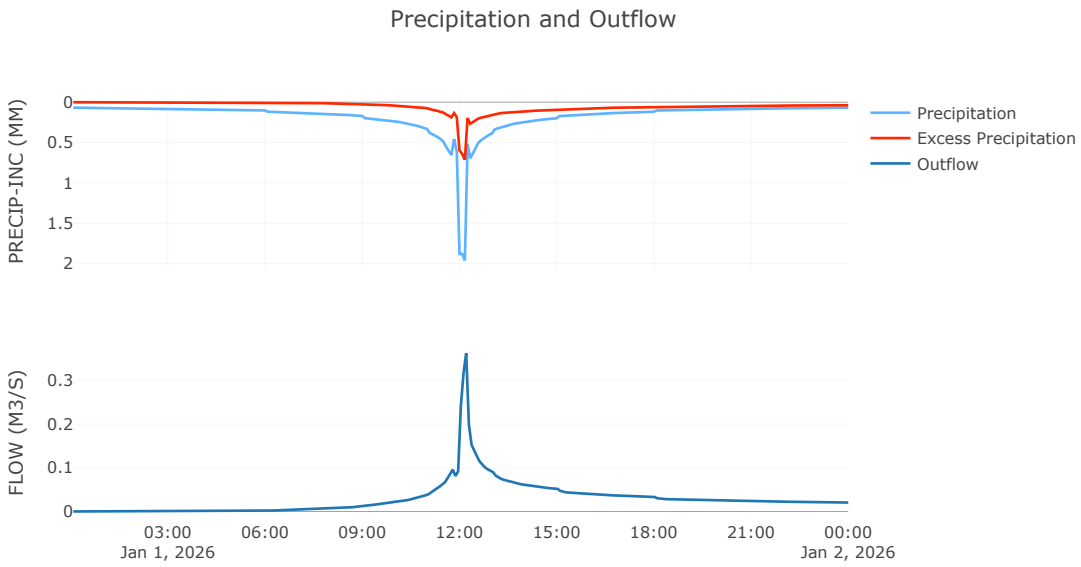
Subbasin: DIFFERENCE POND 7 UPSTREAM

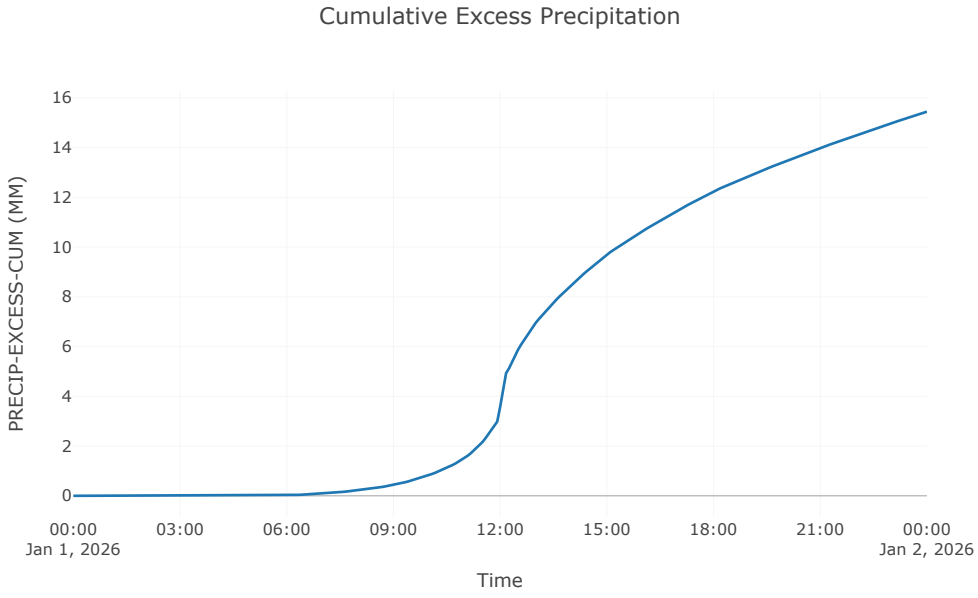
Area (KM2) : 0.16
Latitude Degrees : -44.99
Longitude Degrees : 168.83
Downstream : Reach - CHANNEL 6

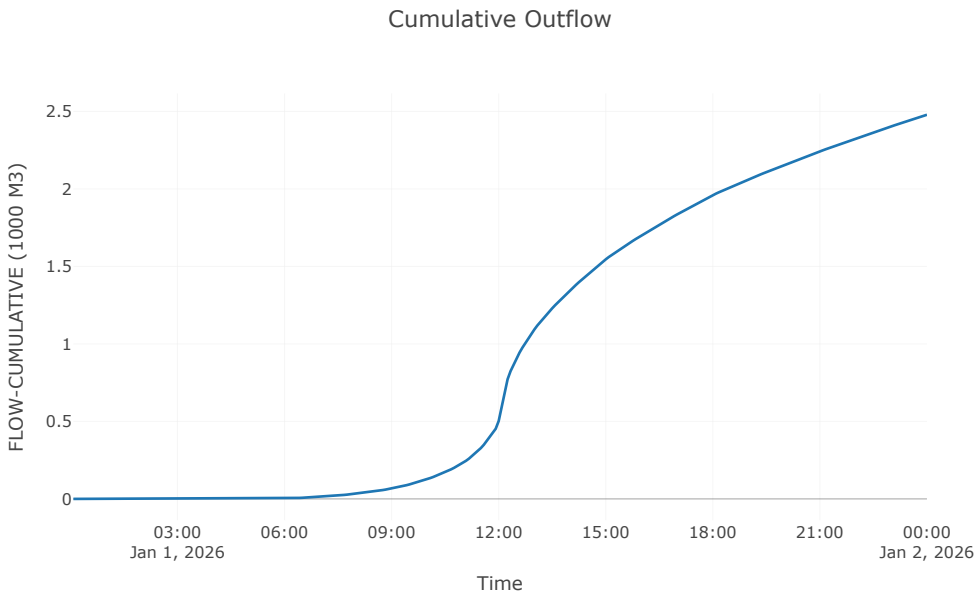
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	74
Initial Abstraction	4.46

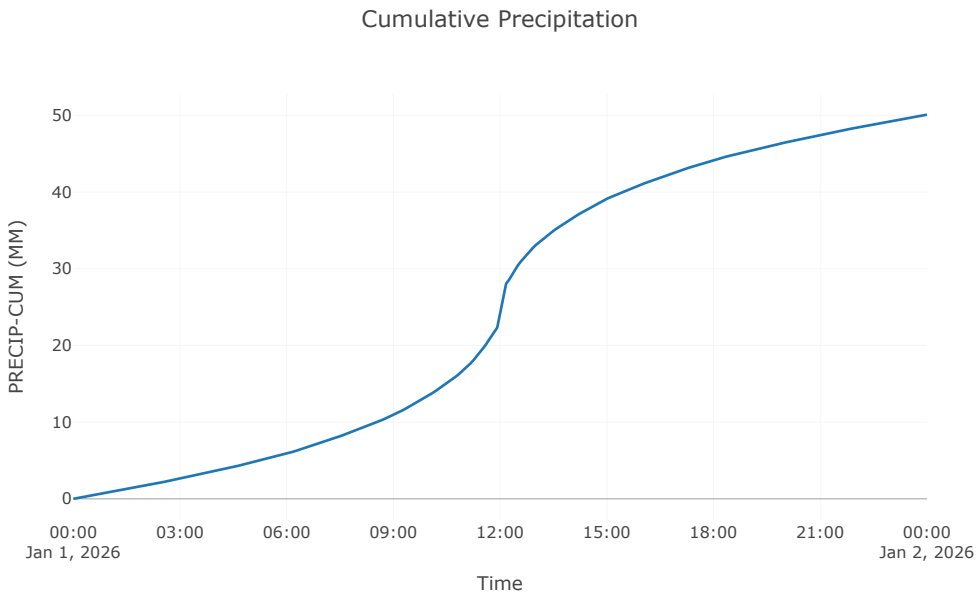
Transform: Scs	
Lag	3.16
Unitgraph Type	Standard

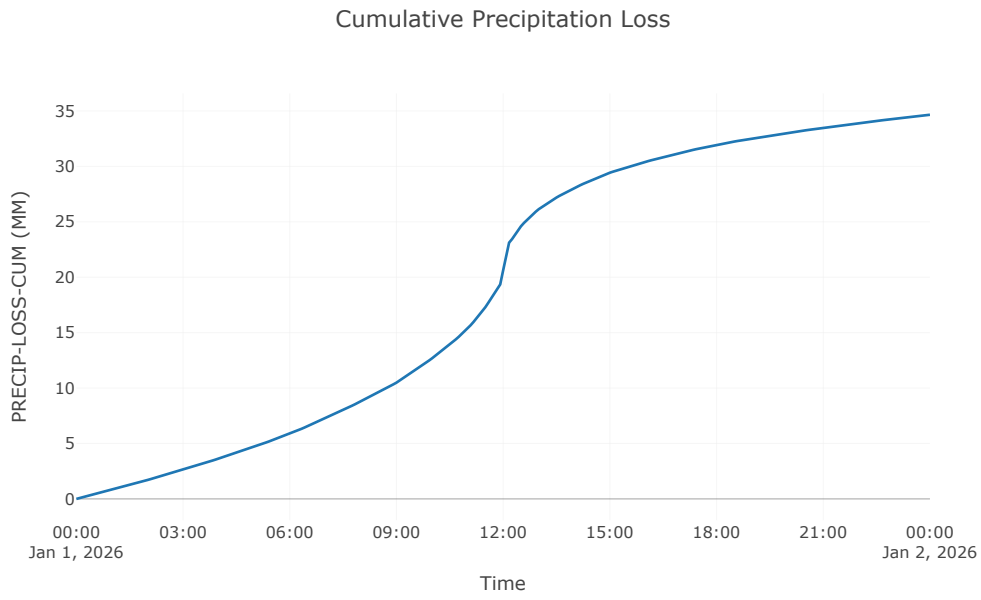
Results: DIFFERENCE POND 7 UPSTREAM	
Peak Discharge (M3/S)	0.36
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	15.41
Precipitation Volume (M3)	8061.09
Loss Volume (M3)	5576.3
Excess Volume (M3)	2484.79
Direct Runoff Volume (M3)	2478.9
Baseflow Volume (M3)	0

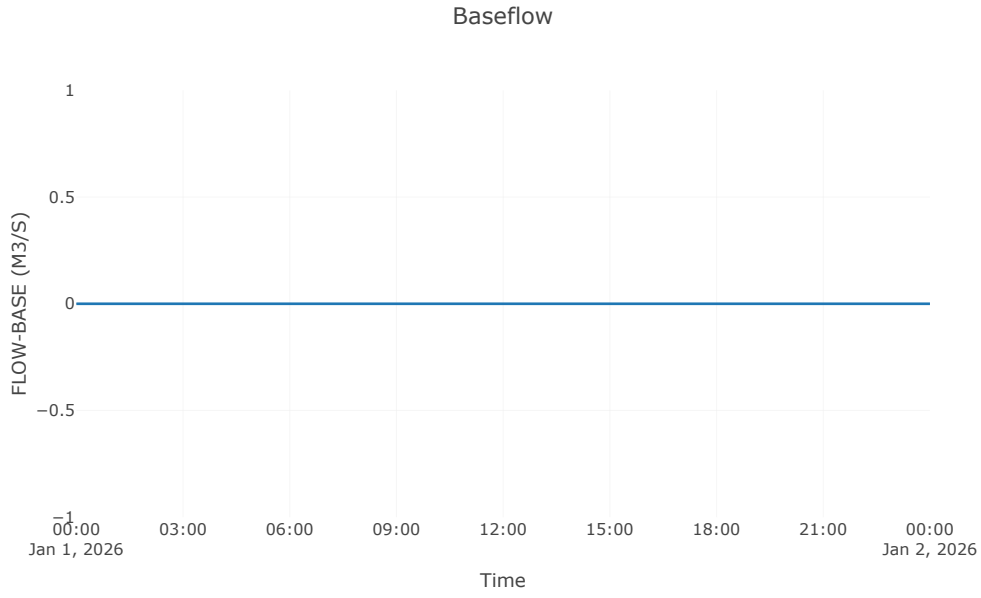

Precipitation and Outflow
PRECIP-INC (MM)
0
0.5
1
1.5
2
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

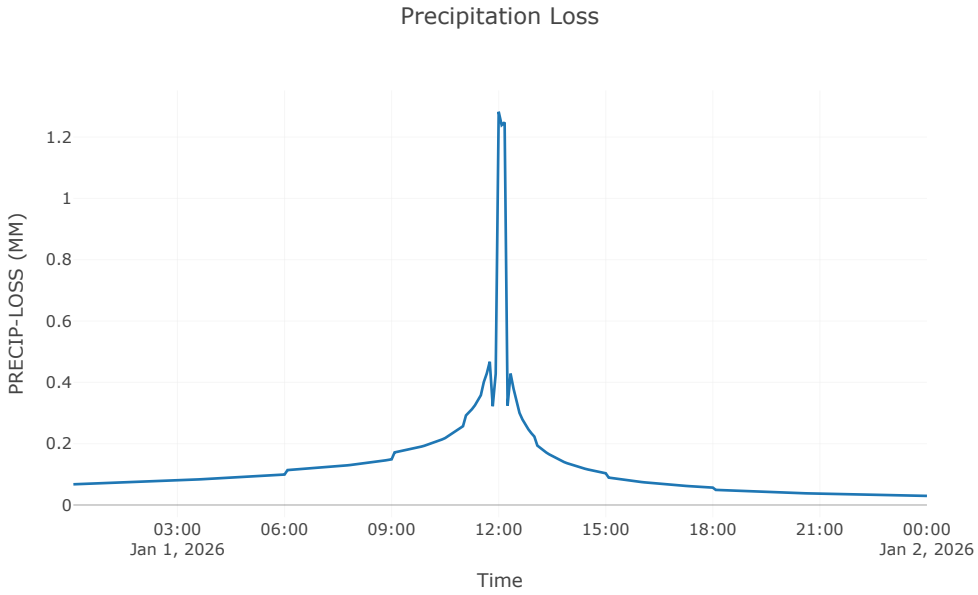

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
16
14
12
10
8
6
4
2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

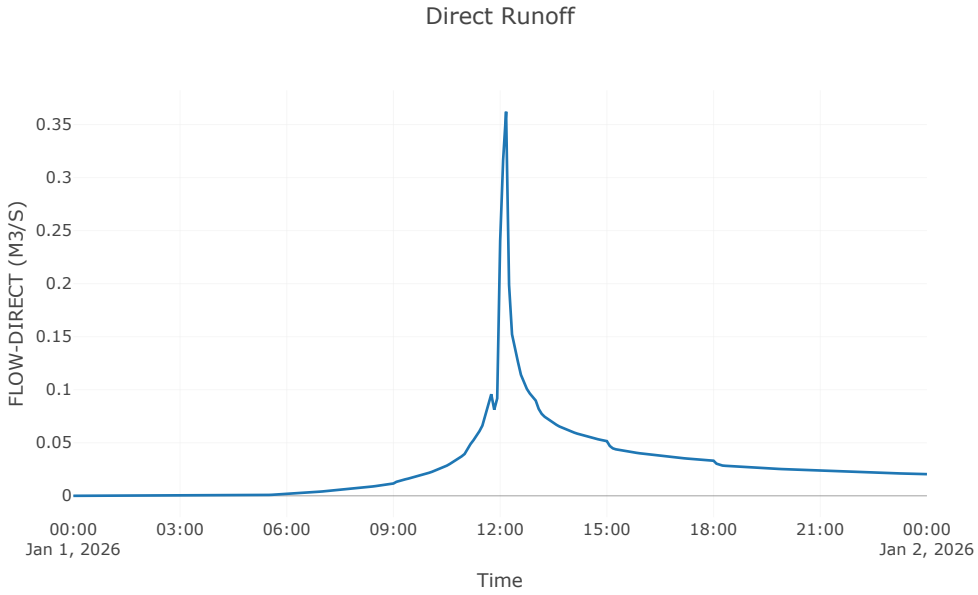

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

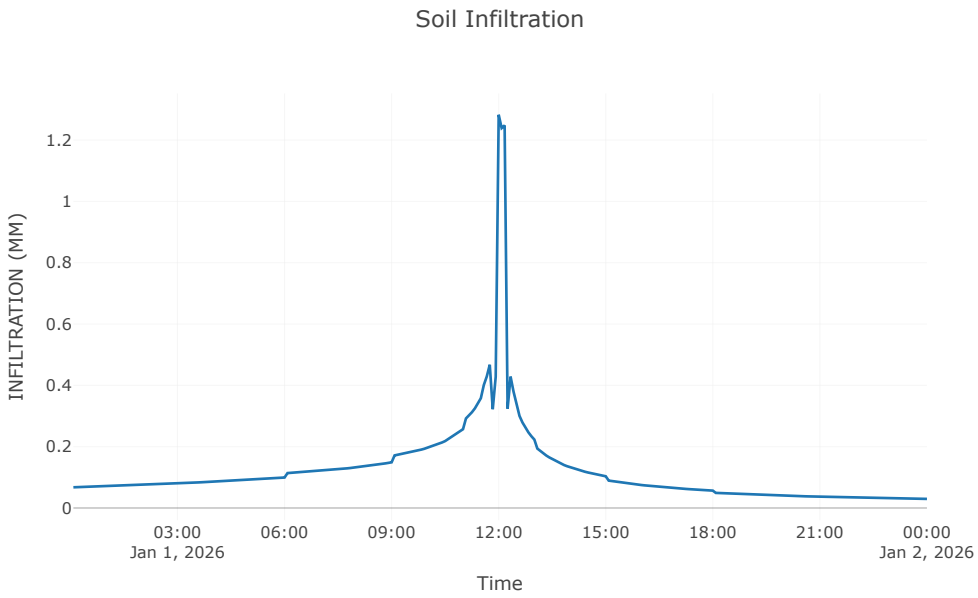

Cumulative Precipitation
PRECIP-CUM (MM)
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
35
30
25
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
1.2
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
1.2
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

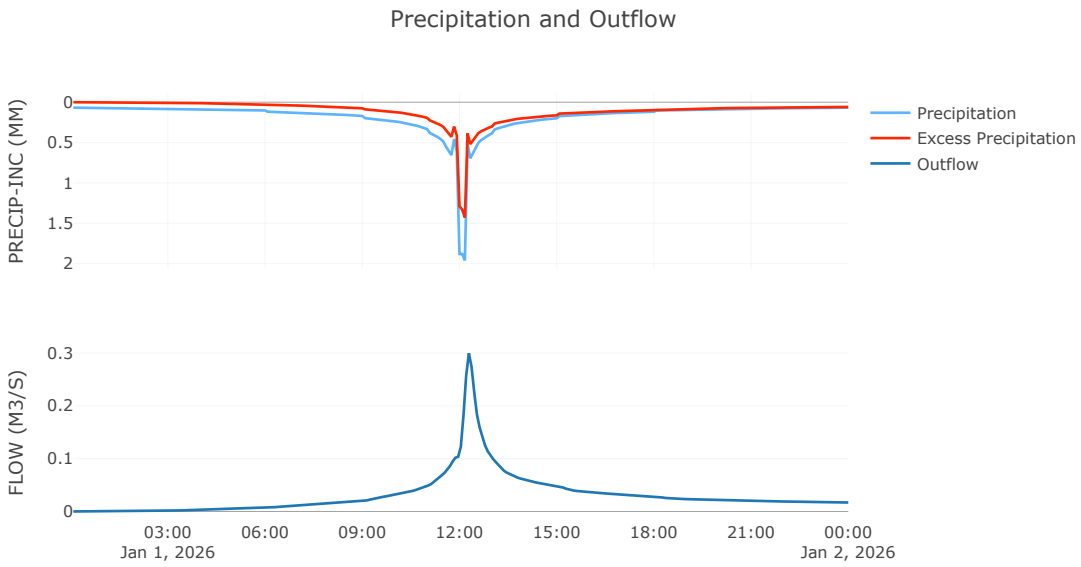
Subbasin: DIFFERENCE POND 7 INTERNAL

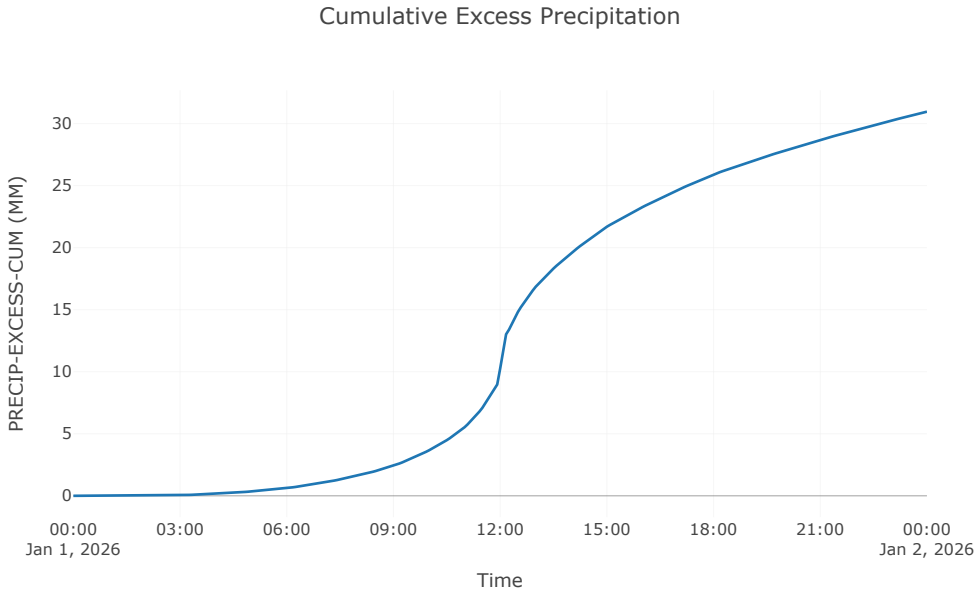
Area (KM2) : 0.09
Latitude Degrees : -44.99
Longitude Degrees : 168.84
Downstream : Junction - POND 7

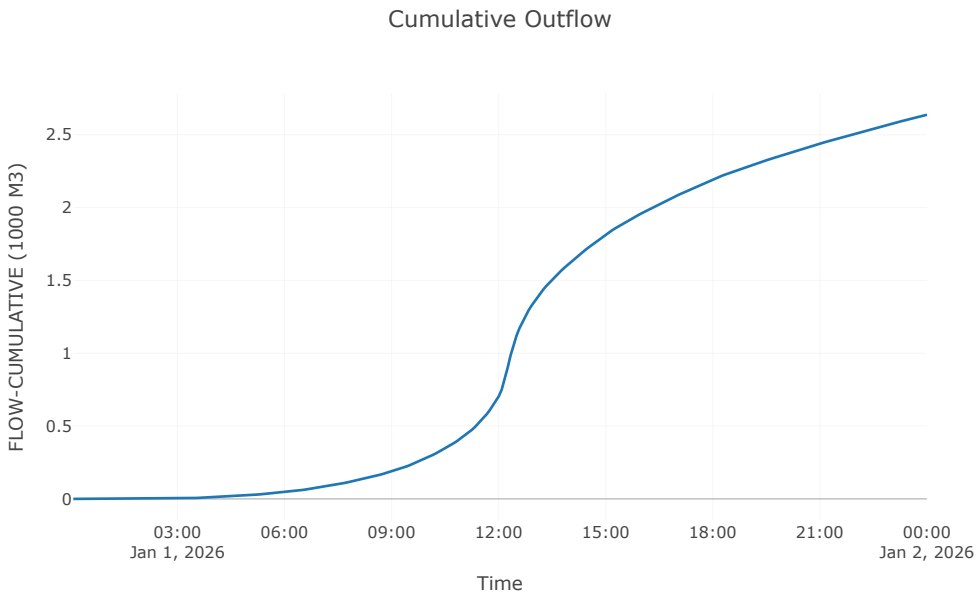
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	90.1
Initial Abstraction	1.4

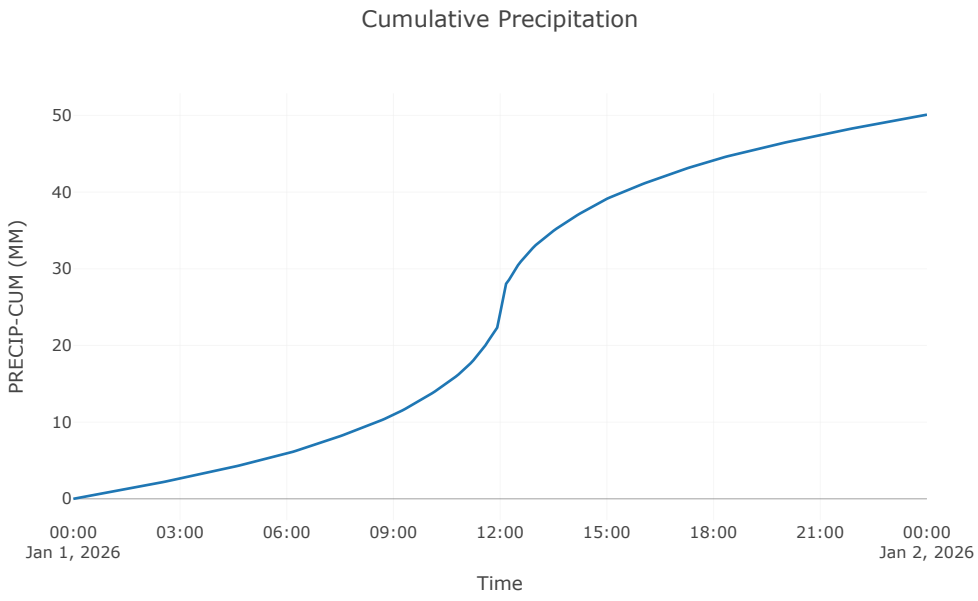
Transform: Scs	
Lag	11.53
Unitgraph Type	Standard

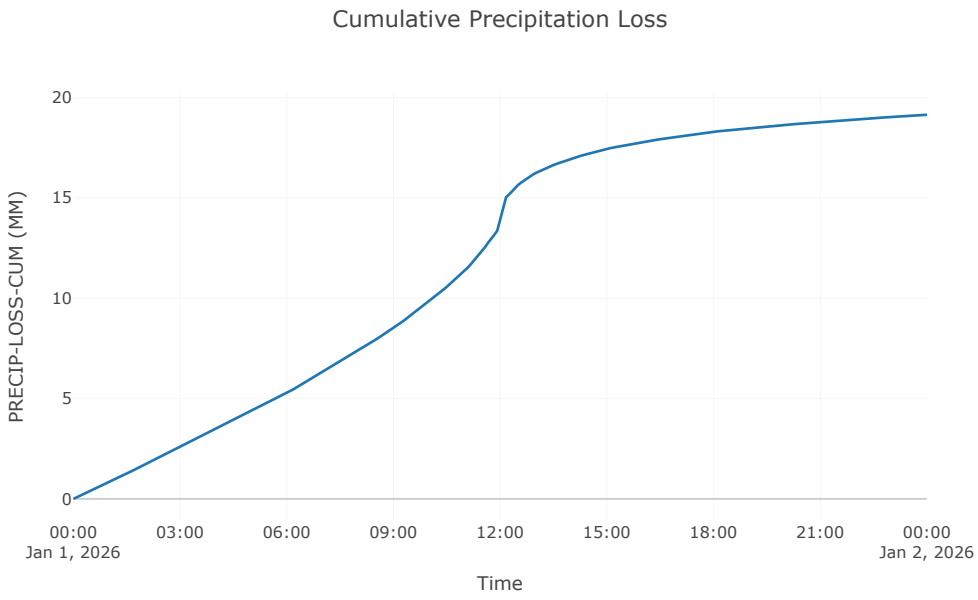
Results: DIFFERENCE POND 7 INTERNAL	
Peak Discharge (M3/S)	0.3
Time of Peak Discharge	01Jan2026, 12:15
Volume (MM)	30.77
Precipitation Volume (M3)	4293.57
Loss Volume (M3)	1640.44
Excess Volume (M3)	2653.13
Direct Runoff Volume (M3)	2637.32
Baseflow Volume (M3)	0

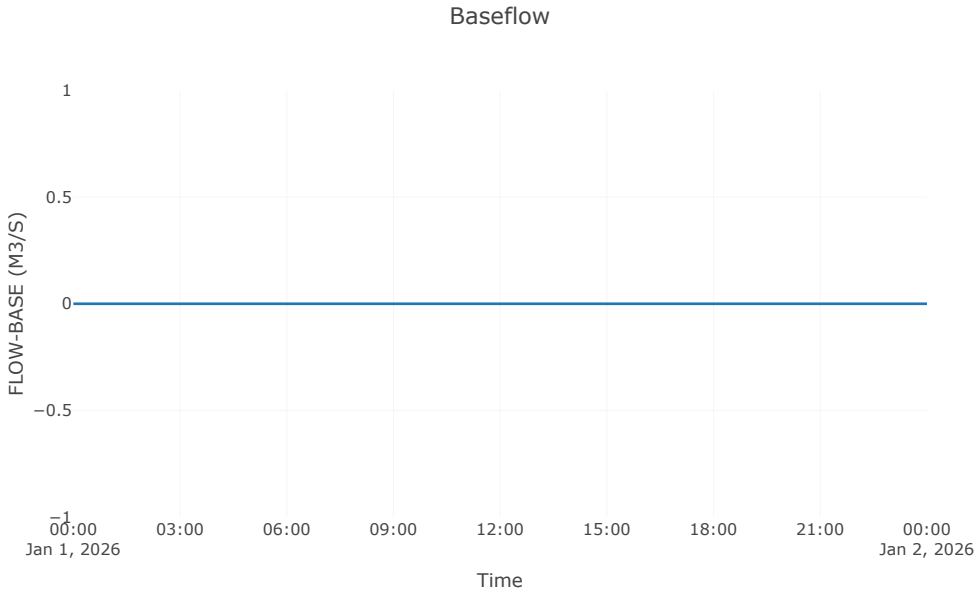

Precipitation and Outflow
PRECIP-INC (MM)
0
0.5
1
1.5
2
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

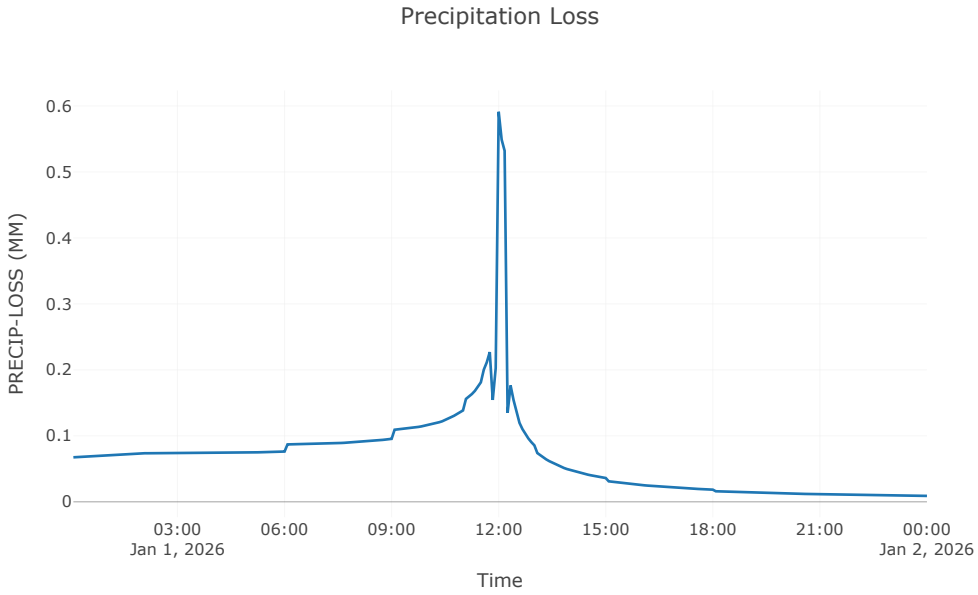

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
30
25
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

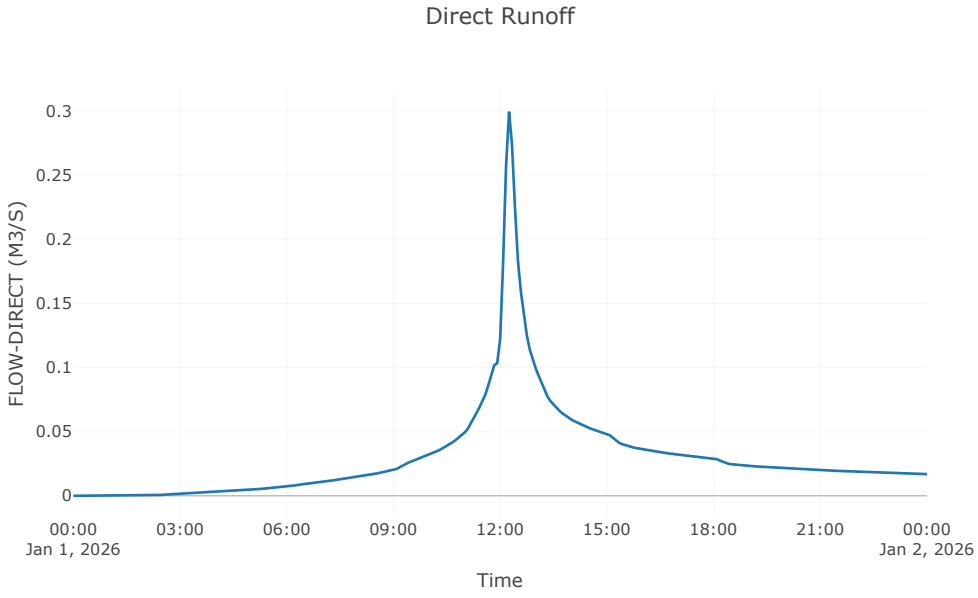

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

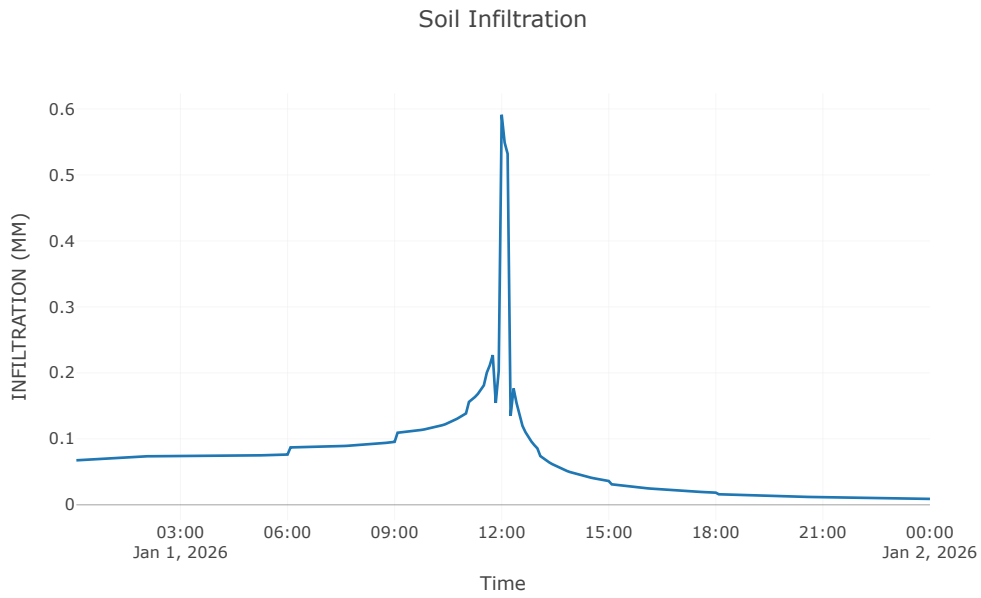

Cumulative Precipitation
PRECIP-CUM (MM)
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
0.6
0.5
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
0.3
0.25
0.2
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
0.6
0.5
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

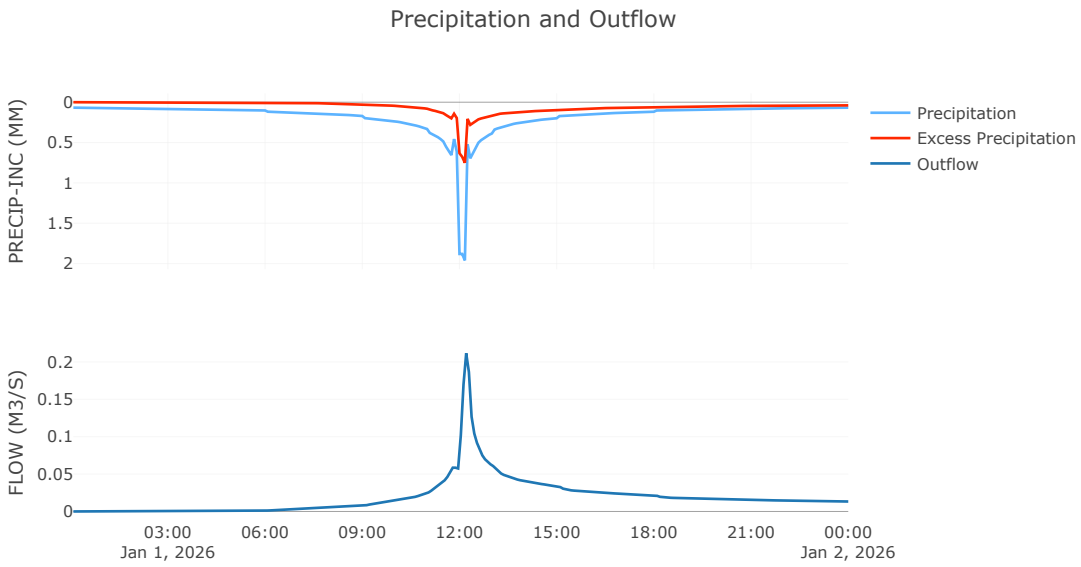
Subbasin: DIFFERENCE WETLAND B UPSTRE

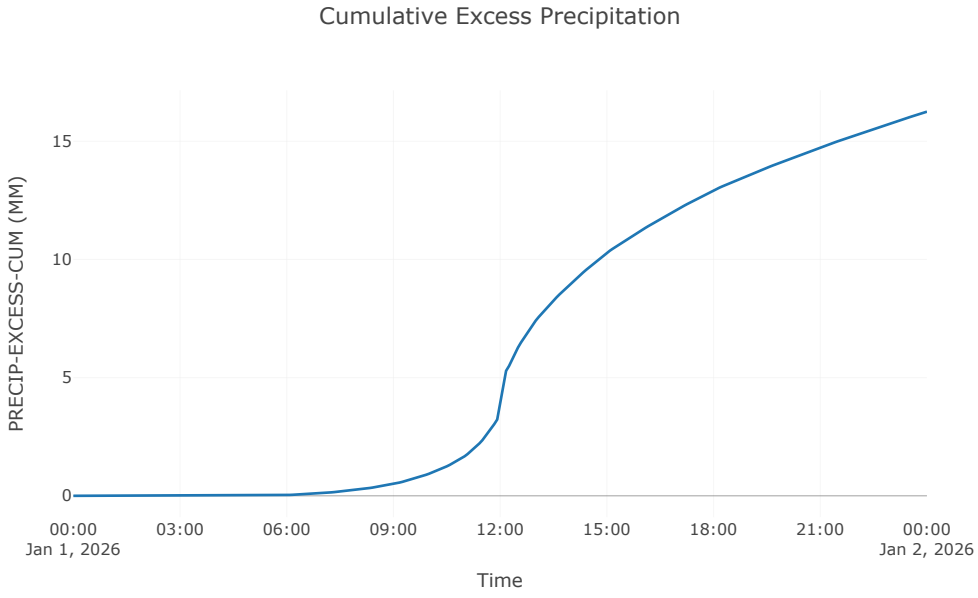
Area (KM2) : 0.1
Latitude Degrees : -44.99
Longitude Degrees : 168.84
Downstream : Junction - CHANNEL 4

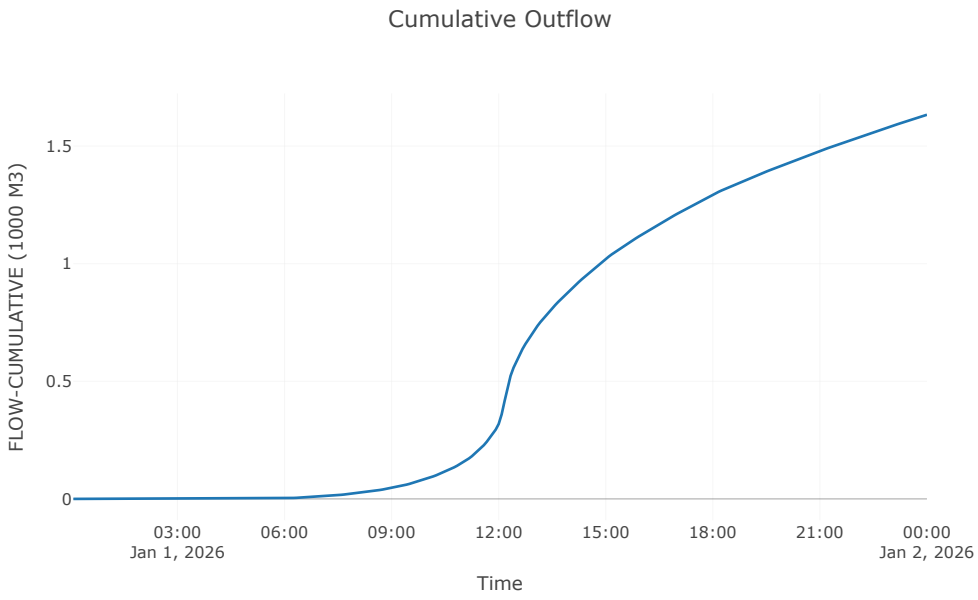
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	75.2
Initial Abstraction	4.19

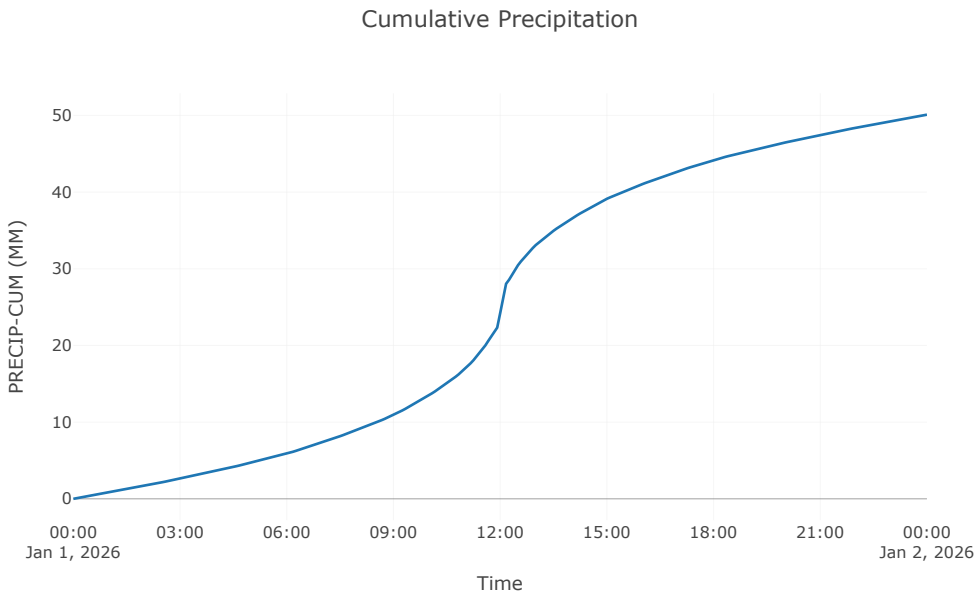
Transform: Scs	
Lag	6.14
Unitgraph Type	Standard

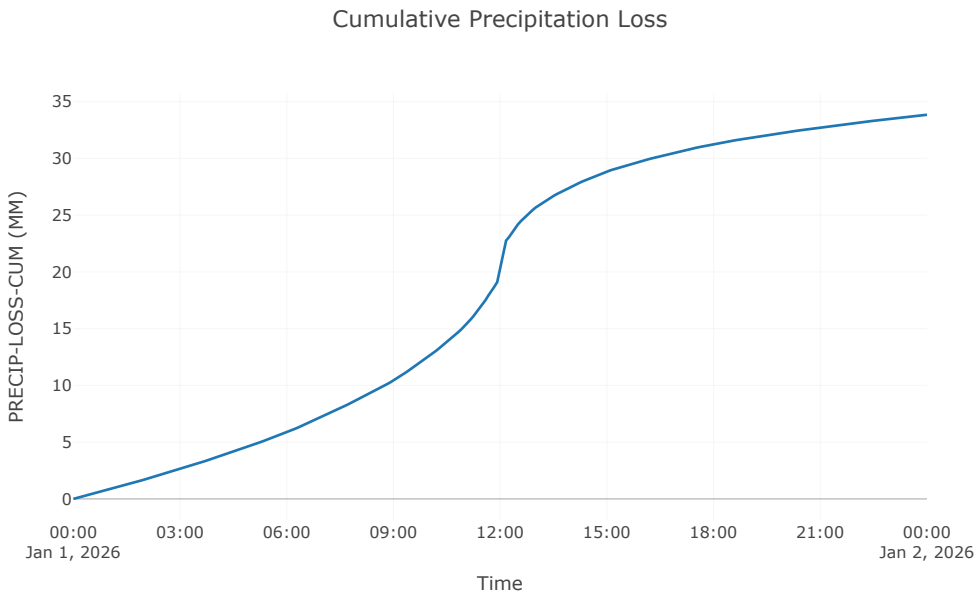
Results: DIFFERENCE WETLAND B UPSTRE	
Peak Discharge (M3/S)	0.21
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	16.19
Precipitation Volume (M3)	5055.09
Loss Volume (M3)	3415.08
Excess Volume (M3)	1640.01
Direct Runoff Volume (M3)	1633.11
Baseflow Volume (M3)	0

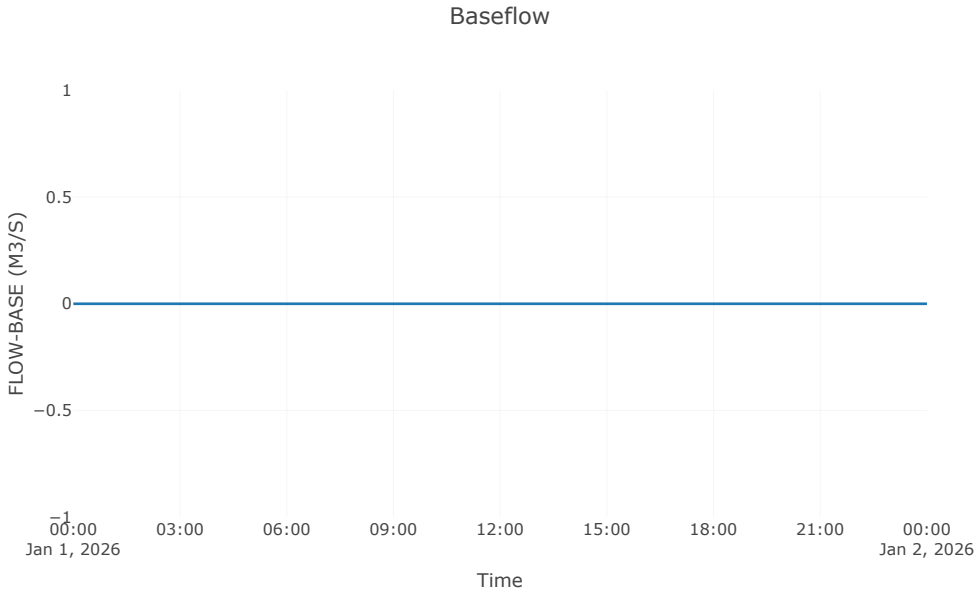

Precipitation and Outflow
PRECIP-INC (MM)
0
0.5
1
1.5
2
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
0.2
0.15
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

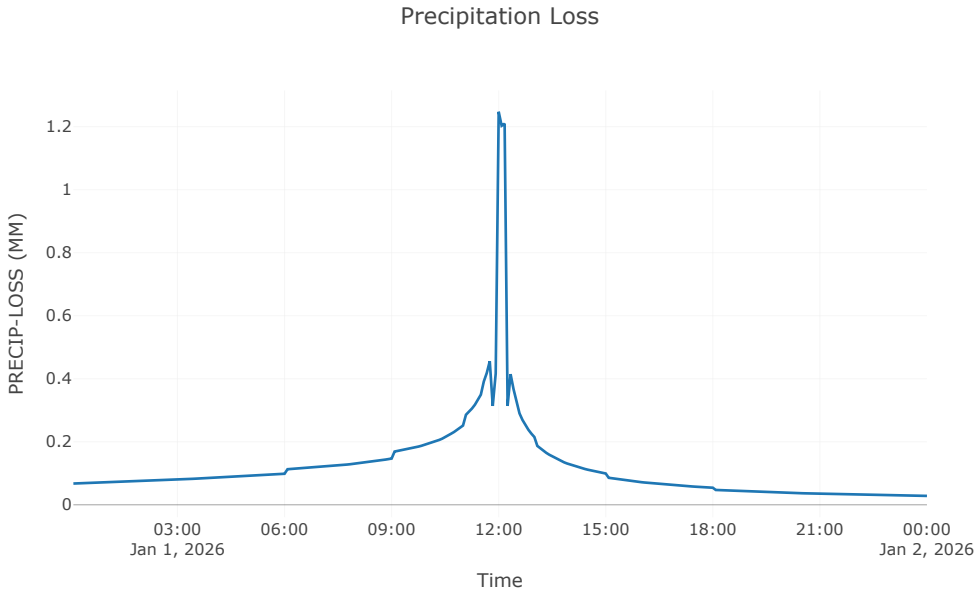

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

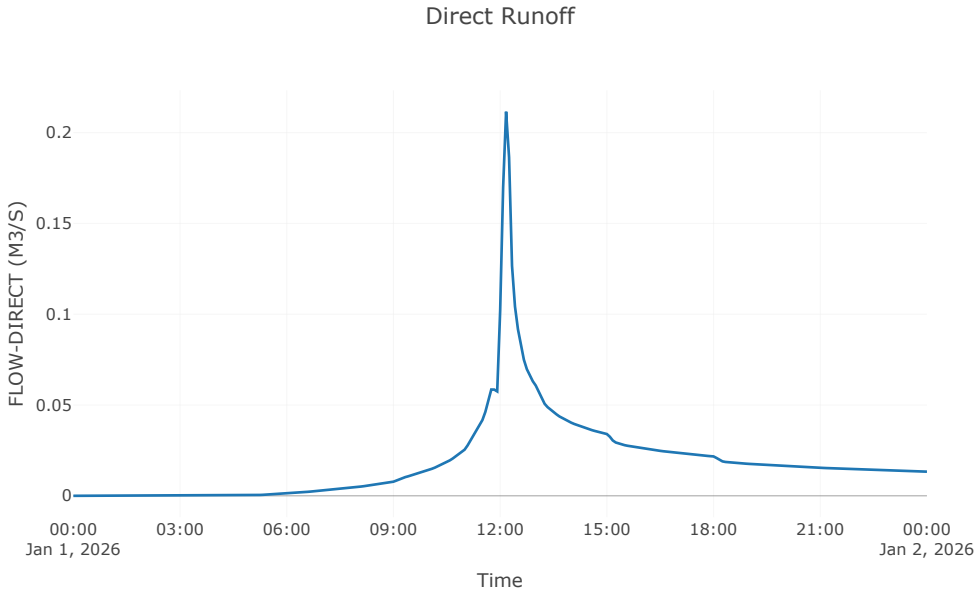

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

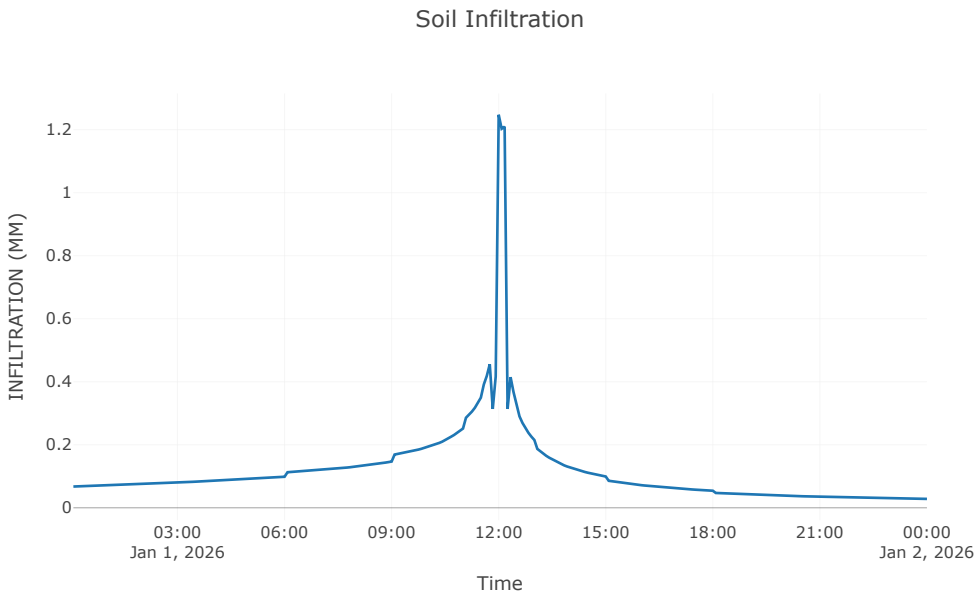

Cumulative Precipitation
PRECIP-CUM (MM)
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
35
30
25
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
1.2
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
0.2
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
1.2
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

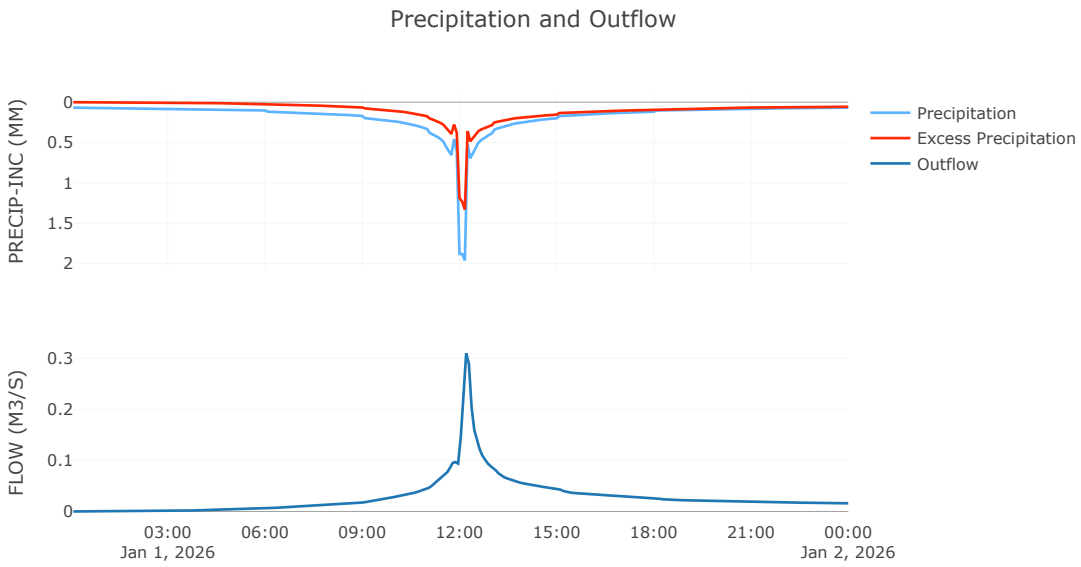
Subbasin: DIFFERENCE WETLAND B INTERN

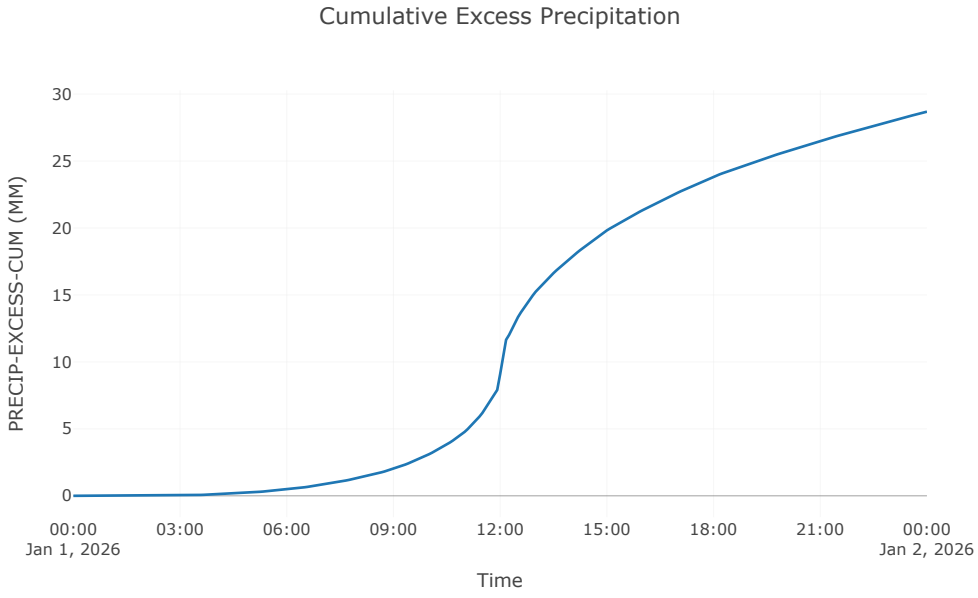
Area (KM2) : 0.08
Latitude Degrees : -44.99
Longitude Degrees : 168.84
Downstream : Junction - CHANNEL 4

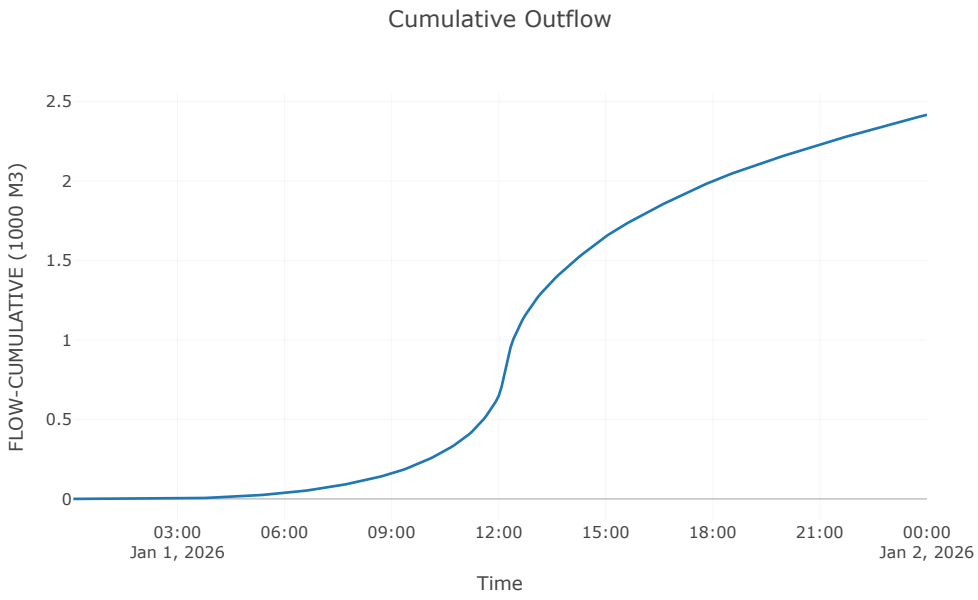
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	88.4
Initial Abstraction	1.67

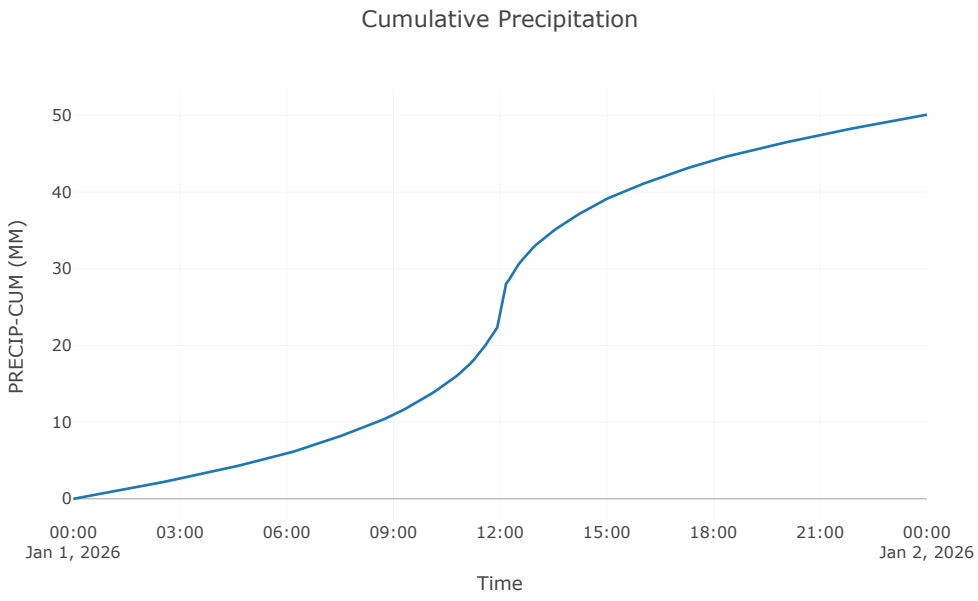
Transform: Scs	
Lag	6.97
Unitgraph Type	Standard

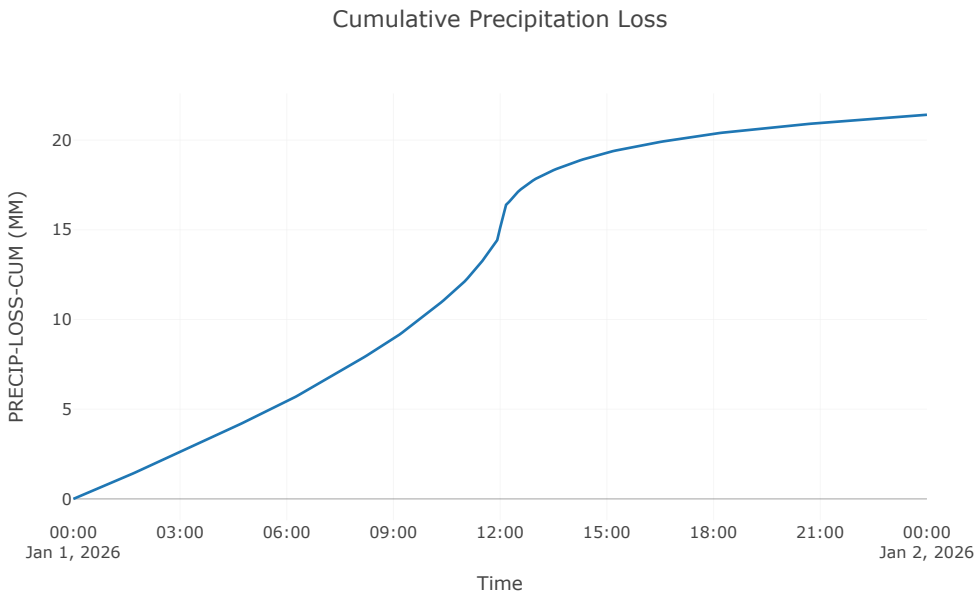
Results: DIFFERENCE WETLAND B INTERN	
Peak Discharge (M3/S)	0.31
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	28.58
Precipitation Volume (M3)	4238.46
Loss Volume (M3)	1811.53
Excess Volume (M3)	2426.93
Direct Runoff Volume (M3)	2417.54
Baseflow Volume (M3)	0

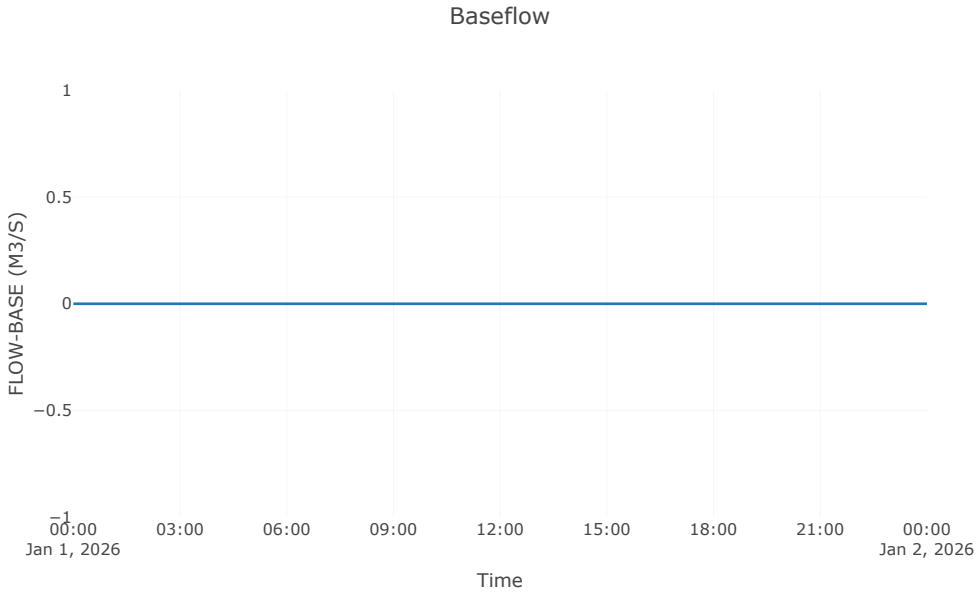

Precipitation and Outflow
PRECIP-INC (MM)
0
0.5
1
1.5
2
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

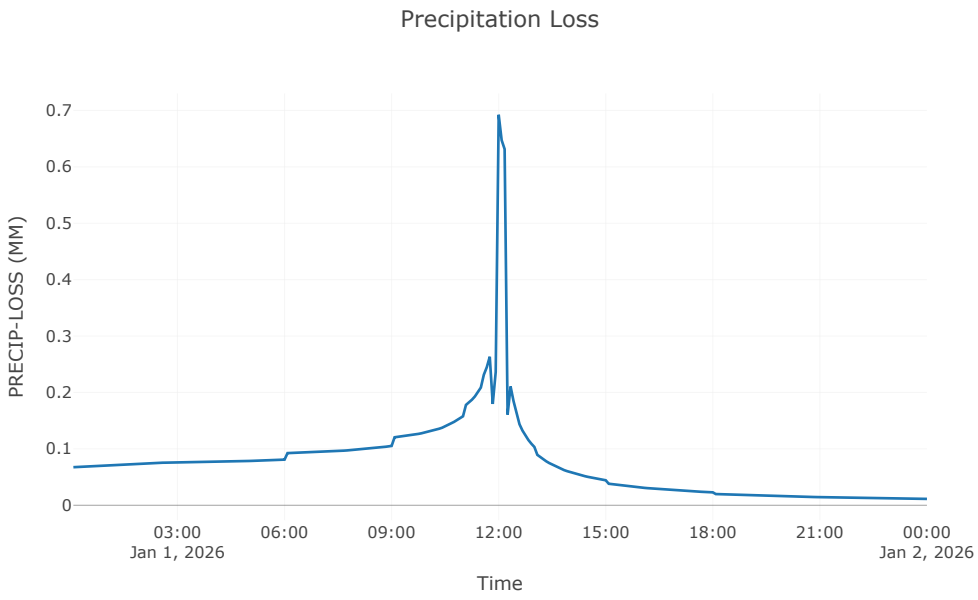

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
30
25
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

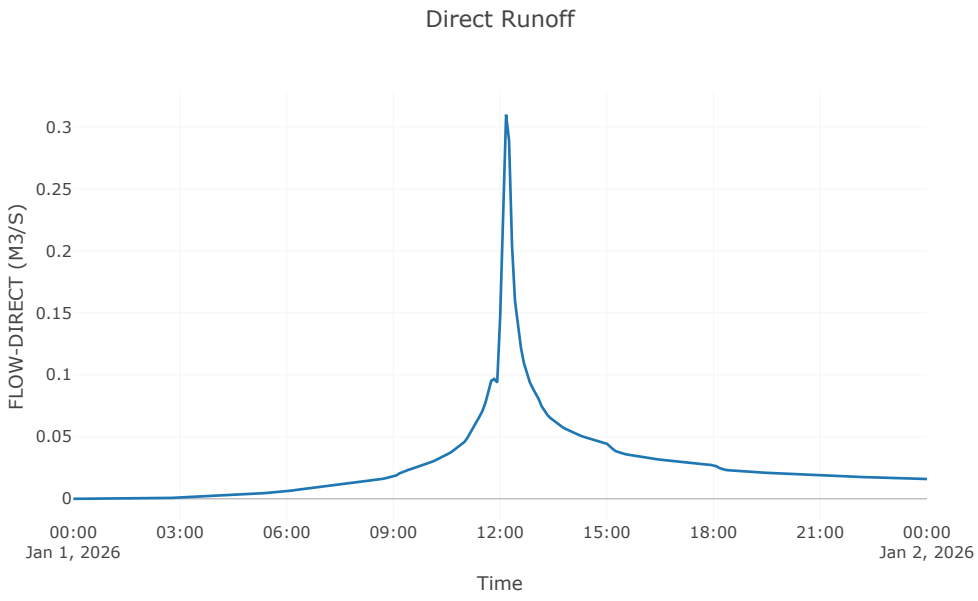

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

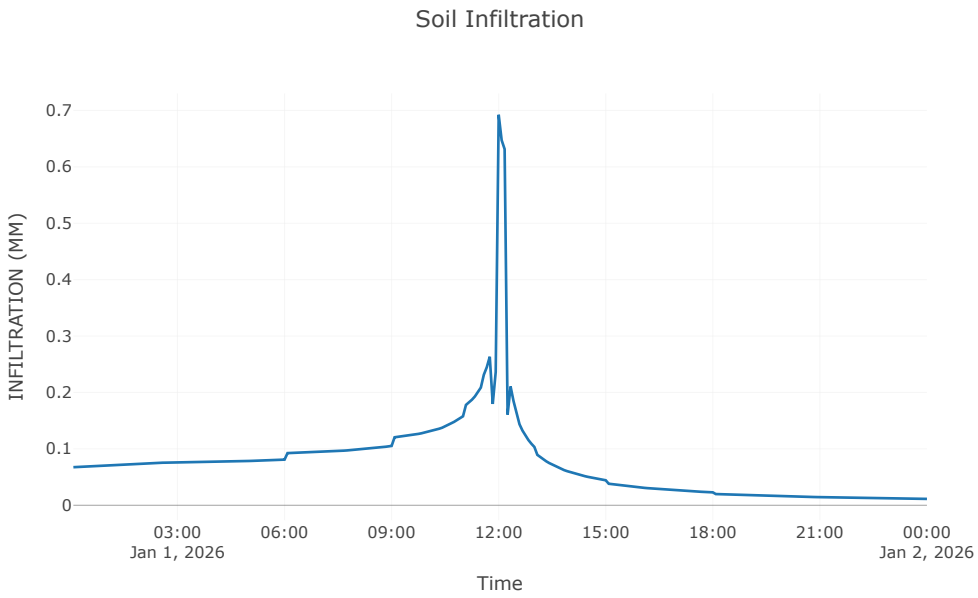

Cumulative Precipitation
PRECIP-CUM (MM)
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
0.3
0.25
0.2
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

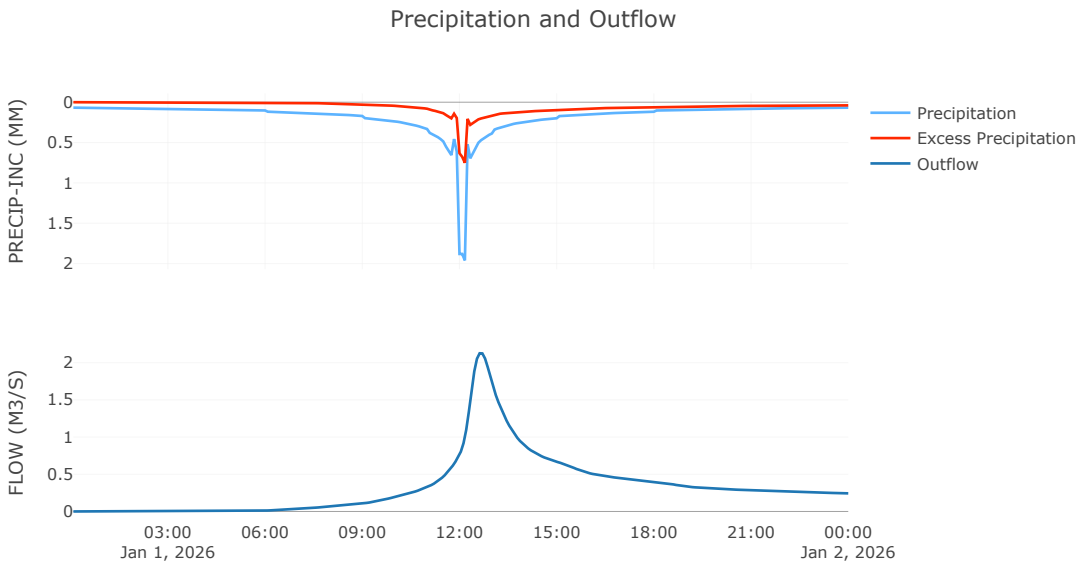
Subbasin: MORVEN FERRY VECTORISED

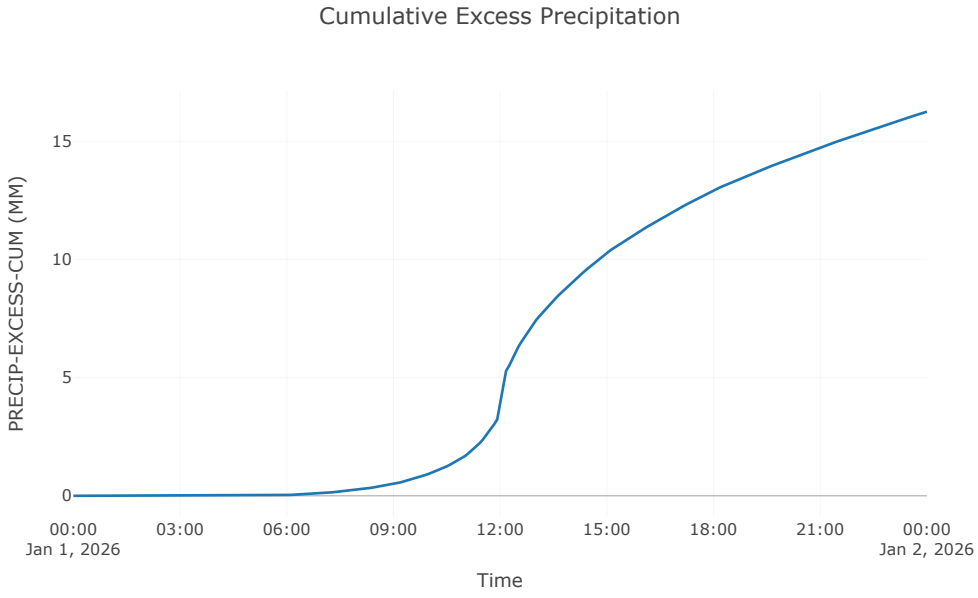
Area (KM2) : 1.8
Latitude Degrees : -44.98
Longitude Degrees : 168.84
Downstream : Swale morven ferry l

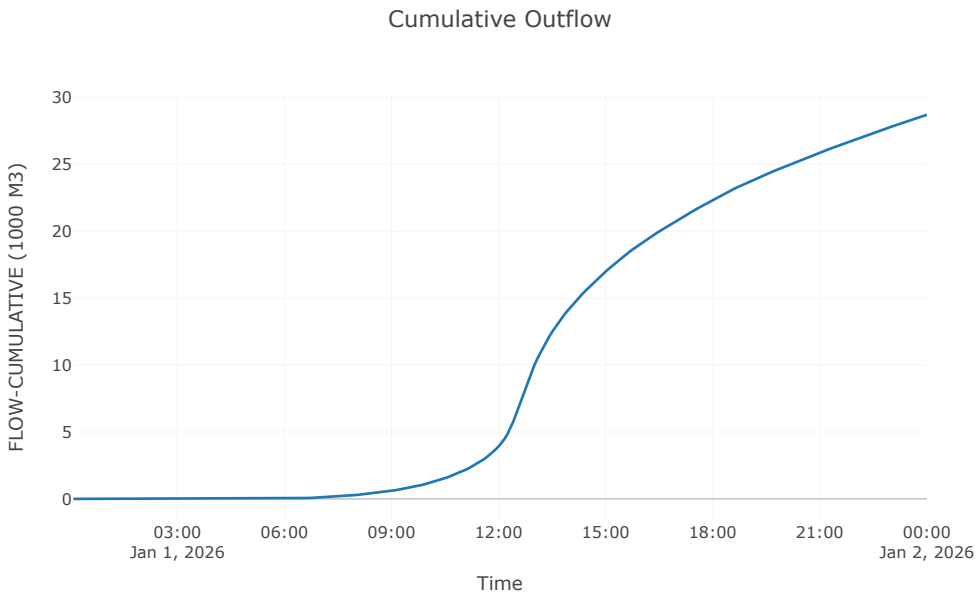
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	75.2
Initial Abstraction	4.19

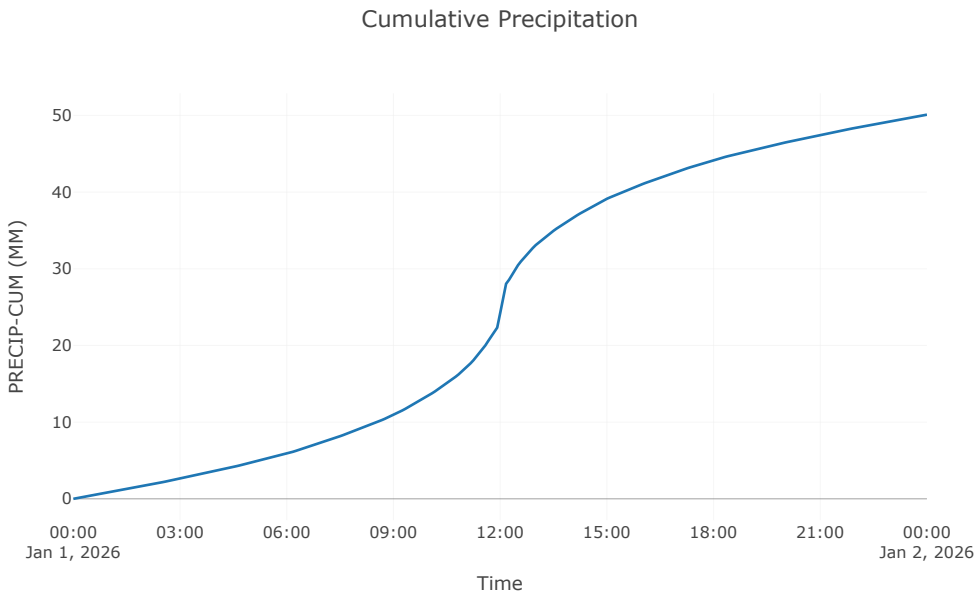
Transform: Scs	
Lag	30.44
Unitgraph Type	Standard

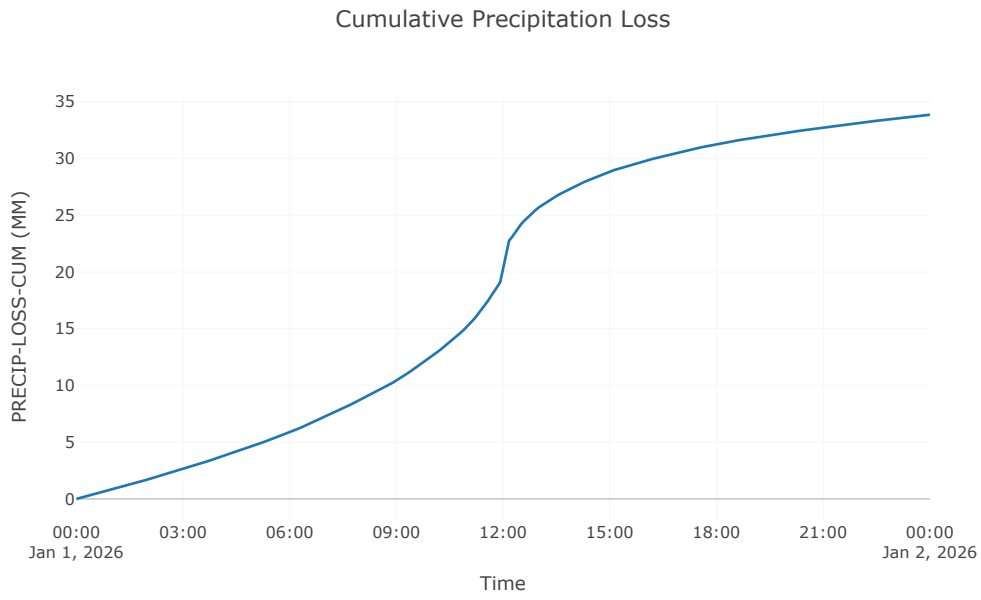
Results: MORVEN FERRY VECTORISED	
Peak Discharge (M3/S)	2.13
Time of Peak Discharge	01Jan2026, 12:35
Volume (MM)	15.93
Precipitation Volume (M3)	90260.16
Loss Volume (M3)	60977.3
Excess Volume (M3)	29282.86
Direct Runoff Volume (M3)	28704.91
Baseflow Volume (M3)	0

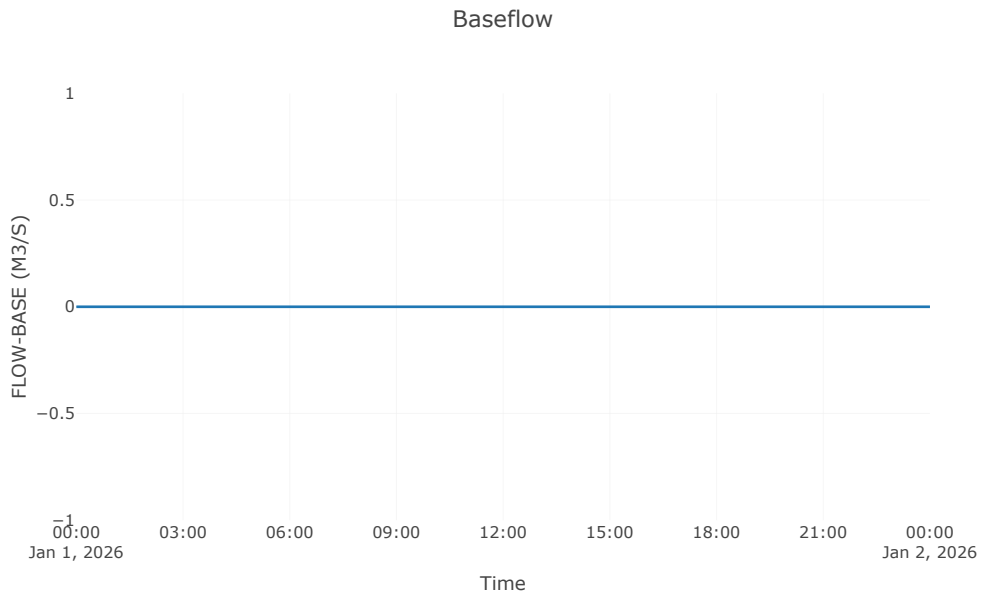

Precipitation and Outflow
PRECIP-INC (MM)
0
0.5
1
1.5
2
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

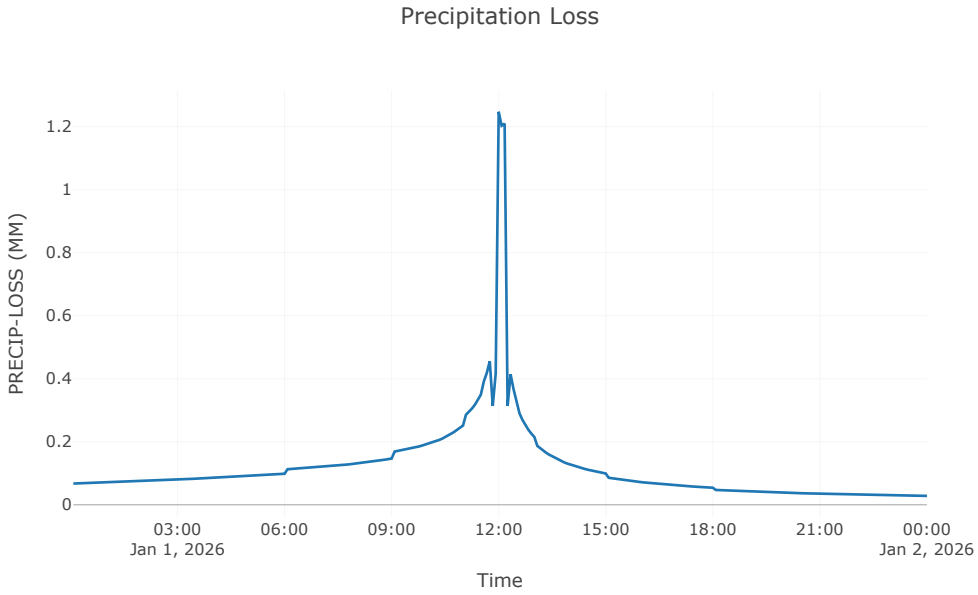

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

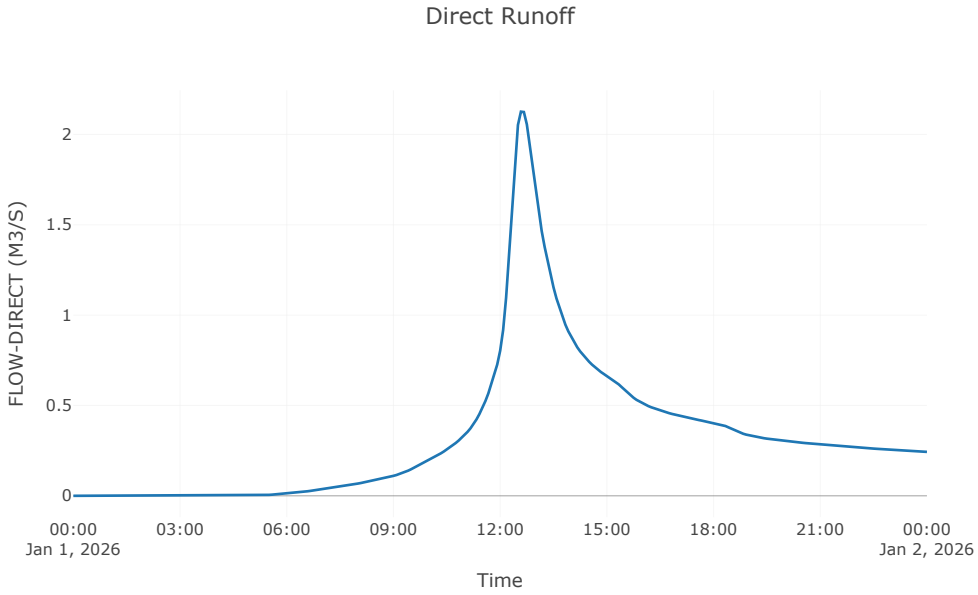

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
30
25
20
15
10
5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

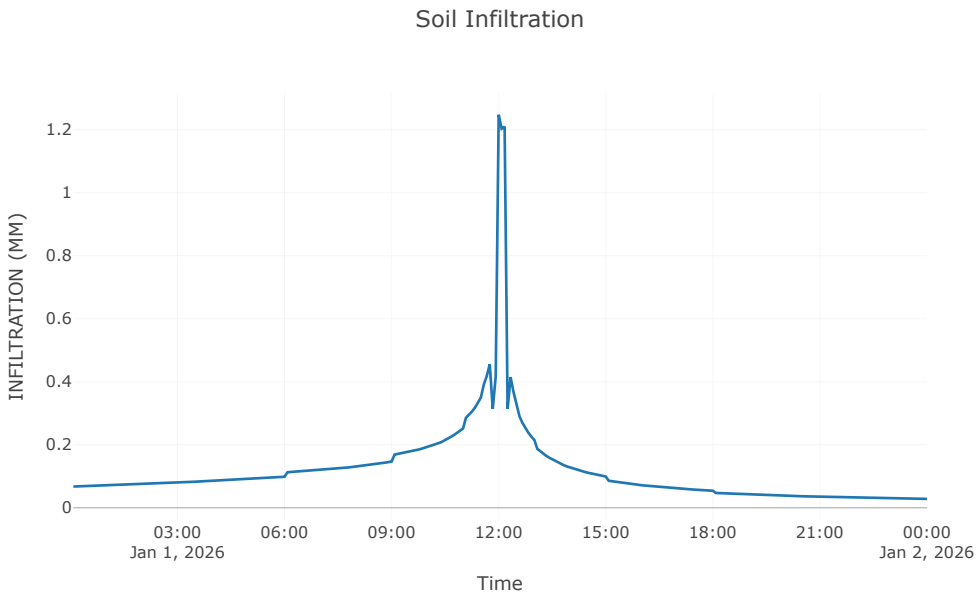

Cumulative Precipitation
PRECIP-CUM (MM)
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
35
30
25
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
1.2
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
1.2
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

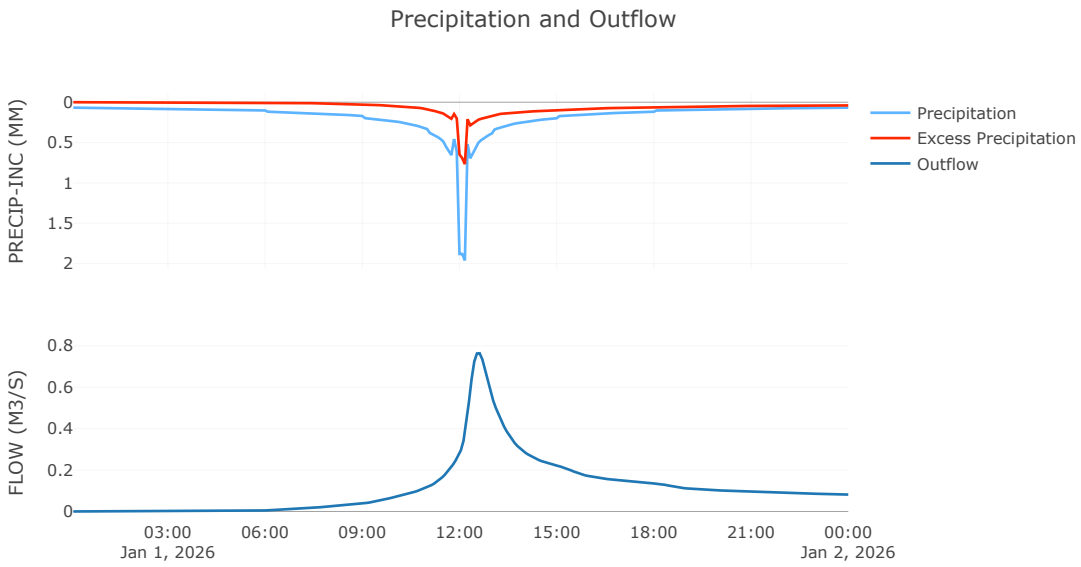
Subbasin: DIFFERENCE DOWNSTREAM EXIT

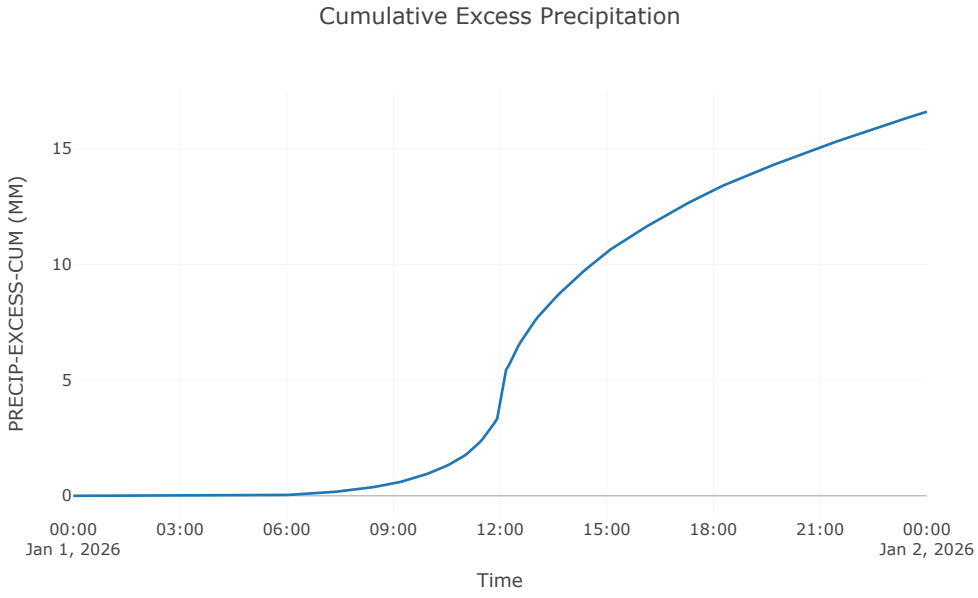
Area (KM2) : 0.6
Latitude Degrees : -45
Longitude Degrees : 168.85
Downstream : Junction - EXIT OLFP

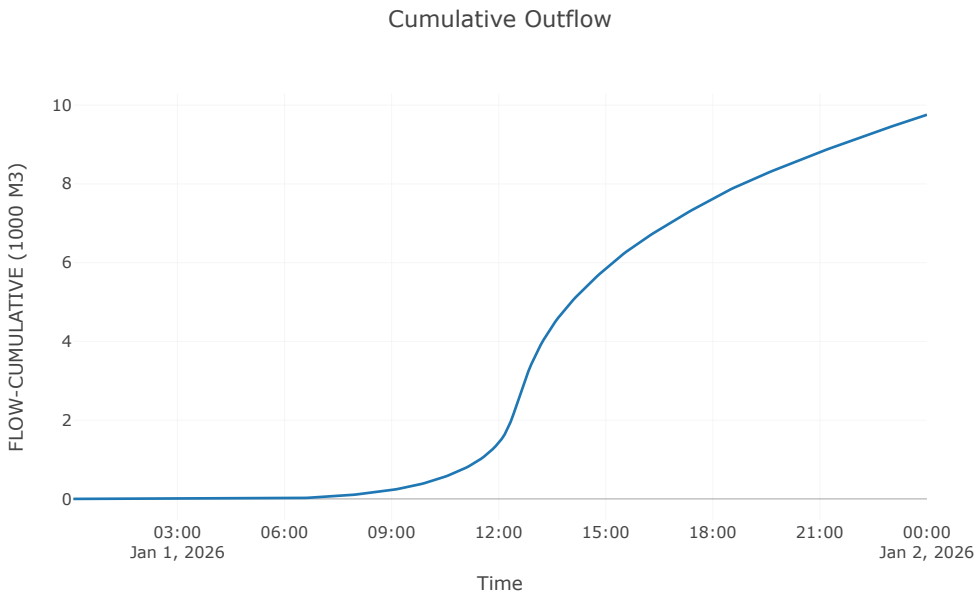
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	75.7
Initial Abstraction	4.08

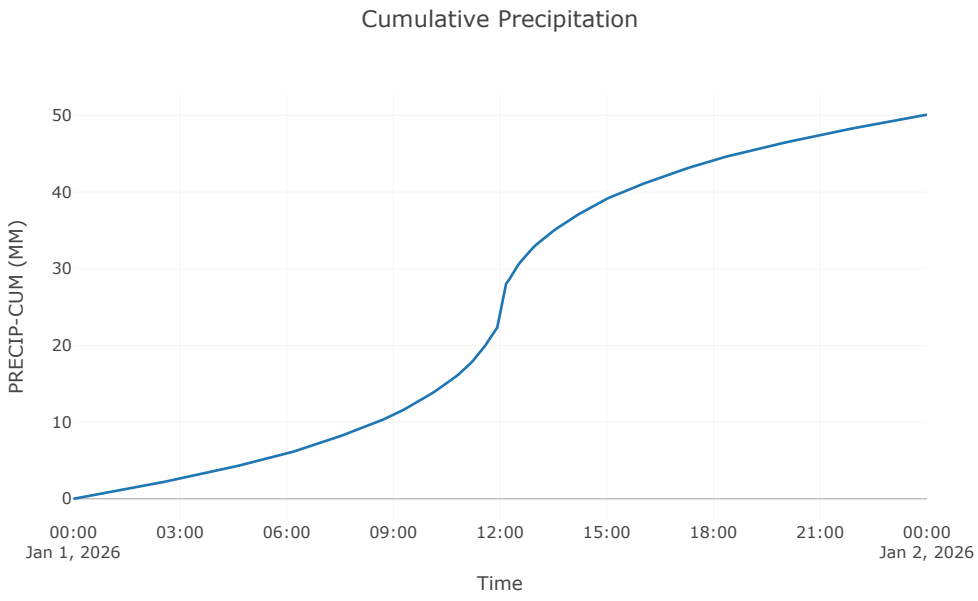
Transform: Scs	
Lag	26.55
Unitgraph Type	Standard

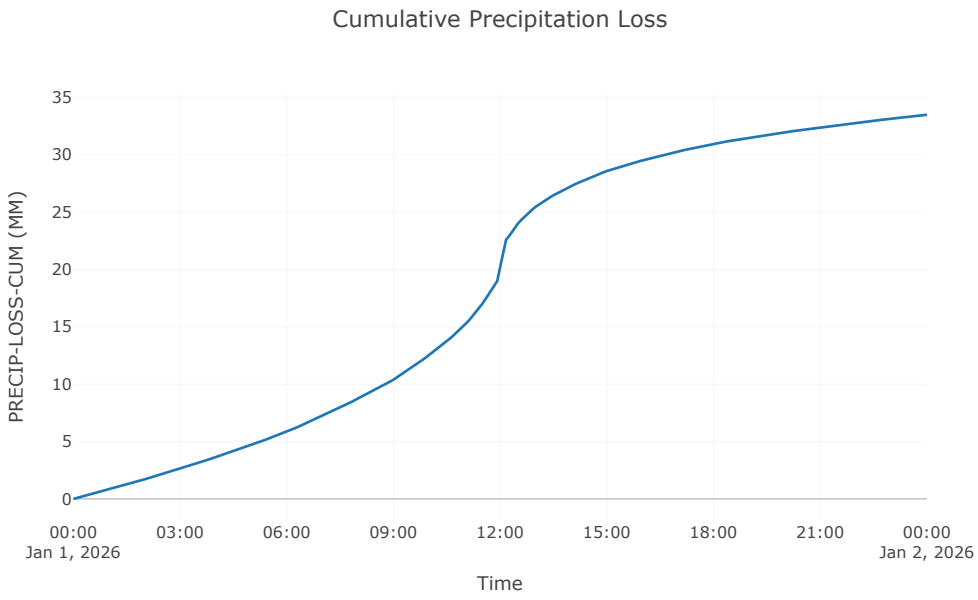
Results: DIFFERENCE DOWNSTREAM EXIT	
Peak Discharge (M3/S)	0.76
Time of Peak Discharge	01Jan2026, 12:35
Volume (MM)	16.32
Precipitation Volume (M3)	29949.78
Loss Volume (M3)	20024.3
Excess Volume (M3)	9925.48
Direct Runoff Volume (M3)	9755.66
Baseflow Volume (M3)	0

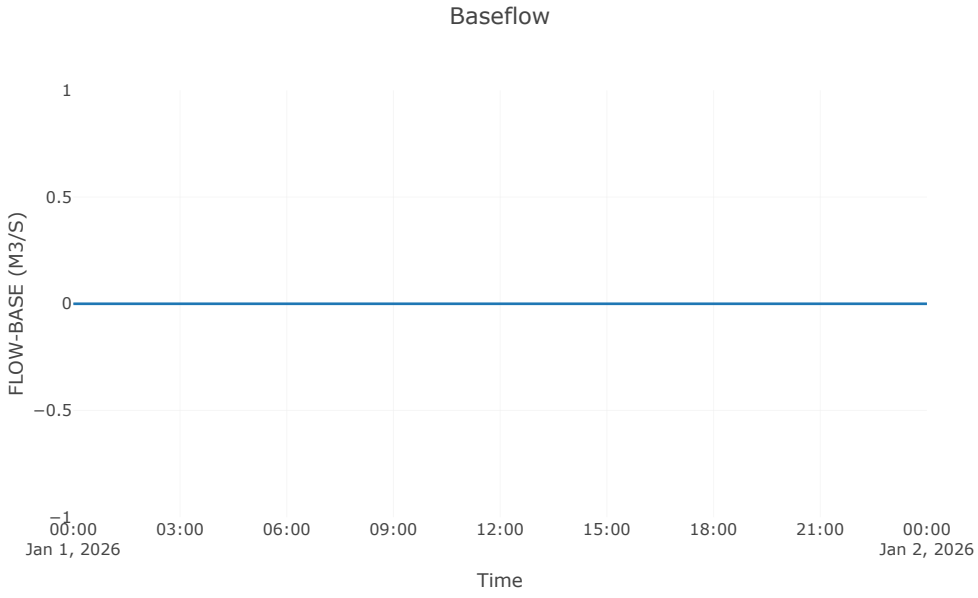

Precipitation and Outflow
PRECIP-INC (MM)
0
0.5
1
1.5
2
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

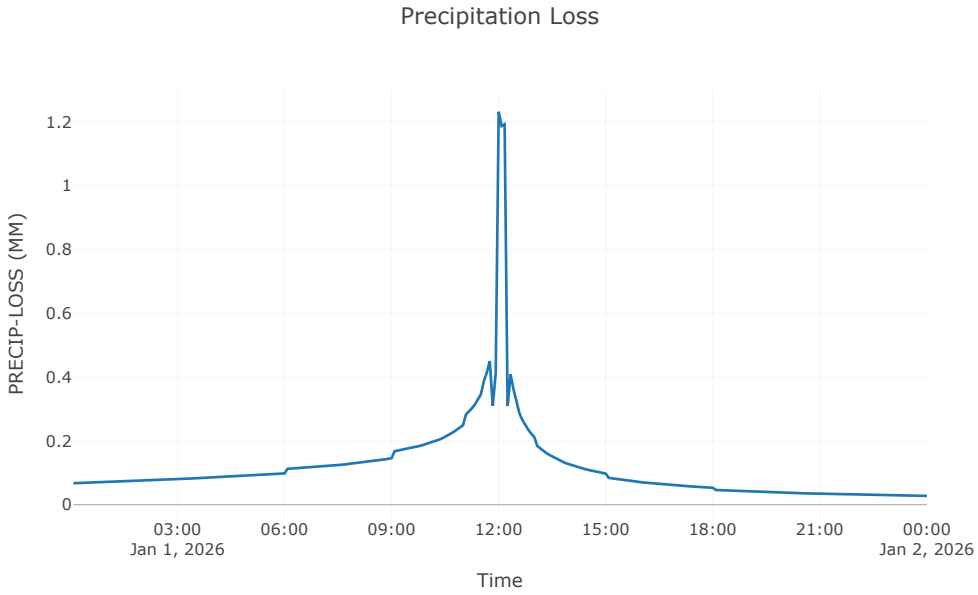

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

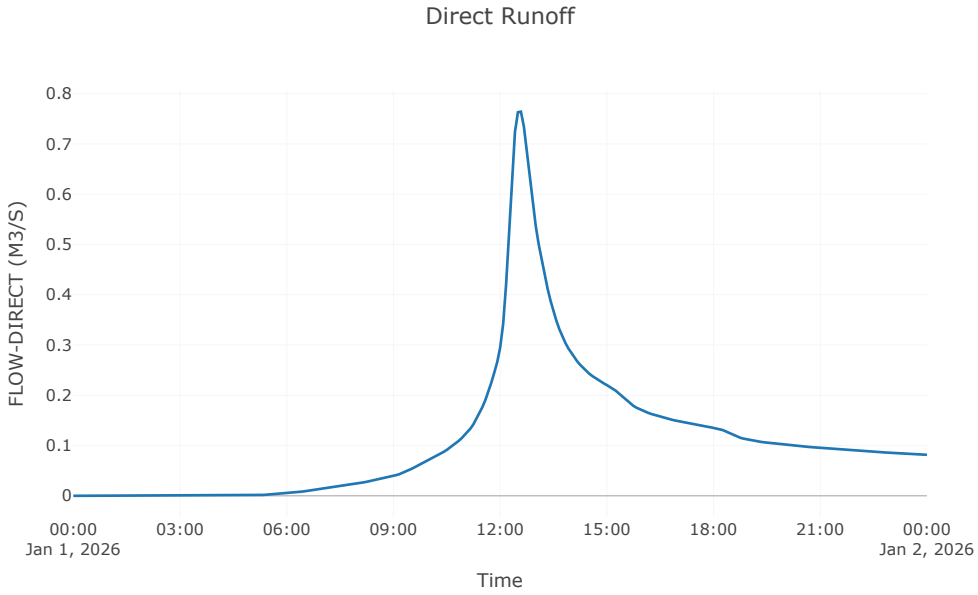

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
10
8
6
4
2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

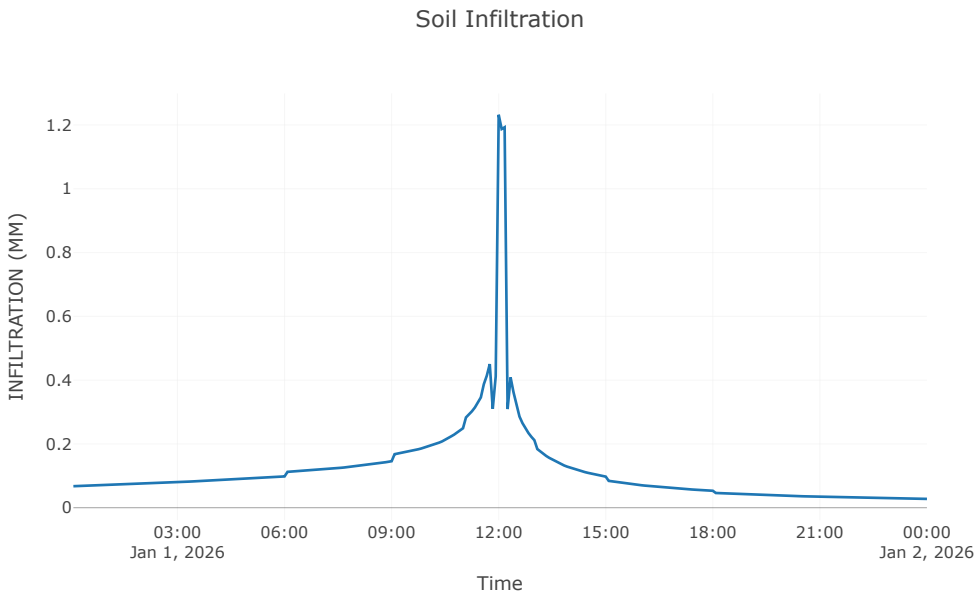

Cumulative Precipitation
PRECIP-CUM (MM)
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
35
30
25
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
1.2
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

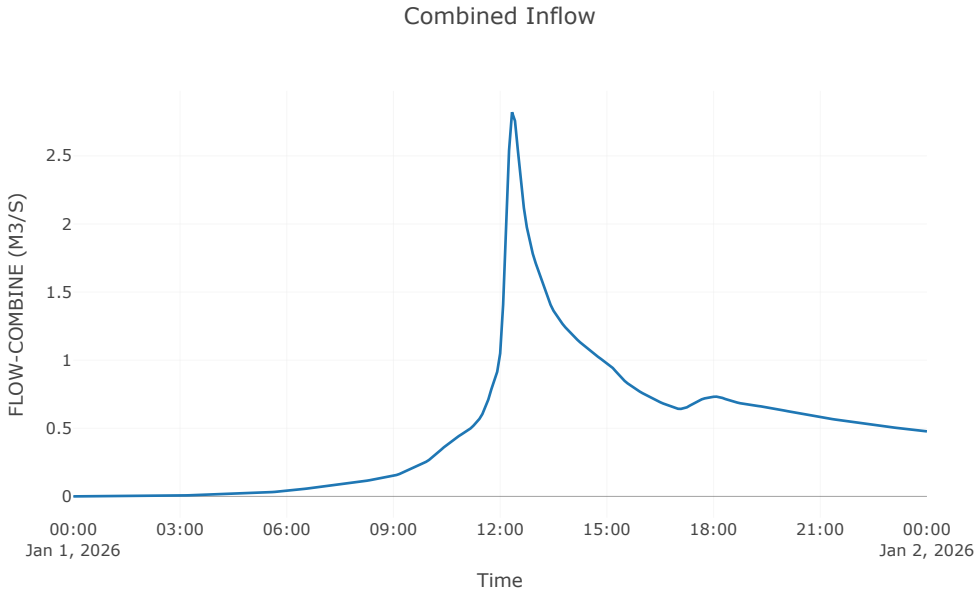

Soil Infiltration
INFILTRATION (MM)
1.2
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

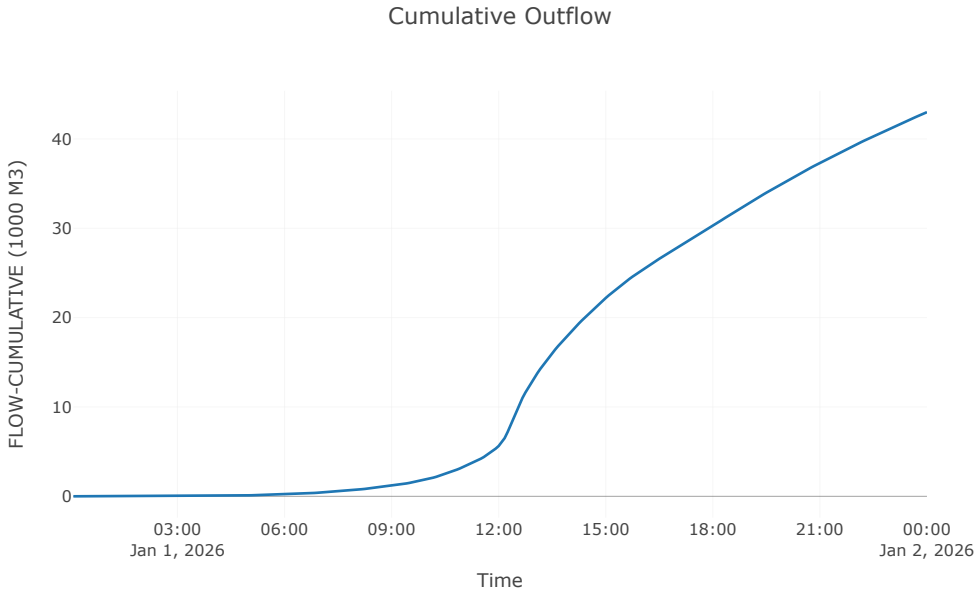
Junction: Junction-POND 1

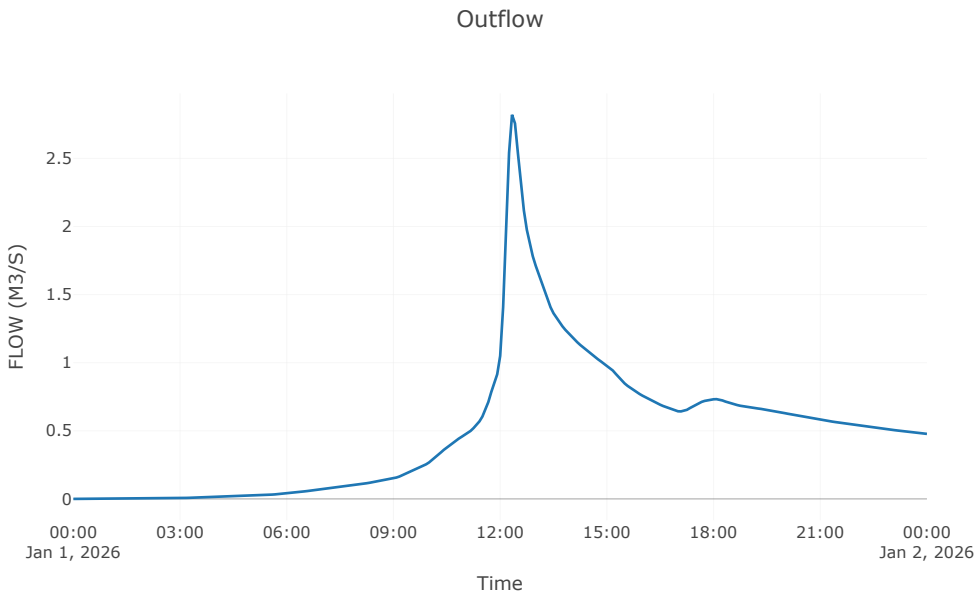
Downstream : Pond 1

Results: Junction-POND 1

Peak Discharge (M3/S)	2.82
Time of Peak Discharge	01Jan2026, 12:20
Volume (MM)	20.65





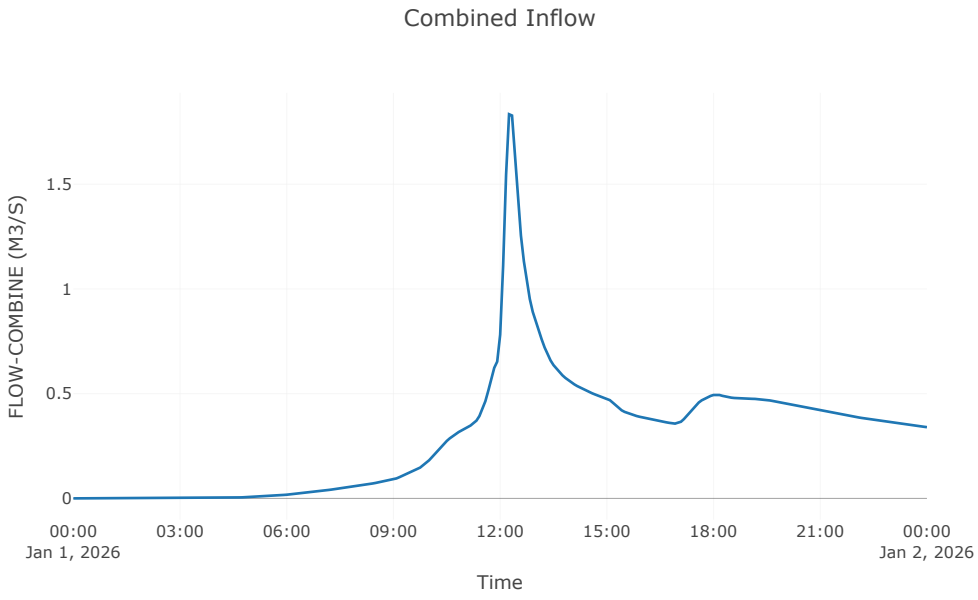

Outflow
FLOW (M3/S)
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

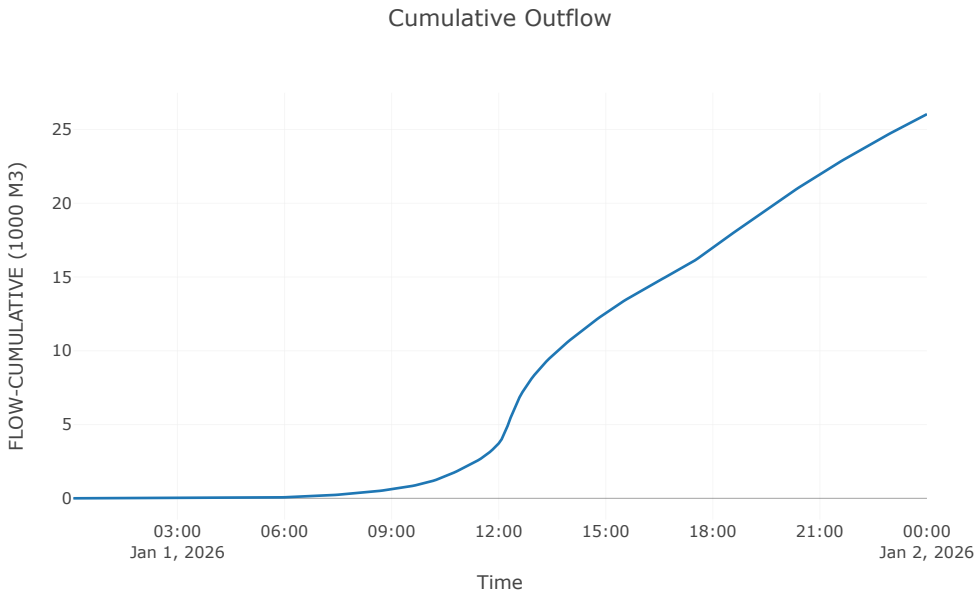
Junction: Junction-CHANNEL 1

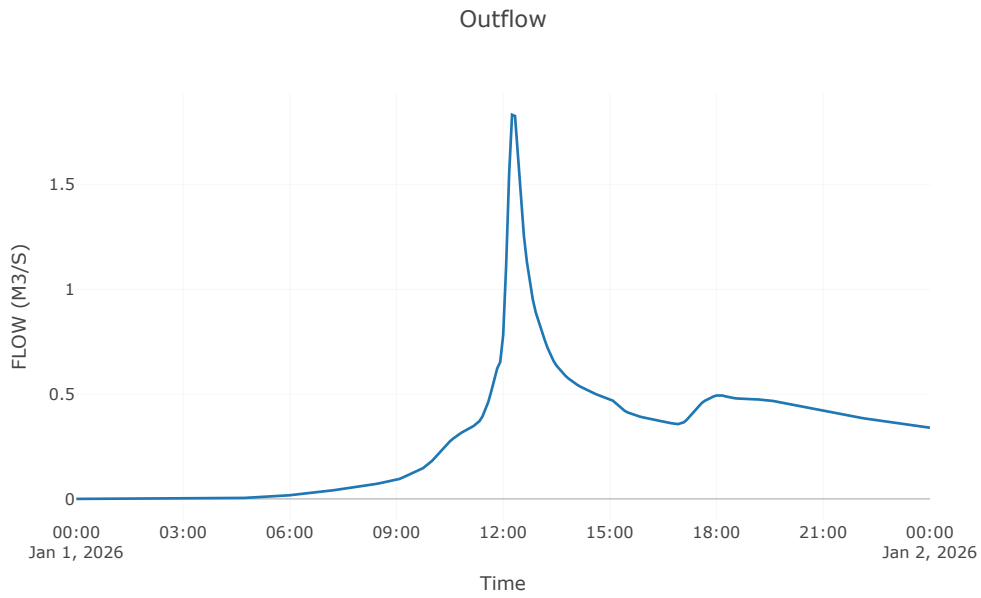
Downstream : Reach - CHANNEL 1

Results: Junction-CHANNEL 1

Peak Discharge (M3/S)	1.83
Time of Peak Discharge	01Jan2026, 12:15
Volume (MM)	20.08





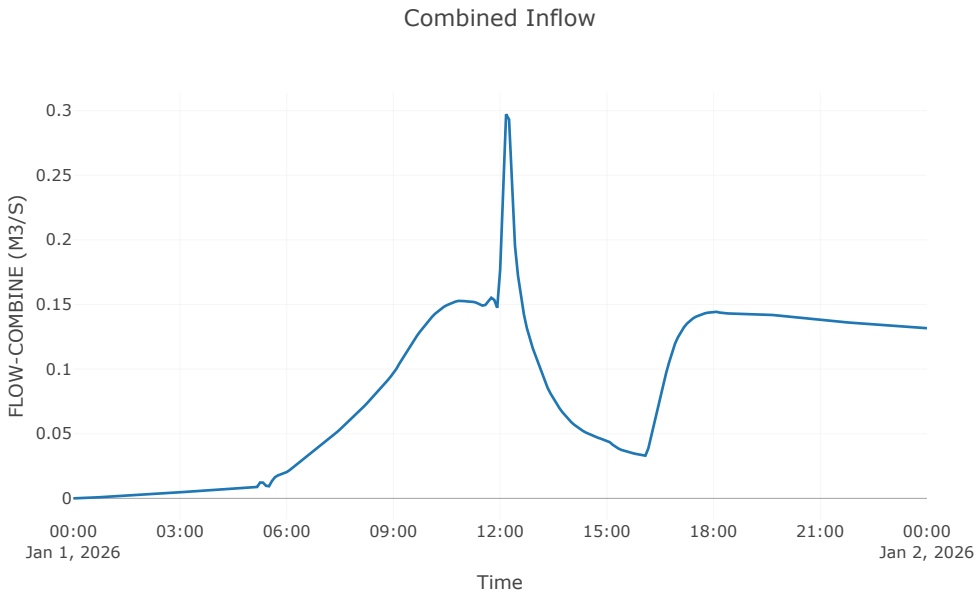

Outflow
FLOW (M3/S)
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

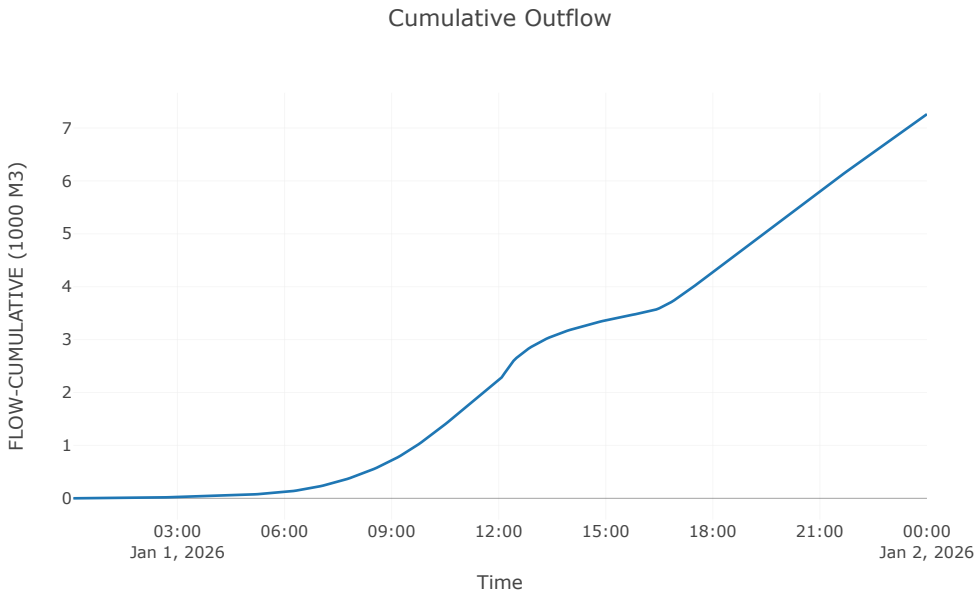
Junction: Junction-POND 2

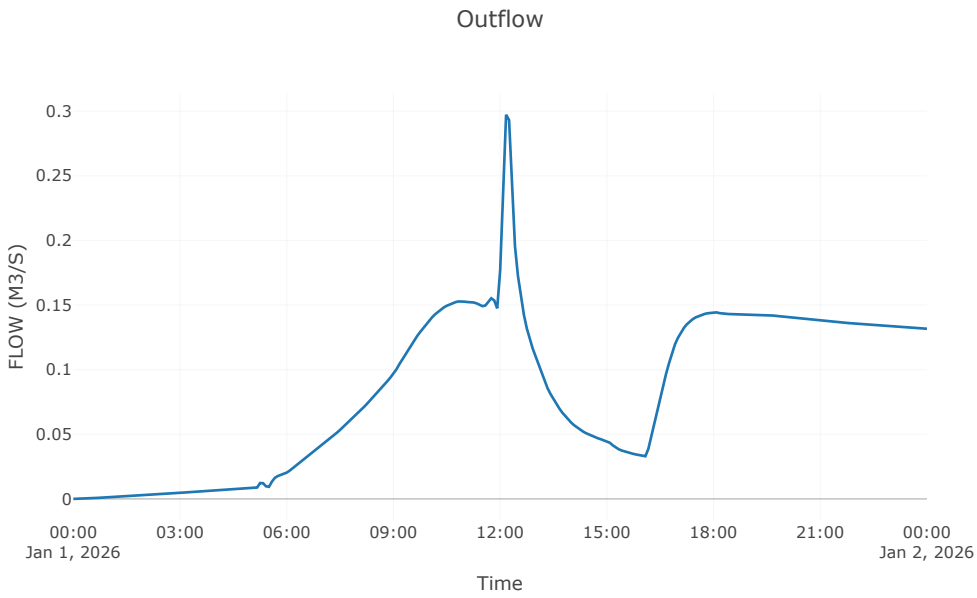
Downstream : Pond 2

Results: Junction-POND 2

Peak Discharge (M3/S)	0.3
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	3.86





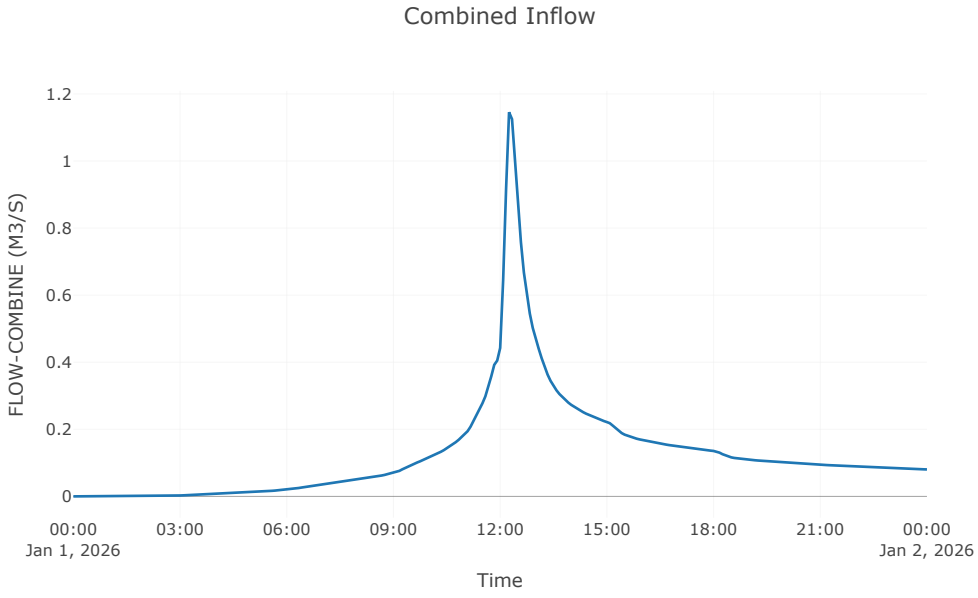

Outflow
FLOW (M3/S)
0.3
0.25
0.2
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

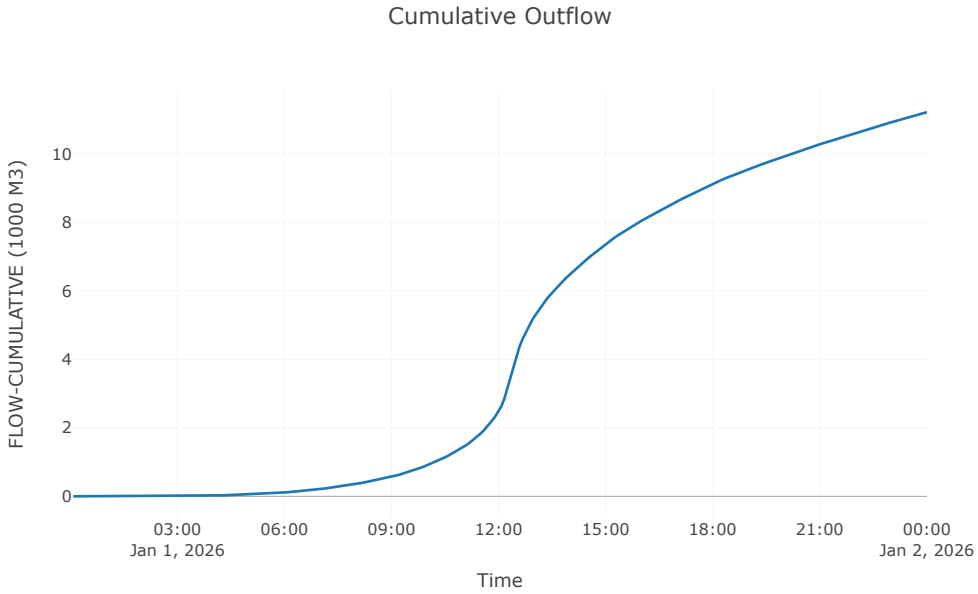
Junction: Junction-CHANNEL 3

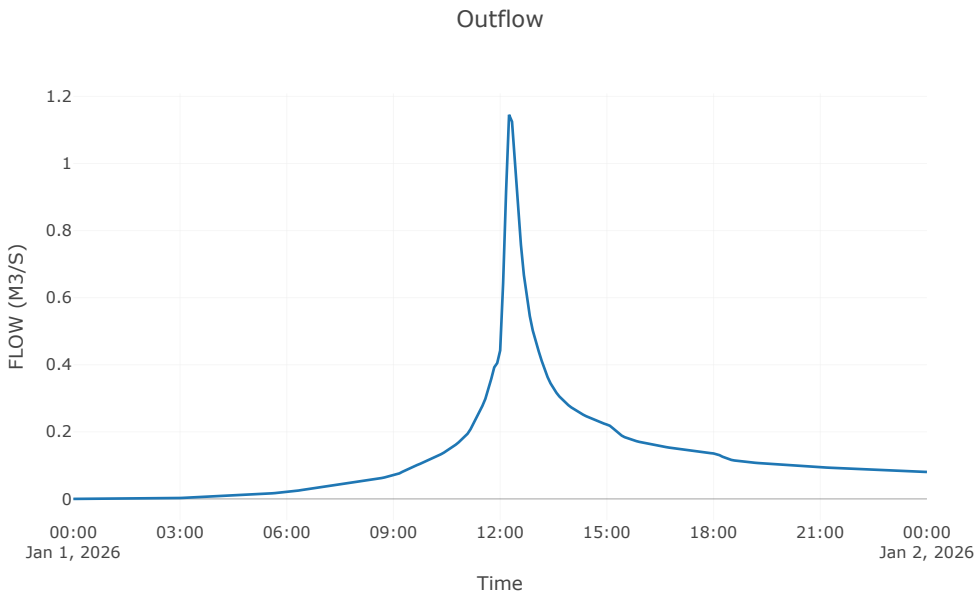
Downstream : Reach - CHANNEL 3

Results: Junction-CHANNEL 3

Peak Discharge (M3/S)	1.15
Time of Peak Discharge	01Jan2026, 12:15
Volume (MM)	23





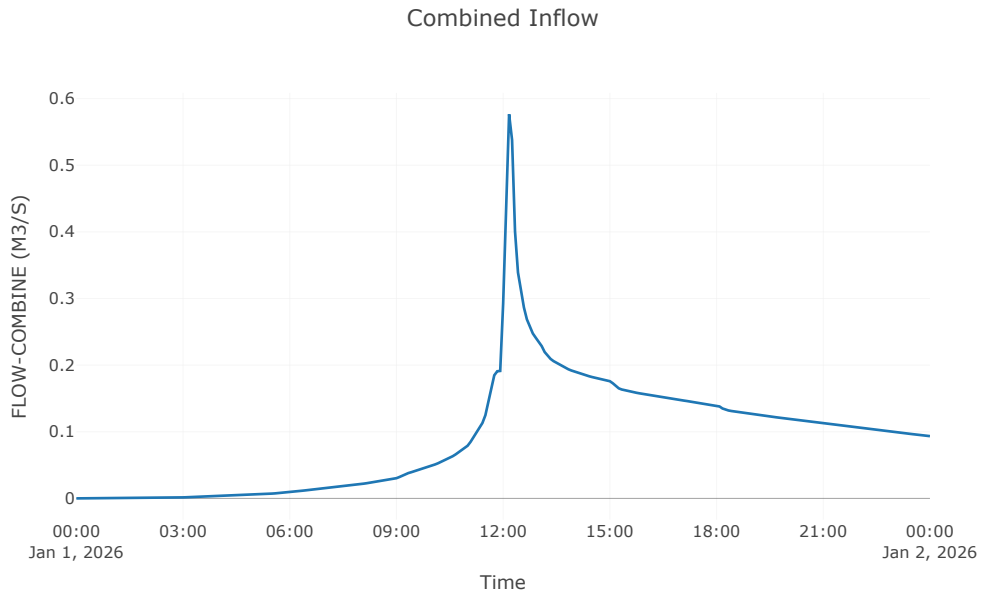

Outflow
1.2
1
0.8
0.6
0.4
0.2
0
FLOW (M3/S)
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

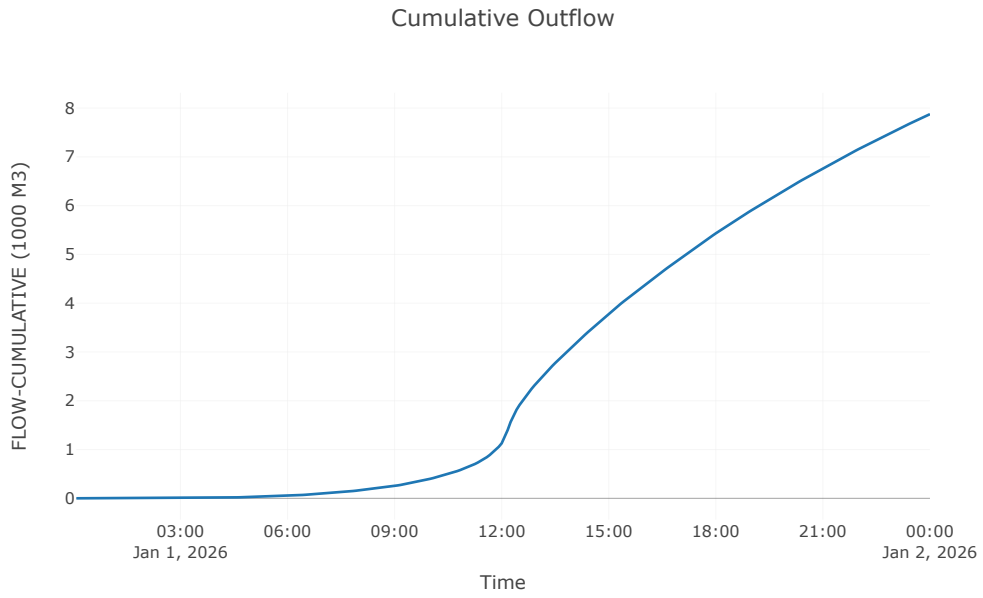
Junction: Junction-CHANNEL 4

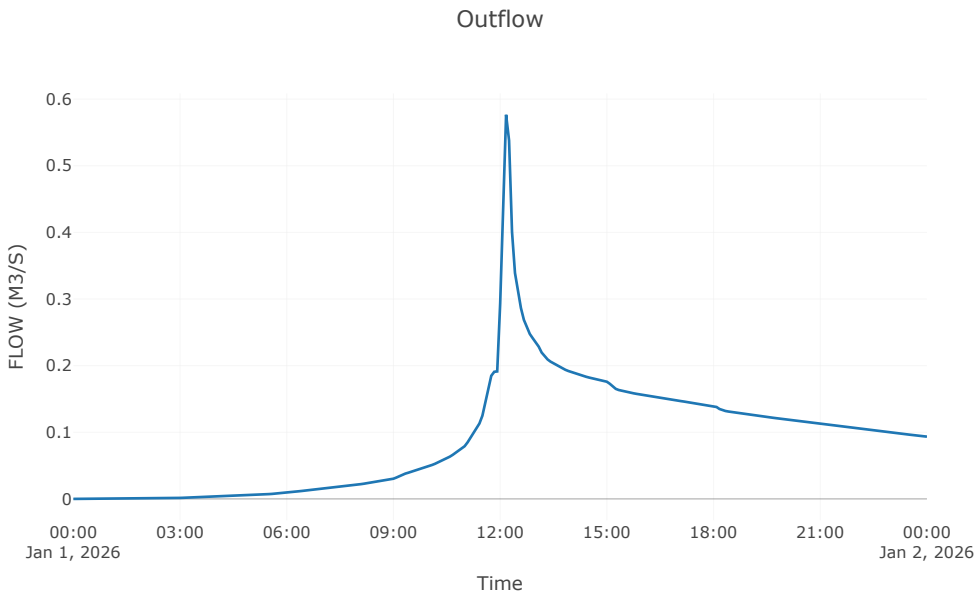
Downstream : Reach - CHANNEL 4

Results: Junction-CHANNEL 4

Peak Discharge (M3/S)	0.58
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	18.23





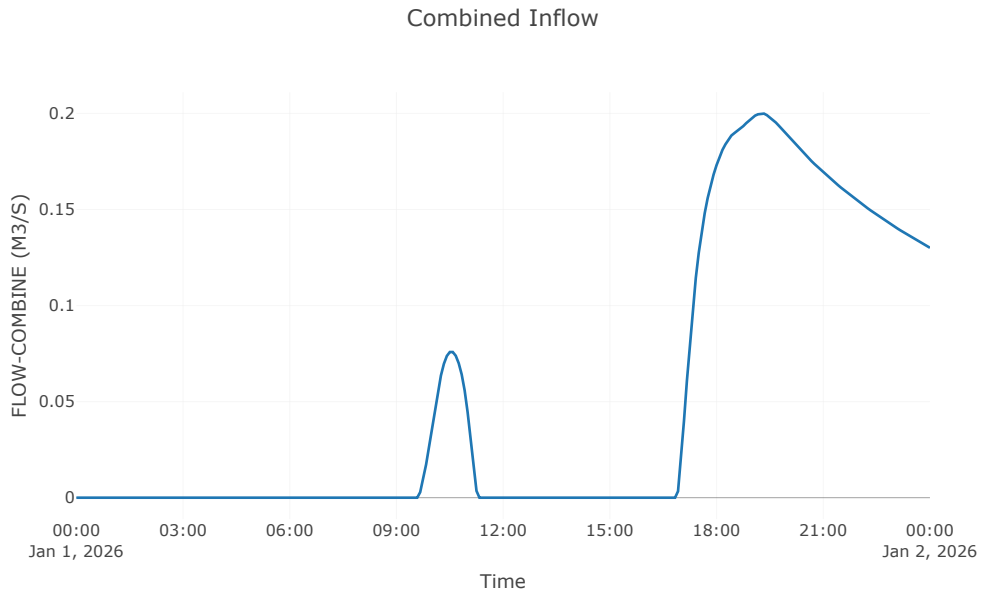

Outflow
FLOW (M3/S)
0.6
0.5
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

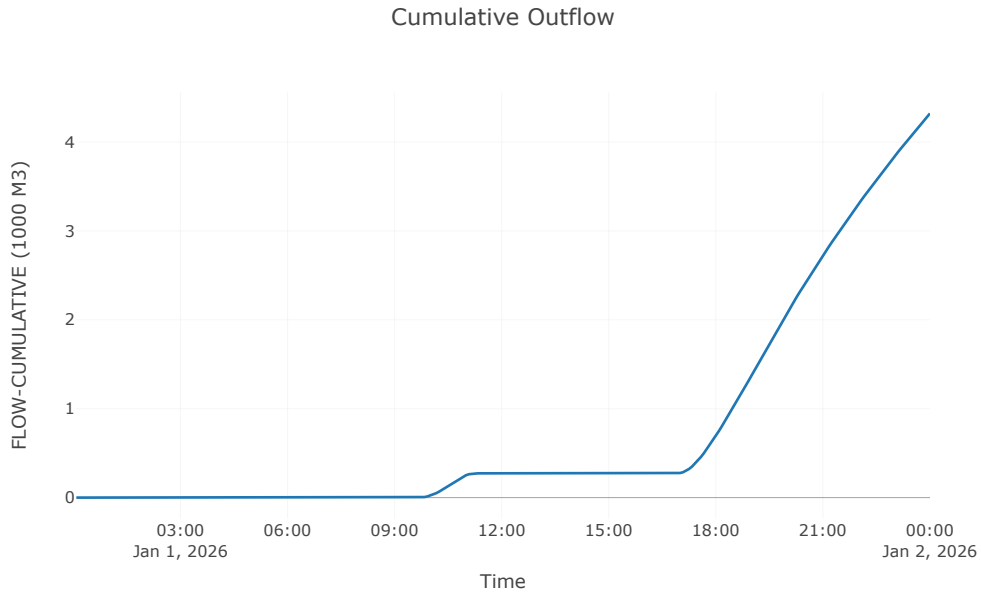
Junction: Junction-CHANNEL 5

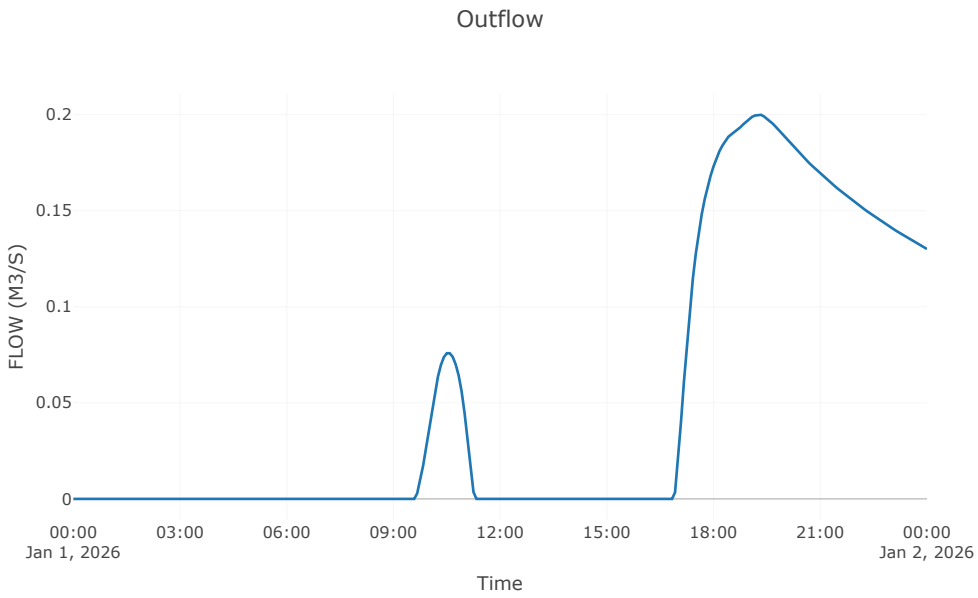
Downstream : Reach - CHANNEL 5

Results: Junction-CHANNEL 5

Peak Discharge (M3/S)	0.2
Time of Peak Discharge	01Jan2026, 19:15





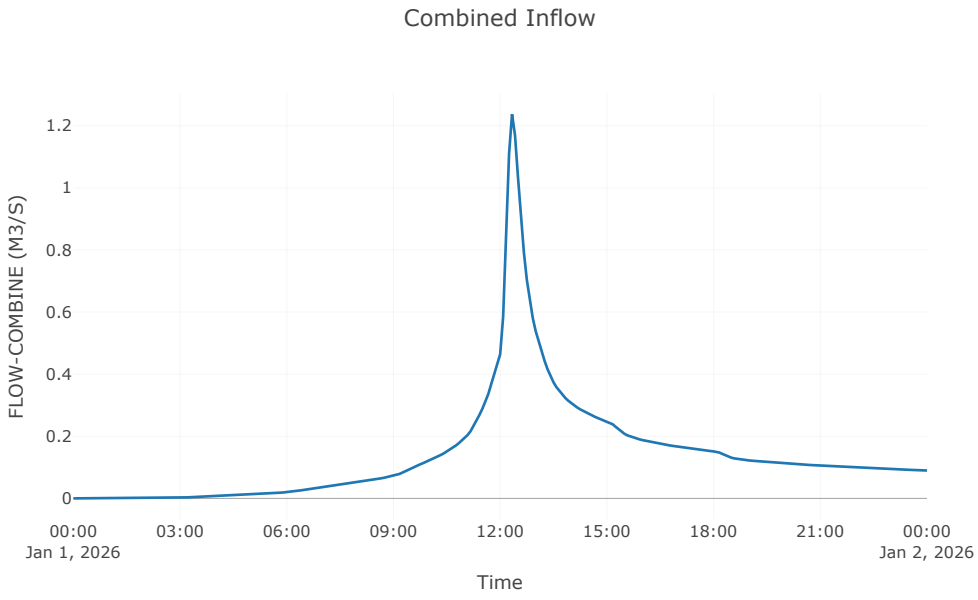

Outflow
FLOW (M3/S)
0.2
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

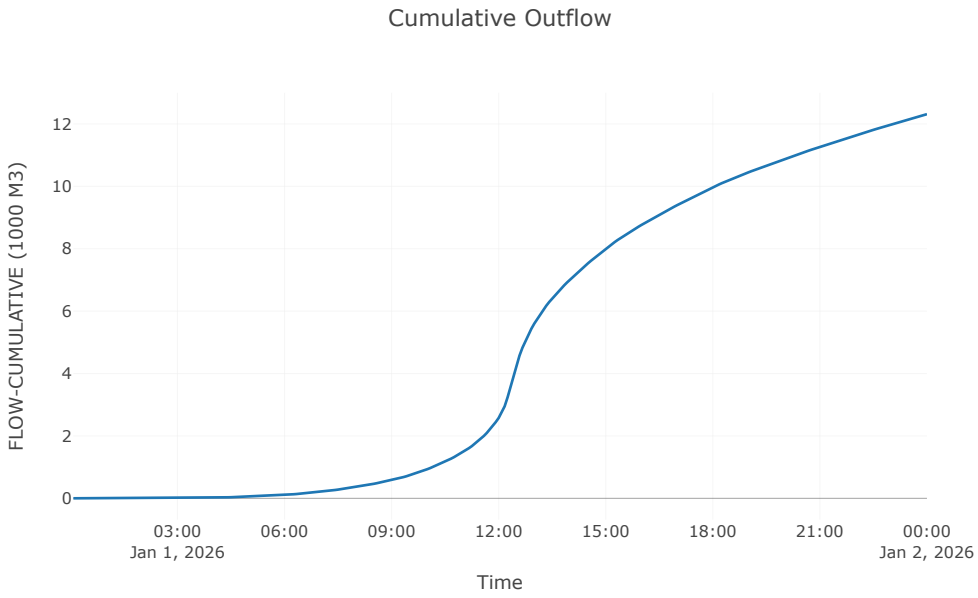
Junction: Junction-POND 6

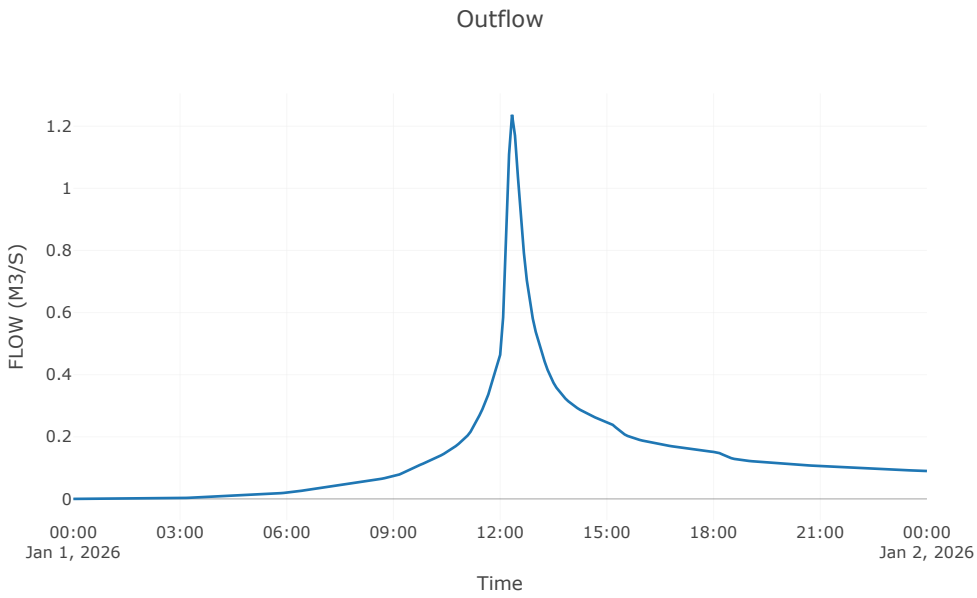
Downstream : Pond 6

Results: Junction-POND 6

Peak Discharge (M3/S)	1.24
Time of Peak Discharge	01Jan2026, 12:20
Volume (MM)	21.98





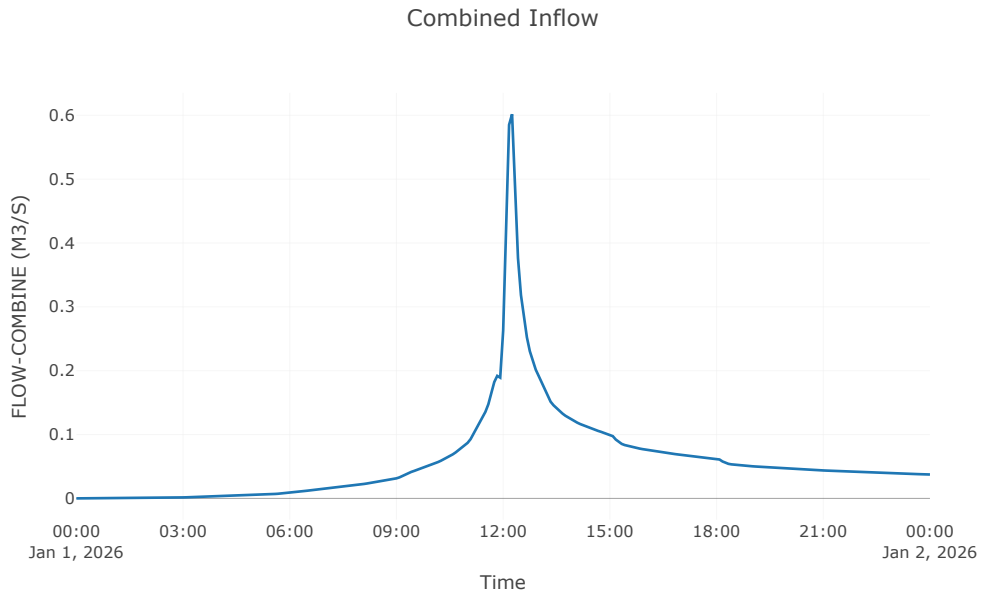

Outflow
FLOW (M3/S)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

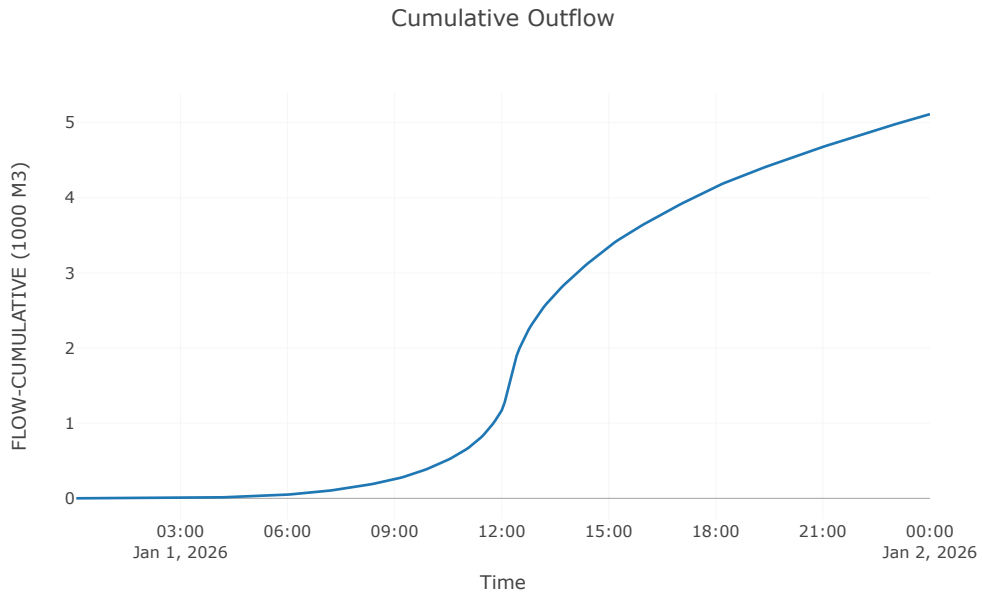
Junction: Junction-POND 7

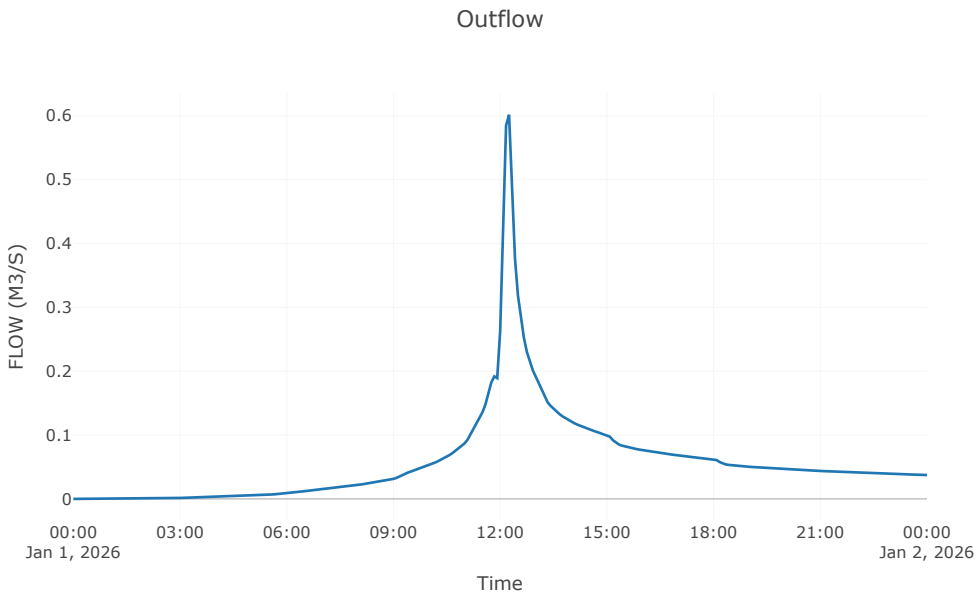
Downstream : Pond 7

Results: Junction-POND 7

Peak Discharge (M3/S)	0.6
Time of Peak Discharge	01Jan2026, 12:15
Volume (MM)	20.73





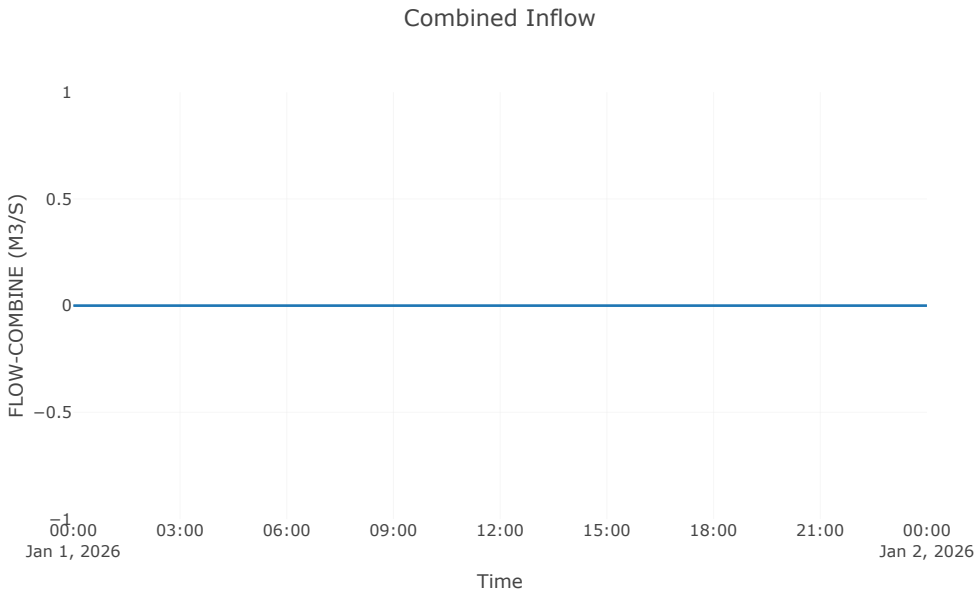

Outflow
FLOW (M3/S)
0.6
0.5
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

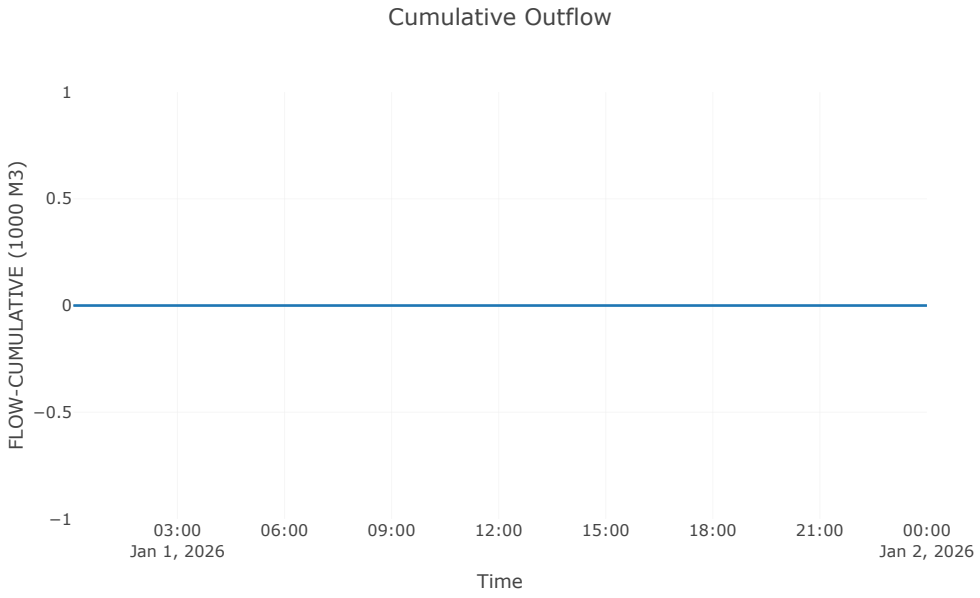
Junction: Junction- POND 1 SPILL

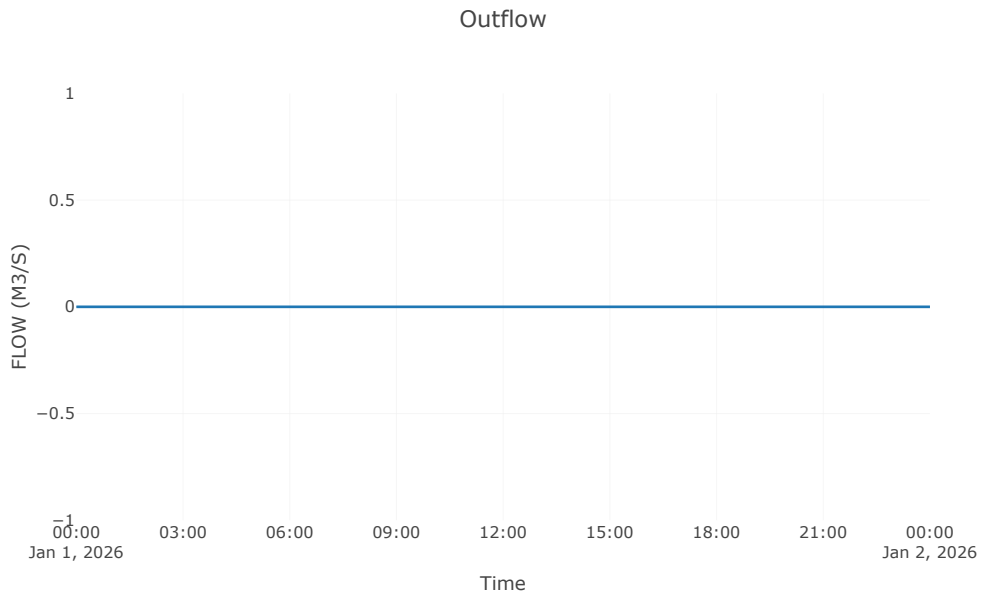
Downstream : Junction - MORVEN FERRY ROAD

Results: Junction- POND 1 SPILL

Peak Discharge (M3/S)	0
Time of Peak Discharge	31Dec2025, 24:00





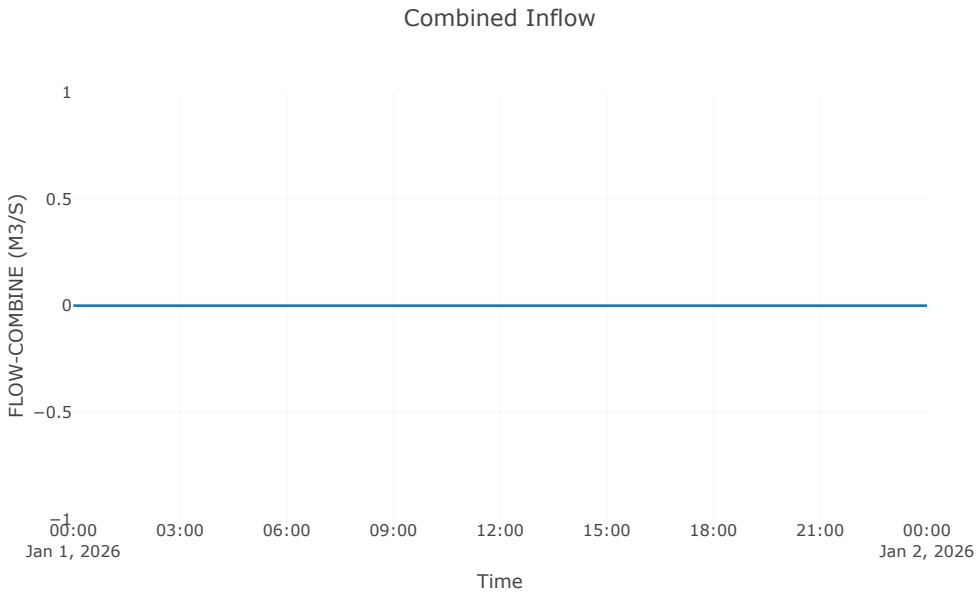

Outflow
1
0.5
0
−0.5
−1
FLOW (M3/S)
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

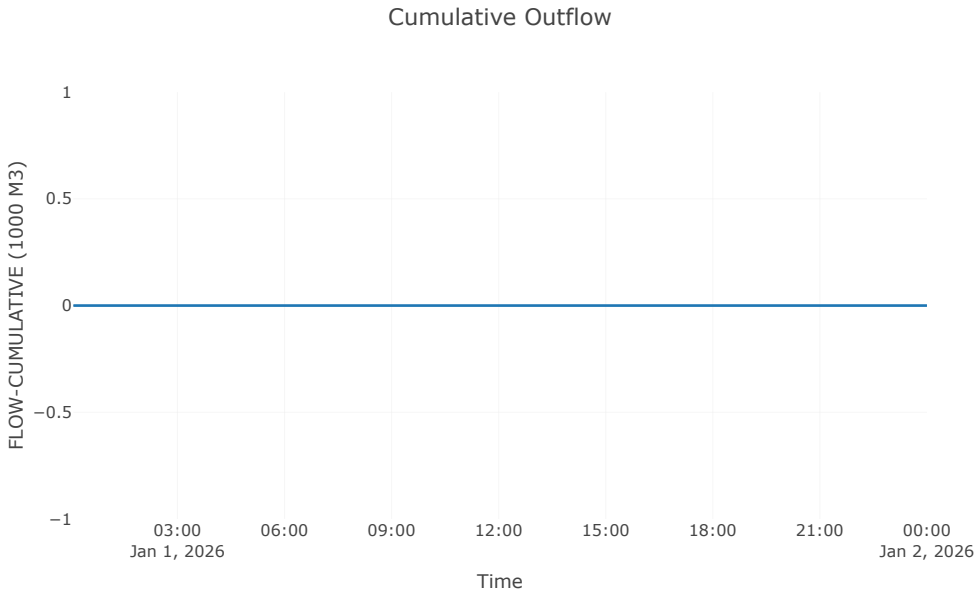
Junction: Junction-POND 2 SPILL

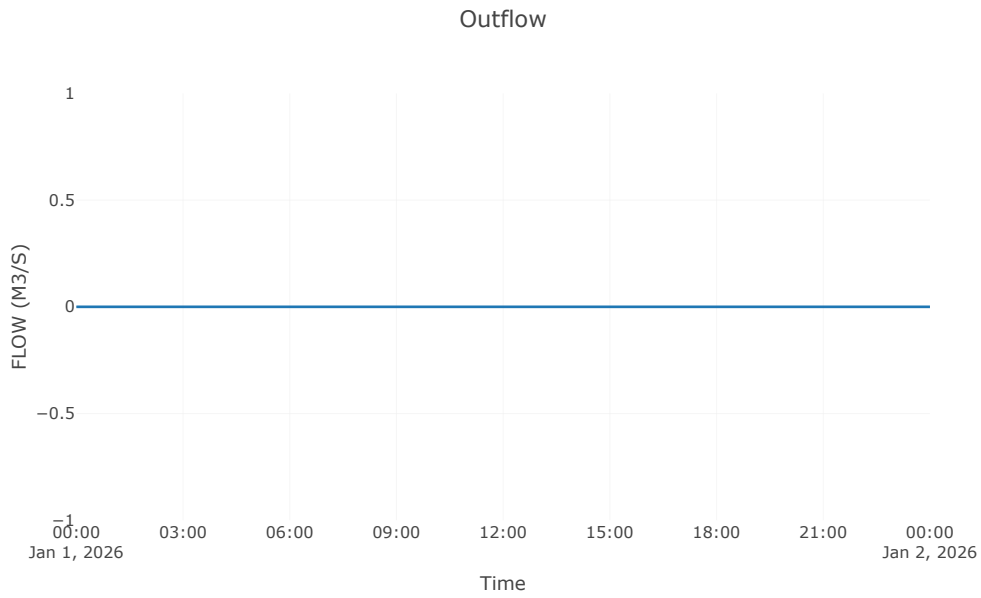
Downstream : Junction - MORVEN FERRY ROAD

Results: Junction-POND 2 SPILL

Peak Discharge (M3/S)	0
Time of Peak Discharge	31Dec2025, 24:00





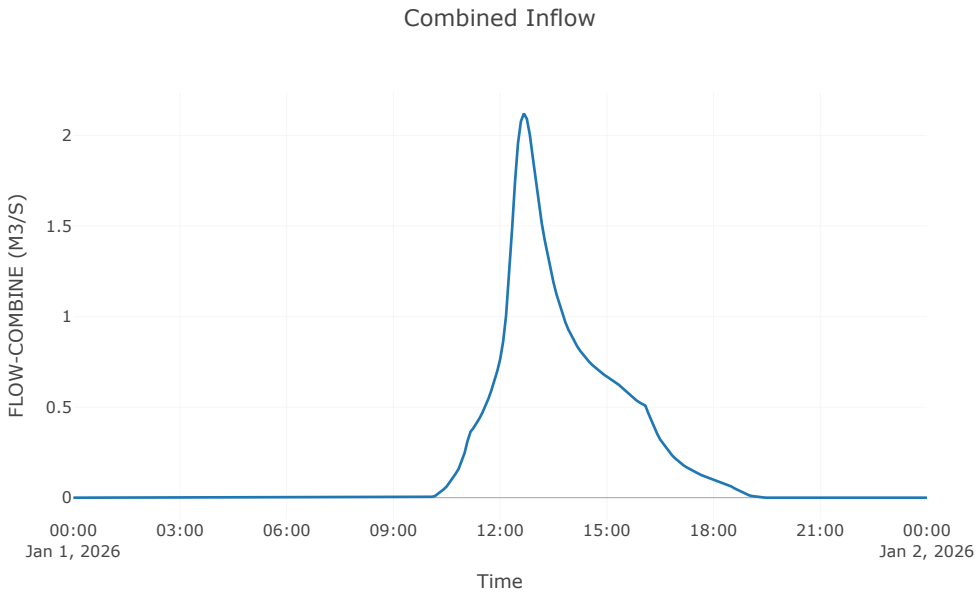

Outflow
1
0.5
0
−0.5
−1
FLOW (M3/S)
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

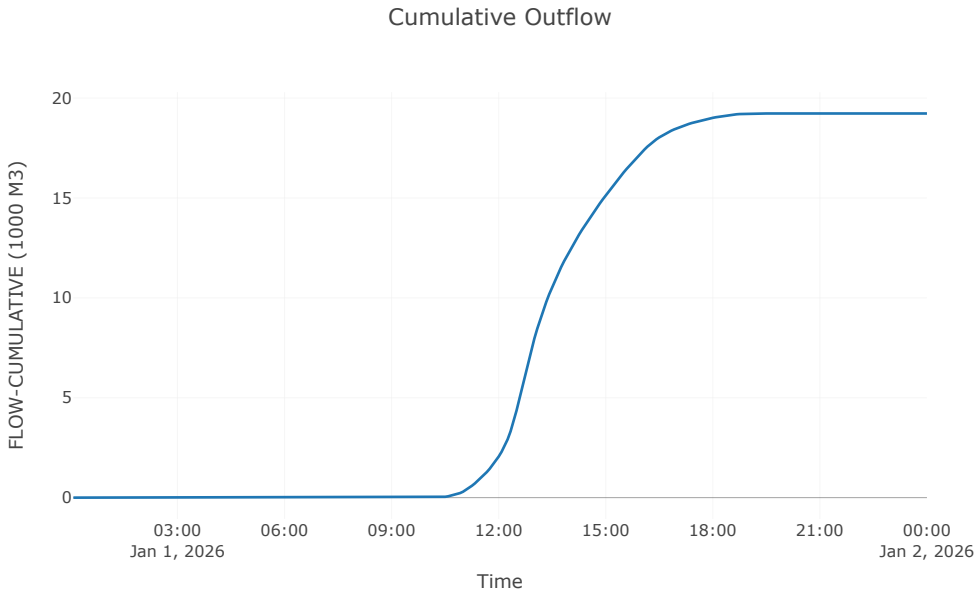
Junction: Junction-PIPE MORVEN FERRY L

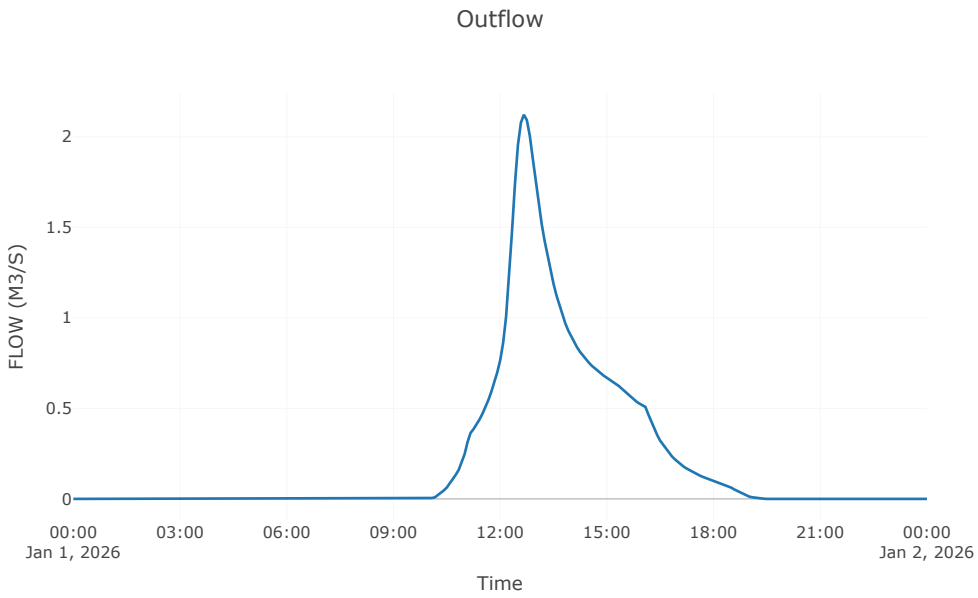
Downstream : Pipe outflow

Results: Junction-PIPE MORVEN FERRY L

Peak Discharge (M3/S)	2.12
Time of Peak Discharge	01Jan2026, 12:40





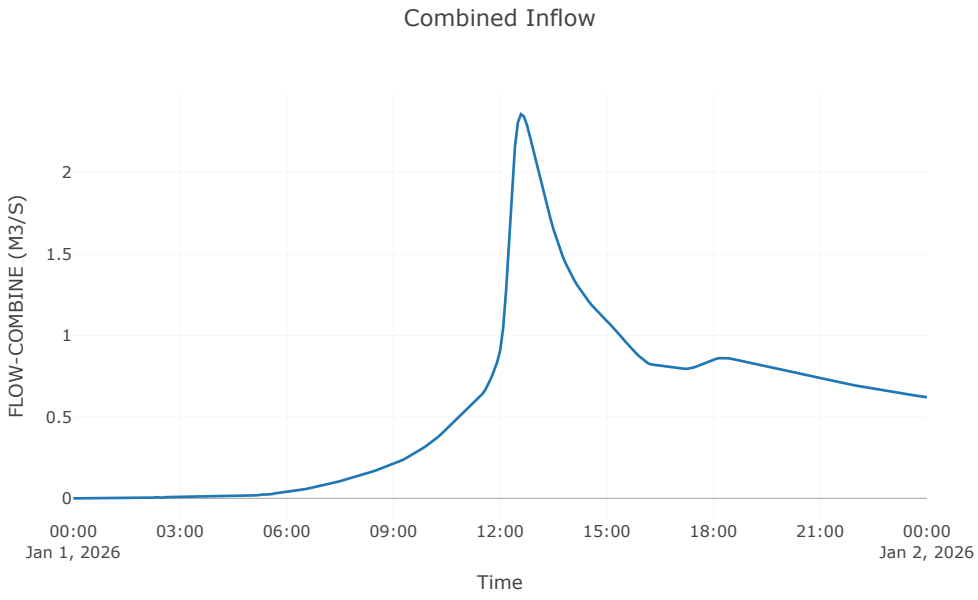

Outflow
FLOW (M3/S)
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

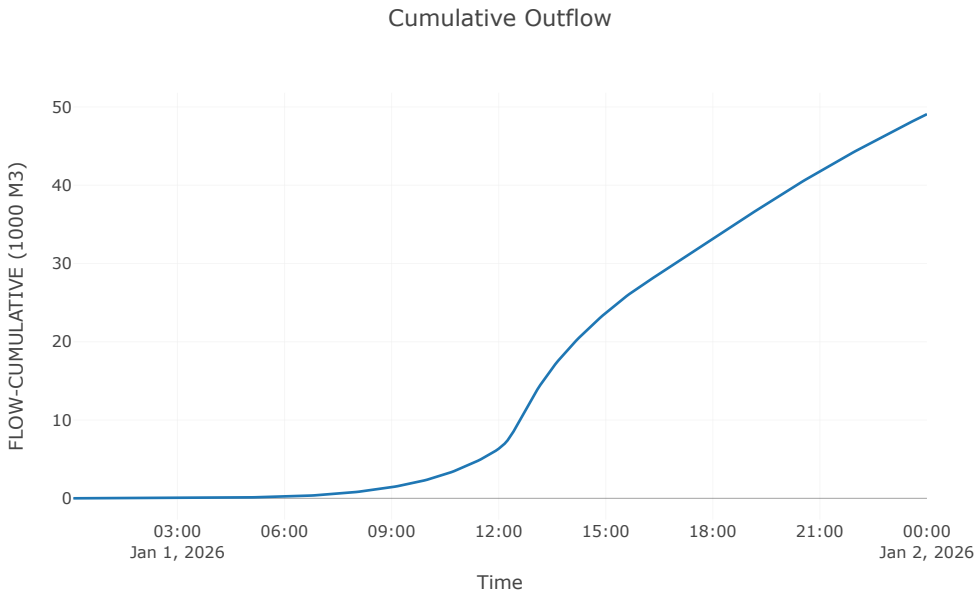
Junction: Junction-MORVEN FERRY PIPE R

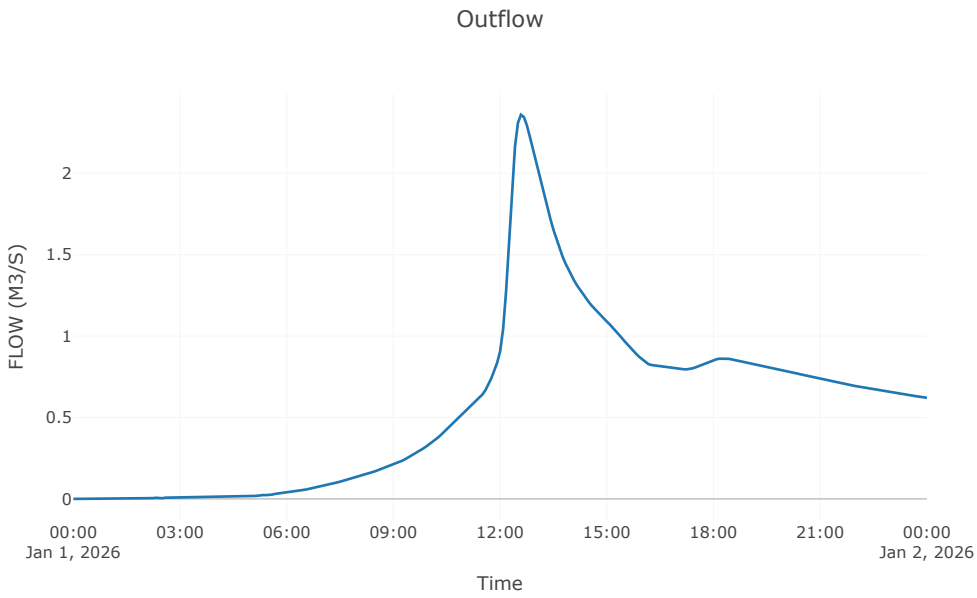
Downstream : Pipe outflow

Results: Junction-MORVEN FERRY PIPE R

Peak Discharge (M3/S)	2.36
Time of Peak Discharge	01Jan2026, 12:35
Volume (MM)	12.38





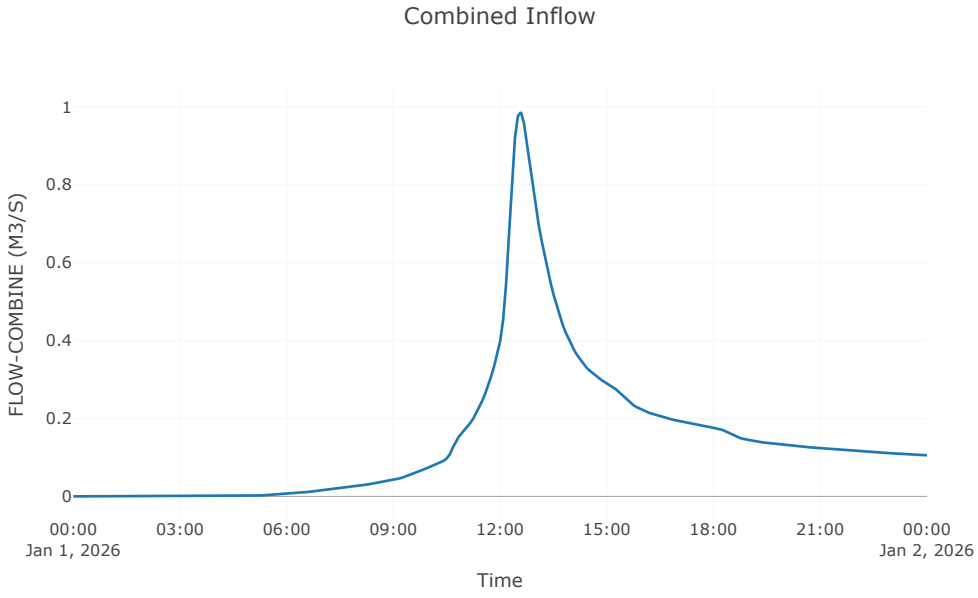

Outflow
FLOW (M3/S)
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

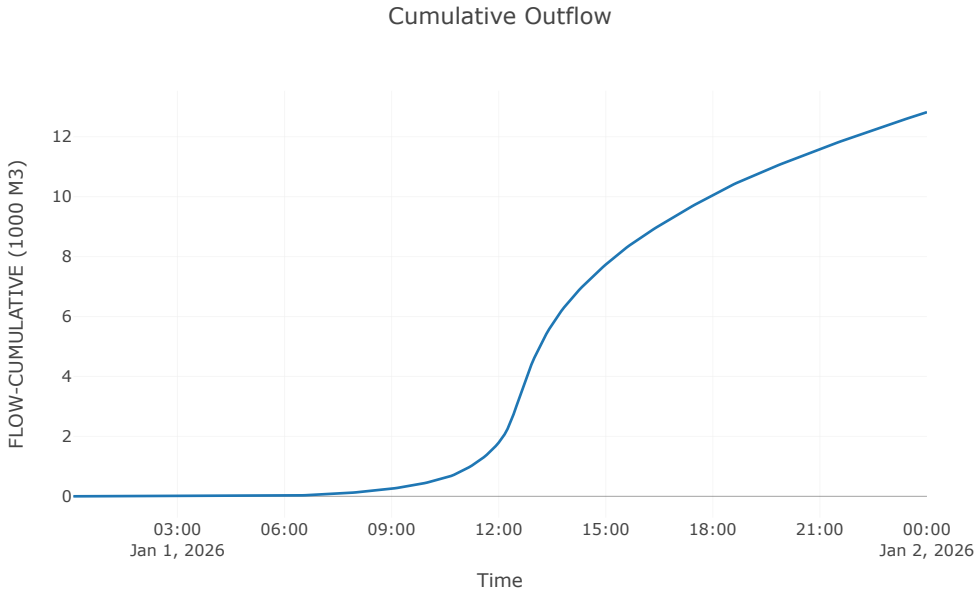
Junction: Junction-MORVEN FERRY ROAD

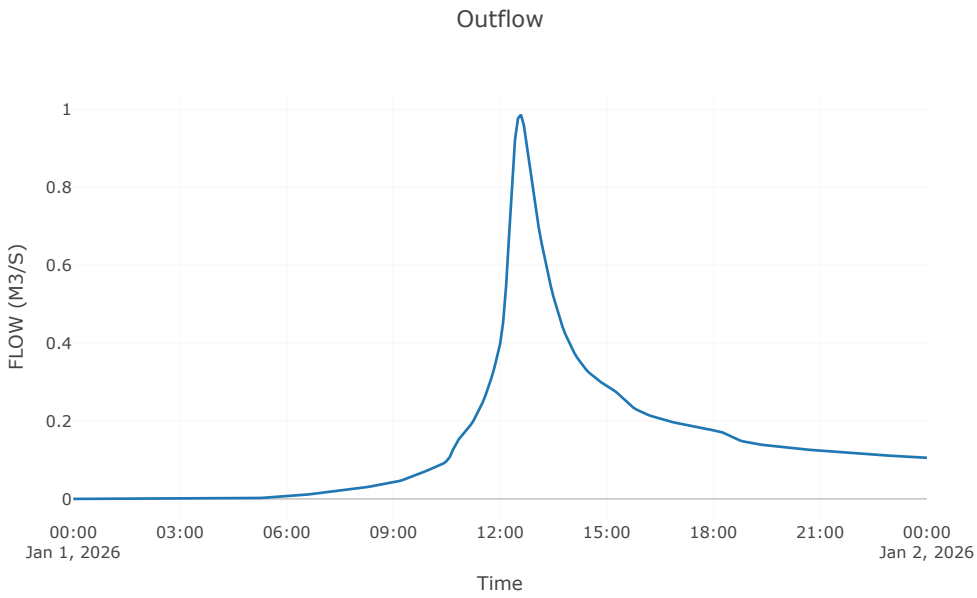
Downstream : Olfp outflow

Results: Junction-MORVEN FERRY ROAD

Peak Discharge (M3/S)	0.99
Time of Peak Discharge	01Jan2026, 12:35
Volume (MM)	17.44





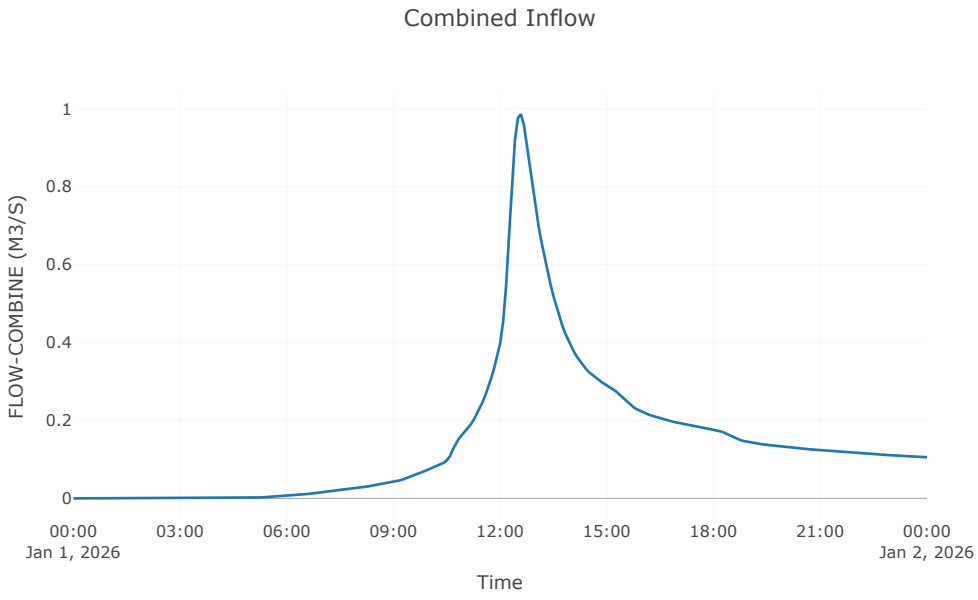

Outflow
FLOW (M3/S)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

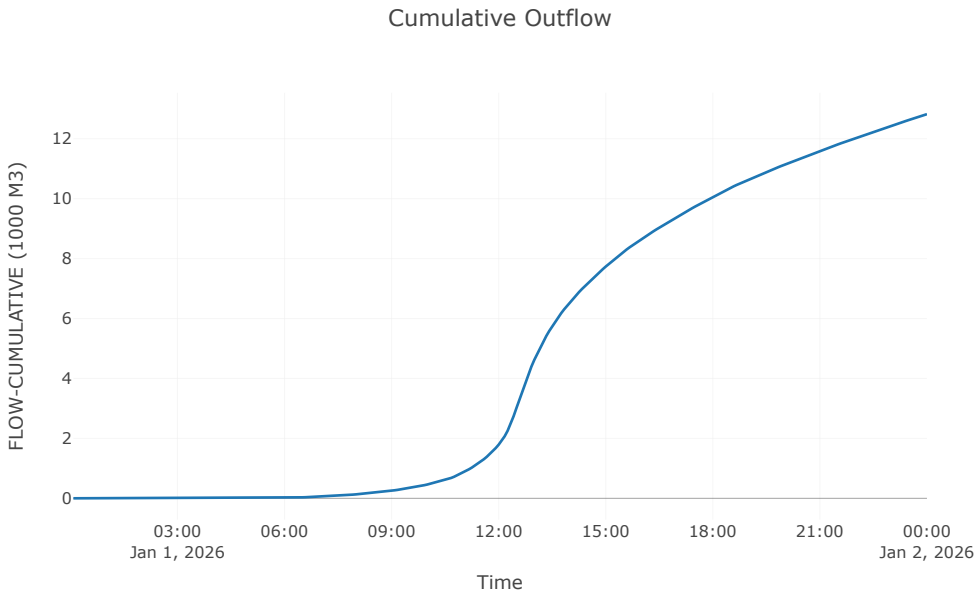
Junction: Junction-EXIT OLFP

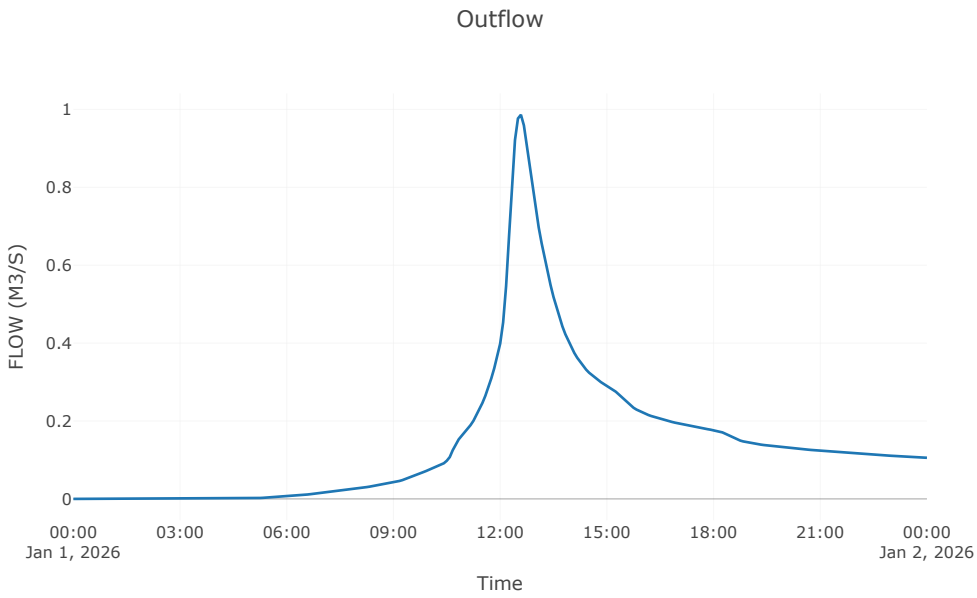
Downstream : Junction - MORVEN FERRY ROAD

Results: Junction-EXIT OLFP

Peak Discharge (M3/S)	0.99
Time of Peak Discharge	01Jan2026, 12:35
Volume (MM)	17.44





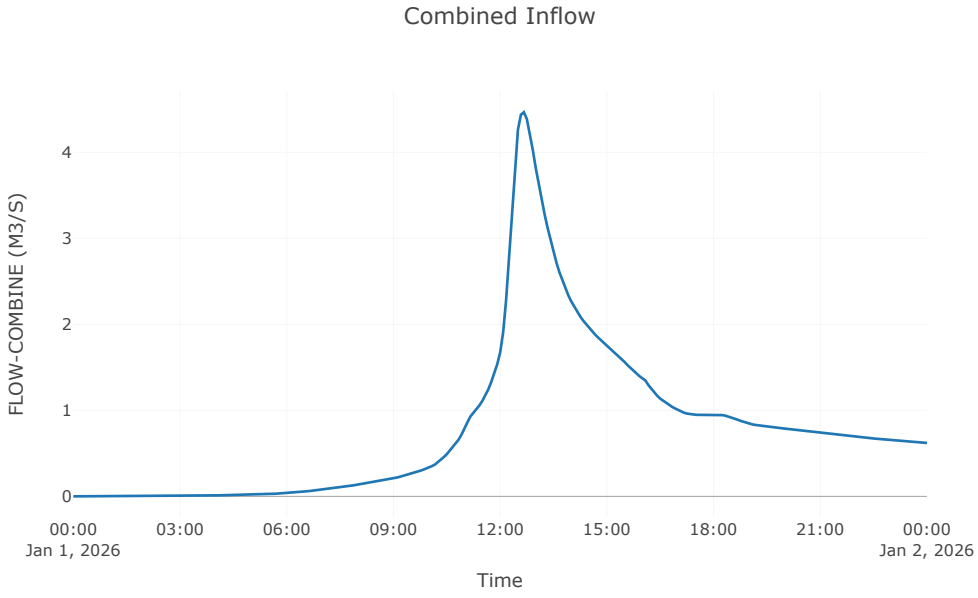

Outflow
FLOW (M3/S)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

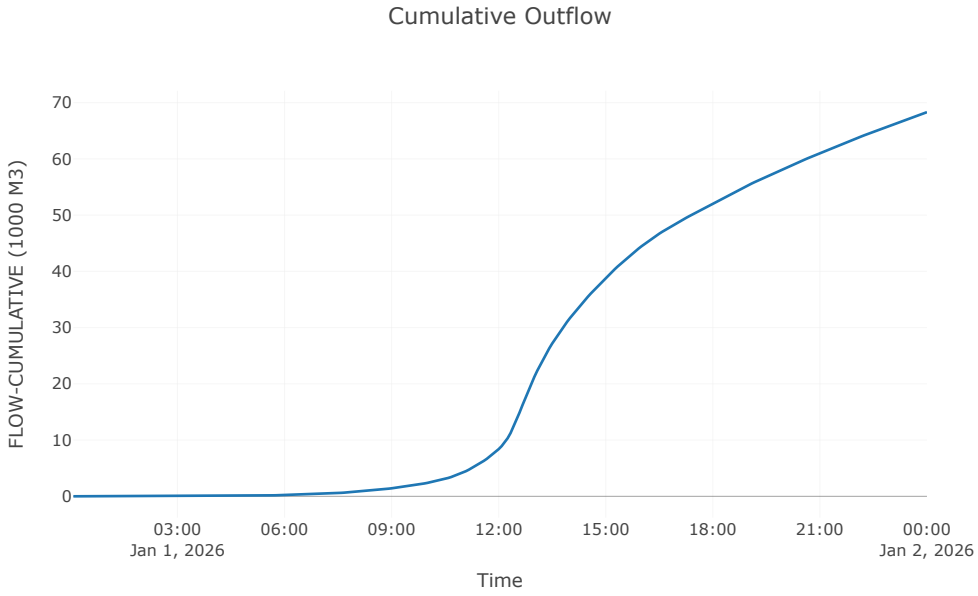
Junction: PIPE OUTFLOW

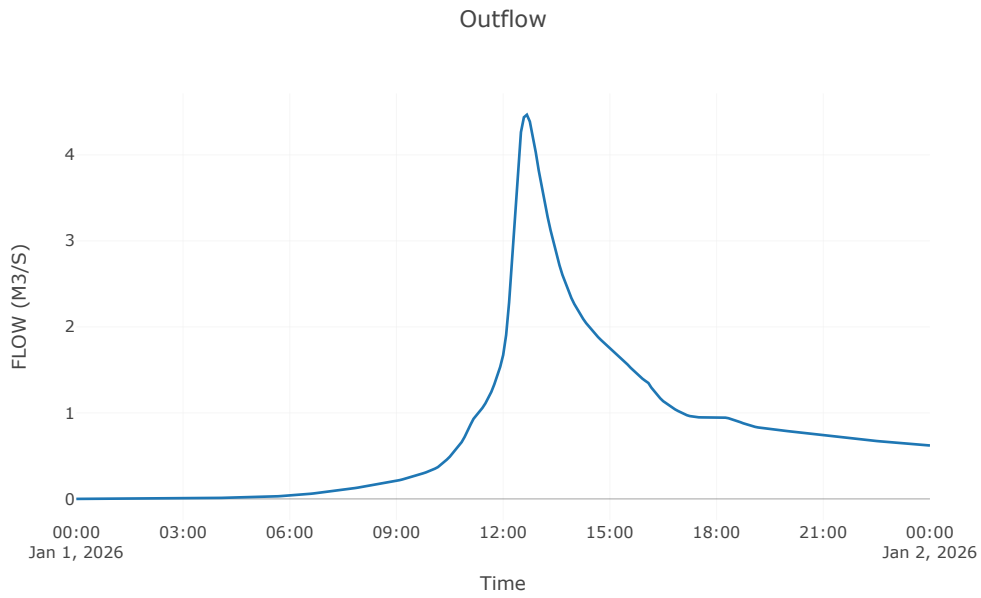
Downstream : Downstream exit

Results: PIPE OUTFLOW

Peak Discharge (M3/S)	4.47
Time of Peak Discharge	01Jan2026, 12:40
Volume (MM)	17.23





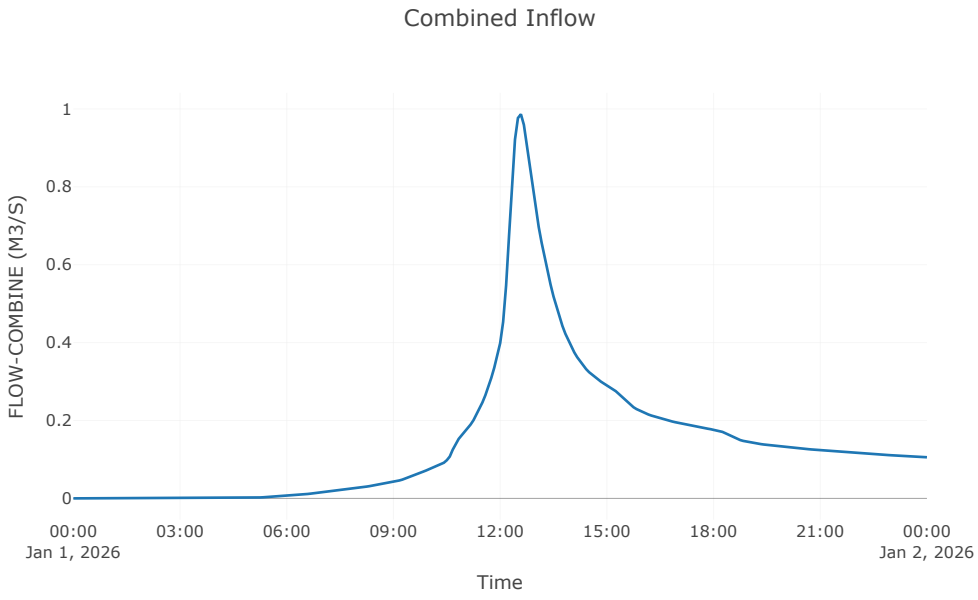

Outflow
FLOW (M3/S)
4
3
2
1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

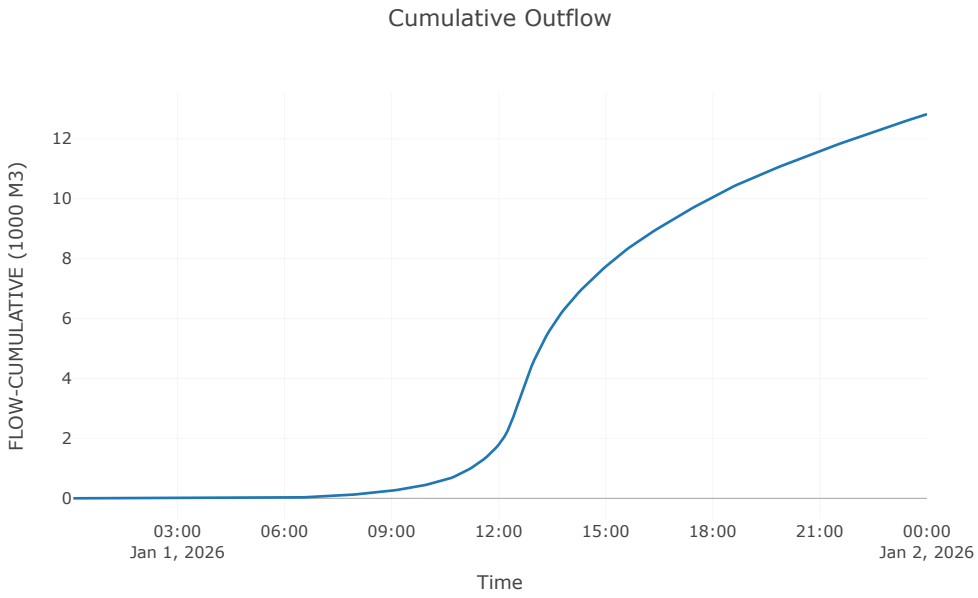
Junction: OLFP OUTFLOW

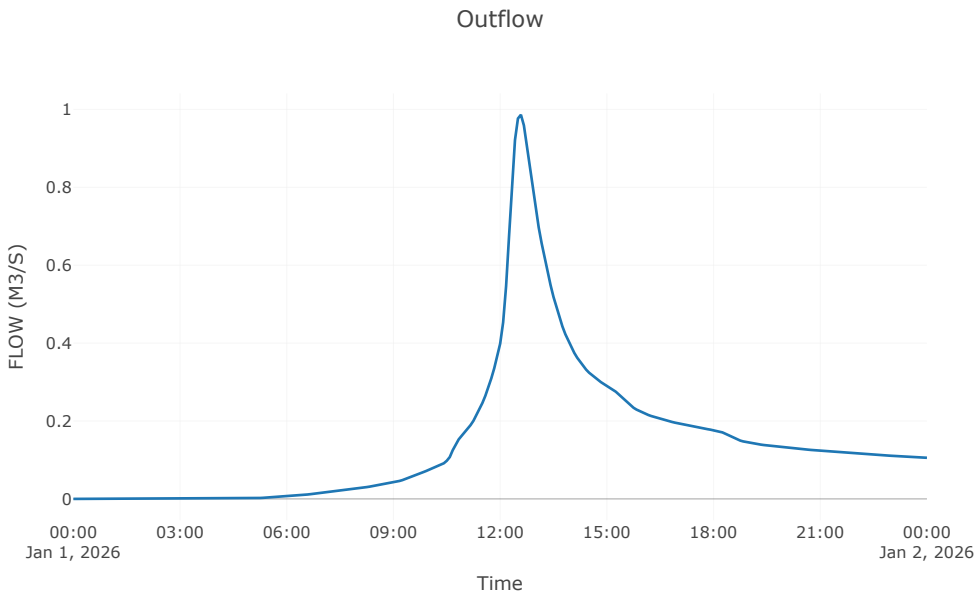
Downstream : Downstream exit

Results: OLFP OUTFLOW

Peak Discharge (M3/S)	0.99
Time of Peak Discharge	01Jan2026, 12:35
Volume (MM)	17.44

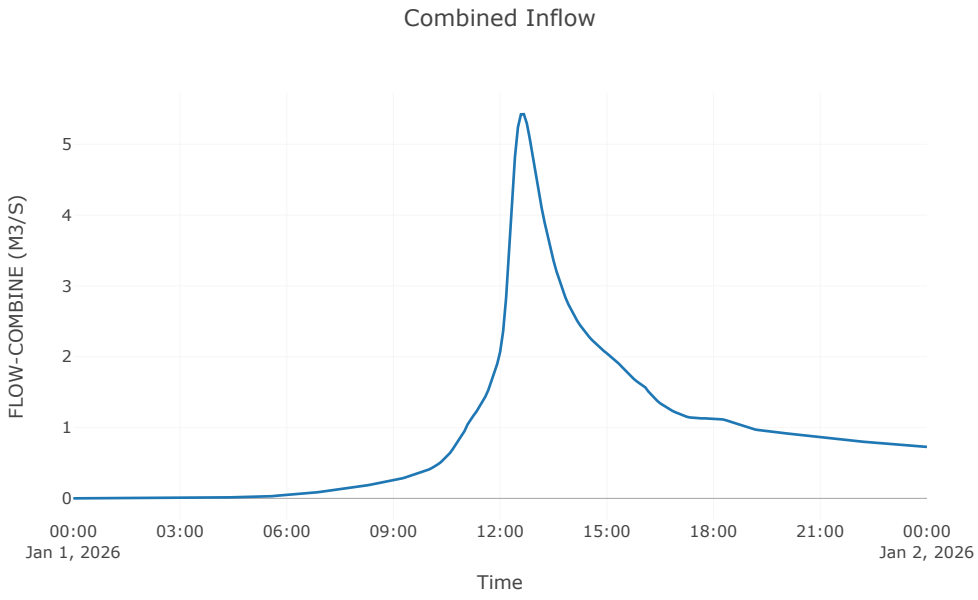


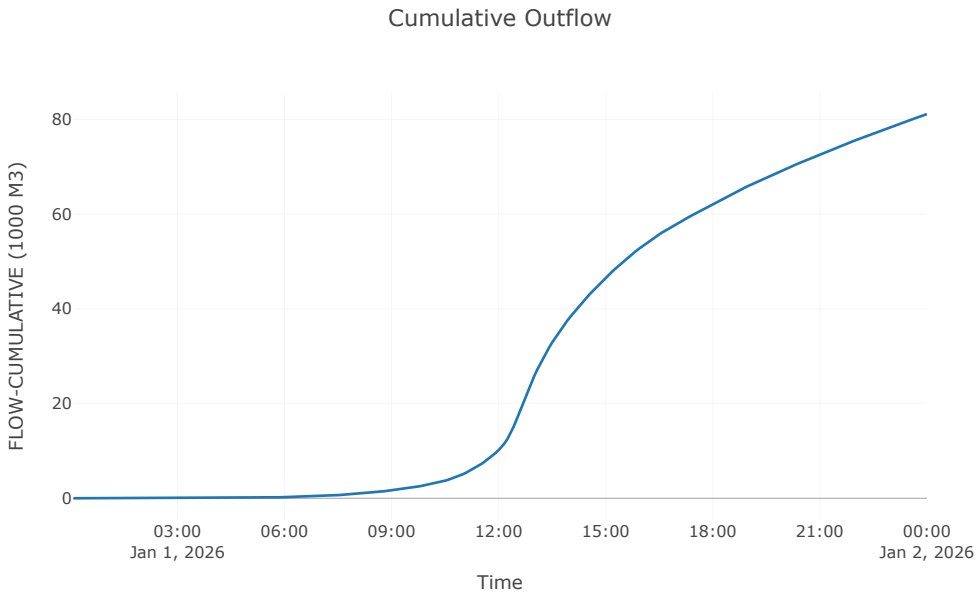


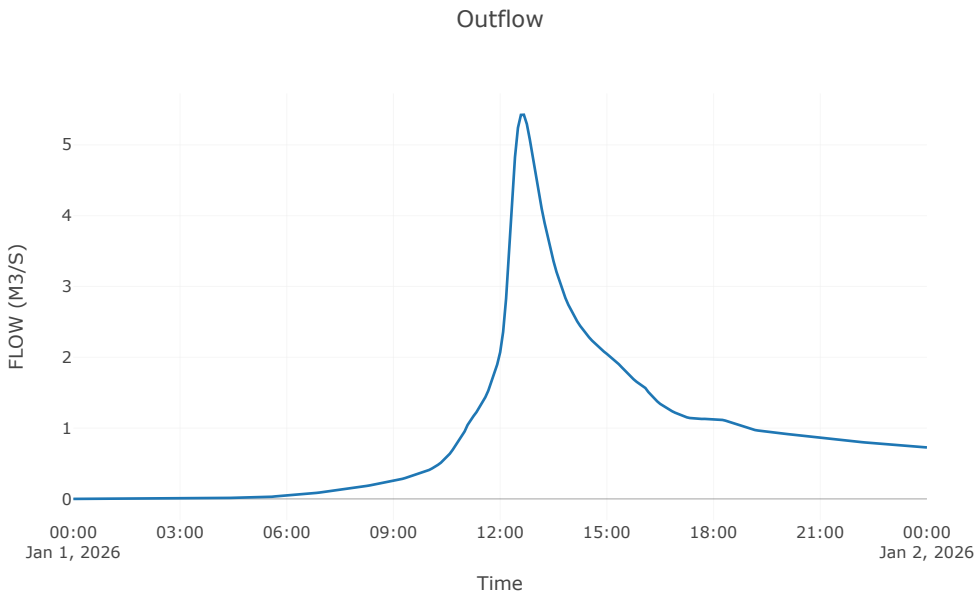

Outflow
FLOW (M3/S)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

Sink: DOWNSTREAM EXIT

Results: DOWNSTREAM EXIT	
Peak Discharge (M3/S)	5.43
Time of Peak Discharge	01Jan2026, 12:40
Volume (MM)	17.26






Outflow
FLOW (M3/S)
0
1
2
3
4
5
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

Project: Ponds Finish Surface
Simulation Run: 20YR
Simulation Start: 31 December 2025, 24:00
Simulation End: 1 January 2026, 24:00

HMS Version: 4.13
Executed: 11 February 2026, 01:33

Global Parameter Summary - Reach

	Downstream
Element Name	**Downstream**
Reach - CHANNEL 1	Junction - POND 1
Reach - CHANNEL 2	Junction - POND 1
Reach - CHANNEL 3	Junction - POND 6
Reach - CHANNEL 4	Junction - CHANNEL 1
Reach - CHANNEL 5	Junction - CHANNEL 1
Reach - POND 5 OLFP	Junction - EXIT OLFP
Reach - CHANNEL 6	Junction - POND 7
Reach - CHANNEL 8	Junction - CHANNEL 3
Reach - WETLAND B	Junction - CHANNEL 4
Reach - MORVEN FERRY SWALE	Olfp outflow

Route: Muskingum Cunge

Element Name	Method	Channel	Length (M)	Energy Slope (M/M)	Mannings n	Bottom Width (M)	Side Slope (M/M)	Initial Variable	Space - Time Method	Index Parameter Type	Index Flow	I El
Reach - CHANNEL 1	Muskingum Cunge	Trapezoid	300	0.01	0.06	20	3	Combined Inflow	Automatic DX and DT	Index Flow	15	
Reach - CHANNEL 2	Muskingum Cunge	Trapezoid	520	0.01	0.06	20	3	Combined Inflow	Automatic DX and DT	Index Flow	15	
Reach - CHANNEL 3	Muskingum Cunge	Trapezoid	340	0.01	0.06	20	3	Combined Inflow	Automatic DX and DT	Index Flow	15	
Reach - CHANNEL 4	Muskingum Cunge	Trapezoid	200	0.03	0.06	20	3	Combined Inflow	Automatic DX and DT	Index Flow	15	
Reach - CHANNEL 5	Muskingum Cunge	Trapezoid	300	0	0.06	20	3	Combined Inflow	Automatic DX and DT	Index Flow	15	
Reach - POND 5 OLFP	Muskingum Cunge	Trapezoid	737.85	0.01	0.06	20	3	Combined Inflow	Automatic DX and DT	Index Flow	15	
Reach - CHANNEL 6	Muskingum Cunge	Trapezoid	300	0.02	0.06	20	3	Combined Inflow	Automatic DX and DT	Index Flow	15	
Reach - CHANNEL 8	Muskingum Cunge	Trapezoid	660	0.03	0.06	20	3	Combined Inflow	Automatic DX and DT	Index Flow	15	
Reach - WETLAND B	Muskingum Cunge	Trapezoid	630	0.08	0.06	20	3	Combined Inflow	Automatic DX and DT	Index Flow	15	
Reach - MORVEN FERRY SWALE	Muskingum Cunge	Trapezoid	770	0.01	0.06	20	3	Combined Inflow	Automatic DX and DT	Index Flow	15	

Global Parameter Summary - Subbasin

	Location	
Element Name	Longitude Degrees	Latitude Degrees
Difference pond 1 internal	168.84	-44.99
Difference pond 1 upstream	168.84	-44.99
Difference pond 1 upstream s	168.85	-44.99
Difference pond 2 internal	168.85	-44.99
Difference pond 2 upstream	168.85	-44.99
Difference pond 2 south	168.85	-44.99
Difference pond 5 internal	168.84	-45
Difference pond 5 upstream	168.84	-45
Difference pond 6 upstream	168.83	-44.99
Difference pond 6 internal	168.84	-45
Difference pond 6 south	168.84	-45
Difference pond 7 upstream	168.83	-44.99
Difference pond 7 internal	168.84	-44.99
Difference wetland b upstre	168.84	-44.99
Difference wetland b intern	168.84	-44.99
Morven ferry vectorised	168.84	-44.98
Difference downstream exit	168.85	-45

Area (KM2)

Element Name	Area (KM2)
Difference pond 1 internal	0.21
Difference pond 1 upstream	0.86
Difference pond 1 upstream s	0.01
Difference pond 2 internal	0.03
Difference pond 2 upstream	0.03
Difference pond 2 south	0.02
Difference pond 5 internal	0.11
Difference pond 5 upstream	0.03
Difference pond 6 upstream	0.2
Difference pond 6 internal	0.29
Difference pond 6 south	0.07
Difference pond 7 upstream	0.16
Difference pond 7 internal	0.09
Difference wetland b upstre	0.1
Difference wetland b intern	0.08
Morven ferry vectorised	1.8
Difference downstream exit	0.6

Downstream

Element Name	Downstream
Difference pond 1 internal	Junction - POND 1
Difference pond 1 upstream	Junction - CHANNEL 1
Difference pond 1 upstream s	Junction - POND 1
Difference pond 2 internal	Junction - POND 2
Difference pond 2 upstream	Pond 3 drybasin
Difference pond 2 south	Junction - POND 2
Difference pond 5 internal	Pond 5
Difference pond 5 upstream	Pond 5
Difference pond 6 upstream	Reach - CHANNEL 8
Difference pond 6 internal	Junction - CHANNEL 3
Difference pond 6 south	Junction - POND 6
Difference pond 7 upstream	Reach - CHANNEL 6
Difference pond 7 internal	Junction - POND 7
Difference wetland b upstre	Junction - CHANNEL 4
Difference wetland b intern	Junction - CHANNEL 4
Morven ferry vectorised	Swale morven ferry l
Difference downstream exit	Junction - EXIT OLFP

Loss Rate: Scs

Element Name	Percent Impervious Area	Curve Number	Initial Abstraction
Difference pond 1 internal	0	90.8	1.29
Difference pond 1 upstream	0	75.2	4.19
Difference pond 1 upstream s	0	74	4.46
Difference pond 2 internal	0	94.4	0.75
Difference pond 2 upstream	0	78.8	3.42
Difference pond 2 south	0	98	0
Difference pond 5 internal	0	87.2	1.86
Difference pond 5 upstream	0	74	4.46
Difference pond 6 upstream	0	74	4.46
Difference pond 6 internal	0	88.4	1.67
Difference pond 6 south	0	74	4.46
Difference pond 7 upstream	0	74	4.46
Difference pond 7 internal	0	90.1	1.4
Difference wetland b upstre	0	75.2	4.19
Difference wetland b intern	0	88.4	1.67
Morven ferry vectorised	0	75.2	4.19
Difference downstream exit	0	75.7	4.08

Transform: Scs

Element Name	Lag	Unitgraph Type
Difference pond 1 internal	15.03	Standard
Difference pond 1 upstream	15.18	Standard
Difference pond 1 upstream s	8.07	Standard
Difference pond 2 internal	9.53	Standard
Difference pond 2 upstream	11.22	Standard
Difference pond 2 south	6.97	Standard
Difference pond 5 internal	12.18	Standard
Difference pond 5 upstream	3.21	Standard
Difference pond 6 upstream	3.86	Standard
Difference pond 6 internal	16.51	Standard
Difference pond 6 south	10.61	Standard
Difference pond 7 upstream	3.16	Standard
Difference pond 7 internal	11.53	Standard
Difference wetland b upstre	6.14	Standard
Difference wetland b intern	6.97	Standard
Morven ferry vectorised	30.44	Standard
Difference downstream exit	26.55	Standard

Global Results Summary

Hydrologic Element	Drainage Area (KM2)	Peak Discharge (M3/S)	Time of Peak	Volume (MM)
Swale morven ferry l	1.8	4.73	01Jan2026, 12:40	39.05
Pond 1	2.08	5.86	01Jan2026, 12:40	54.63
Pond 2	1.88	0.52	01Jan2026, 12:20	6.59
Pond 3 drybasin	1.83	0.16	01Jan2026, 17:25	4.63
Pond 5	0.14	0.66	01Jan2026, 12:30	54.29
Pond 6	0.56	1.19	01Jan2026, 13:05	47.92
Pond 7	0.25	0.17	01Jan2026, 15:50	30.42
Reach - CHANNEL 1	1.3	5.66	01Jan2026, 12:20	57.12
Reach - CHANNEL 2	0.56	1.19	01Jan2026, 13:10	47.78
Reach - CHANNEL 3	0.49	3.21	01Jan2026, 12:20	53.66
Reach - CHANNEL 4	0.43	1.53	01Jan2026, 12:10	39.49
Reach - CHANNEL 5	0	0.68	01Jan2026, 17:35	Not specified
Reach - POND 5 OLFP	0.14	0.66	01Jan2026, 12:35	54.17
Reach - CHANNEL 6	0.16	1.1	01Jan2026, 12:10	41.01
Reach - CHANNEL 8	0.2	1.4	01Jan2026, 12:15	41
Reach - WETLAND B	0.25	0.17	01Jan2026, 15:55	30.27
Reach - MORVEN FERRY SWALE	0	1.88	01Jan2026, 12:50	Not specified
Difference pond 1 internal	0.21	1.71	01Jan2026, 12:20	67.41
Difference pond 1 upstream	0.86	4.4	01Jan2026, 12:20	42.34
Difference pond 1 upstream s	0.01	0.08	01Jan2026, 12:10	40.95
Difference pond 2 internal	0.03	0.27	01Jan2026, 12:15	75.11

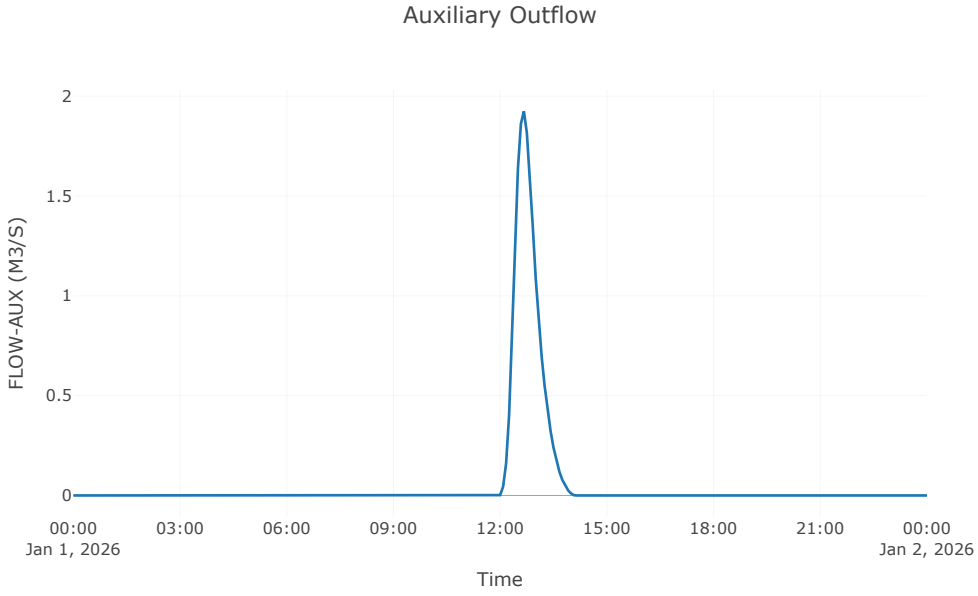
Difference pond 2 upstream	0.03	0.2	01Jan2026, 12:15	47.32
Difference pond 2 south	0.02	0.29	01Jan2026, 12:10	83.89
Difference pond 5 internal	0.11	0.88	01Jan2026, 12:15	60.71
Difference pond 5 upstream	0.03	0.2	01Jan2026, 12:10	41.05
Difference pond 6 upstream	0.2	1.44	01Jan2026, 12:10	41.04
Difference pond 6 internal	0.29	2.09	01Jan2026, 12:20	62.77
Difference pond 6 south	0.07	0.41	01Jan2026, 12:15	40.9
Difference pond 7 upstream	0.16	1.16	01Jan2026, 12:10	41.05
Difference pond 7 internal	0.09	0.76	01Jan2026, 12:15	66.12
Difference wetland b upstre	0.1	0.69	01Jan2026, 12:10	42.53
Difference wetland b intern	0.08	0.82	01Jan2026, 12:10	63.01
Morven ferry vectorised	1.8	6.67	01Jan2026, 12:35	42.02
Difference downstream exit	0.6	2.39	01Jan2026, 12:30	42.75
Junction - POND 1	2.08	8.25	01Jan2026, 12:20	55.55
Junction - CHANNEL 1	1.3	5.73	01Jan2026, 12:15	57.26
Junction - POND 2	1.88	0.65	01Jan2026, 12:10	6.6
Junction - CHANNEL 3	0.49	3.32	01Jan2026, 12:15	53.72
Junction - CHANNEL 4	0.43	1.62	01Jan2026, 12:10	39.54
Junction - CHANNEL 5	0	0.68	01Jan2026, 17:25	Not specified
Junction - POND 6	0.56	3.56	01Jan2026, 12:20	52.01
Junction - POND 7	0.25	1.77	01Jan2026, 12:10	49.74
Junction - POND 1 SPILL	0	0	31Dec2025, 24:00	Not specified
Junction - POND 2 SPILL	0	0	31Dec2025, 24:00	Not specified
Junction - PIPE MORVEN FERRY L	0	4.73	01Jan2026, 12:40	Not specified
Junction - MORVEN FERRY PIPE R	3.96	6.28	01Jan2026, 12:35	31.83
Junction - MORVEN FERRY ROAD	0.74	3.04	01Jan2026, 12:30	44.89
Junction - EXIT OLFP	0.74	3.04	01Jan2026, 12:30	44.89
Pipe outflow	3.96	10.97	01Jan2026, 12:40	42.4
Olfp outflow	0.74	4.44	01Jan2026, 12:45	52.1
Downstream exit	4.7	15.31	01Jan2026, 12:40	43.92

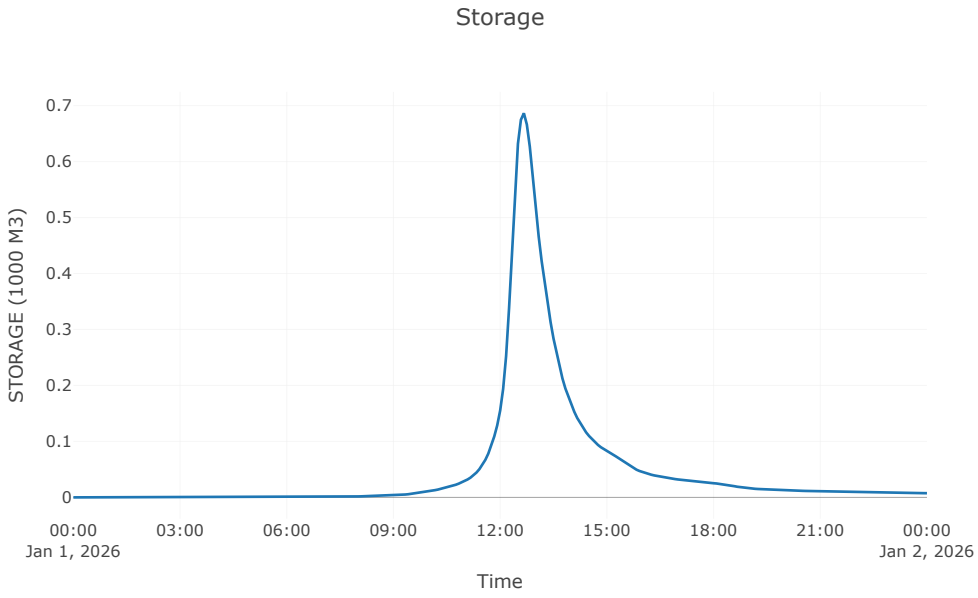
Reservoir: SWALE MORVEN FERRY L

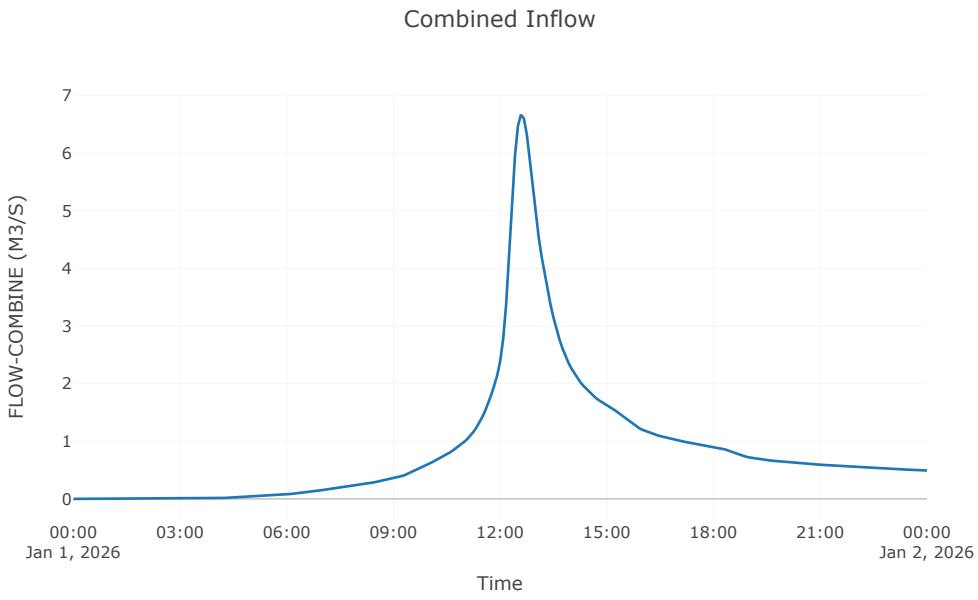
Downstream : Diversion - PIPE MORVEN FRY L

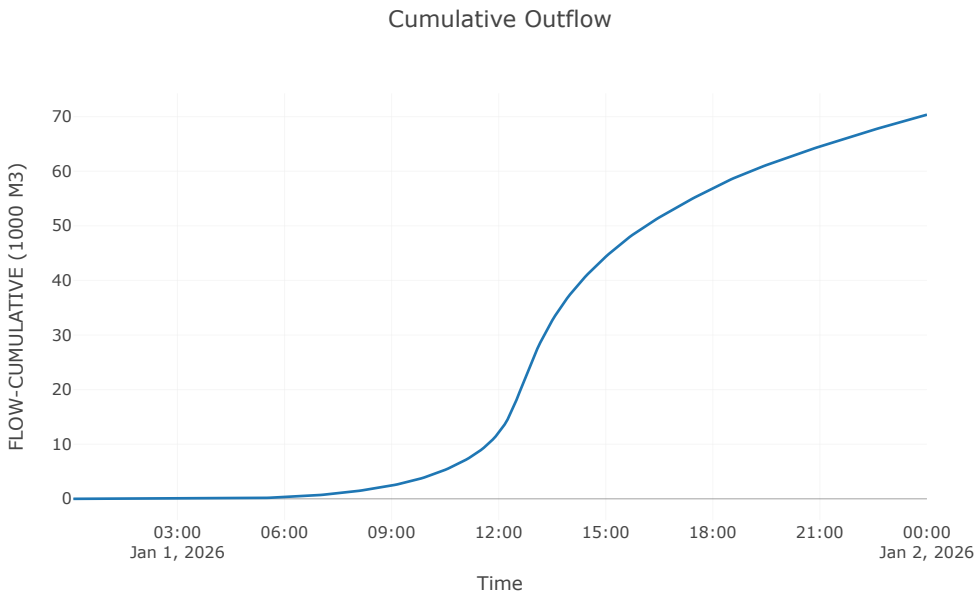
Results: SWALE MORVEN FERRY L

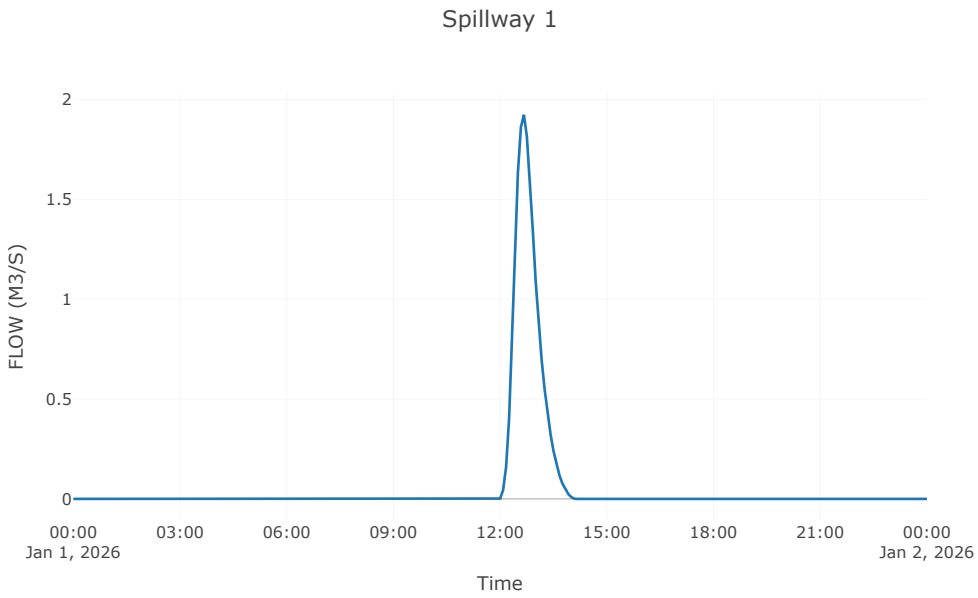
Peak Discharge (M3/S)	4.73
Time of Peak Discharge	01Jan2026, 12:40
Volume (MM)	39.05
Peak Inflow (M3/S)	6.67
Time of Peak Inflow	01Jan2026, 12:35
Inflow Volume (M3)	75700.43
Maximum Storage (M3)	686.33
Peak Elevation (M)	0.46
Discharge Volume (M3)	70358

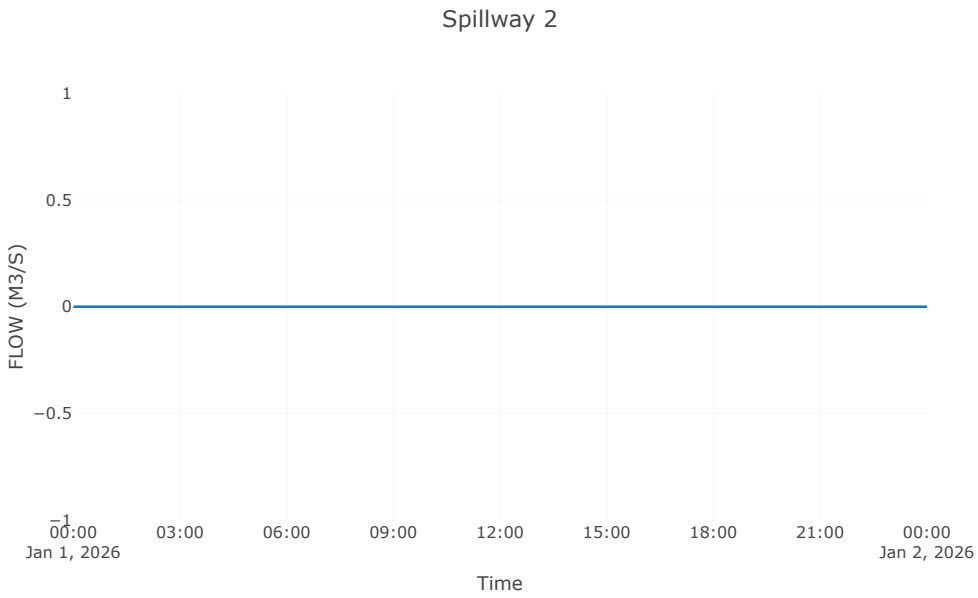


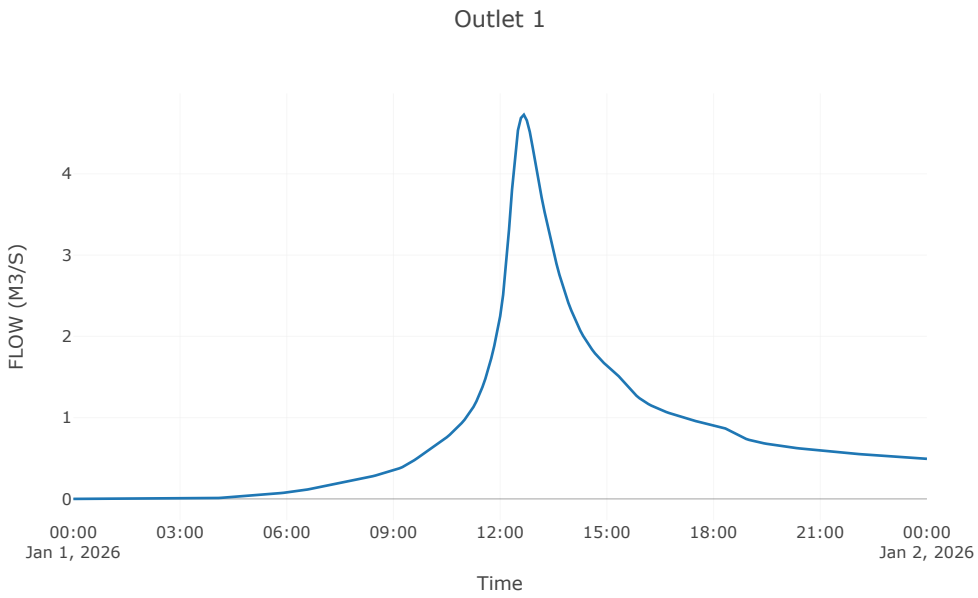


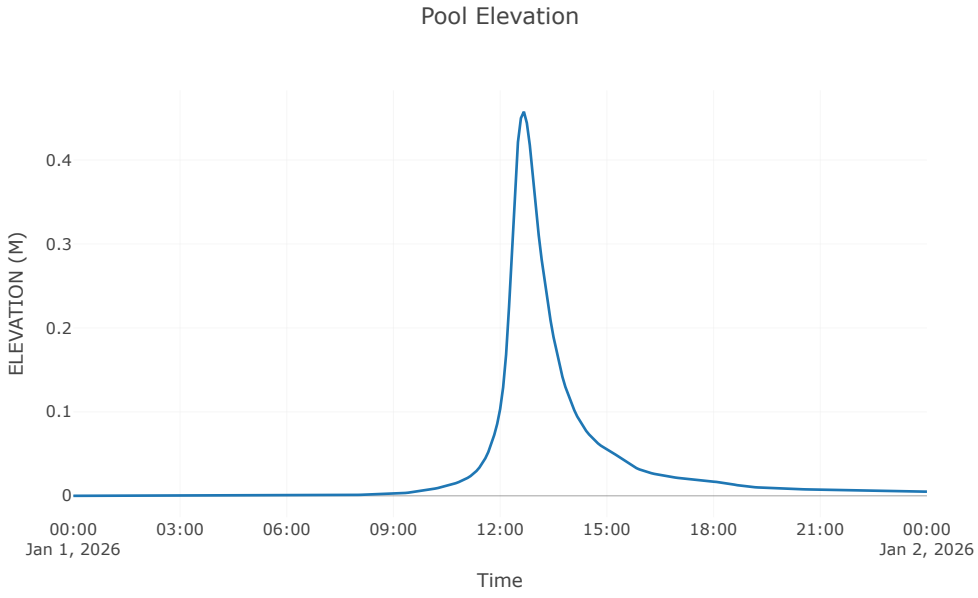

Combined Inflow
FLOW-COMBINE (M3/S)
0
1
2
3
4
5
6
7
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

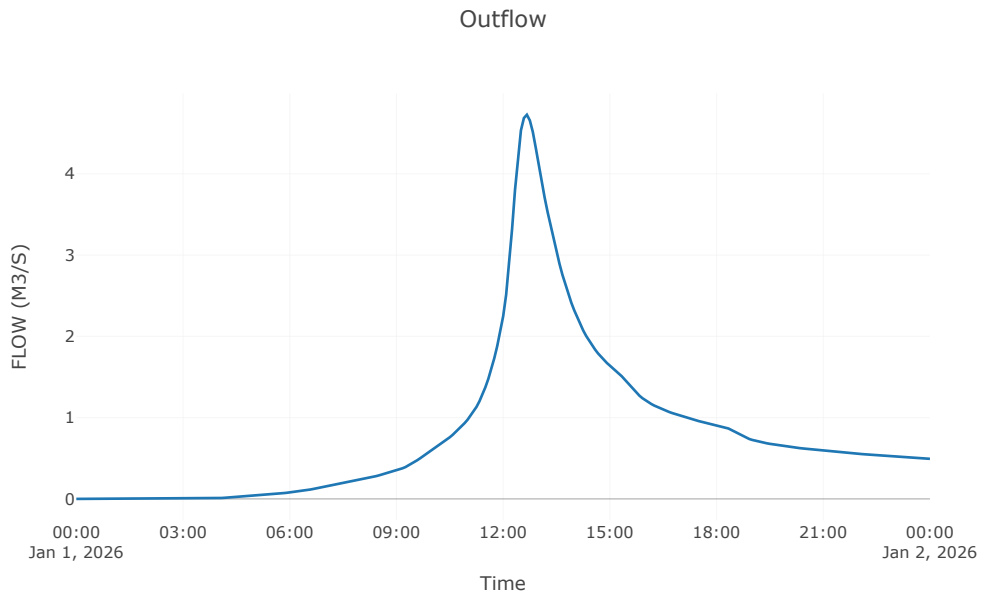

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
0
10
20
30
40
50
60
70
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Spillway 1
FLOW (M3/S)
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Spillway 2
FLOW (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 1
FLOW (M3/S)
0
1
2
3
4
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

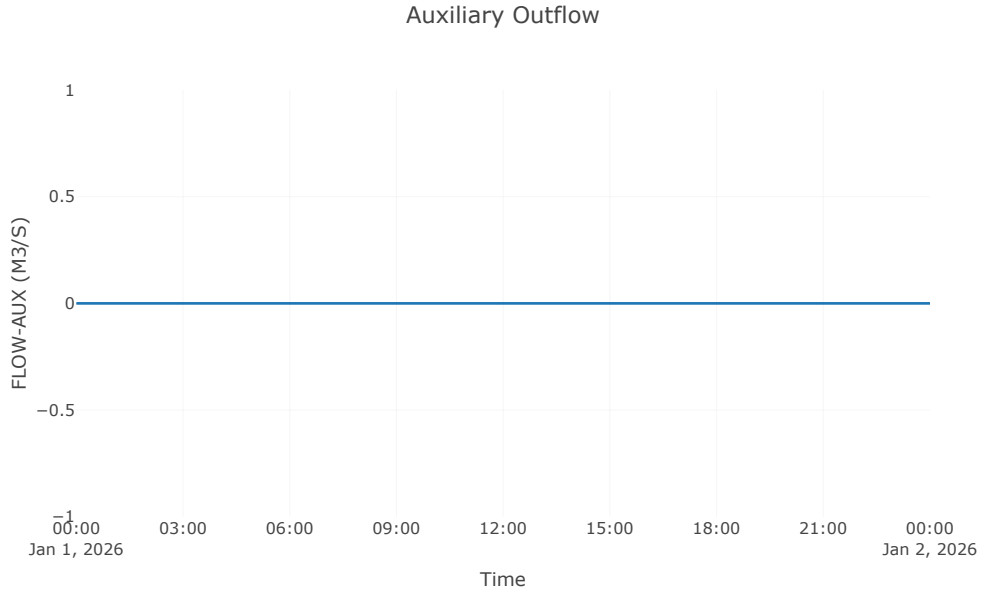

Pool Elevation
ELEVATION (M)
0
0.1
0.2
0.3
0.4
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

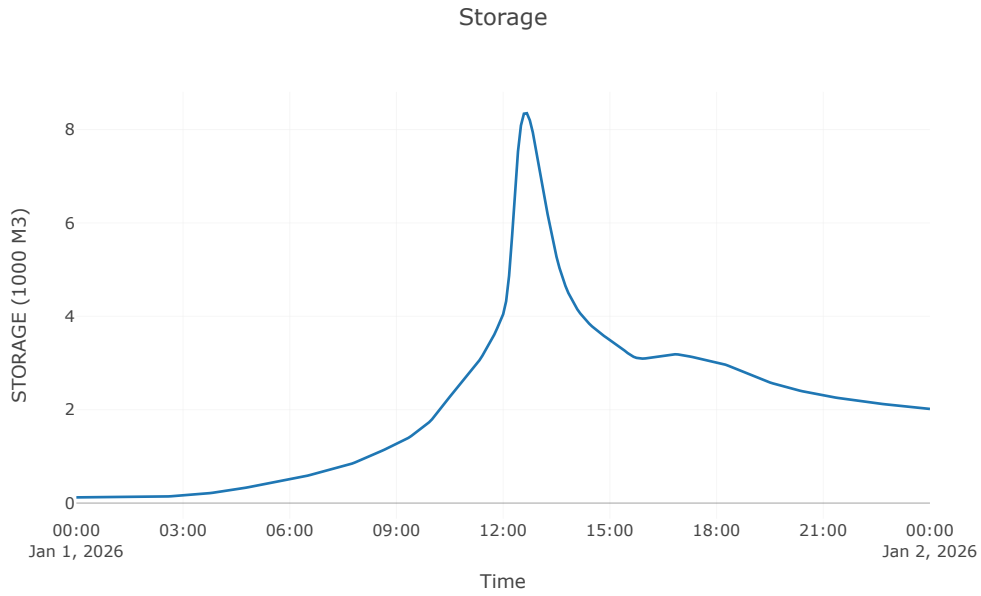

Outflow
FLOW (M3/S)
0
1
2
3
4
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

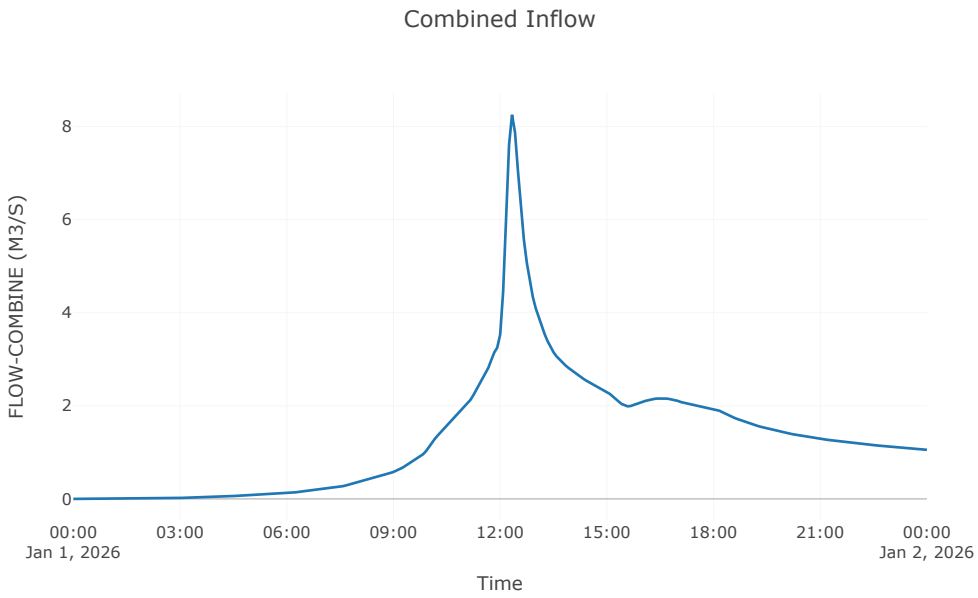
Reservoir: POND 1

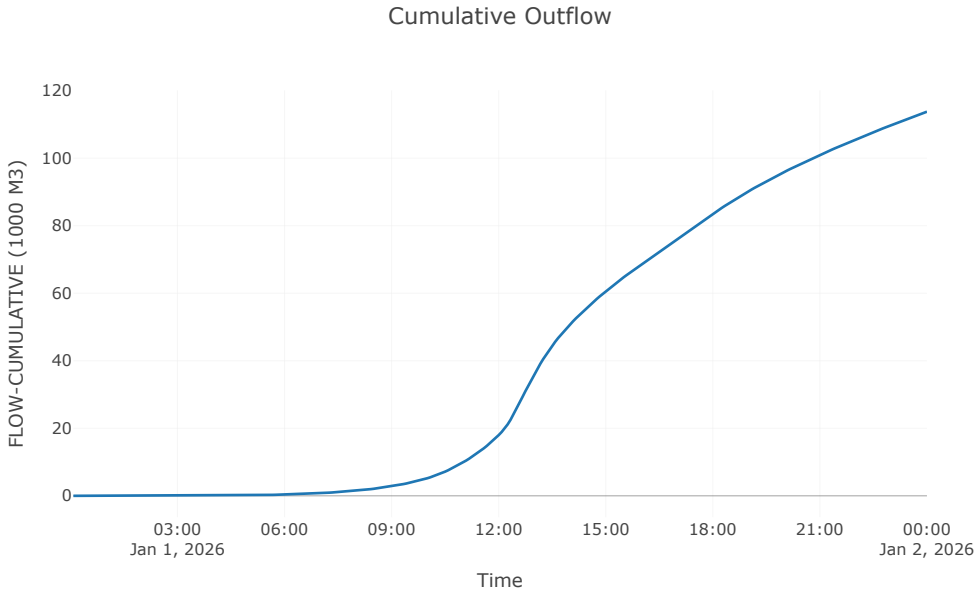
Downstream : Junction - MORVEN FERRY PIPE R

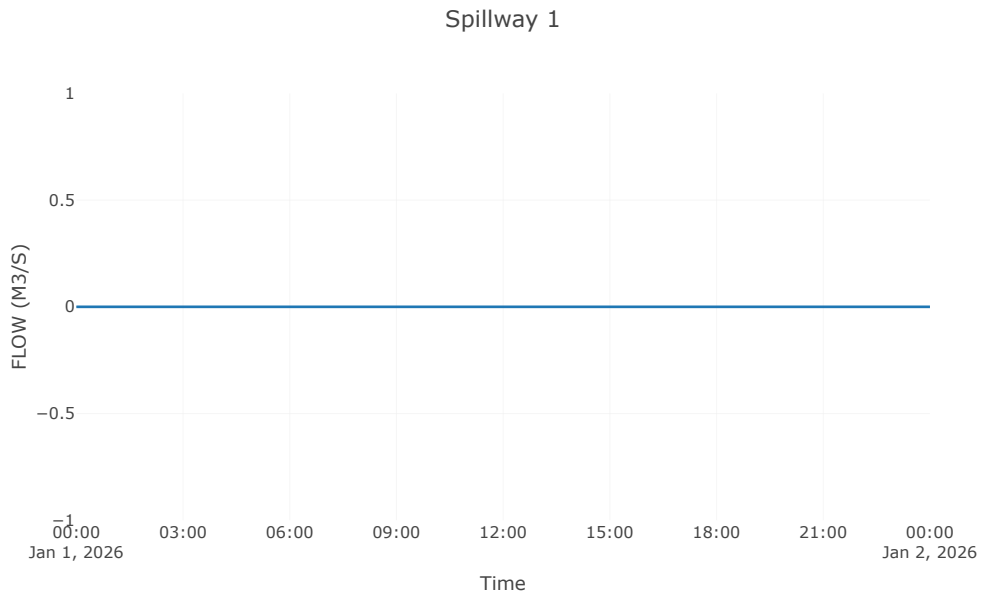
Results: POND 1	
Peak Discharge (M3/S)	5.86
Time of Peak Discharge	01Jan2026, 12:40
Volume (MM)	54.63
Peak Inflow (M3/S)	8.25
Time of Peak Inflow	01Jan2026, 12:20
Inflow Volume (M3)	1.16E5
Maximum Storage (M3)	8348.99
Peak Elevation (M)	2.45
Discharge Volume (M3)	1.14E5

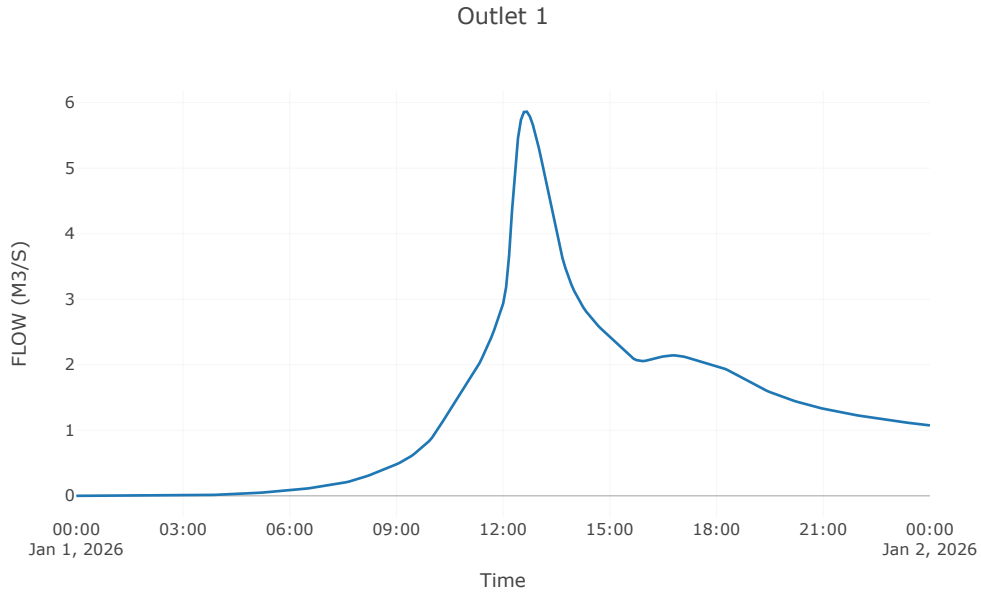


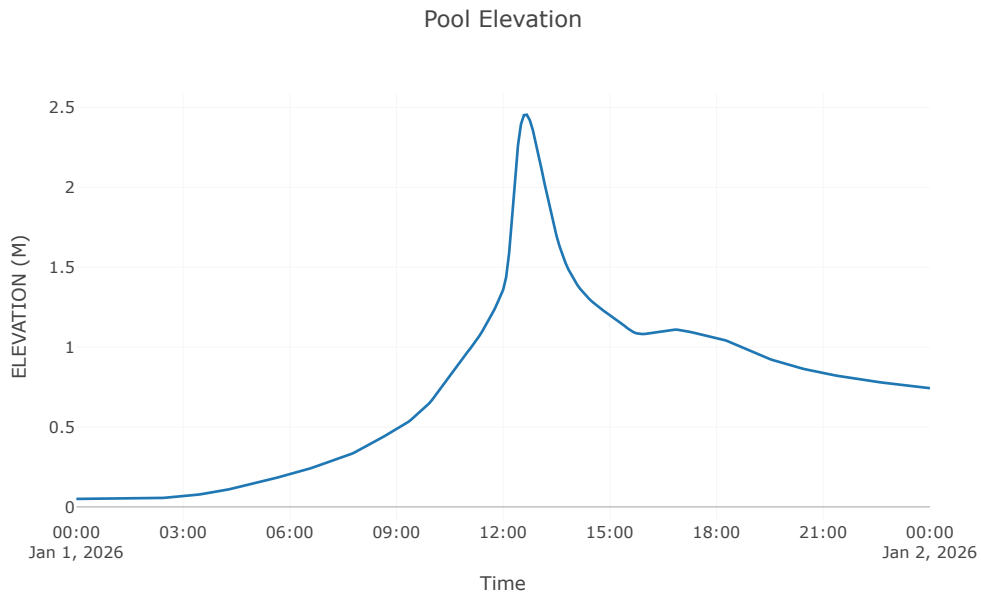


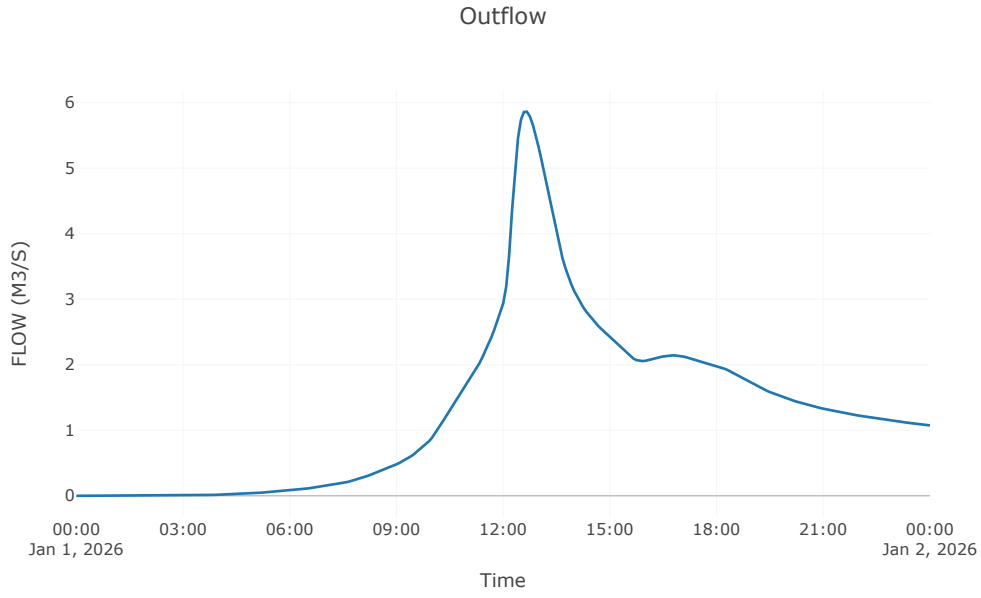

Combined Inflow
FLOW-COMBINE (M3/S)
8
6
4
2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
120
100
80
60
40
20
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Spillway 1
1
0.5
0
−0.5
−1
FLOW (M3/S)
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 1
6
5
4
3
2
1
0
FLOW (M3/S)
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Pool Elevation
ELEVATION (M)
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

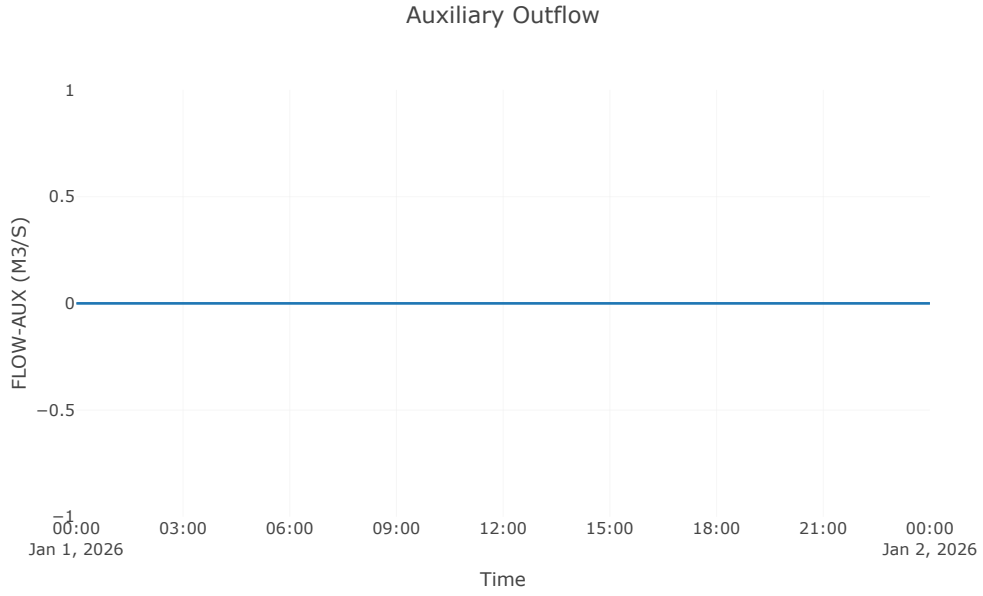

Outflow
FLOW (M3/S)
6
5
4
3
2
1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

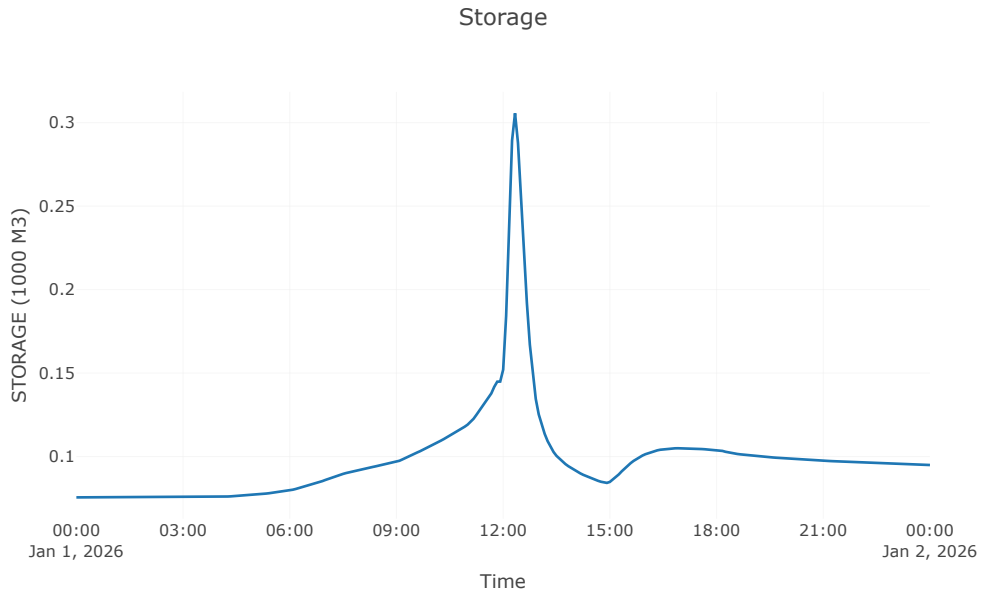
Reservoir: POND 2

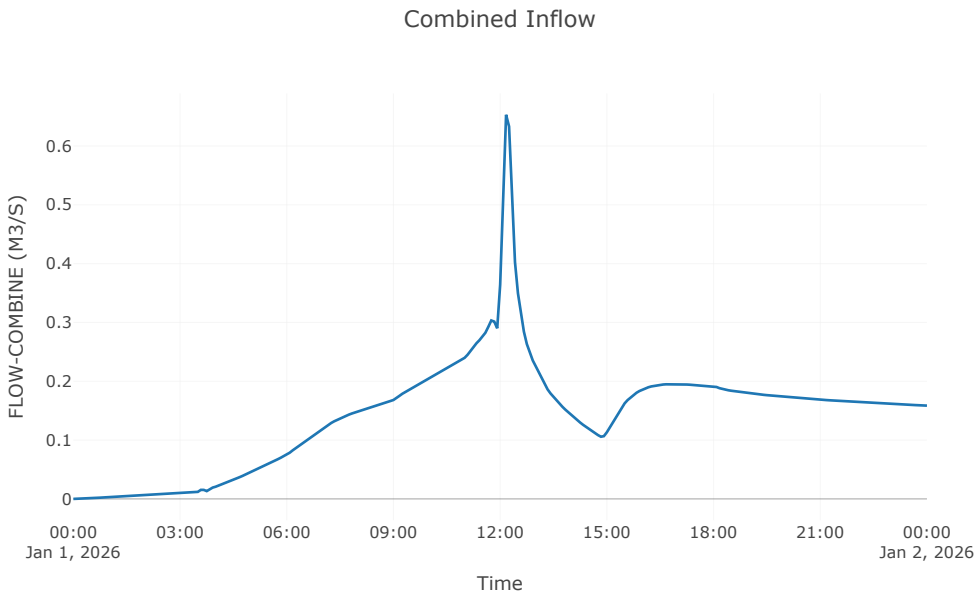
Downstream : Junction - MORVEN FERRY PIPE R

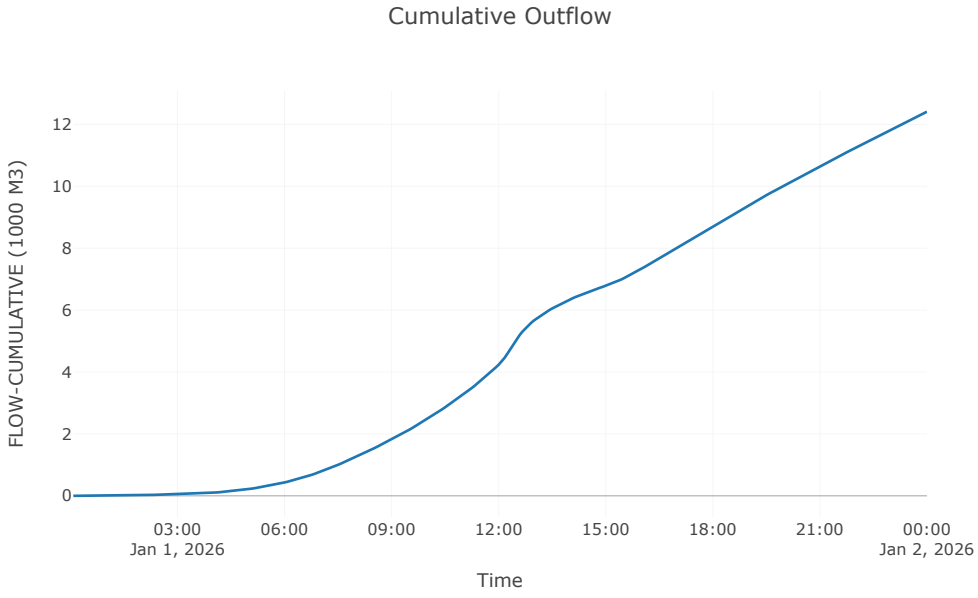
Results: POND 2

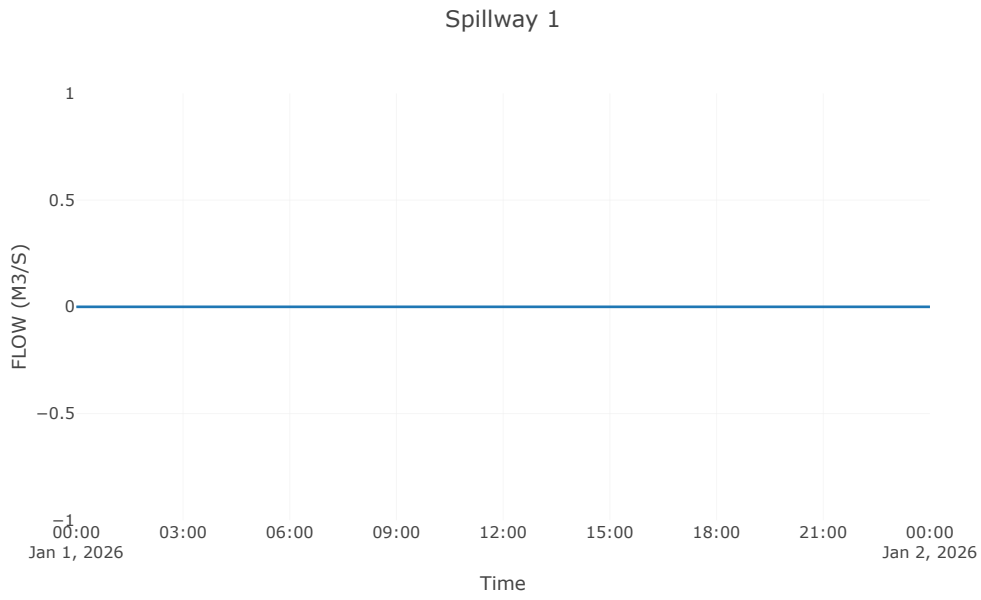
Peak Discharge (M3/S)	0.52
Time of Peak Discharge	01Jan2026, 12:20
Volume (MM)	6.59
Peak Inflow (M3/S)	0.65
Time of Peak Inflow	01Jan2026, 12:10
Inflow Volume (M3)	12431.61
Maximum Storage (M3)	305.63
Peak Elevation (M)	0.55
Discharge Volume (M3)	12412.24

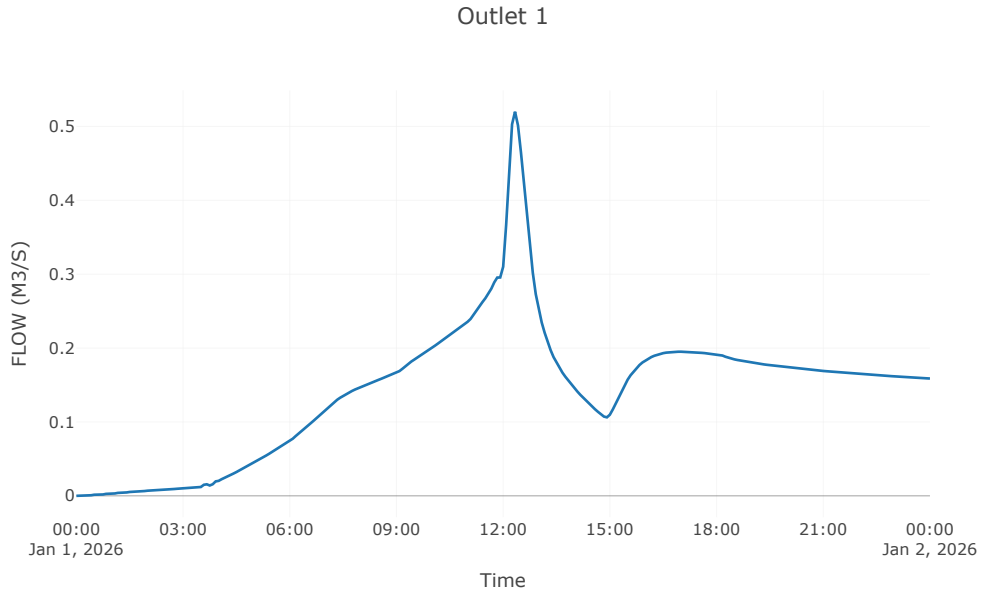


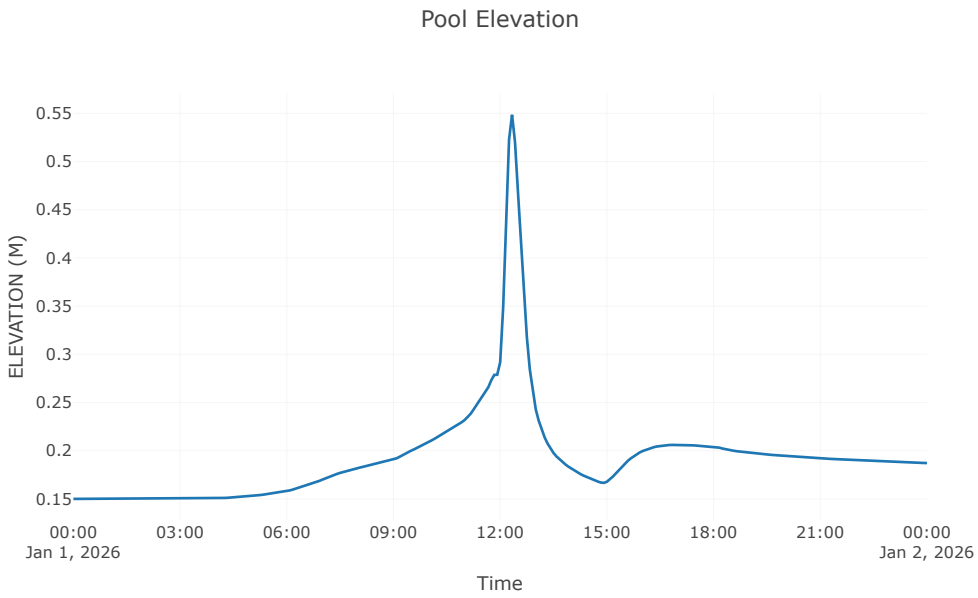


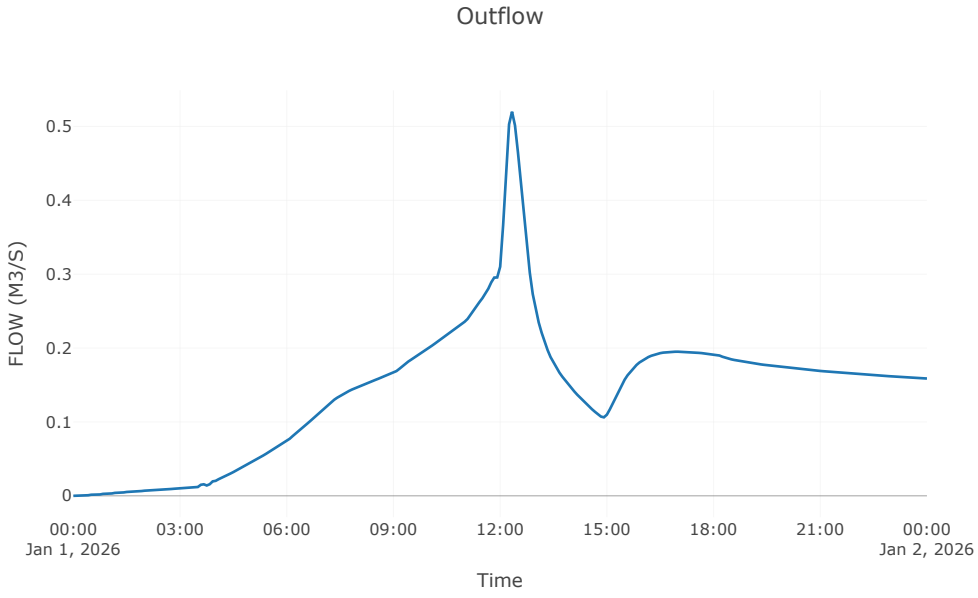

Combined Inflow
FLOW-COMBINE (M3/S)
0.6
0.5
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
12
10
8
6
4
2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Spillway 1
1
0.5
0
−0.5
−1
FLOW (M3/S)
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 1
0.5
0.4
0.3
0.2
0.1
0
FLOW (M3/S)
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

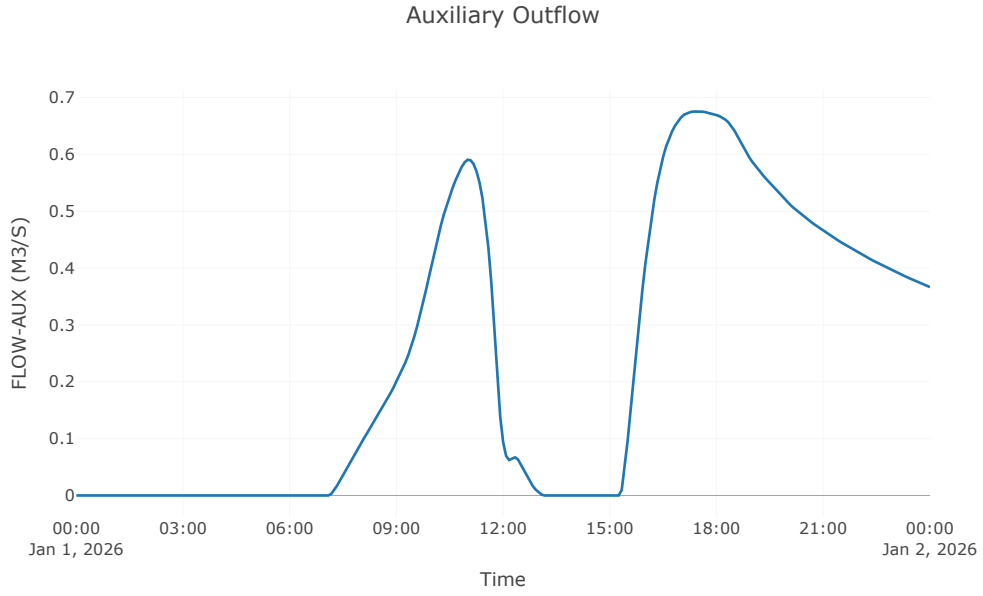

Pool Elevation
ELEVATION (M)
0.55
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

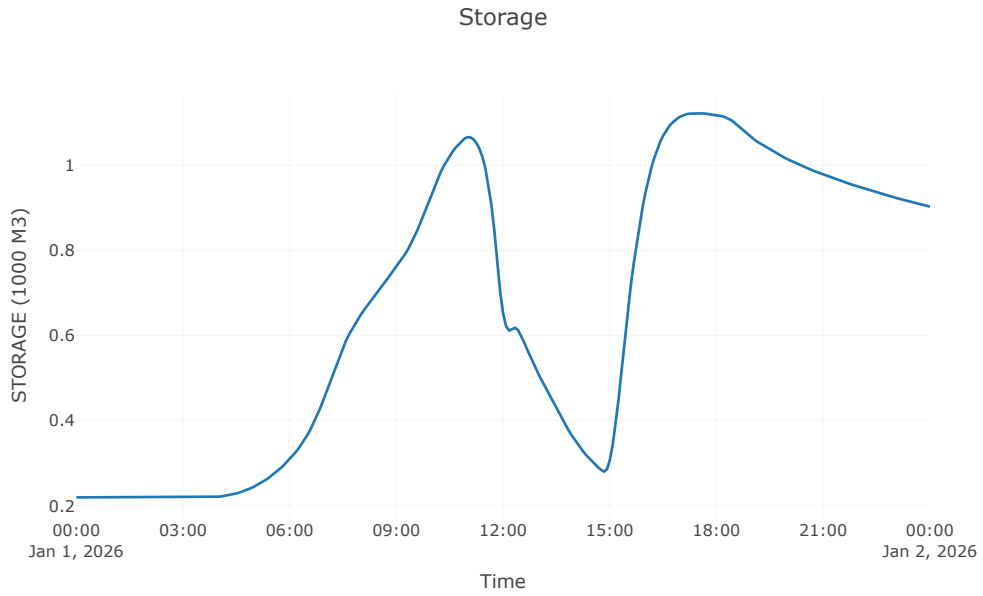

Outflow
FLOW (M3/S)
0.5
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

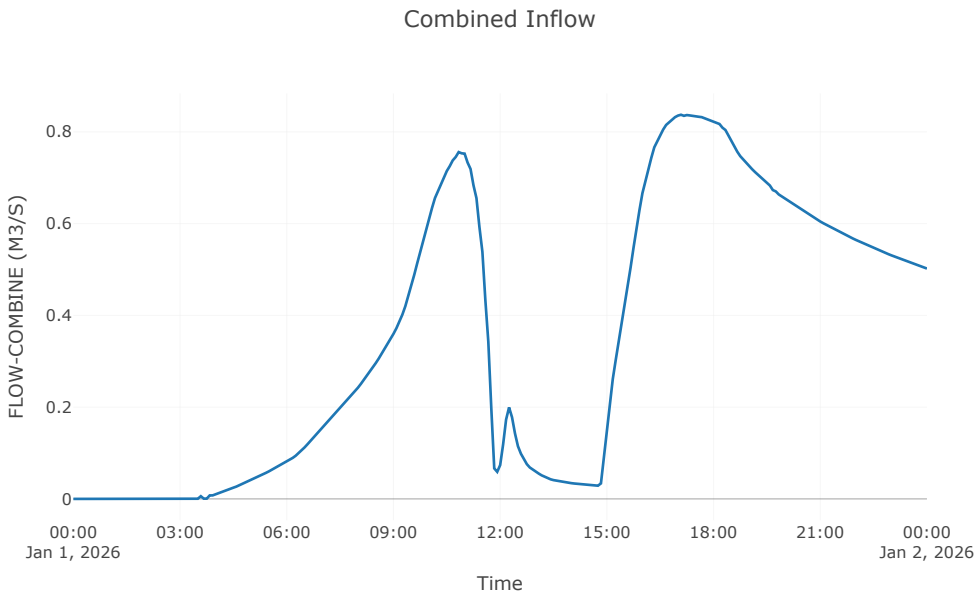
Reservoir: POND 3 DRYBASIN

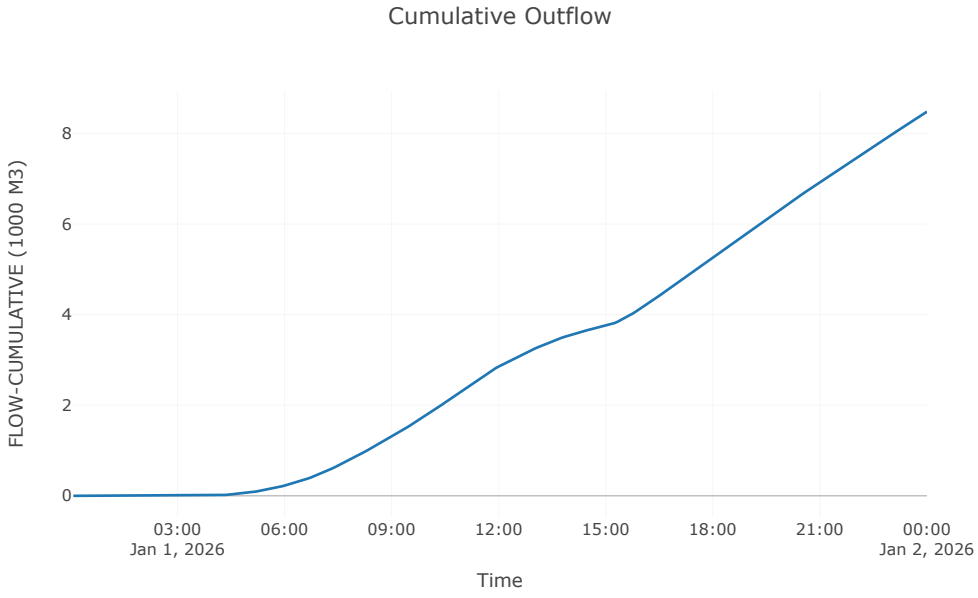
Downstream : Junction - POND 2

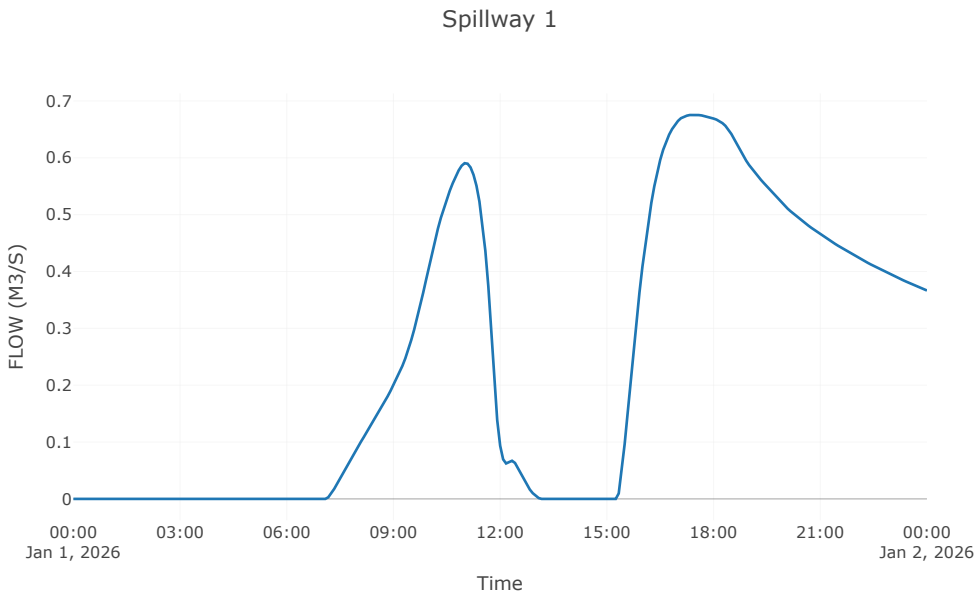
Results: POND 3 DRYBASIN	
Peak Discharge (M3/S)	0.16
Time of Peak Discharge	01Jan2026, 17:25
Volume (MM)	4.63
Peak Inflow (M3/S)	0.84
Time of Peak Inflow	01Jan2026, 17:05
Inflow Volume (M3)	29896.02
Maximum Storage (M3)	1121.5
Peak Elevation (M)	0.28
Discharge Volume (M3)	8481.24

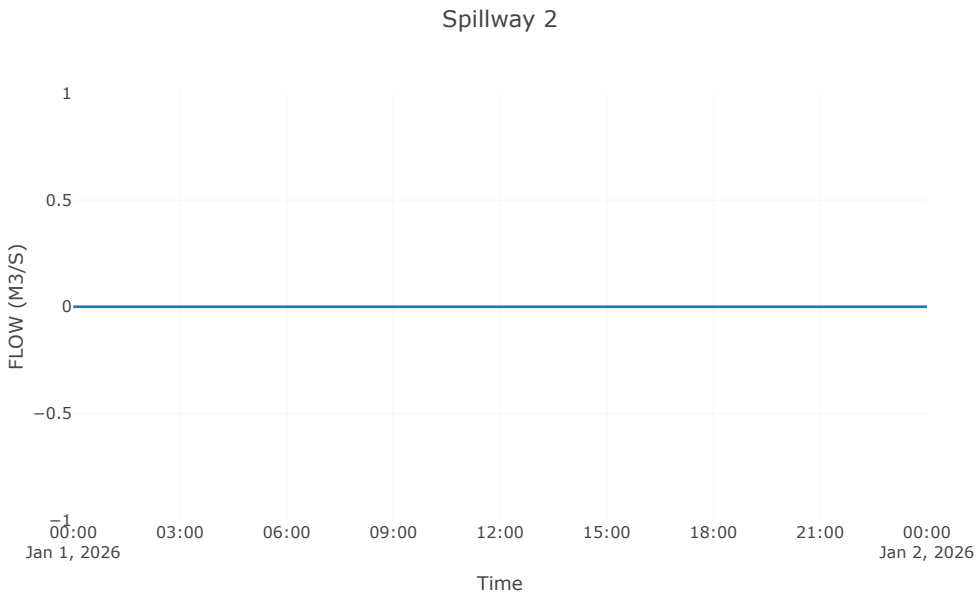


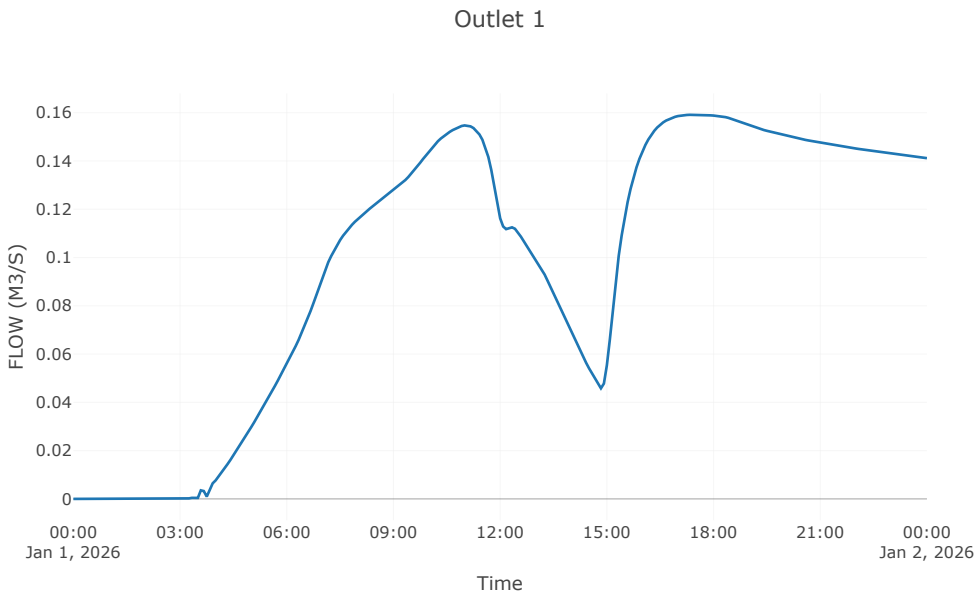


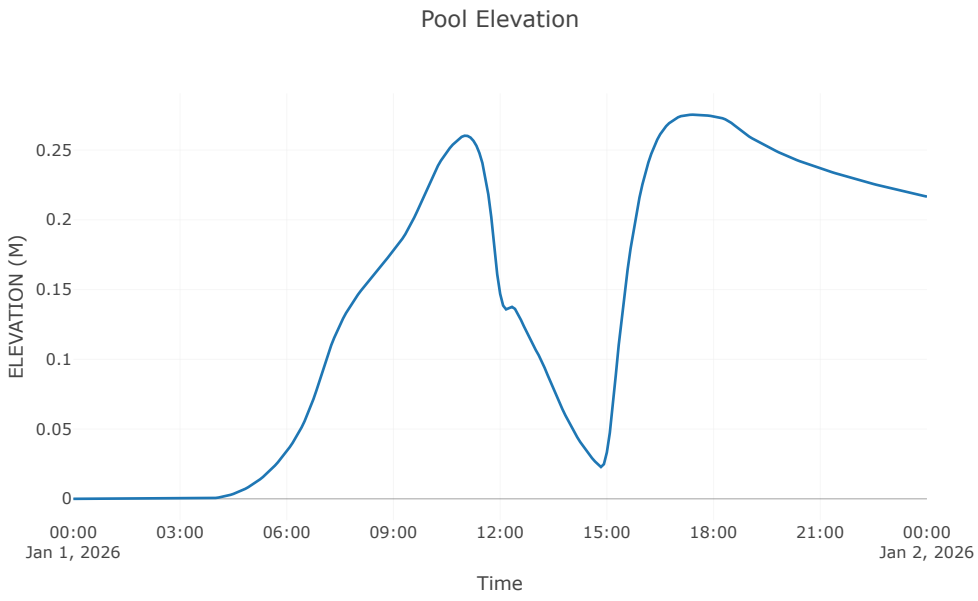

Combined Inflow
FLOW-COMBINE (M3/S)
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

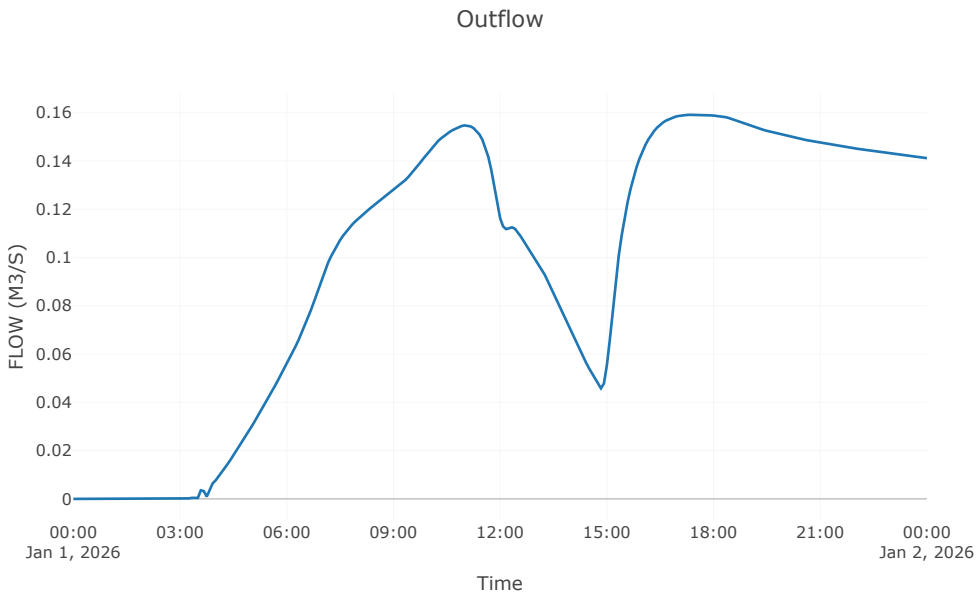

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
8
6
4
2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Spillway 1
FLOW (M3/S)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Spillway 2
FLOW (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 1
FLOW (M3/S)
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

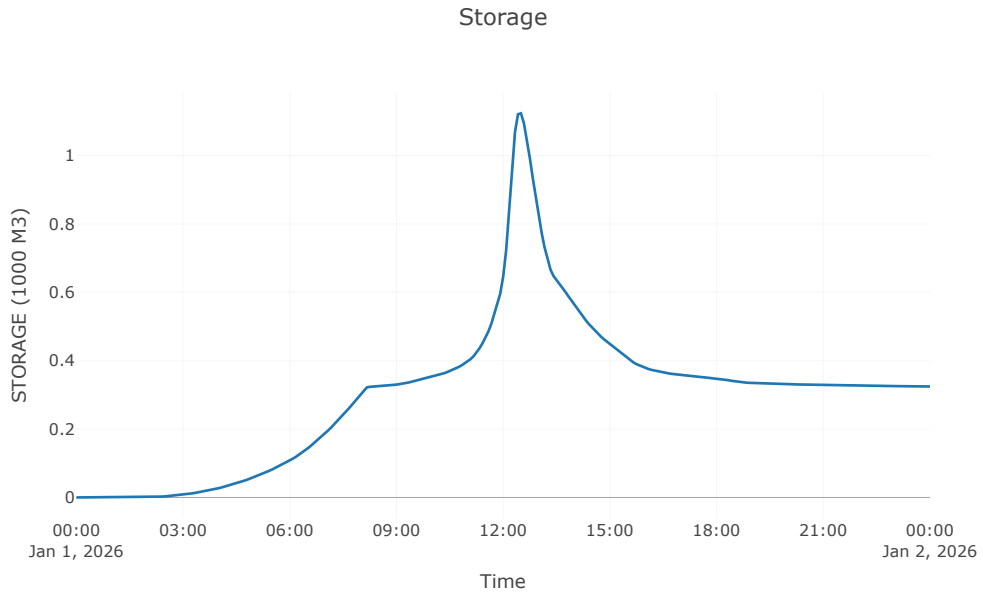

Pool Elevation
ELEVATION (M)
0.25
0.2
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

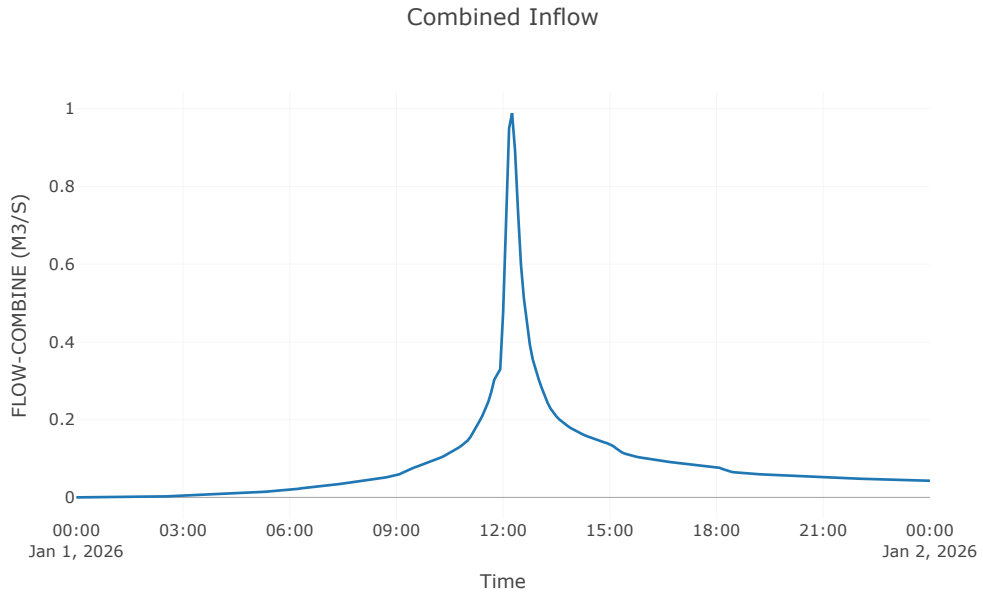

Outflow
FLOW (M3/S)
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

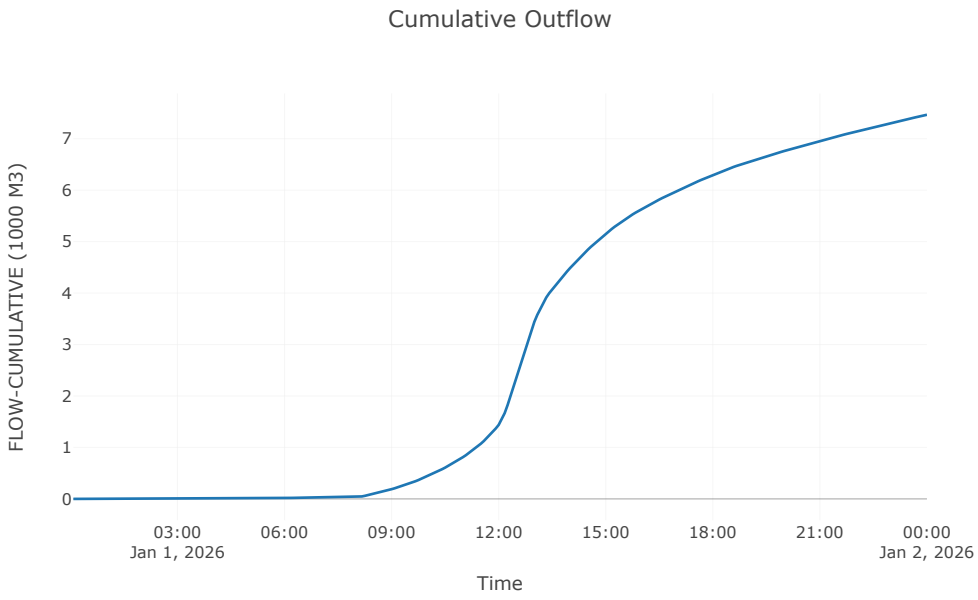
Reservoir: POND 5

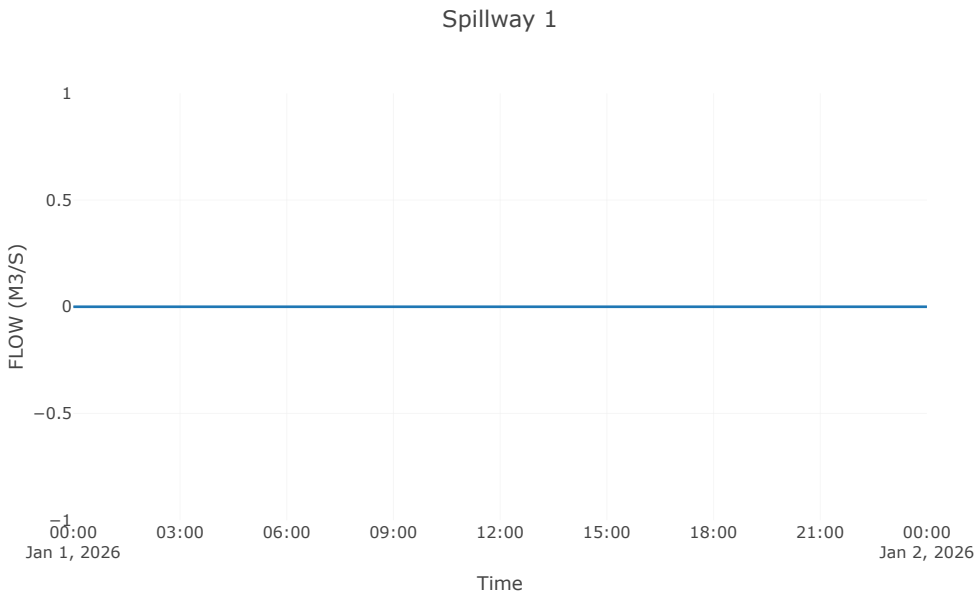
Downstream : Reach - POND 5 OLFP

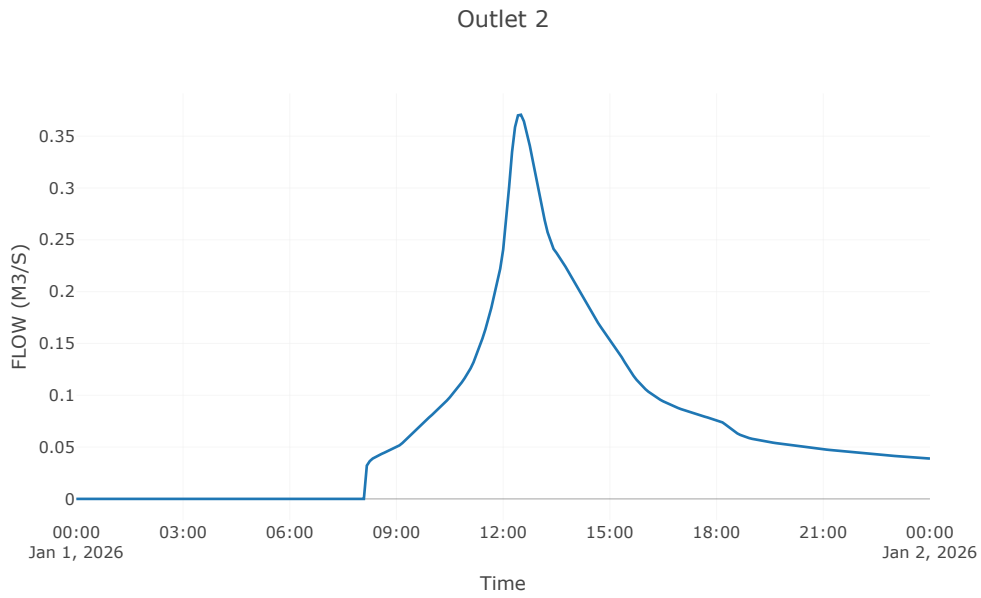
Results: POND 5	
Peak Discharge (M3/S)	0.66
Time of Peak Discharge	01Jan2026, 12:30
Volume (MM)	54.29
Peak Inflow (M3/S)	0.99
Time of Peak Inflow	01Jan2026, 12:15
Inflow Volume (M3)	7799.07
Maximum Storage (M3)	1123.51
Peak Elevation (M)	0.67
Discharge Volume (M3)	7465.39

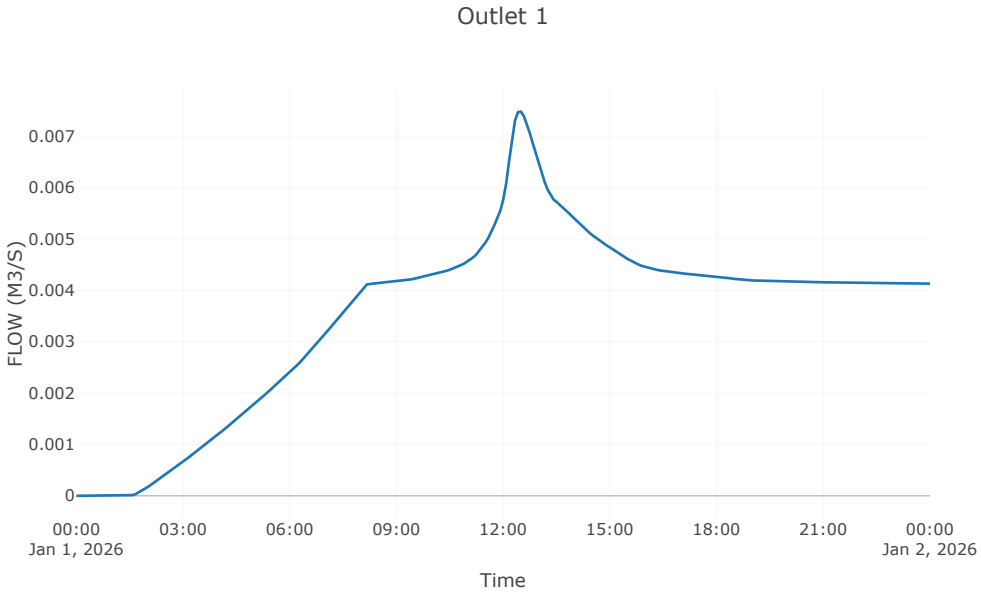


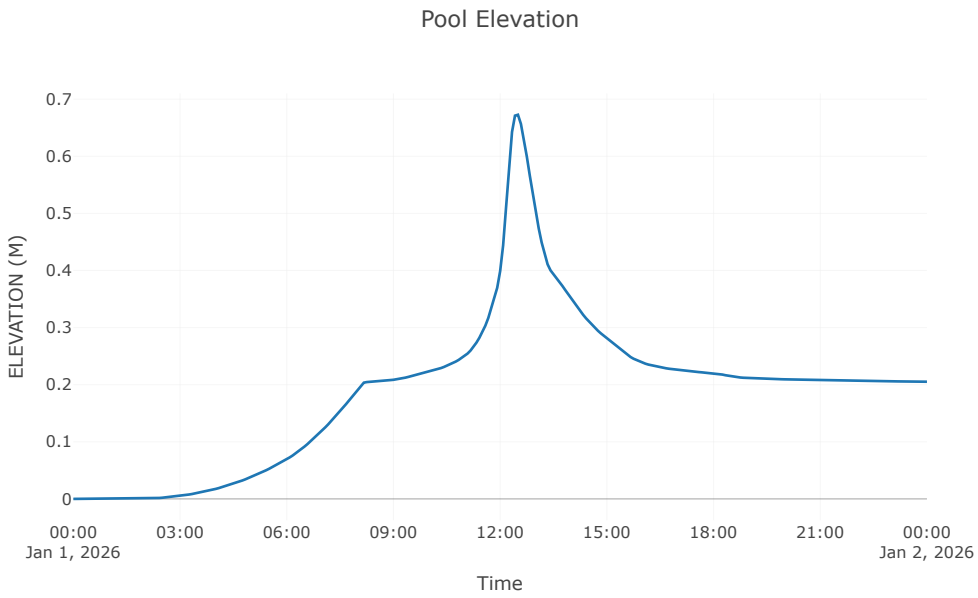


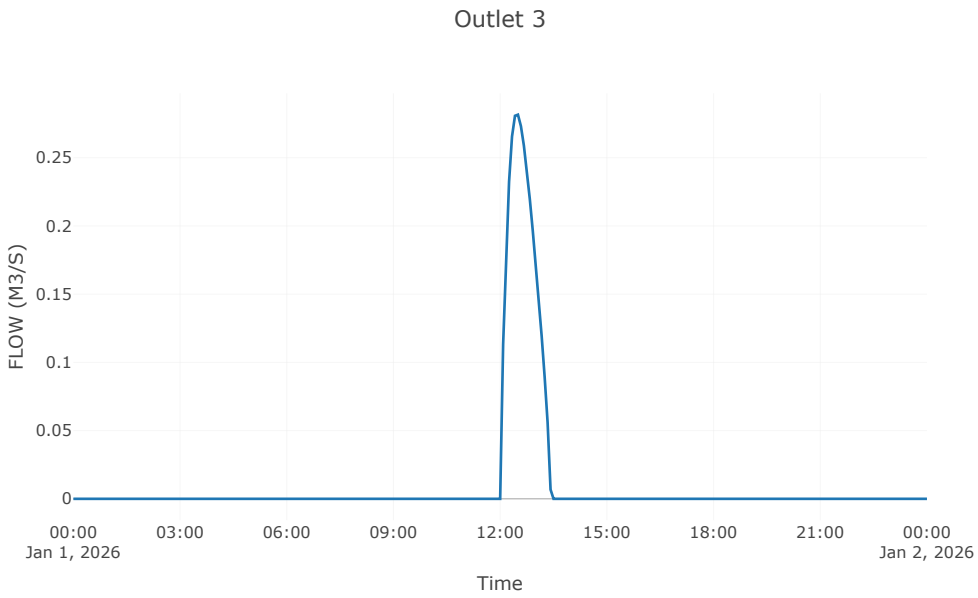

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
0
1
2
3
4
5
6
7
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

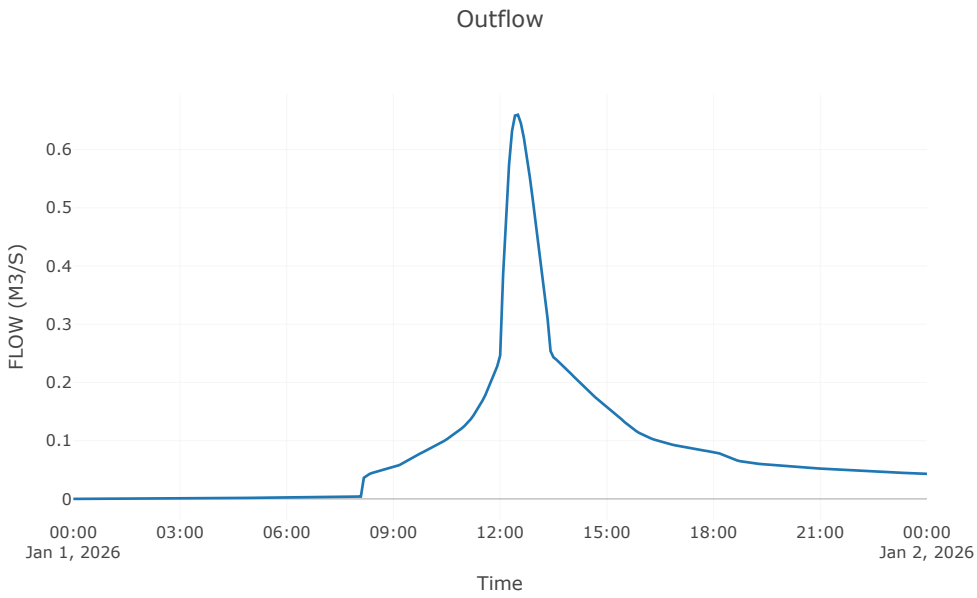

Spillway 1
FLOW (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 2
FLOW (M3/S)
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 1
FLOW (M3/S)
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Pool Elevation
ELEVATION (M)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 3
FLOW (M3/S)
0.25
0.2
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

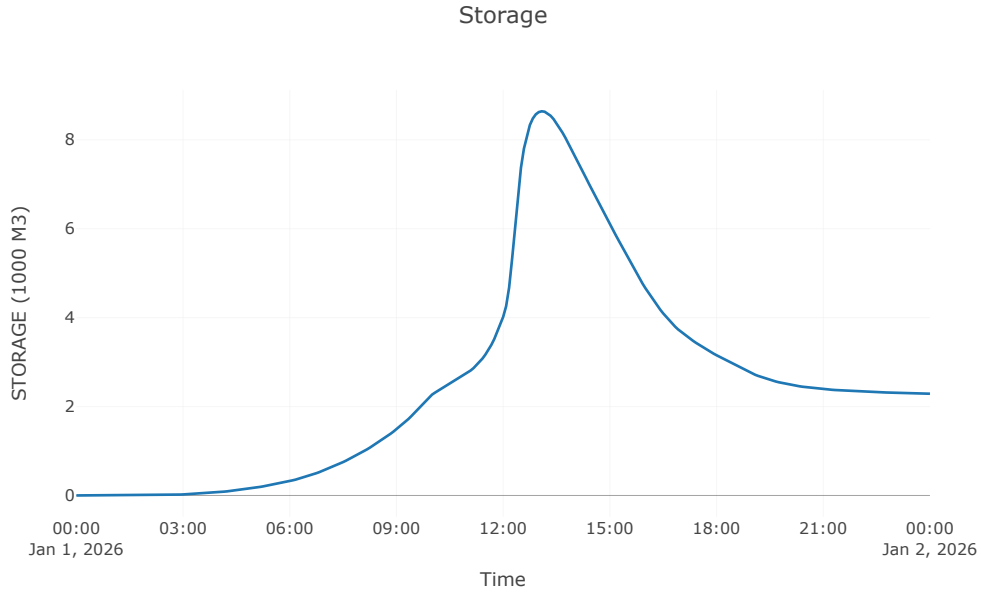

Outflow
FLOW (M3/S)
0.6
0.5
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

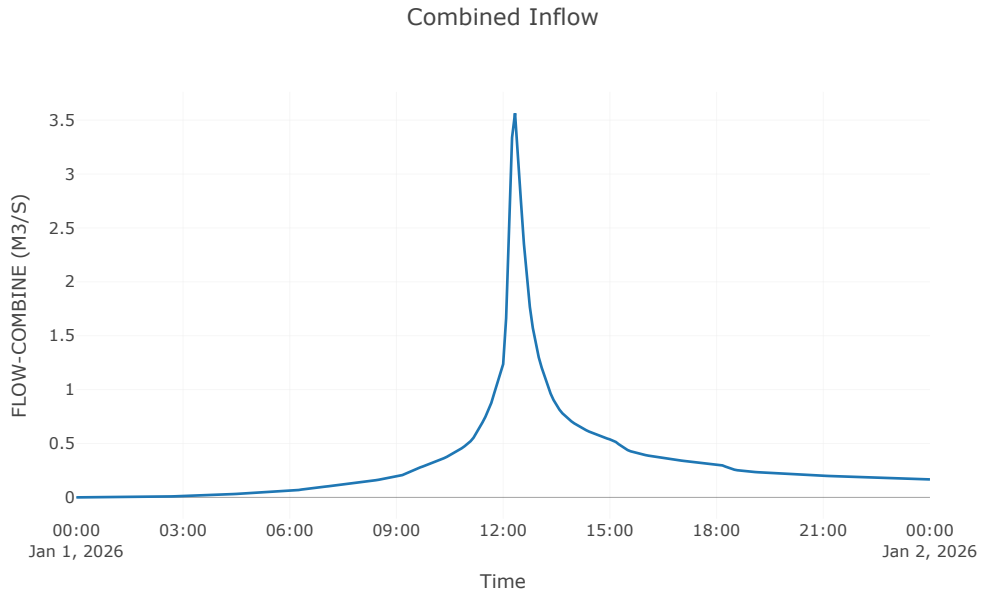
Reservoir: POND 6

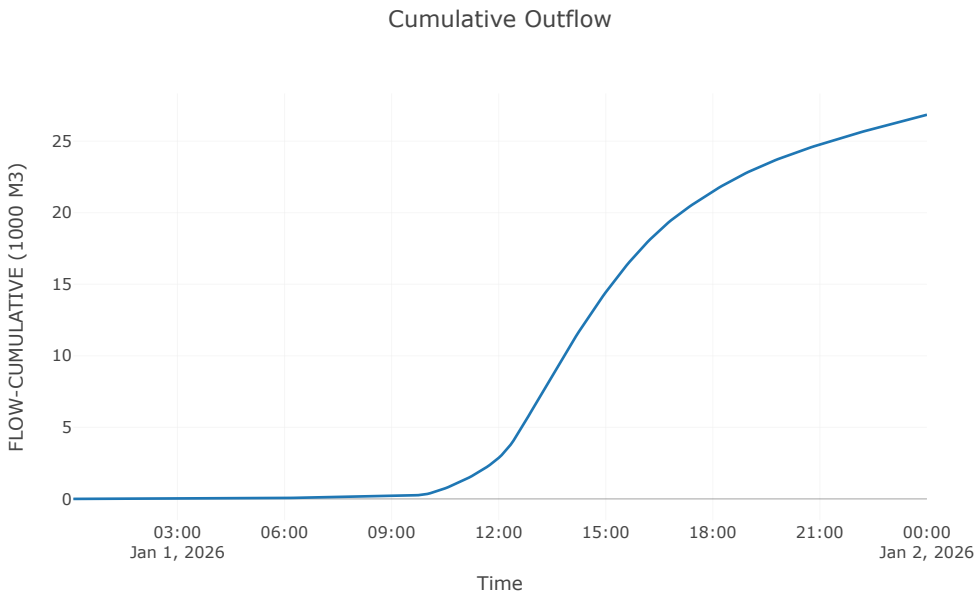
Downstream : Reach - CHANNEL 2

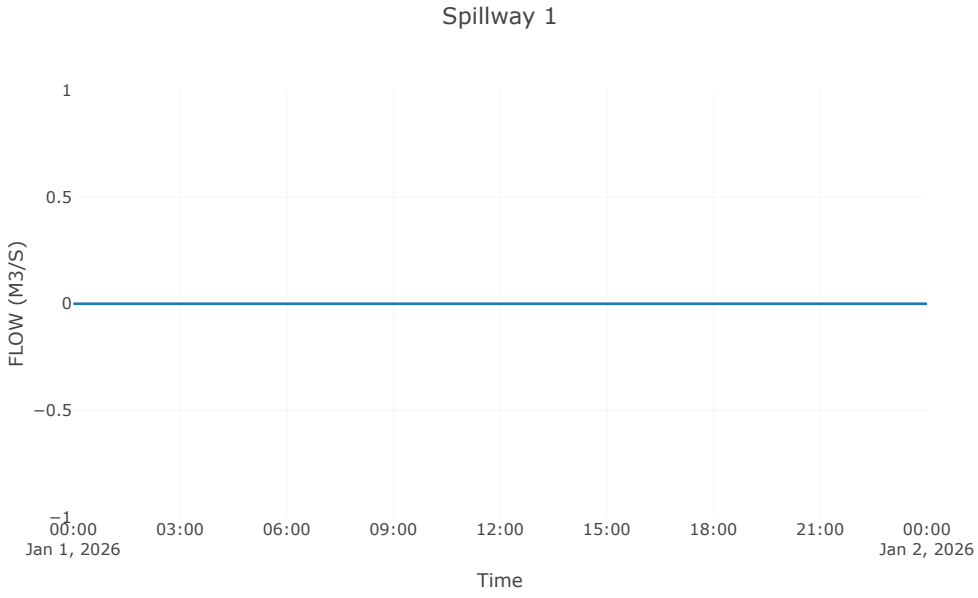
Results: POND 6

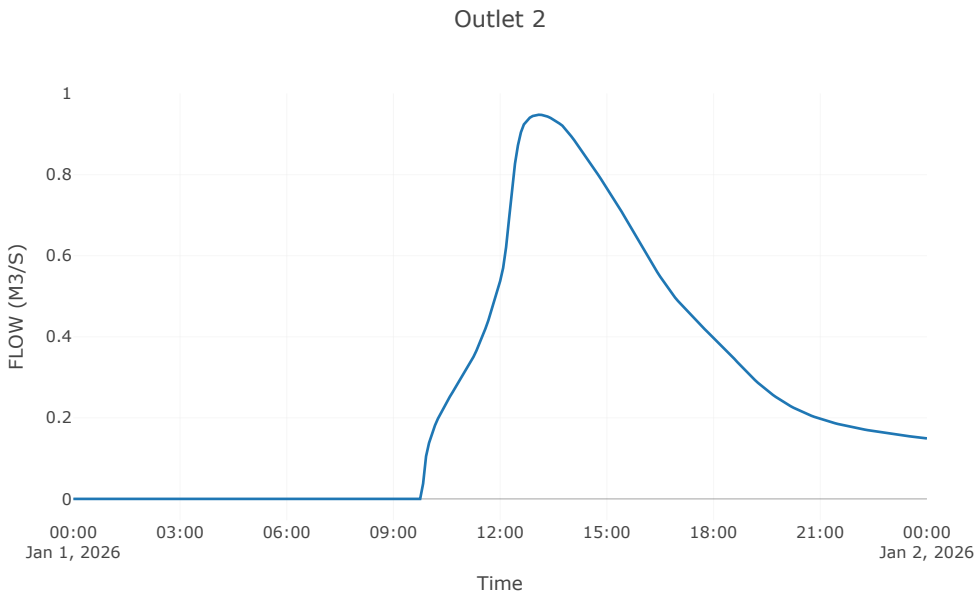
Peak Discharge (M3/S)	1.19
Time of Peak Discharge	01Jan2026, 13:05
Volume (MM)	47.92
Peak Inflow (M3/S)	3.56
Time of Peak Inflow	01Jan2026, 12:20
Inflow Volume (M3)	29136.22
Maximum Storage (M3)	8641.55
Peak Elevation (M)	2.09
Discharge Volume (M3)	26844.38

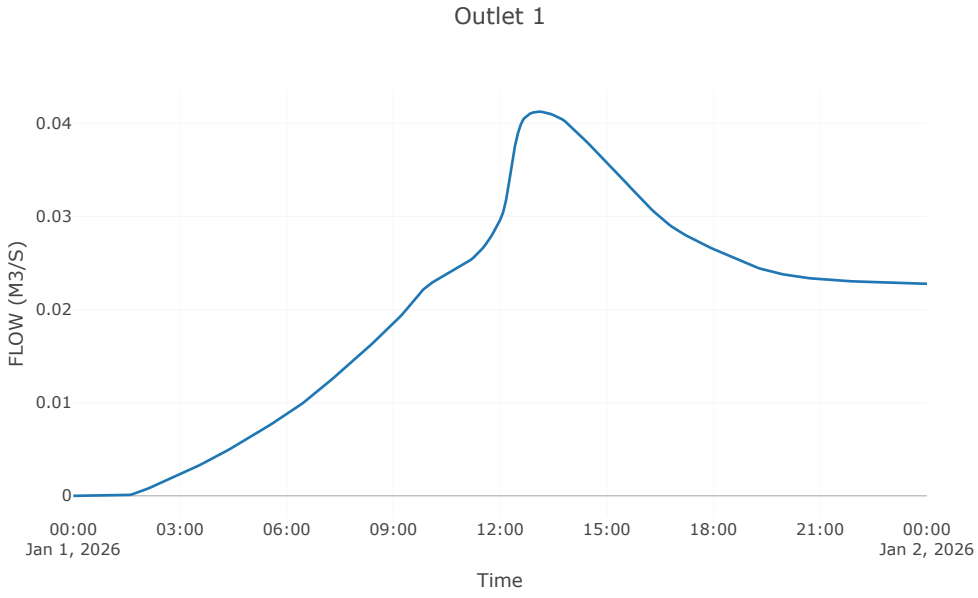


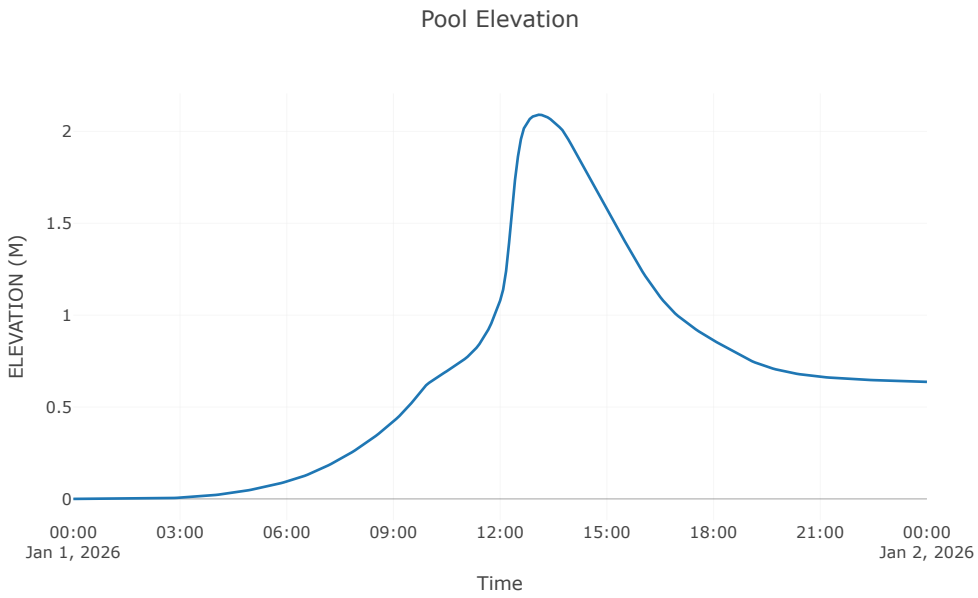


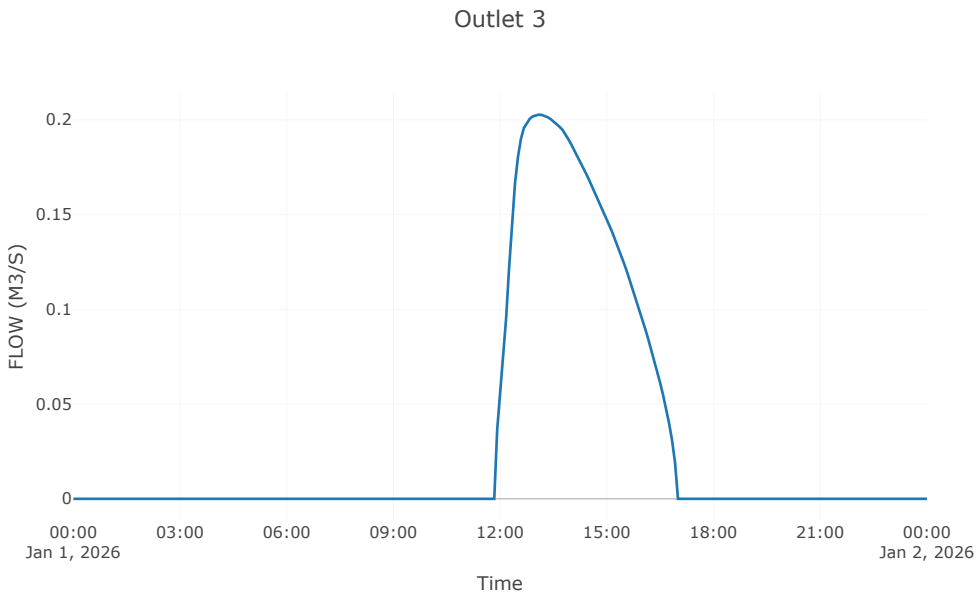

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
25
20
15
10
5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

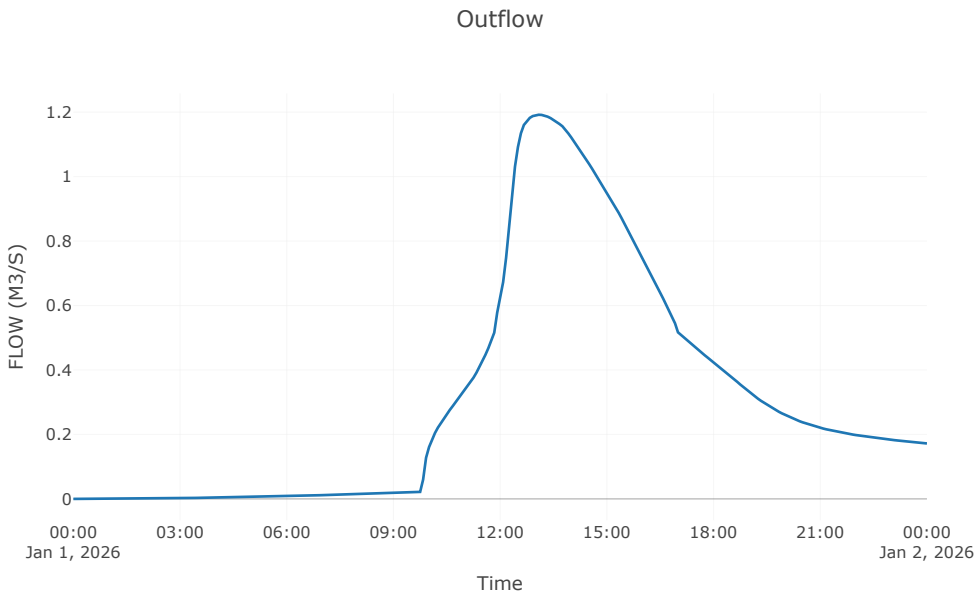

Spillway 1
FLOW (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 2
FLOW (M3/S)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 1
FLOW (M3/S)
0.04
0.03
0.02
0.01
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Pool Elevation
ELEVATION (M)
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 3
FLOW (M3/S)
0.2
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

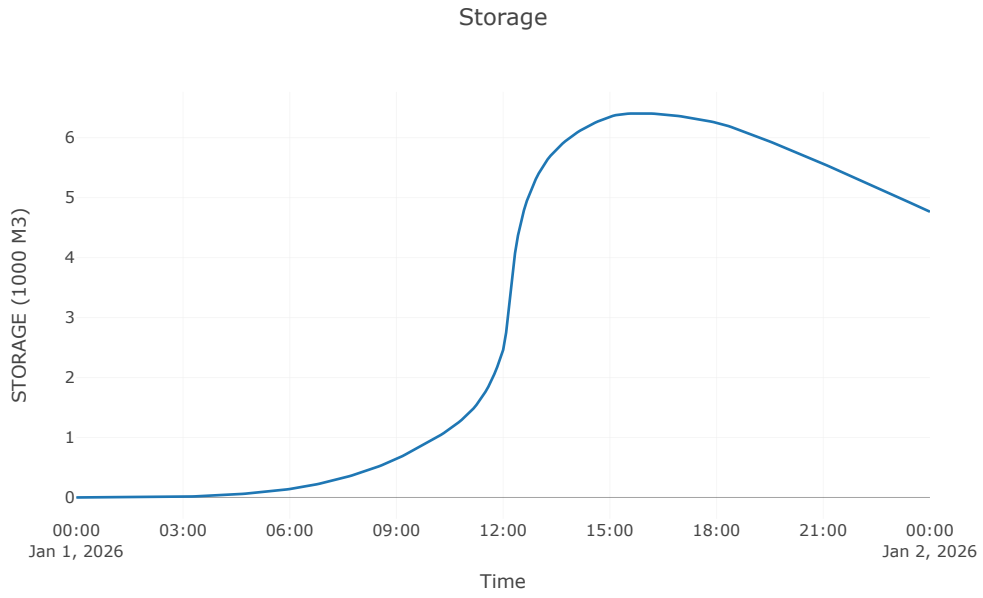

Outflow
FLOW (M3/S)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

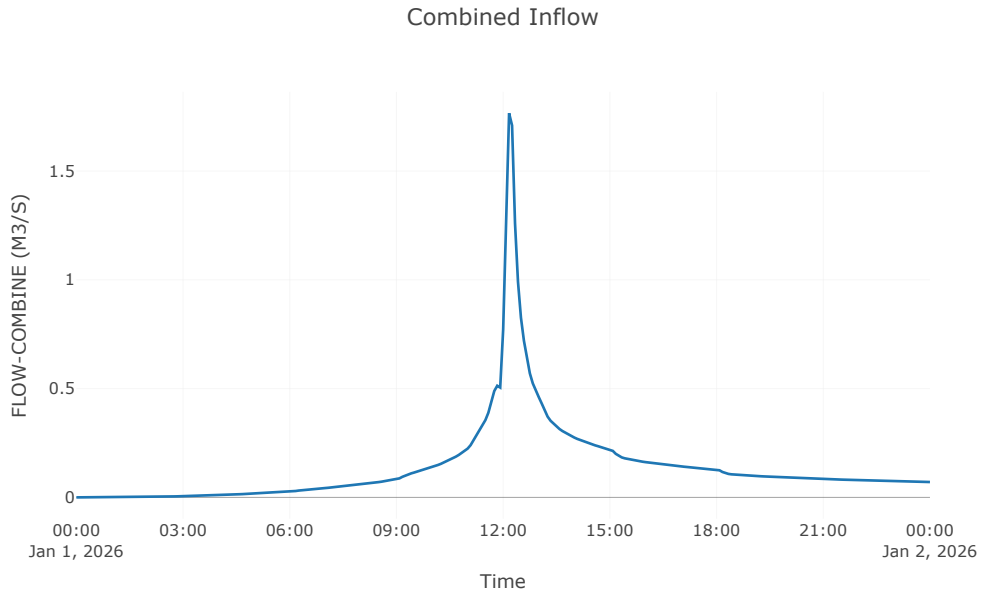
Reservoir: POND 7

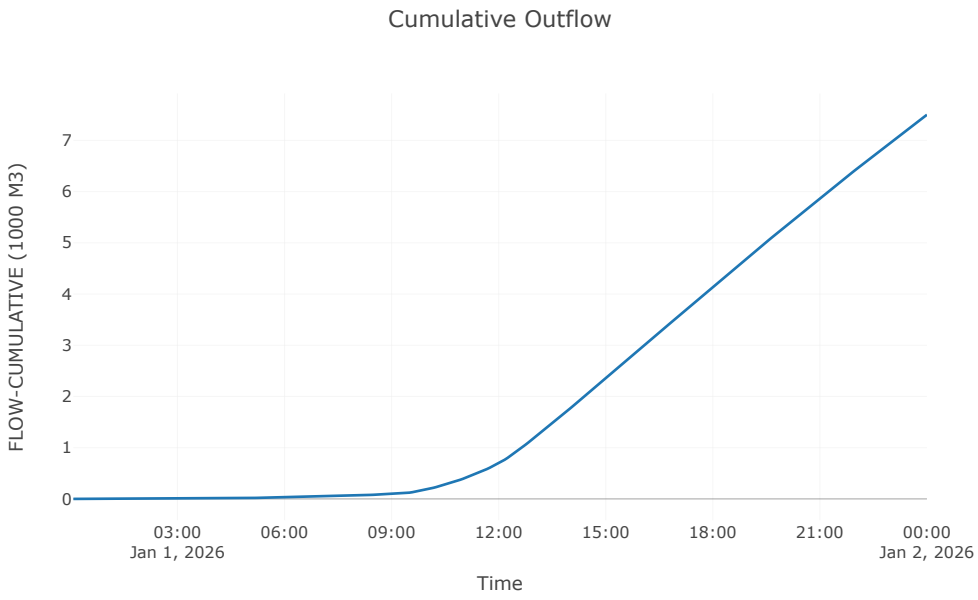
Downstream : Reach - WETLAND B

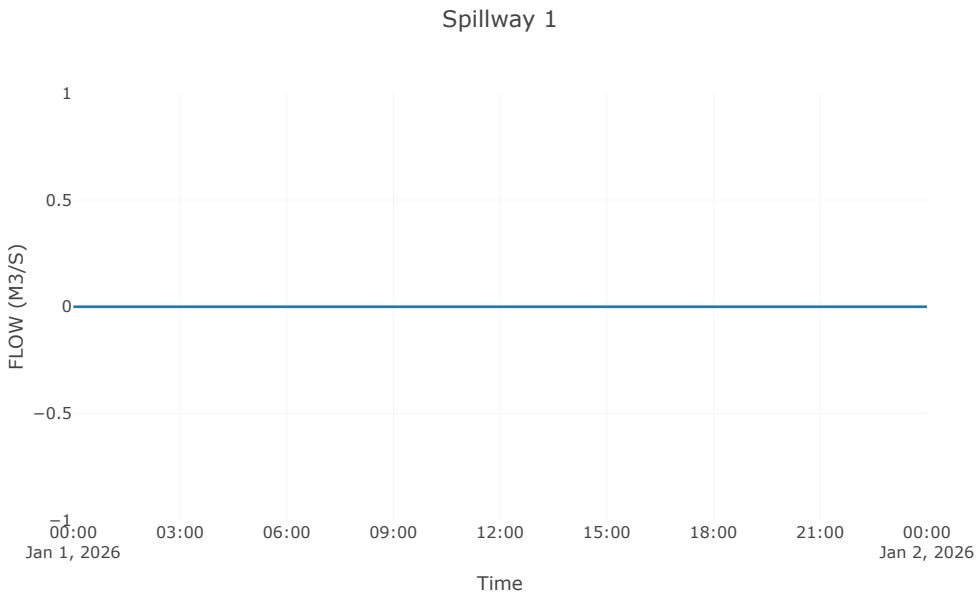
Results: POND 7

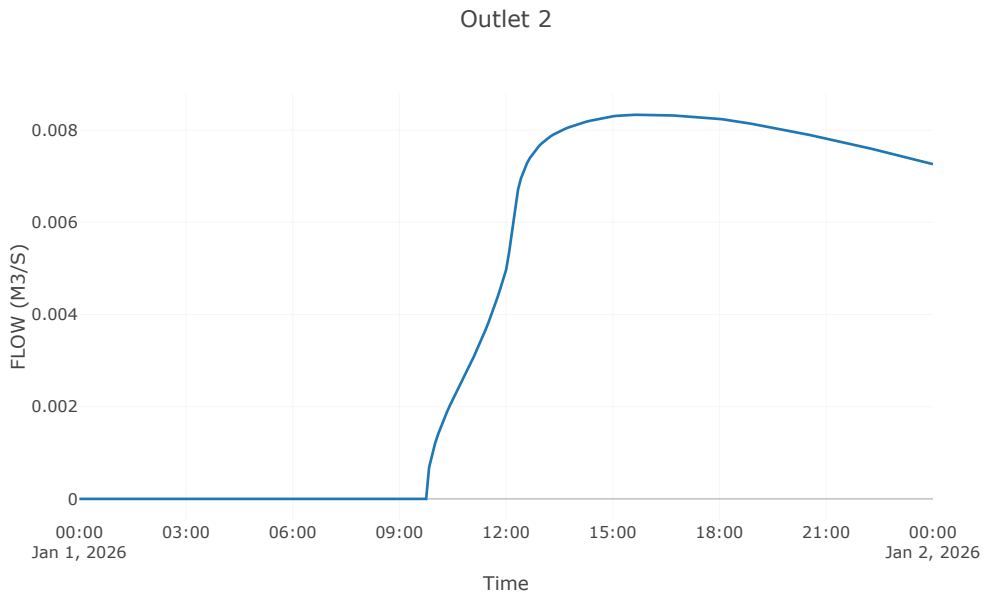
Peak Discharge (M3/S)	0.17
Time of Peak Discharge	01Jan2026, 15:50
Volume (MM)	30.42
Peak Inflow (M3/S)	1.77
Time of Peak Inflow	01Jan2026, 12:10
Inflow Volume (M3)	12265.67
Maximum Storage (M3)	6405.67
Peak Elevation (M)	3
Discharge Volume (M3)	7500.94

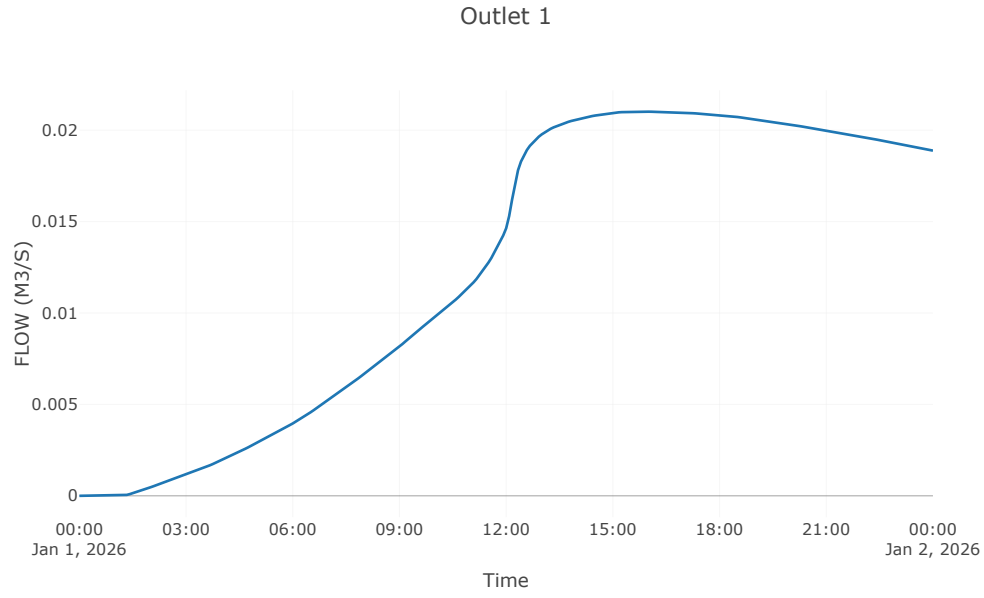


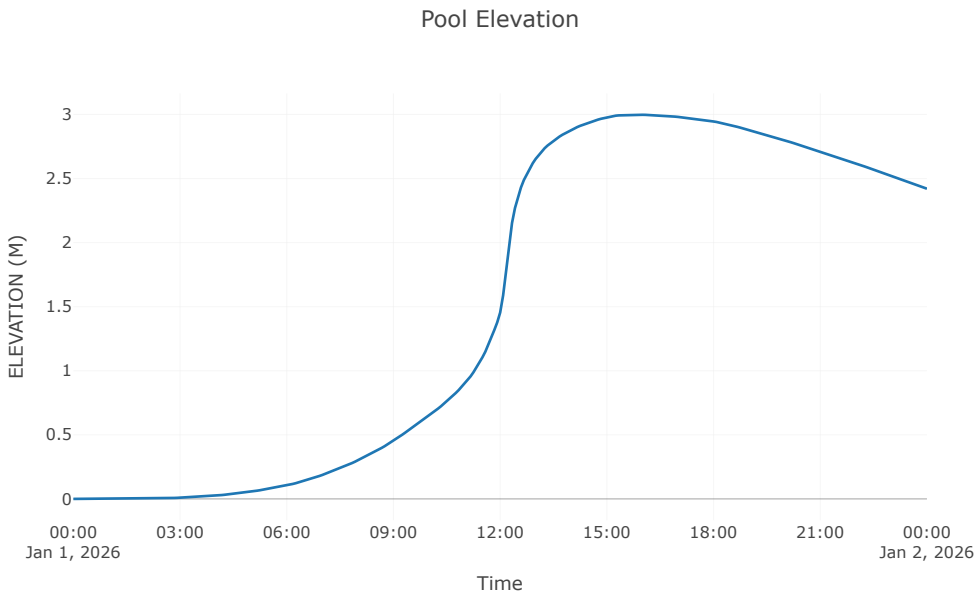


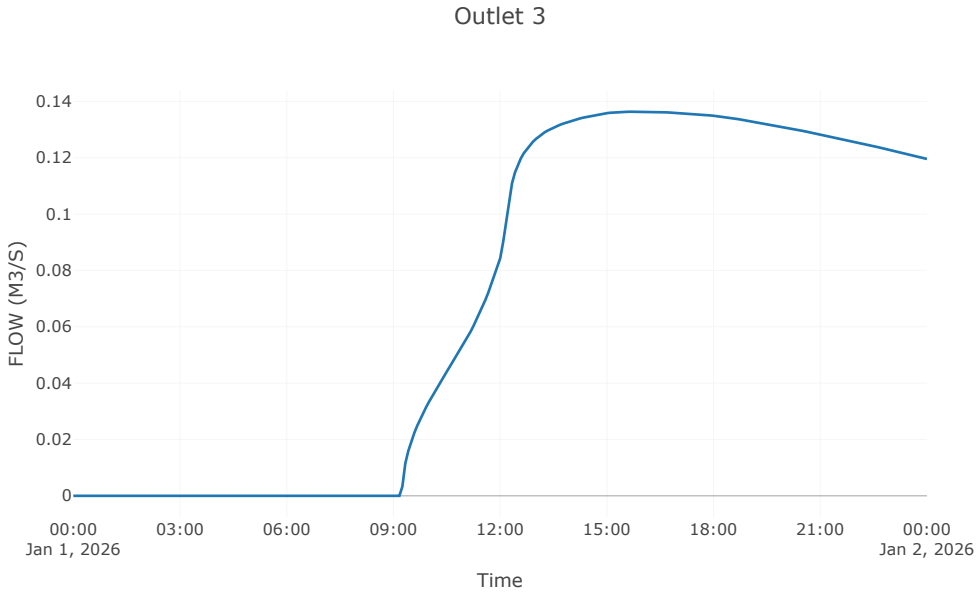

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
0
1
2
3
4
5
6
7
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

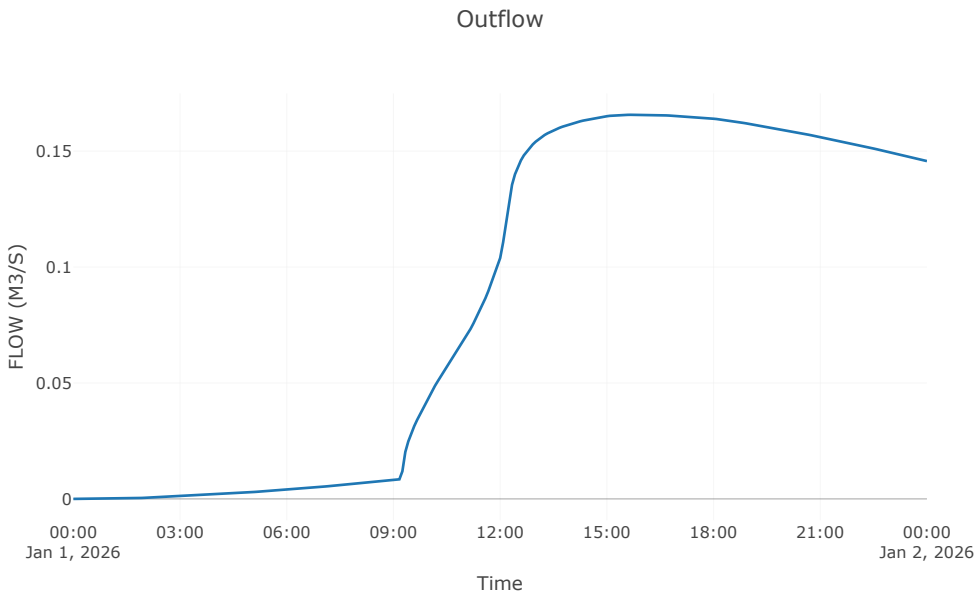

Spillway 1
FLOW (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 2
0.008
0.006
0.004
0.002
0
FLOW (M3/S)
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 1
0.02
0.015
0.01
0.005
0
FLOW (M3/S)
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Pool Elevation
ELEVATION (M)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 3
FLOW (M3/S)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

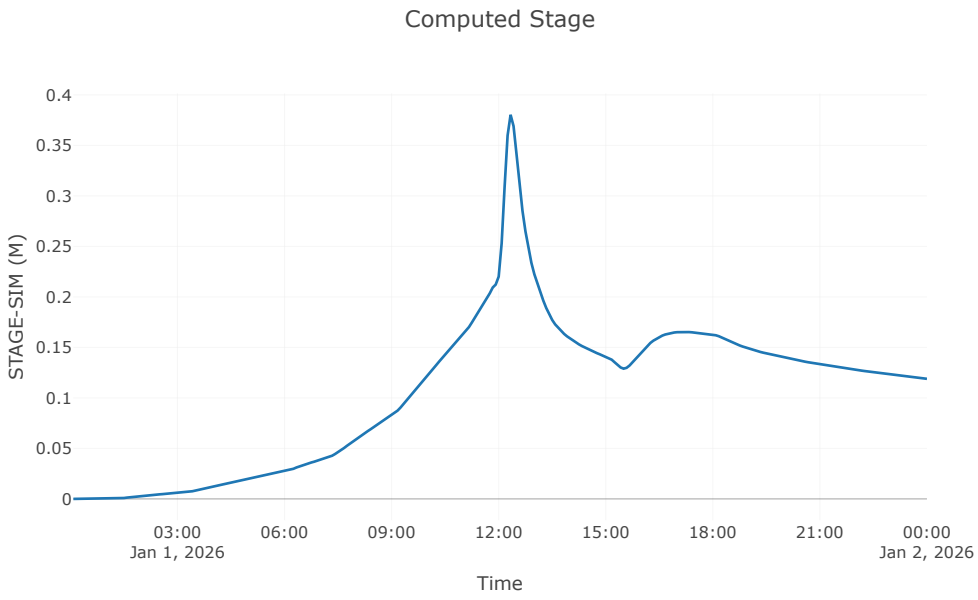

Outflow
0.15
0.1
0.05
0
FLOW (M3/S)
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

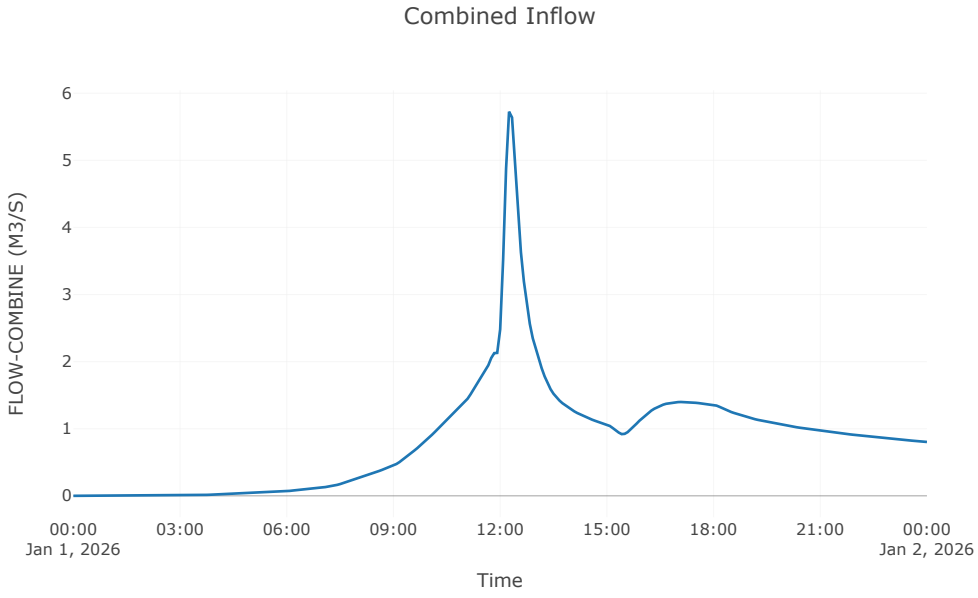
Reach: Reach-CHANNEL 1

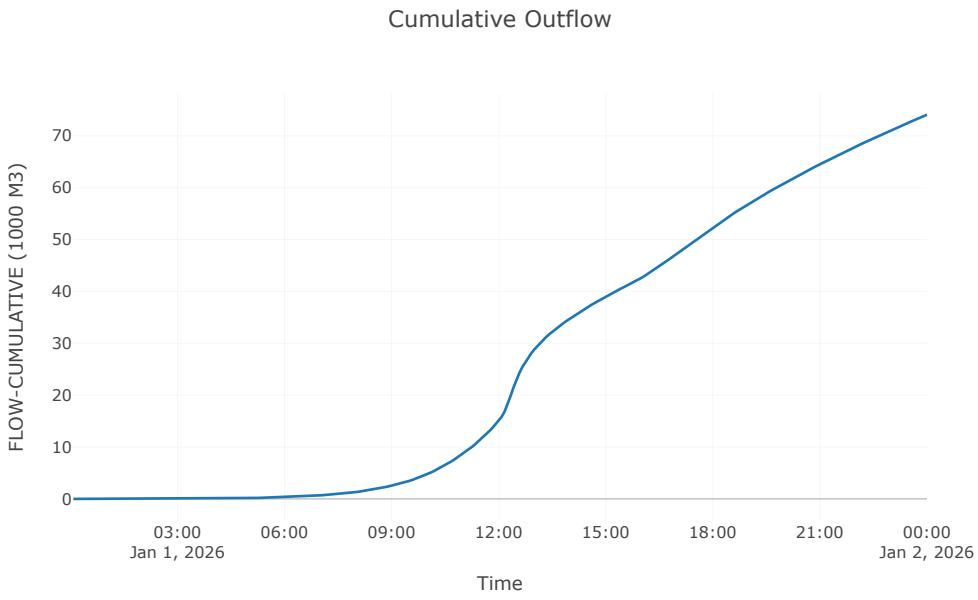
Downstream : Junction - POND 1

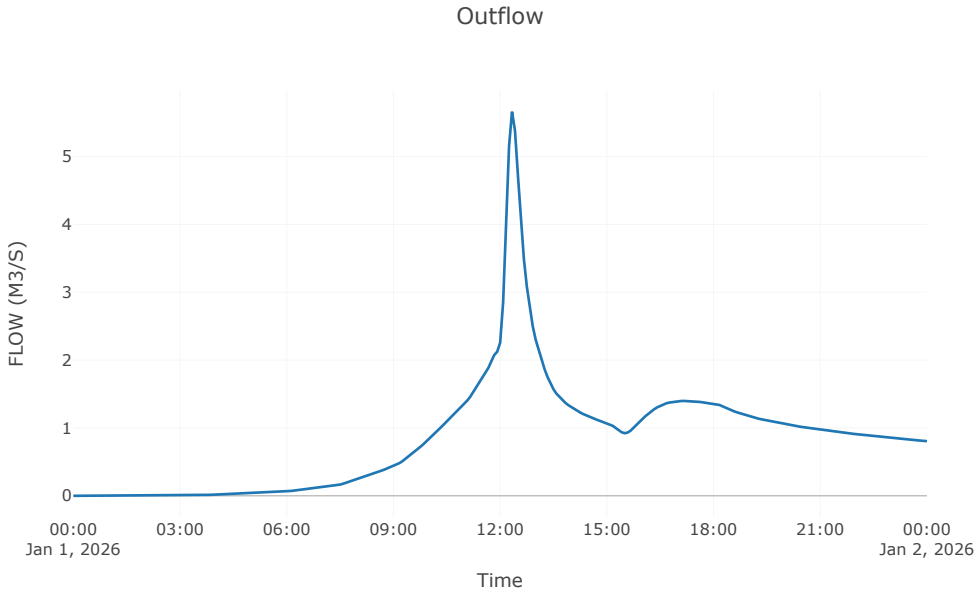
Route: Muskingum Cunge	
Method	Muskingum Cunge
Channel	Trapezoid
Length (M)	300
Energy Slope (M/M)	0.01
Mannings n	0.06
Bottom Width (M)	20
Side Slope (M/M)	3
Initial Variable	Combined Inflow
Space - Time Method	Automatic DX and DT
Index Parameter Type	Index Flow
Index Flow	15
Invert Elevation	0
Maximum Depth Iterations	20
Maximum Route Step Iterations	30

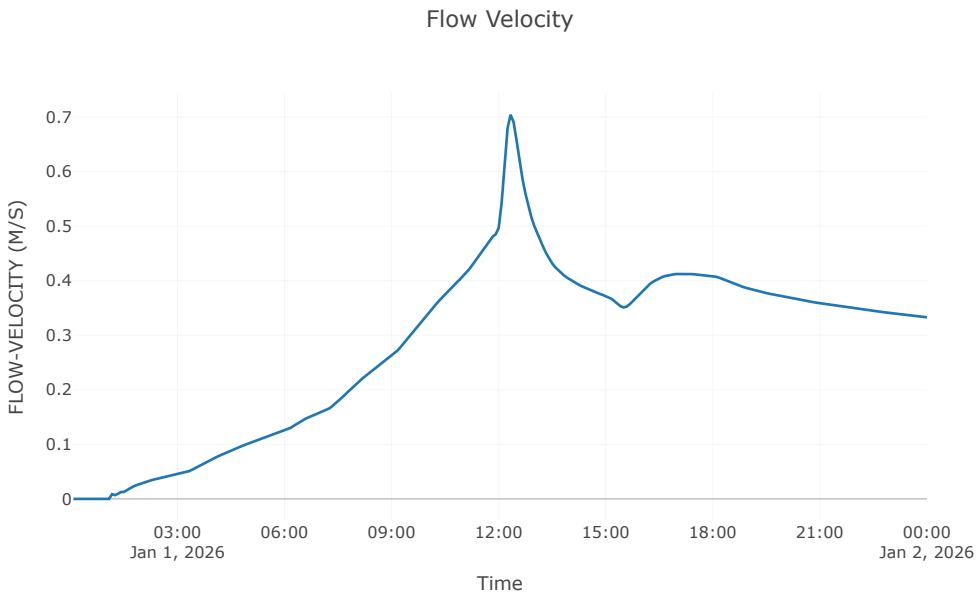
Results: Reach-CHANNEL 1	
Peak Discharge (M3/S)	5.66
Time of Peak Discharge	01Jan2026, 12:20
Volume (MM)	57.12
Peak Inflow (M3/S)	5.73
Inflow Volume (M3)	74241.5


Computed Stage
STAGE-SIM (M)
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Combined Inflow
FLOW-COMBINE (M3/S)
6
5
4
3
2
1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
70
60
50
40
30
20
10
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outflow
FLOW (M3/S)
5
4
3
2
1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

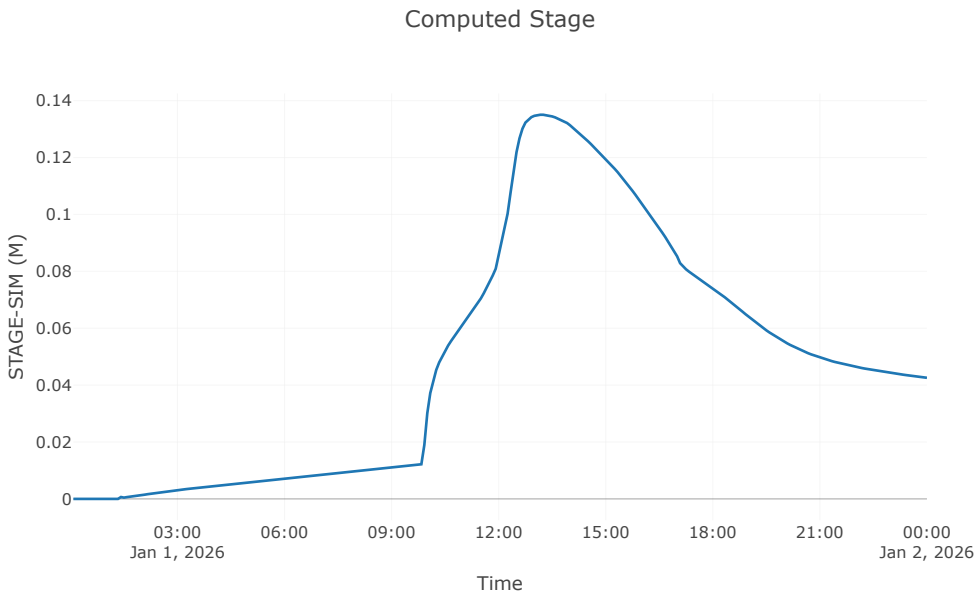

Flow Velocity
FLOW-VELOCITY (M/S)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

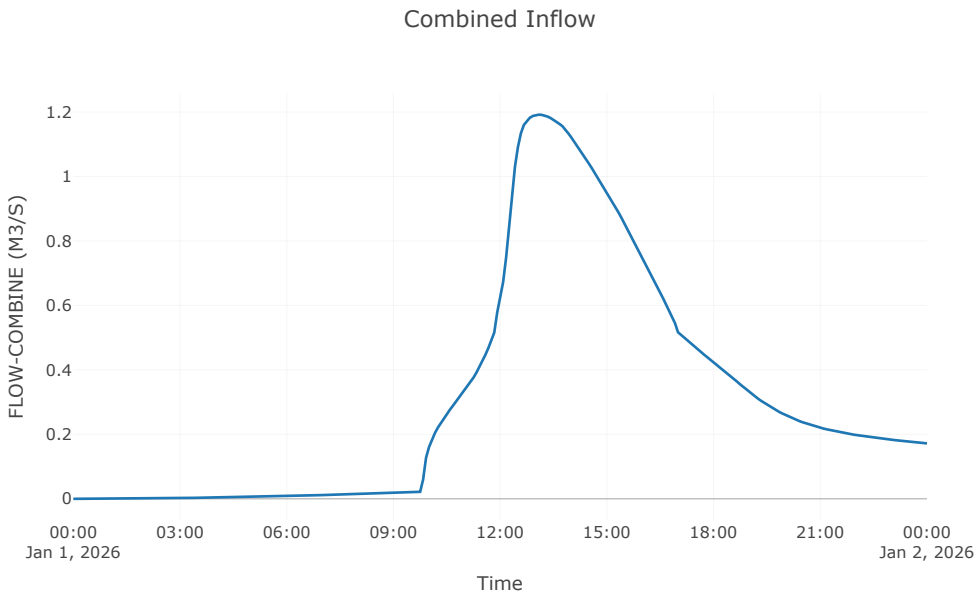
Reach: Reach-CHANNEL 2

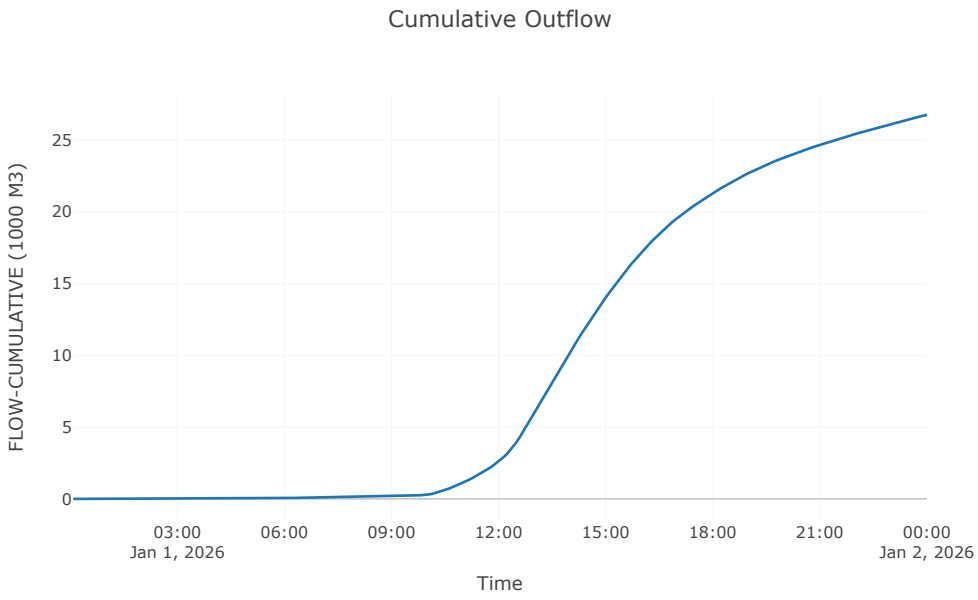
Downstream : Junction - POND 1

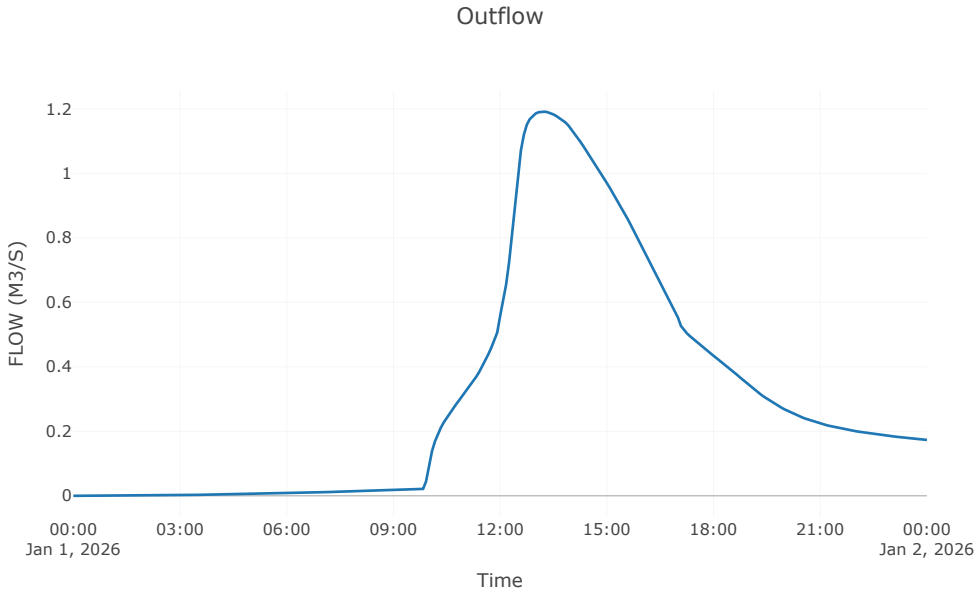
Route: Muskingum Cunge	
Method	Muskingum Cunge
Channel	Trapezoid
Length (M)	520
Energy Slope (M/M)	0.01
Mannings n	0.06
Bottom Width (M)	20
Side Slope (M/M)	3
Initial Variable	Combined Inflow
Space - Time Method	Automatic DX and DT
Index Parameter Type	Index Flow
Index Flow	15
Invert Elevation	0
Maximum Depth Iterations	20
Maximum Route Step Iterations	30

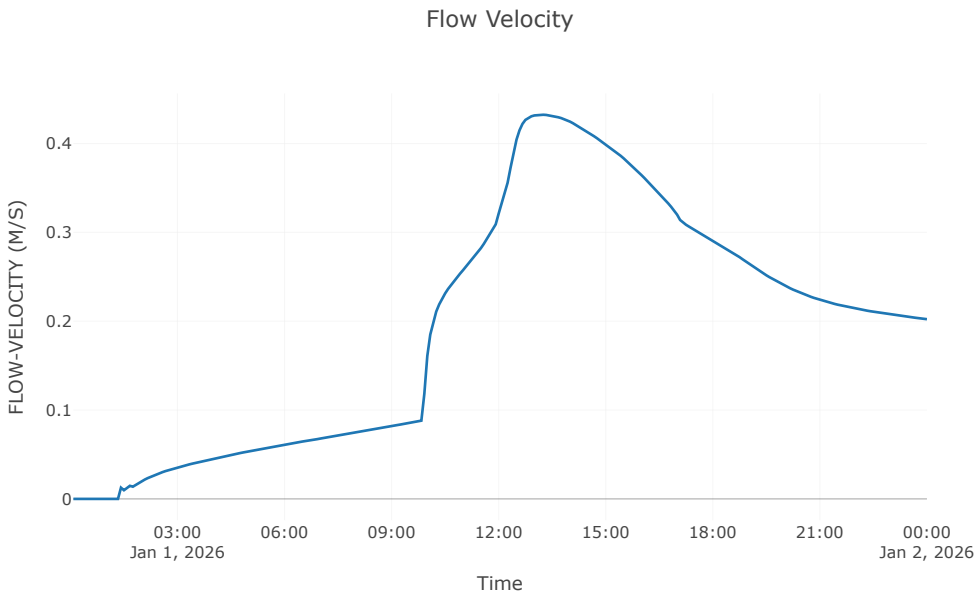
Results: Reach-CHANNEL 2	
Peak Discharge (M3/S)	1.19
Time of Peak Discharge	01Jan2026, 13:10
Volume (MM)	47.78
Peak Inflow (M3/S)	1.19
Inflow Volume (M3)	26844.38


Computed Stage
STAGE-SIM (M)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Combined Inflow
FLOW-COMBINE (M3/S)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
25
20
15
10
5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outflow
FLOW (M3/S)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

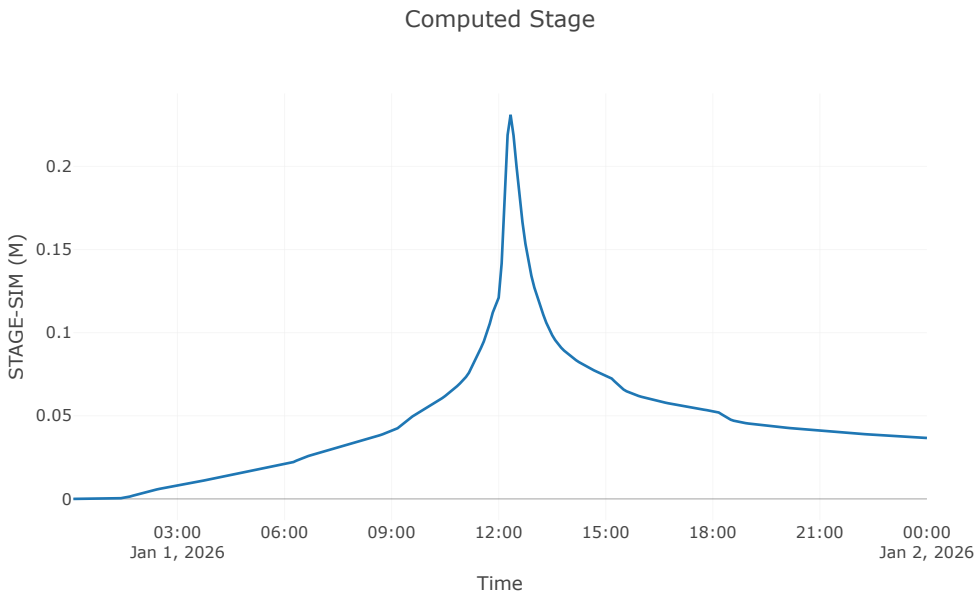

Flow Velocity
FLOW-VELOCITY (M/S)
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

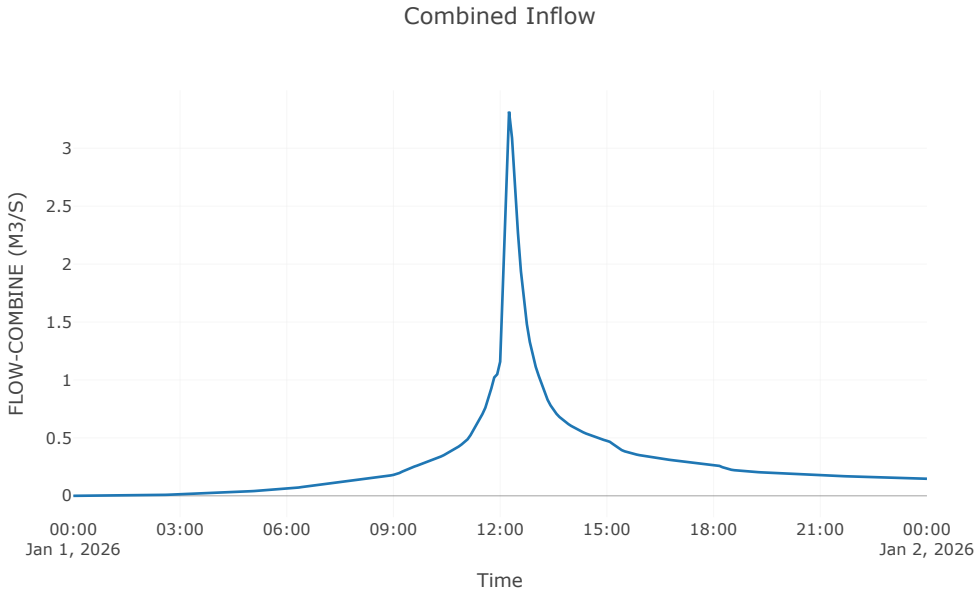
Reach: Reach-CHANNEL 3

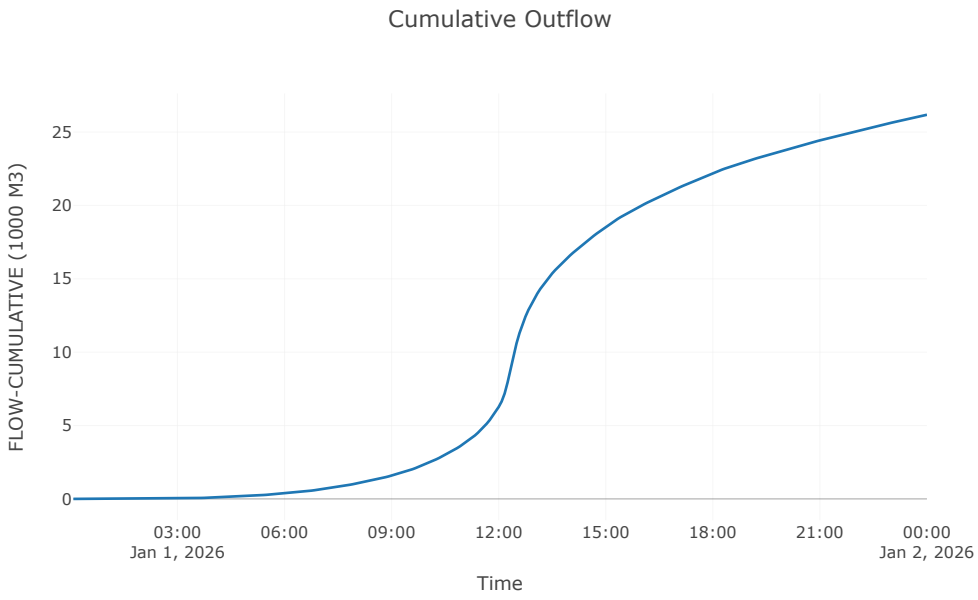
Downstream : Junction - POND 6

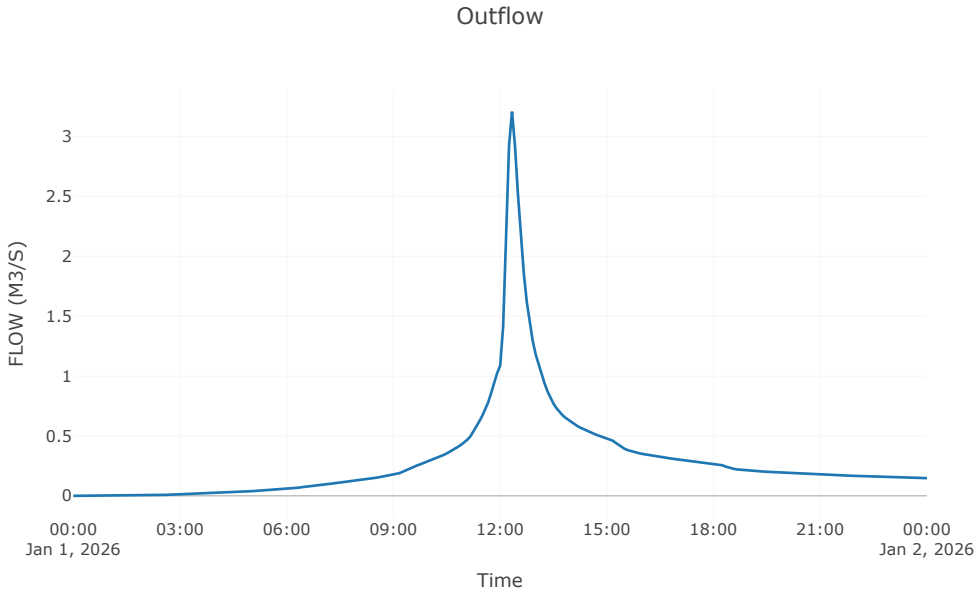
Route: Muskingum Cunge	
Method	Muskingum Cunge
Channel	Trapezoid
Length (M)	340
Energy Slope (M/M)	0.01
Mannings n	0.06
Bottom Width (M)	20
Side Slope (M/M)	3
Initial Variable	Combined Inflow
Space - Time Method	Automatic DX and DT
Index Parameter Type	Index Flow
Index Flow	15
Invert Elevation	0
Maximum Depth Iterations	20
Maximum Route Step Iterations	30

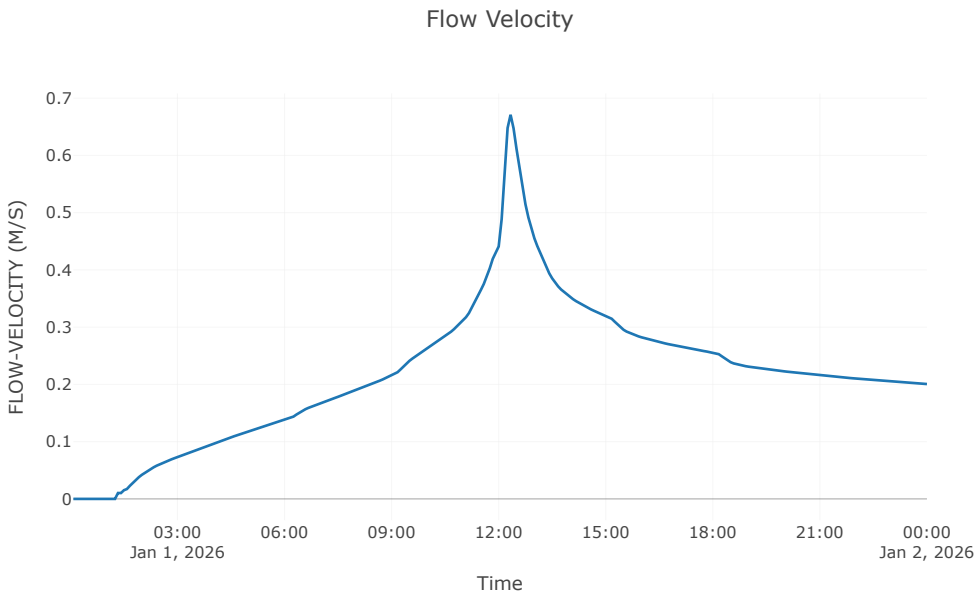
Results: Reach-CHANNEL 3	
Peak Discharge (M3/S)	3.21
Time of Peak Discharge	01Jan2026, 12:20
Volume (MM)	53.66
Peak Inflow (M3/S)	3.32
Inflow Volume (M3)	26211.24


Computed Stage
STAGE-SIM (M)
0.2
0.15
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Combined Inflow
FLOW-COMBINE (M3/S)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
25
20
15
10
5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outflow
FLOW (M3/S)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

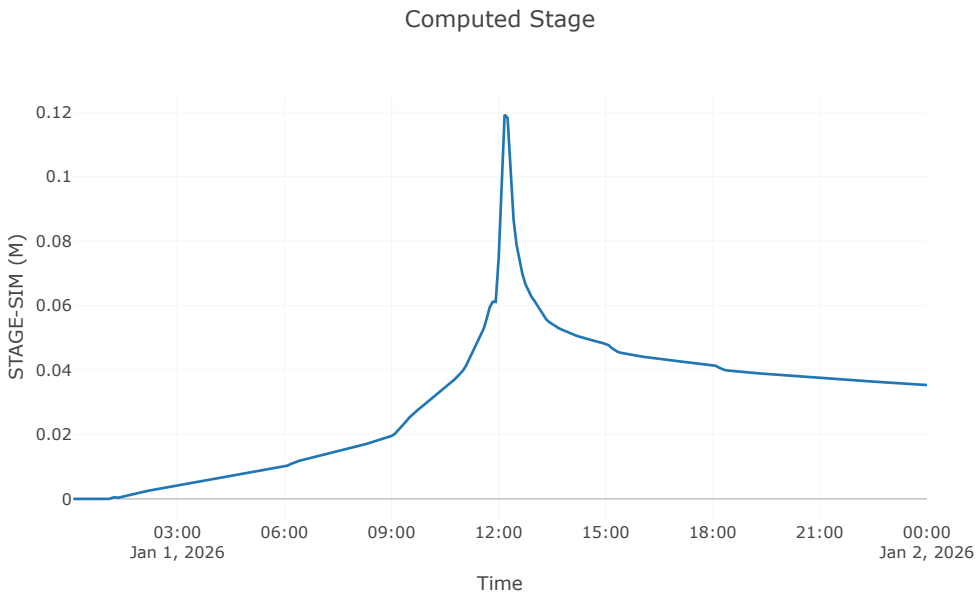

Flow Velocity
FLOW-VELOCITY (M/S)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

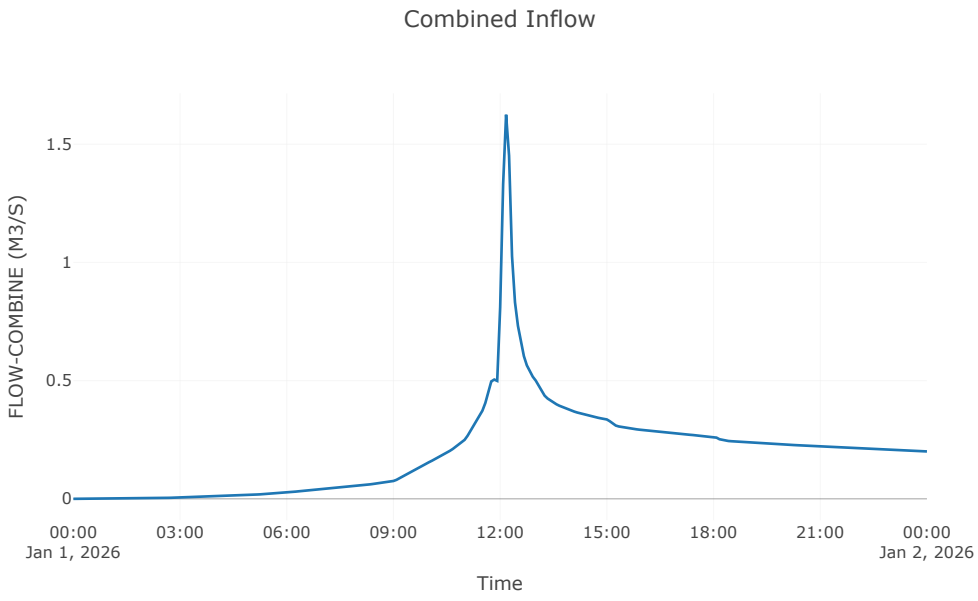
Reach: Reach-CHANNEL 4

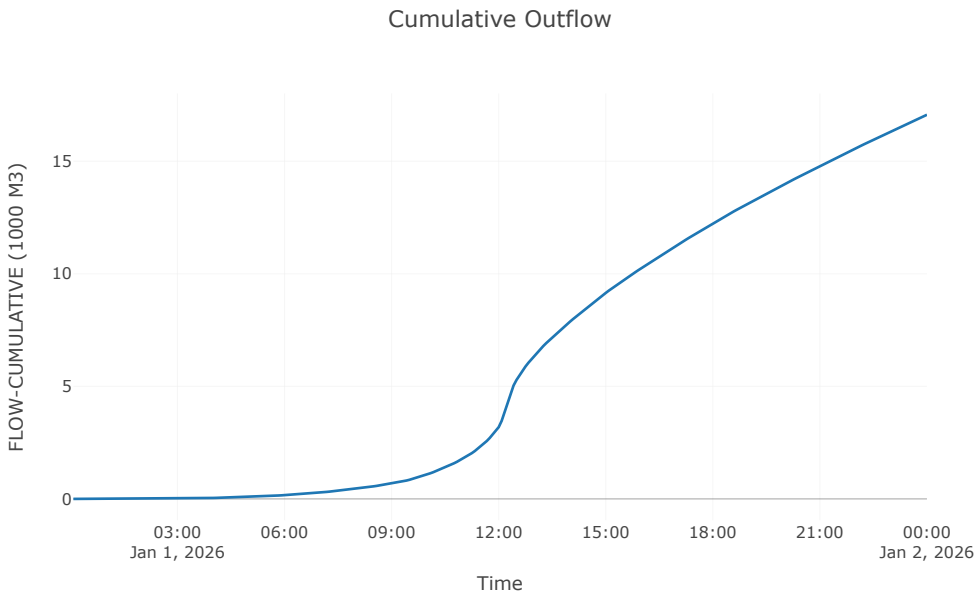
Downstream : Junction - CHANNEL 1

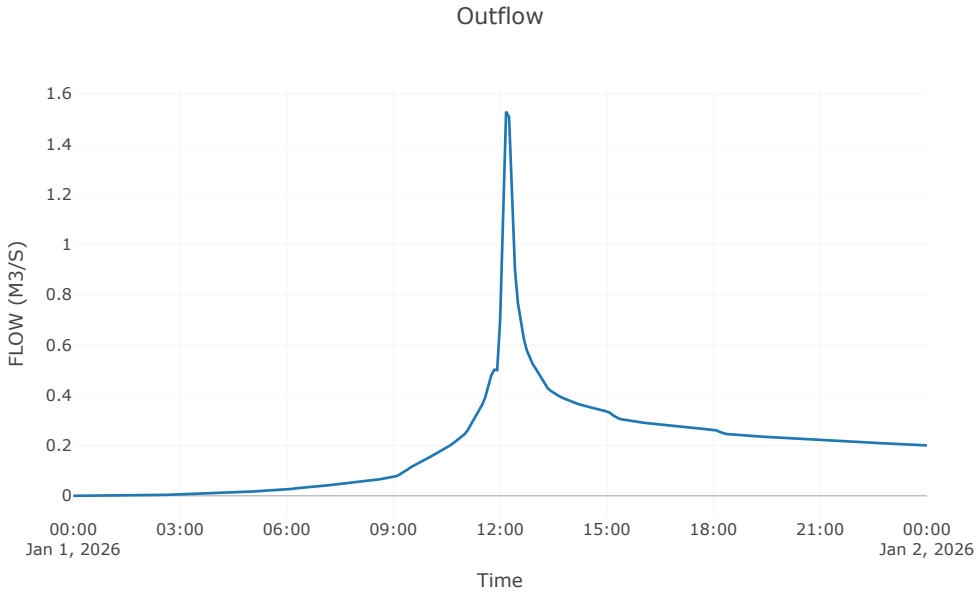
Route: Muskingum Cunge	
Method	Muskingum Cunge
Channel	Trapezoid
Length (M)	200
Energy Slope (M/M)	0.03
Mannings n	0.06
Bottom Width (M)	20
Side Slope (M/M)	3
Initial Variable	Combined Inflow
Space - Time Method	Automatic DX and DT
Index Parameter Type	Index Flow
Index Flow	15
Invert Elevation	0
Maximum Depth Iterations	20
Maximum Route Step Iterations	30

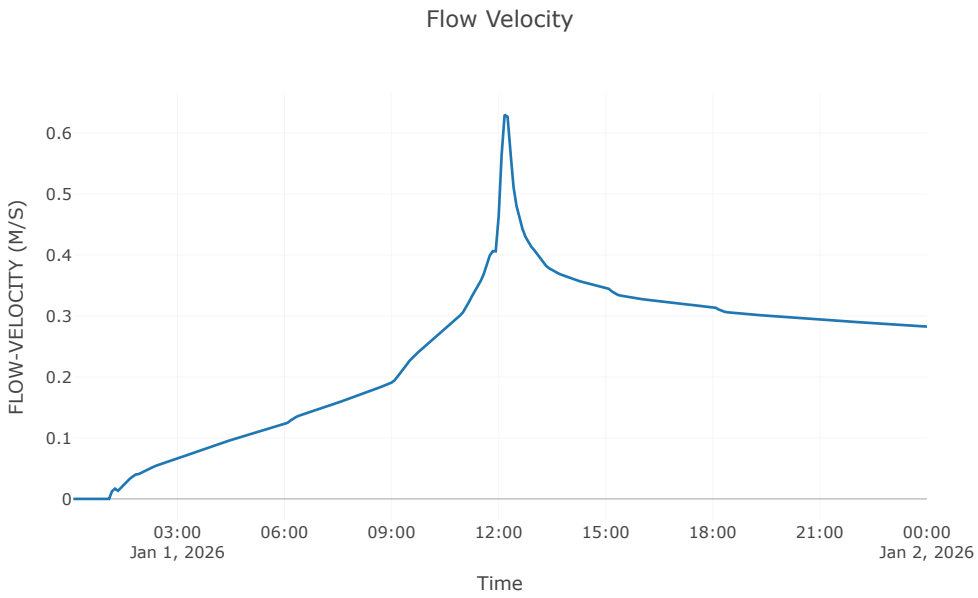
Results: Reach-CHANNEL 4	
Peak Discharge (M3/S)	1.53
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	39.49
Peak Inflow (M3/S)	1.62
Inflow Volume (M3)	17087.31


Computed Stage
STAGE-SIM (M)
0.12
0.1
0.08
0.06
0.04
0.02
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Combined Inflow
FLOW-COMBINE (M3/S)
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
15
10
5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outflow
FLOW (M3/S)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

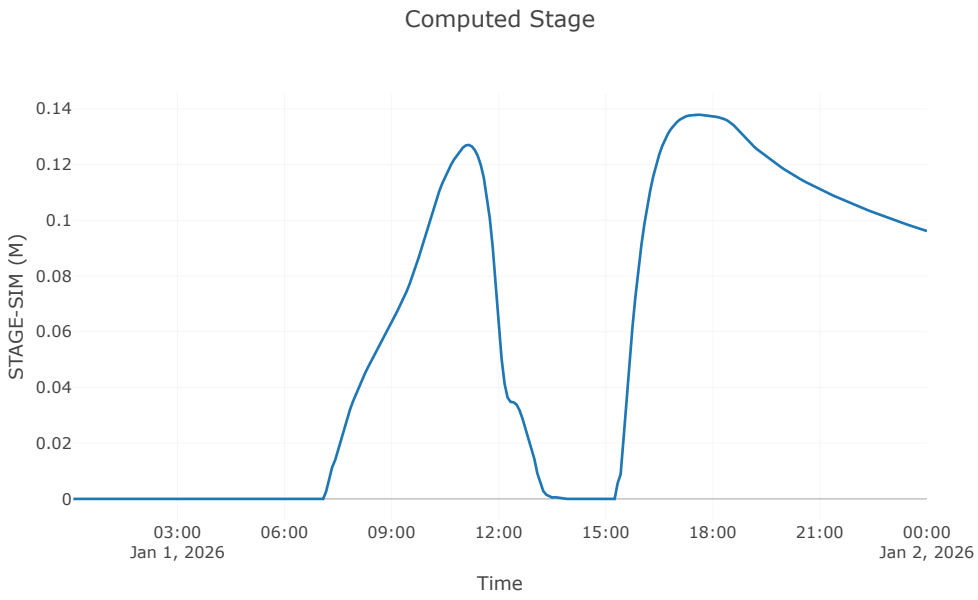

Flow Velocity
FLOW-VELOCITY (M/S)
0.6
0.5
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

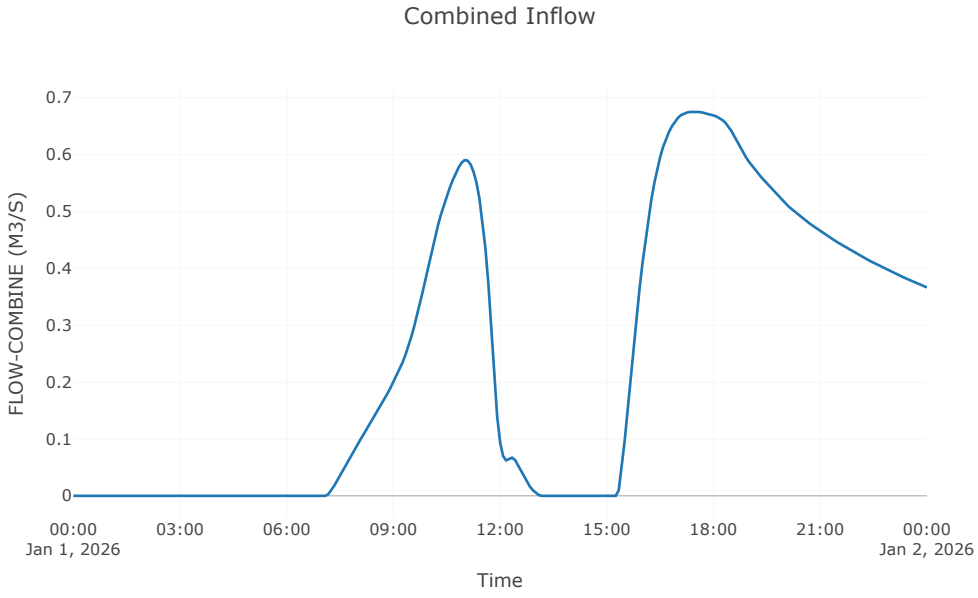
Reach: Reach-CHANNEL 5

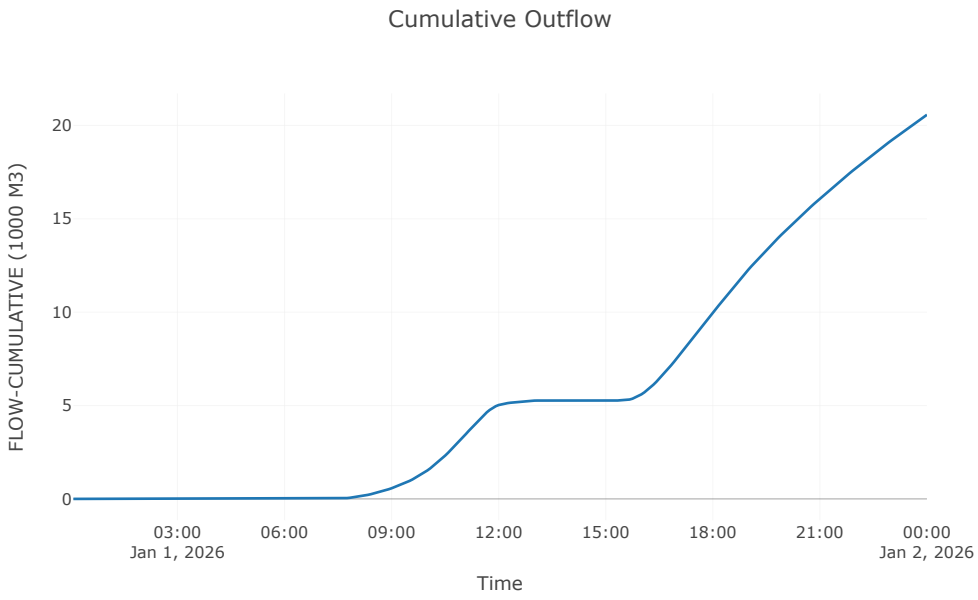
Downstream : Junction - CHANNEL 1

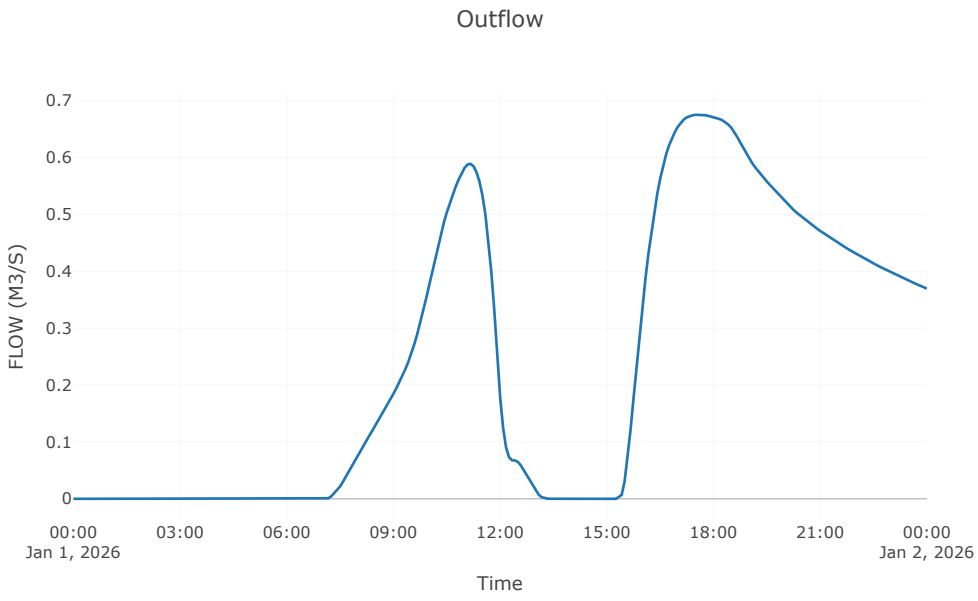
Route: Muskingum Cunge	
Method	Muskingum Cunge
Channel	Trapezoid
Length (M)	300
Energy Slope (M/M)	0
Mannings n	0.06
Bottom Width (M)	20
Side Slope (M/M)	3
Initial Variable	Combined Inflow
Space - Time Method	Automatic DX and DT
Index Parameter Type	Index Flow
Index Flow	15
Invert Elevation	0
Maximum Depth Iterations	20
Maximum Route Step Iterations	30

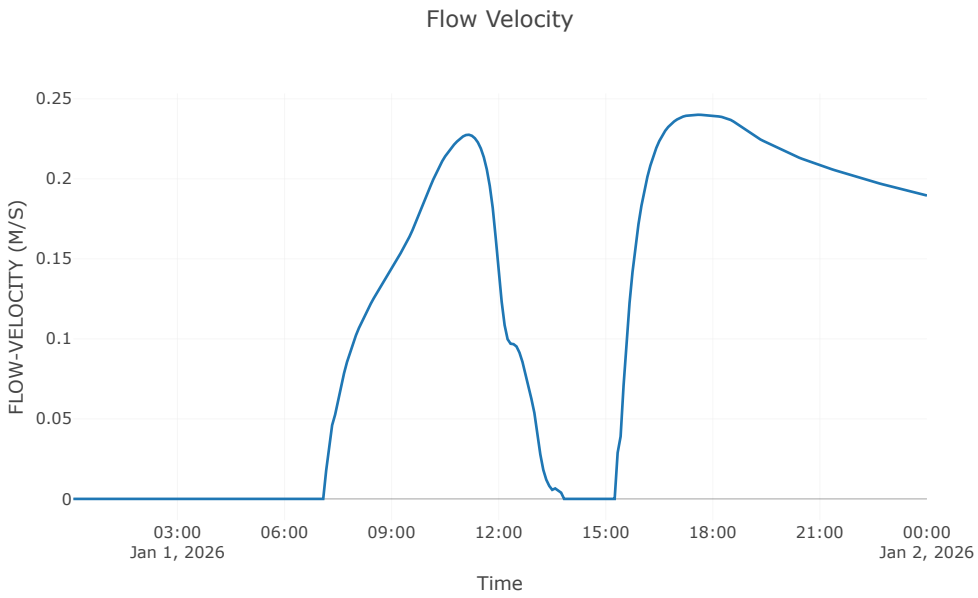
Results: Reach-CHANNEL 5	
Peak Discharge (M3/S)	0.68
Time of Peak Discharge	01Jan2026, 17:35
Peak Inflow (M3/S)	0.68
Inflow Volume (M3)	20735.19


Computed Stage
STAGE-SIM (M)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Combined Inflow
FLOW-COMBINE (M3/S)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
20
15
10
5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outflow
FLOW (M3/S)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

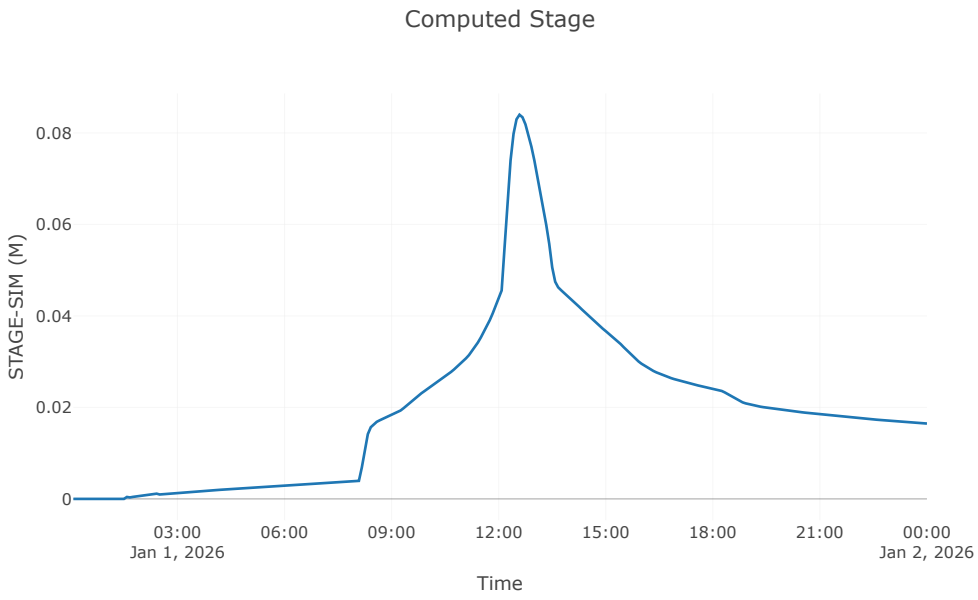

Flow Velocity
FLOW-VELOCITY (M/S)
0.25
0.2
0.15
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

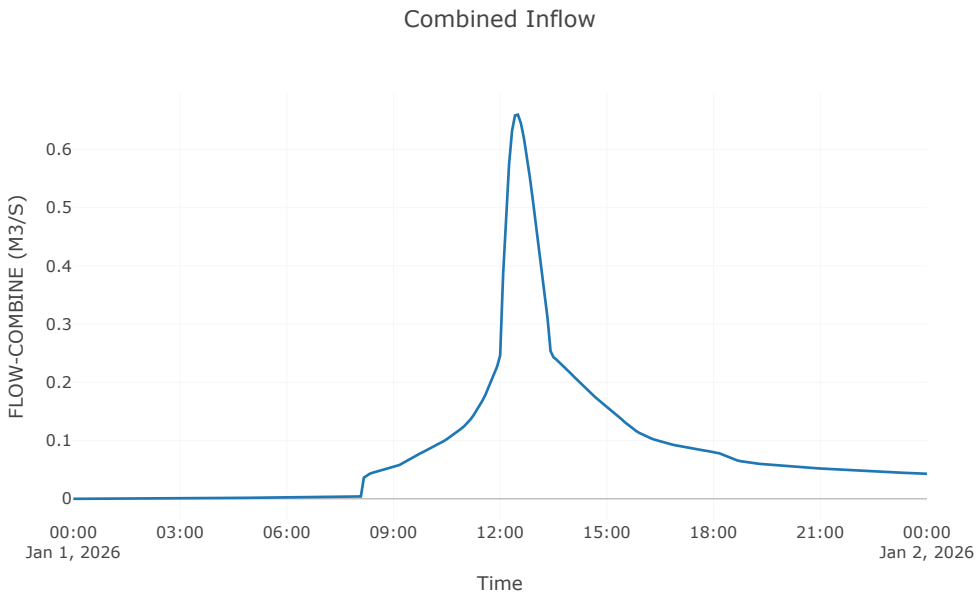
Reach: Reach-POND 5 OLFP

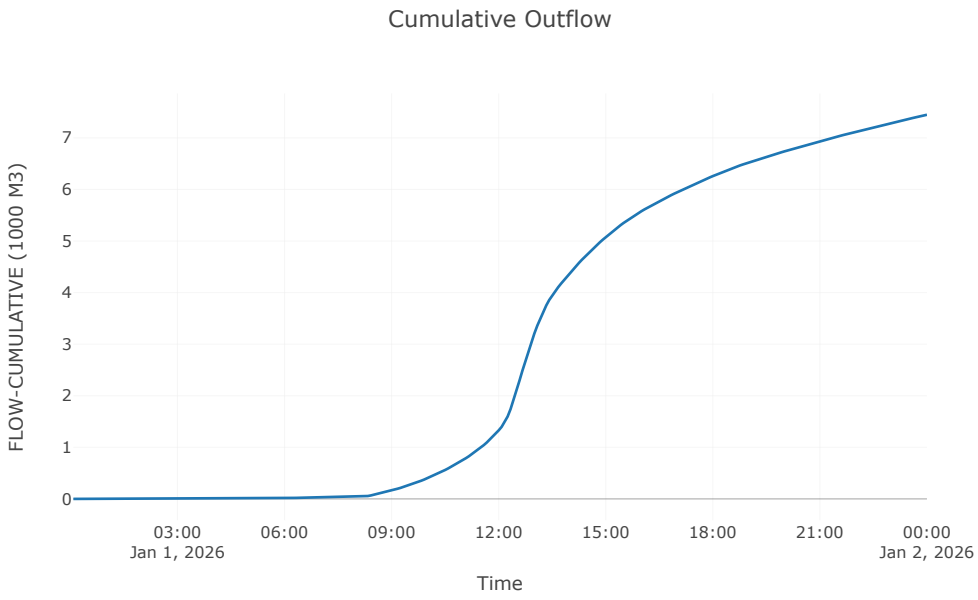
Downstream : Junction - EXIT OLFP

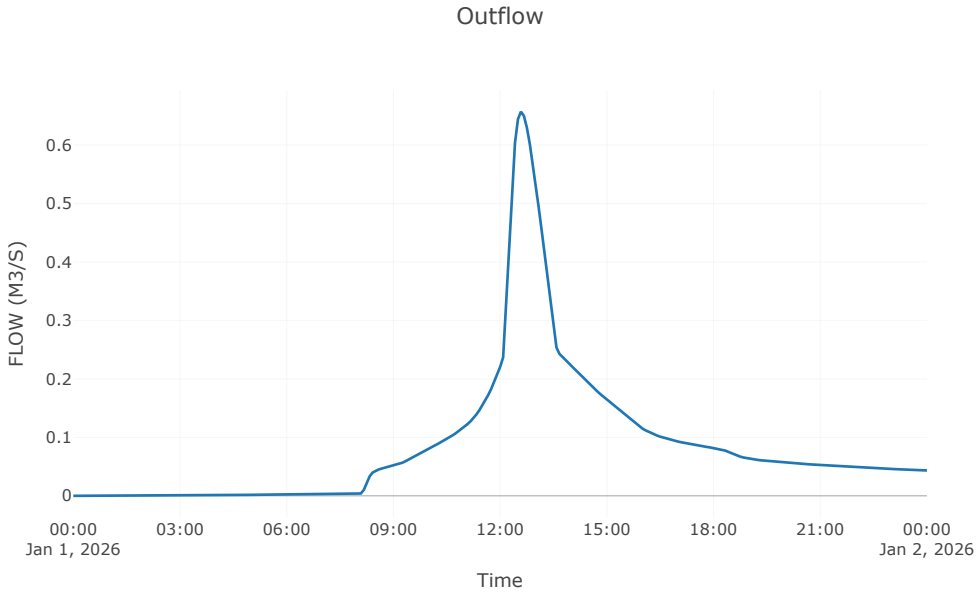
Route: Muskingum Cunge	
Method	Muskingum Cunge
Channel	Trapezoid
Length (M)	737.85
Energy Slope (M/M)	0.01
Mannings n	0.06
Bottom Width (M)	20
Side Slope (M/M)	3
Initial Variable	Combined Inflow
Space - Time Method	Automatic DX and DT
Index Parameter Type	Index Flow
Index Flow	15
Invert Elevation	0
Maximum Depth Iterations	20
Maximum Route Step Iterations	30

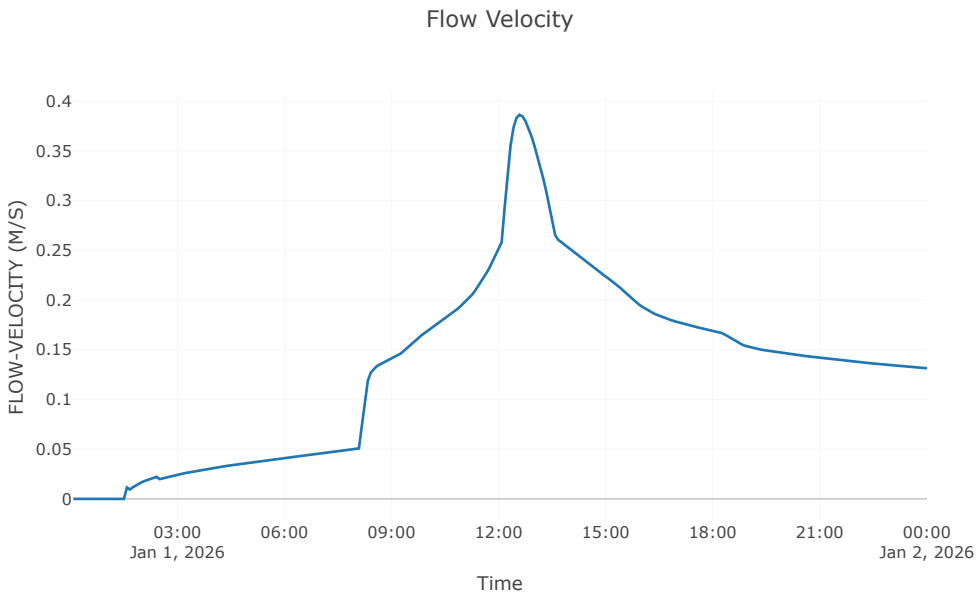
Results: Reach-POND 5 OLFP	
Peak Discharge (M3/S)	0.66
Time of Peak Discharge	01Jan2026, 12:35
Volume (MM)	54.17
Peak Inflow (M3/S)	0.66
Inflow Volume (M3)	7465.39


Computed Stage
STAGE-SIM (M)
0.08
0.06
0.04
0.02
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Combined Inflow
FLOW-COMBINE (M3/S)
0.6
0.5
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
0
1
2
3
4
5
6
7
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outflow
FLOW (M3/S)
0
0.1
0.2
0.3
0.4
0.5
0.6
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

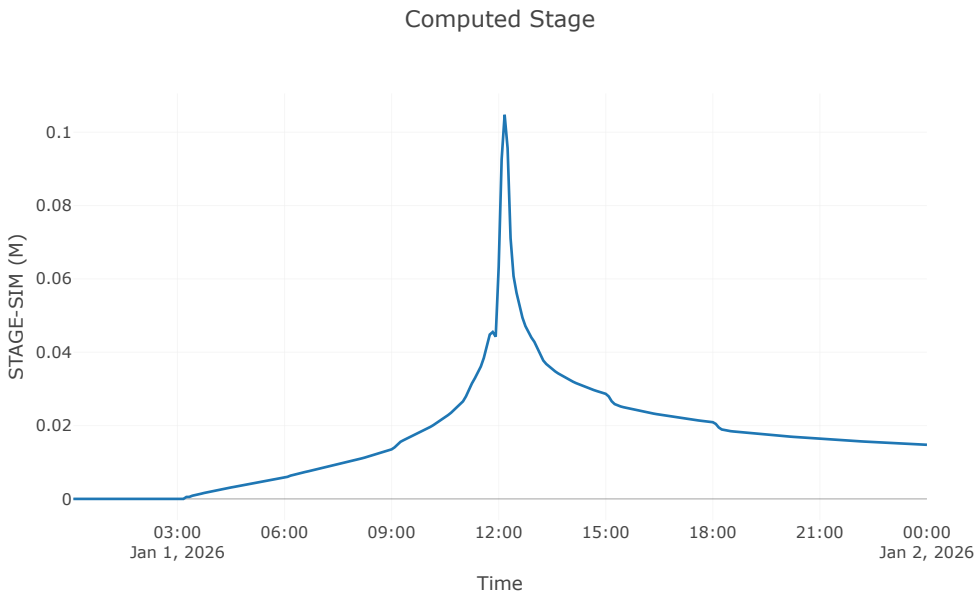

Flow Velocity
FLOW-VELOCITY (M/S)
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

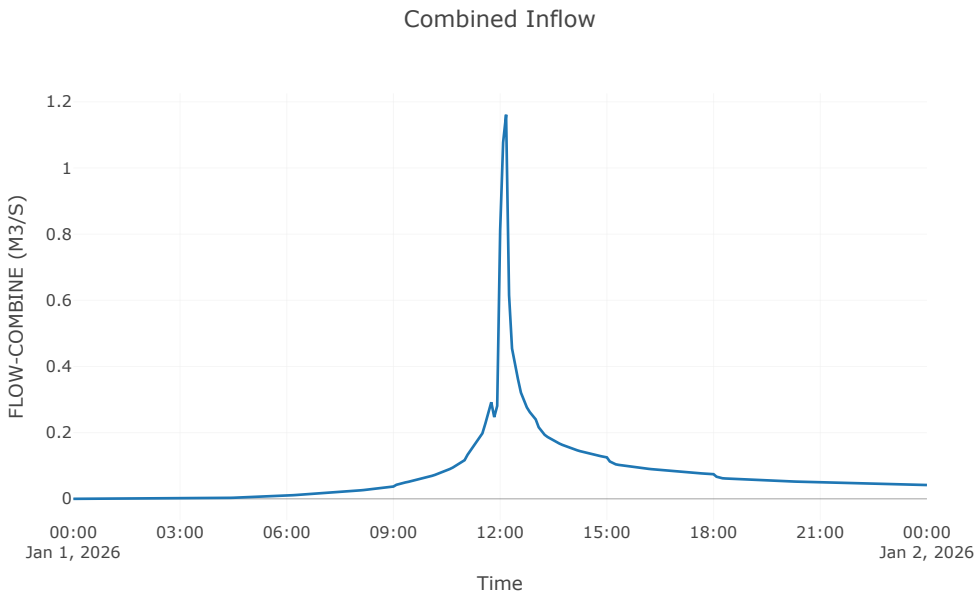
Reach: Reach-CHANNEL 6

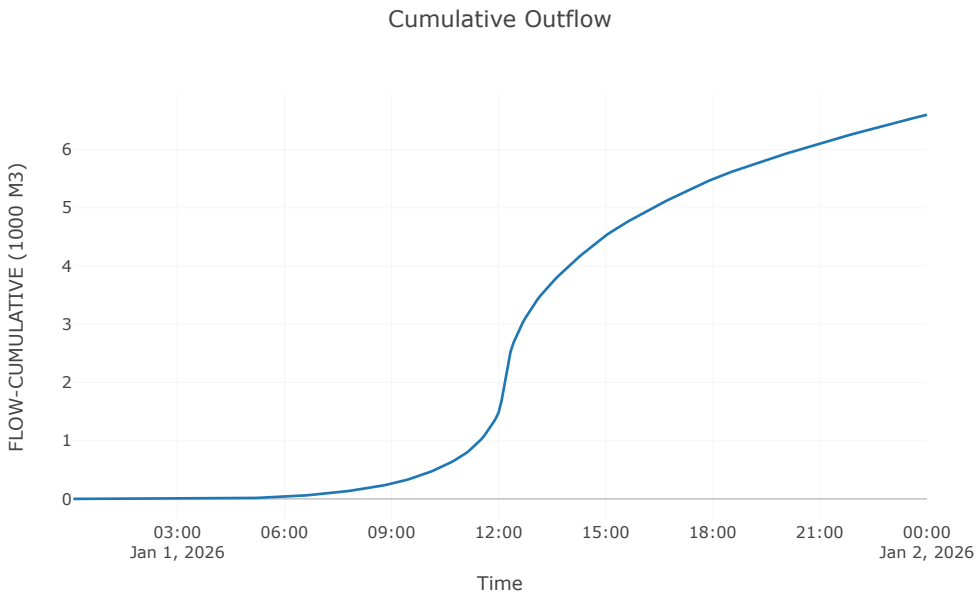
Downstream : Junction - POND 7

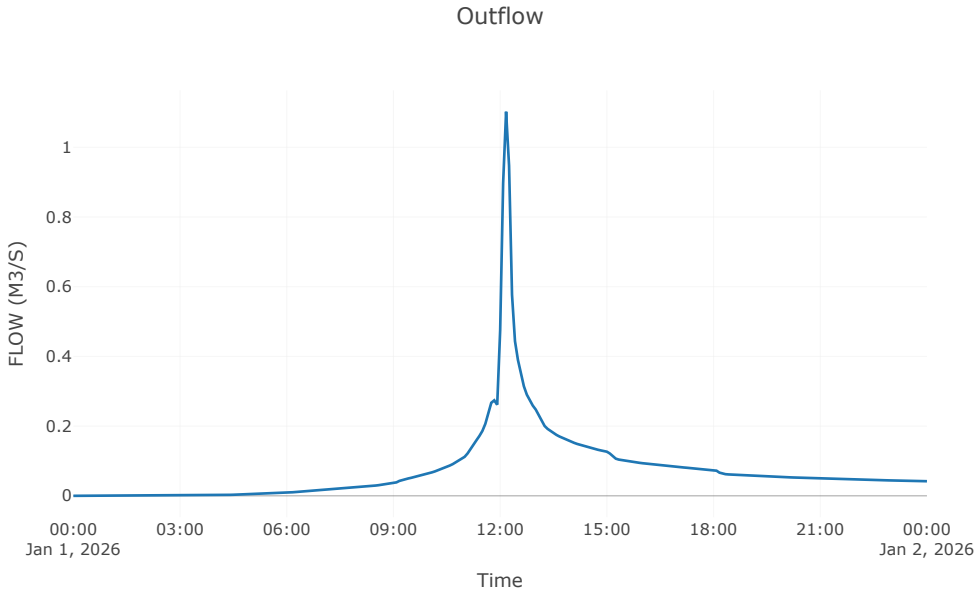
Route: Muskingum Cunge	
Method	Muskingum Cunge
Channel	Trapezoid
Length (M)	300
Energy Slope (M/M)	0.02
Mannings n	0.06
Bottom Width (M)	20
Side Slope (M/M)	3
Initial Variable	Combined Inflow
Space - Time Method	Automatic DX and DT
Index Parameter Type	Index Flow
Index Flow	15
Invert Elevation	0
Maximum Depth Iterations	20
Maximum Route Step Iterations	30

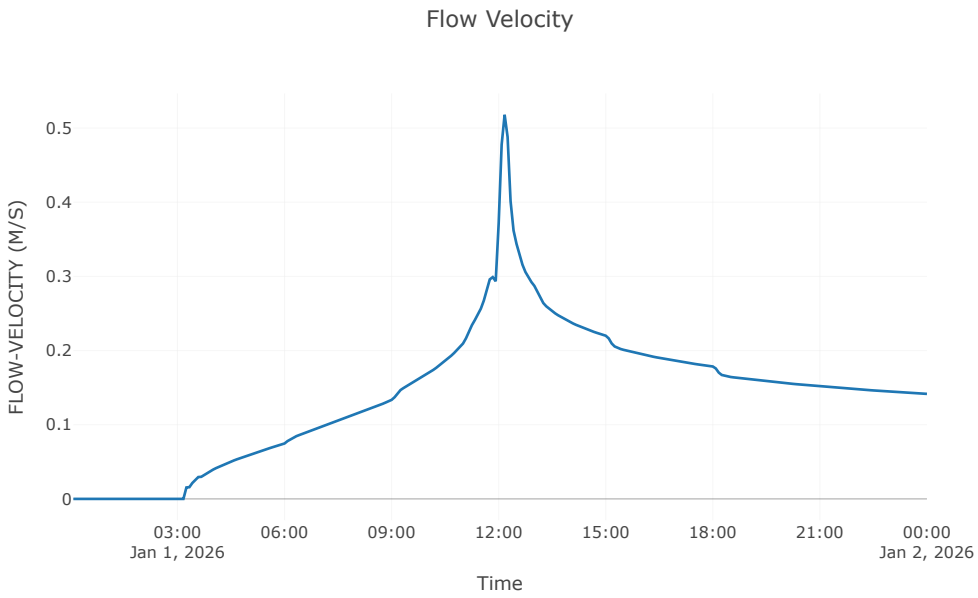
Results: Reach-CHANNEL 6	
Peak Discharge (M3/S)	1.1
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	41.01
Peak Inflow (M3/S)	1.16
Inflow Volume (M3)	6605.14


Computed Stage
STAGE-SIM (M)
0.1
0.08
0.06
0.04
0.02
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Combined Inflow
FLOW-COMBINE (M3/S)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
0
1
2
3
4
5
6
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outflow
FLOW (M3/S)
0
0.2
0.4
0.6
0.8
1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

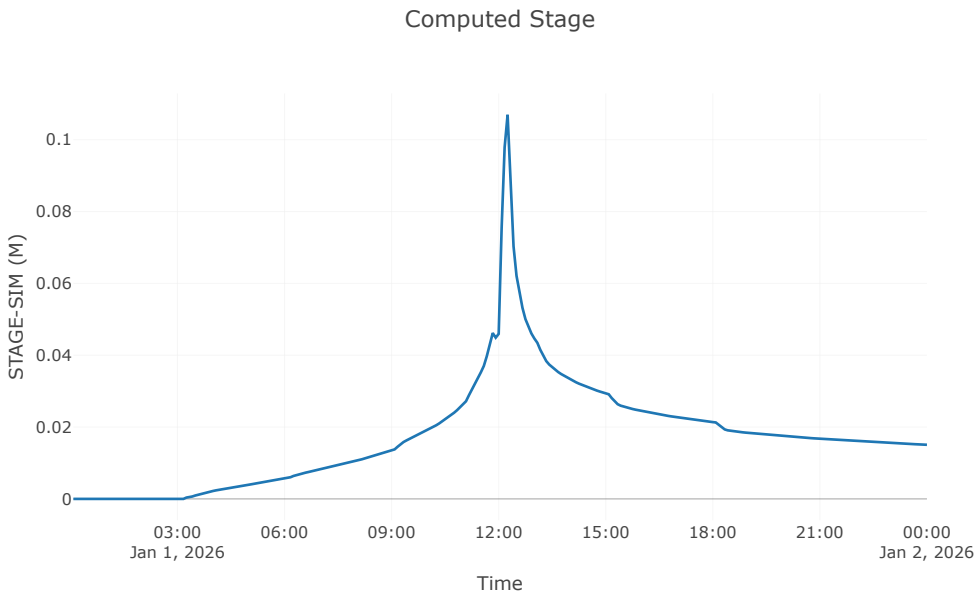

Flow Velocity
FLOW-VELOCITY (M/S)
0.5
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

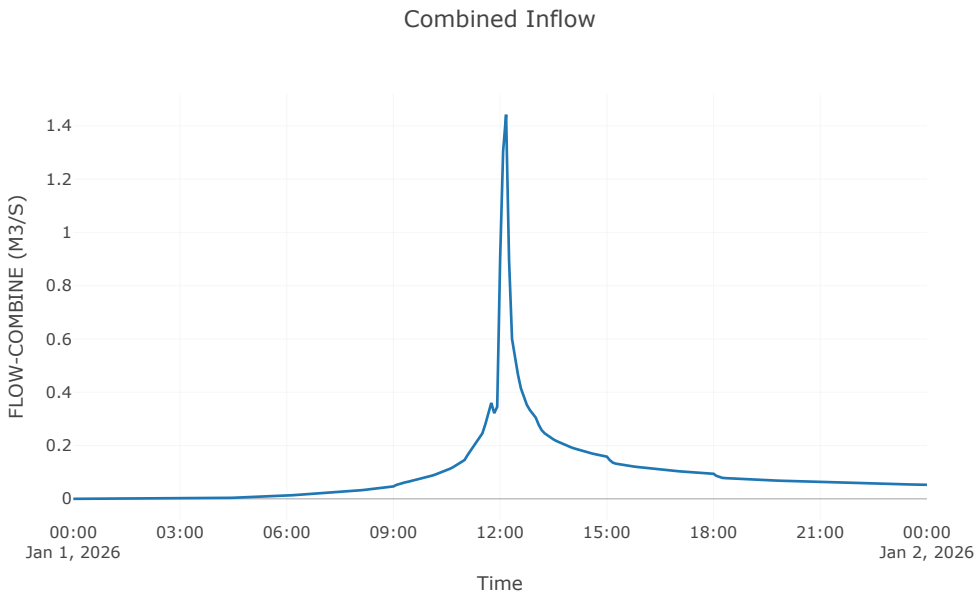
Reach: Reach-CHANNEL 8

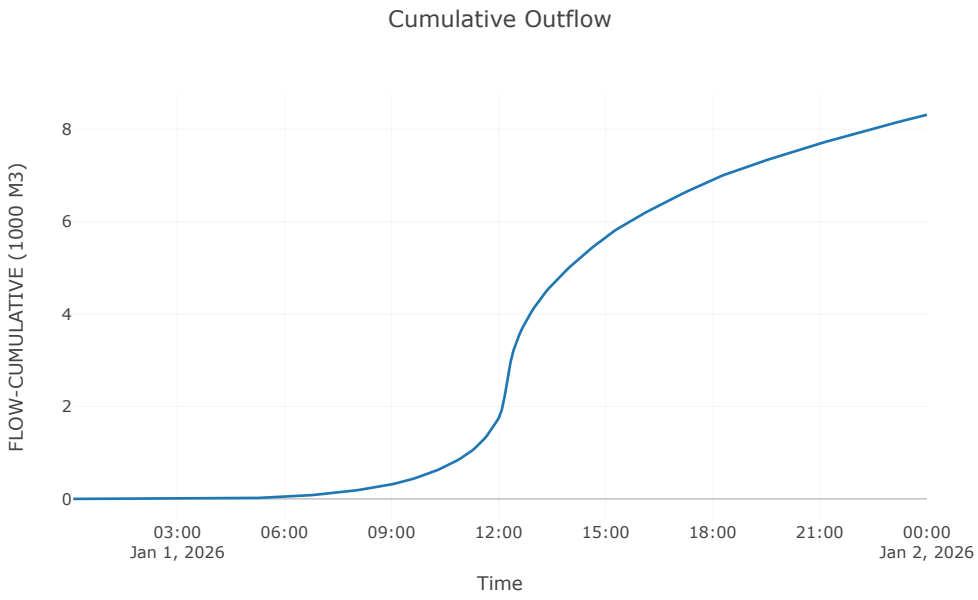
Downstream : Junction - CHANNEL 3

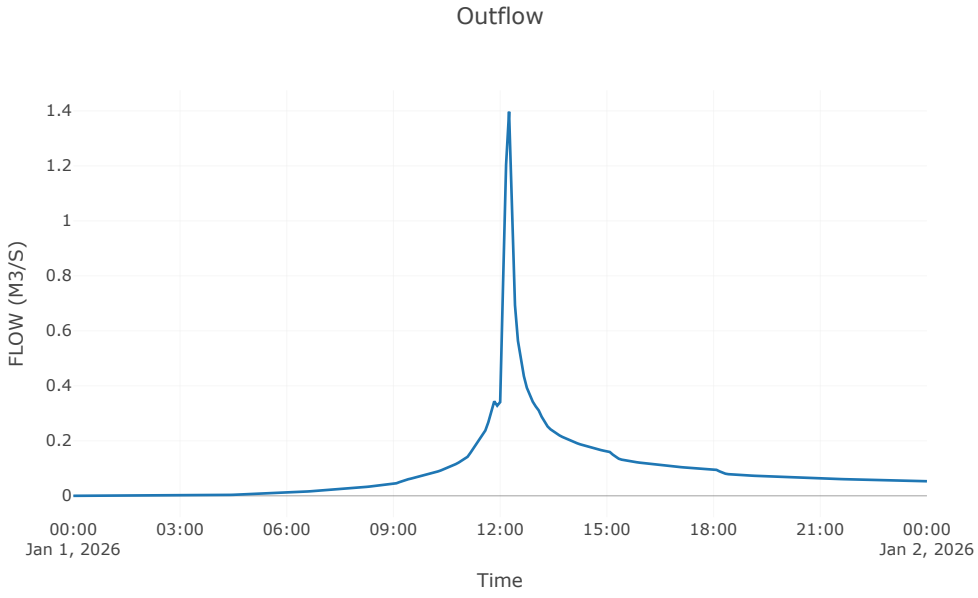
Route: Muskingum Cunge	
Method	Muskingum Cunge
Channel	Trapezoid
Length (M)	660
Energy Slope (M/M)	0.03
Mannings n	0.06
Bottom Width (M)	20
Side Slope (M/M)	3
Initial Variable	Combined Inflow
Space - Time Method	Automatic DX and DT
Index Parameter Type	Index Flow
Index Flow	15
Invert Elevation	0
Maximum Depth Iterations	20
Maximum Route Step Iterations	30

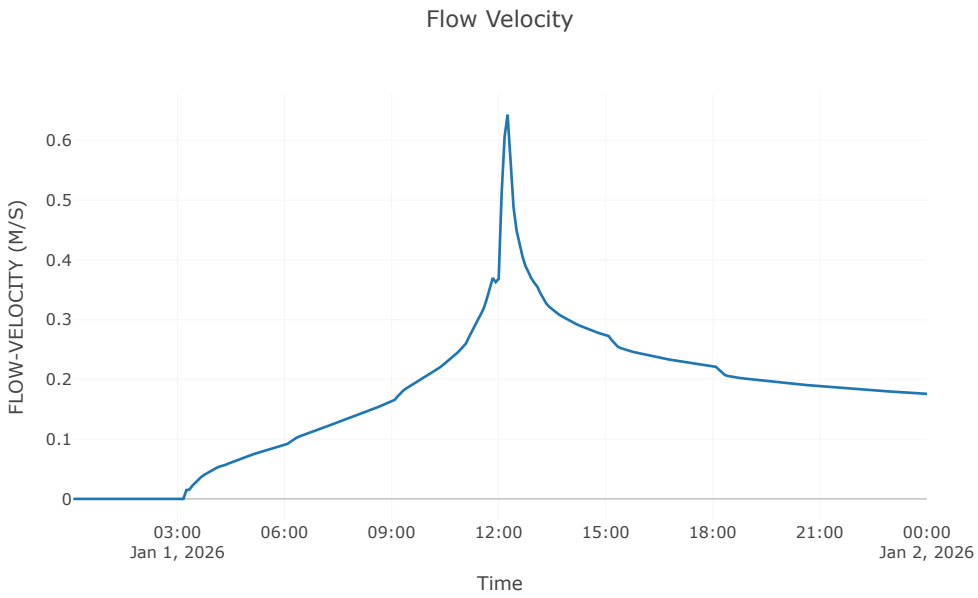
Results: Reach-CHANNEL 8	
Peak Discharge (M3/S)	1.4
Time of Peak Discharge	01Jan2026, 12:15
Volume (MM)	41
Peak Inflow (M3/S)	1.44
Inflow Volume (M3)	8322.38


Computed Stage
STAGE-SIM (M)
0.1
0.08
0.06
0.04
0.02
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Combined Inflow
FLOW-COMBINE (M3/S)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
0
2
4
6
8
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outflow
FLOW (M3/S)
0
0.2
0.4
0.6
0.8
1
1.2
1.4
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

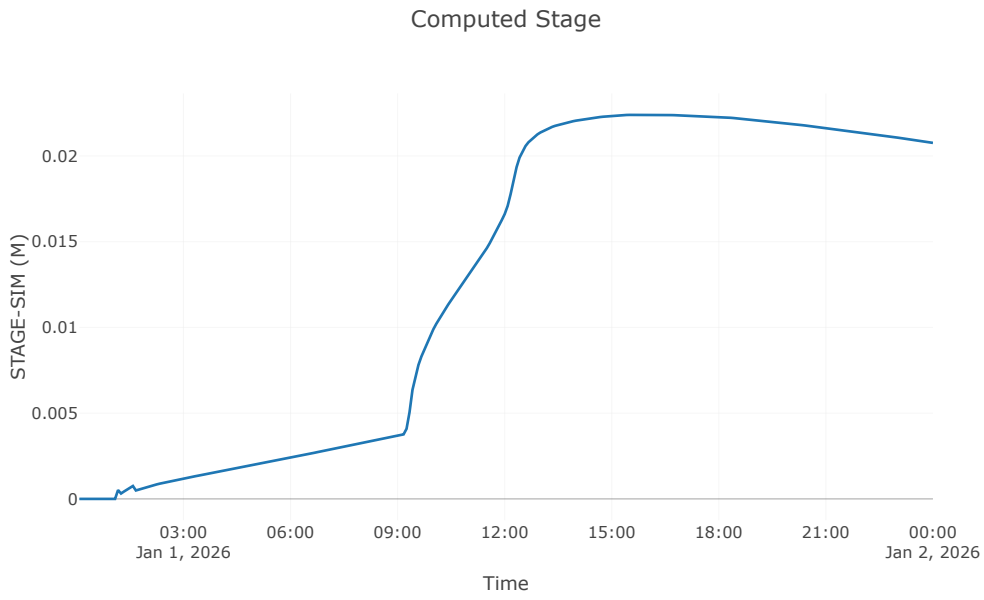

Flow Velocity
FLOW-VELOCITY (M/S)
0.6
0.5
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

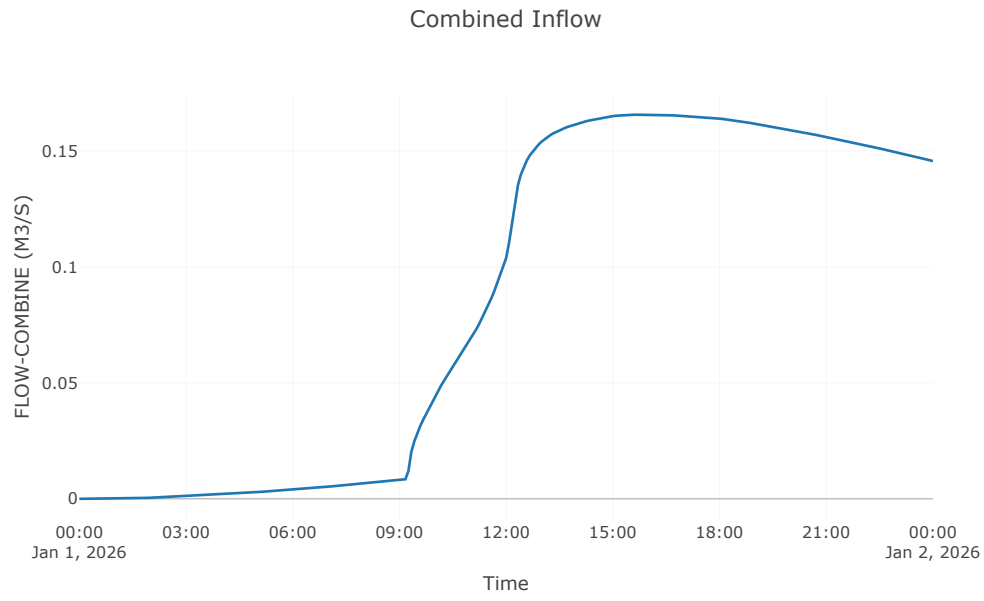
Reach: Reach-WETLAND B

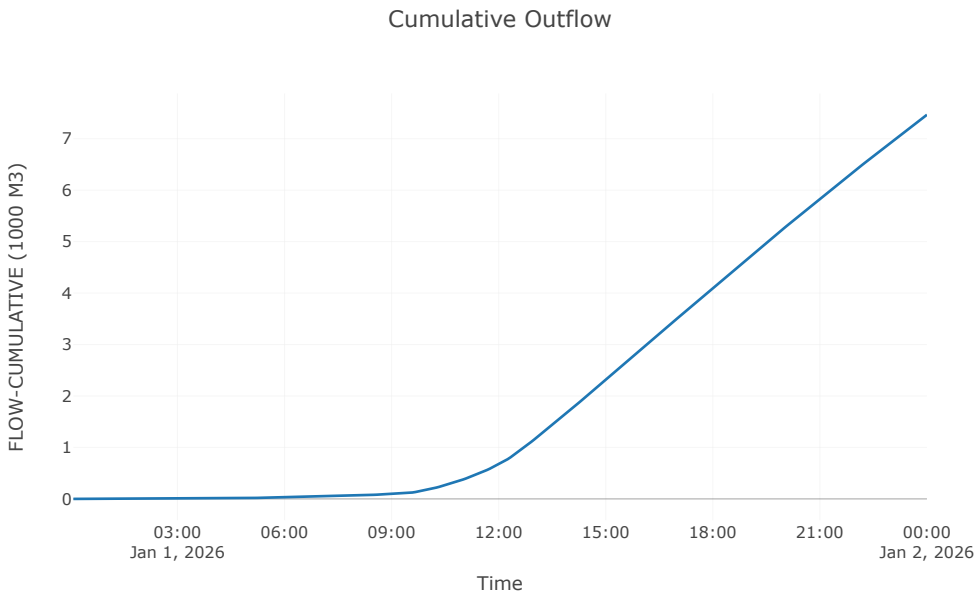
Downstream : Junction - CHANNEL 4

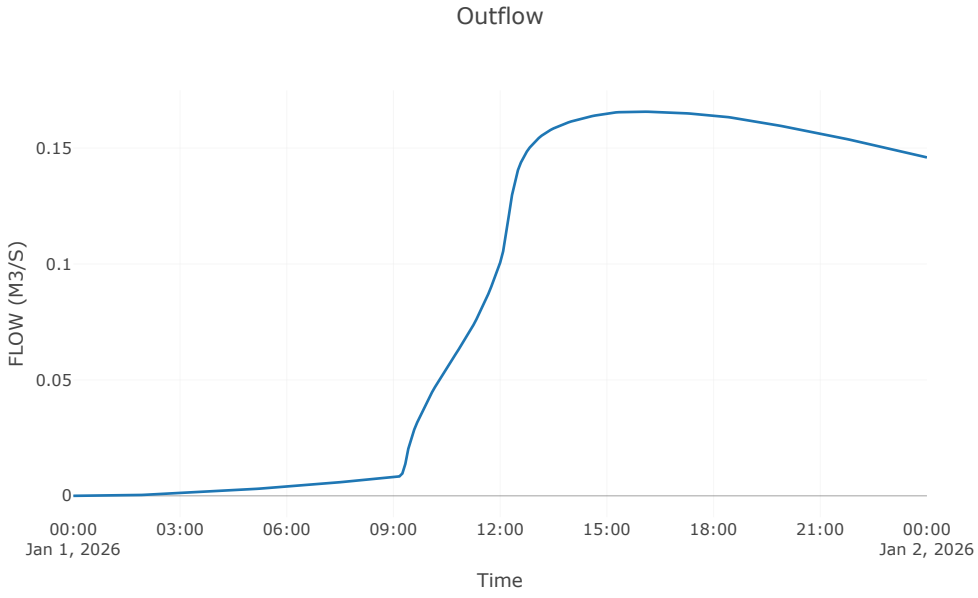
Route: Muskingum Cunge	
Method	Muskingum Cunge
Channel	Trapezoid
Length (M)	630
Energy Slope (M/M)	0.08
Mannings n	0.06
Bottom Width (M)	20
Side Slope (M/M)	3
Initial Variable	Combined Inflow
Space - Time Method	Automatic DX and DT
Index Parameter Type	Index Flow
Index Flow	15
Invert Elevation	0
Maximum Depth Iterations	20
Maximum Route Step Iterations	30

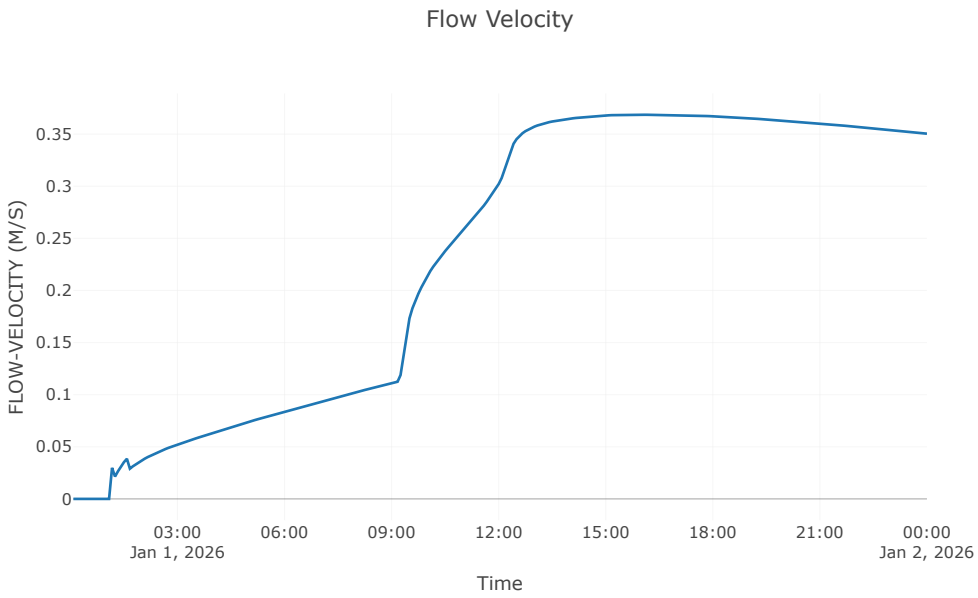
Results: Reach-WETLAND B	
Peak Discharge (M3/S)	0.17
Time of Peak Discharge	01Jan2026, 15:55
Volume (MM)	30.27
Peak Inflow (M3/S)	0.17
Inflow Volume (M3)	7500.94


Computed Stage
STAGE-SIM (M)
0.02
0.015
0.01
0.005
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Combined Inflow
FLOW-COMBINE (M3/S)
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
0
1
2
3
4
5
6
7
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outflow
FLOW (M3/S)
0
0.05
0.1
0.15
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

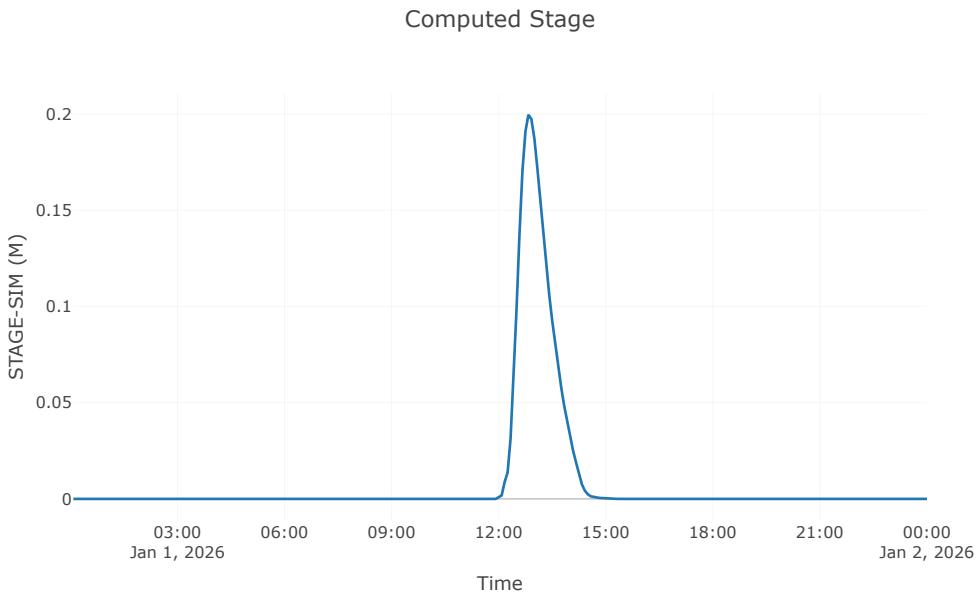

Flow Velocity
FLOW-VELOCITY (M/S)
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

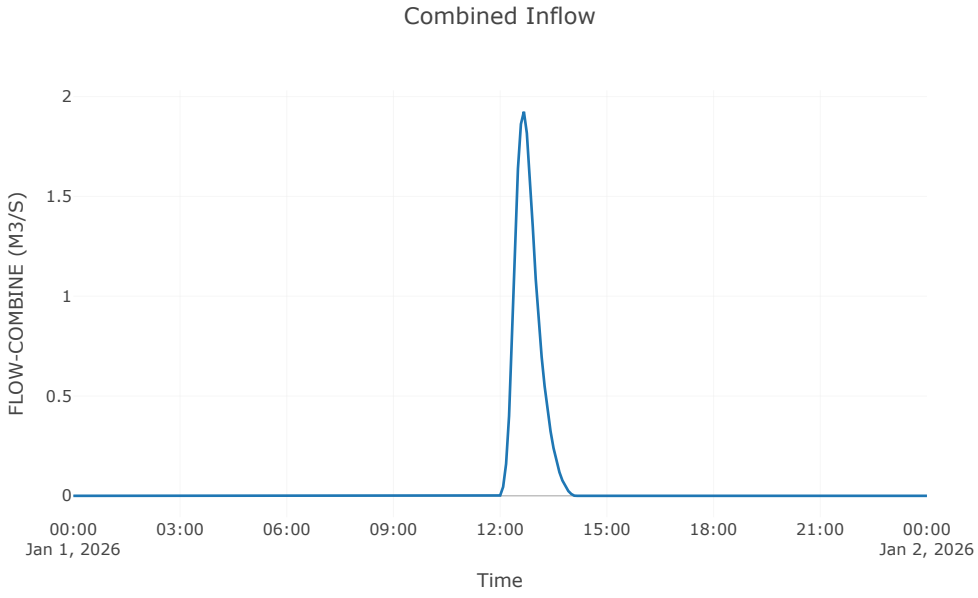
Reach: Reach-MORVEN FERRY SWALE

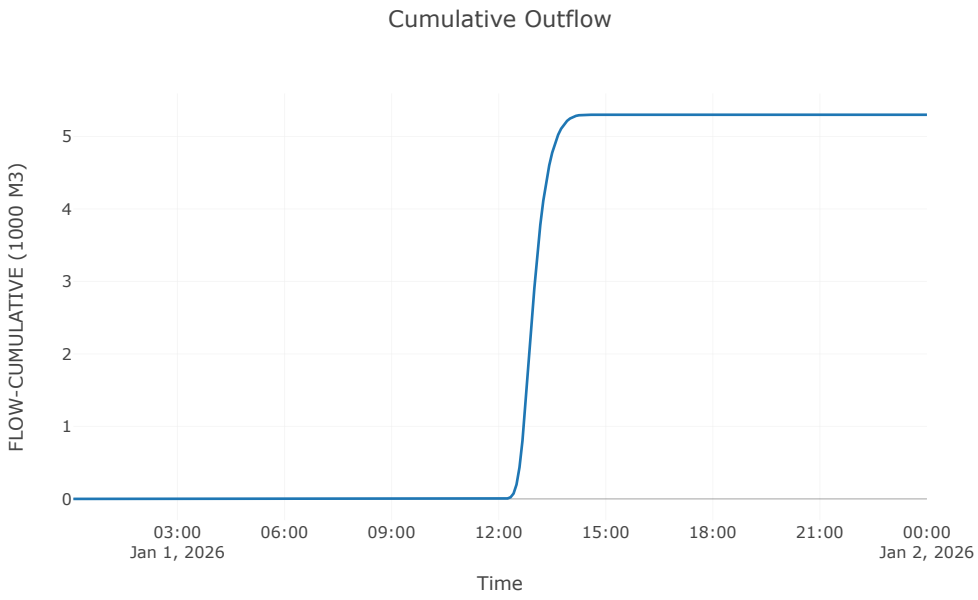
Downstream : Olfp outflow

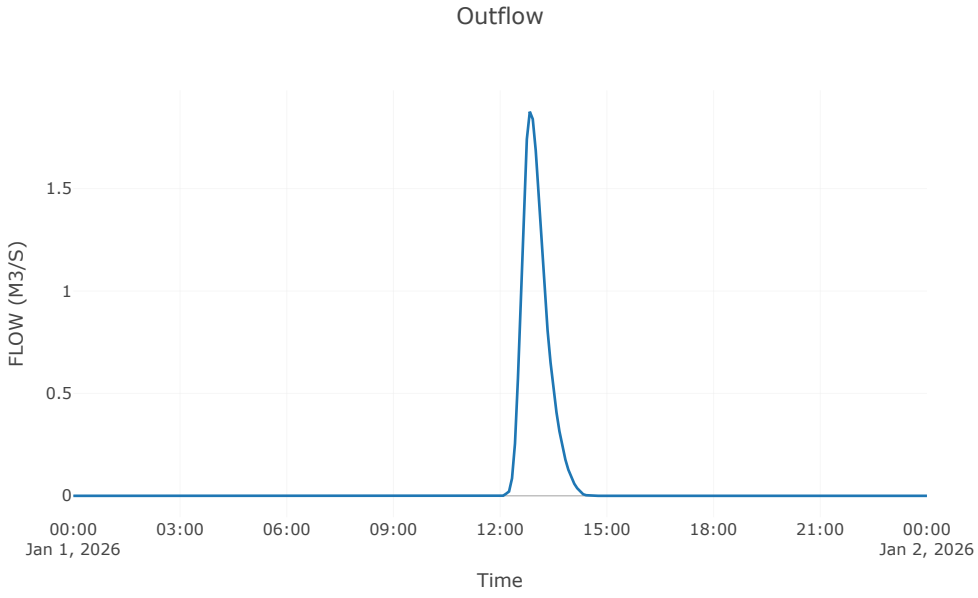
Route: Muskingum Cunge	
Method	Muskingum Cunge
Channel	Trapezoid
Length (M)	770
Energy Slope (M/M)	0.01
Mannings n	0.06
Bottom Width (M)	20
Side Slope (M/M)	3
Initial Variable	Combined Inflow
Space - Time Method	Automatic DX and DT
Index Parameter Type	Index Flow
Index Flow	15
Invert Elevation	0
Maximum Depth Iterations	20
Maximum Route Step Iterations	30

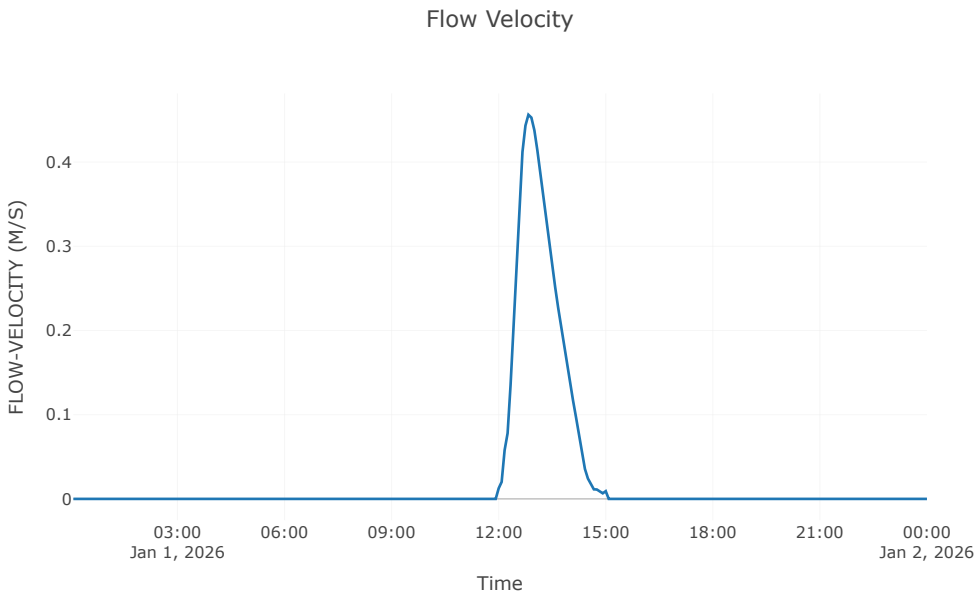
Results: Reach-MORVEN FERRY SWALE	
Peak Discharge (M3/S)	1.88
Time of Peak Discharge	01Jan2026, 12:50
Peak Inflow (M3/S)	1.92
Inflow Volume (M3)	5239.75


Computed Stage
STAGE-SIM (M)
0.2
0.15
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Combined Inflow
FLOW-COMBINE (M3/S)
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
0
1
2
3
4
5
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outflow
FLOW (M3/S)
0
0.5
1
1.5
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Flow Velocity
FLOW-VELOCITY (M/S)
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

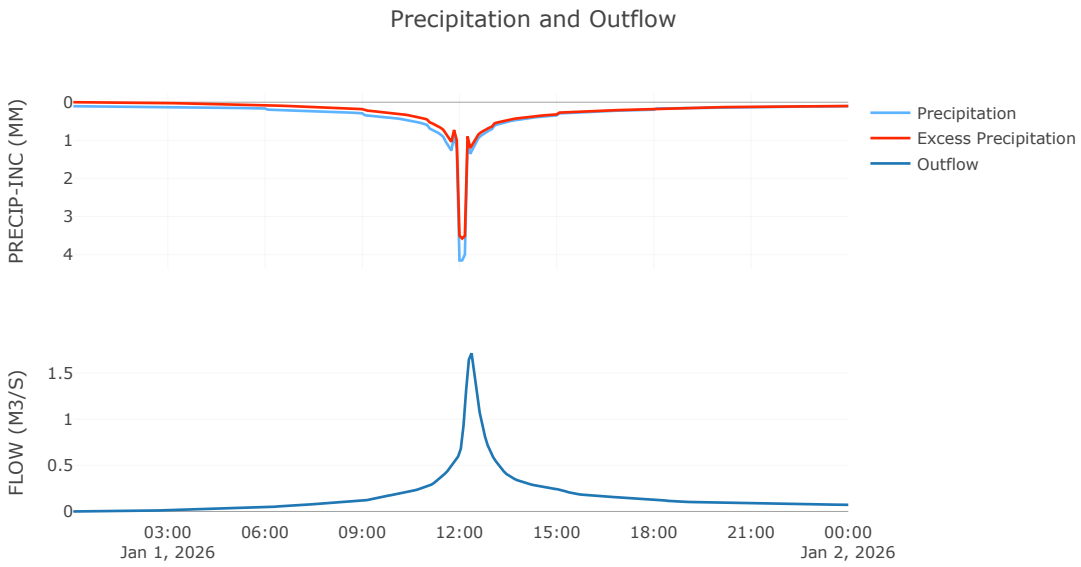
Subbasin: DIFFERENCE POND 1 INTERNAL

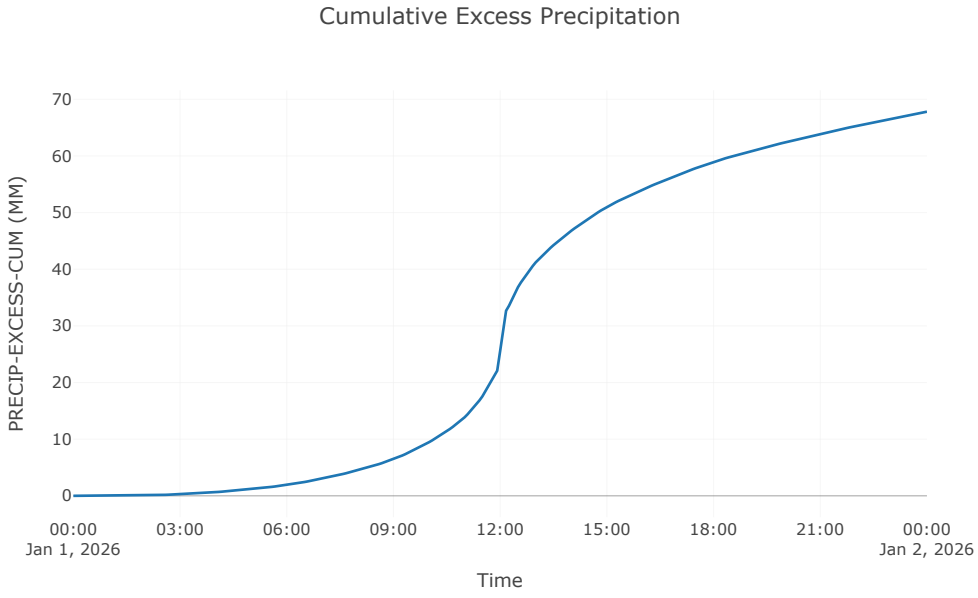
Area (KM2) : 0.21
Latitude Degrees : -44.99
Longitude Degrees : 168.84
Downstream : Junction - POND 1

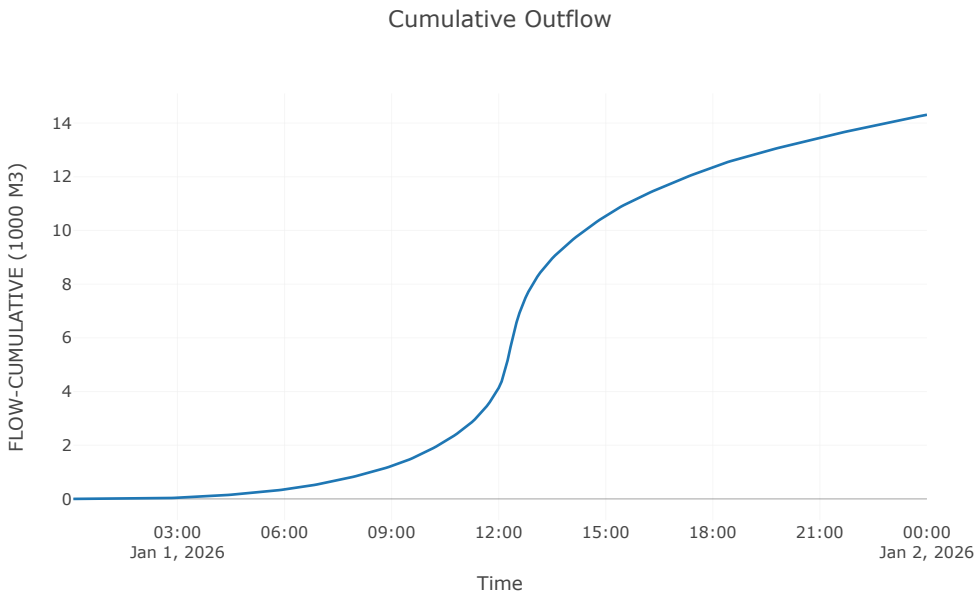
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	90.8
Initial Abstraction	1.29

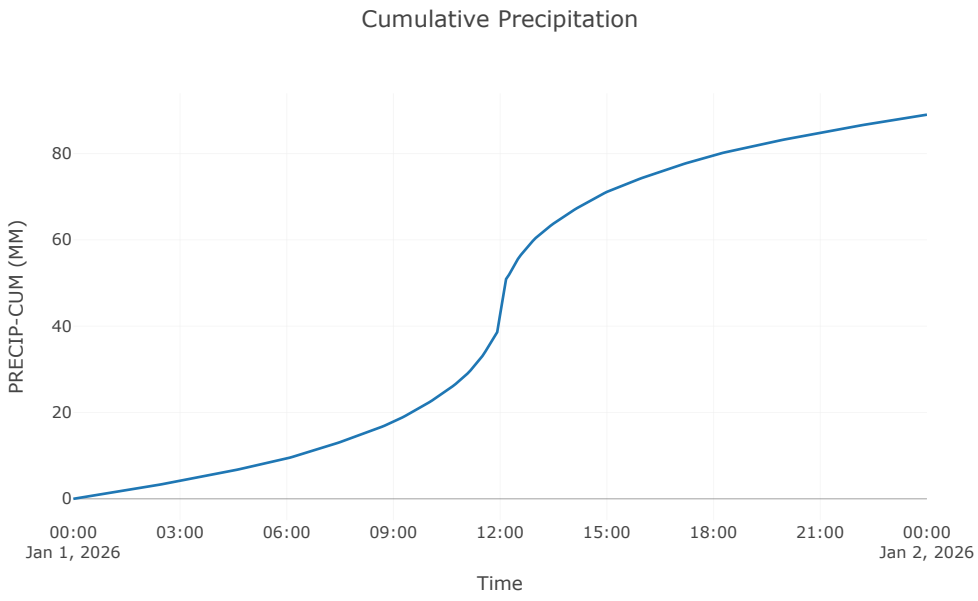
Transform: Scs	
Lag	15.03
Unitgraph Type	Standard

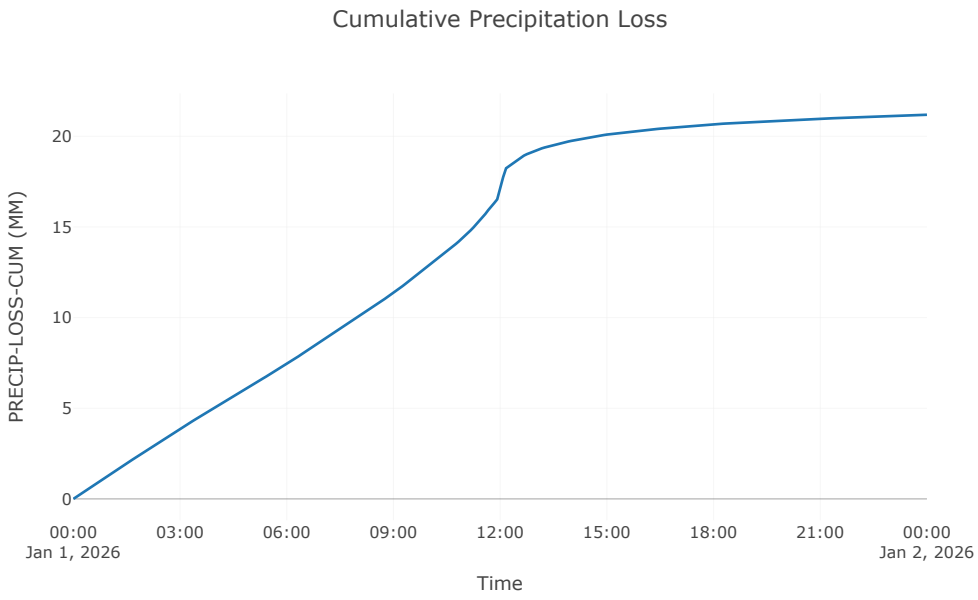
Results: DIFFERENCE POND 1 INTERNAL	
Peak Discharge (M3/S)	1.71
Time of Peak Discharge	01Jan2026, 12:20
Volume (MM)	67.41
Precipitation Volume (M3)	18894.7
Loss Volume (M3)	4498.09
Excess Volume (M3)	14396.61
Direct Runoff Volume (M3)	14310.21
Baseflow Volume (M3)	0

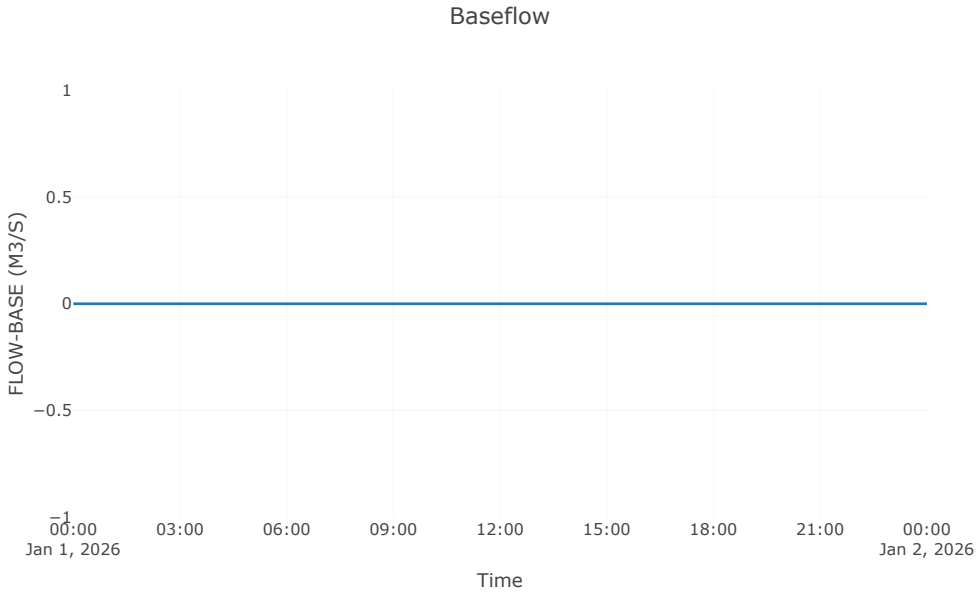

Precipitation and Outflow
PRECIP-INC (MM)
0
1
2
3
4
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

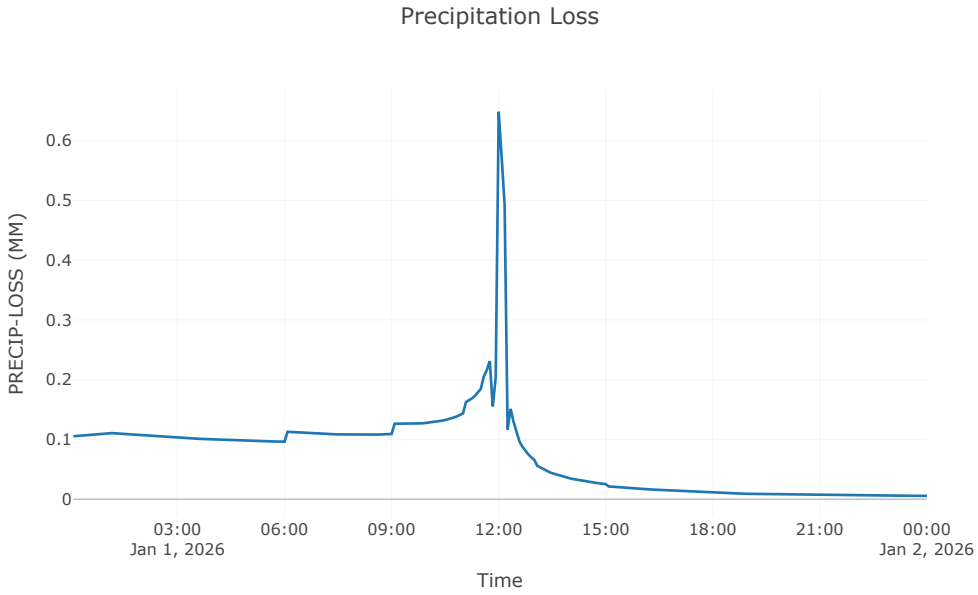

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

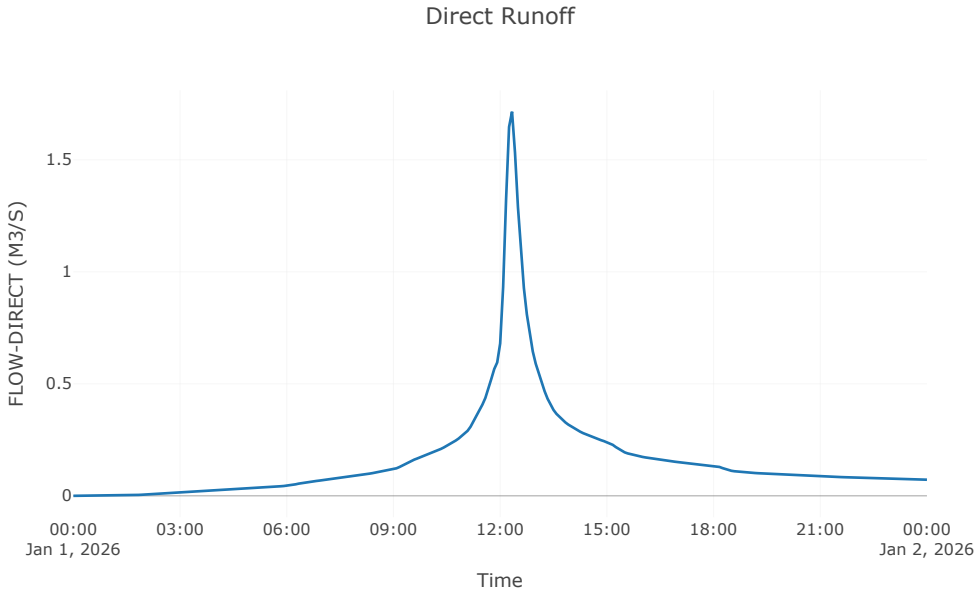

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
0
2
4
6
8
10
12
14
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

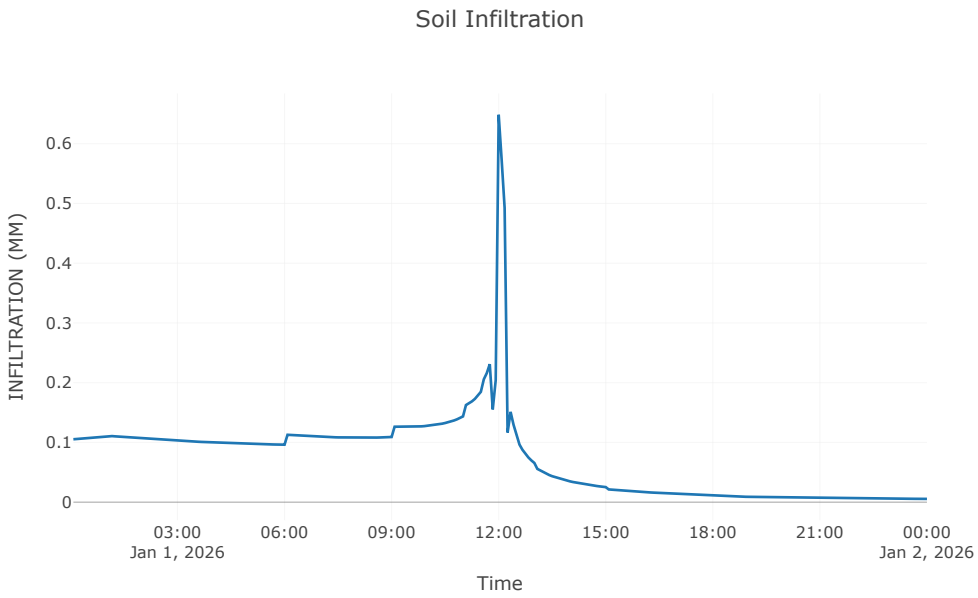

Cumulative Precipitation
PRECIP-CUM (MM)
0
20
40
60
80
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
0.6
0.5
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
0.6
0.5
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

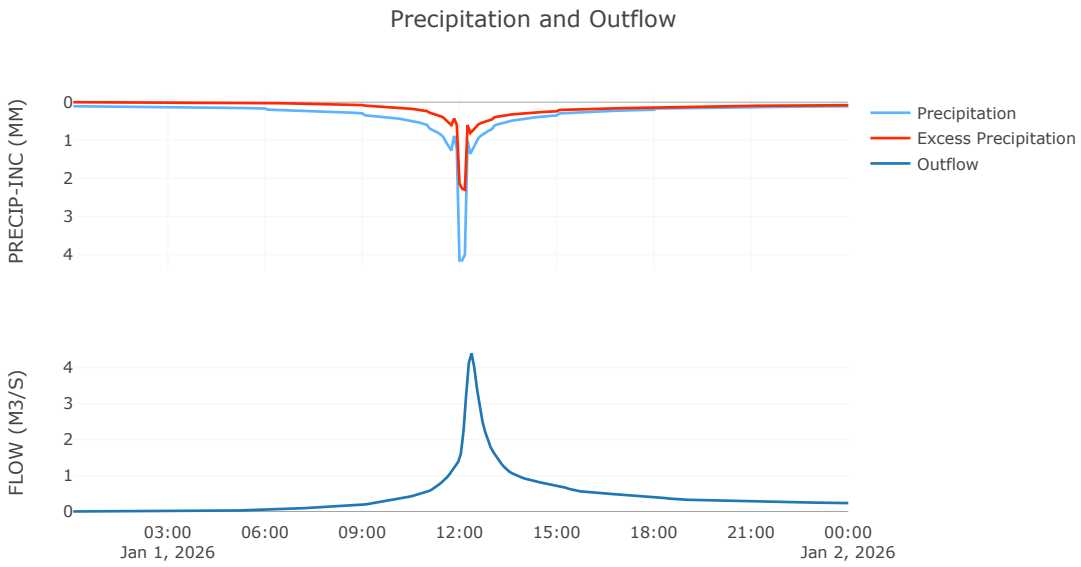
Subbasin: DIFFERENCE POND 1 UPSTREAM

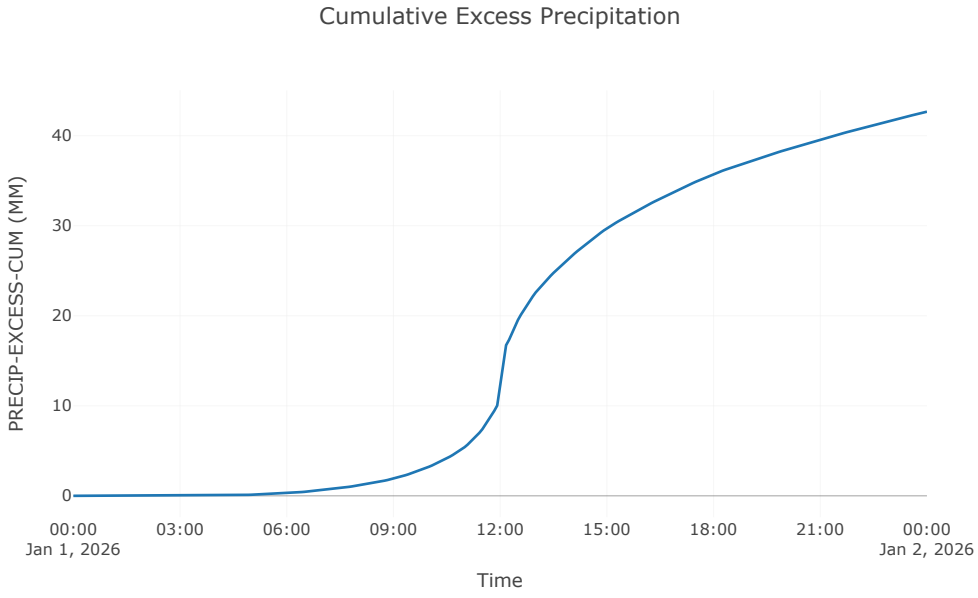
Area (KM2) : 0.86
Latitude Degrees : -44.99
Longitude Degrees : 168.84
Downstream : Junction - CHANNEL 1

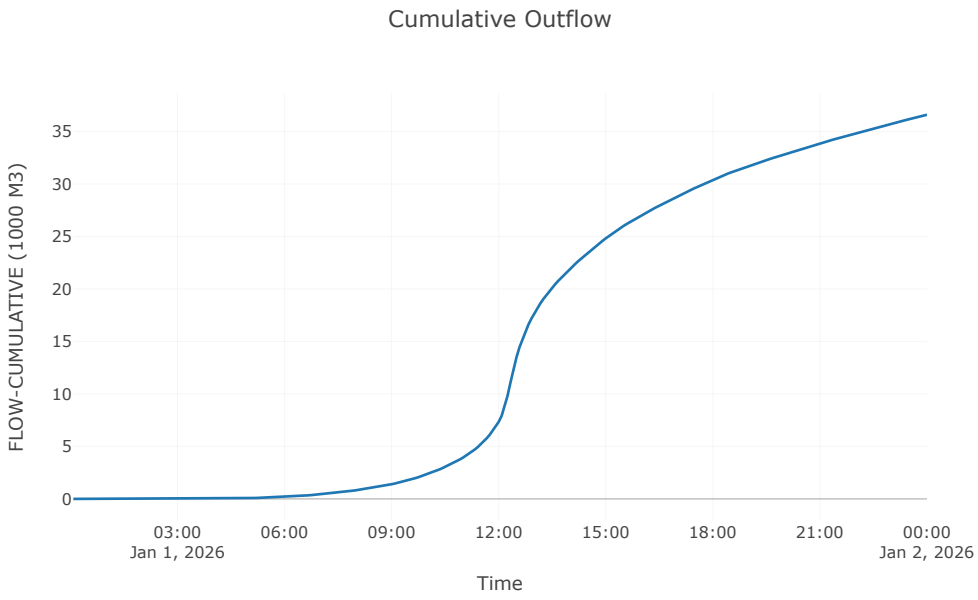
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	75.2
Initial Abstraction	4.19

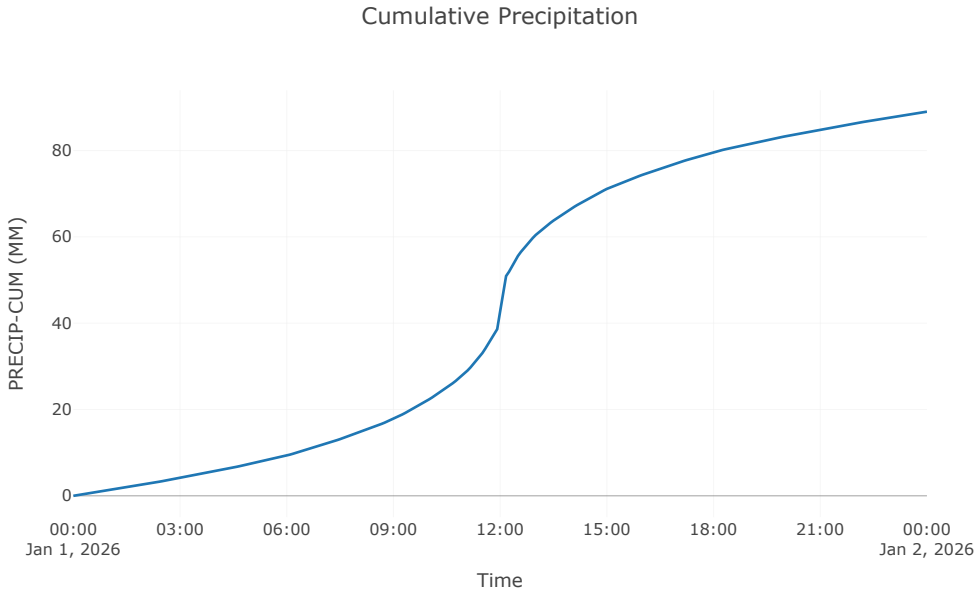
Transform: Scs	
Lag	15.18
Unitgraph Type	Standard

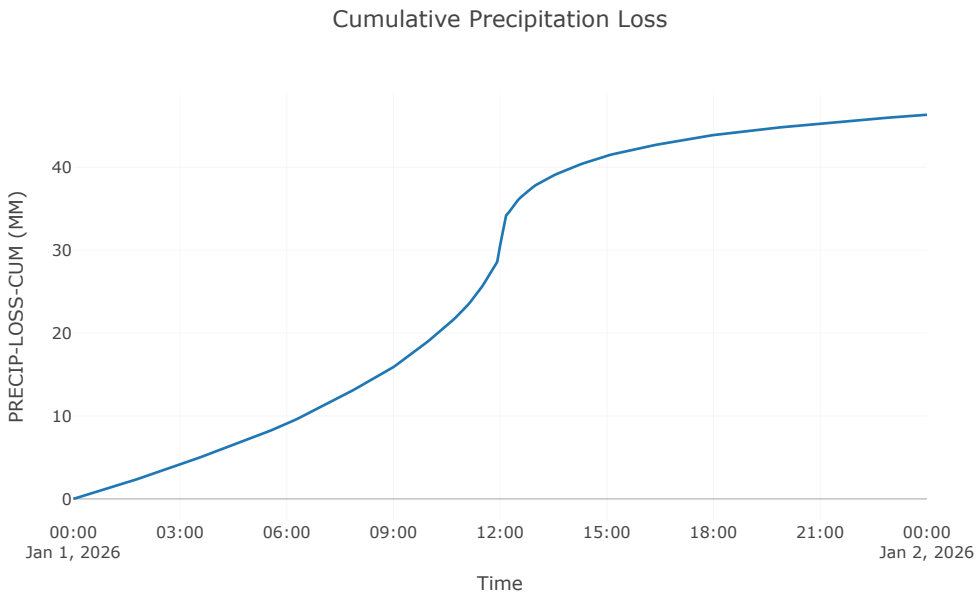
Results: DIFFERENCE POND 1 UPSTREAM	
Peak Discharge (M3/S)	4.4
Time of Peak Discharge	01Jan2026, 12:20
Volume (MM)	42.34
Precipitation Volume (M3)	76940.5
Loss Volume (M3)	40054.34
Excess Volume (M3)	36886.16
Direct Runoff Volume (M3)	36604.39
Baseflow Volume (M3)	0

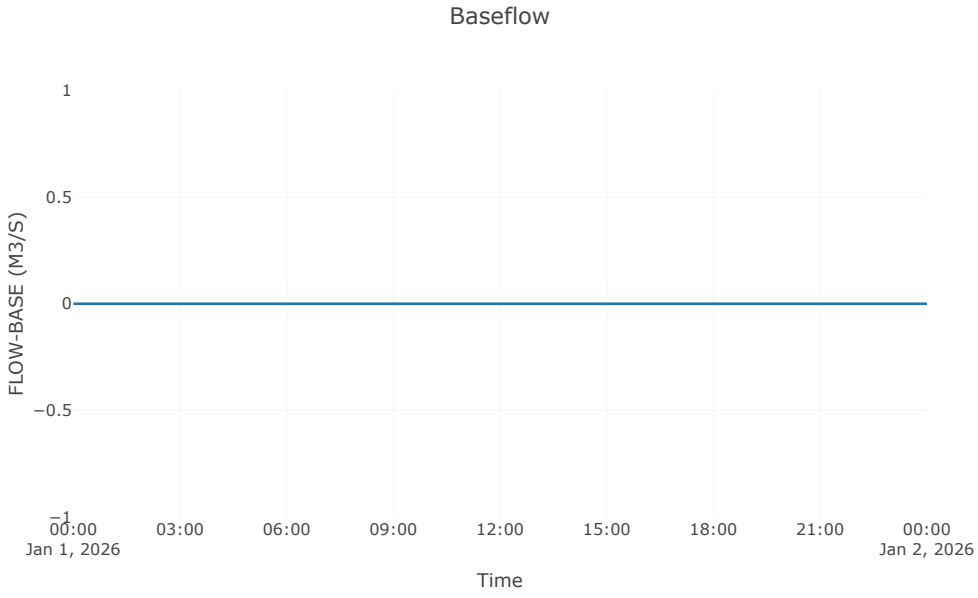

Precipitation and Outflow
PRECIP-INC (MM)
0
1
2
3
4
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
4
3
2
1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

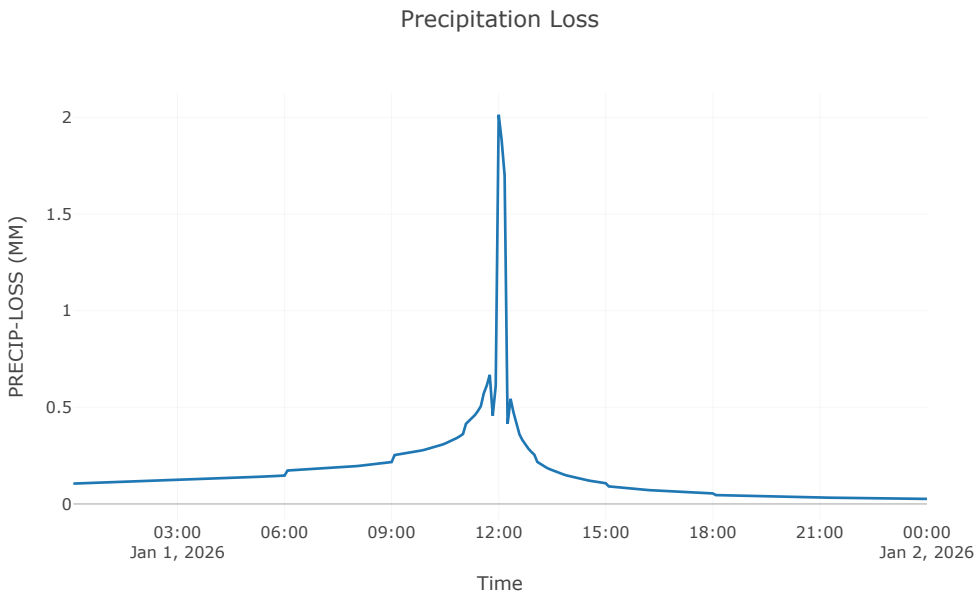

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

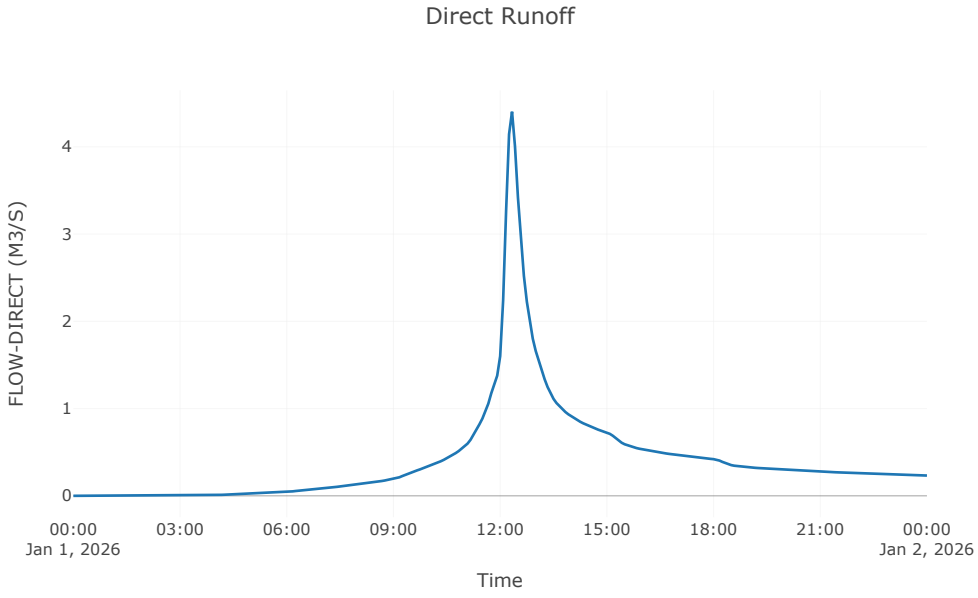

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
35
30
25
20
15
10
5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

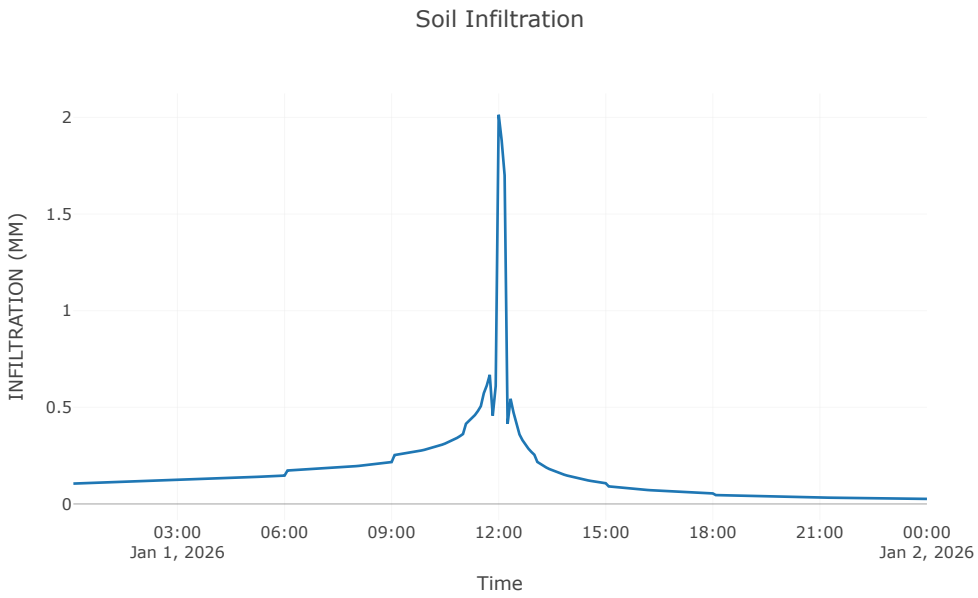

Cumulative Precipitation
PRECIP-CUM (MM)
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
4
3
2
1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

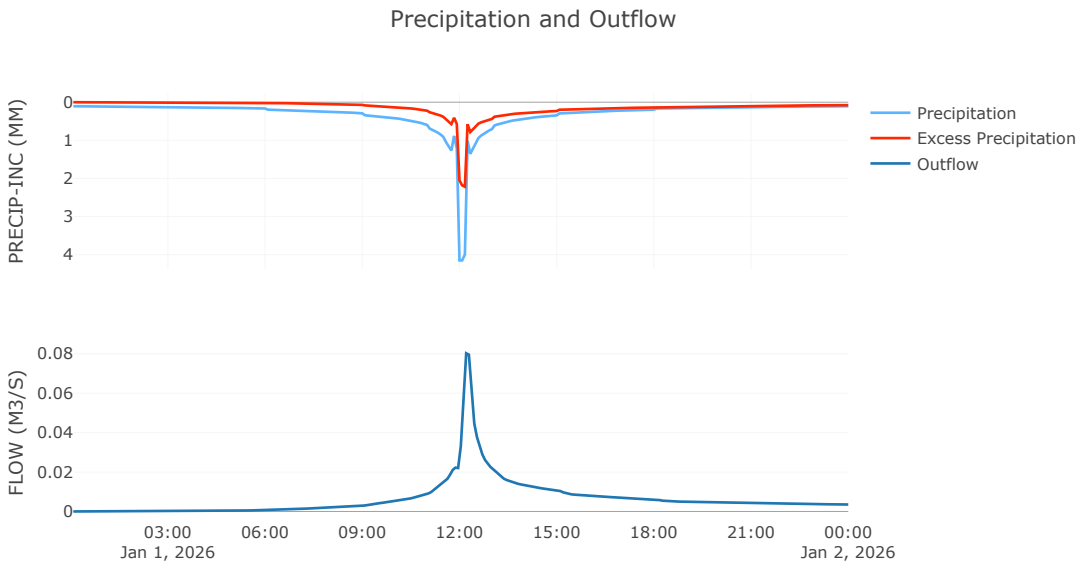
Subbasin: DIFFERENCE POND 1 UPSTREAM S

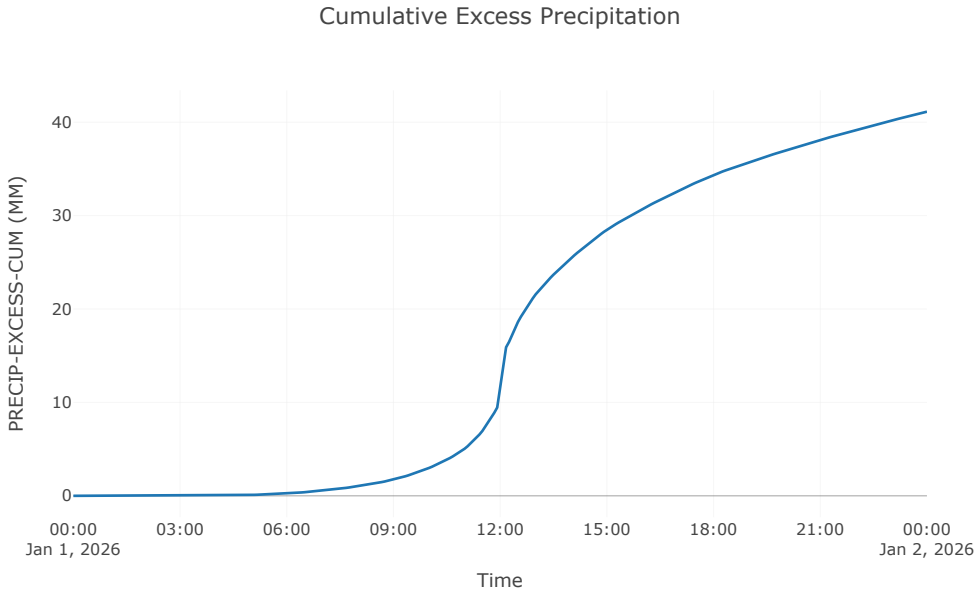
Area (KM2) : 0.01
Latitude Degrees : -44.99
Longitude Degrees : 168.85
Downstream : Junction - POND 1

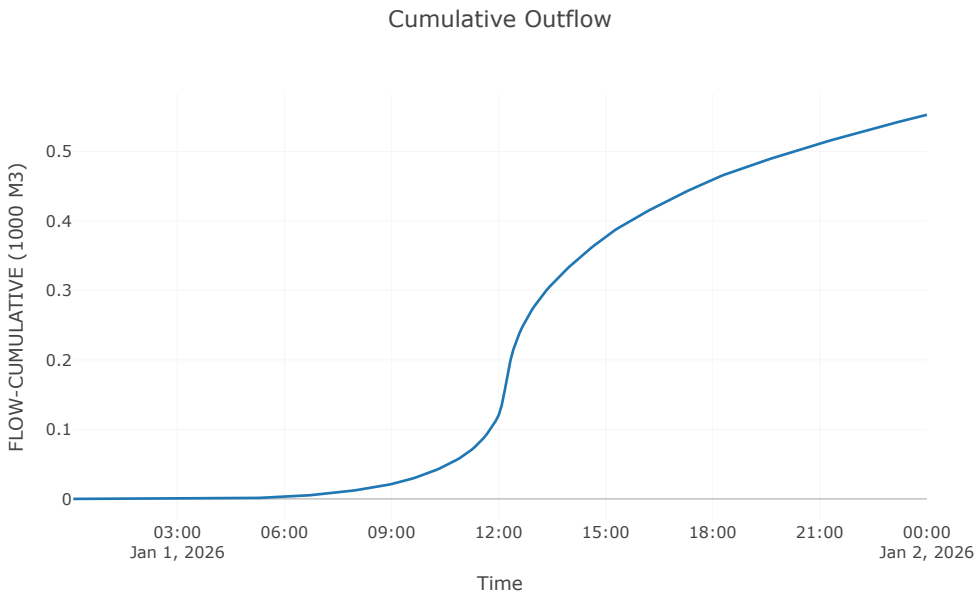
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	74
Initial Abstraction	4.46

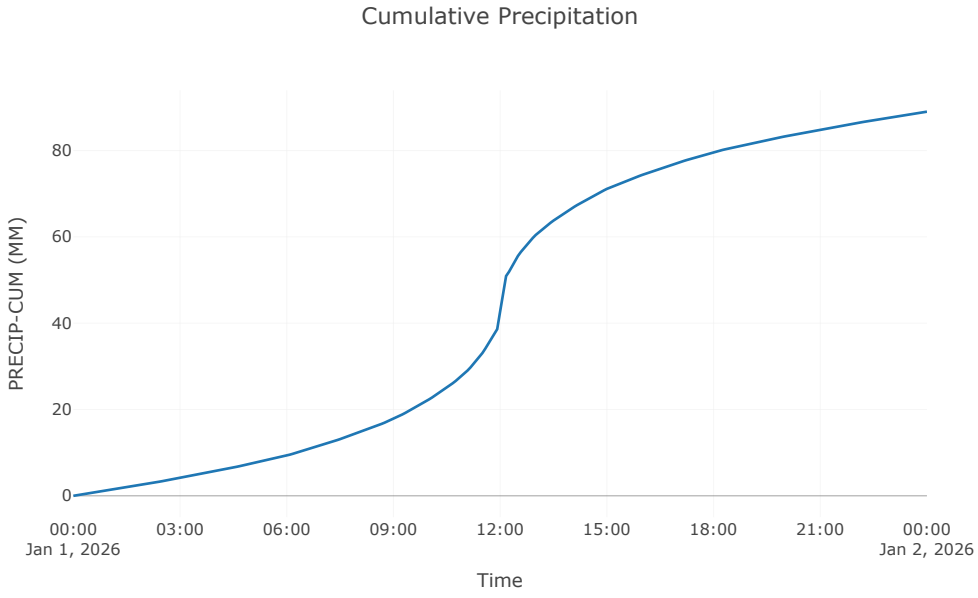
Transform: Scs	
Lag	8.07
Unitgraph Type	Standard

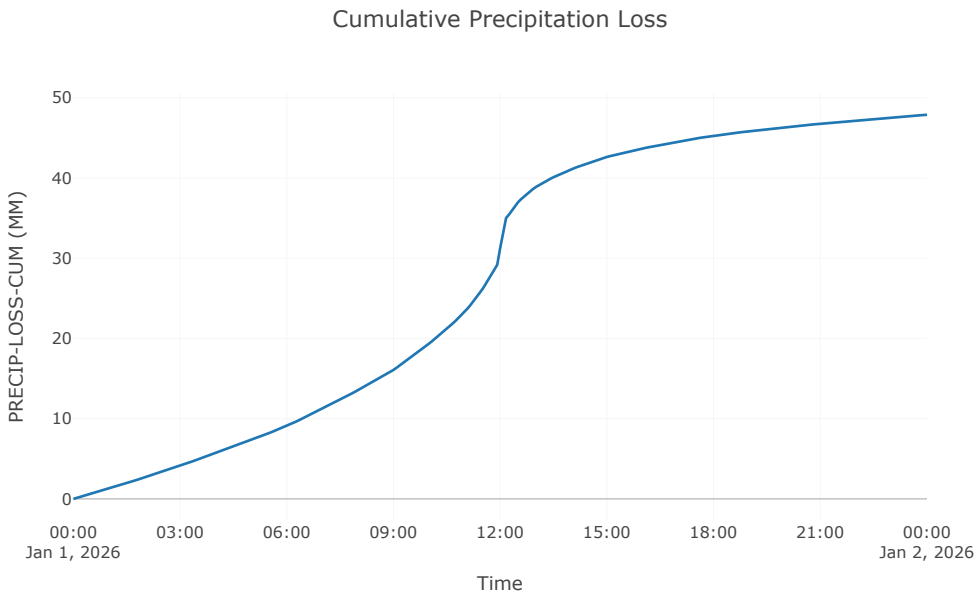
Results: DIFFERENCE POND 1 UPSTREAM S	
Peak Discharge (M3/S)	0.08
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	40.95
Precipitation Volume (M3)	1201.5
Loss Volume (M3)	646.3
Excess Volume (M3)	555.2
Direct Runoff Volume (M3)	552.83
Baseflow Volume (M3)	0

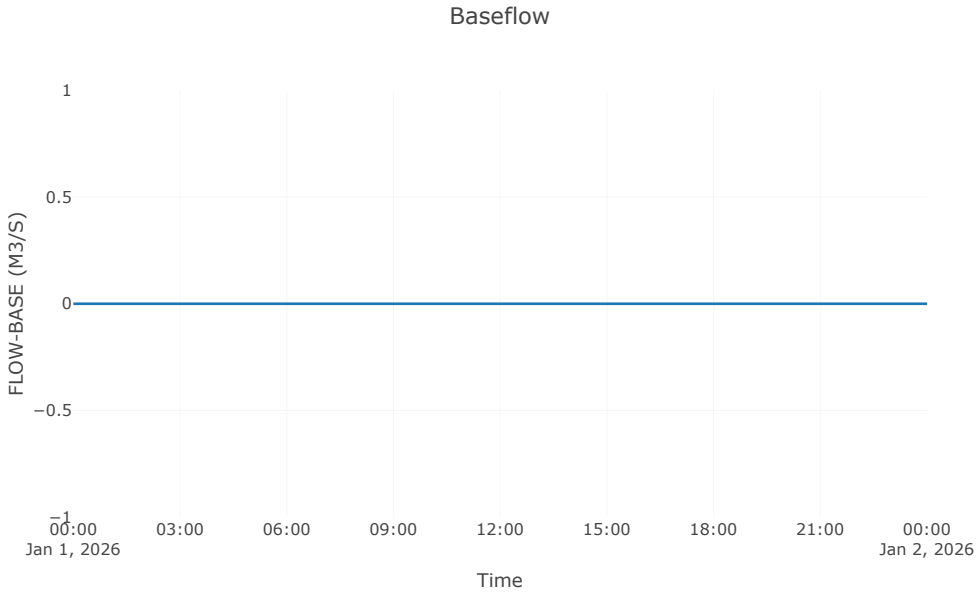

Precipitation and Outflow
PRECIP-INC (MM)
0
1
2
3
4
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
0.08
0.06
0.04
0.02
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

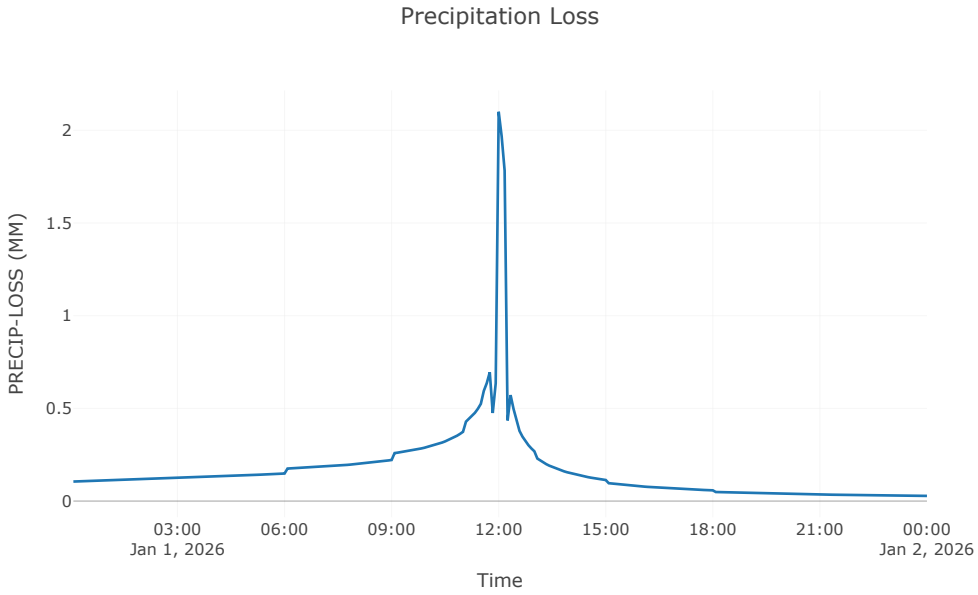

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

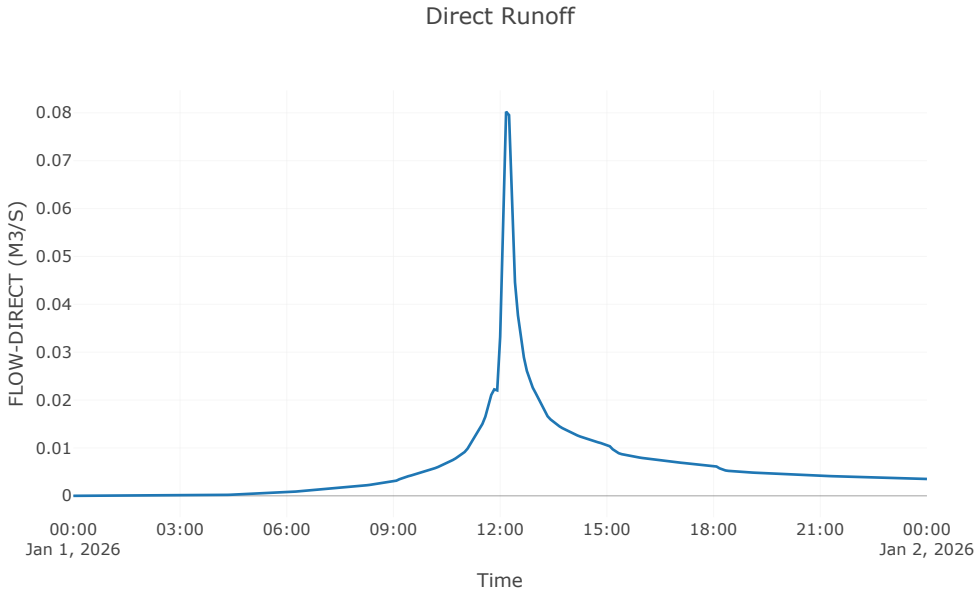

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
0.5
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

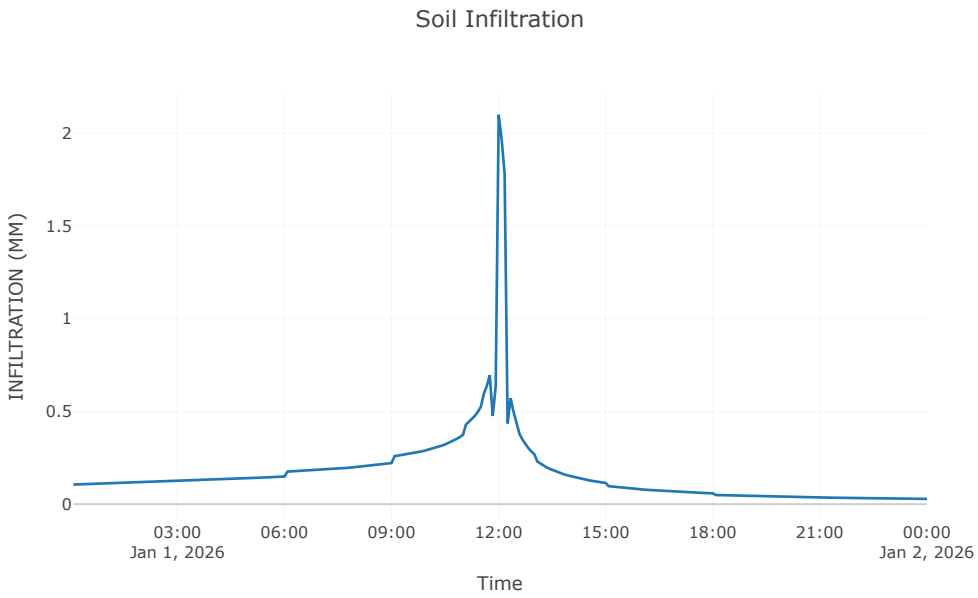

Cumulative Precipitation
PRECIP-CUM (MM)
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

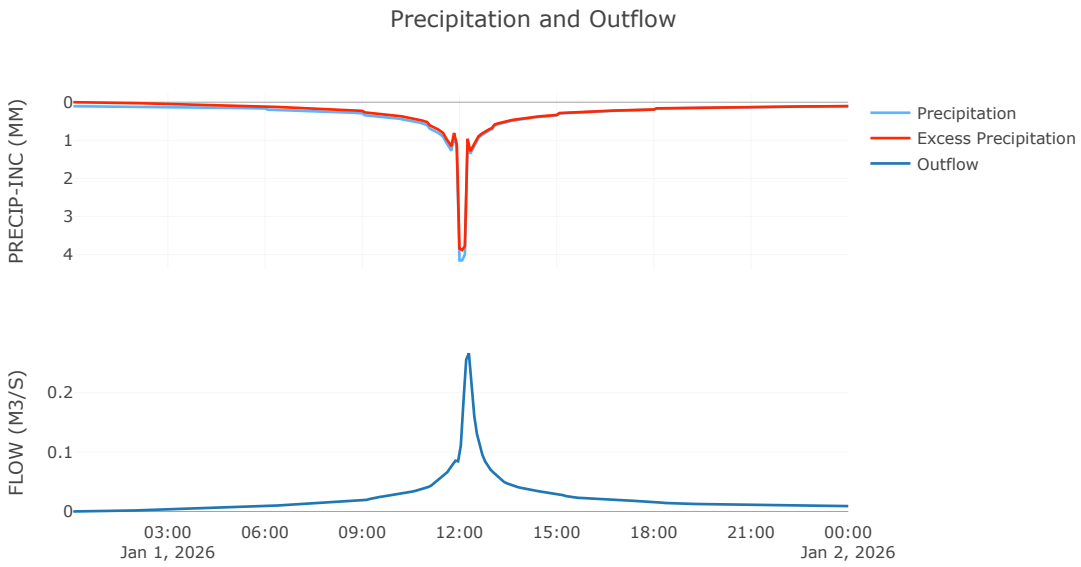
Subbasin: DIFFERENCE POND 2 INTERNAL

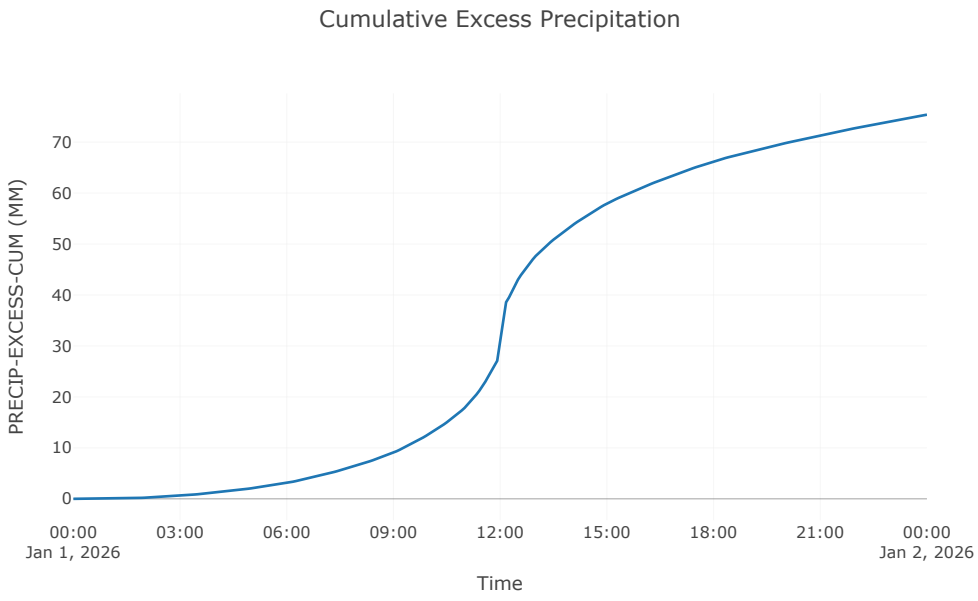
Area (KM2) : 0.03
Latitude Degrees : -44.99
Longitude Degrees : 168.85
Downstream : Junction - POND 2

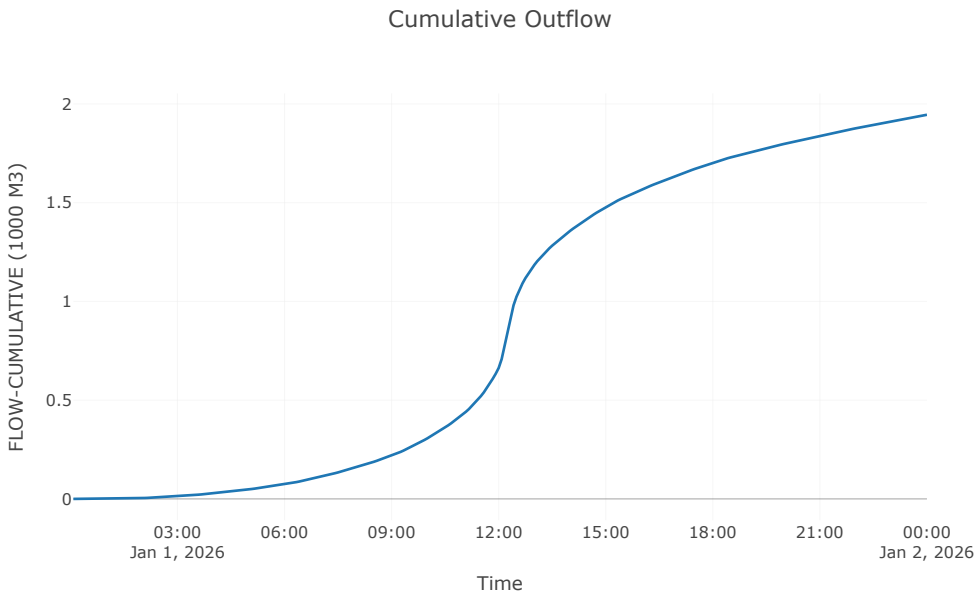
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	94.4
Initial Abstraction	0.75

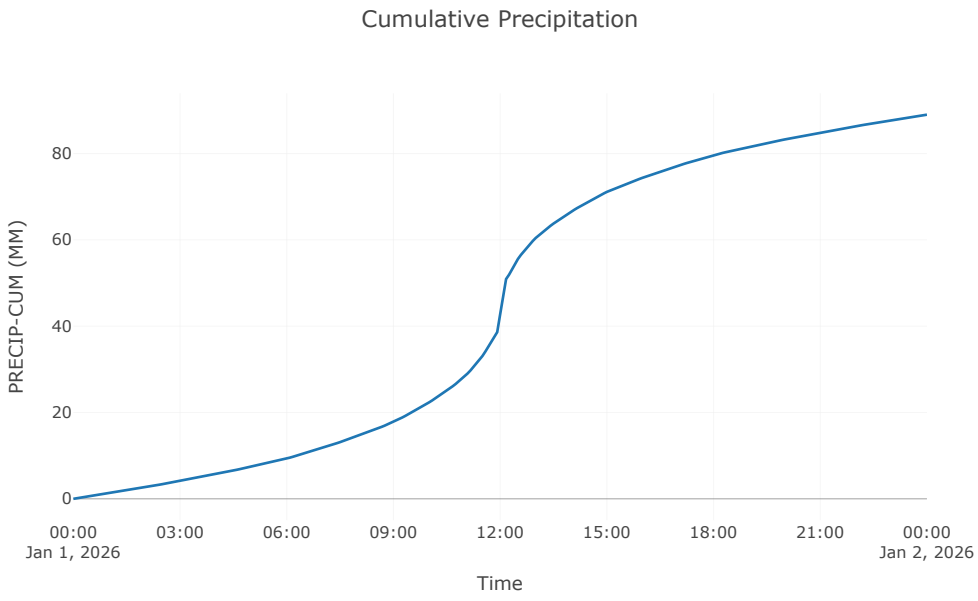
Transform: Scs	
Lag	9.53
Unitgraph Type	Standard

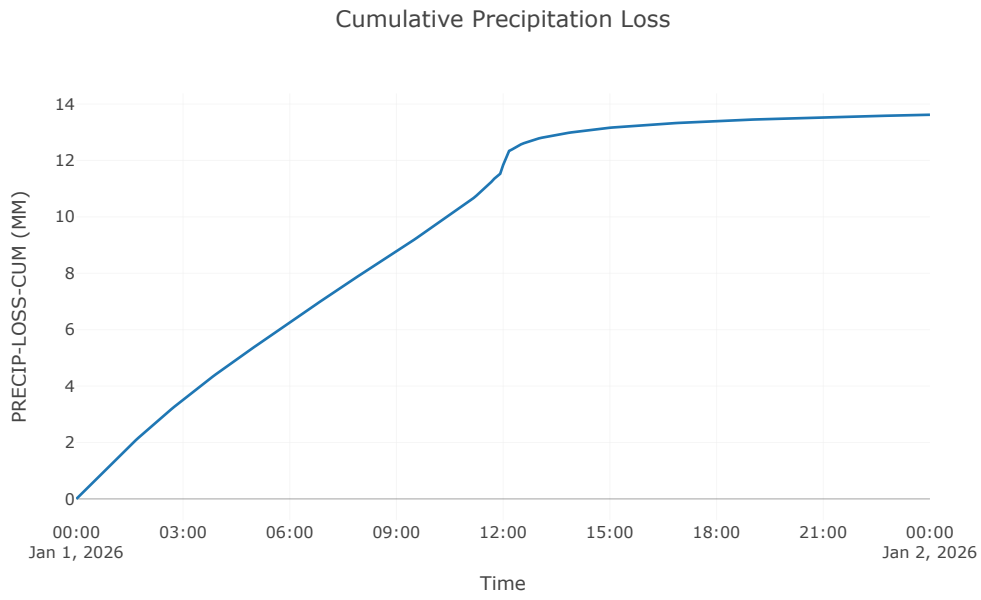
Results: DIFFERENCE POND 2 INTERNAL	
Peak Discharge (M3/S)	0.27
Time of Peak Discharge	01Jan2026, 12:15
Volume (MM)	75.11
Precipitation Volume (M3)	2305.1
Loss Volume (M3)	352.77
Excess Volume (M3)	1952.33
Direct Runoff Volume (M3)	1945.3
Baseflow Volume (M3)	0

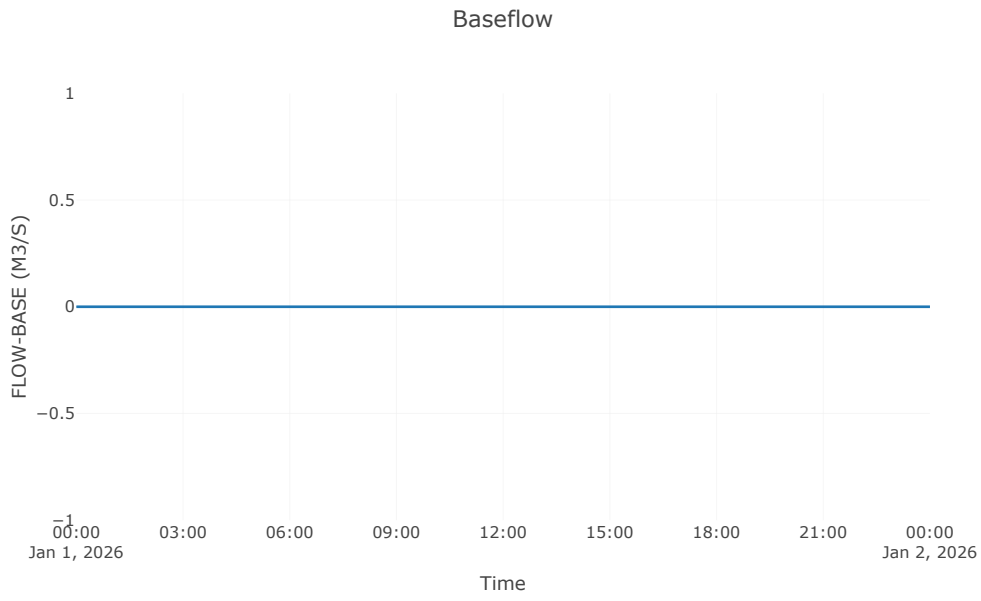

Precipitation and Outflow
PRECIP-INC (MM)
0
1
2
3
4
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

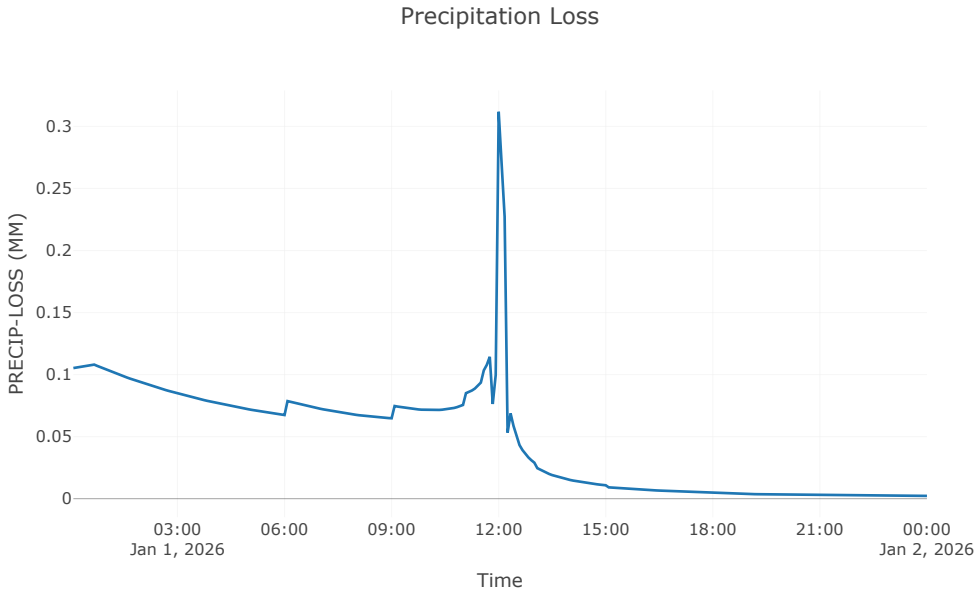

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

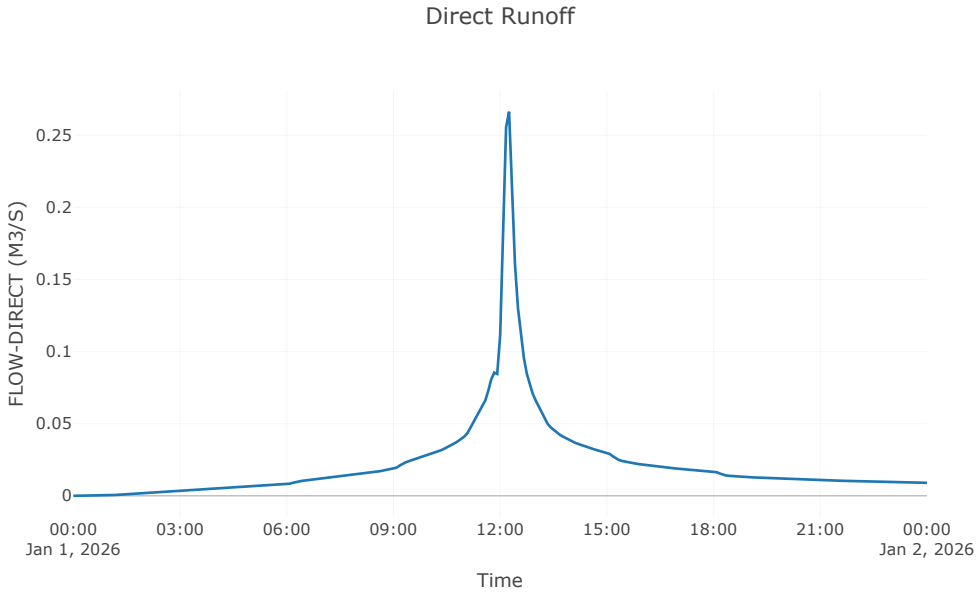

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

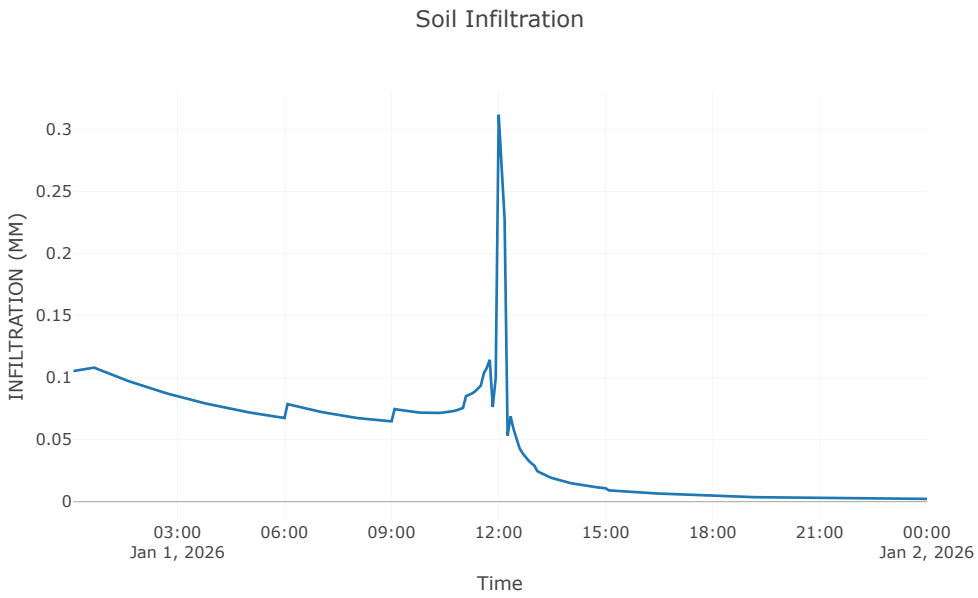

Cumulative Precipitation
PRECIP-CUM (MM)
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
14
12
10
8
6
4
2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
0.3
0.25
0.2
0.15
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
0.25
0.2
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
0.3
0.25
0.2
0.15
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

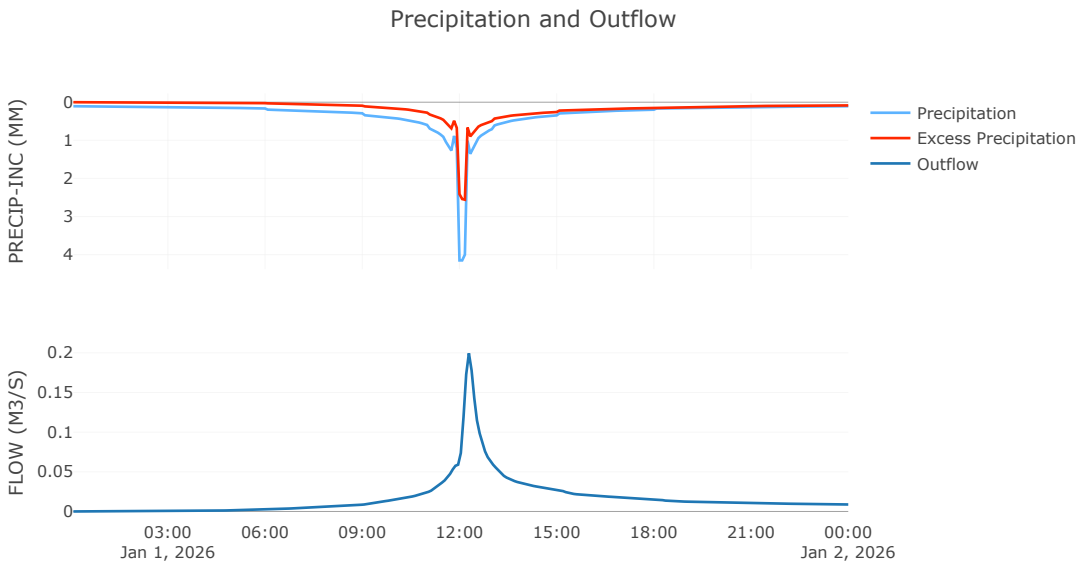
Subbasin: DIFFERENCE POND 2 UPSTREAM

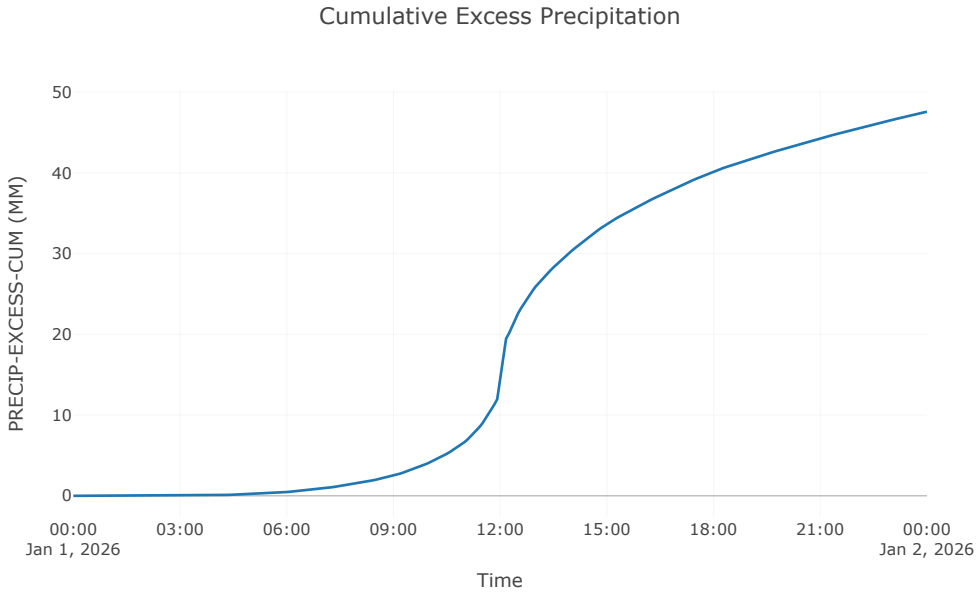
Area (KM2) : 0.03
Latitude Degrees : -44.99
Longitude Degrees : 168.85
Downstream : Pond 3 drybasin

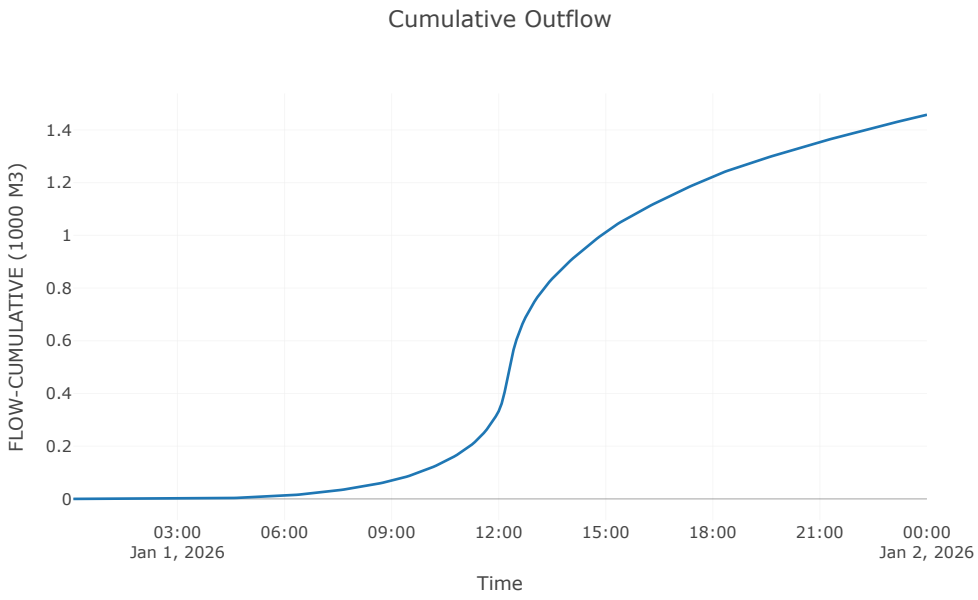
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	78.8
Initial Abstraction	3.42

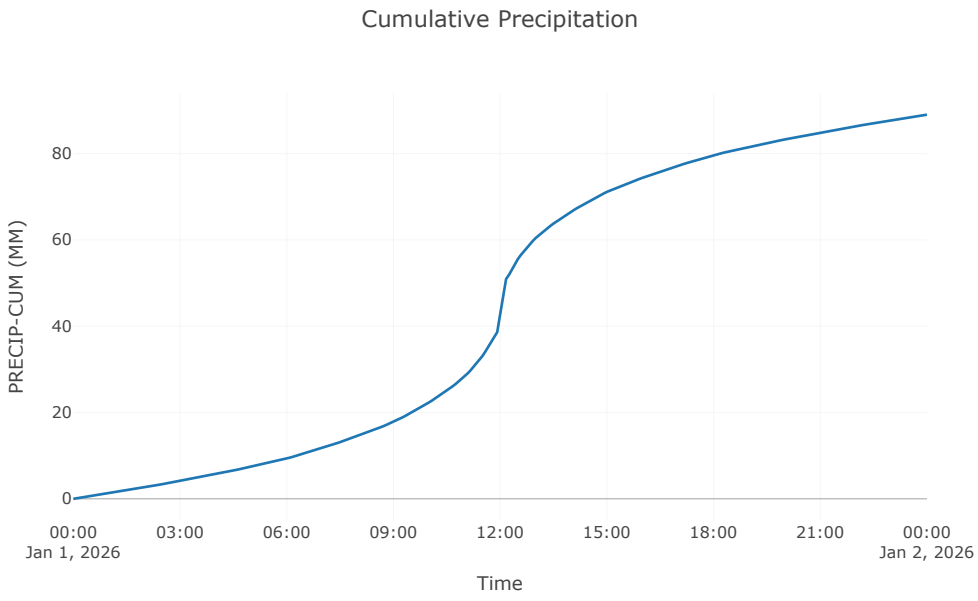
Transform: Scs	
Lag	11.22
Unitgraph Type	Standard

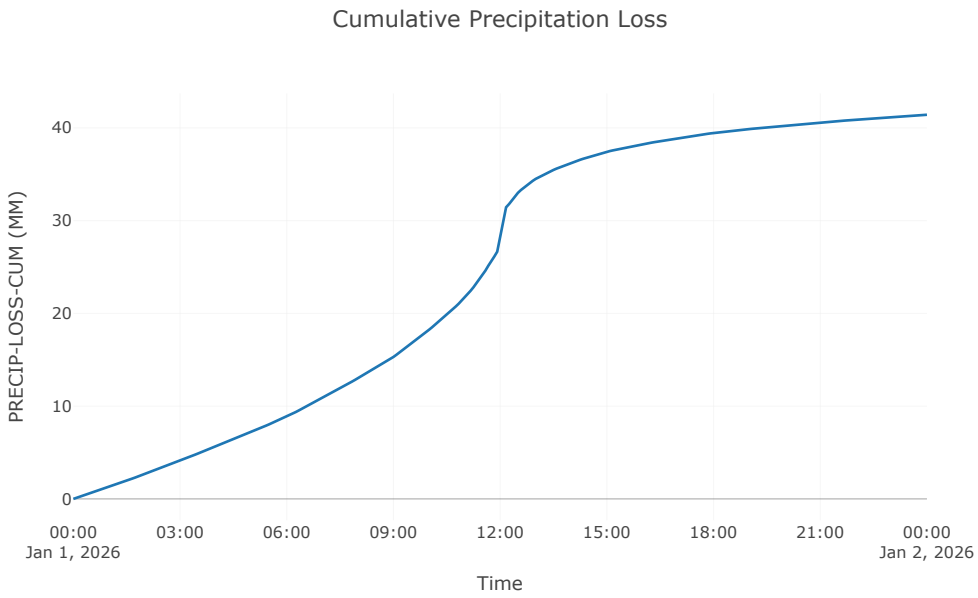
Results: DIFFERENCE POND 2 UPSTREAM	
Peak Discharge (M3/S)	0.2
Time of Peak Discharge	01Jan2026, 12:15
Volume (MM)	47.32
Precipitation Volume (M3)	2741.2
Loss Volume (M3)	1275.6
Excess Volume (M3)	1465.6
Direct Runoff Volume (M3)	1457.58
Baseflow Volume (M3)	0

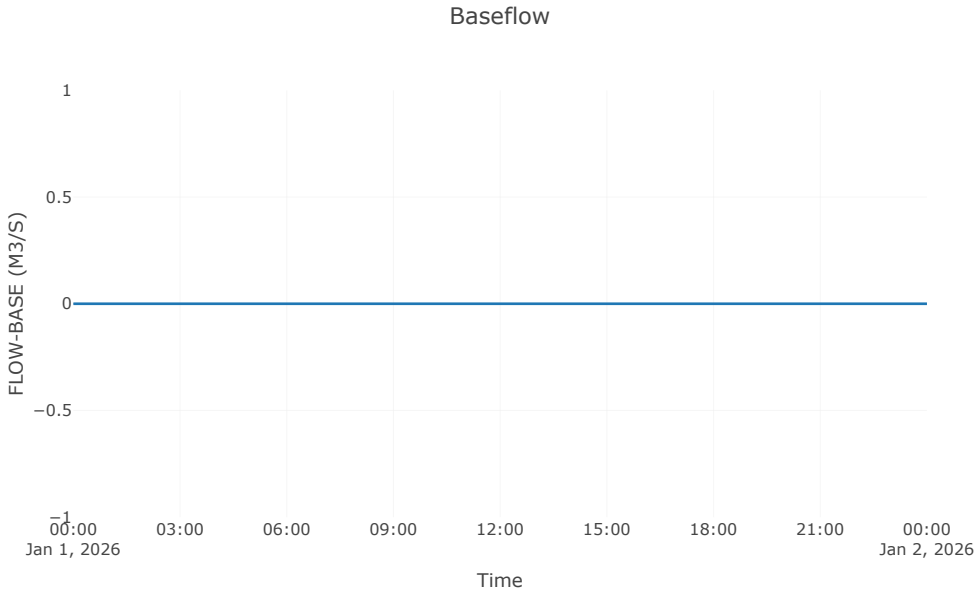

Precipitation and Outflow
PRECIP-INC (MM)
0
1
2
3
4
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
0.2
0.15
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

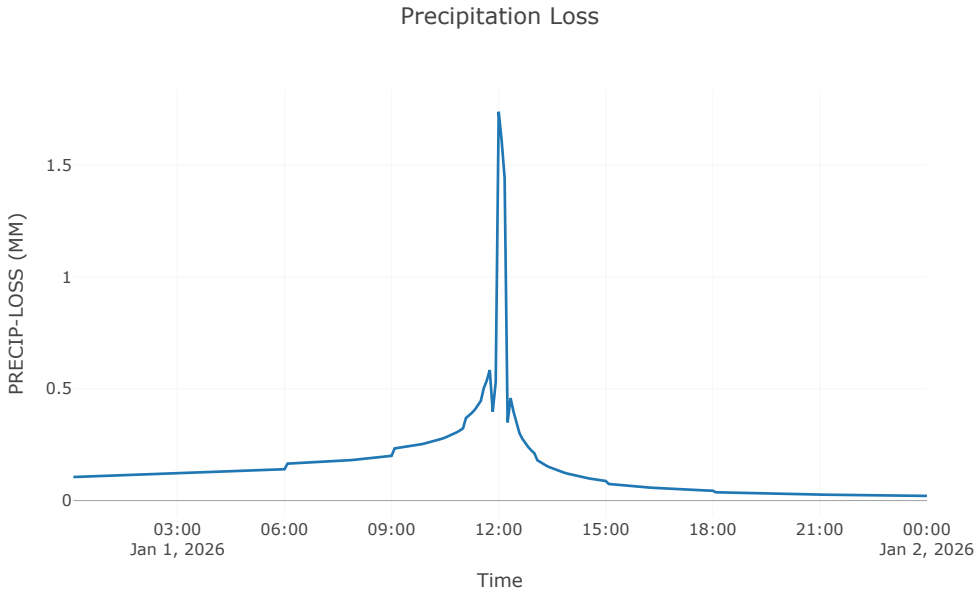

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

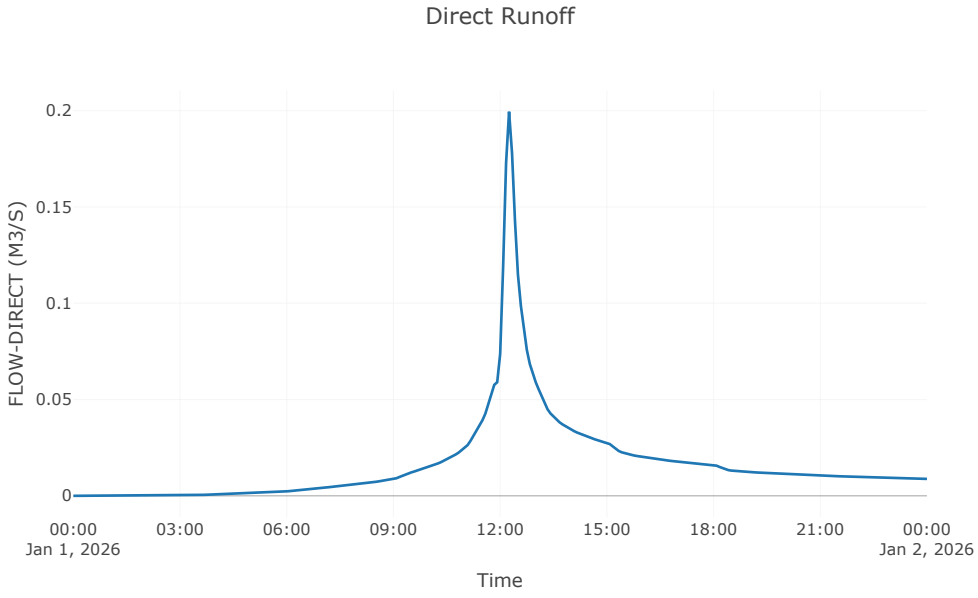

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

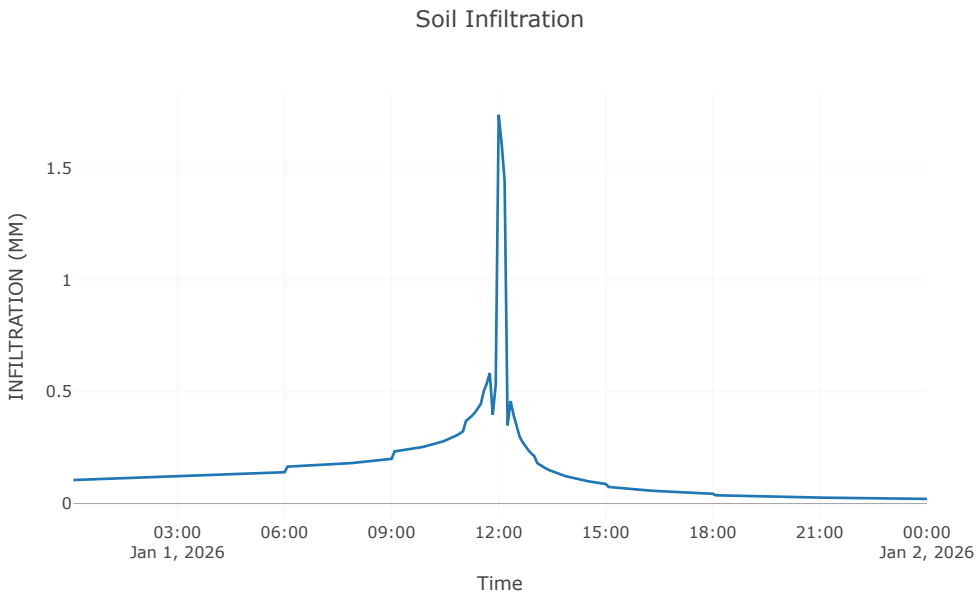

Cumulative Precipitation
PRECIP-CUM (MM)
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
0.2
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

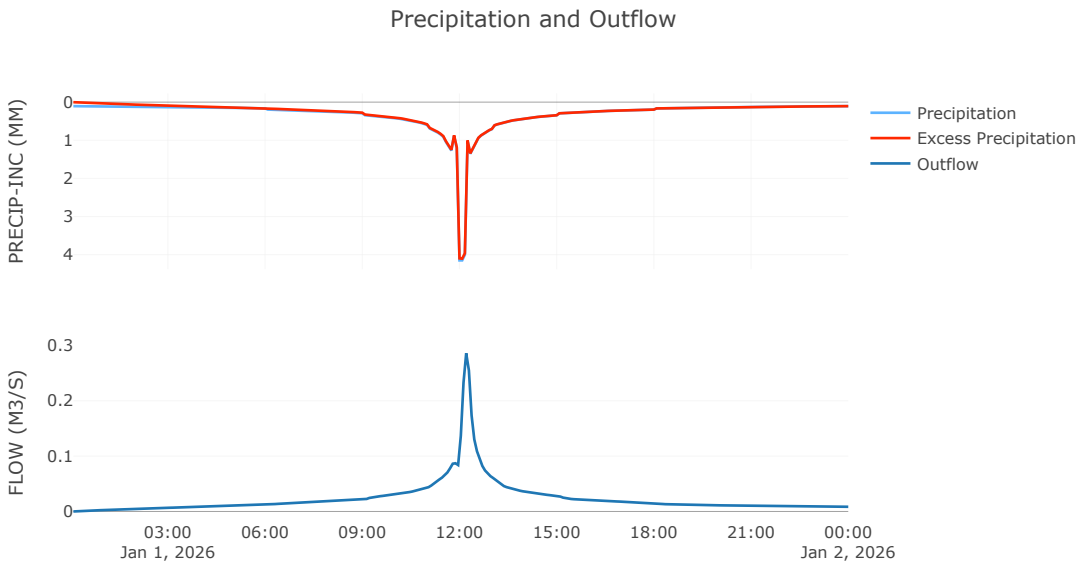
Subbasin: DIFFERENCE POND 2 SOUTH

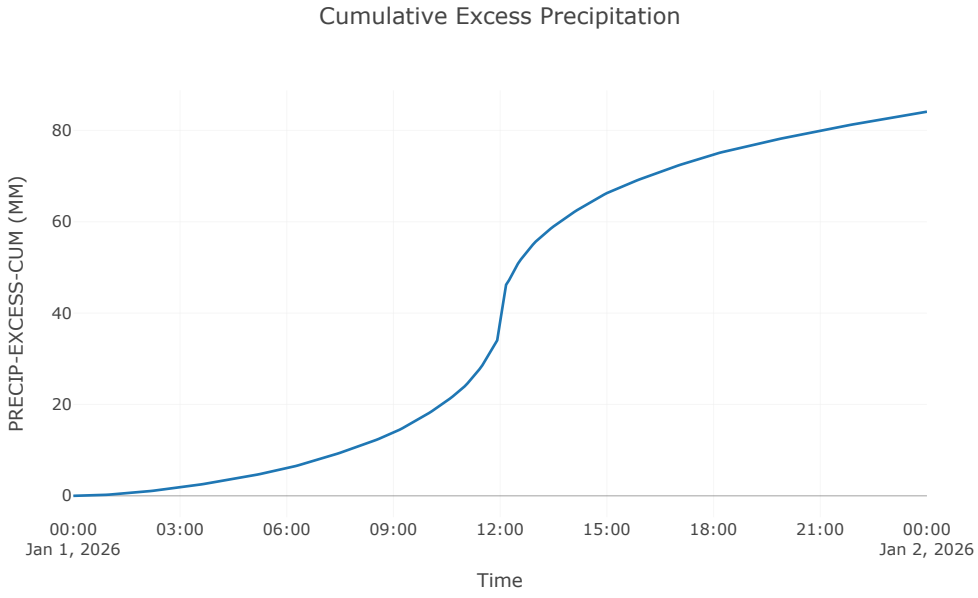
Area (KM2) : 0.02
Latitude Degrees : -44.99
Longitude Degrees : 168.85
Downstream : Junction - POND 2

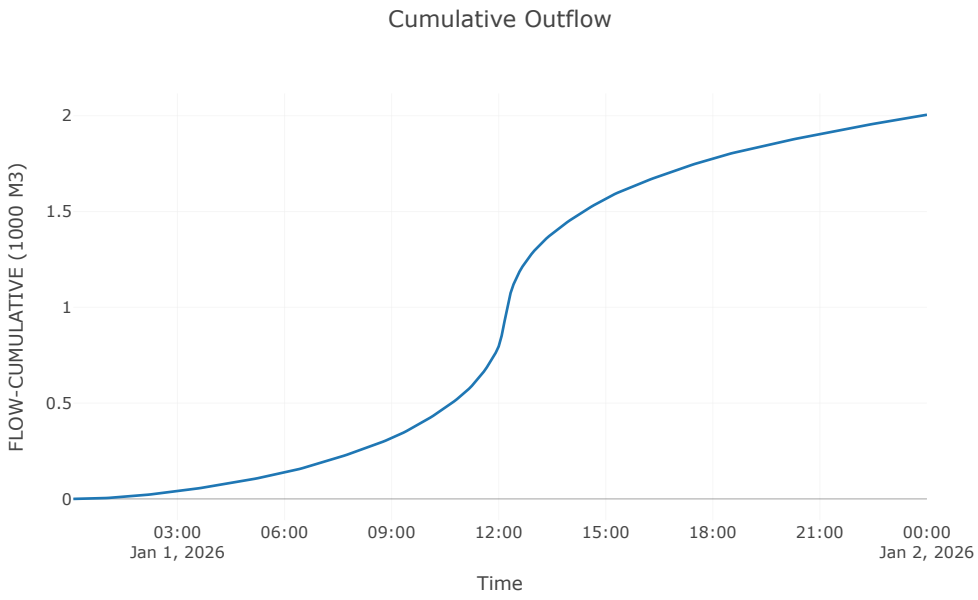
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	98
Initial Abstraction	0

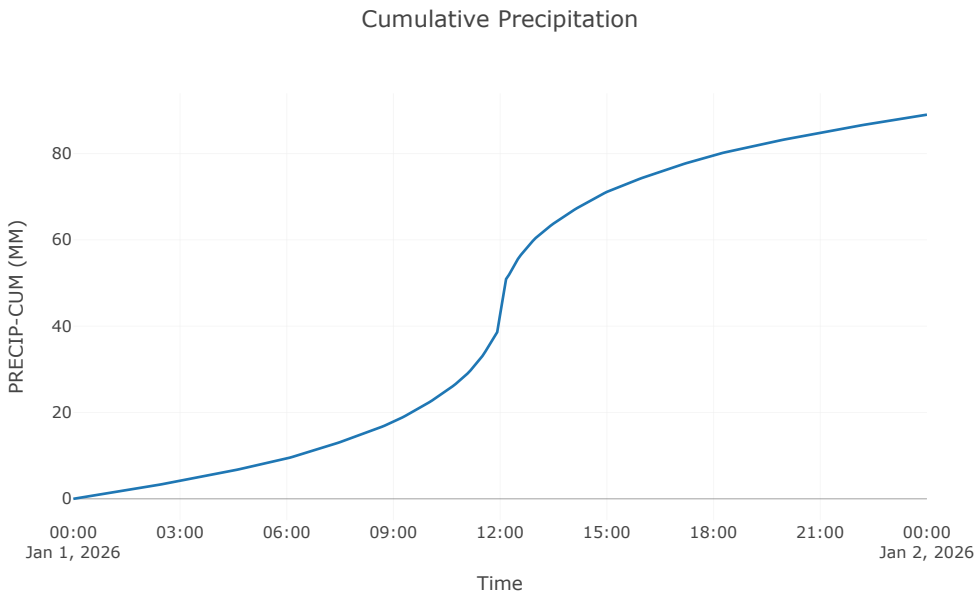
Transform: Scs	
Lag	6.97
Unitgraph Type	Standard

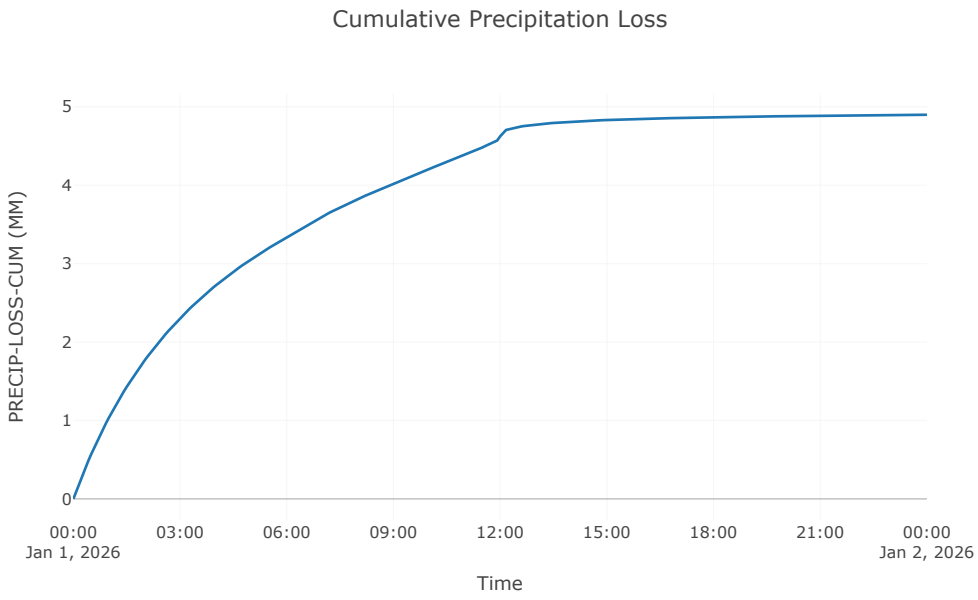
Results: DIFFERENCE POND 2 SOUTH	
Peak Discharge (M3/S)	0.29
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	83.89
Precipitation Volume (M3)	2127.1
Loss Volume (M3)	117.07
Excess Volume (M3)	2010.03
Direct Runoff Volume (M3)	2005.08
Baseflow Volume (M3)	0

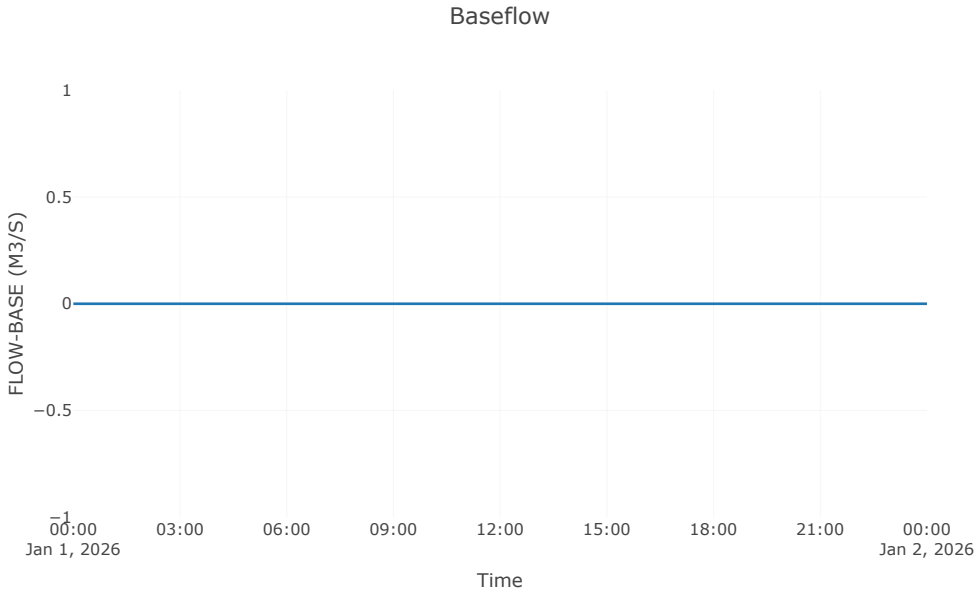

Precipitation and Outflow
PRECIP-INC (MM)
0
1
2
3
4
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

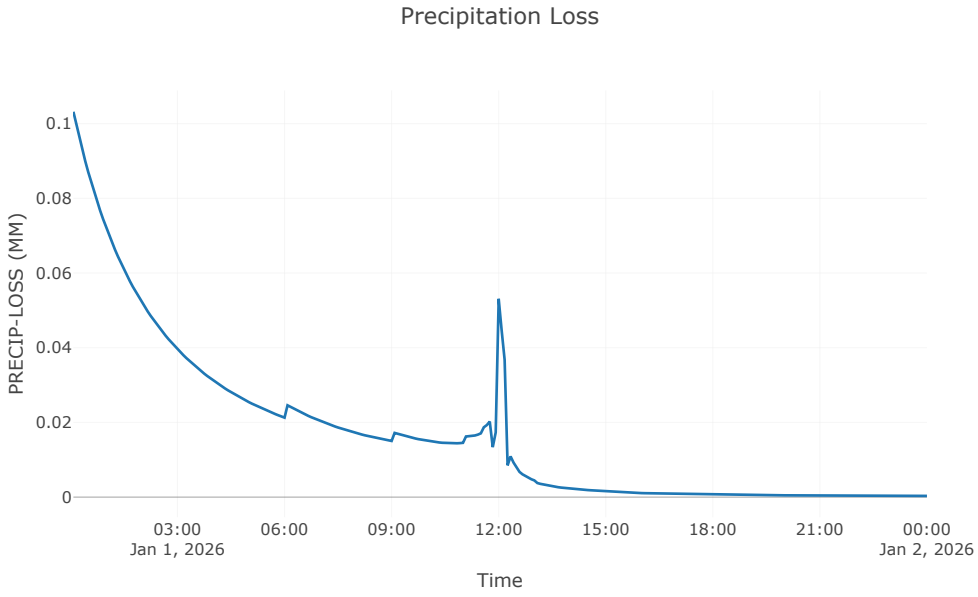

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

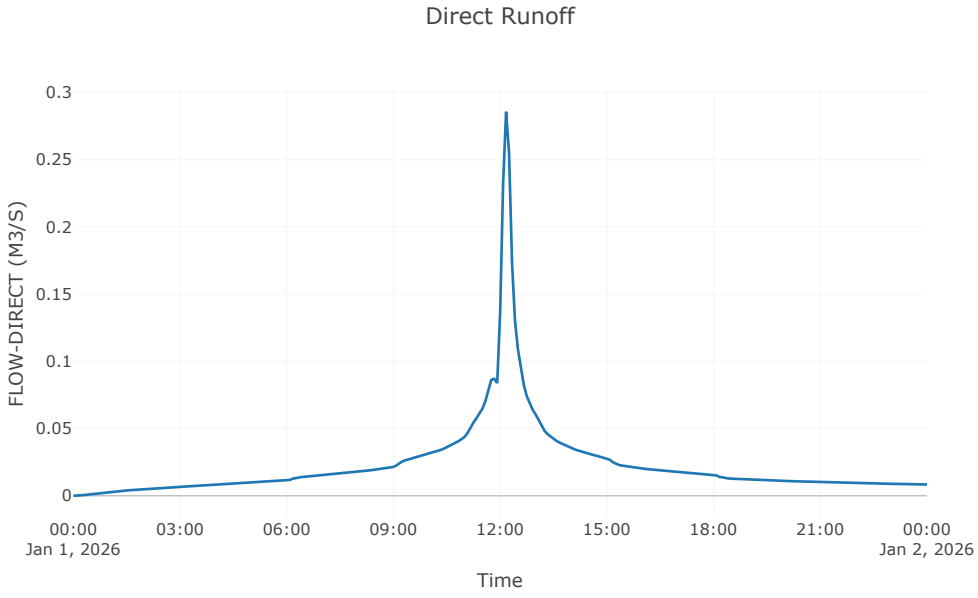

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

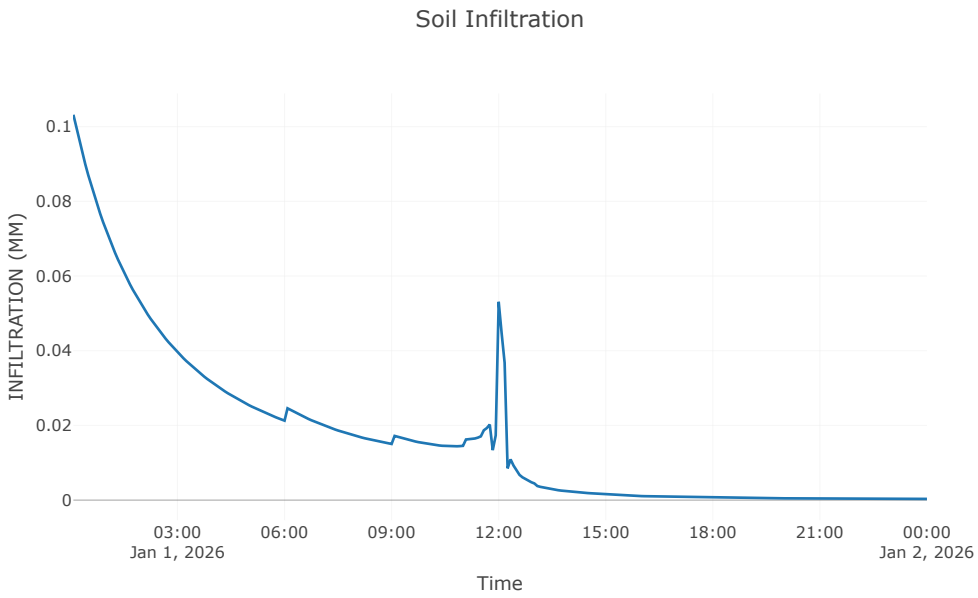

Cumulative Precipitation
PRECIP-CUM (MM)
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
5
4
3
2
1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
0.1
0.08
0.06
0.04
0.02
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
0.3
0.25
0.2
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
0.1
0.08
0.06
0.04
0.02
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

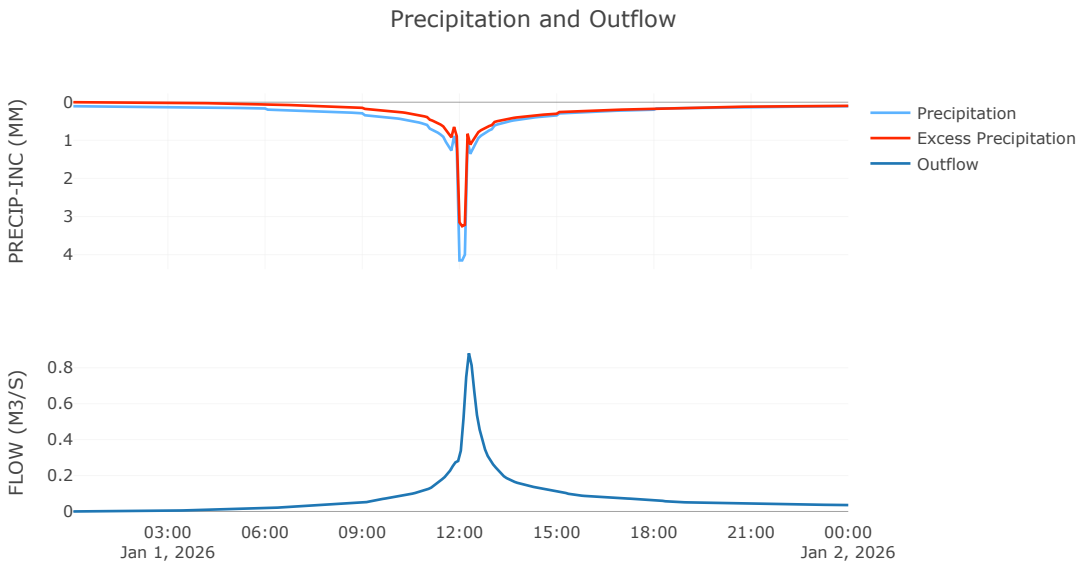
Subbasin: DIFFERENCE POND 5 INTERNAL

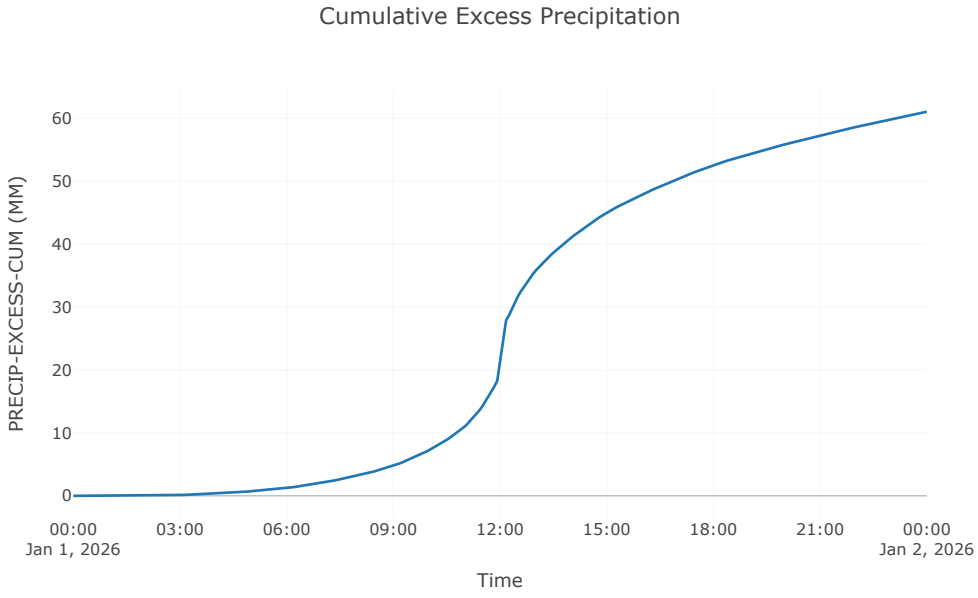
Area (KM2) : 0.11
Latitude Degrees : -45
Longitude Degrees : 168.84
Downstream : Pond 5

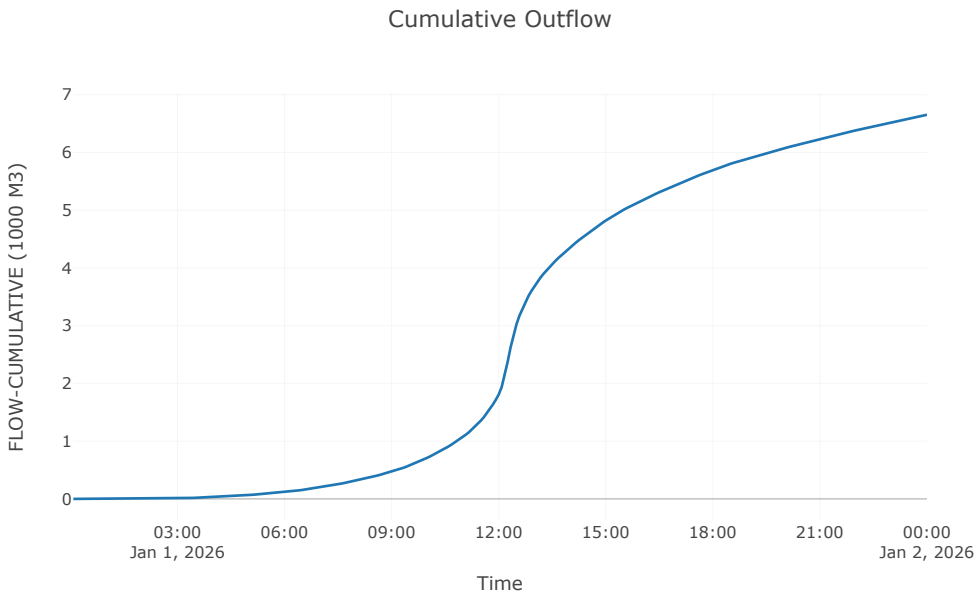
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	87.2
Initial Abstraction	1.86

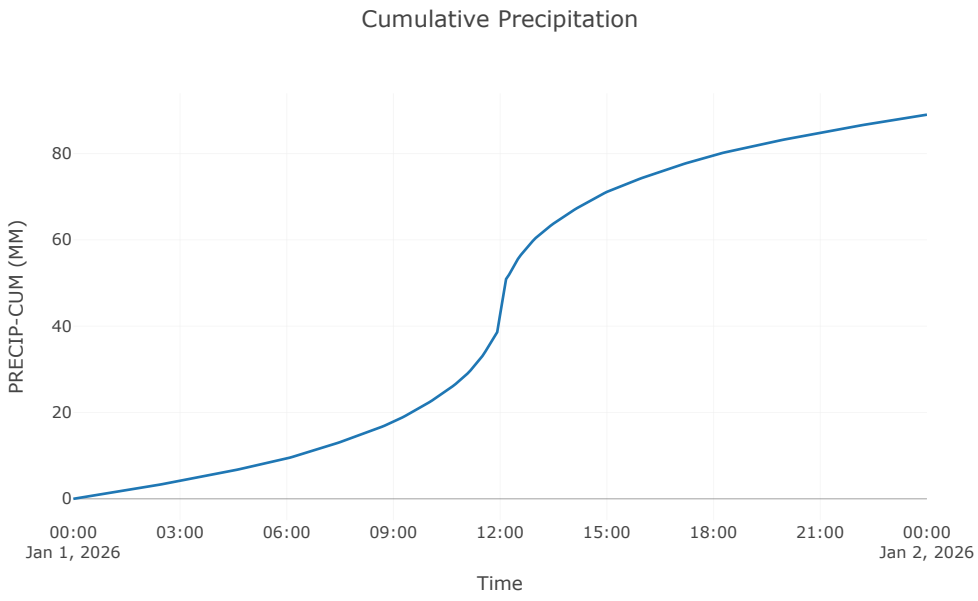
Transform: Scs	
Lag	12.18
Unitgraph Type	Standard

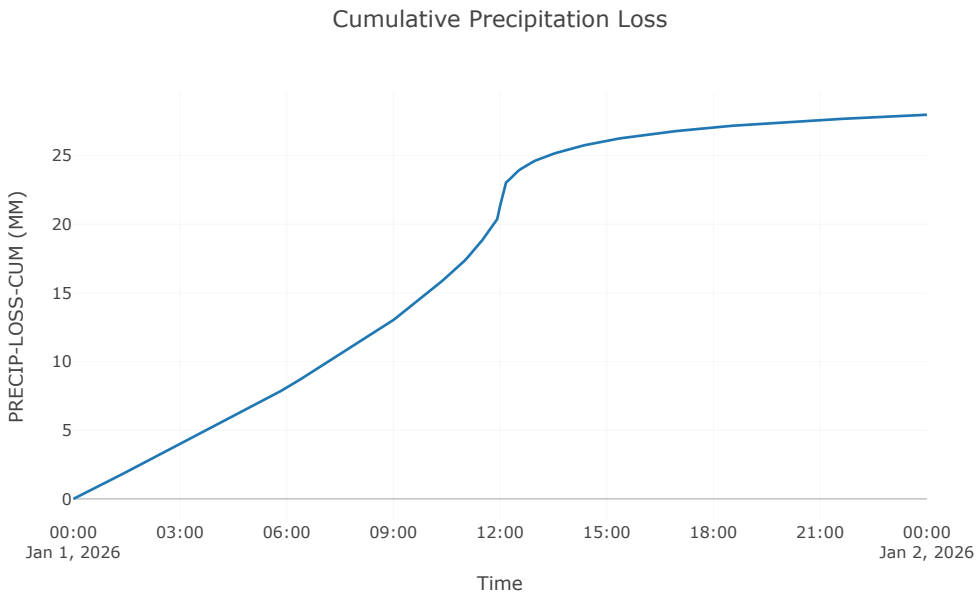
Results: DIFFERENCE POND 5 INTERNAL	
Peak Discharge (M3/S)	0.88
Time of Peak Discharge	01Jan2026, 12:15
Volume (MM)	60.71
Precipitation Volume (M3)	9754.4
Loss Volume (M3)	3065.72
Excess Volume (M3)	6688.68
Direct Runoff Volume (M3)	6653.77
Baseflow Volume (M3)	0

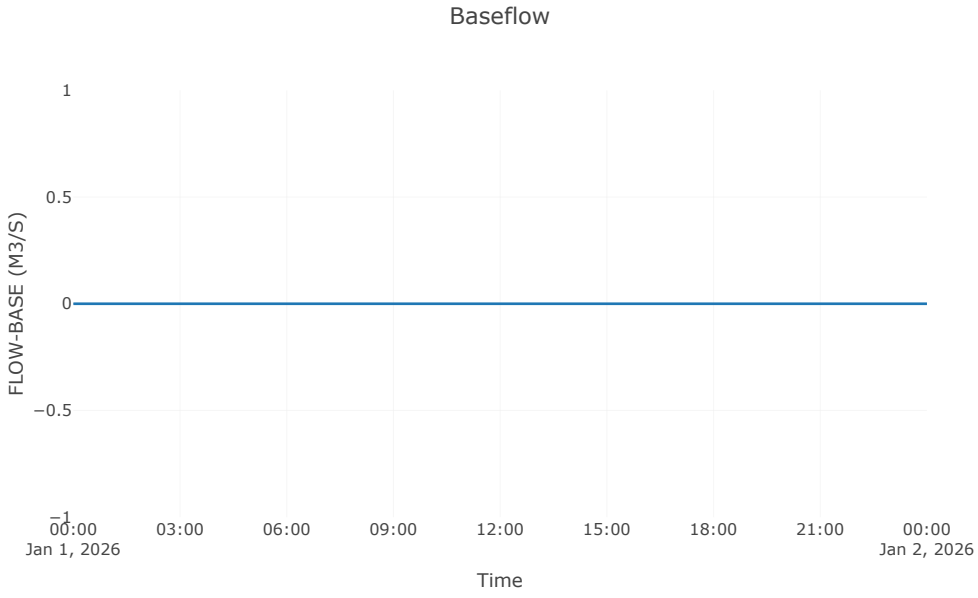

Precipitation and Outflow
PRECIP-INC (MM)
0
1
2
3
4
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

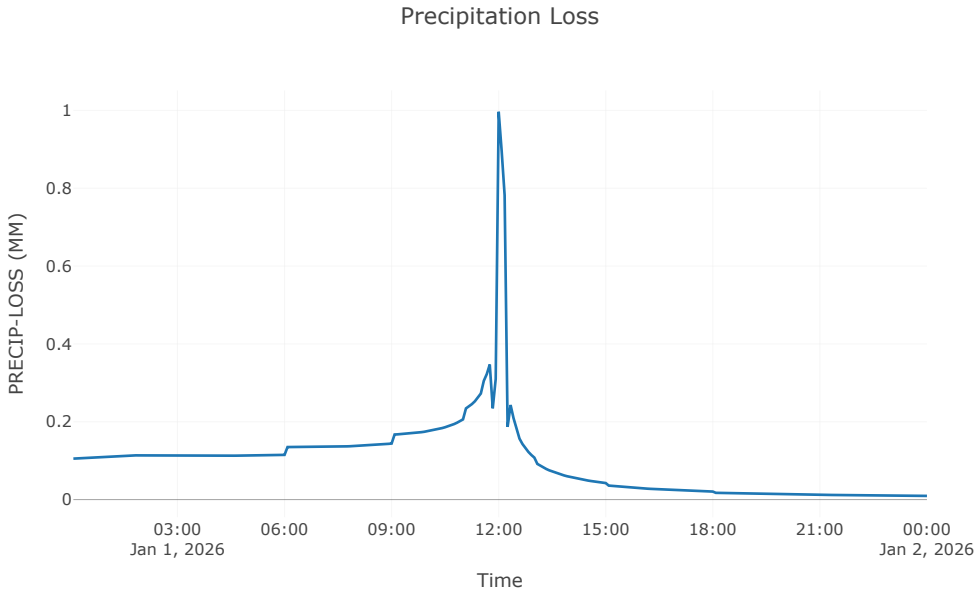

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
60
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

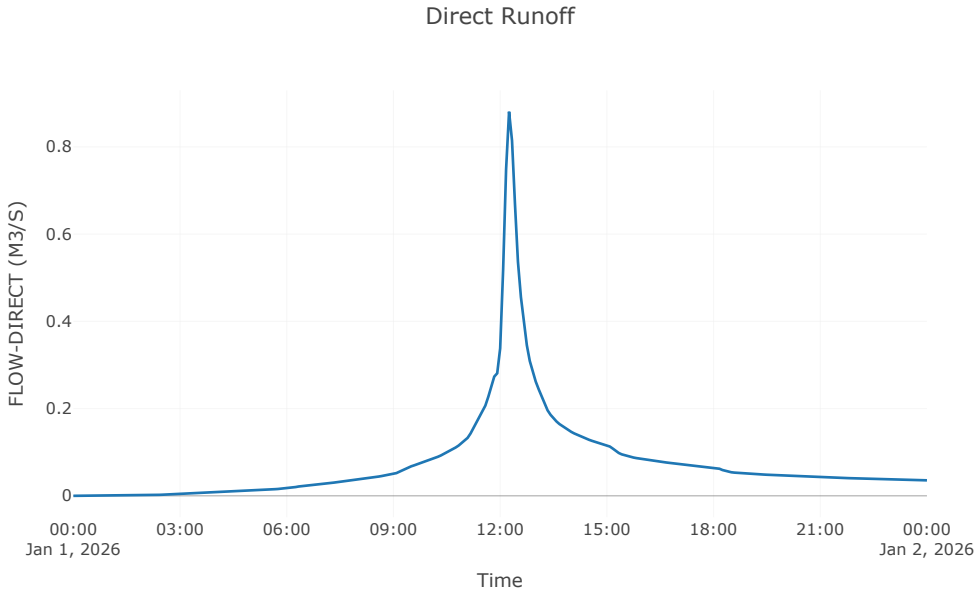

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
7
6
5
4
3
2
1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

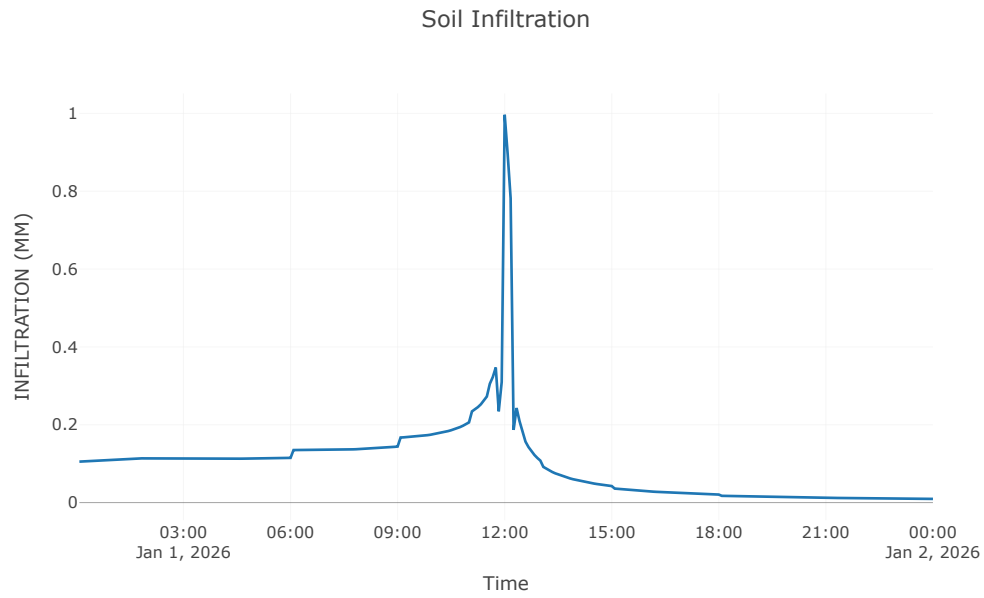

Cumulative Precipitation
PRECIP-CUM (MM)
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
25
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

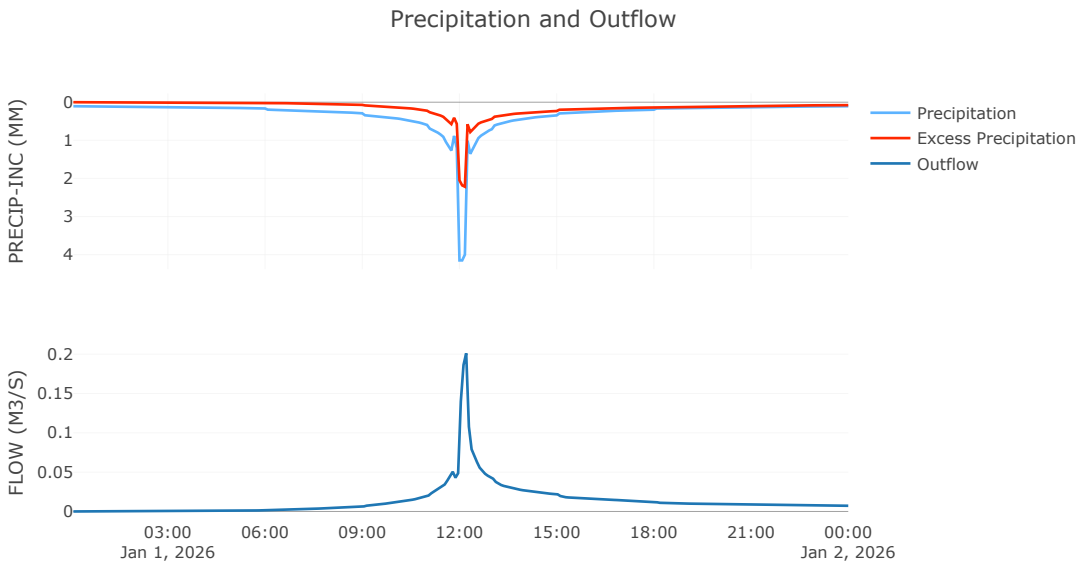
Subbasin: DIFFERENCE POND 5 UPSTREAM

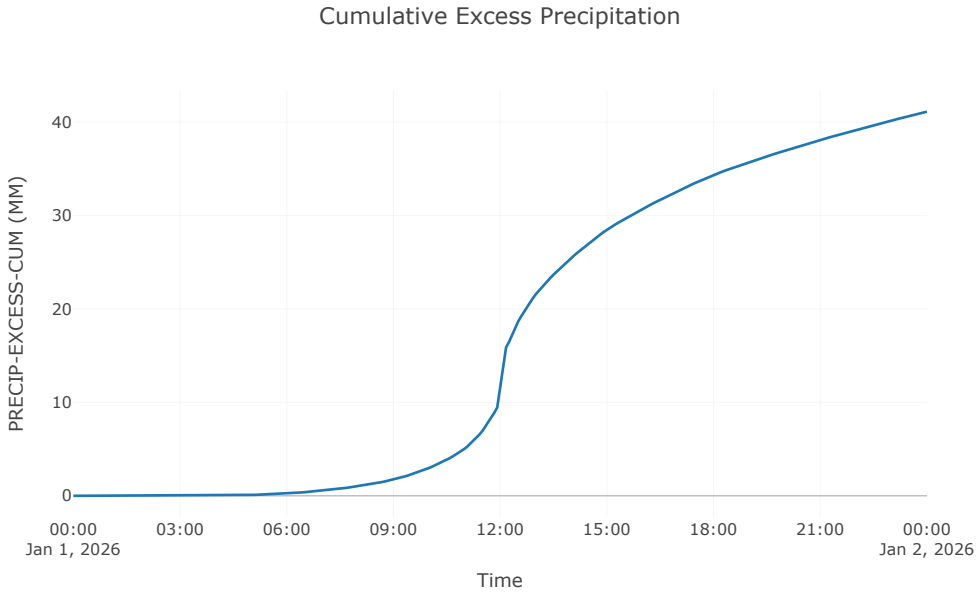
Area (KM2) : 0.03
Latitude Degrees : -45
Longitude Degrees : 168.84
Downstream : Pond 5

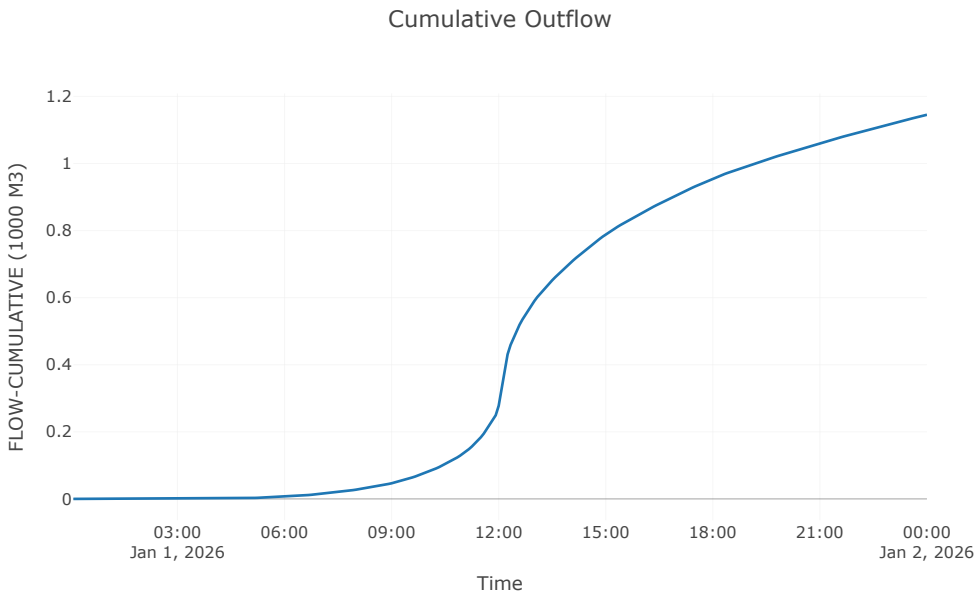
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	74
Initial Abstraction	4.46

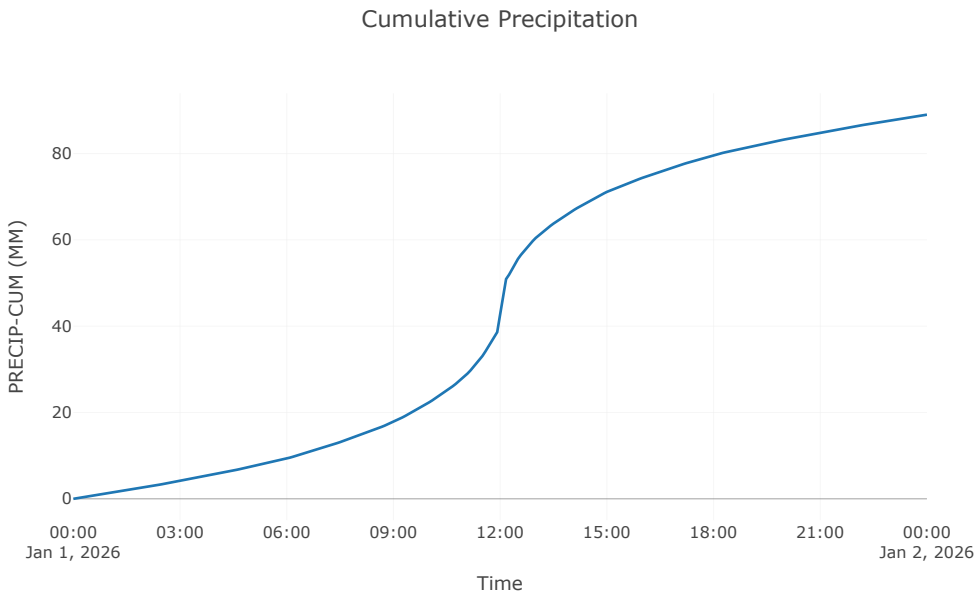
Transform: Scs	
Lag	3.21
Unitgraph Type	Standard

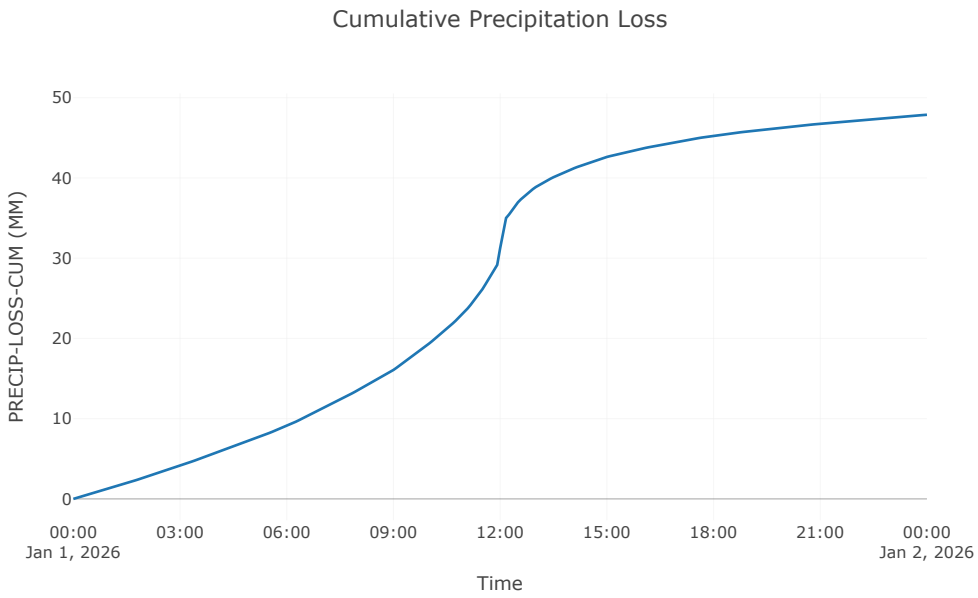
Results: DIFFERENCE POND 5 UPSTREAM	
Peak Discharge (M3/S)	0.2
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	41.05
Precipitation Volume (M3)	2483.1
Loss Volume (M3)	1335.68
Excess Volume (M3)	1147.42
Direct Runoff Volume (M3)	1145.31
Baseflow Volume (M3)	0

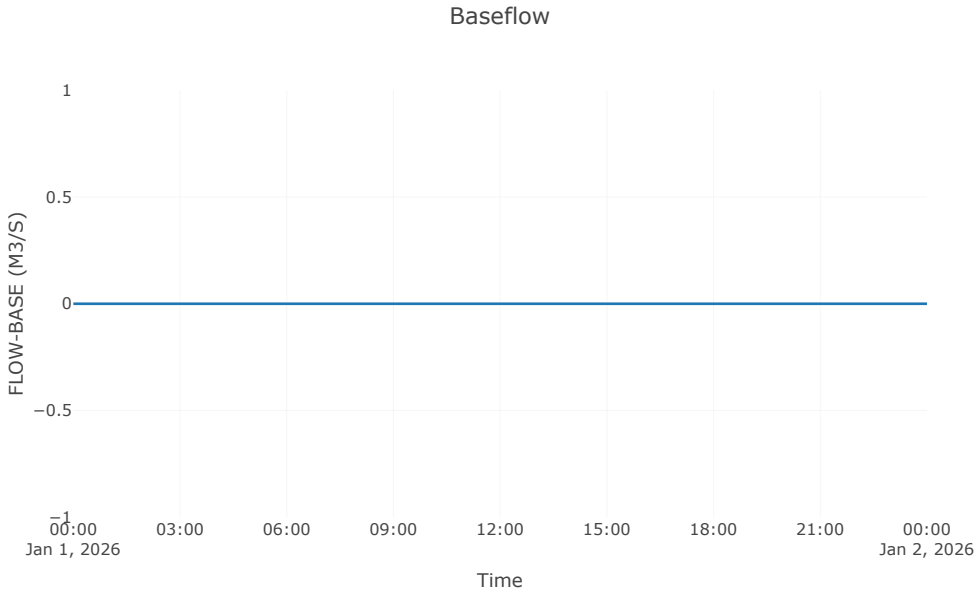

Precipitation and Outflow
PRECIP-INC (MM)
0
1
2
3
4
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
0.2
0.15
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

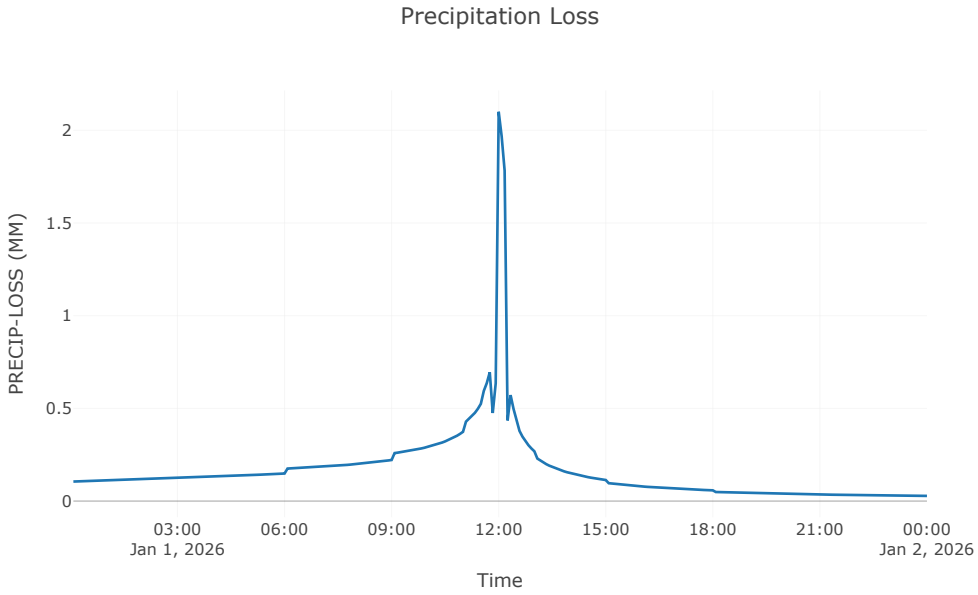

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

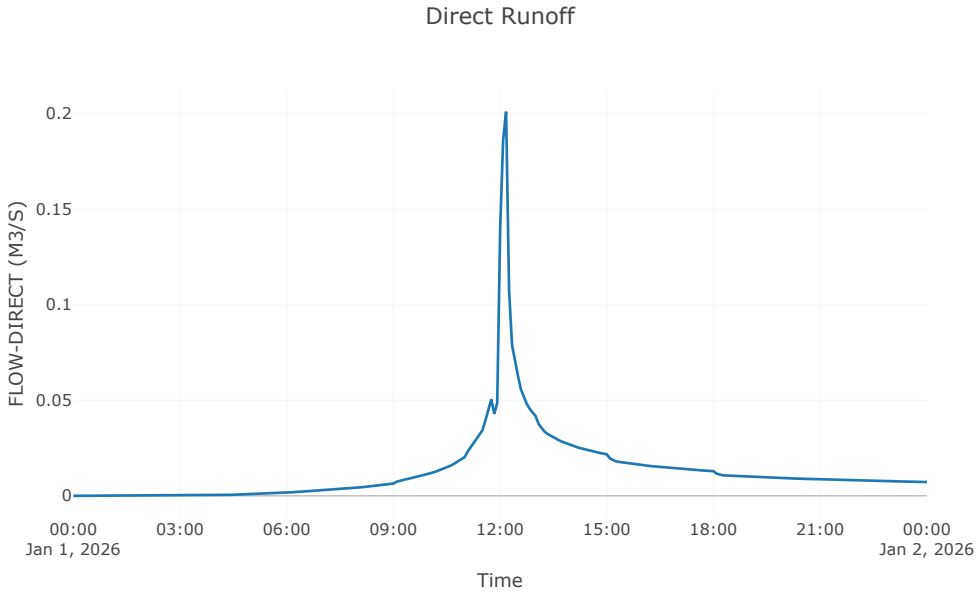

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
1.2
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

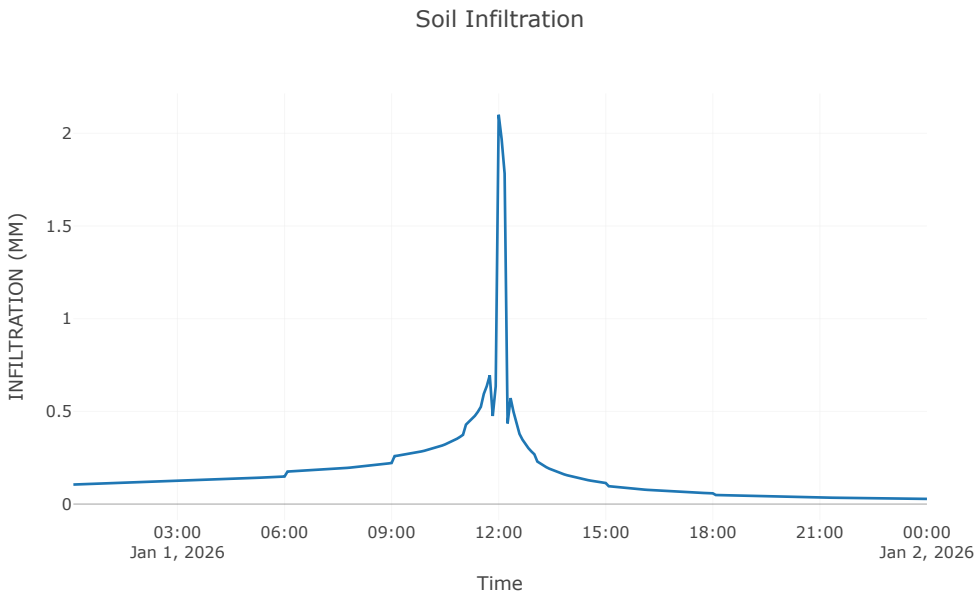

Cumulative Precipitation
PRECIP-CUM (MM)
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
0.2
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

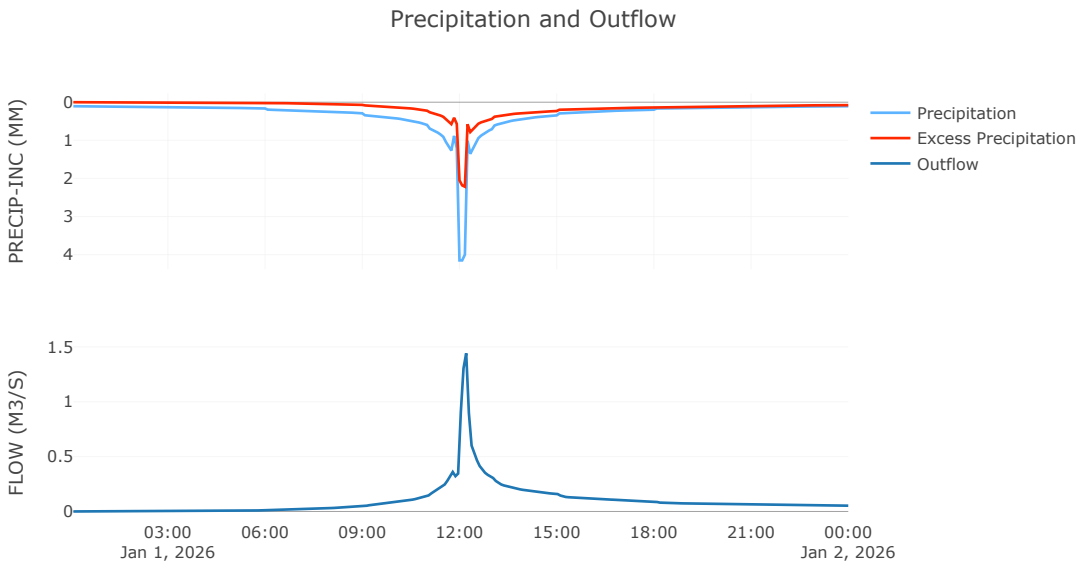
Subbasin: DIFFERENCE POND 6 UPSTREAM

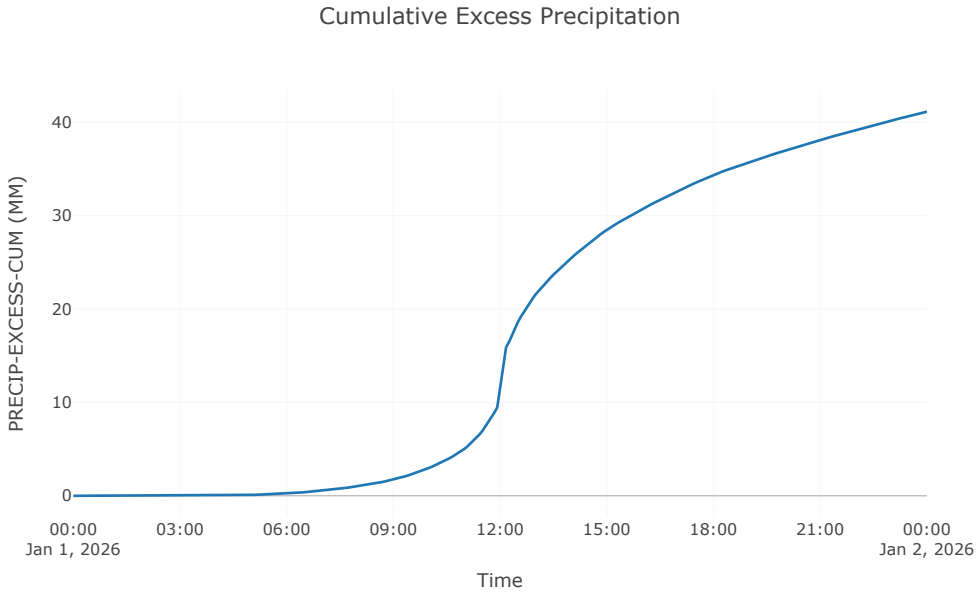
Area (KM2) : 0.2
Latitude Degrees : -44.99
Longitude Degrees : 168.83
Downstream : Reach - CHANNEL 8

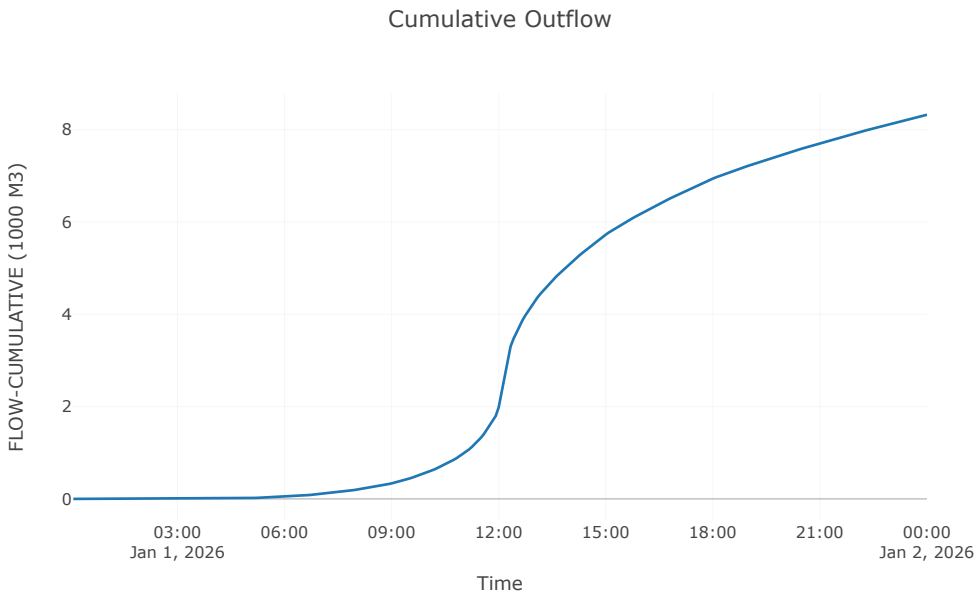
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	74
Initial Abstraction	4.46

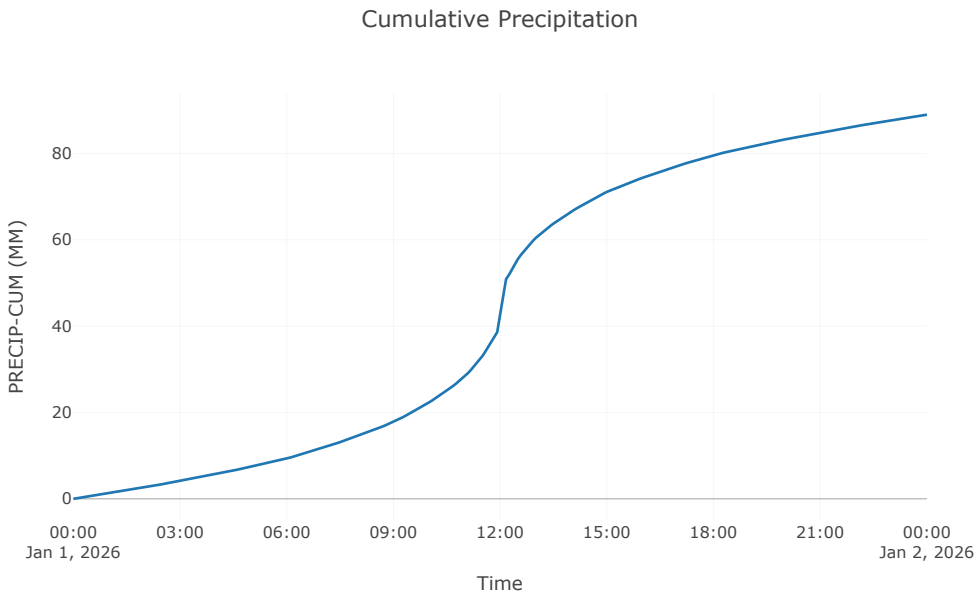
Transform: Scs	
Lag	3.86
Unitgraph Type	Standard

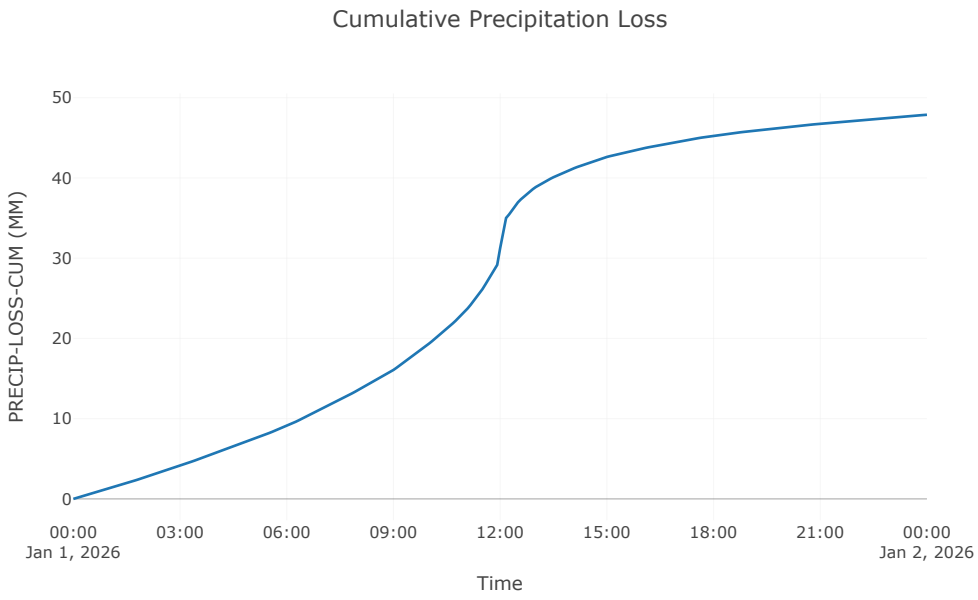
Results: DIFFERENCE POND 6 UPSTREAM	
Peak Discharge (M3/S)	1.44
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	41.04
Precipitation Volume (M3)	18049.2
Loss Volume (M3)	9708.84
Excess Volume (M3)	8340.36
Direct Runoff Volume (M3)	8322.38
Baseflow Volume (M3)	0

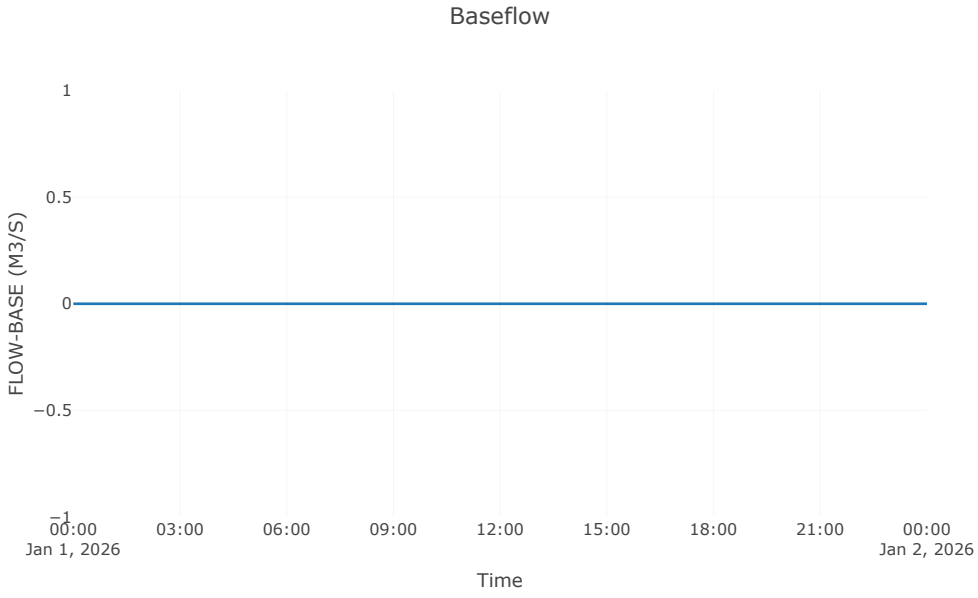

Precipitation and Outflow
PRECIP-INC (MM)
0
1
2
3
4
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

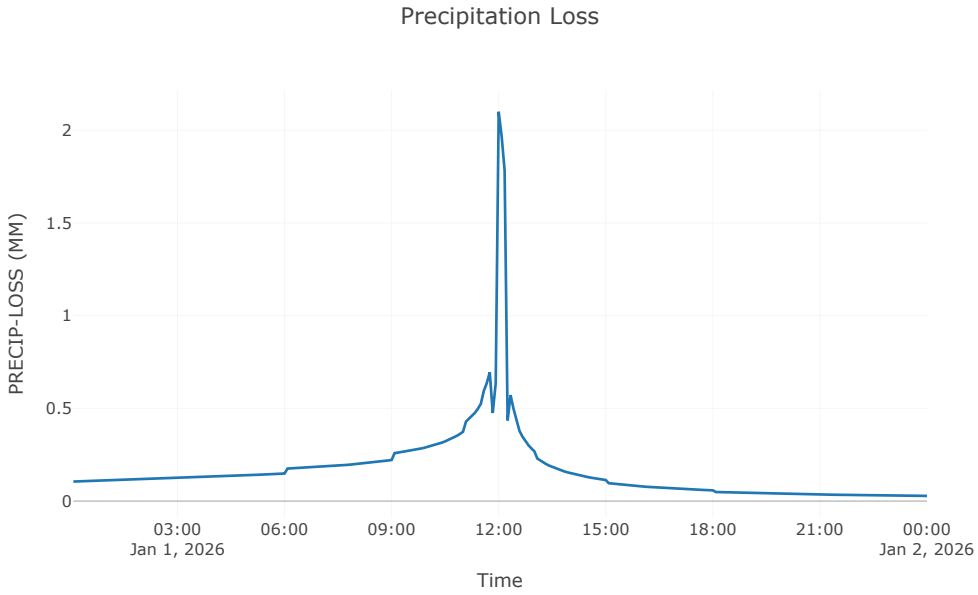

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

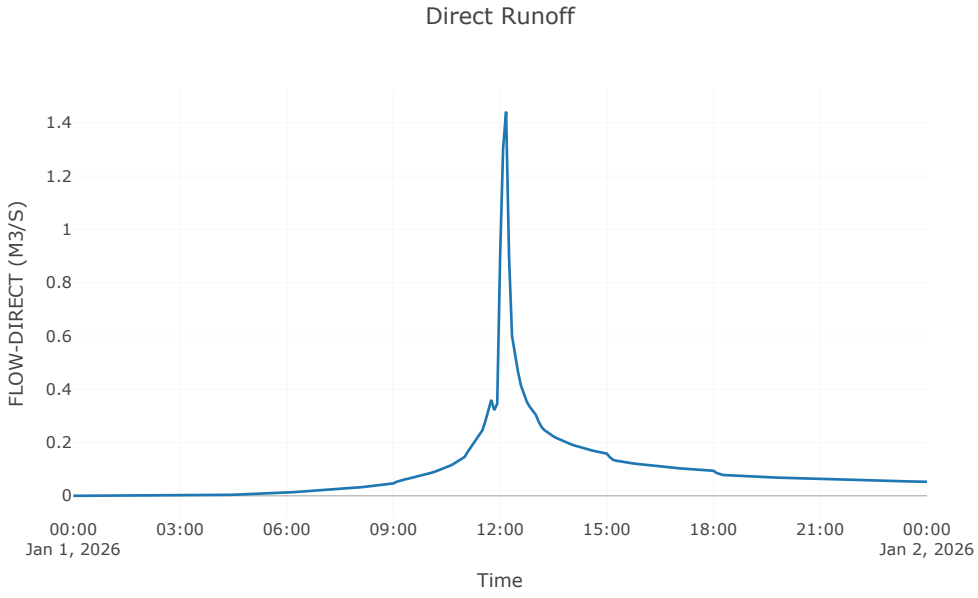

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
0
2
4
6
8
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

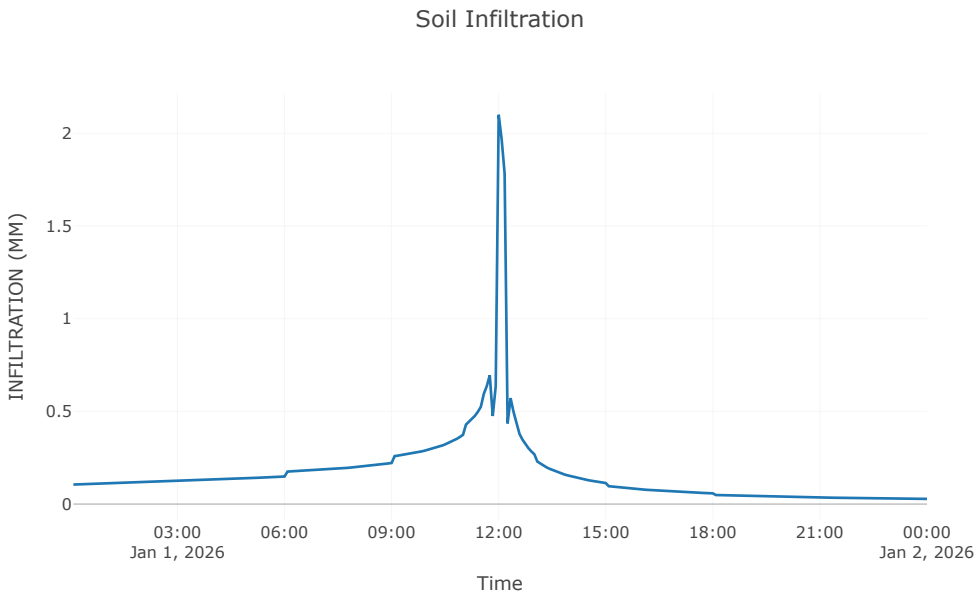

Cumulative Precipitation
PRECIP-CUM (MM)
0
20
40
60
80
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

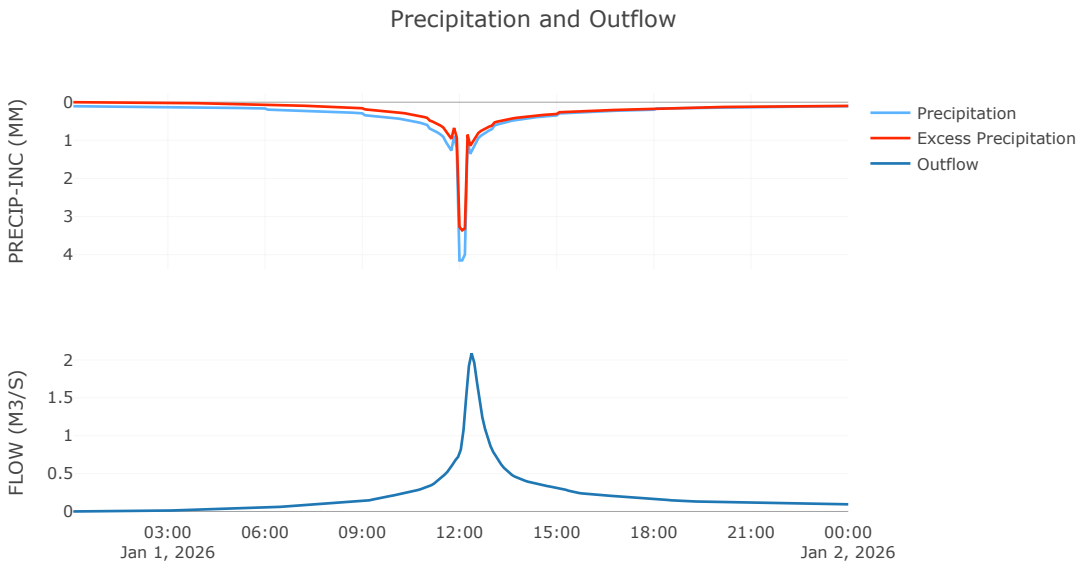
Subbasin: DIFFERENCE POND 6 INTERNAL

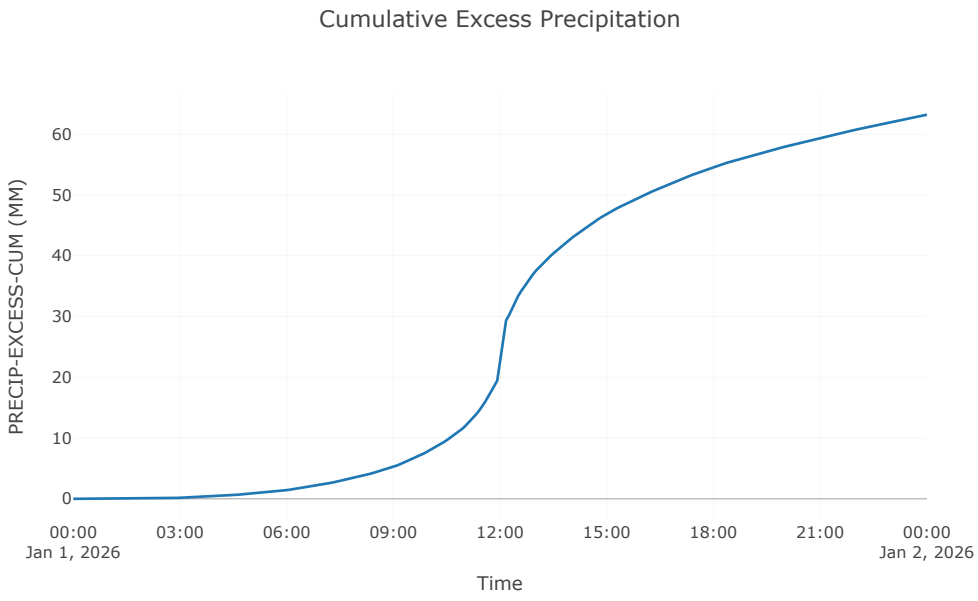
Area (KM2) : 0.29
Latitude Degrees : -45
Longitude Degrees : 168.84
Downstream : Junction - CHANNEL 3

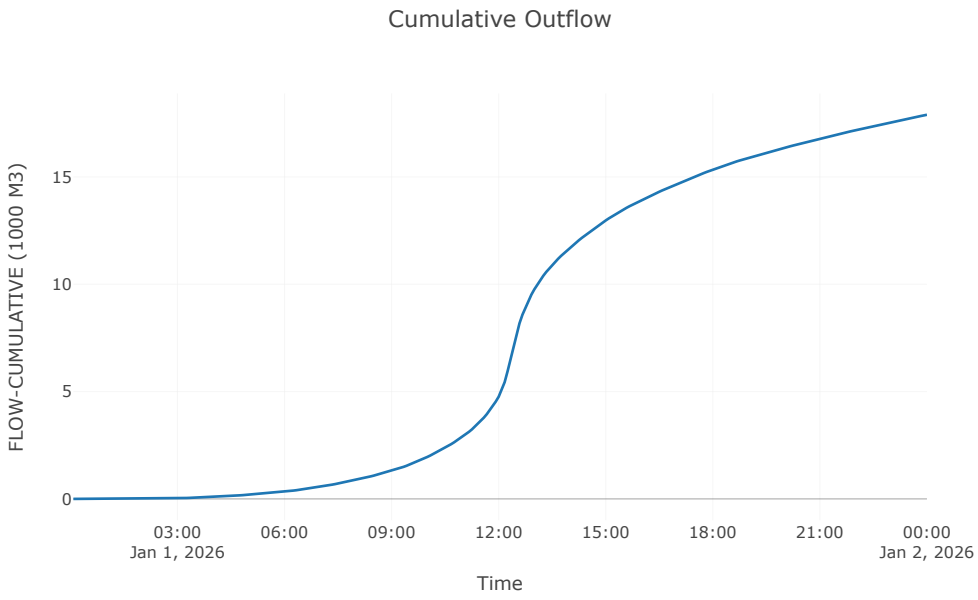
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	88.4
Initial Abstraction	1.67

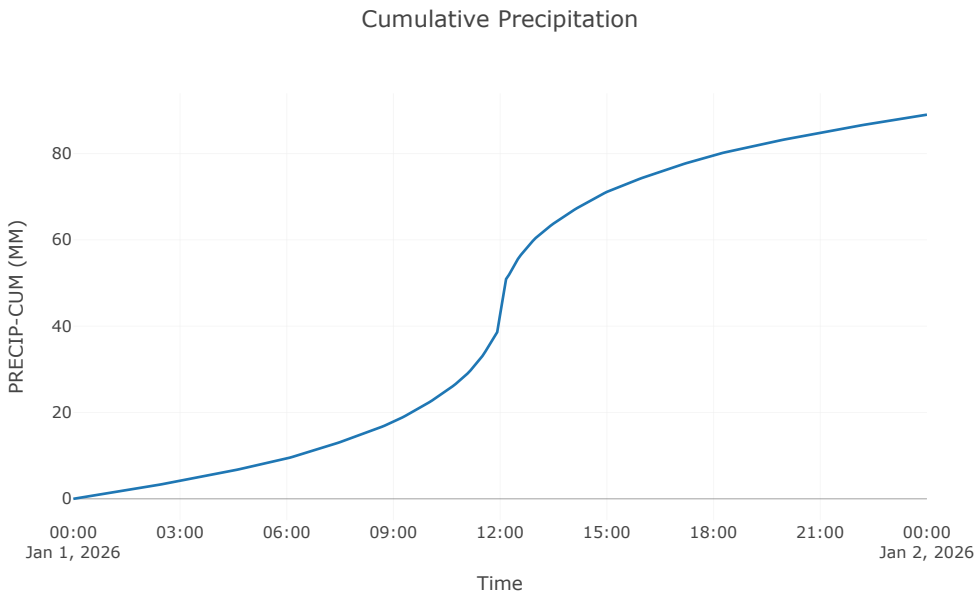
Transform: Scs	
Lag	16.51
Unitgraph Type	Standard

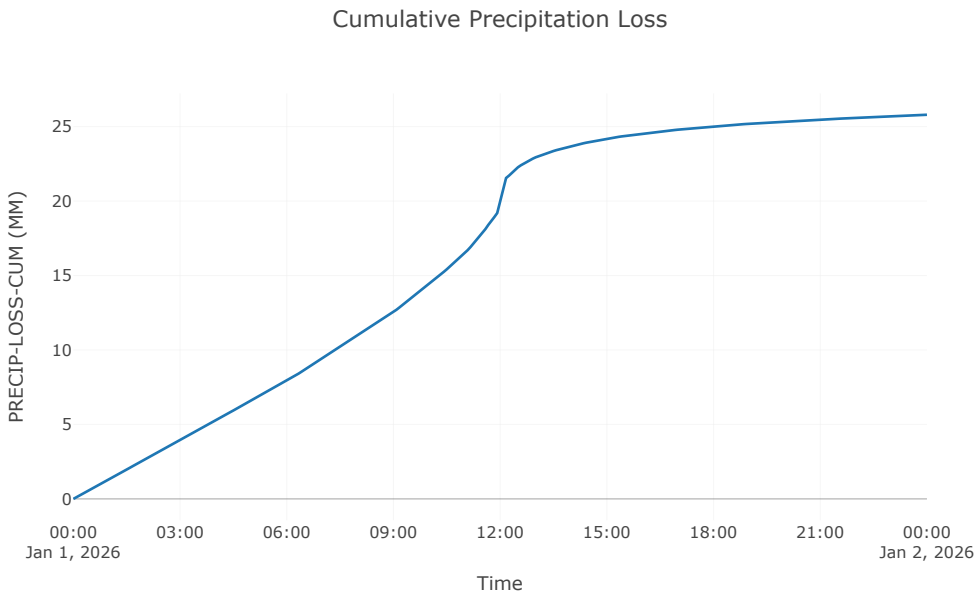
Results: DIFFERENCE POND 6 INTERNAL	
Peak Discharge (M3/S)	2.09
Time of Peak Discharge	01Jan2026, 12:20
Volume (MM)	62.77
Precipitation Volume (M3)	25373.9
Loss Volume (M3)	7353.7
Excess Volume (M3)	18020.2
Direct Runoff Volume (M3)	17896.29
Baseflow Volume (M3)	0

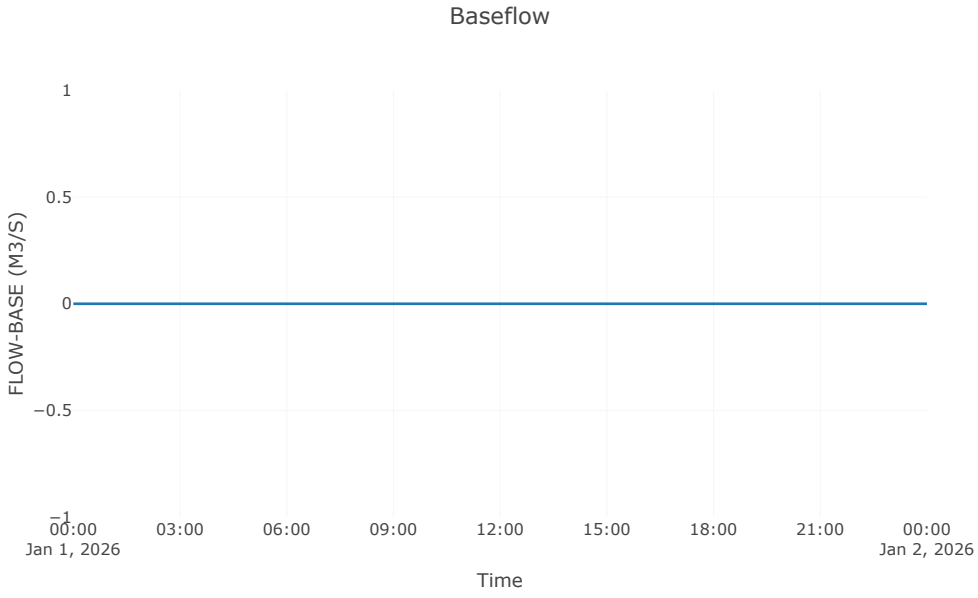

Precipitation and Outflow
PRECIP-INC (MM)
0
1
2
3
4
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

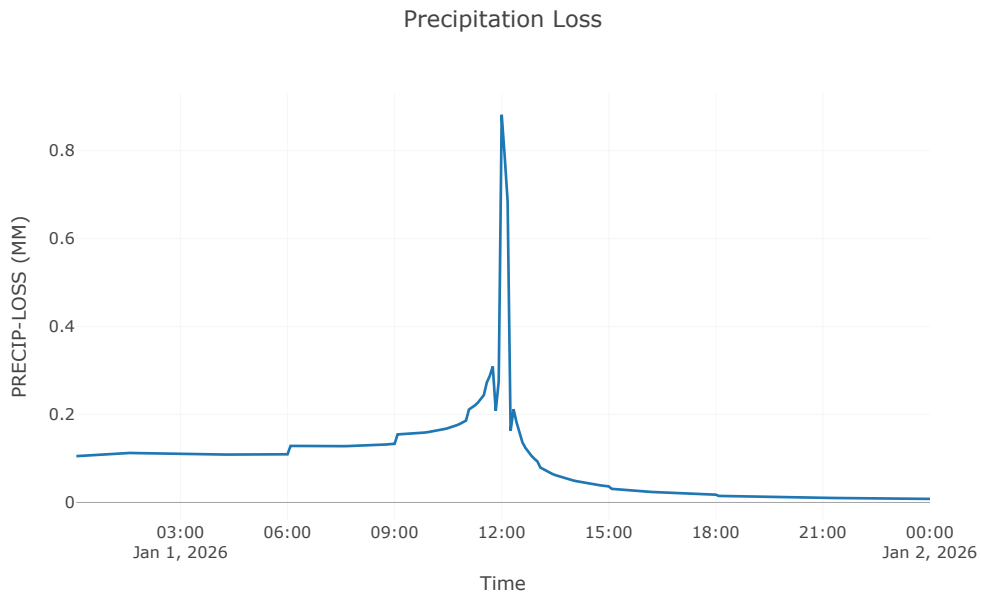

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
60
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

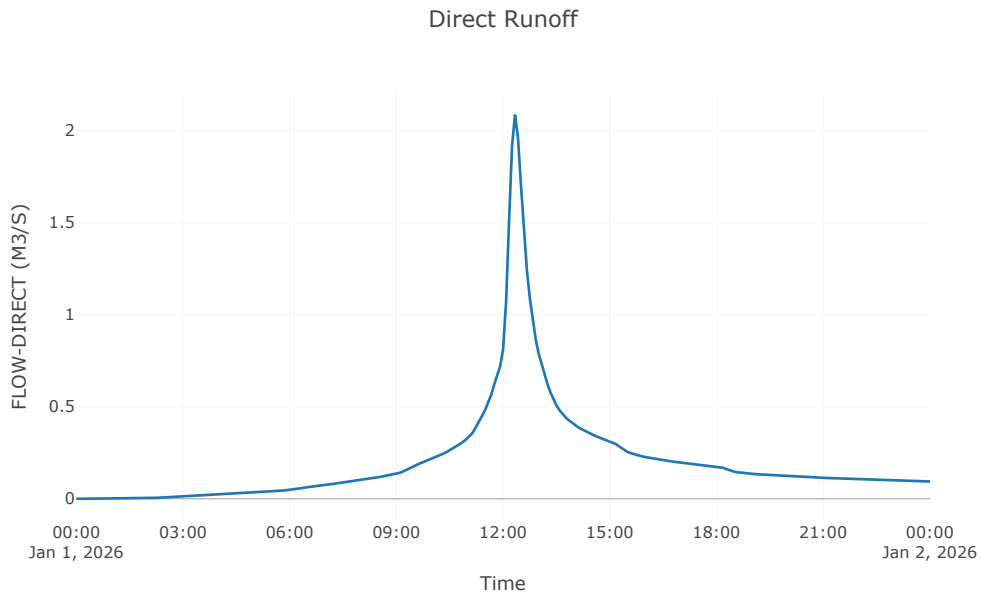

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
15
10
5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

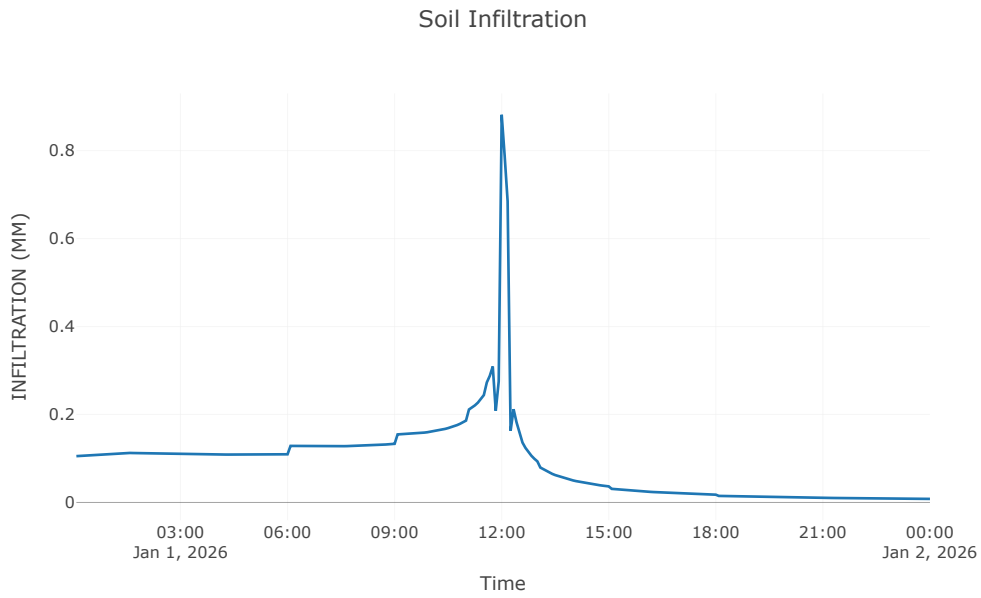

Cumulative Precipitation
PRECIP-CUM (MM)
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
25
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

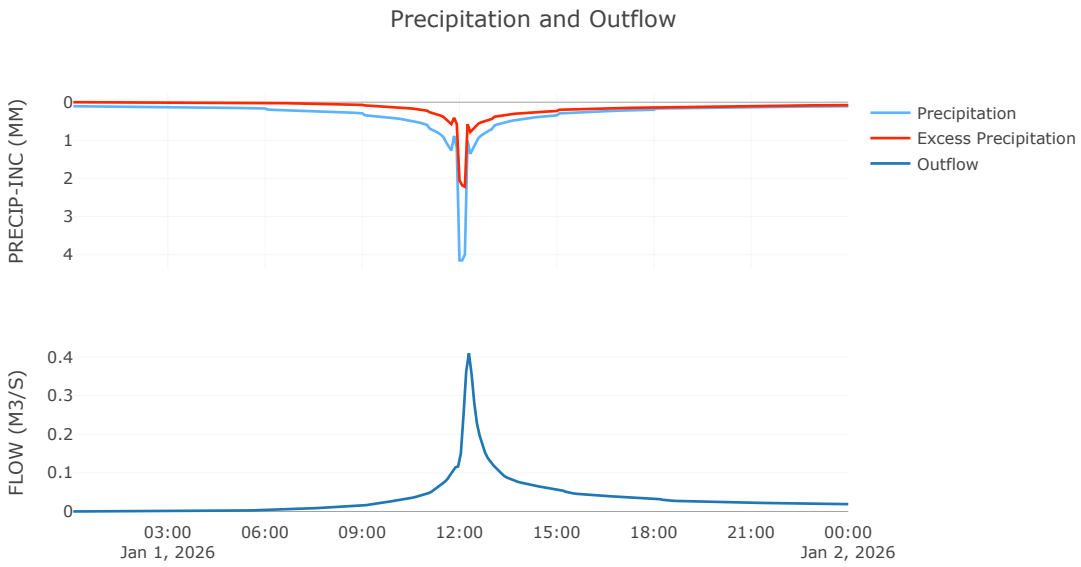
Subbasin: DIFFERENCE POND 6 SOUTH

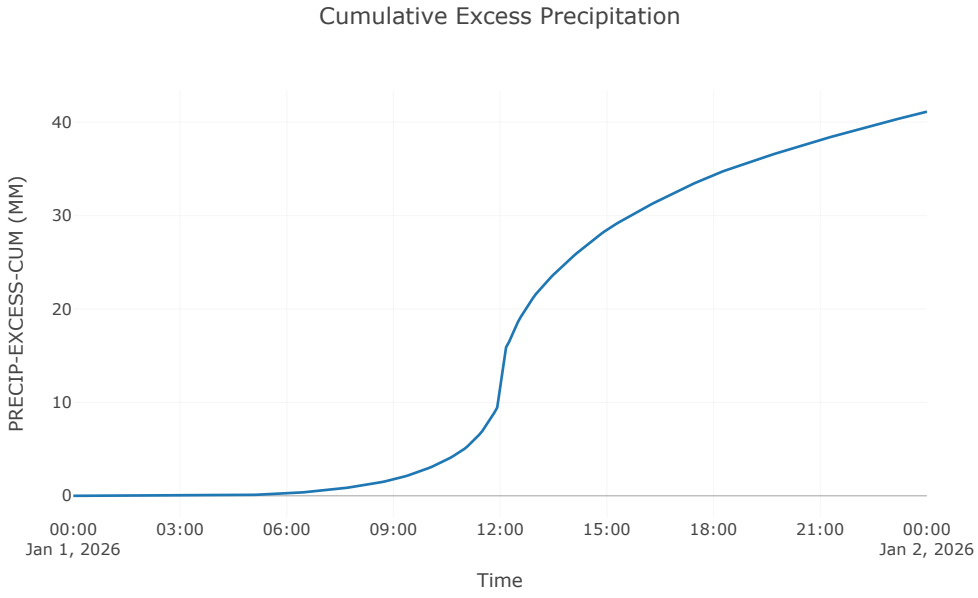
Area (KM2) : 0.07
Latitude Degrees : -45
Longitude Degrees : 168.84
Downstream : Junction - POND 6

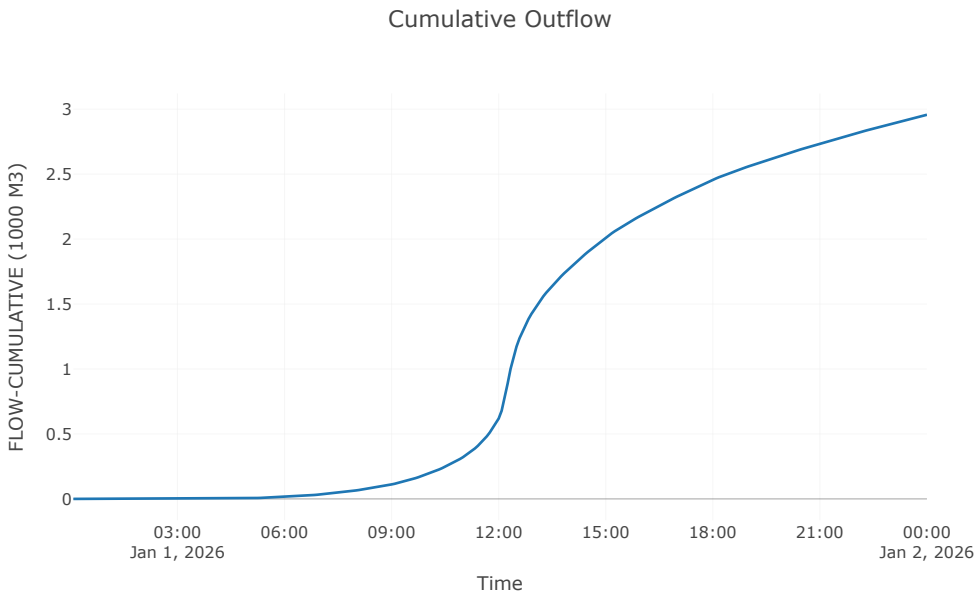
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	74
Initial Abstraction	4.46

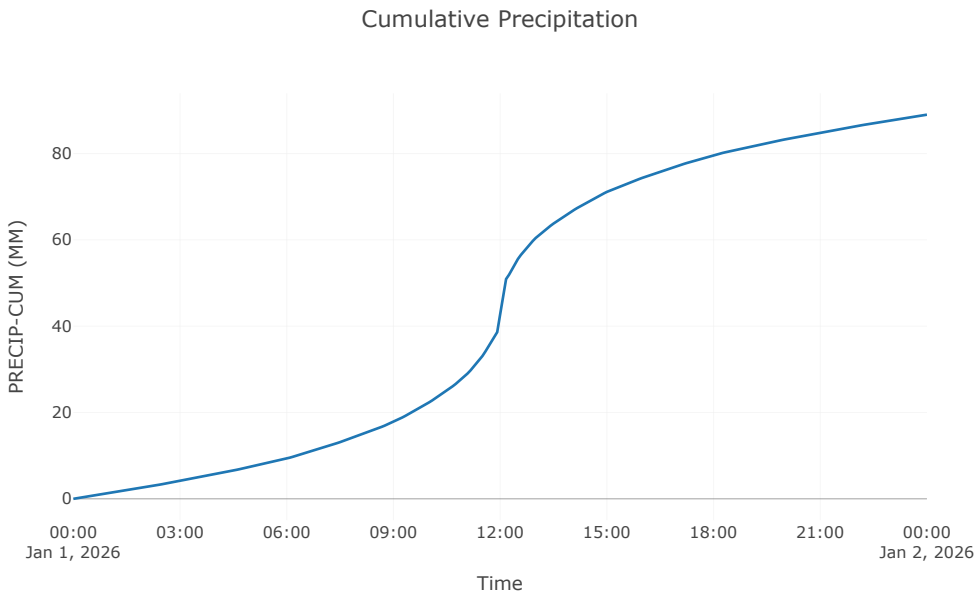
Transform: Scs	
Lag	10.61
Unitgraph Type	Standard

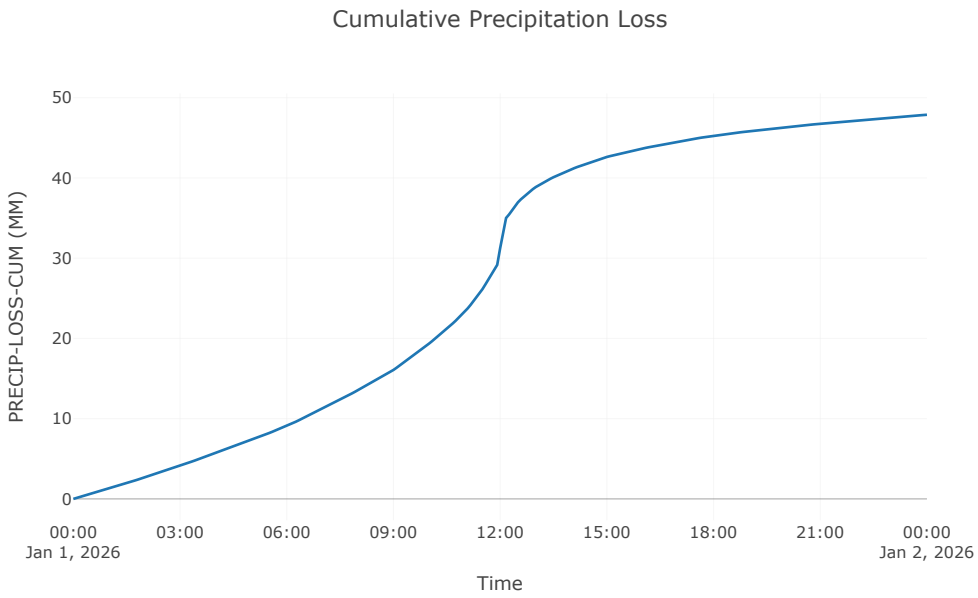
Results: DIFFERENCE POND 6 SOUTH	
Peak Discharge (M3/S)	0.41
Time of Peak Discharge	01Jan2026, 12:15
Volume (MM)	40.9
Precipitation Volume (M3)	6434.7
Loss Volume (M3)	3461.29
Excess Volume (M3)	2973.41
Direct Runoff Volume (M3)	2957.04
Baseflow Volume (M3)	0

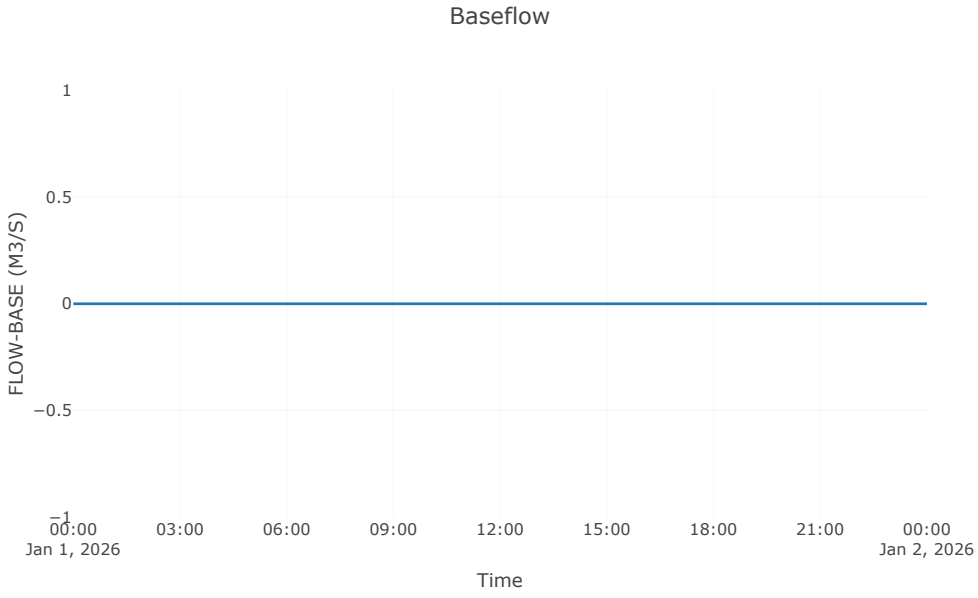

Precipitation and Outflow
PRECIP-INC (MM)
0
1
2
3
4
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

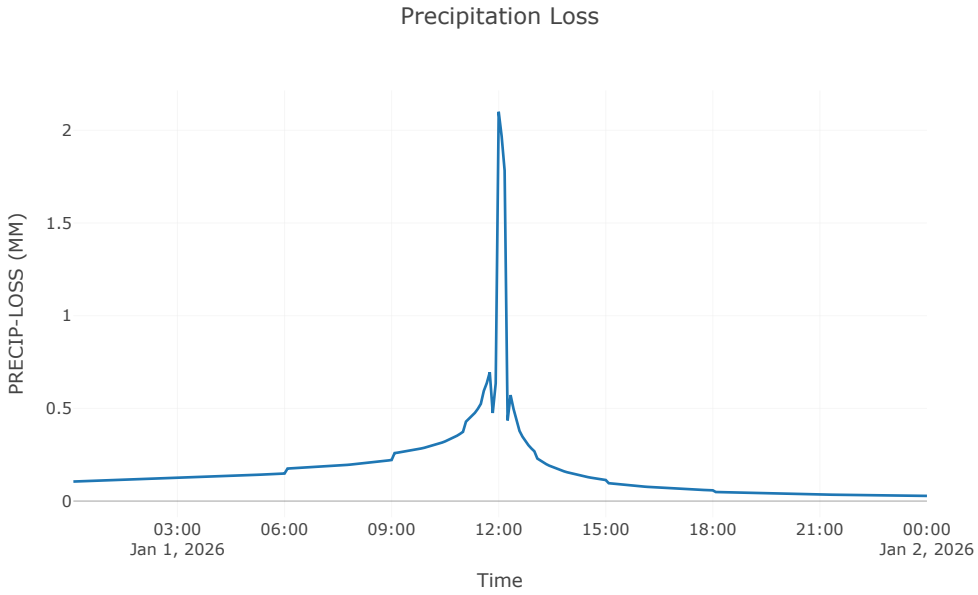

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

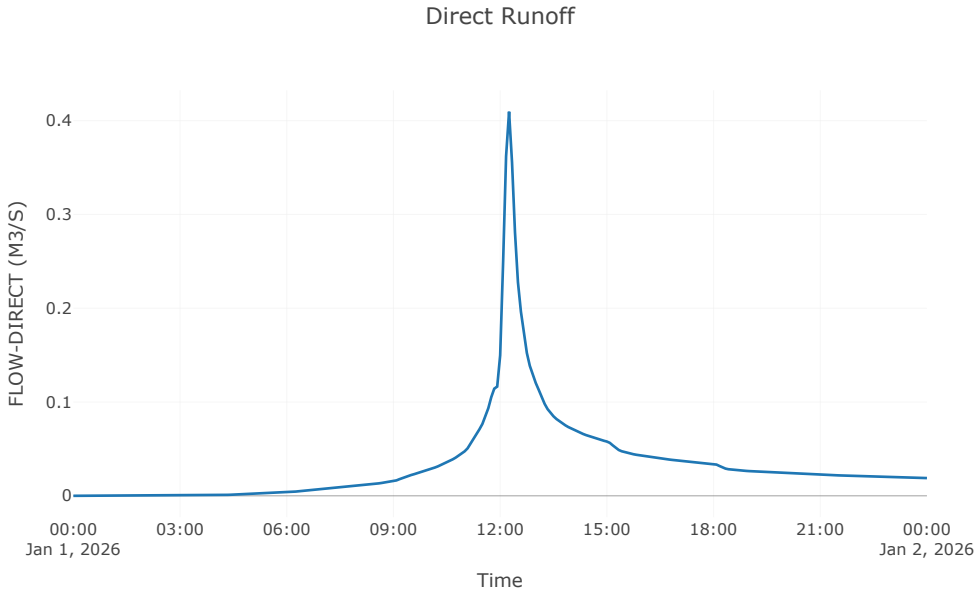

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
3
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

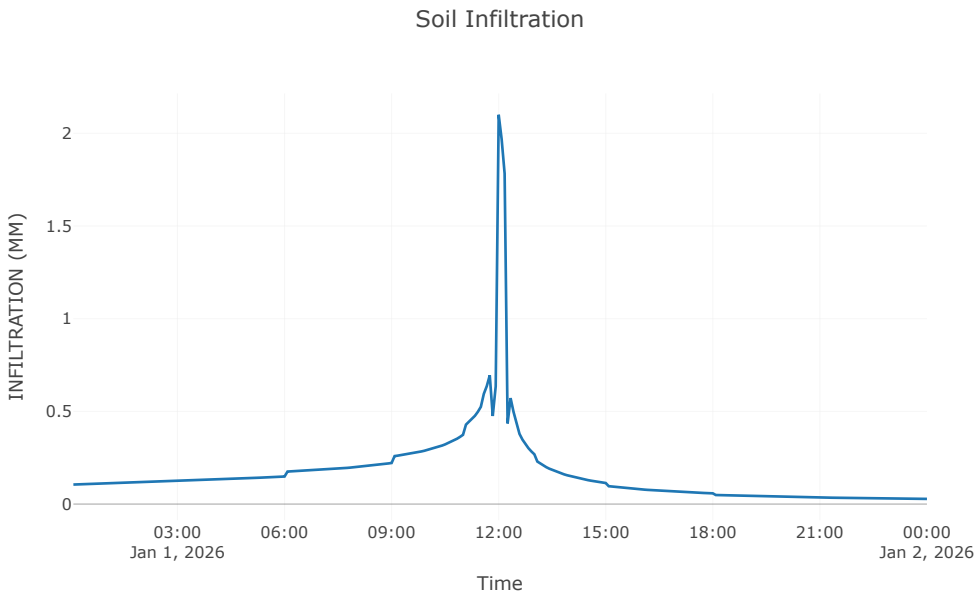

Cumulative Precipitation
PRECIP-CUM (MM)
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

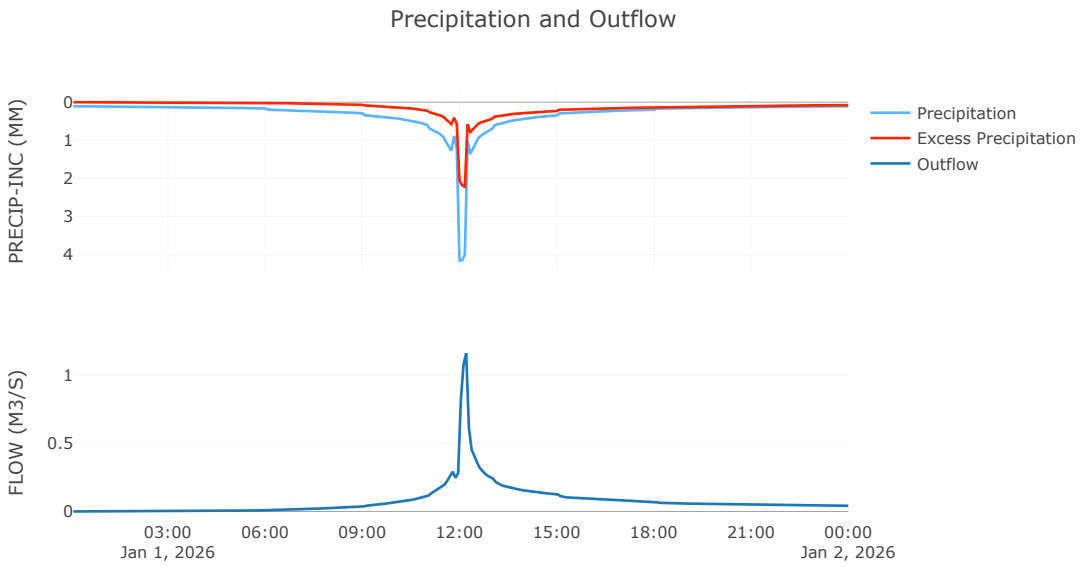
Subbasin: DIFFERENCE POND 7 UPSTREAM

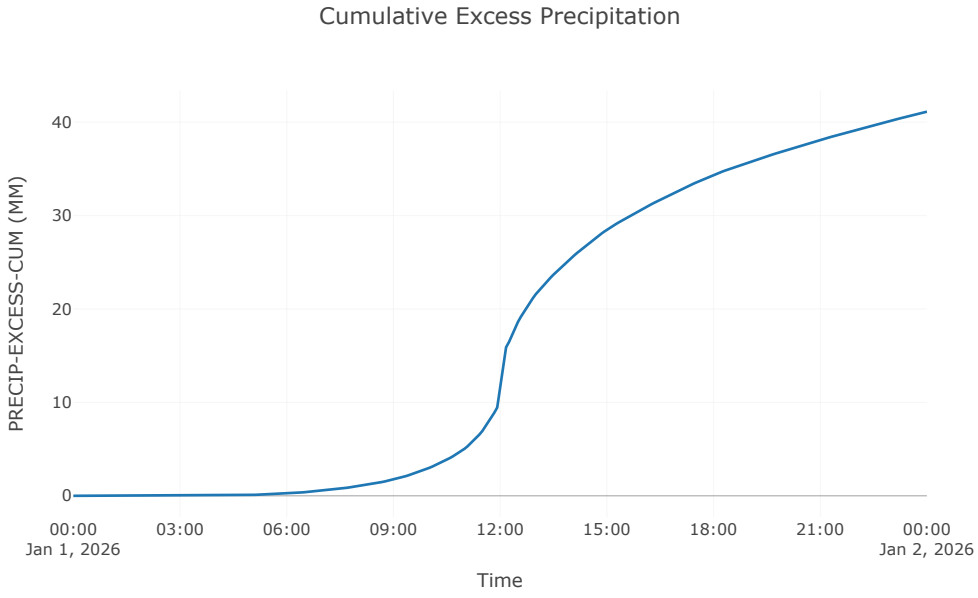
Area (KM2) : 0.16
Latitude Degrees : -44.99
Longitude Degrees : 168.83
Downstream : Reach - CHANNEL 6

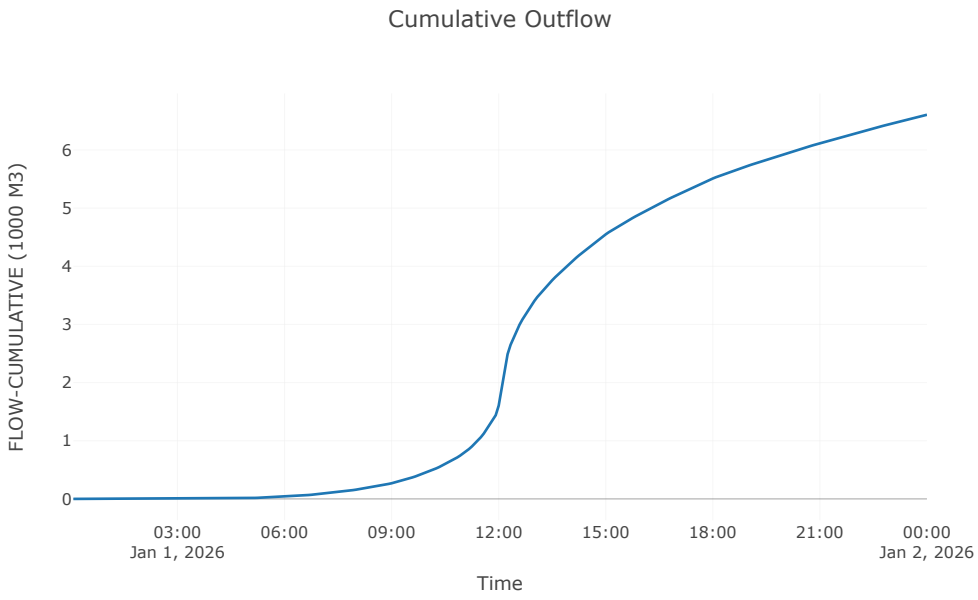
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	74
Initial Abstraction	4.46

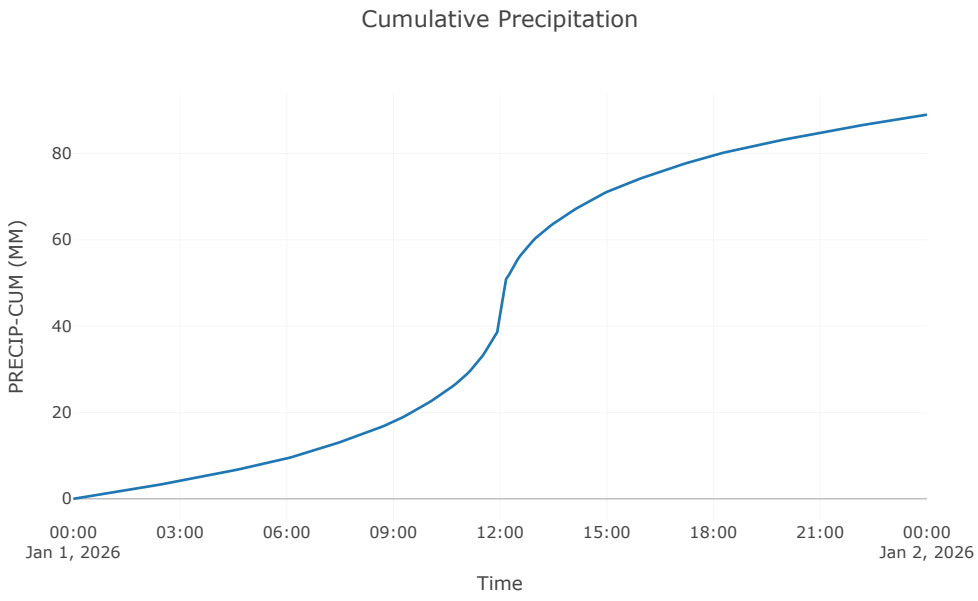
Transform: Scs	
Lag	3.16
Unitgraph Type	Standard

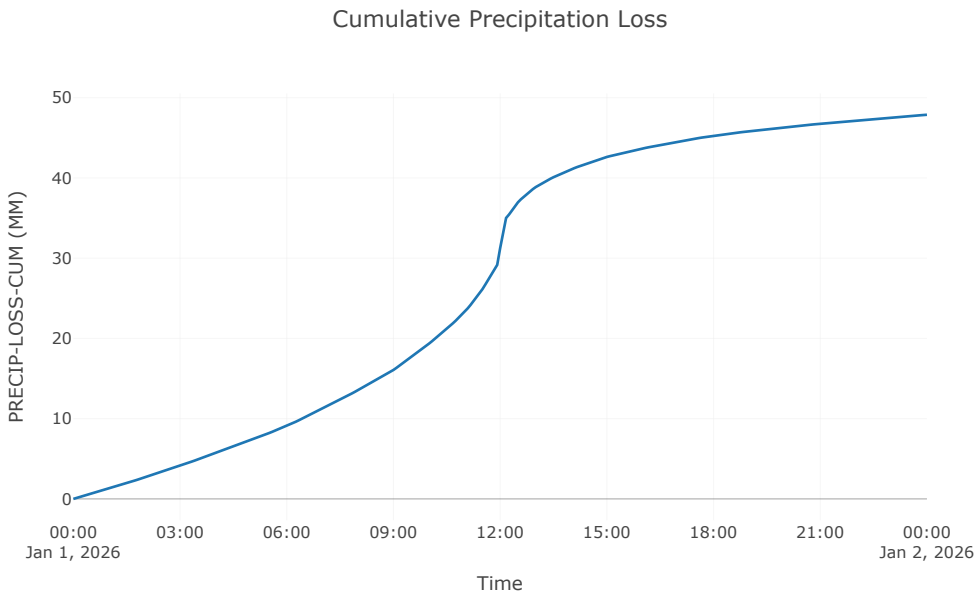
Results: DIFFERENCE POND 7 UPSTREAM	
Peak Discharge (M3/S)	1.16
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	41.05
Precipitation Volume (M3)	14320.1
Loss Volume (M3)	7702.92
Excess Volume (M3)	6617.18
Direct Runoff Volume (M3)	6605.14
Baseflow Volume (M3)	0

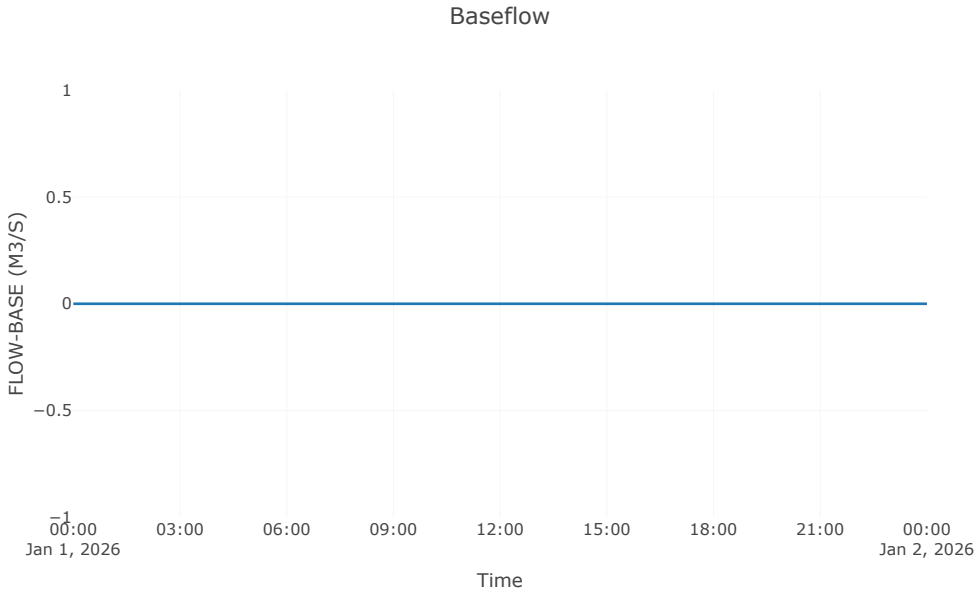

Precipitation and Outflow
PRECIP-INC (MM)
0
1
2
3
4
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

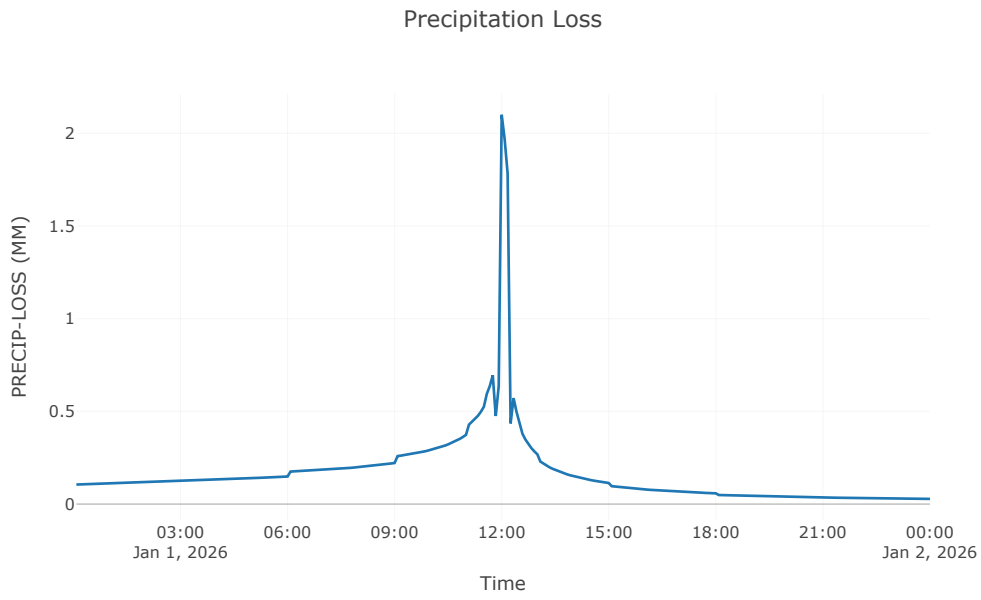

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

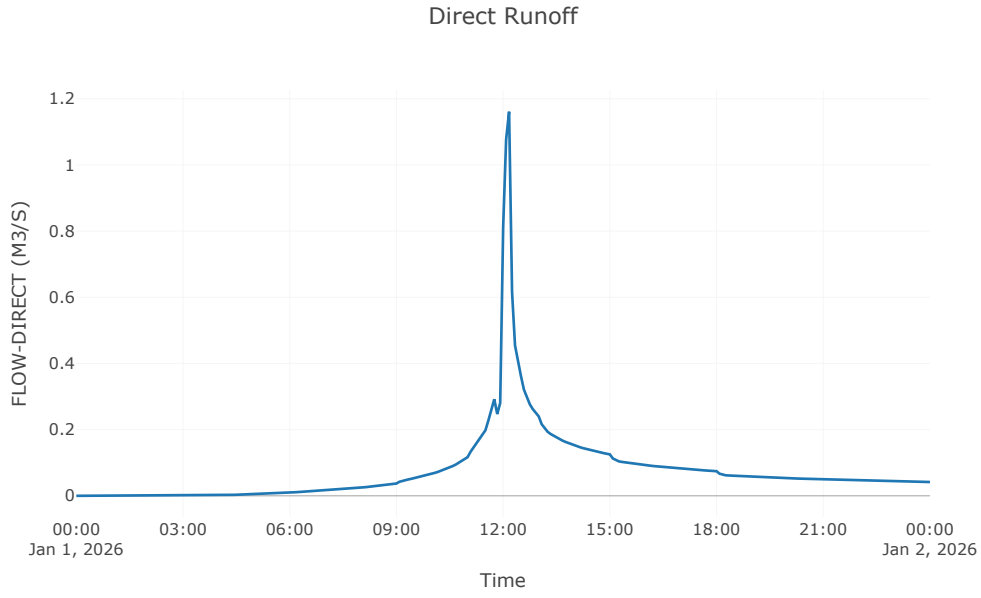

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
0
1
2
3
4
5
6
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

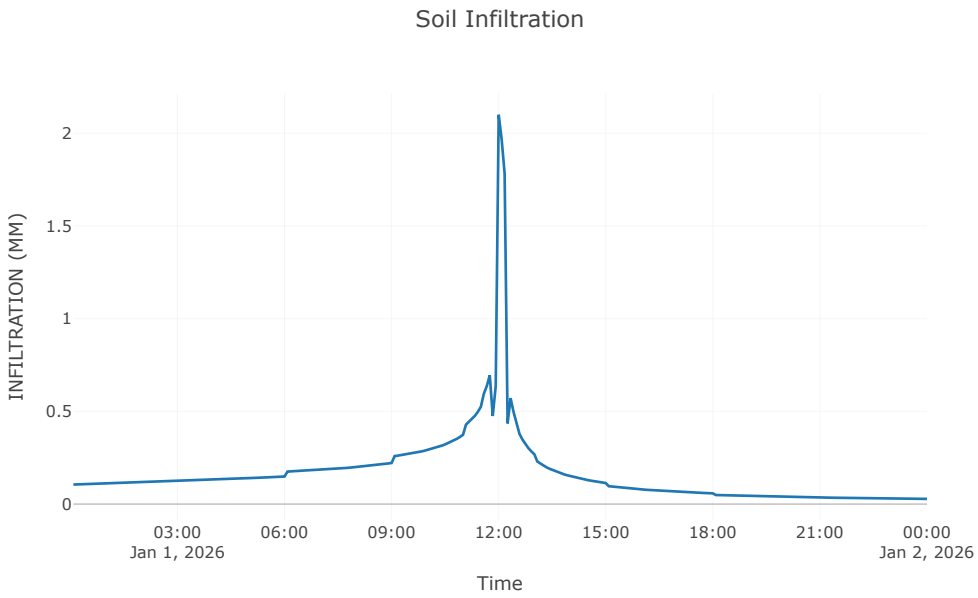

Cumulative Precipitation
PRECIP-CUM (MM)
0
20
40
60
80
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

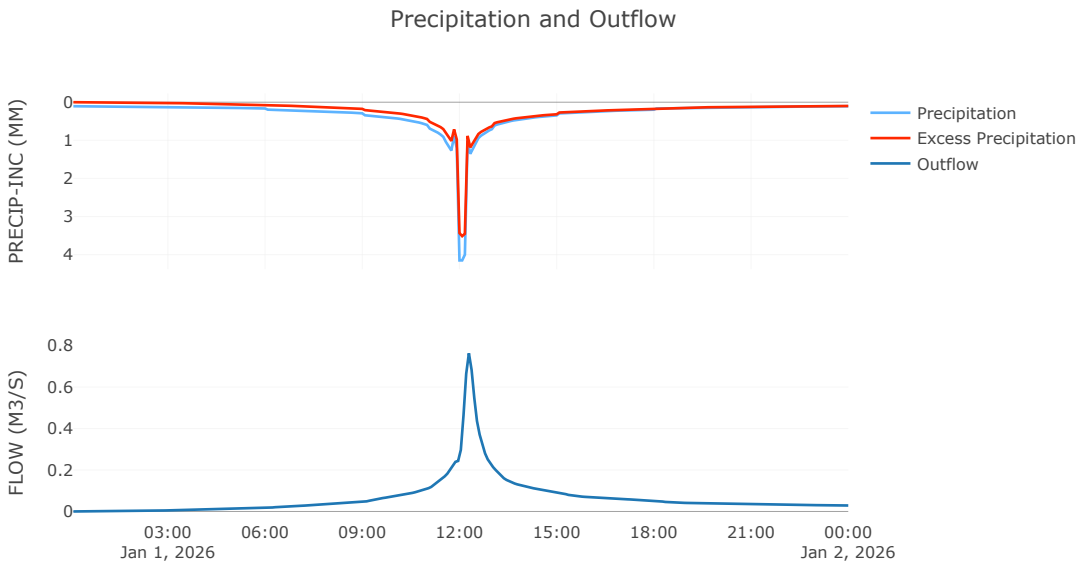
Subbasin: DIFFERENCE POND 7 INTERNAL

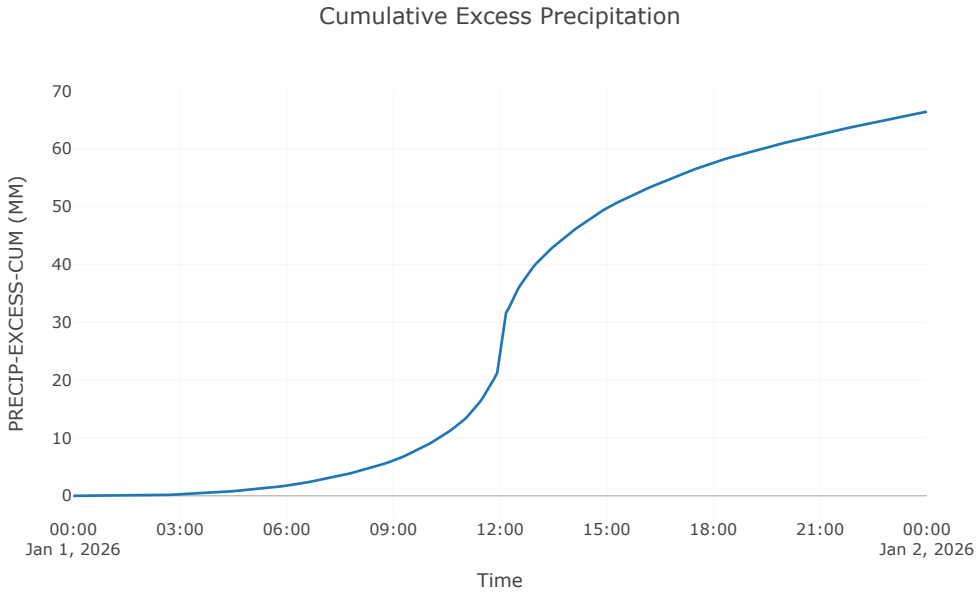
Area (KM2) : 0.09
Latitude Degrees : -44.99
Longitude Degrees : 168.84
Downstream : Junction - POND 7

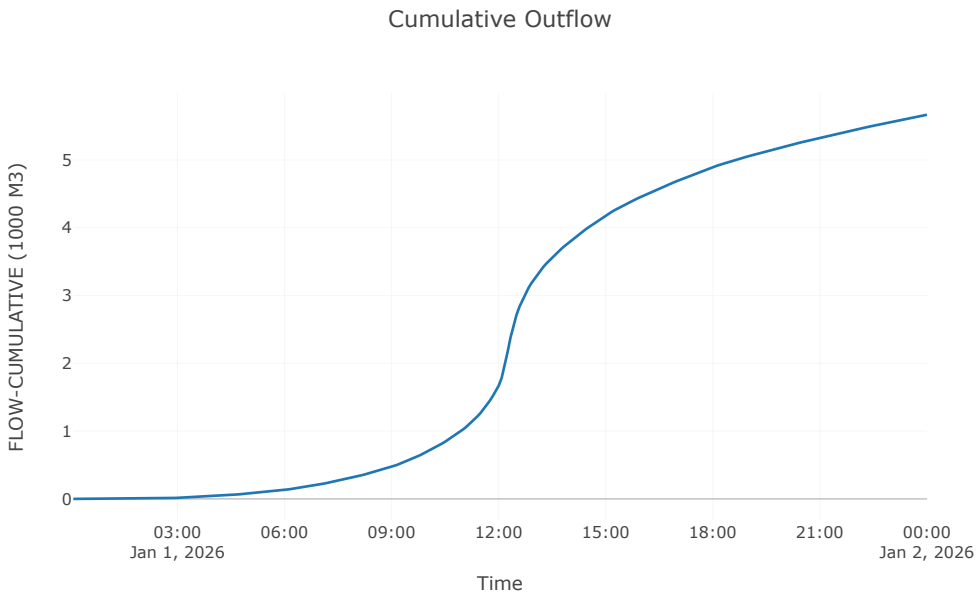
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	90.1
Initial Abstraction	1.4

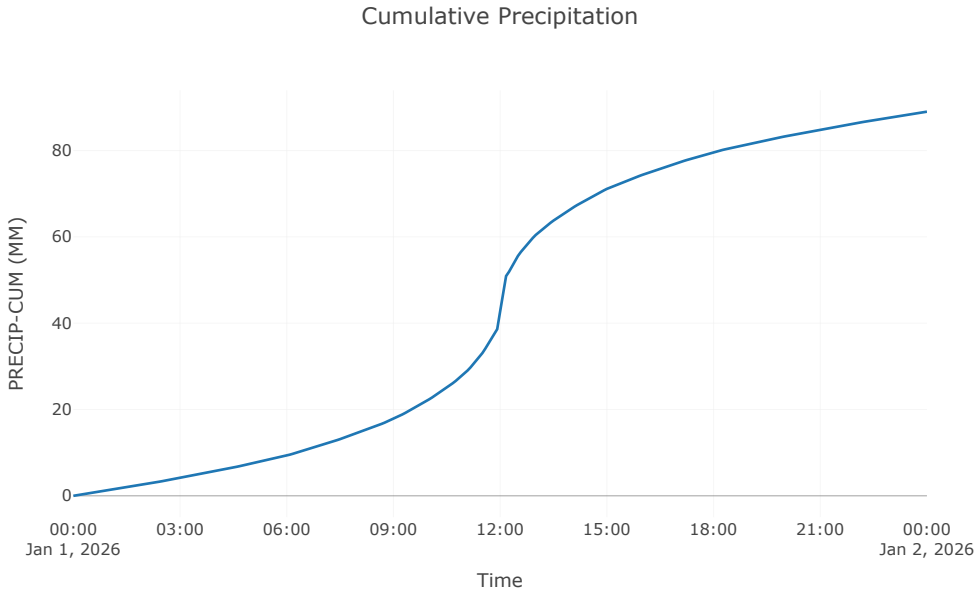
Transform: Scs	
Lag	11.53
Unitgraph Type	Standard

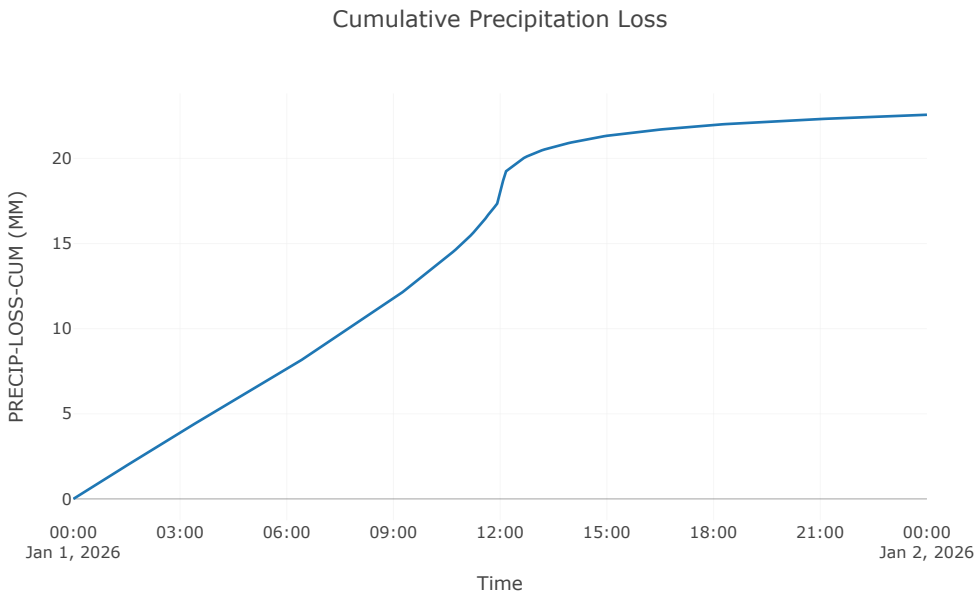
Results: DIFFERENCE POND 7 INTERNAL	
Peak Discharge (M3/S)	0.76
Time of Peak Discharge	01Jan2026, 12:15
Volume (MM)	66.12
Precipitation Volume (M3)	7627.3
Loss Volume (M3)	1933.88
Excess Volume (M3)	5693.42
Direct Runoff Volume (M3)	5666.6
Baseflow Volume (M3)	0

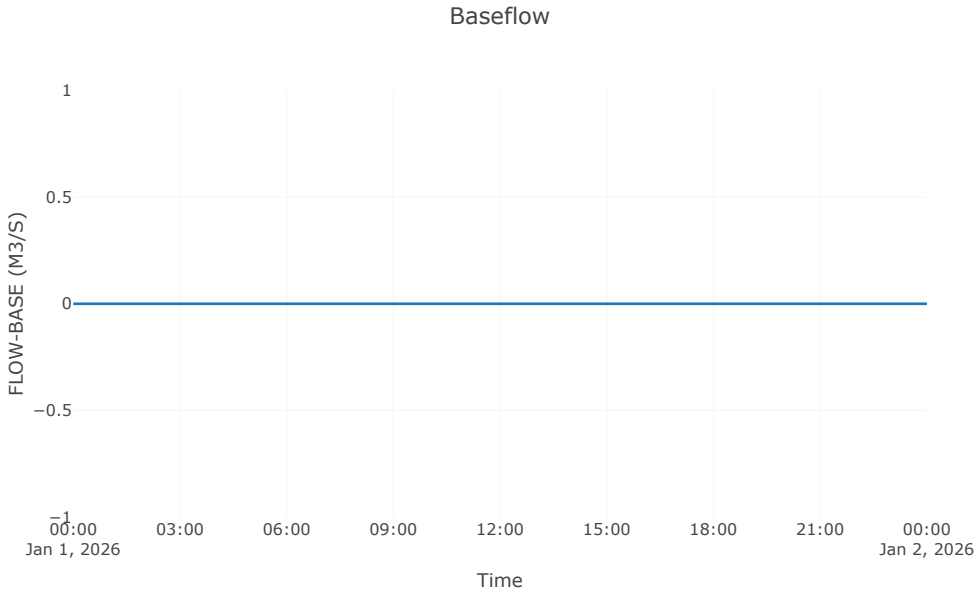

Precipitation and Outflow
PRECIP-INC (MM)
0
1
2
3
4
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

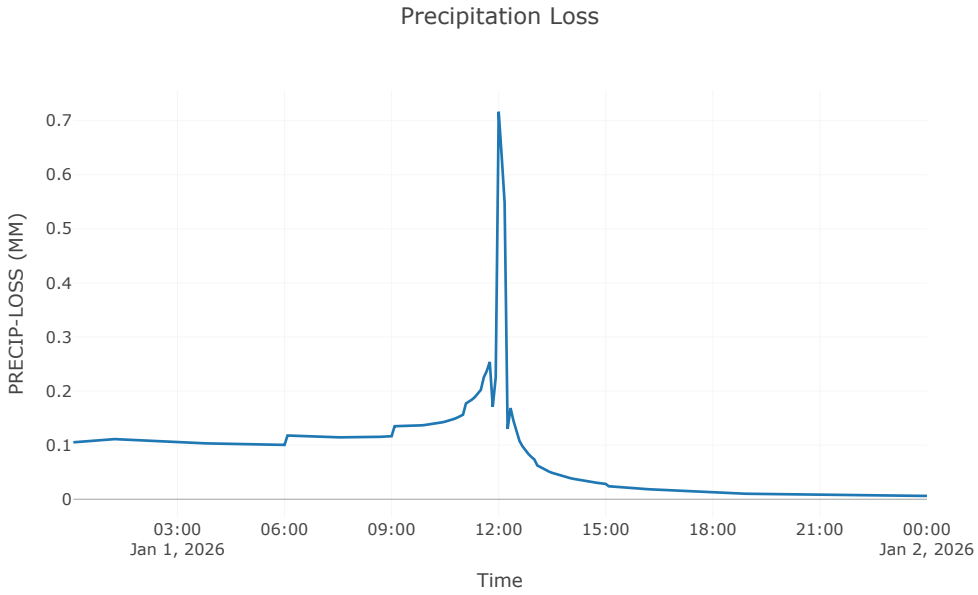

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

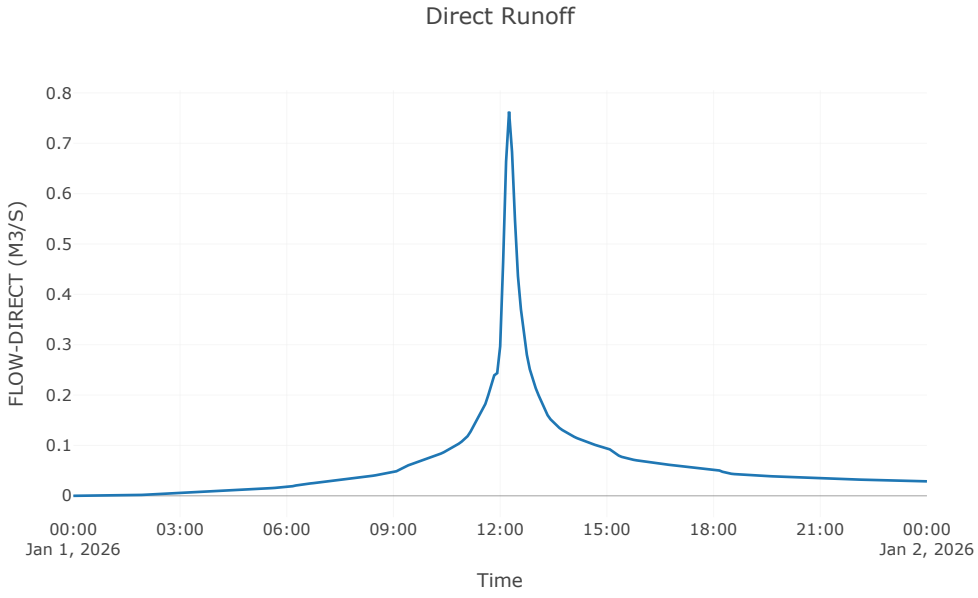

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
0
1
2
3
4
5
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

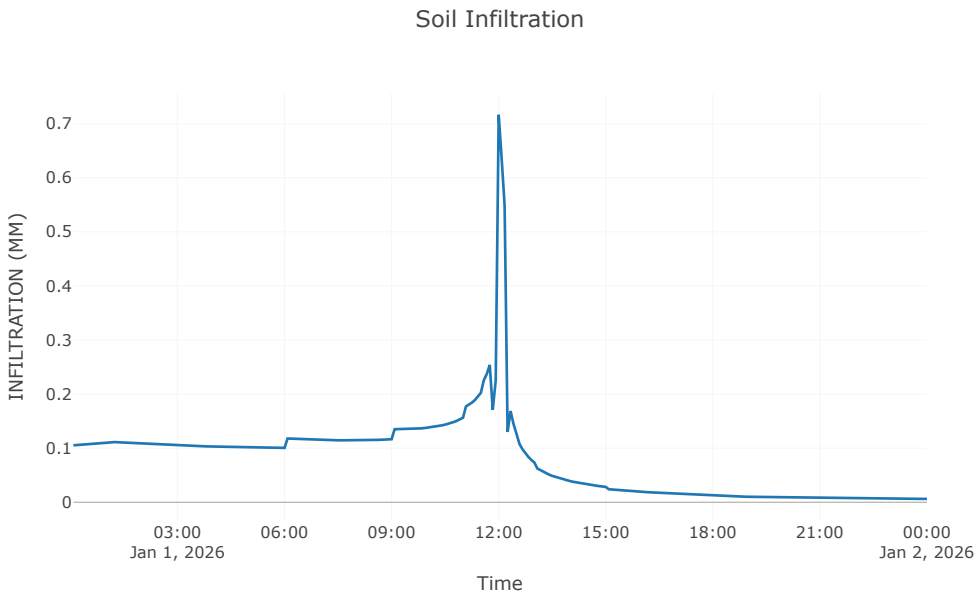

Cumulative Precipitation
PRECIP-CUM (MM)
0
20
40
60
80
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

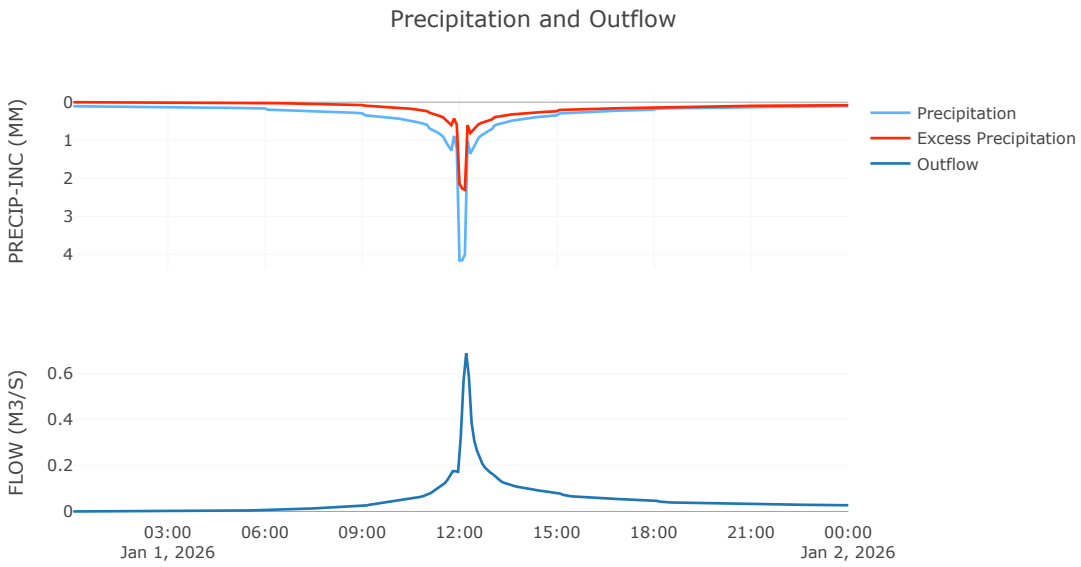
Subbasin: DIFFERENCE WETLAND B UPSTRE

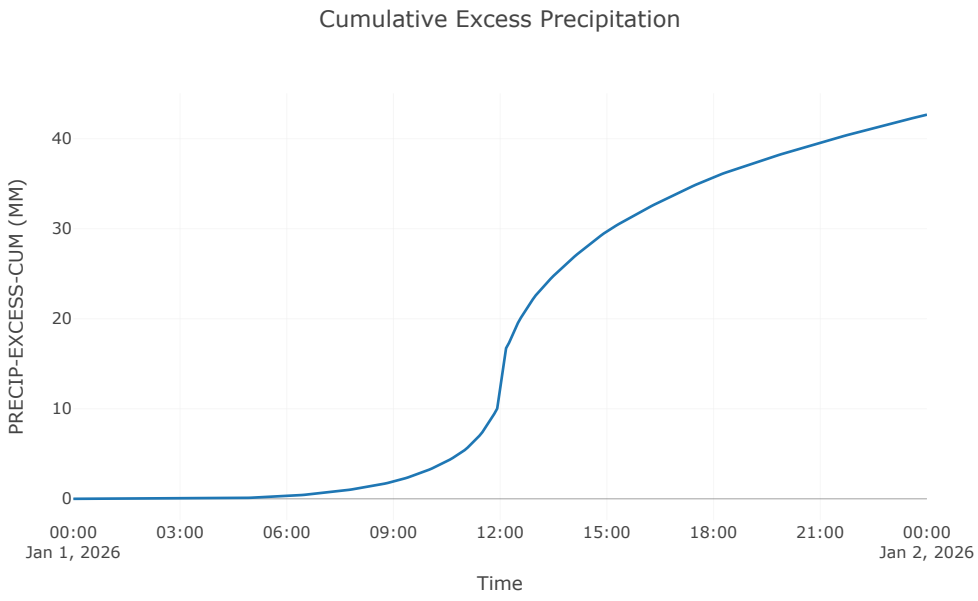
Area (KM2) : 0.1
Latitude Degrees : -44.99
Longitude Degrees : 168.84
Downstream : Junction - CHANNEL 4

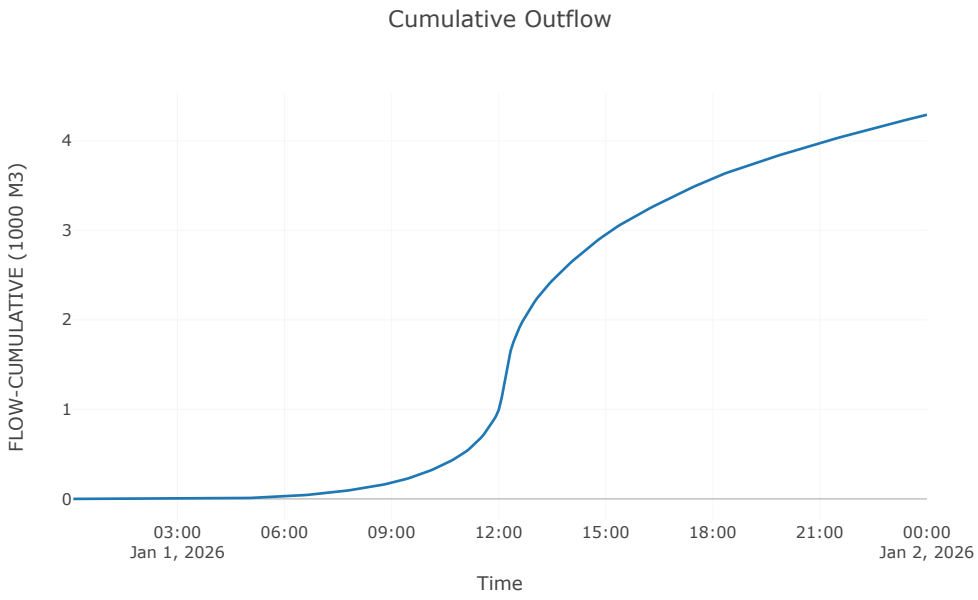
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	75.2
Initial Abstraction	4.19

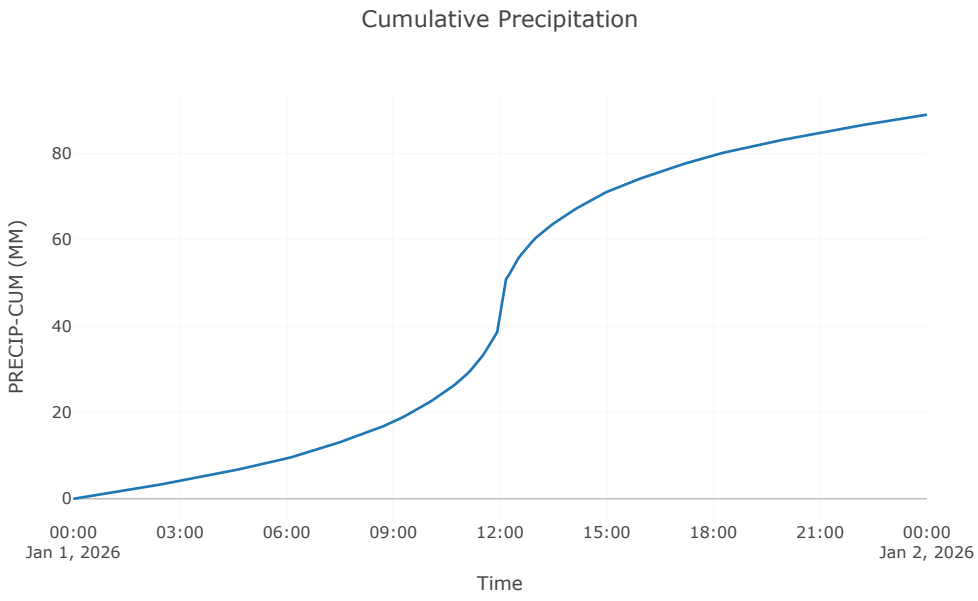
Transform: Scs	
Lag	6.14
Unitgraph Type	Standard

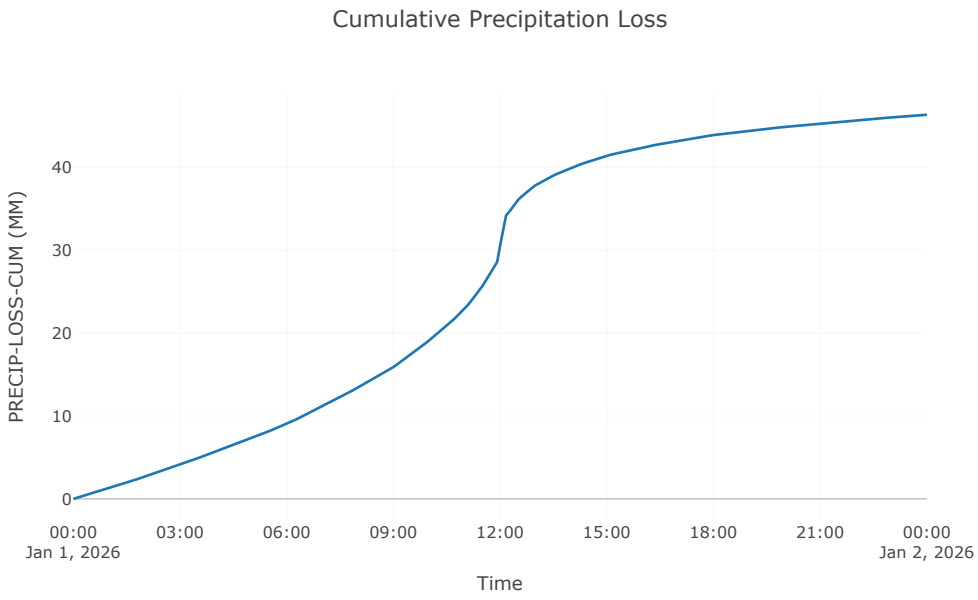
Results: DIFFERENCE WETLAND B UPSTRE	
Peak Discharge (M3/S)	0.69
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	42.53
Precipitation Volume (M3)	8980.1
Loss Volume (M3)	4674.94
Excess Volume (M3)	4305.16
Direct Runoff Volume (M3)	4291.24
Baseflow Volume (M3)	0

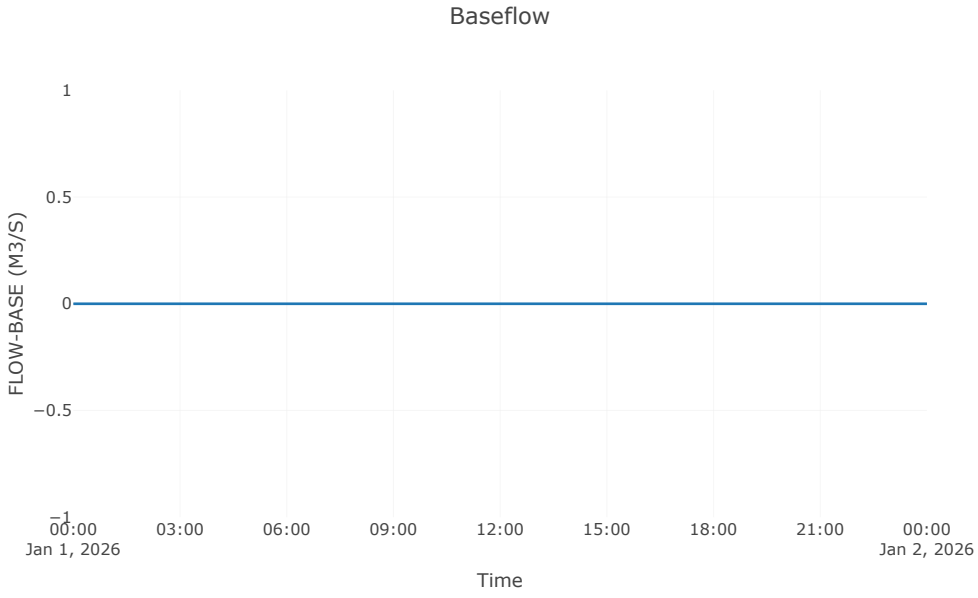

Precipitation and Outflow
PRECIP-INC (MM)
0
1
2
3
4
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

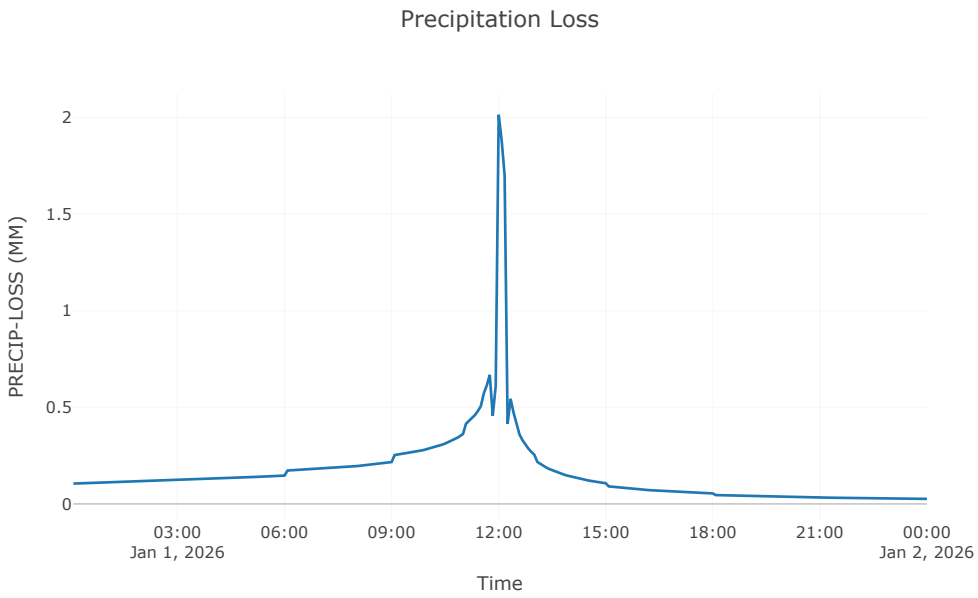

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

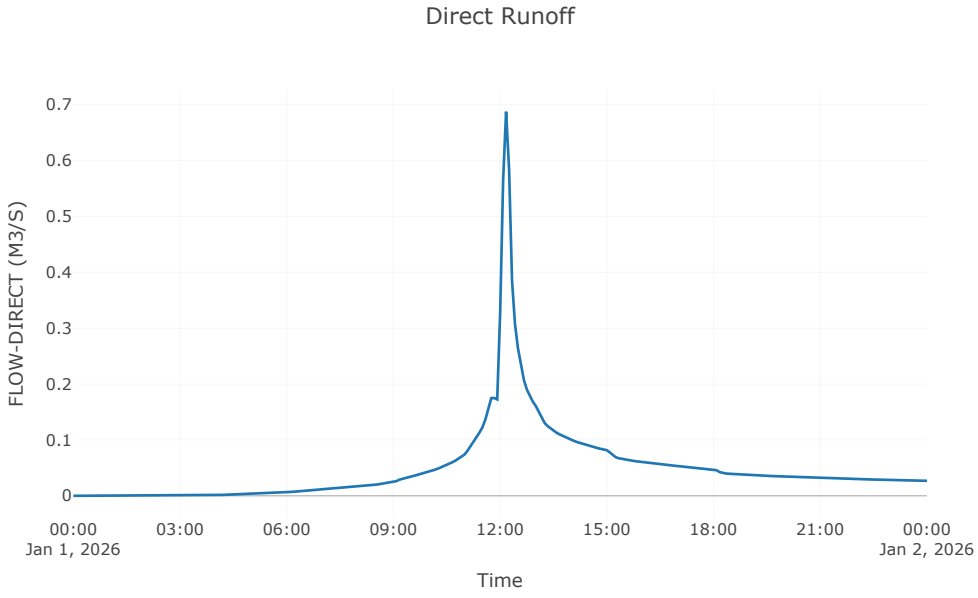

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
0
1
2
3
4
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

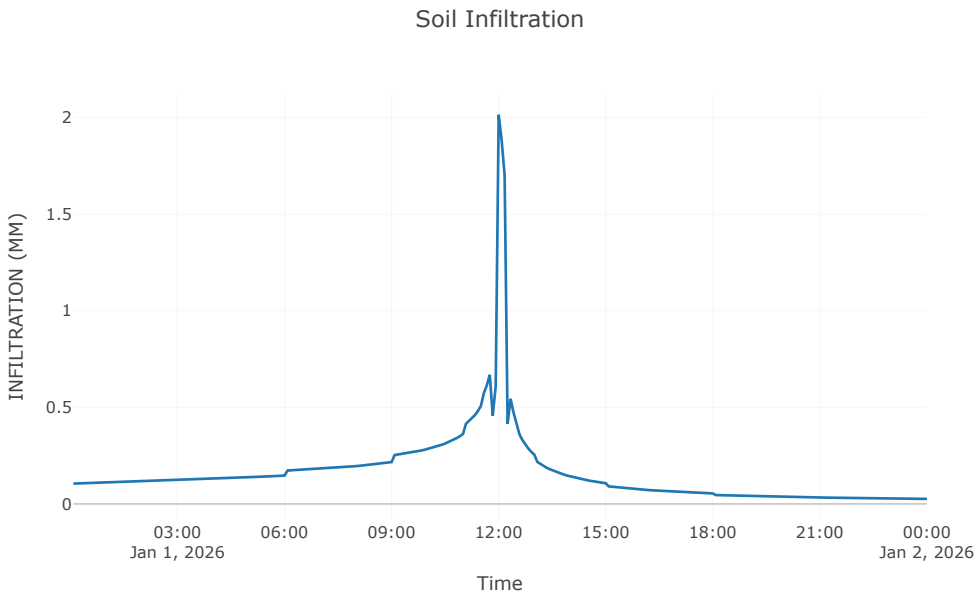

Cumulative Precipitation
PRECIP-CUM (MM)
0
20
40
60
80
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

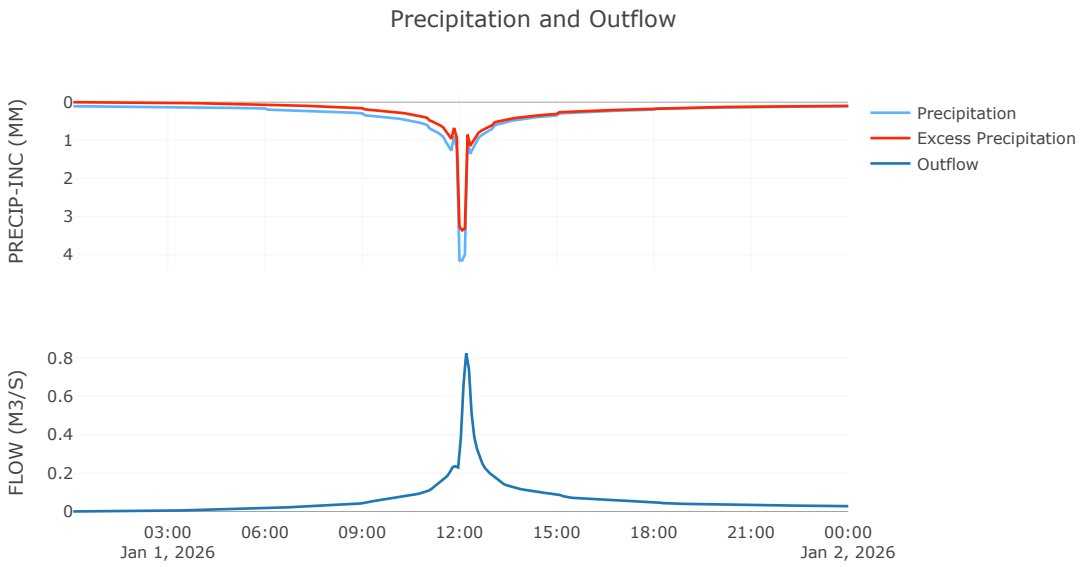
Subbasin: DIFFERENCE WETLAND B INTERN

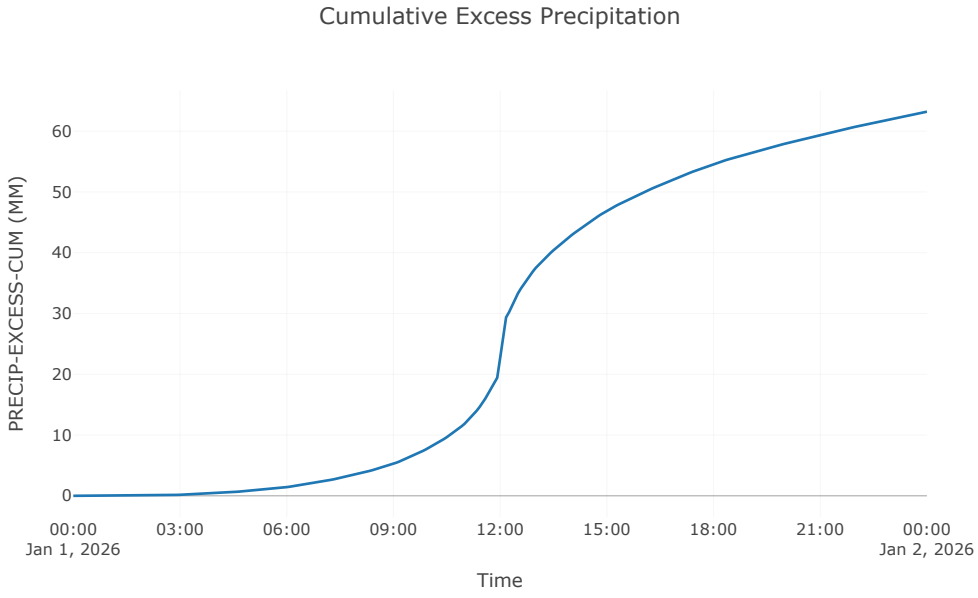
Area (KM2) : 0.08
Latitude Degrees : -44.99
Longitude Degrees : 168.84
Downstream : Junction - CHANNEL 4

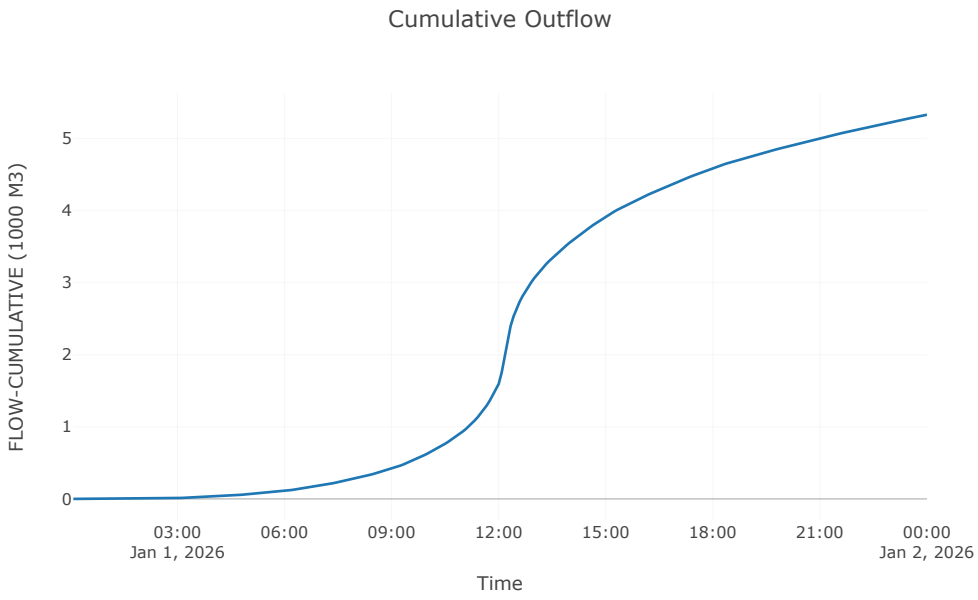
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	88.4
Initial Abstraction	1.67

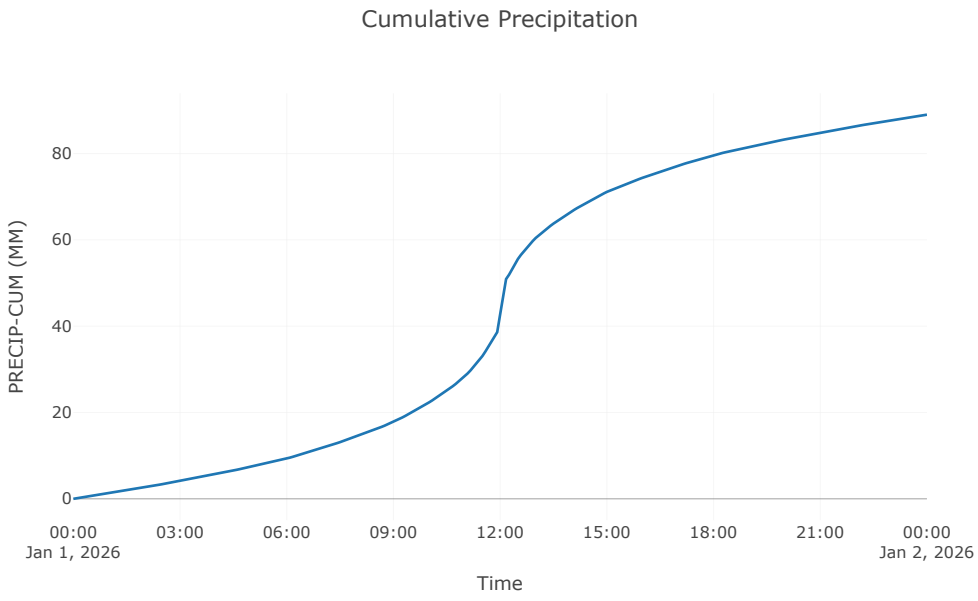
Transform: Scs	
Lag	6.97
Unitgraph Type	Standard

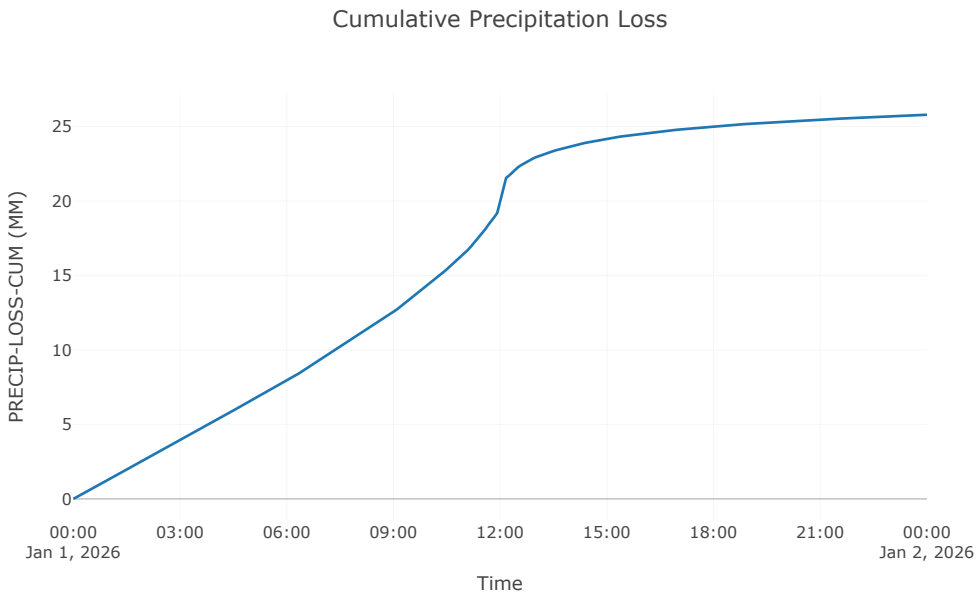
Results: DIFFERENCE WETLAND B INTERN	
Peak Discharge (M3/S)	0.82
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	63.01
Precipitation Volume (M3)	7529.4
Loss Volume (M3)	2182.12
Excess Volume (M3)	5347.28
Direct Runoff Volume (M3)	5331.05
Baseflow Volume (M3)	0

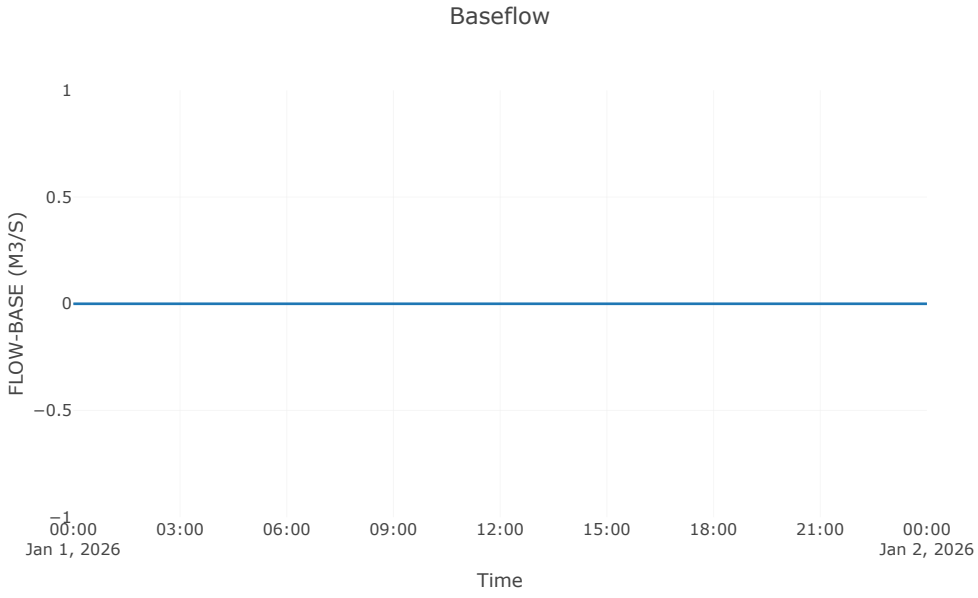

Precipitation and Outflow
PRECIP-INC (MM)
0
1
2
3
4
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

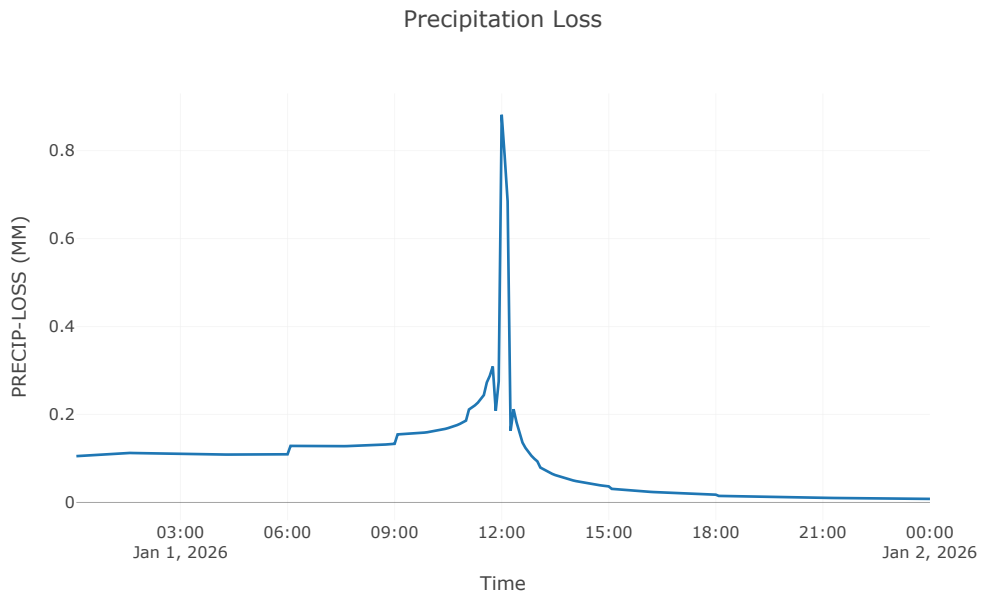

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
60
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

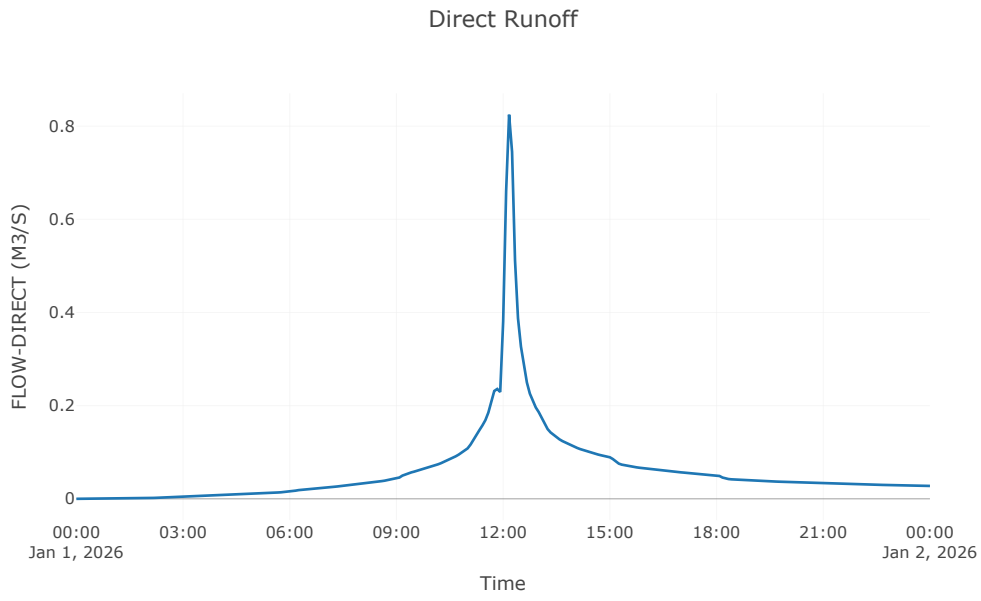

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
0
1
2
3
4
5
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

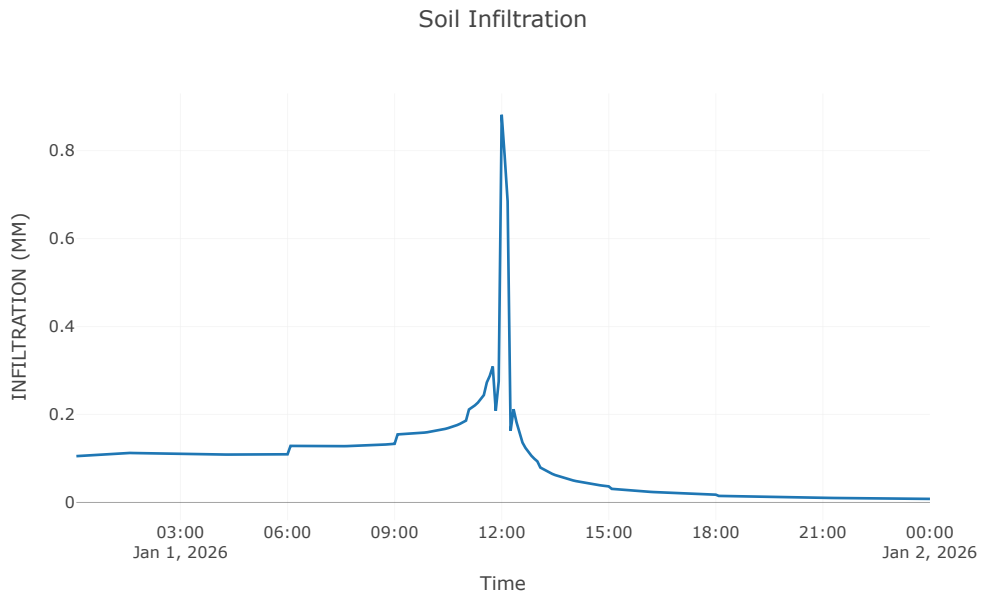

Cumulative Precipitation
PRECIP-CUM (MM)
0
20
40
60
80
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
25
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

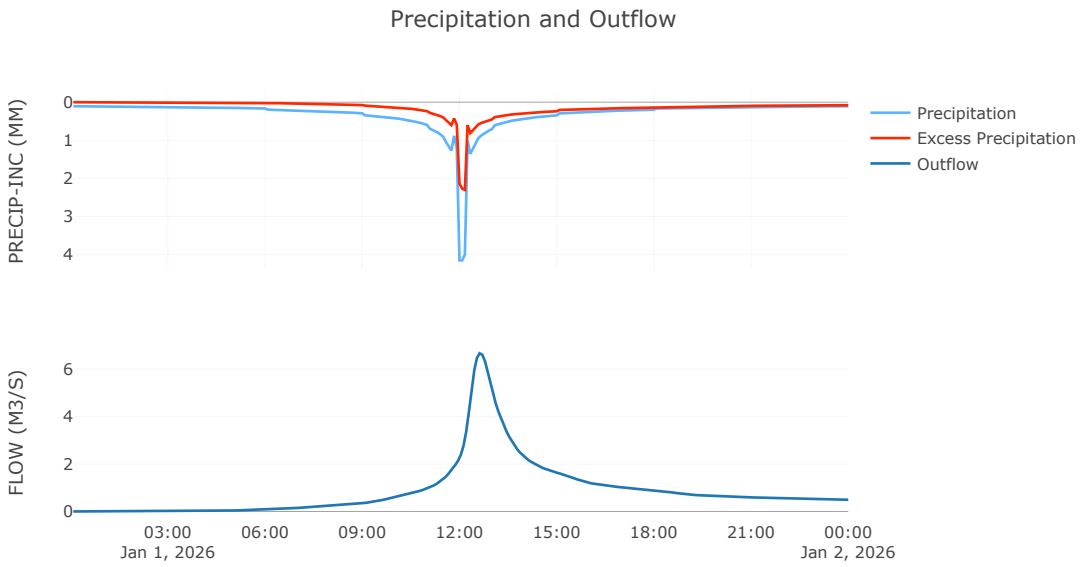
Subbasin: MORVEN FERRY VECTORISED

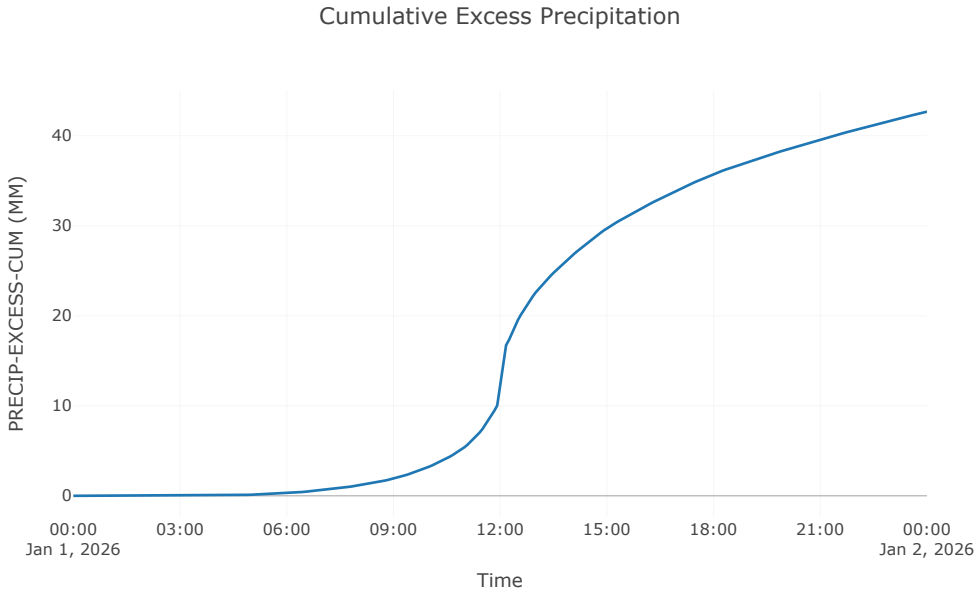
Area (KM2) : 1.8
Latitude Degrees : -44.98
Longitude Degrees : 168.84
Downstream : Swale morven ferry l

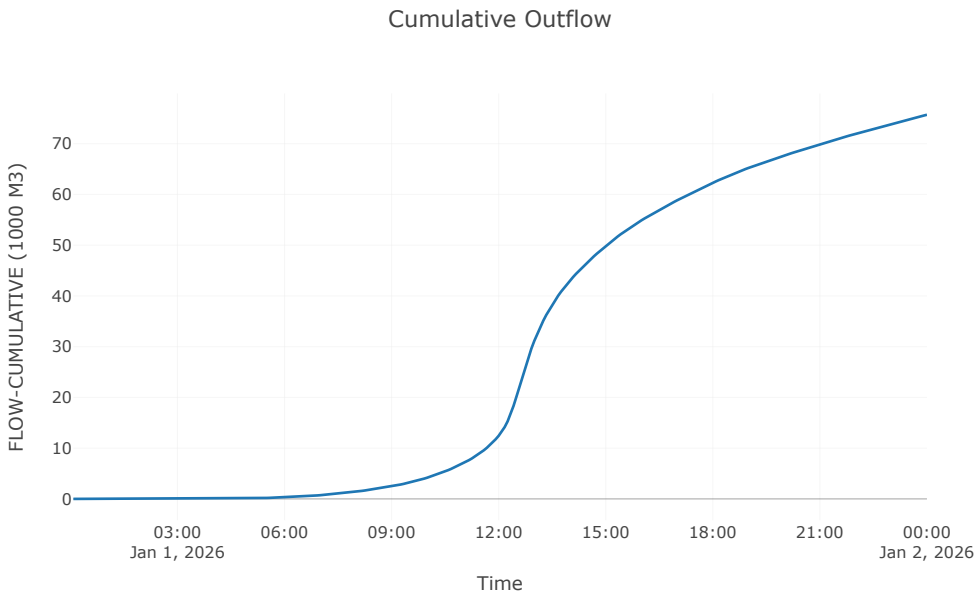
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	75.2
Initial Abstraction	4.19

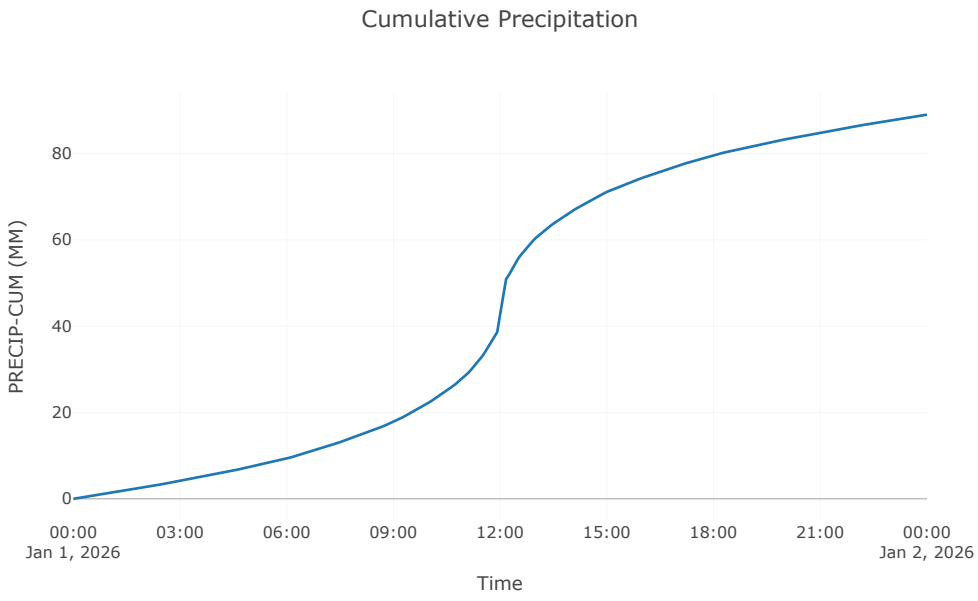
Transform: Scs	
Lag	30.44
Unitgraph Type	Standard

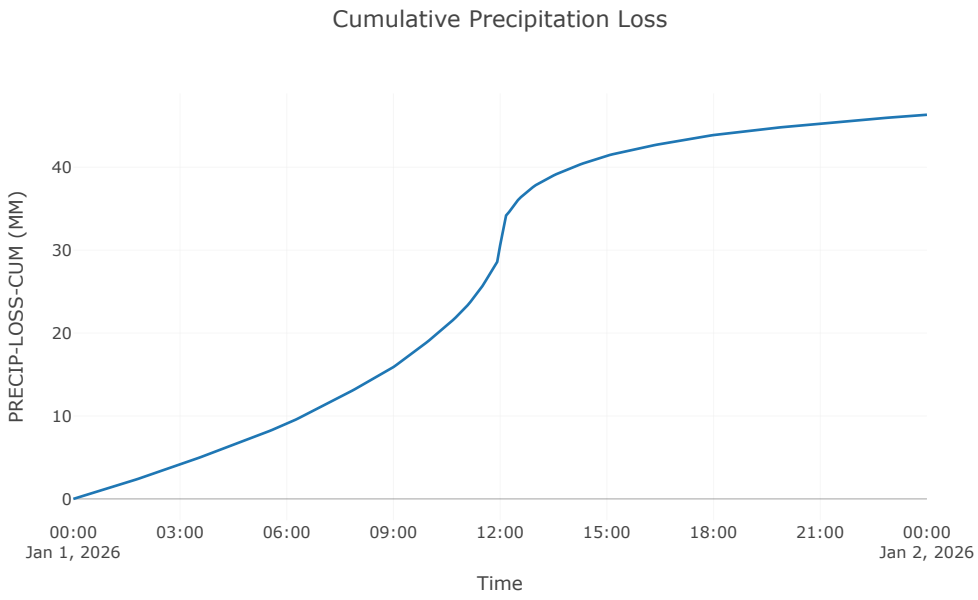
Results: MORVEN FERRY VECTORISED	
Peak Discharge (M3/S)	6.67
Time of Peak Discharge	01Jan2026, 12:35
Volume (MM)	42.02
Precipitation Volume (M3)	1.6E5
Loss Volume (M3)	83472.4
Excess Volume (M3)	76870
Direct Runoff Volume (M3)	75700.43
Baseflow Volume (M3)	0

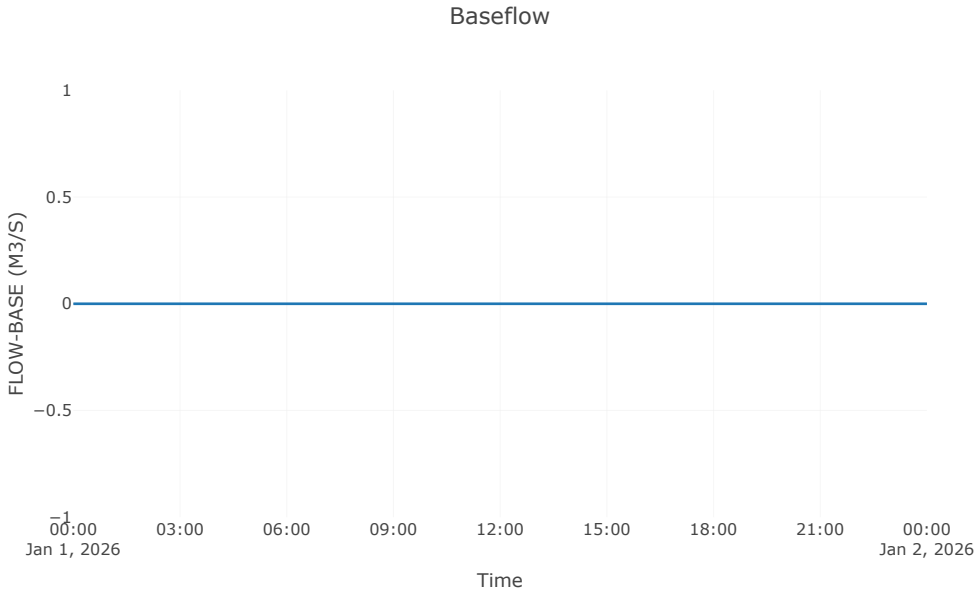

Precipitation and Outflow
PRECIP-INC (MM)
0
1
2
3
4
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
6
4
2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

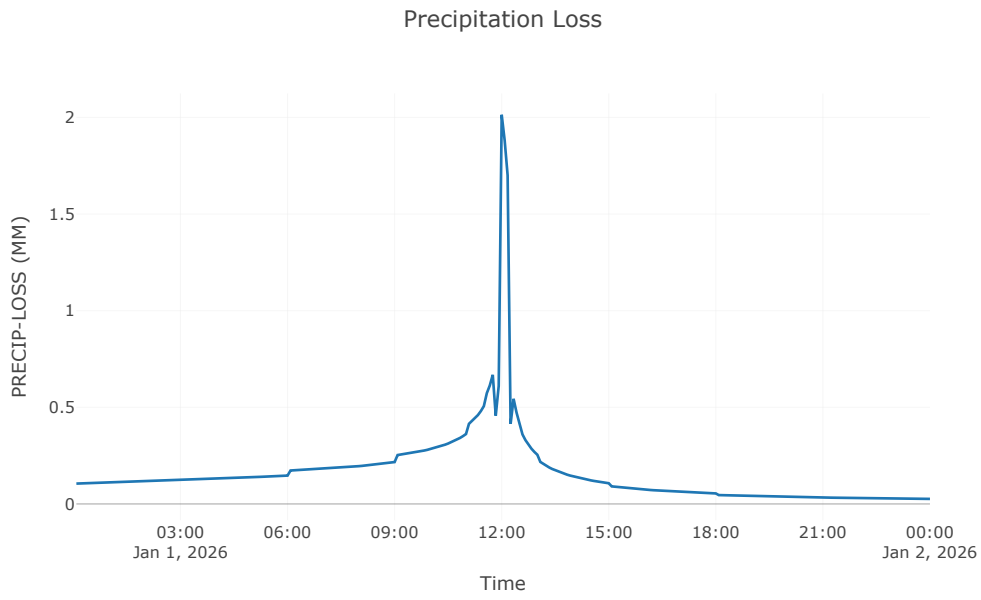

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

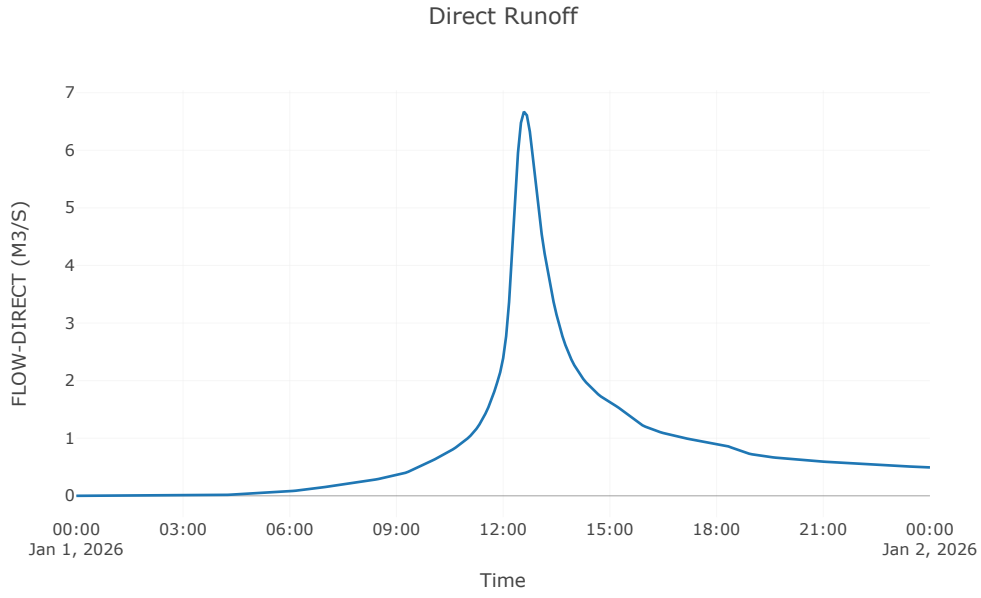

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
70
60
50
40
30
20
10
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

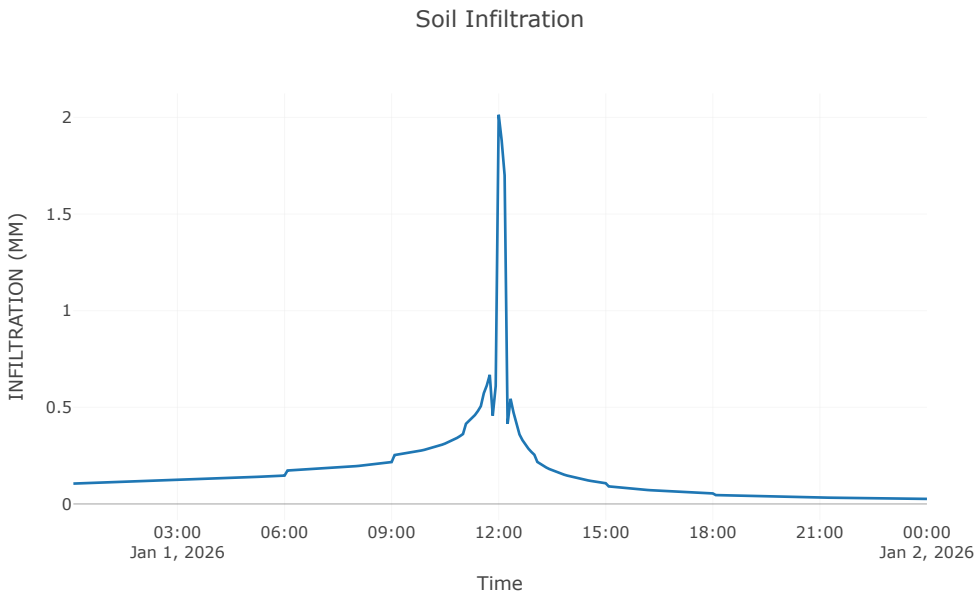

Cumulative Precipitation
PRECIP-CUM (MM)
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
7
6
5
4
3
2
1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

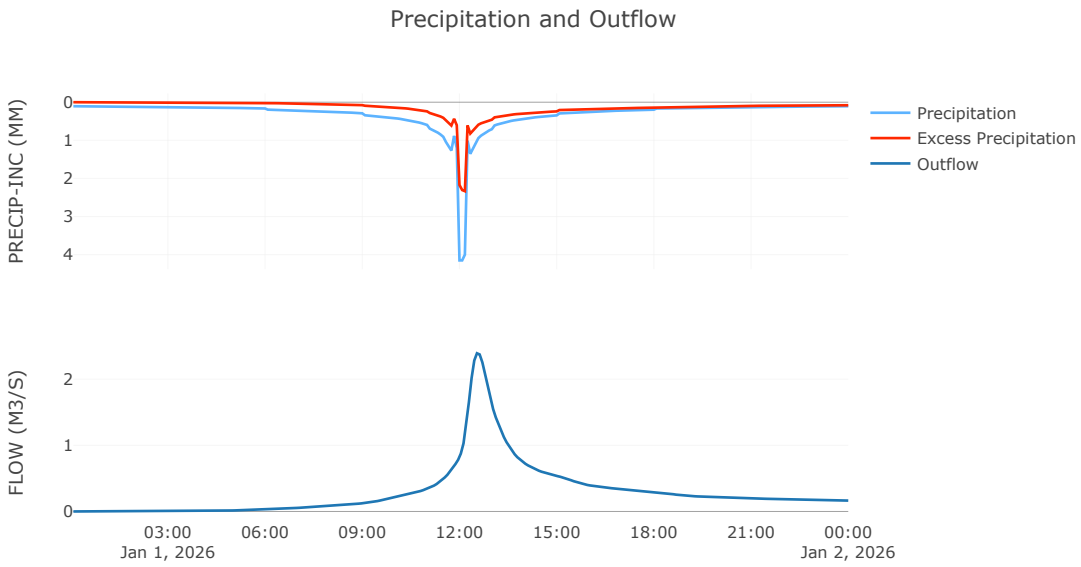
Subbasin: DIFFERENCE DOWNSTREAM EXIT

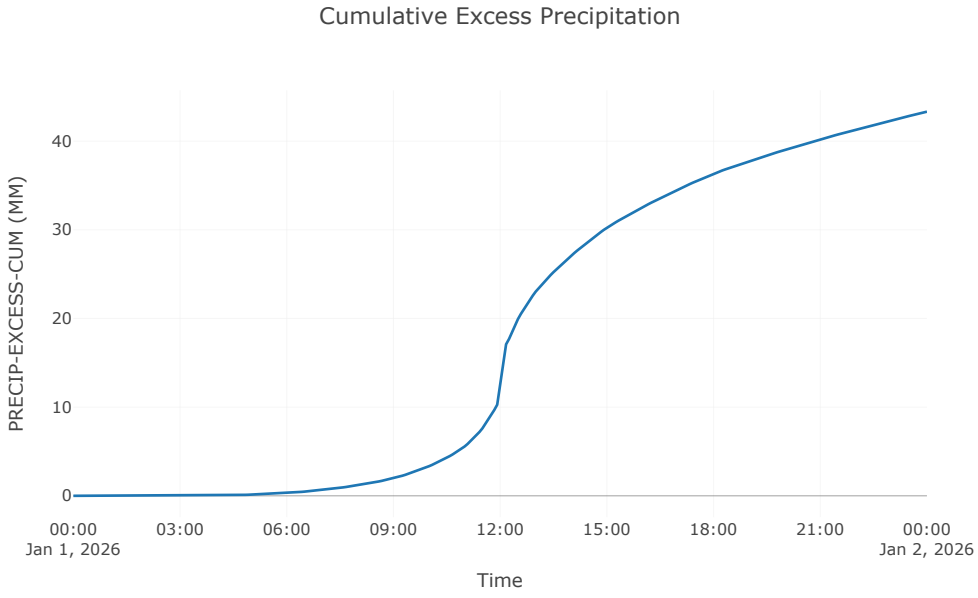
Area (KM2) : 0.6
Latitude Degrees : -45
Longitude Degrees : 168.85
Downstream : Junction - EXIT OLFP

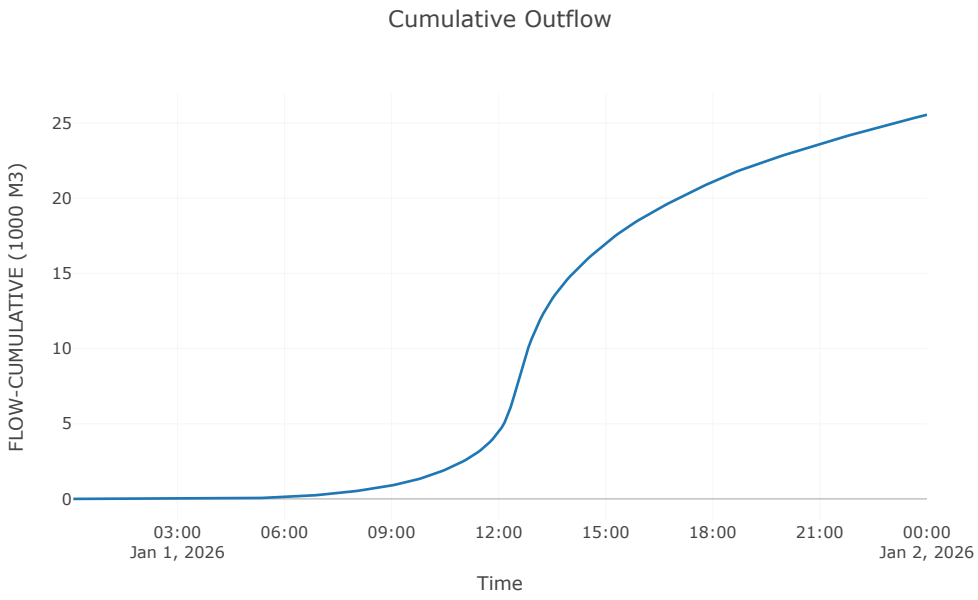
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	75.7
Initial Abstraction	4.08

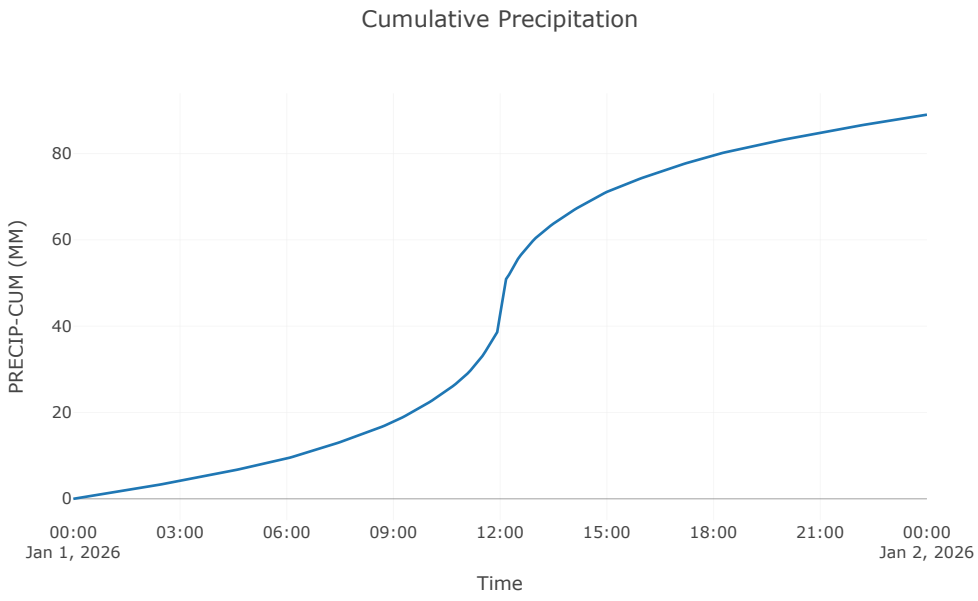
Transform: Scs	
Lag	26.55
Unitgraph Type	Standard

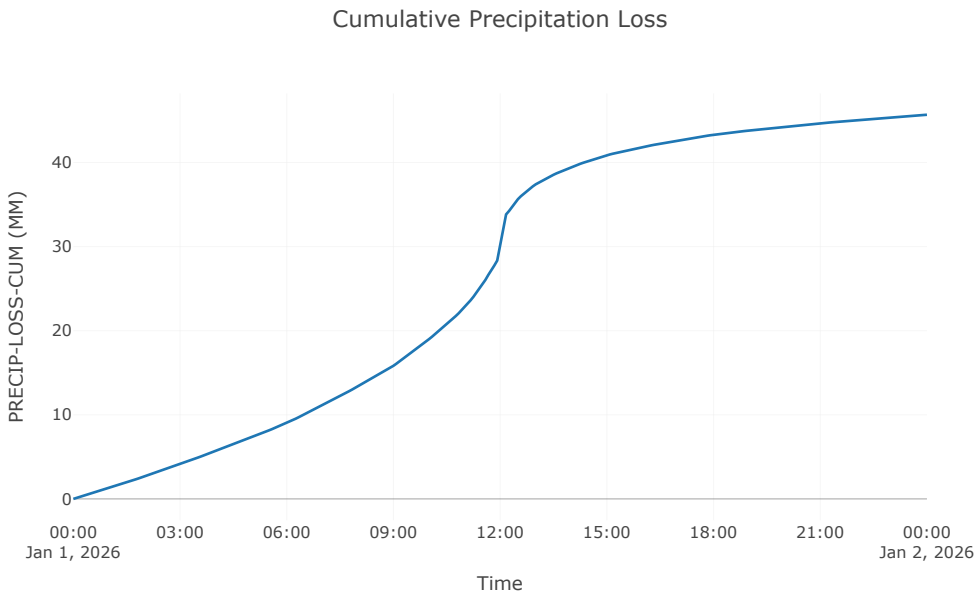
Results: DIFFERENCE DOWNSTREAM EXIT	
Peak Discharge (M3/S)	2.39
Time of Peak Discharge	01Jan2026, 12:30
Volume (MM)	42.75
Precipitation Volume (M3)	53204.2
Loss Volume (M3)	27305.44
Excess Volume (M3)	25898.76
Direct Runoff Volume (M3)	25557.17
Baseflow Volume (M3)	0

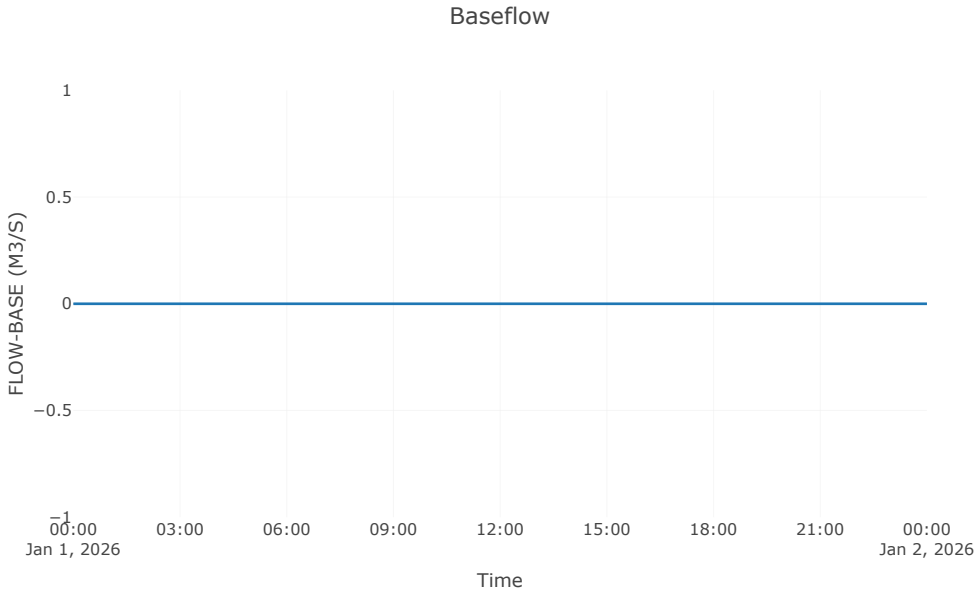

Precipitation and Outflow
PRECIP-INC (MM)
0
1
2
3
4
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
2
1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

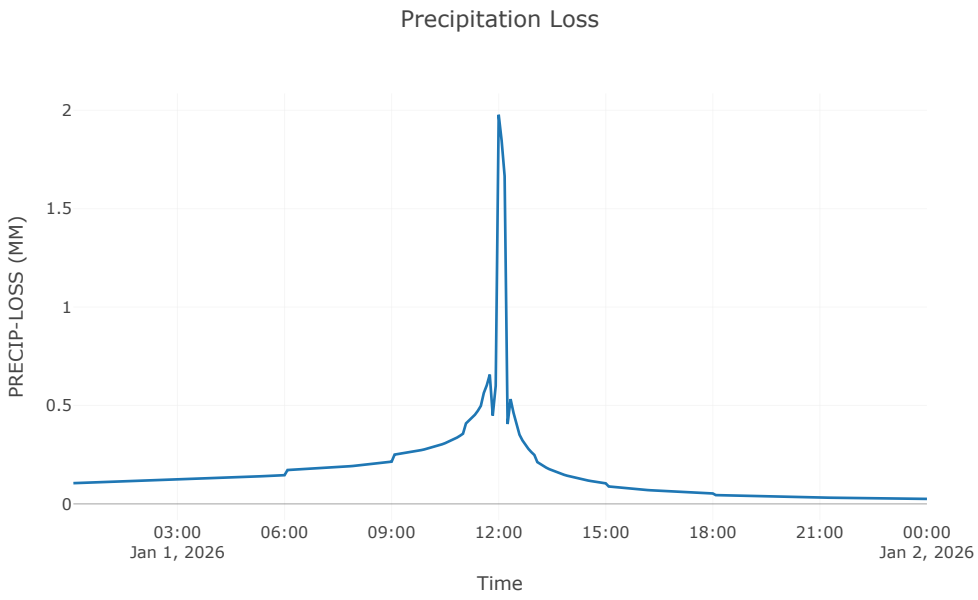

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

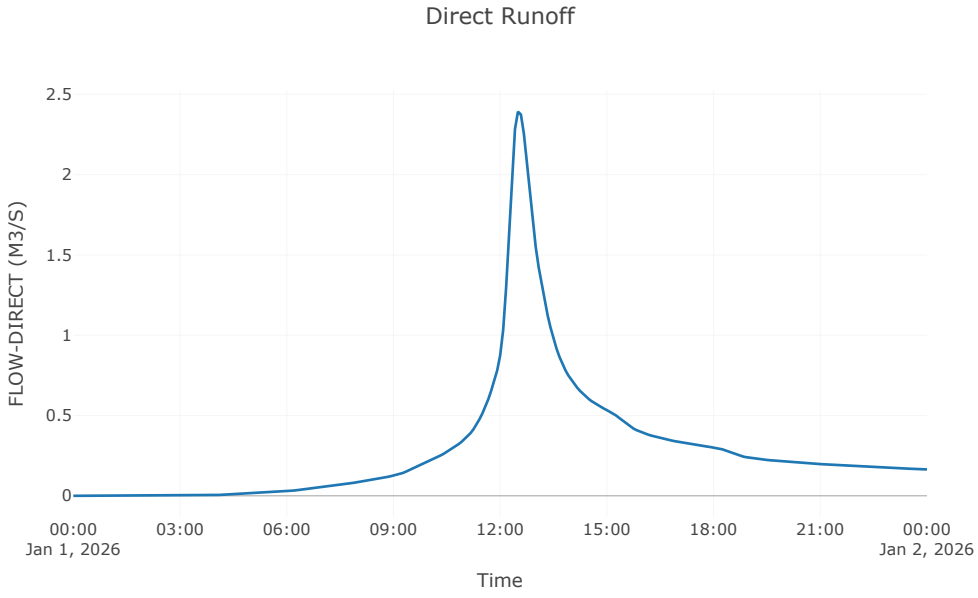

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
25
20
15
10
5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

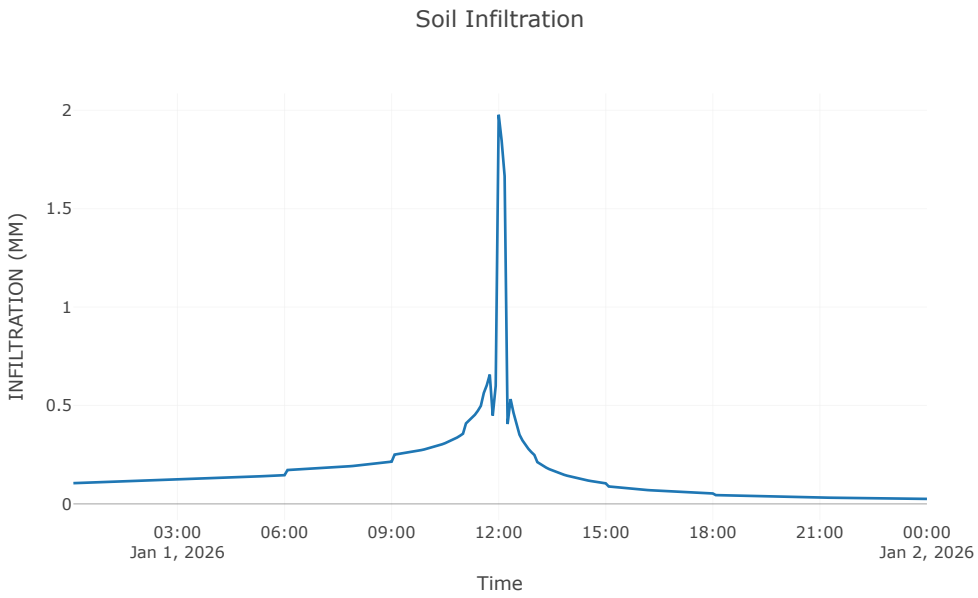

Cumulative Precipitation
PRECIP-CUM (MM)
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

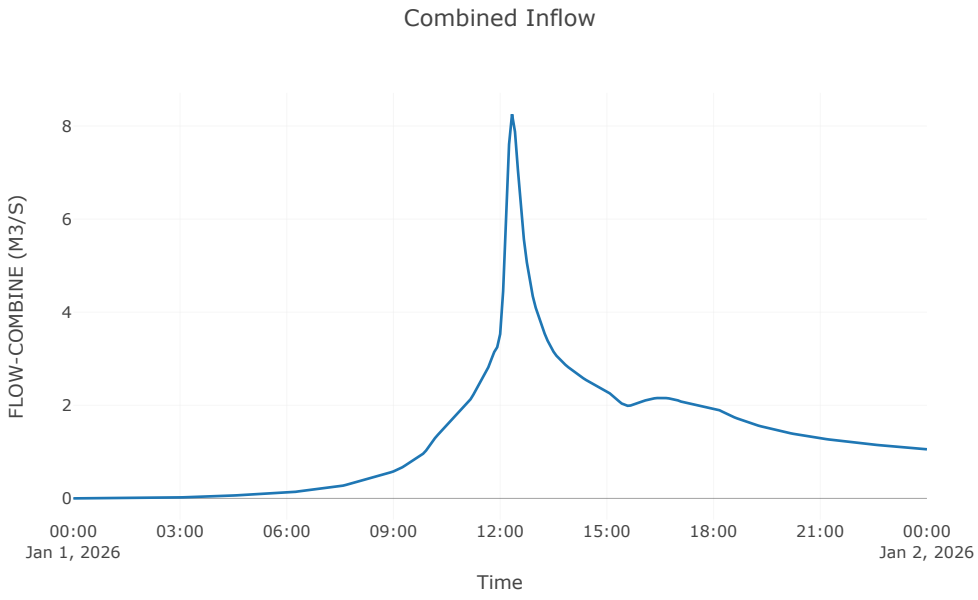

Soil Infiltration
INFILTRATION (MM)
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

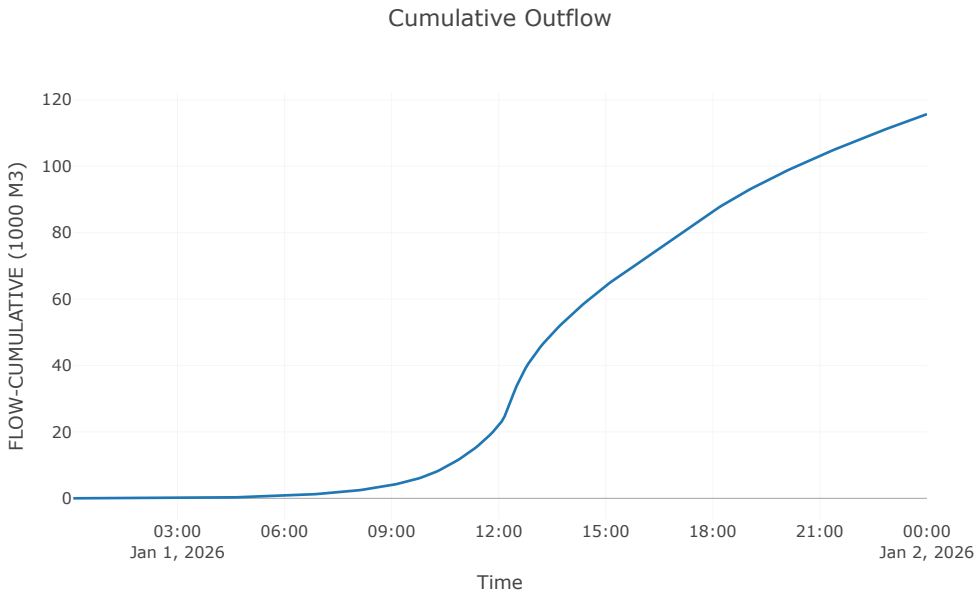
Junction: Junction-POND 1

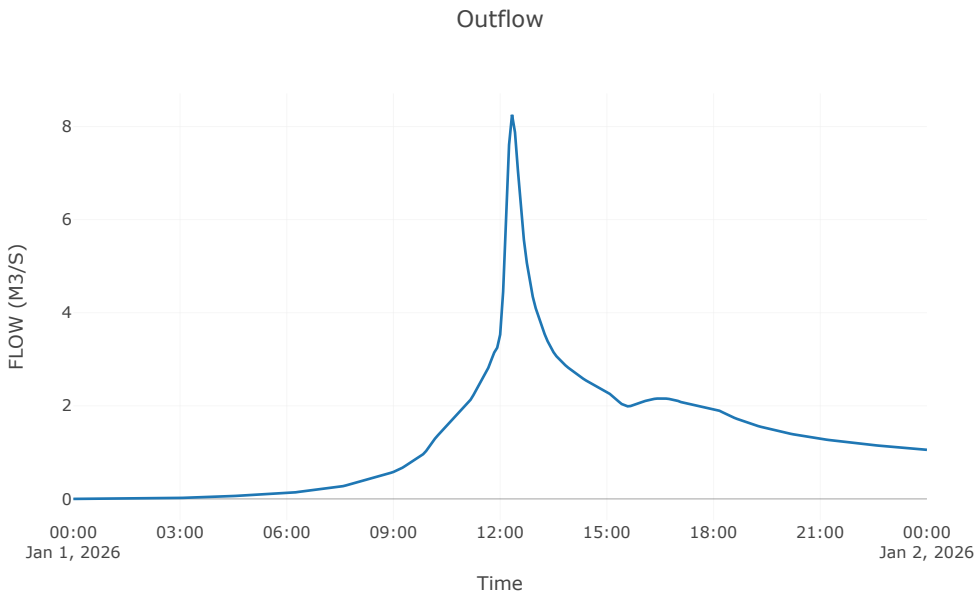
Downstream : Pond 1

Results: Junction-POND 1

Peak Discharge (M3/S)	8.25
Time of Peak Discharge	01Jan2026, 12:20
Volume (MM)	55.55





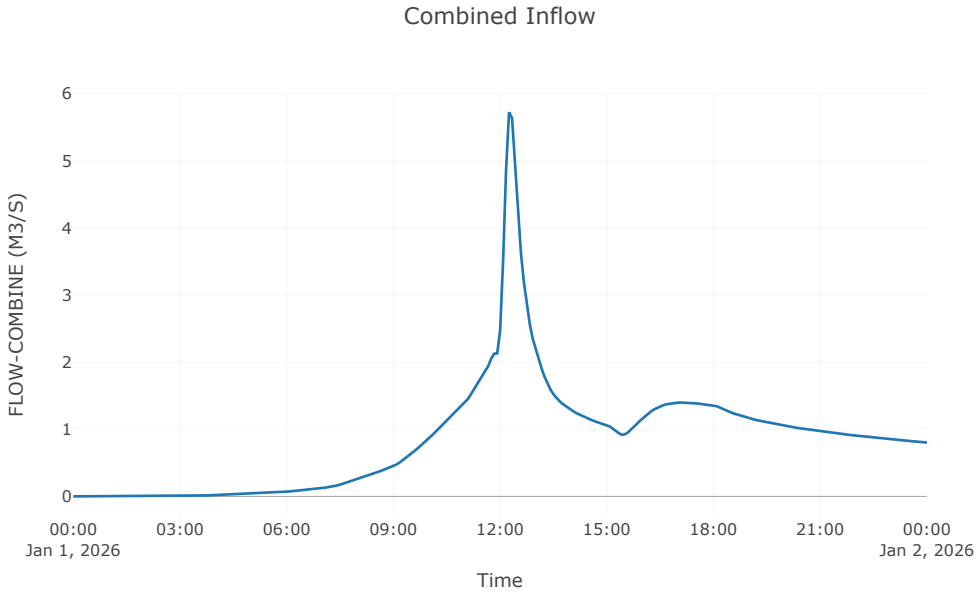

Outflow
FLOW (M3/S)
8
6
4
2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

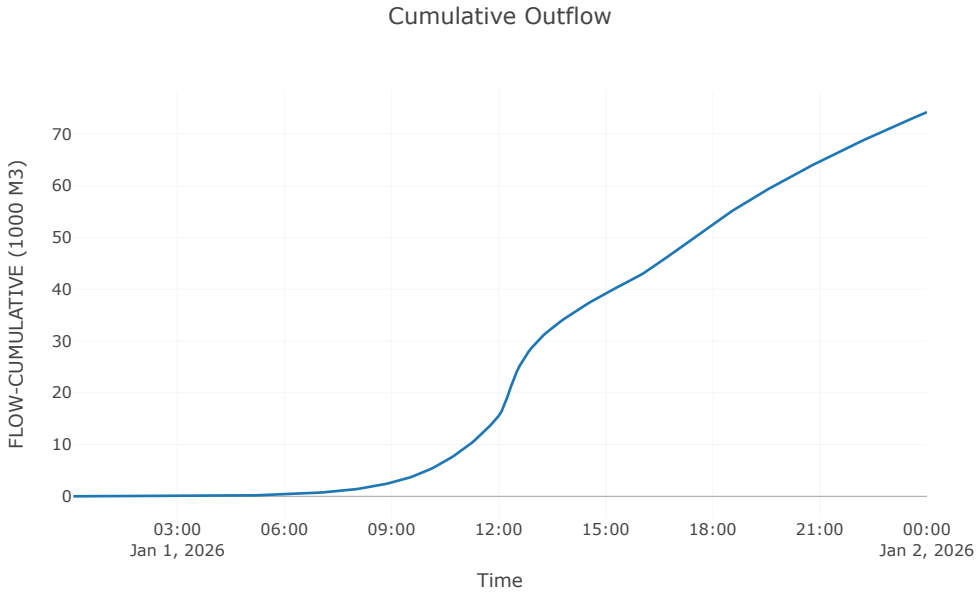
Junction: Junction-CHANNEL 1

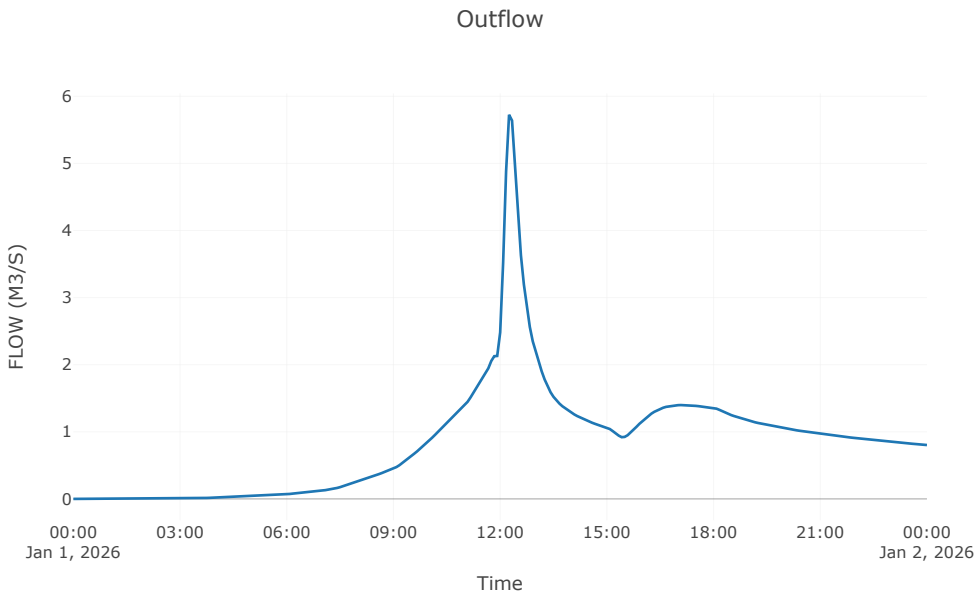
Downstream : Reach - CHANNEL 1

Results: Junction-CHANNEL 1

Peak Discharge (M3/S)	5.73
Time of Peak Discharge	01Jan2026, 12:15
Volume (MM)	57.26





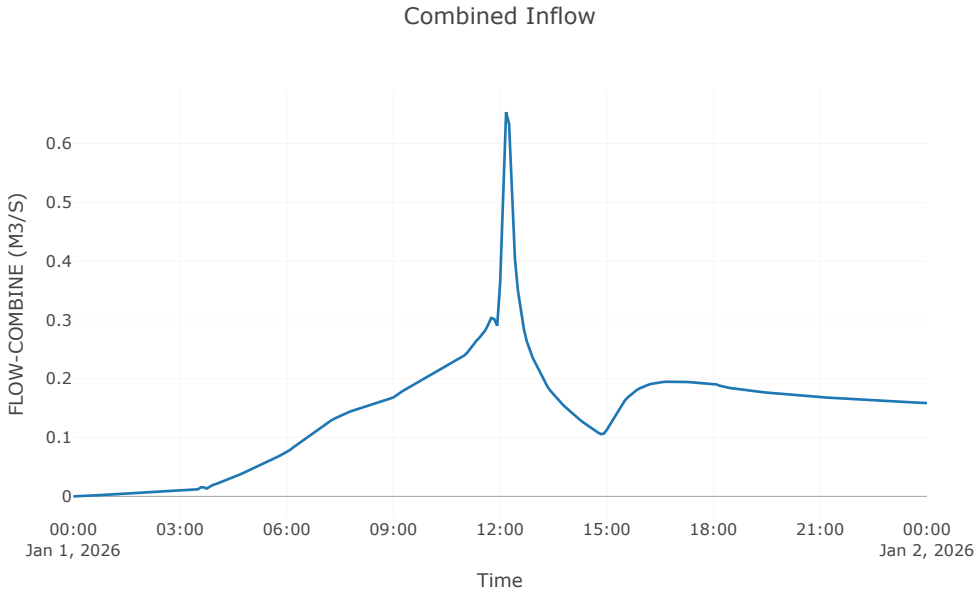

Outflow
FLOW (M3/S)
6
5
4
3
2
1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

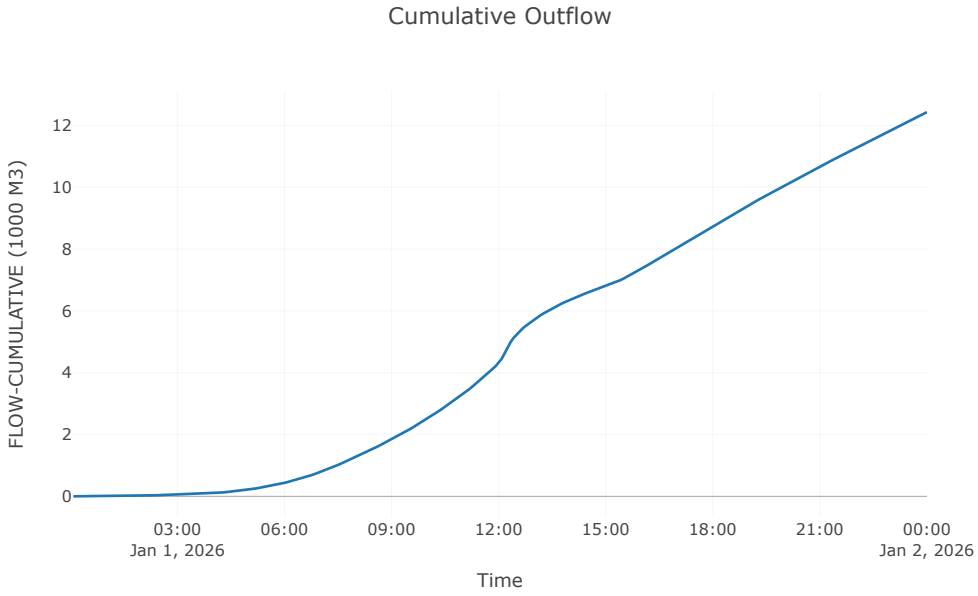
Junction: Junction-POND 2

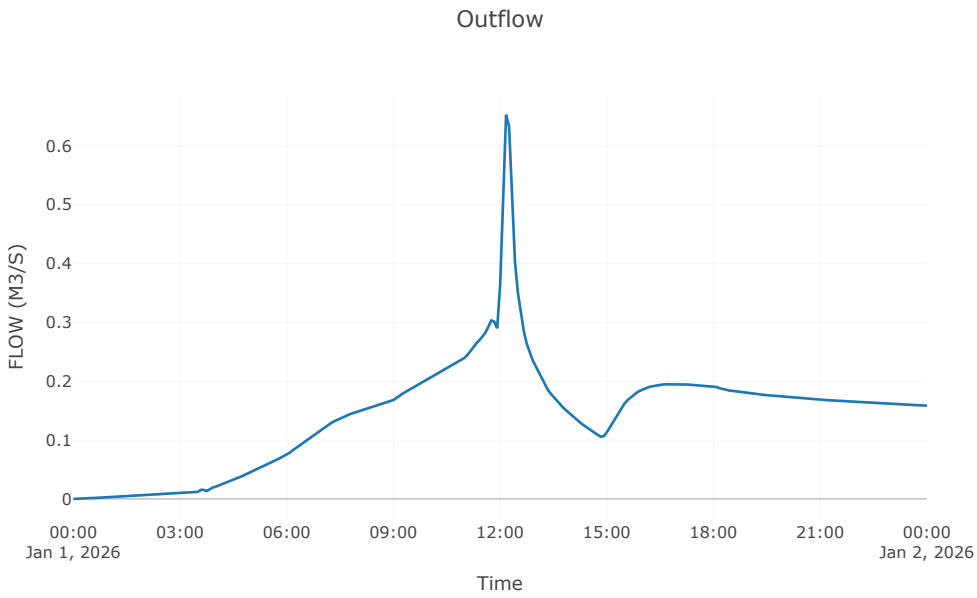
Downstream : Pond 2

Results: Junction-POND 2

Peak Discharge (M3/S)	0.65
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	6.6





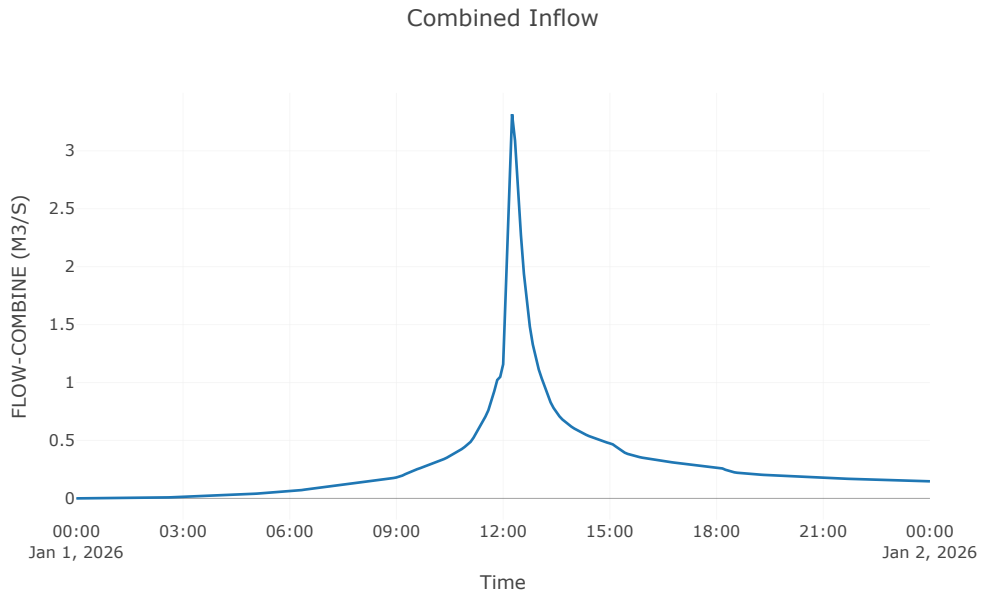

Outflow
FLOW (M3/S)
0.6
0.5
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

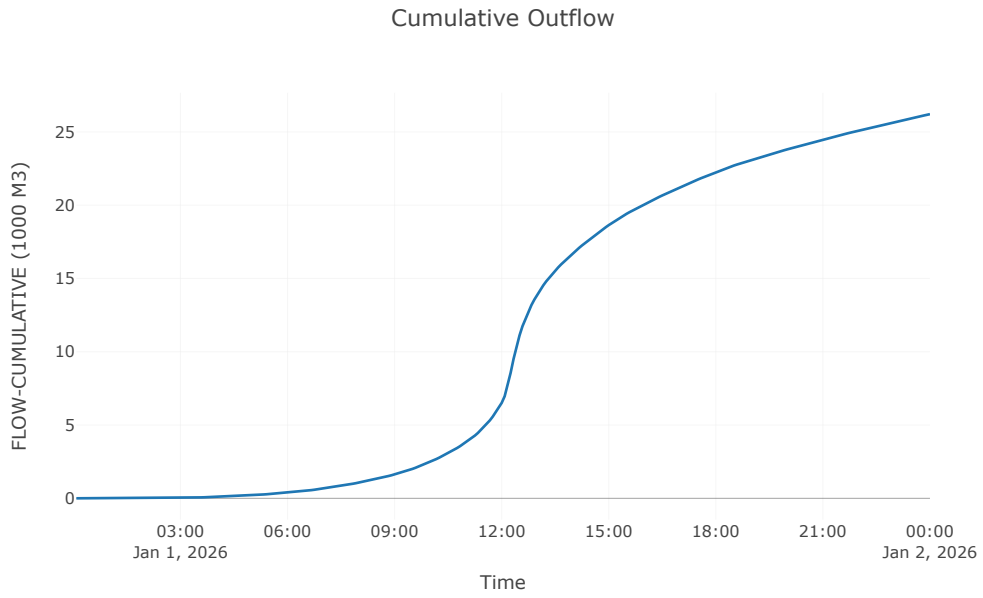
Junction: Junction-CHANNEL 3

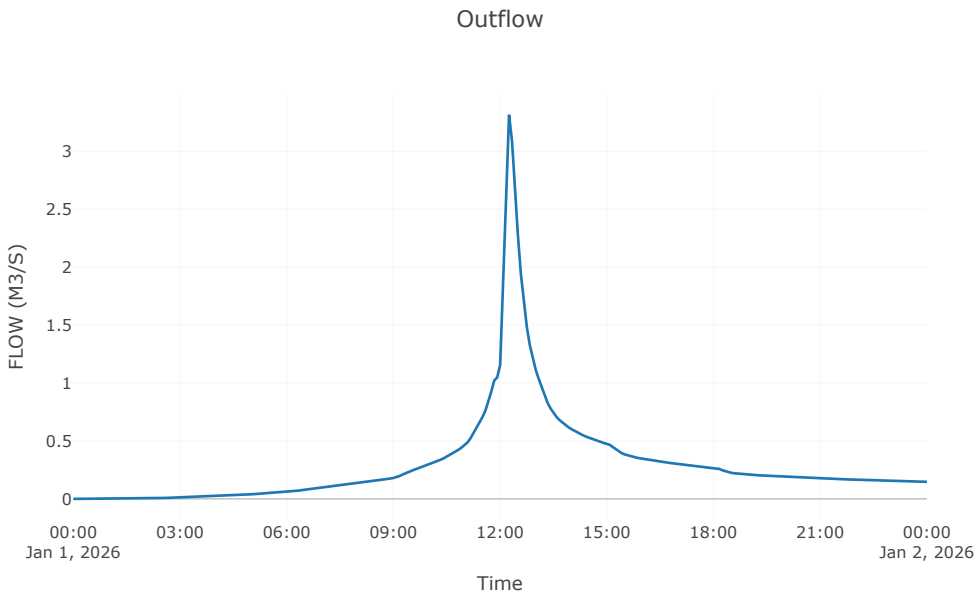
Downstream : Reach - CHANNEL 3

Results: Junction-CHANNEL 3

Peak Discharge (M3/S)	3.32
Time of Peak Discharge	01Jan2026, 12:15
Volume (MM)	53.72





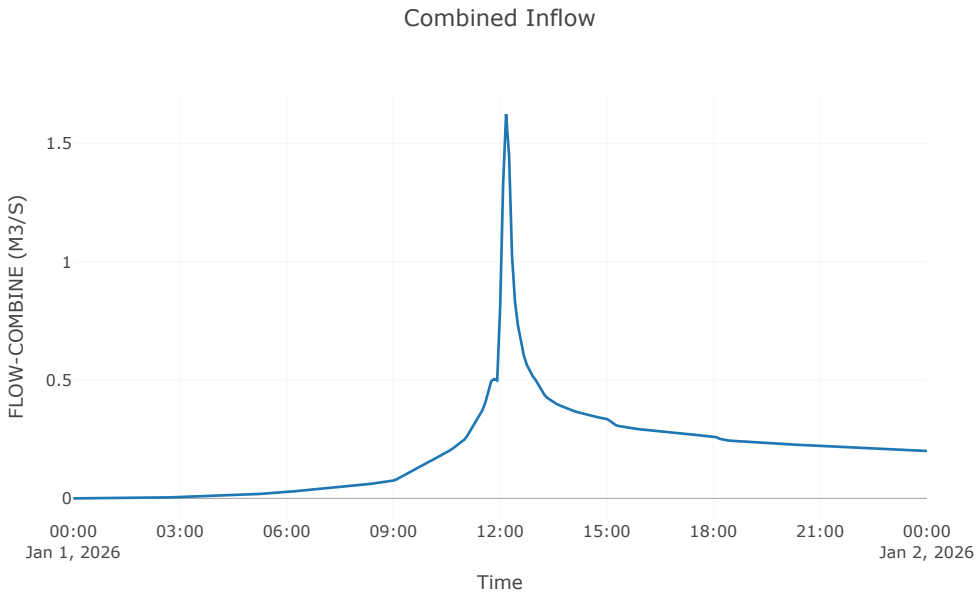

Outflow
FLOW (M3/S)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

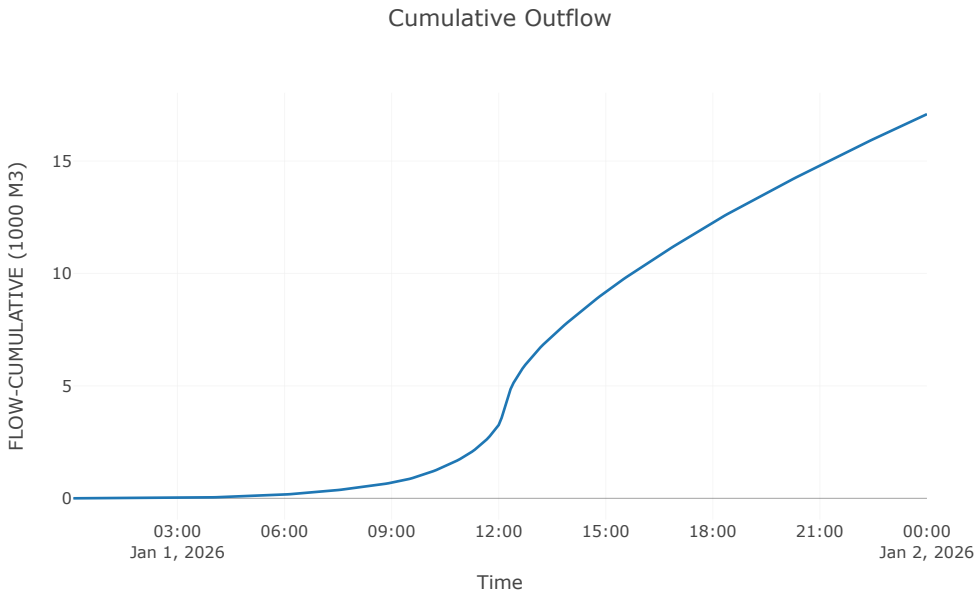
Junction: Junction-CHANNEL 4

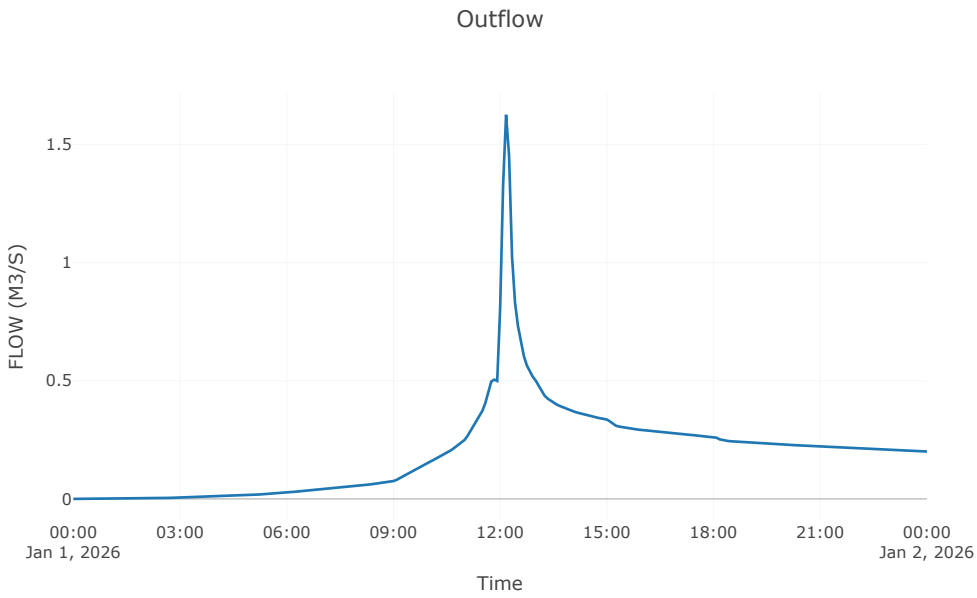
Downstream : Reach - CHANNEL 4

Results: Junction-CHANNEL 4

Peak Discharge (M3/S)	1.62
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	39.54





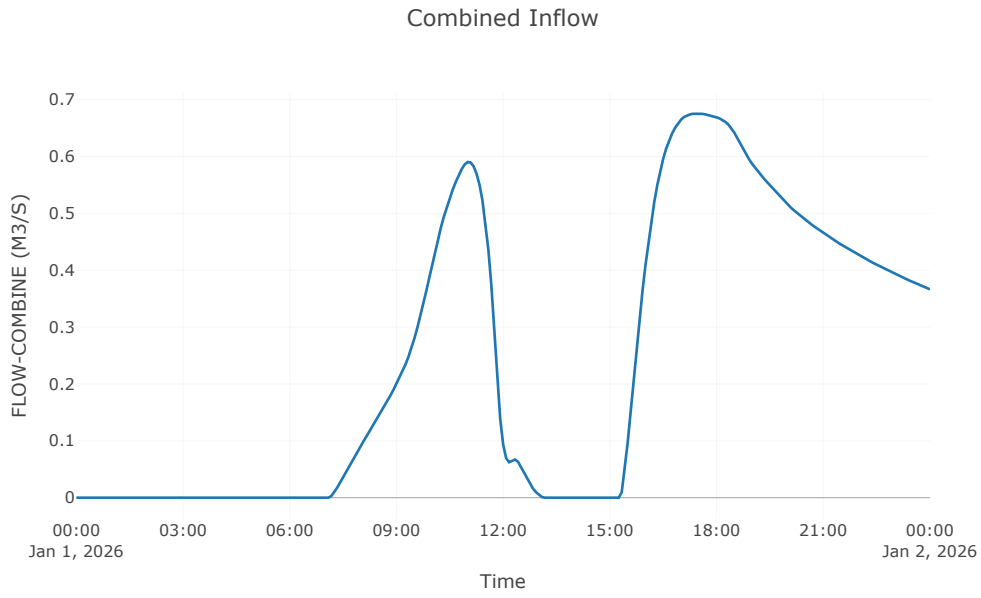

Outflow
FLOW (M3/S)
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

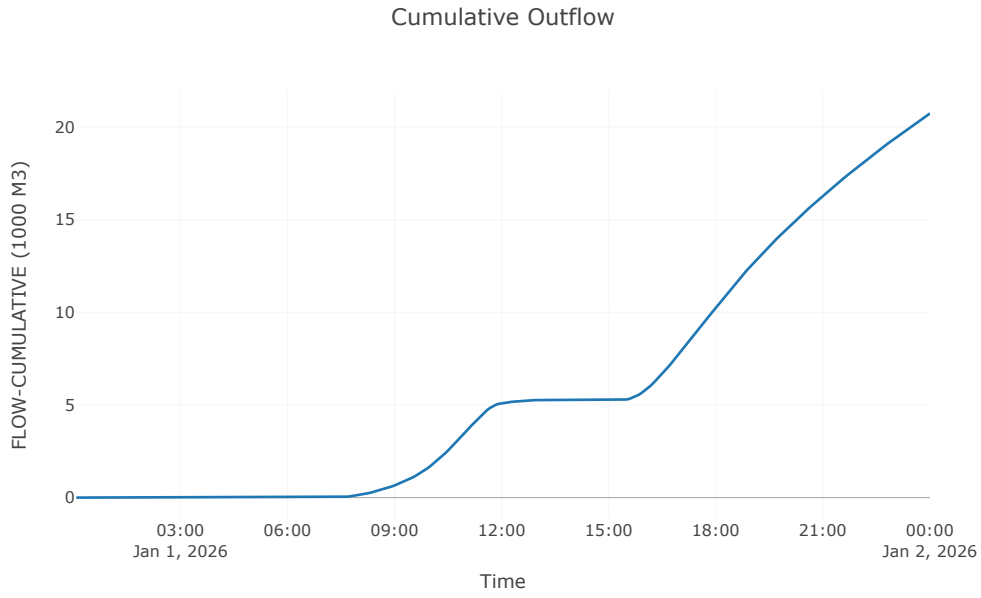
Junction: Junction-CHANNEL 5

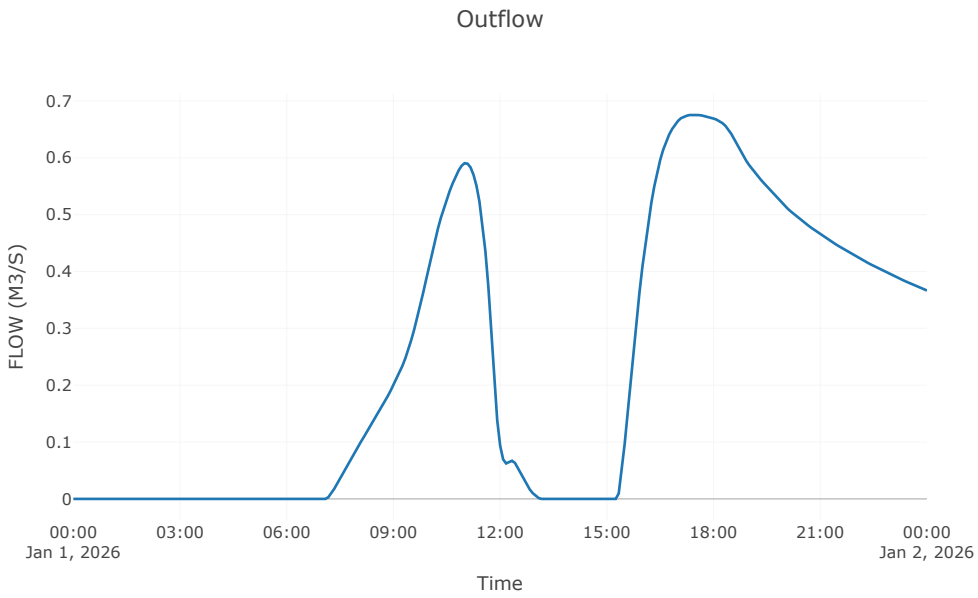
Downstream : Reach - CHANNEL 5

Results: Junction-CHANNEL 5

Peak Discharge (M3/S)	0.68
Time of Peak Discharge	01Jan2026, 17:25





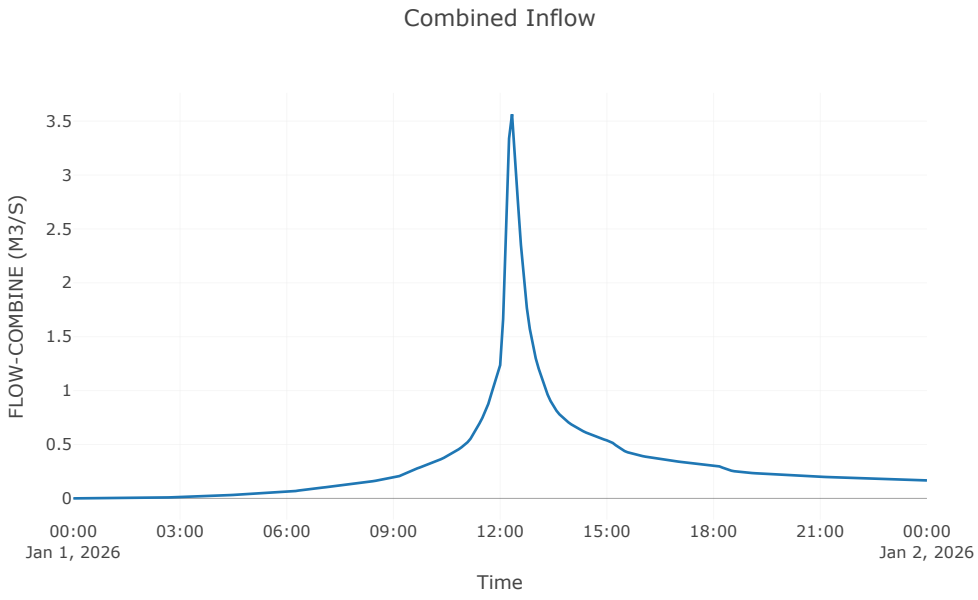

Outflow
FLOW (M3/S)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

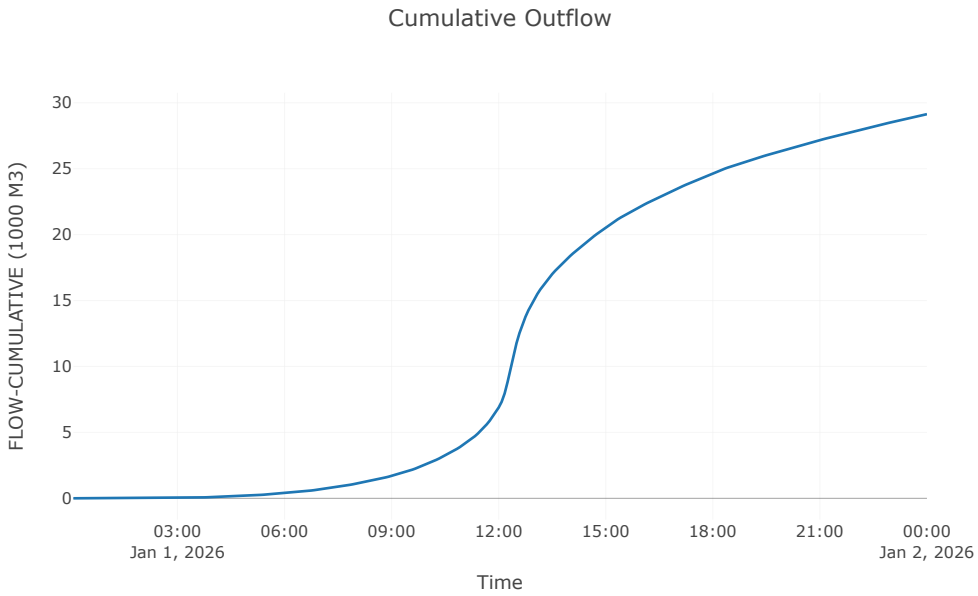
Junction: Junction-POND 6

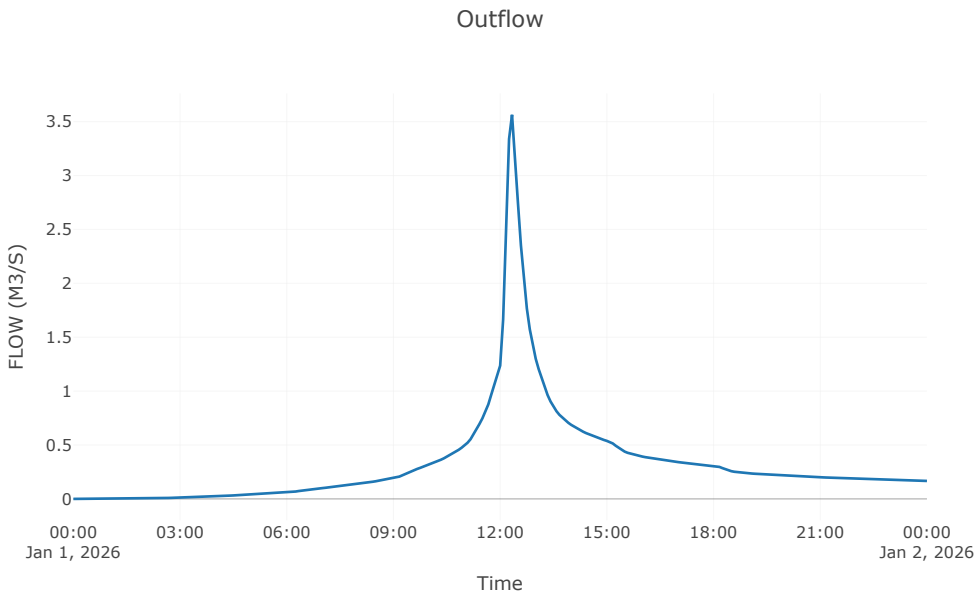
Downstream : Pond 6

Results: Junction-POND 6

Peak Discharge (M3/S)	3.56
Time of Peak Discharge	01Jan2026, 12:20
Volume (MM)	52.01





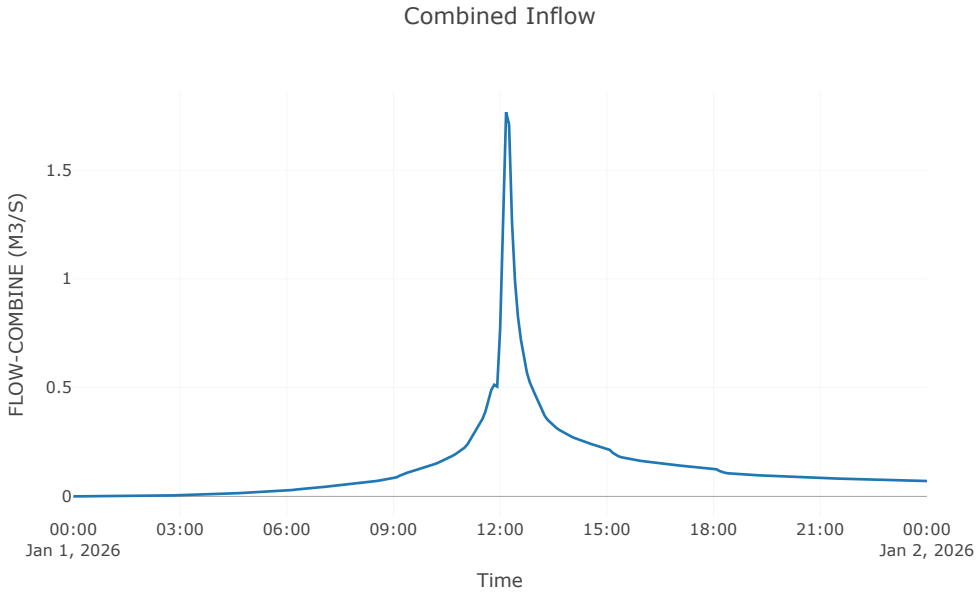

Outflow
FLOW (M3/S)
3.5
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

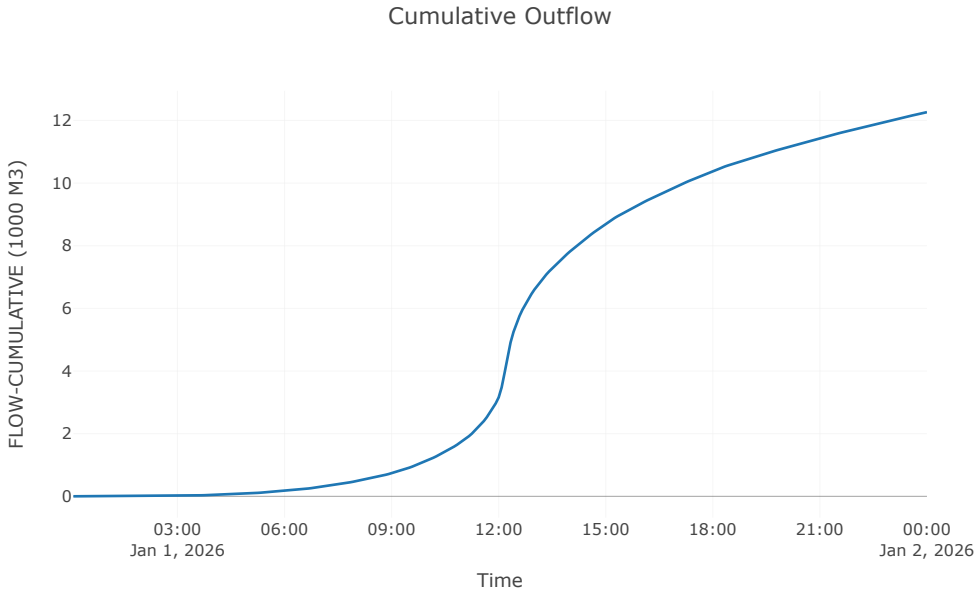
Junction: Junction-POND 7

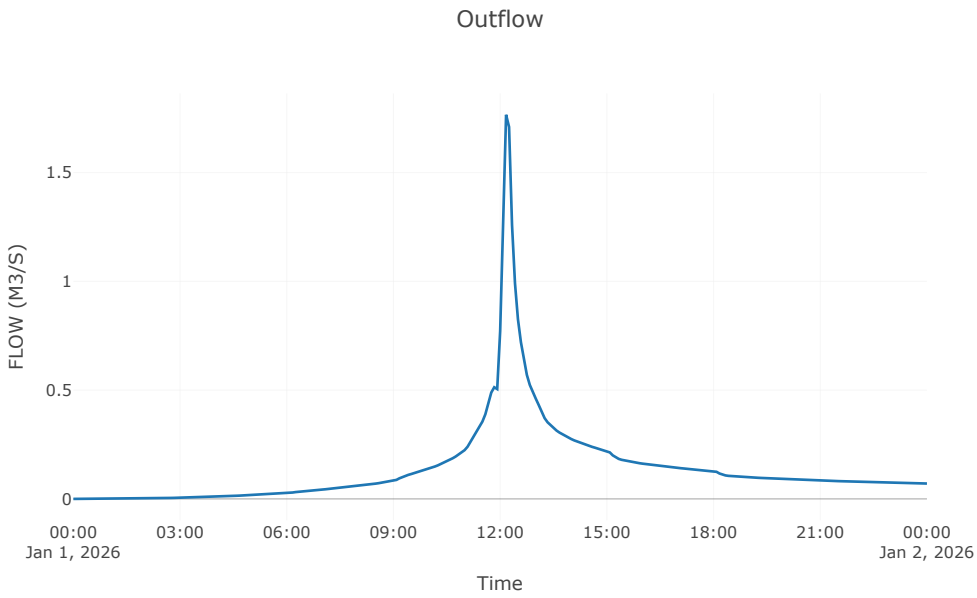
Downstream : Pond 7

Results: Junction-POND 7

Peak Discharge (M3/S)	1.77
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	49.74





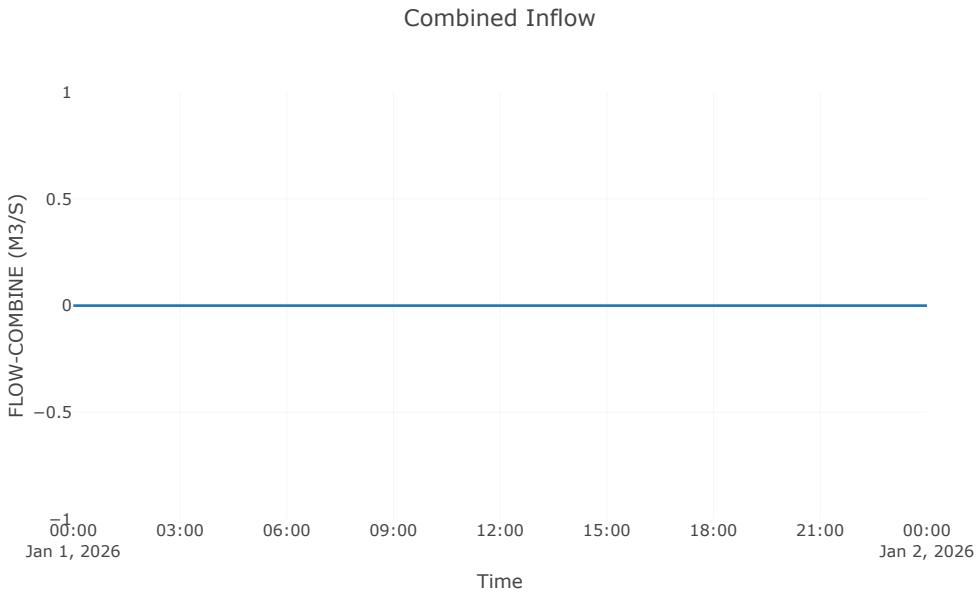

Outflow
FLOW (M3/S)
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

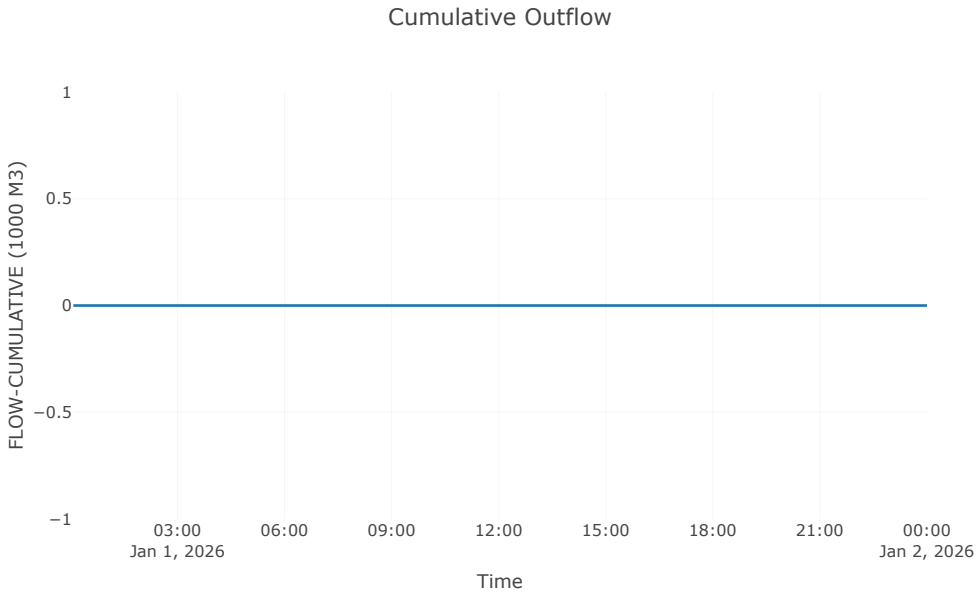
Junction: Junction- POND 1 SPILL

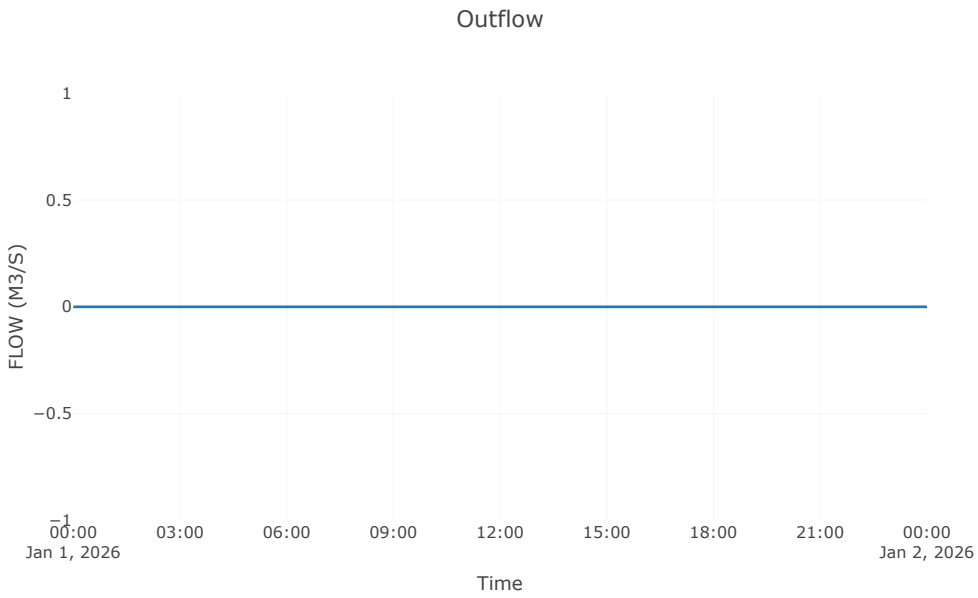
Downstream : Junction - MORVEN FERRY ROAD

Results: Junction- POND 1 SPILL

Peak Discharge (M3/S)	0
Time of Peak Discharge	31Dec2025, 24:00





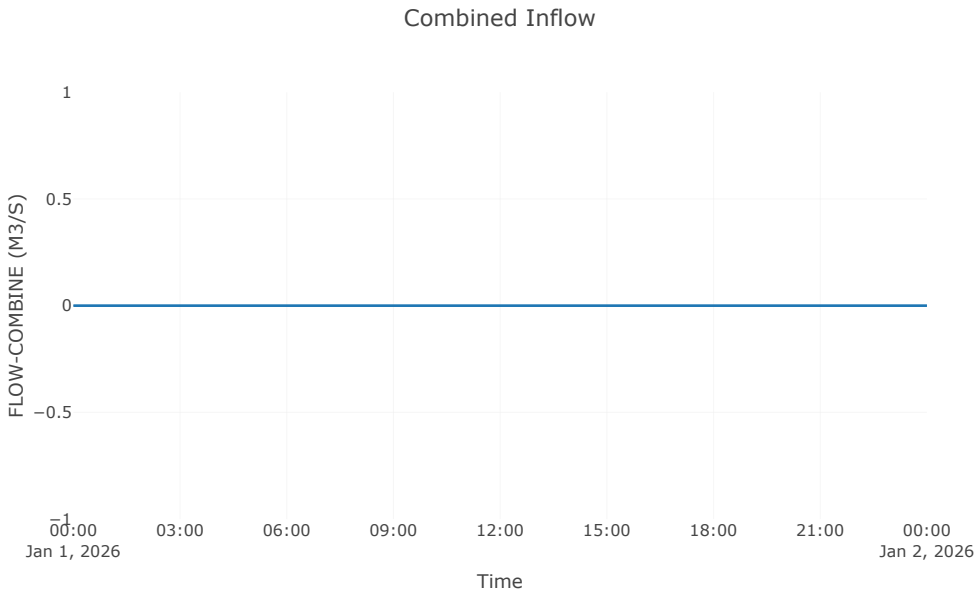

Outflow
1
0.5
0
−0.5
−1
FLOW (M3/S)
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

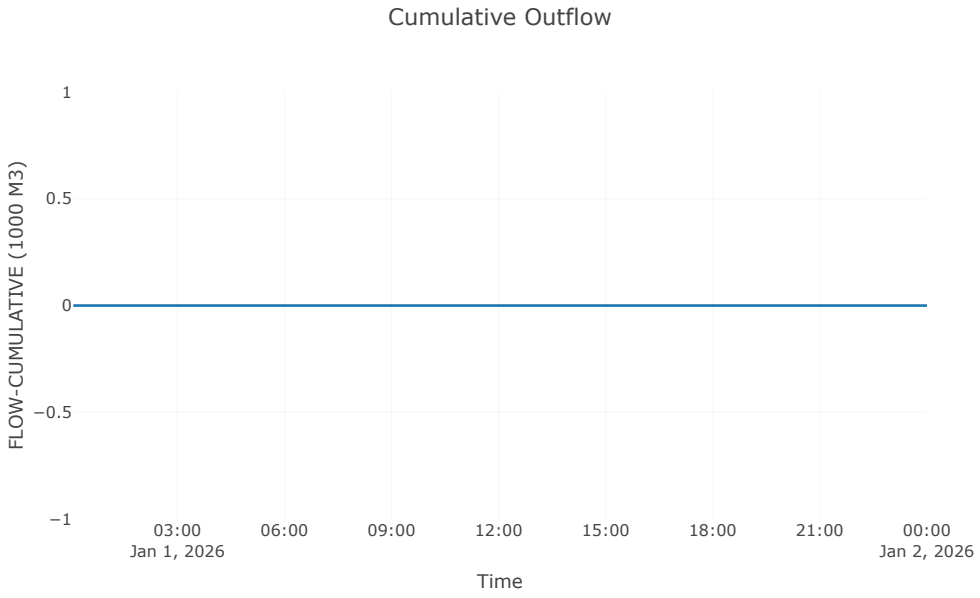
Junction: Junction-POND 2 SPILL

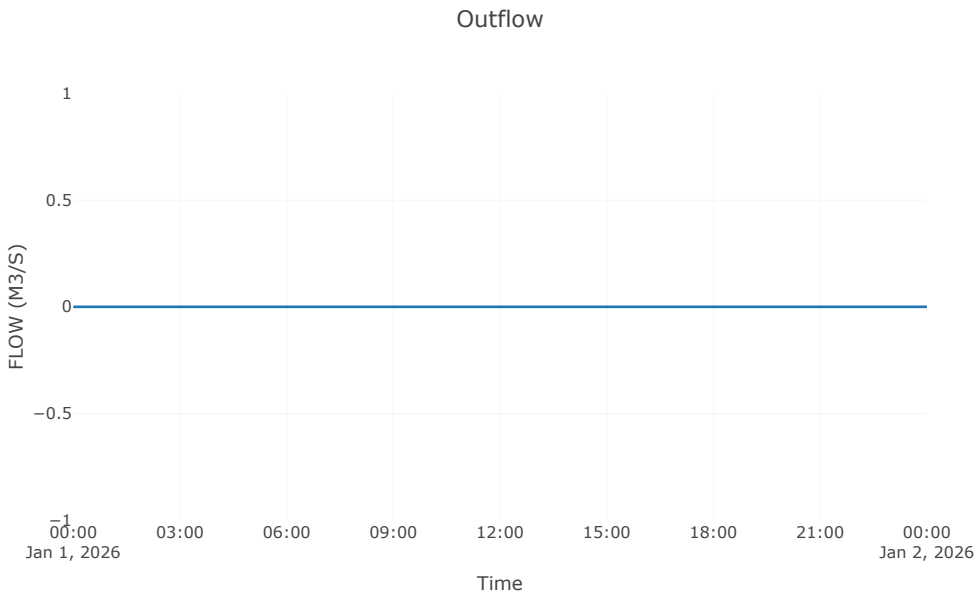
Downstream : Junction - MORVEN FERRY ROAD

Results: Junction-POND 2 SPILL

Peak Discharge (M3/S)	0
Time of Peak Discharge	31Dec2025, 24:00





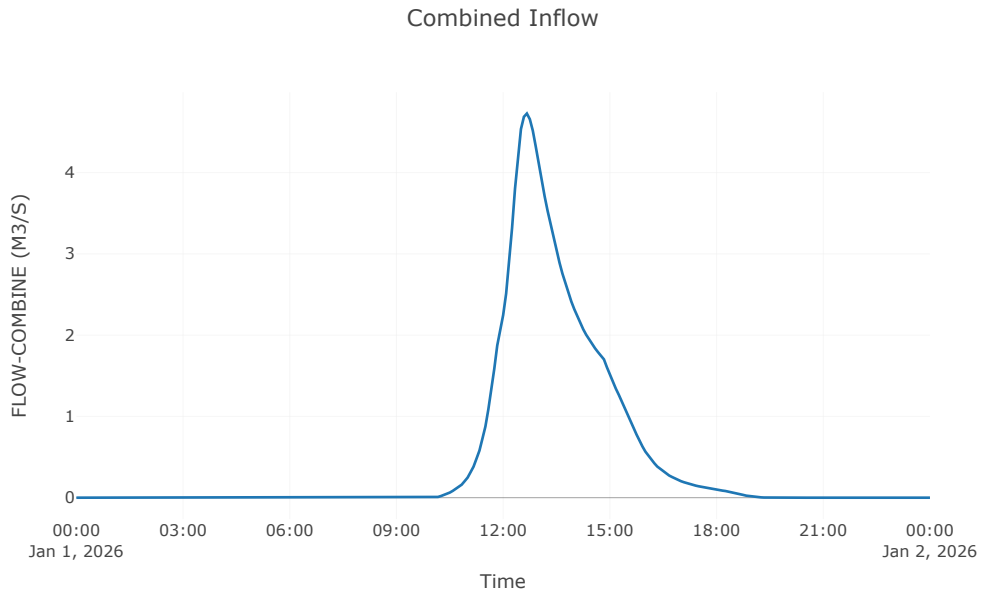

Outflow
1
0.5
0
−0.5
−1
FLOW (M3/S)
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

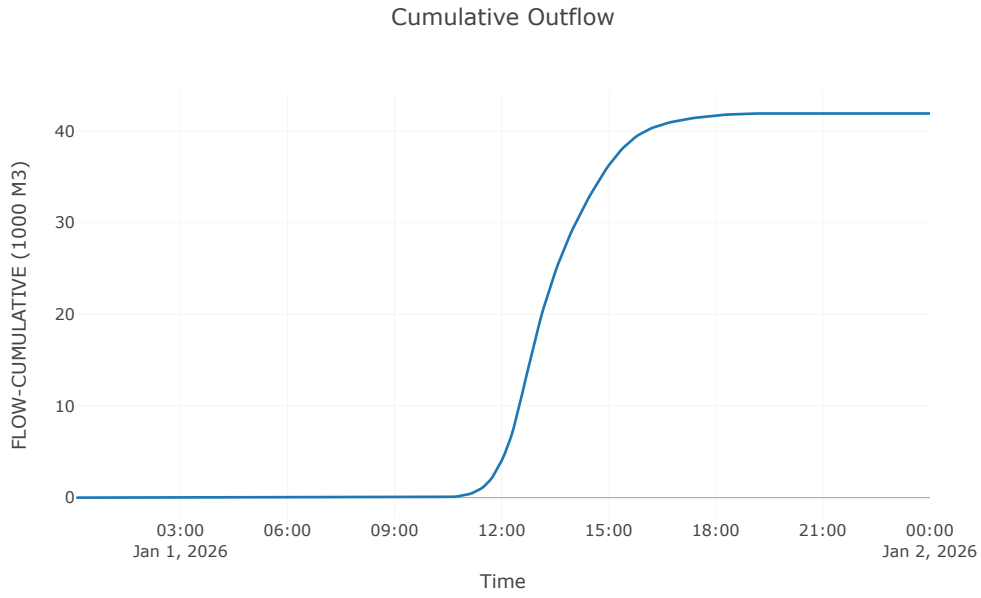
Junction: Junction-PIPE MORVEN FERRY L

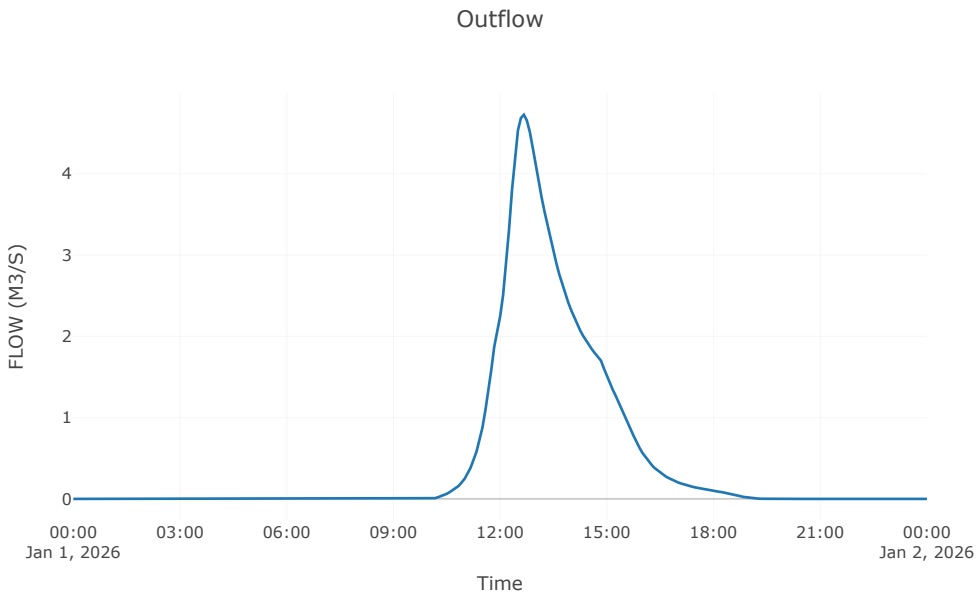
Downstream : Pipe outflow

Results: Junction-PIPE MORVEN FERRY L

Peak Discharge (M3/S)	4.73
Time of Peak Discharge	01Jan2026, 12:40





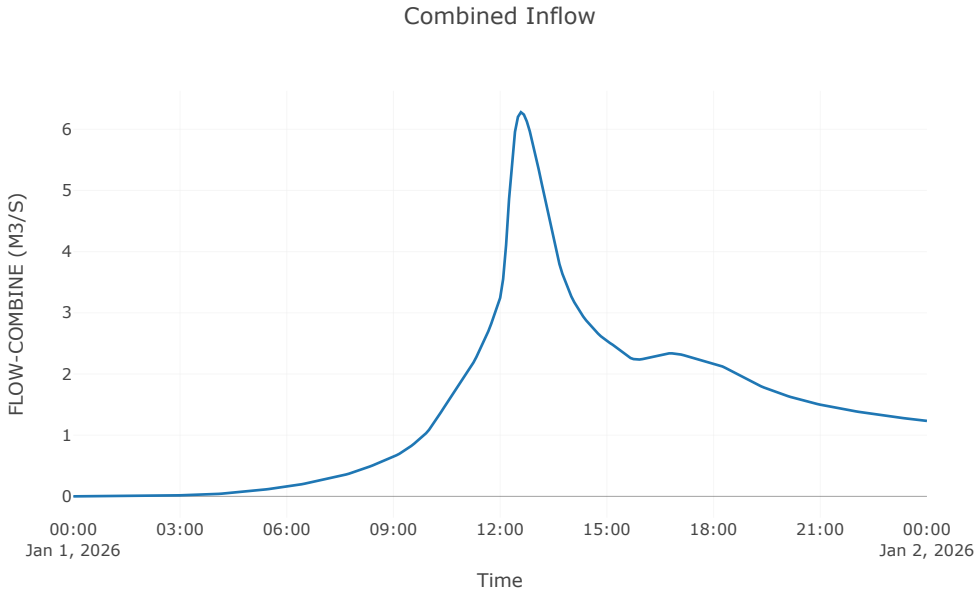

Outflow
FLOW (M3/S)
4
3
2
1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

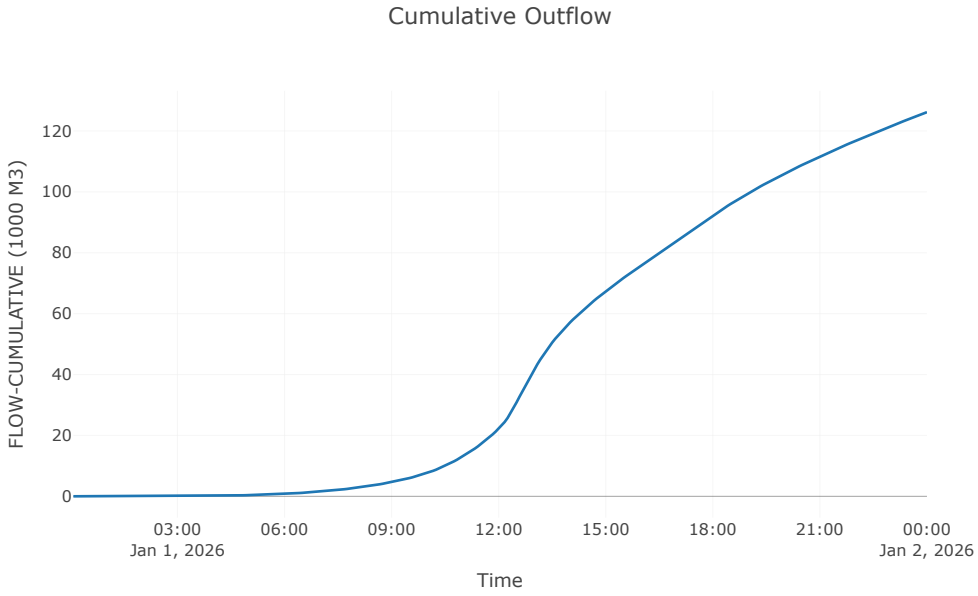
Junction: Junction-MORVEN FERRY PIPE R

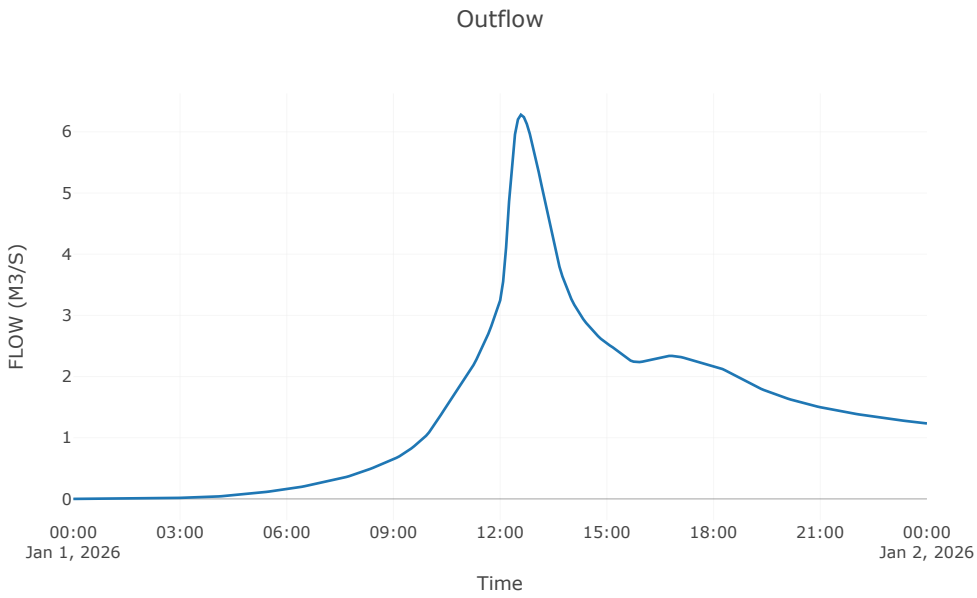
Downstream : Pipe outflow

Results: Junction-MORVEN FERRY PIPE R

Peak Discharge (M3/S)	6.28
Time of Peak Discharge	01Jan2026, 12:35
Volume (MM)	31.83





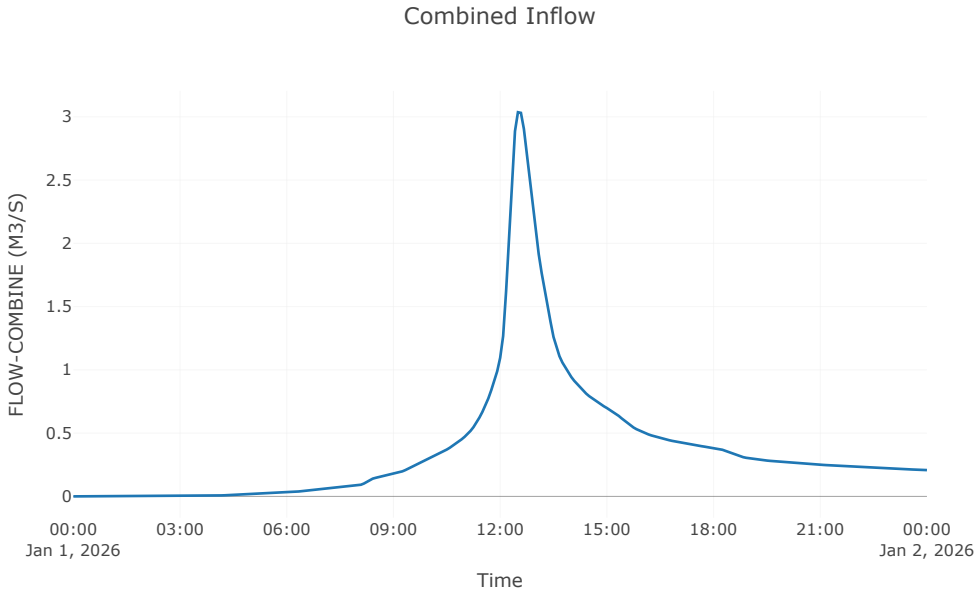

Outflow
FLOW (M3/S)
0
1
2
3
4
5
6
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

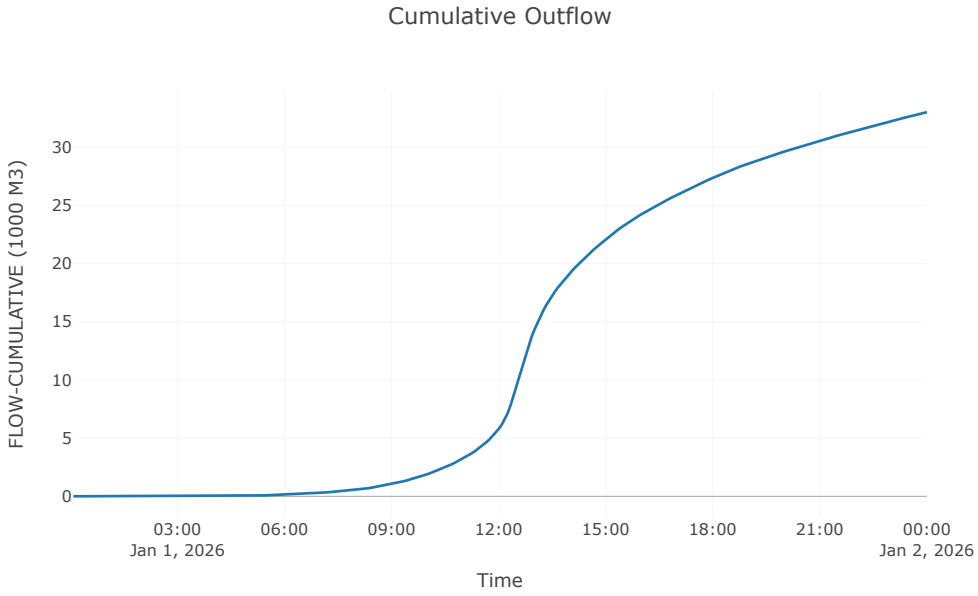
Junction: Junction-MORVEN FERRY ROAD

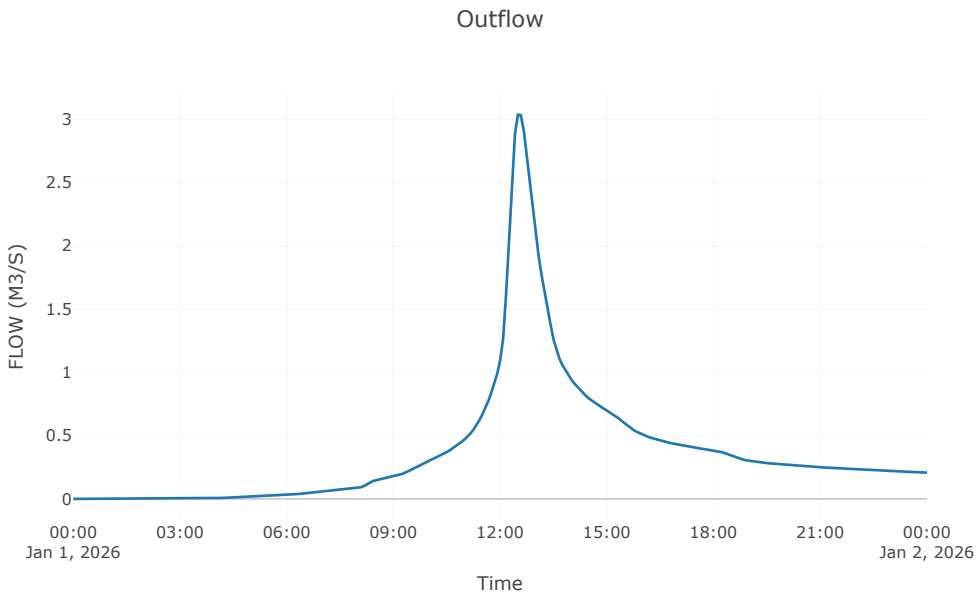
Downstream : Olfp outflow

Results: Junction-MORVEN FERRY ROAD

Peak Discharge (M3/S)	3.04
Time of Peak Discharge	01Jan2026, 12:30
Volume (MM)	44.89





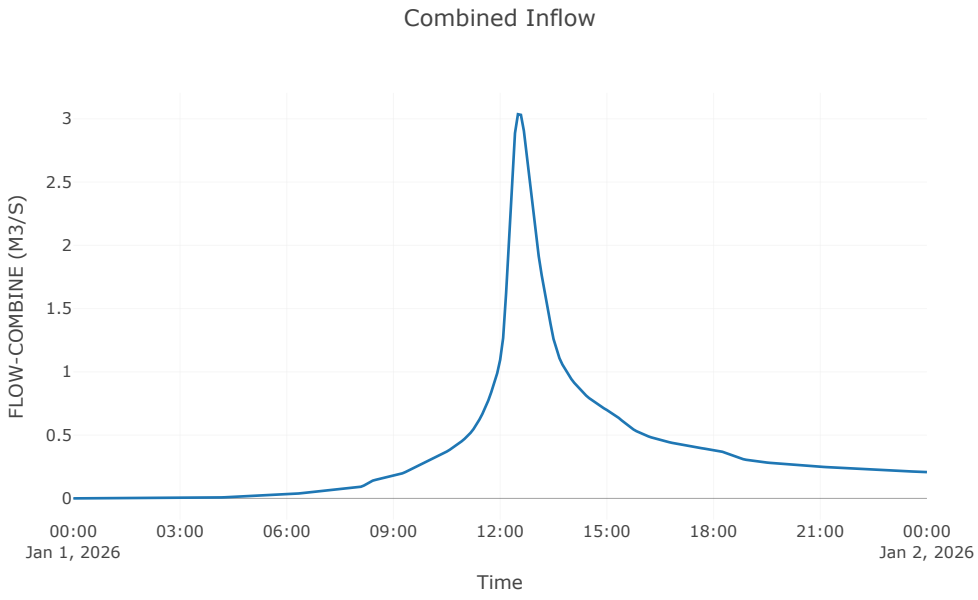

Outflow
FLOW (M3/S)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

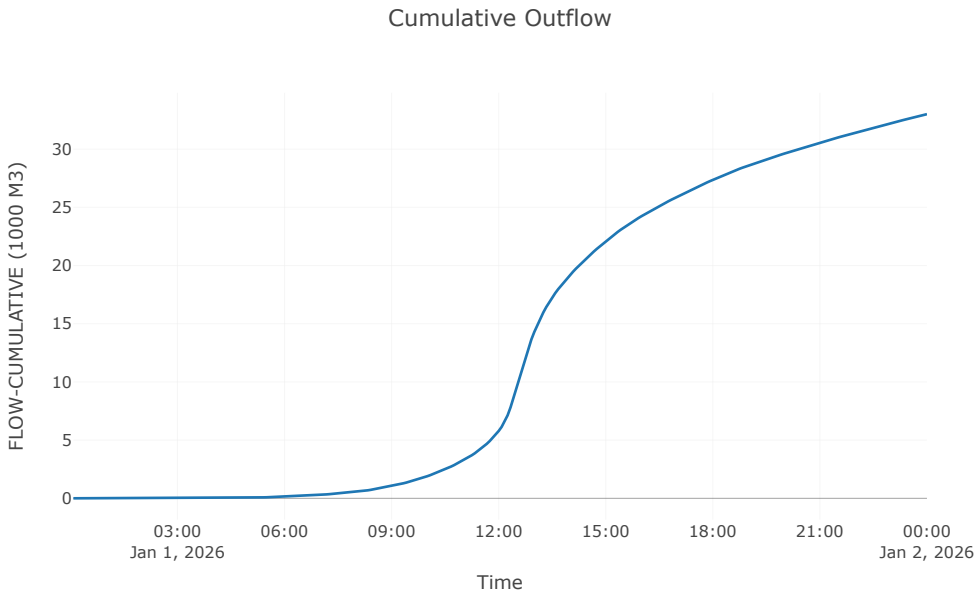
Junction: Junction-EXIT OLFP

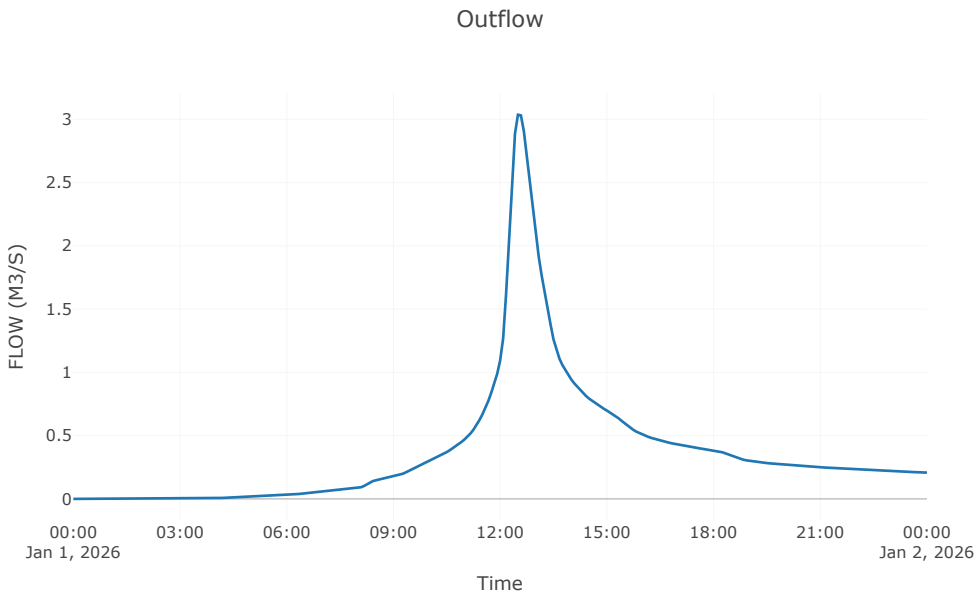
Downstream : Junction - MORVEN FERRY ROAD

Results: Junction-EXIT OLFP

Peak Discharge (M3/S)	3.04
Time of Peak Discharge	01Jan2026, 12:30
Volume (MM)	44.89





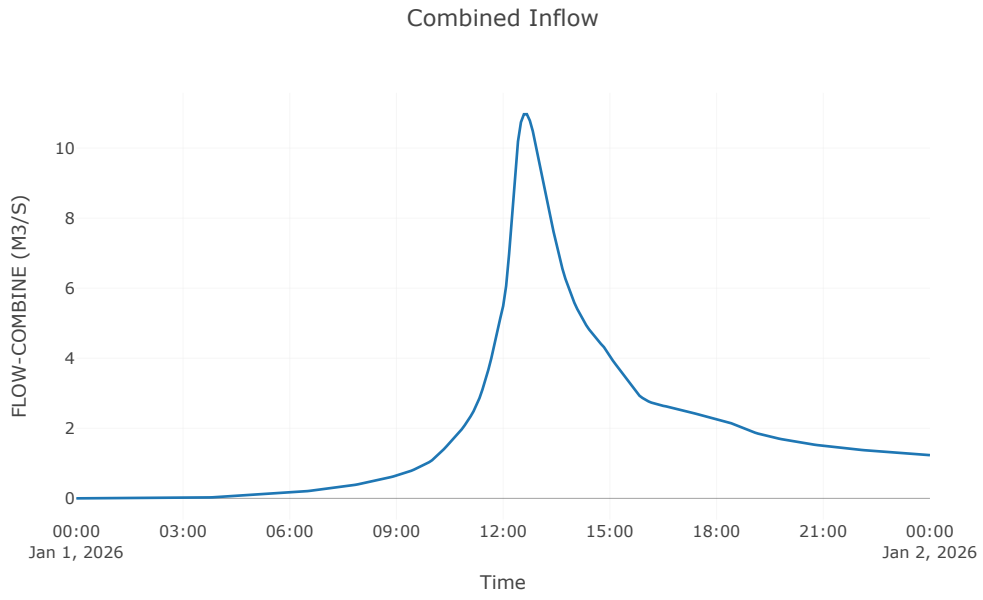

Outflow
FLOW (M3/S)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

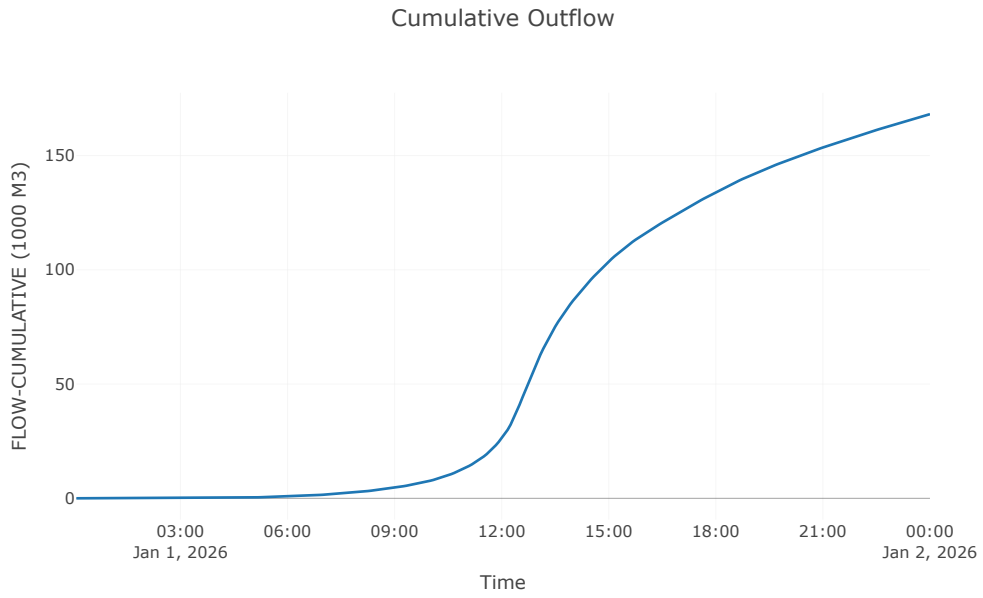
Junction: PIPE OUTFLOW

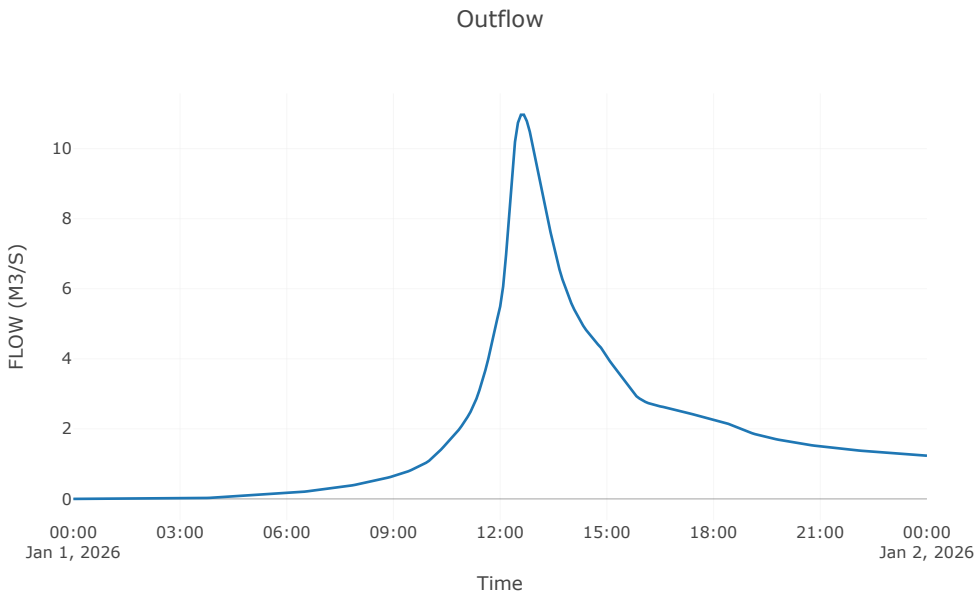
Downstream : Downstream exit

Results: PIPE OUTFLOW

Peak Discharge (M3/S)	10.97
Time of Peak Discharge	01Jan2026, 12:40
Volume (MM)	42.4





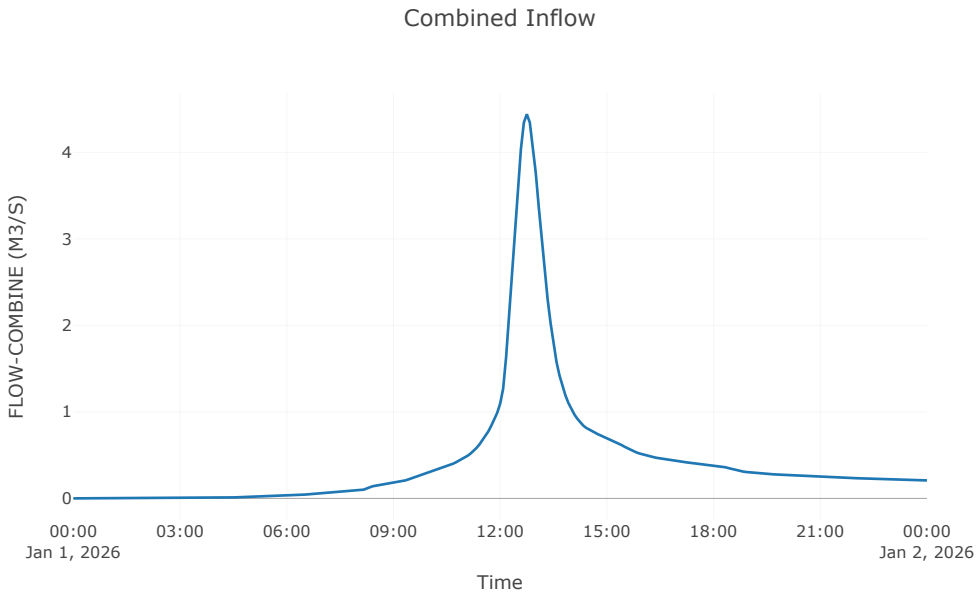

Outflow
FLOW (M3/S)
10
8
6
4
2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

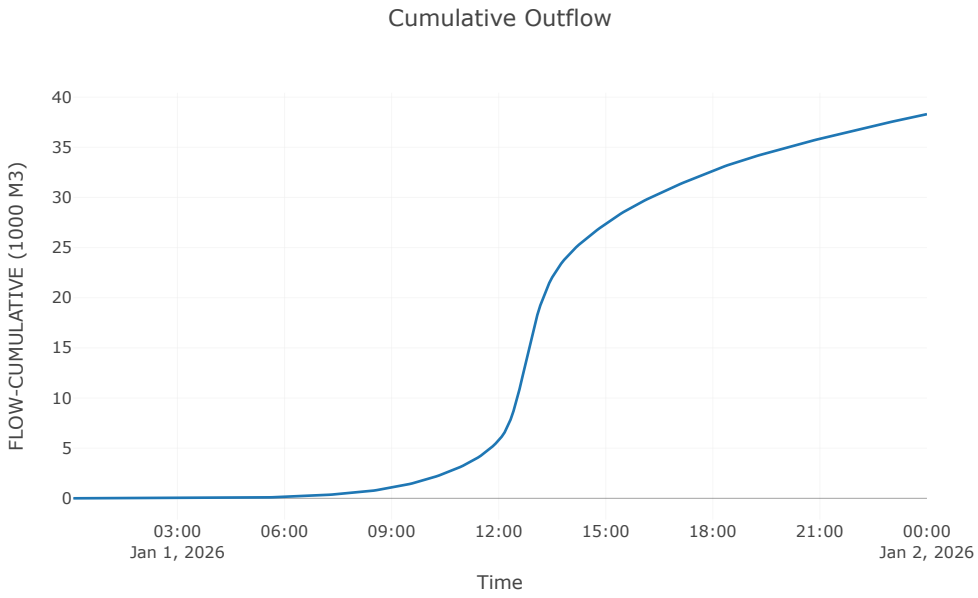
Junction: OLFP OUTFLOW

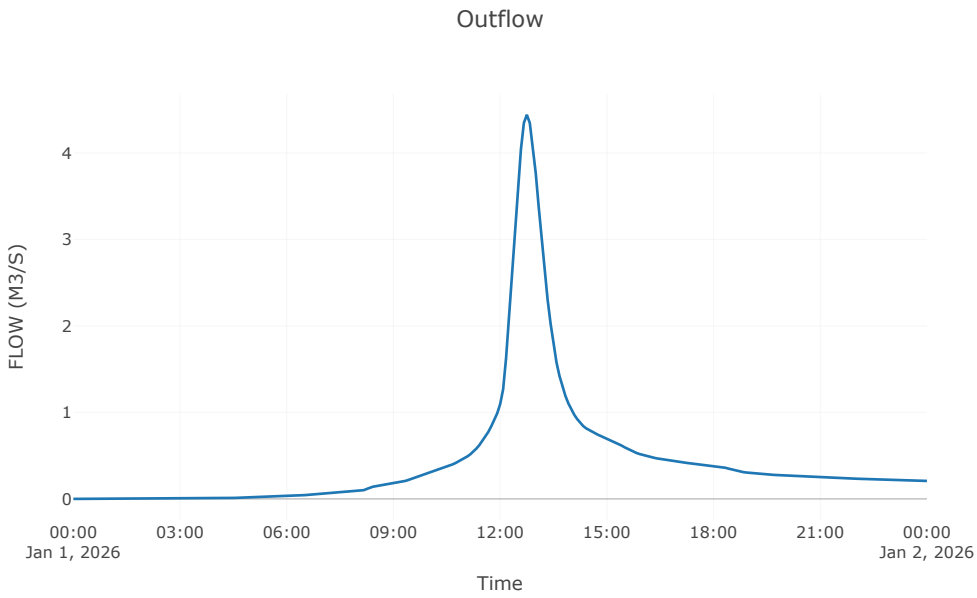
Downstream : Downstream exit

Results: OLFP OUTFLOW

Peak Discharge (M3/S)	4.44
Time of Peak Discharge	01Jan2026, 12:45
Volume (MM)	52.1

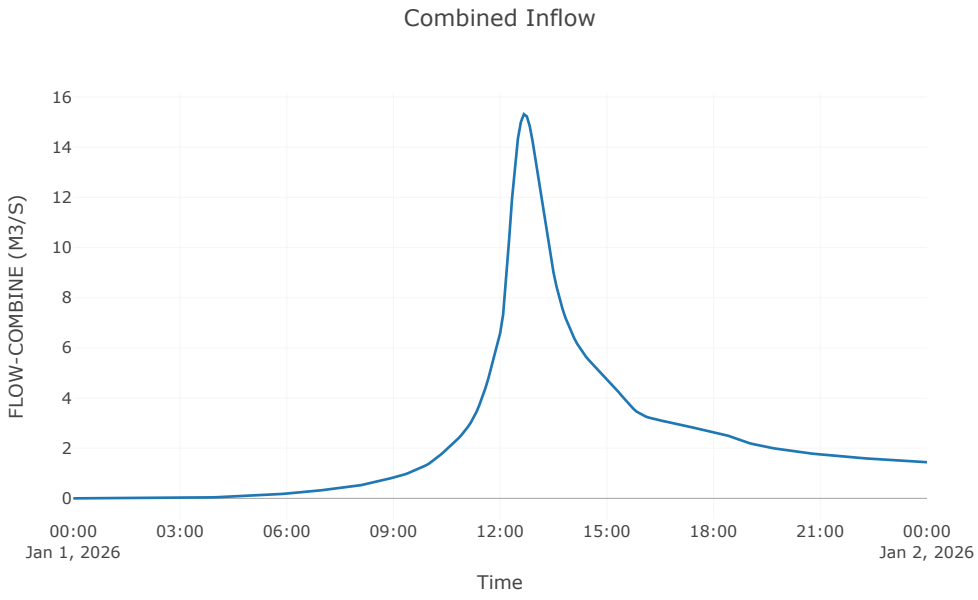


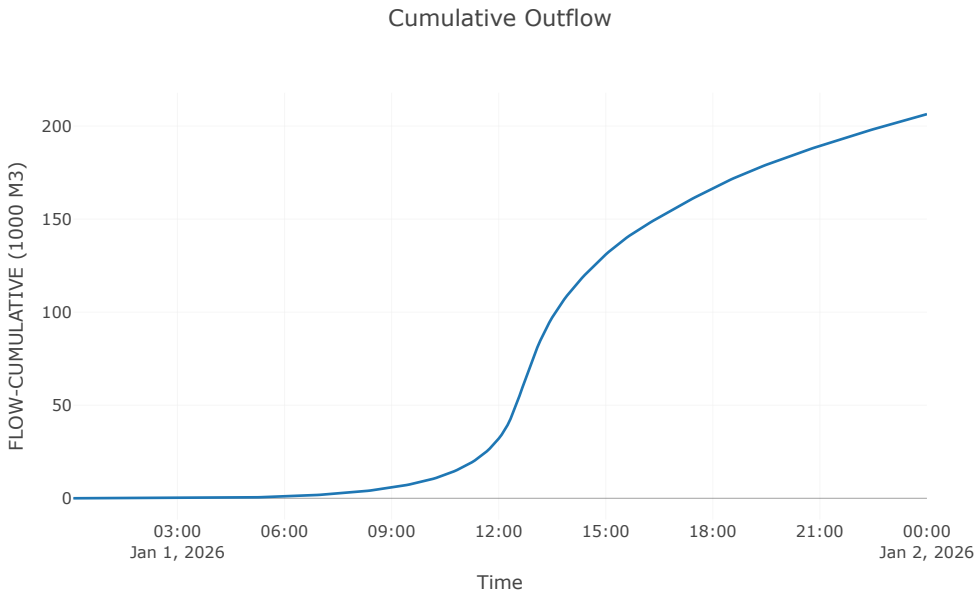


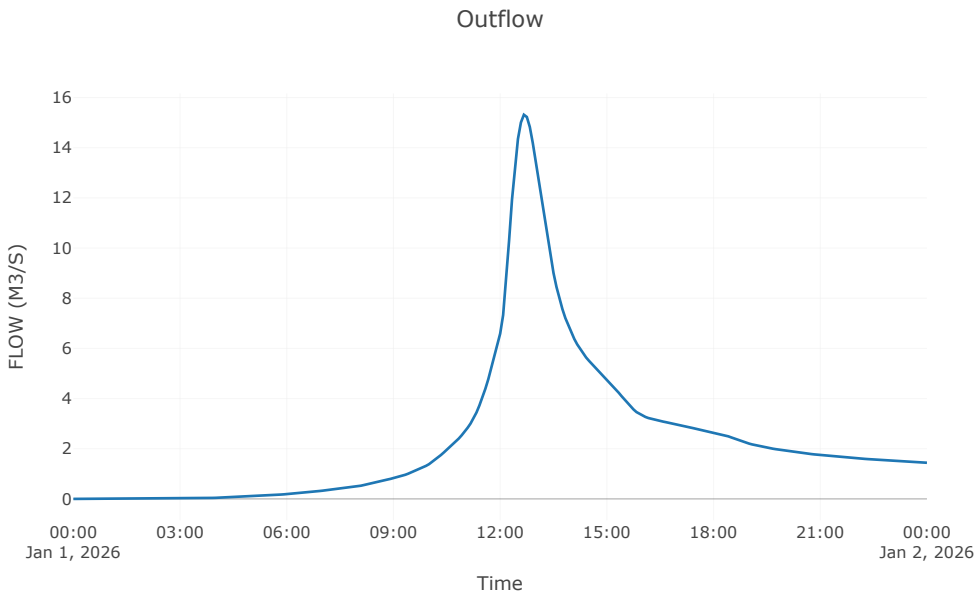

Outflow
FLOW (M3/S)
4
3
2
1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

Sink: DOWNSTREAM EXIT

Results: DOWNSTREAM EXIT	
Peak Discharge (M3/S)	15.31
Time of Peak Discharge	01Jan2026, 12:40
Volume (MM)	43.92






Outflow
FLOW (M3/S)
16
14
12
10
8
6
4
2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

Project: Ponds Finish Surface
Simulation Run: 100YR
Simulation Start: 31 December 2025, 24:00
Simulation End: 1 January 2026, 24:00

HMS Version: 4.13
Executed: 11 February 2026, 01:33

Global Parameter Summary - Reach

	Downstream
Element Name	**Downstream**
Reach - CHANNEL 1	Junction - POND 1
Reach - CHANNEL 2	Junction - POND 1
Reach - CHANNEL 3	Junction - POND 6
Reach - CHANNEL 4	Junction - CHANNEL 1
Reach - CHANNEL 5	Junction - CHANNEL 1
Reach - POND 5 OLFP	Junction - EXIT OLFP
Reach - CHANNEL 6	Junction - POND 7
Reach - CHANNEL 8	Junction - CHANNEL 3
Reach - WETLAND B	Junction - CHANNEL 4
Reach - MORVEN FERRY SWALE	Olfp outflow

Route: Muskingum Cunge

Element Name	Method	Channel	Length (M)	Energy Slope (M/M)	Mannings n	Bottom Width (M)	Side Slope (M/M)	Initial Variable	Space - Time Method	Index Parameter Type	Index Flow	I El
Reach - CHANNEL 1	Muskingum Cunge	Trapezoid	300	0.01	0.06	20	3	Combined Inflow	Automatic DX and DT	Index Flow	15	
Reach - CHANNEL 2	Muskingum Cunge	Trapezoid	520	0.01	0.06	20	3	Combined Inflow	Automatic DX and DT	Index Flow	15	
Reach - CHANNEL 3	Muskingum Cunge	Trapezoid	340	0.01	0.06	20	3	Combined Inflow	Automatic DX and DT	Index Flow	15	
Reach - CHANNEL 4	Muskingum Cunge	Trapezoid	200	0.03	0.06	20	3	Combined Inflow	Automatic DX and DT	Index Flow	15	
Reach - CHANNEL 5	Muskingum Cunge	Trapezoid	300	0	0.06	20	3	Combined Inflow	Automatic DX and DT	Index Flow	15	
Reach - POND 5 OLFP	Muskingum Cunge	Trapezoid	737.85	0.01	0.06	20	3	Combined Inflow	Automatic DX and DT	Index Flow	15	
Reach - CHANNEL 6	Muskingum Cunge	Trapezoid	300	0.02	0.06	20	3	Combined Inflow	Automatic DX and DT	Index Flow	15	
Reach - CHANNEL 8	Muskingum Cunge	Trapezoid	660	0.03	0.06	20	3	Combined Inflow	Automatic DX and DT	Index Flow	15	
Reach - WETLAND B	Muskingum Cunge	Trapezoid	630	0.08	0.06	20	3	Combined Inflow	Automatic DX and DT	Index Flow	15	
Reach - MORVEN FERRY SWALE	Muskingum Cunge	Trapezoid	770	0.01	0.06	20	3	Combined Inflow	Automatic DX and DT	Index Flow	15	

Global Parameter Summary - Subbasin

	Location	
Element Name	Longitude Degrees	Latitude Degrees
Difference pond 1 internal	168.84	-44.99
Difference pond 1 upstream	168.84	-44.99
Difference pond 1 upstream s	168.85	-44.99
Difference pond 2 internal	168.85	-44.99
Difference pond 2 upstream	168.85	-44.99
Difference pond 2 south	168.85	-44.99
Difference pond 5 internal	168.84	-45
Difference pond 5 upstream	168.84	-45
Difference pond 6 upstream	168.83	-44.99
Difference pond 6 internal	168.84	-45
Difference pond 6 south	168.84	-45
Difference pond 7 upstream	168.83	-44.99
Difference pond 7 internal	168.84	-44.99
Difference wetland b upstre	168.84	-44.99
Difference wetland b intern	168.84	-44.99
Morven ferry vectorised	168.84	-44.98
Difference downstream exit	168.85	-45

Area (KM2)

Element Name	Area (KM2)
Difference pond 1 internal	0.21
Difference pond 1 upstream	0.86
Difference pond 1 upstream s	0.01
Difference pond 2 internal	0.03
Difference pond 2 upstream	0.03
Difference pond 2 south	0.02
Difference pond 5 internal	0.11
Difference pond 5 upstream	0.03
Difference pond 6 upstream	0.2
Difference pond 6 internal	0.29
Difference pond 6 south	0.07
Difference pond 7 upstream	0.16
Difference pond 7 internal	0.09
Difference wetland b upstre	0.1
Difference wetland b intern	0.08
Morven ferry vectorised	1.8
Difference downstream exit	0.6

Downstream

Element Name	Downstream
Difference pond 1 internal	Junction - POND 1
Difference pond 1 upstream	Junction - CHANNEL 1
Difference pond 1 upstream s	Junction - POND 1
Difference pond 2 internal	Junction - POND 2
Difference pond 2 upstream	Pond 3 drybasin
Difference pond 2 south	Junction - POND 2
Difference pond 5 internal	Pond 5
Difference pond 5 upstream	Pond 5
Difference pond 6 upstream	Reach - CHANNEL 8
Difference pond 6 internal	Junction - CHANNEL 3
Difference pond 6 south	Junction - POND 6
Difference pond 7 upstream	Reach - CHANNEL 6
Difference pond 7 internal	Junction - POND 7
Difference wetland b upstre	Junction - CHANNEL 4
Difference wetland b intern	Junction - CHANNEL 4
Morven ferry vectorised	Swale morven ferry l
Difference downstream exit	Junction - EXIT OLFP

Loss Rate: Scs

Element Name	Percent Impervious Area	Curve Number	Initial Abstraction
Difference pond 1 internal	0	90.8	1.29
Difference pond 1 upstream	0	75.2	4.19
Difference pond 1 upstream s	0	74	4.46
Difference pond 2 internal	0	94.4	0.75
Difference pond 2 upstream	0	78.8	3.42
Difference pond 2 south	0	98	0
Difference pond 5 internal	0	87.2	1.86
Difference pond 5 upstream	0	74	4.46
Difference pond 6 upstream	0	74	4.46
Difference pond 6 internal	0	88.4	1.67
Difference pond 6 south	0	74	4.46
Difference pond 7 upstream	0	74	4.46
Difference pond 7 internal	0	90.1	1.4
Difference wetland b upstre	0	75.2	4.19
Difference wetland b intern	0	88.4	1.67
Morven ferry vectorised	0	75.2	4.19
Difference downstream exit	0	75.7	4.08

Transform: Scs

Element Name	Lag	Unitgraph Type
Difference pond 1 internal	15.03	Standard
Difference pond 1 upstream	15.18	Standard
Difference pond 1 upstream s	8.07	Standard
Difference pond 2 internal	9.53	Standard
Difference pond 2 upstream	11.22	Standard
Difference pond 2 south	6.97	Standard
Difference pond 5 internal	12.18	Standard
Difference pond 5 upstream	3.21	Standard
Difference pond 6 upstream	3.86	Standard
Difference pond 6 internal	16.51	Standard
Difference pond 6 south	10.61	Standard
Difference pond 7 upstream	3.16	Standard
Difference pond 7 internal	11.53	Standard
Difference wetland b upstre	6.14	Standard
Difference wetland b intern	6.97	Standard
Morven ferry vectorised	30.44	Standard
Difference downstream exit	26.55	Standard

Global Results Summary

Hydrologic Element	Drainage Area (KM2)	Peak Discharge (M3/S)	Time of Peak	Volume (MM)
Swale morven ferry l	1.8	9.21	01Jan2026, 12:35	62.57
Pond 1	2.08	6.38	01Jan2026, 12:20	89.63
Pond 2	1.88	0.63	01Jan2026, 12:15	8.65
Pond 3 drybasin	1.83	0.19	01Jan2026, 11:30	5.83
Pond 5	0.14	1.05	01Jan2026, 12:30	90.29
Pond 6	0.56	2.15	01Jan2026, 13:00	82.17
Pond 7	0.25	0.89	01Jan2026, 12:50	51.77
Reach - CHANNEL 1	1.3	12.04	01Jan2026, 12:20	107.57
Reach - CHANNEL 2	0.56	2.14	01Jan2026, 13:10	81.98
Reach - CHANNEL 3	0.49	6.08	01Jan2026, 12:20	88.66
Reach - CHANNEL 4	0.43	2.9	01Jan2026, 12:10	66.49
Reach - CHANNEL 5	0	1.49	01Jan2026, 11:40	Not specified
Reach - POND 5 OLFP	0.14	1.03	01Jan2026, 12:35	90.11
Reach - CHANNEL 6	0.16	2.28	01Jan2026, 12:10	72.4
Reach - CHANNEL 8	0.2	2.87	01Jan2026, 12:15	72.43
Reach - WETLAND B	0.25	0.88	01Jan2026, 12:55	51.6
Reach - MORVEN FERRY SWALE	0	4.43	01Jan2026, 12:45	Not specified
Difference pond 1 internal	0.21	3.03	01Jan2026, 12:20	105.76
Difference pond 1 upstream	0.86	8.88	01Jan2026, 12:20	74.23

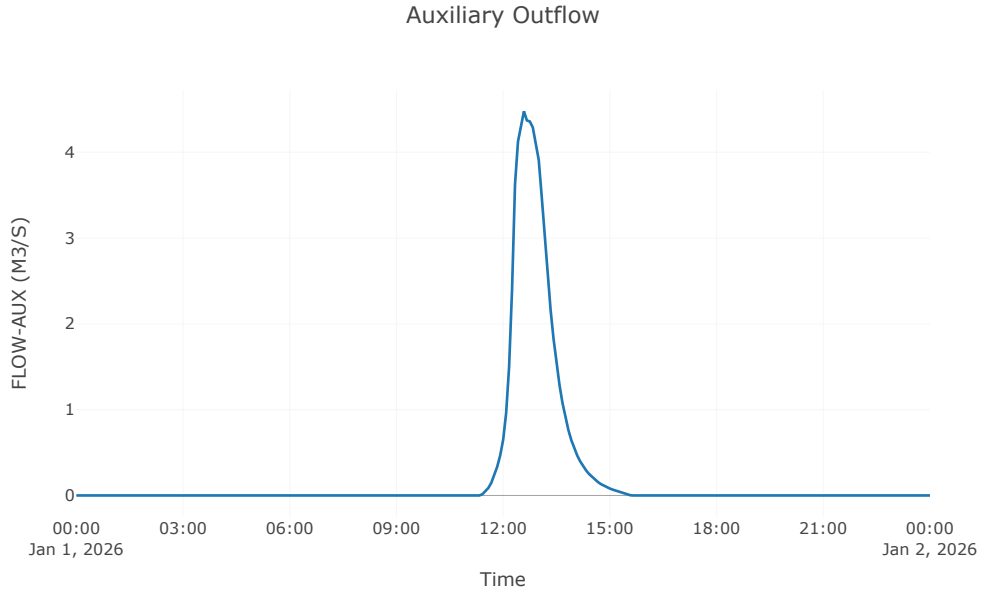
Difference pond 1 upstream s	0.01	0.17	01Jan2026, 12:10	72.3
Difference pond 2 internal	0.03	0.46	01Jan2026, 12:15	114.42
Difference pond 2 upstream	0.03	0.39	01Jan2026, 12:15	80.97
Difference pond 2 south	0.02	0.48	01Jan2026, 12:10	123.75
Difference pond 5 internal	0.11	1.62	01Jan2026, 12:15	97.89
Difference pond 5 upstream	0.03	0.4	01Jan2026, 12:10	72.44
Difference pond 6 upstream	0.2	2.91	01Jan2026, 12:10	72.43
Difference pond 6 internal	0.29	3.78	01Jan2026, 12:20	100.34
Difference pond 6 south	0.07	0.84	01Jan2026, 12:15	72.23
Difference pond 7 upstream	0.16	2.32	01Jan2026, 12:10	72.44
Difference pond 7 internal	0.09	1.36	01Jan2026, 12:15	104.29
Difference wetland b upstre	0.1	1.4	01Jan2026, 12:10	74.49
Difference wetland b intern	0.08	1.51	01Jan2026, 12:10	100.66
Morven ferry vectorised	1.8	13.32	01Jan2026, 12:35	73.77
Difference downstream exit	0.6	4.78	01Jan2026, 12:30	74.78
Junction - POND 1	2.08	16.37	01Jan2026, 12:20	100.27
Junction - CHANNEL 1	1.3	12.24	01Jan2026, 12:15	107.76
Junction - POND 2	1.88	1.1	01Jan2026, 12:10	8.82
Junction - CHANNEL 3	0.49	6.36	01Jan2026, 12:15	88.74
Junction - CHANNEL 4	0.43	3.06	01Jan2026, 12:10	66.55
Junction - CHANNEL 5	0	1.49	01Jan2026, 11:30	Not specified
Junction - POND 6	0.56	6.79	01Jan2026, 12:20	86.54
Junction - POND 7	0.25	3.48	01Jan2026, 12:10	83.48
Junction - POND 1 SPILL	0	9.52	01Jan2026, 12:20	Not specified
Junction - POND 2 SPILL	0	0.44	01Jan2026, 12:15	Not specified
Junction - PIPE MORVEN FERRY L	0	7.69	01Jan2026, 12:30	Not specified
Junction - MORVEN FERRY PIPE R	3.96	7.01	01Jan2026, 12:20	51.19
Junction - MORVEN FERRY ROAD	0.74	14.99	01Jan2026, 12:25	104.81
Junction - EXIT OLFP	0.74	5.75	01Jan2026, 12:30	77.65
Pipe outflow	3.96	14.63	01Jan2026, 12:30	65.48
Olfp outflow	0.74	17.08	01Jan2026, 12:25	132.31
Downstream exit	4.7	31.56	01Jan2026, 12:30	75.93

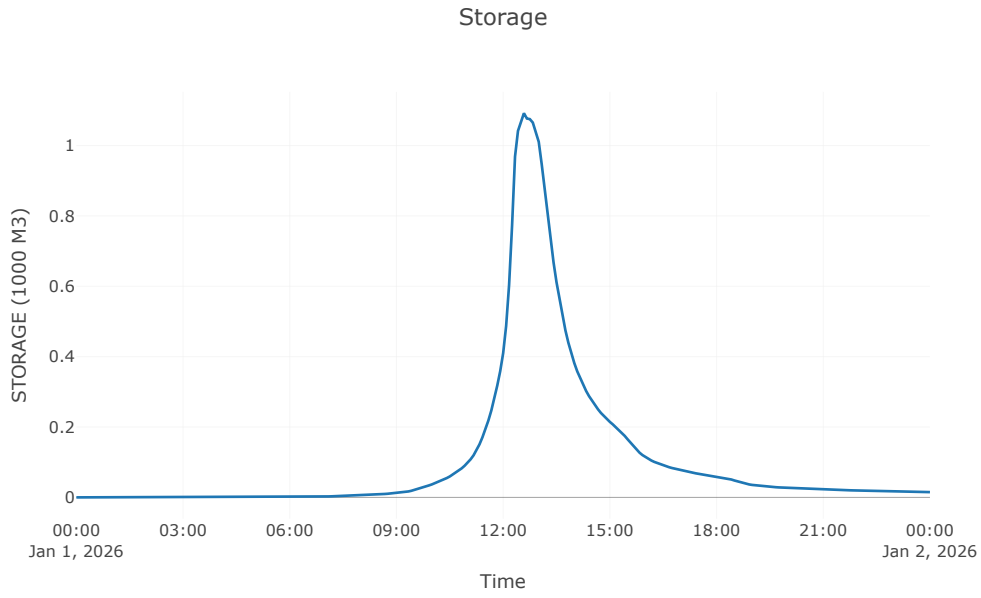
Reservoir: SWALE MORVEN FERRY L

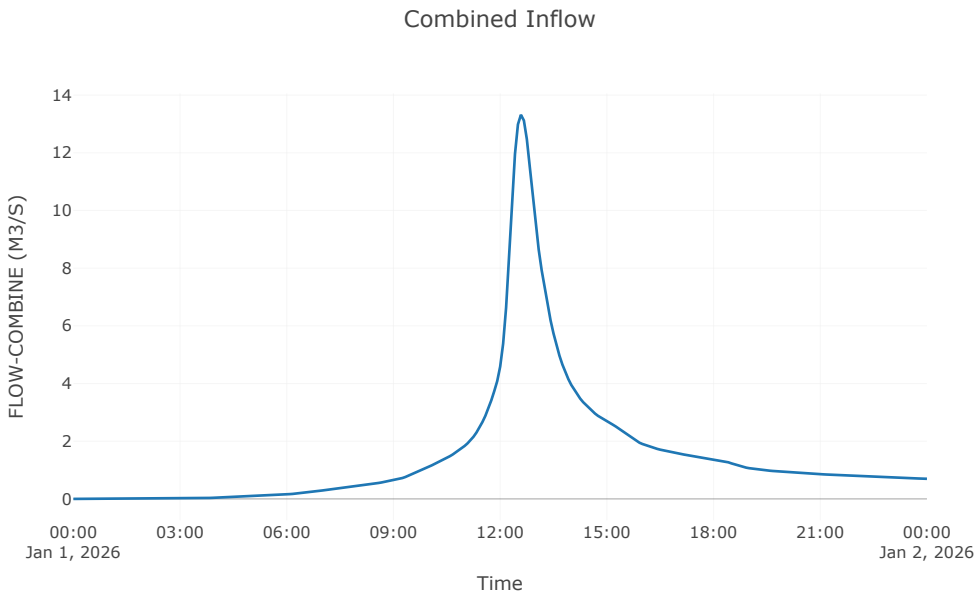
Downstream : Diversion - PIPE MORVEN FRY L

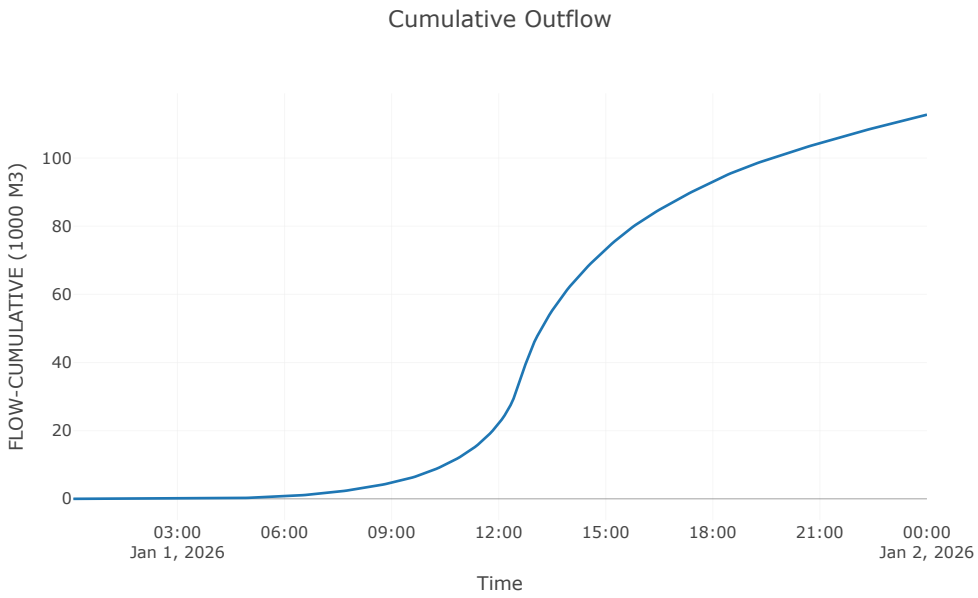
Results: SWALE MORVEN FERRY L

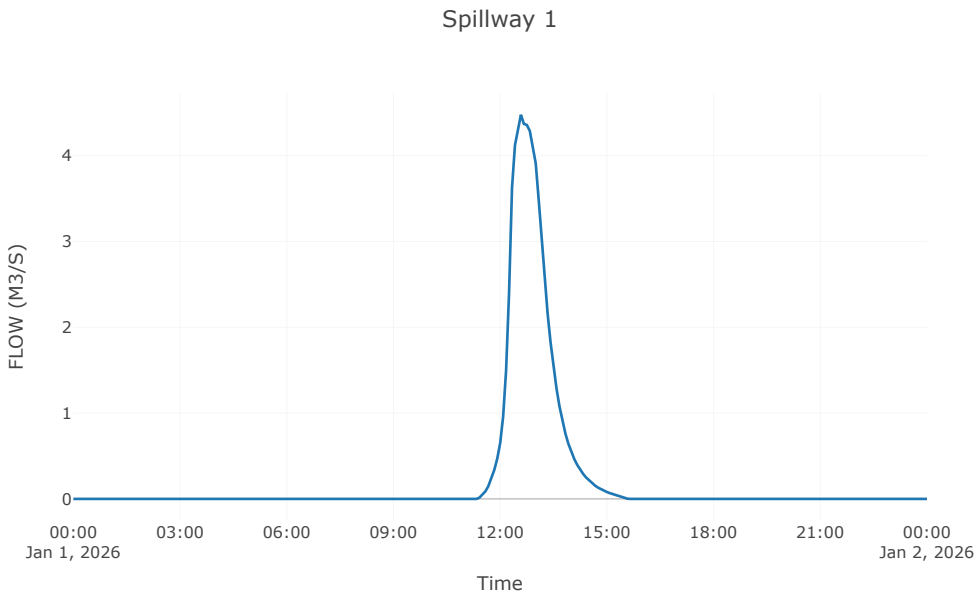
Peak Discharge (M3/S)	9.21
Time of Peak Discharge	01Jan2026, 12:35
Volume (MM)	62.57
Peak Inflow (M3/S)	13.32
Time of Peak Inflow	01Jan2026, 12:35
Inflow Volume (M3)	1.33E5
Maximum Storage (M3)	1091.73
Peak Elevation (M)	0.73
Discharge Volume (M3)	1.13E5

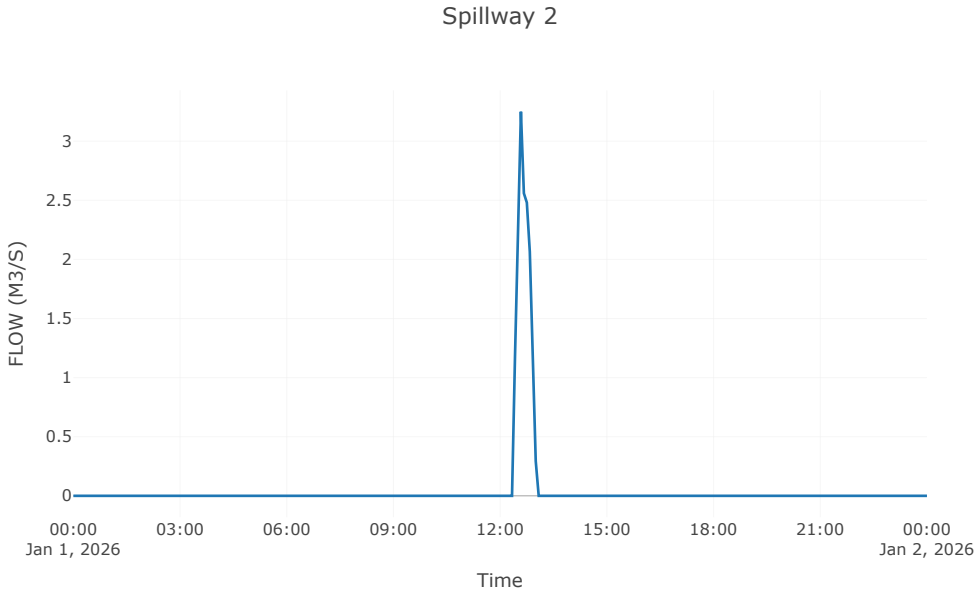


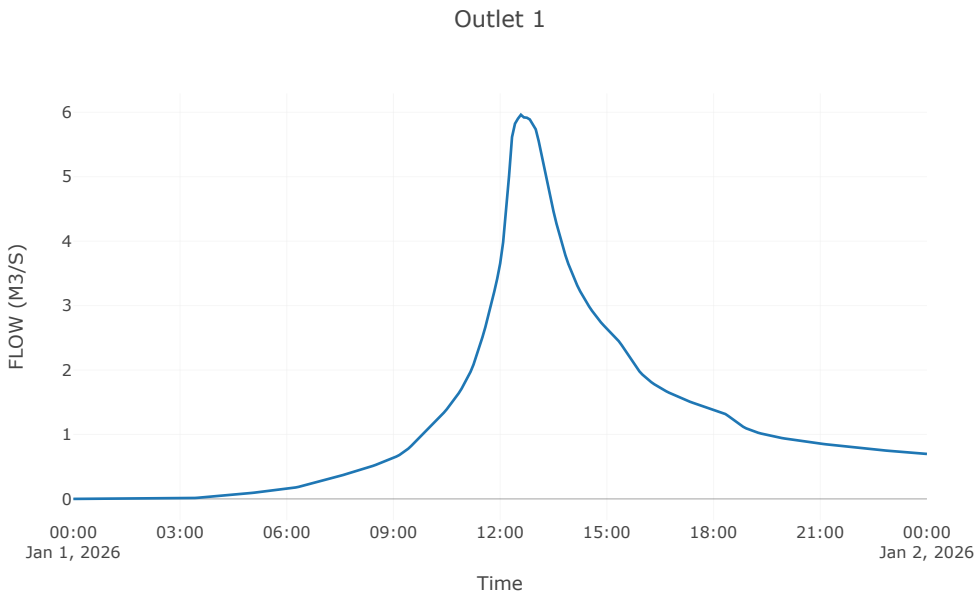


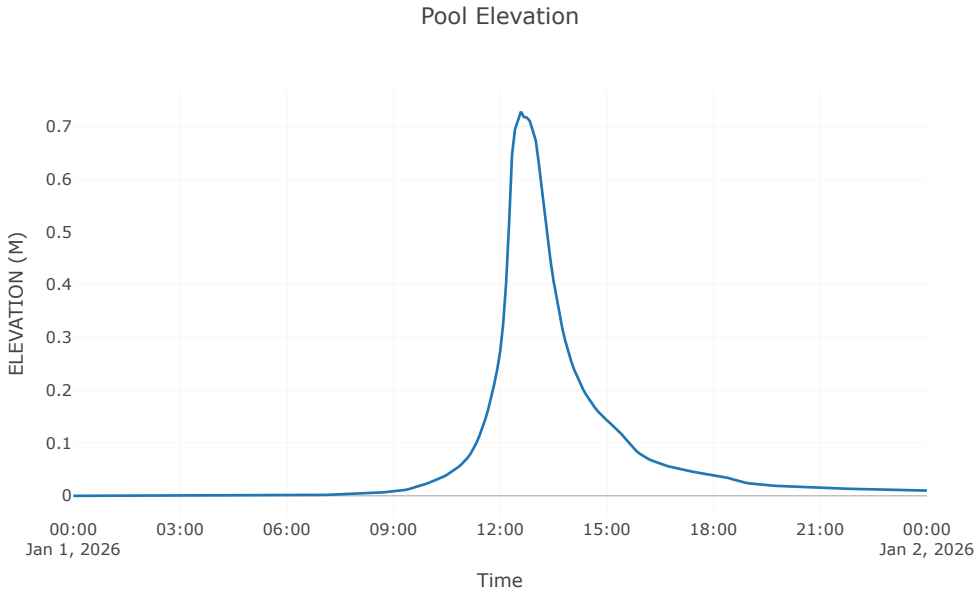

Combined Inflow
FLOW-COMBINE (M3/S)
14
12
10
8
6
4
2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

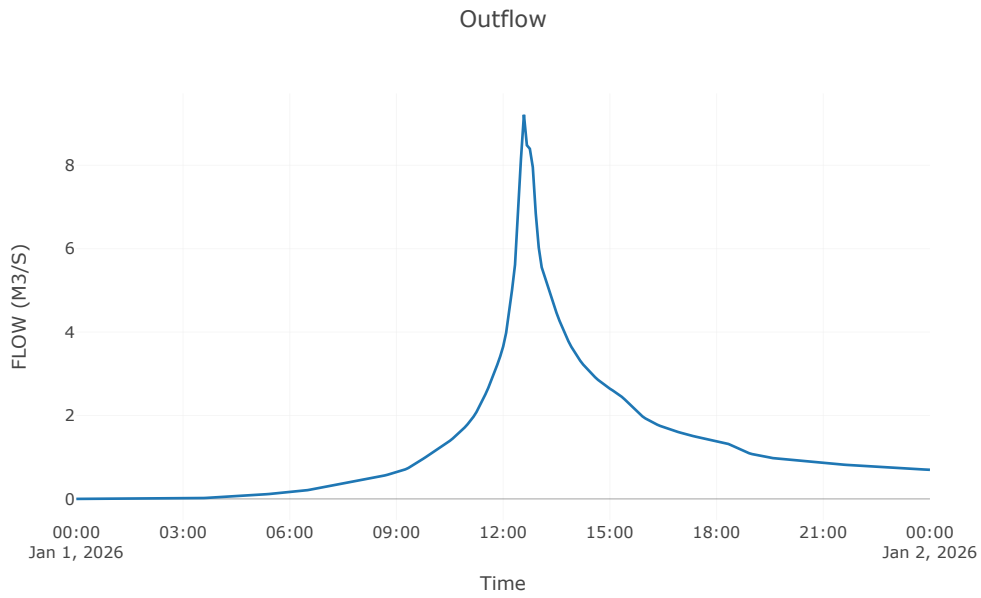

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
100
80
60
40
20
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Spillway 1
FLOW (M3/S)
0
1
2
3
4
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Spillway 2
FLOW (M3/S)
0
0.5
1
1.5
2
2.5
3
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 1
FLOW (M3/S)
0
1
2
3
4
5
6
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

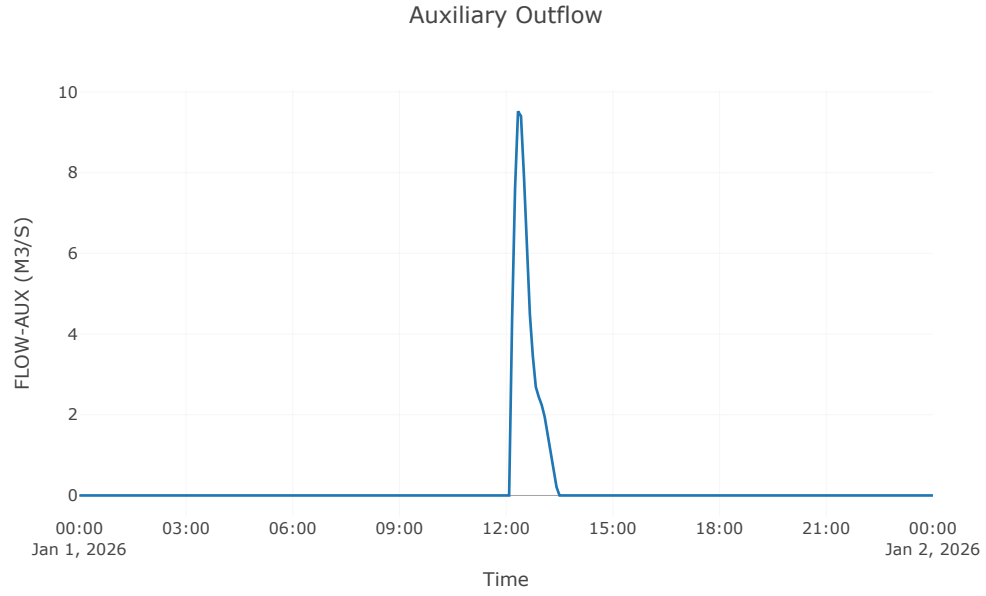

Pool Elevation
ELEVATION (M)
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

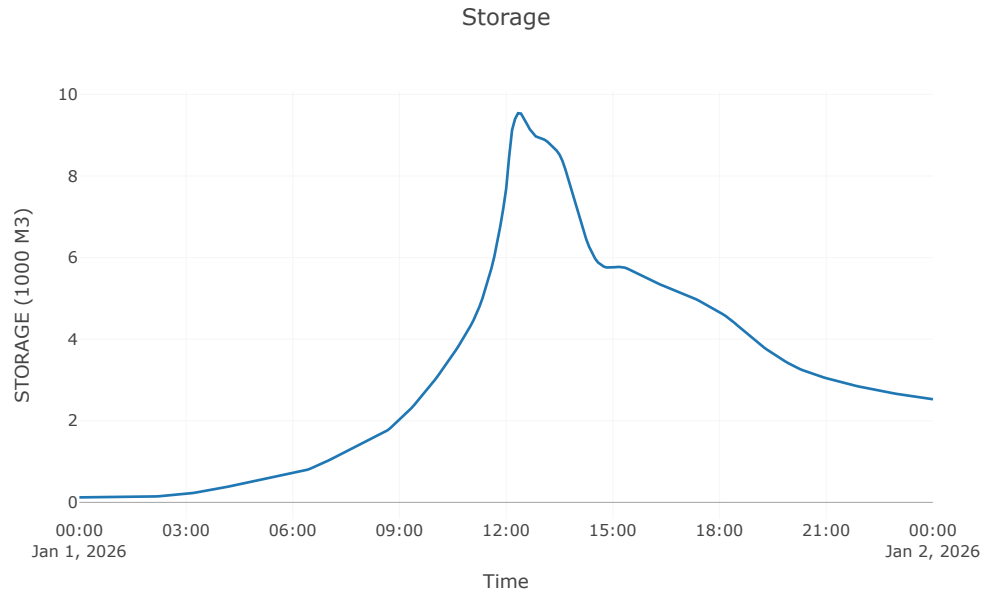

Outflow
FLOW (M3/S)
0
2
4
6
8
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

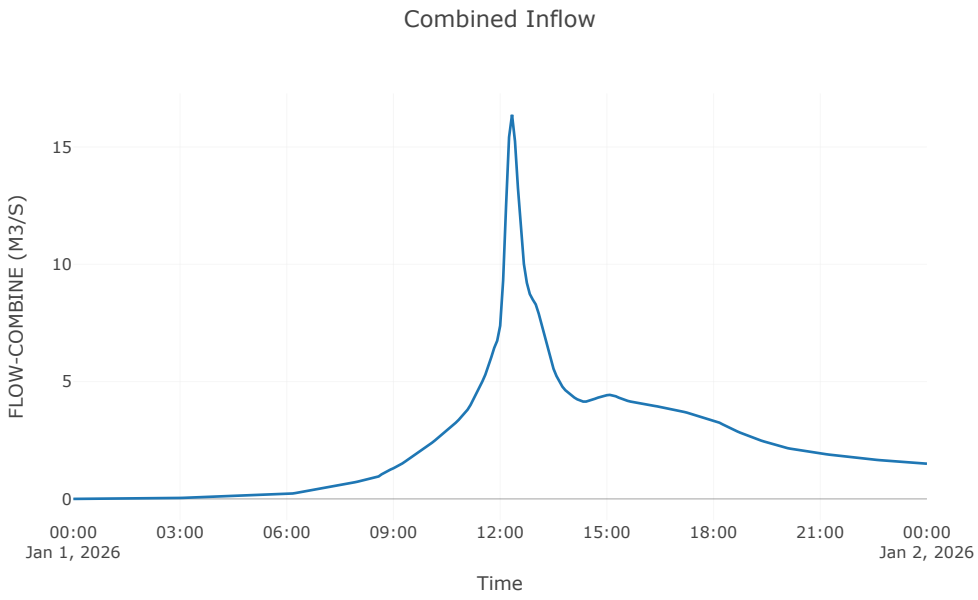
Reservoir: POND 1

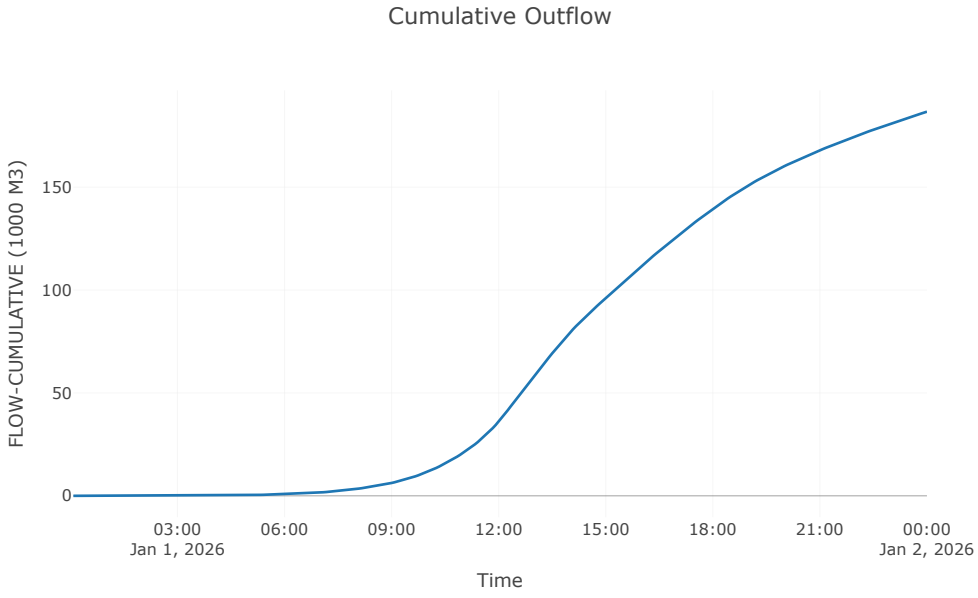
Downstream : Junction - MORVEN FERRY PIPE R

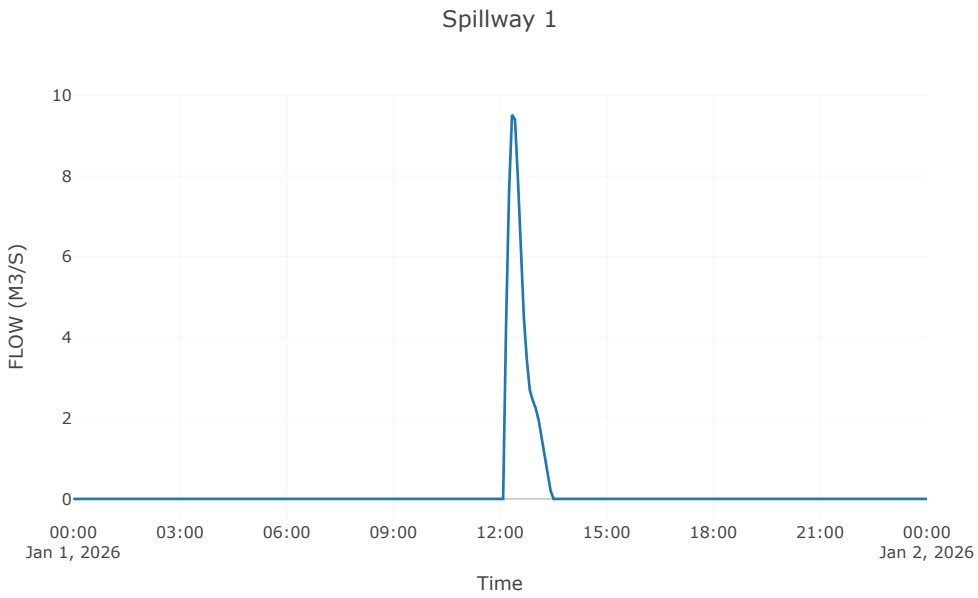
Results: POND 1	
Peak Discharge (M3/S)	6.38
Time of Peak Discharge	01Jan2026, 12:20
Volume (MM)	89.63
Peak Inflow (M3/S)	16.37
Time of Peak Inflow	01Jan2026, 12:20
Inflow Volume (M3)	2.09E5
Maximum Storage (M3)	9538.53
Peak Elevation (M)	2.72
Discharge Volume (M3)	1.87E5

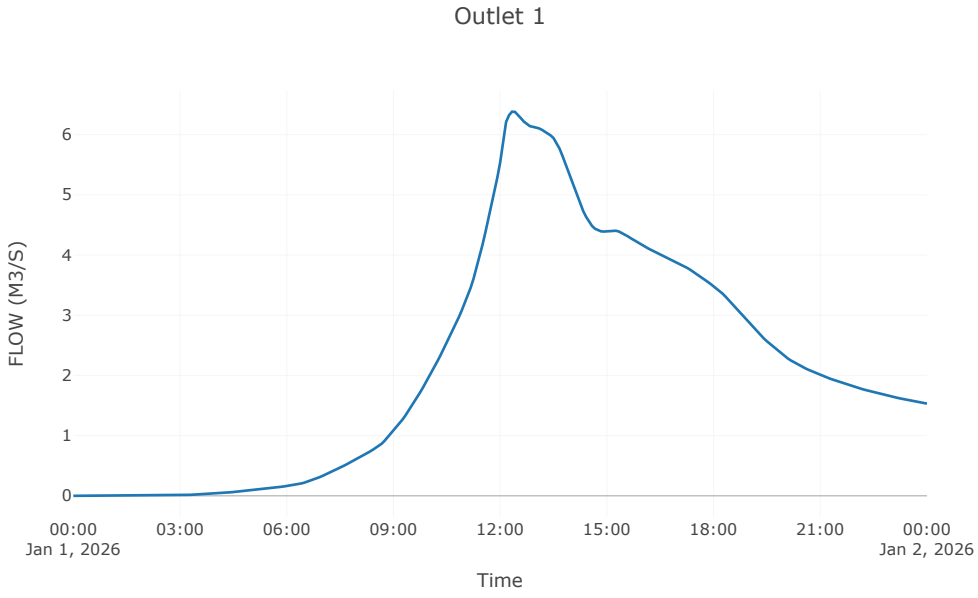


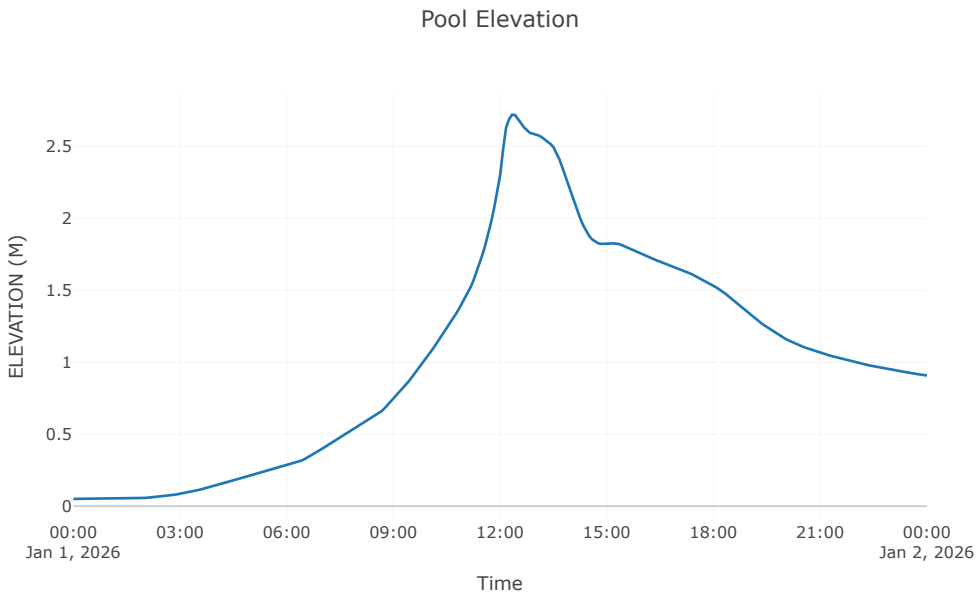


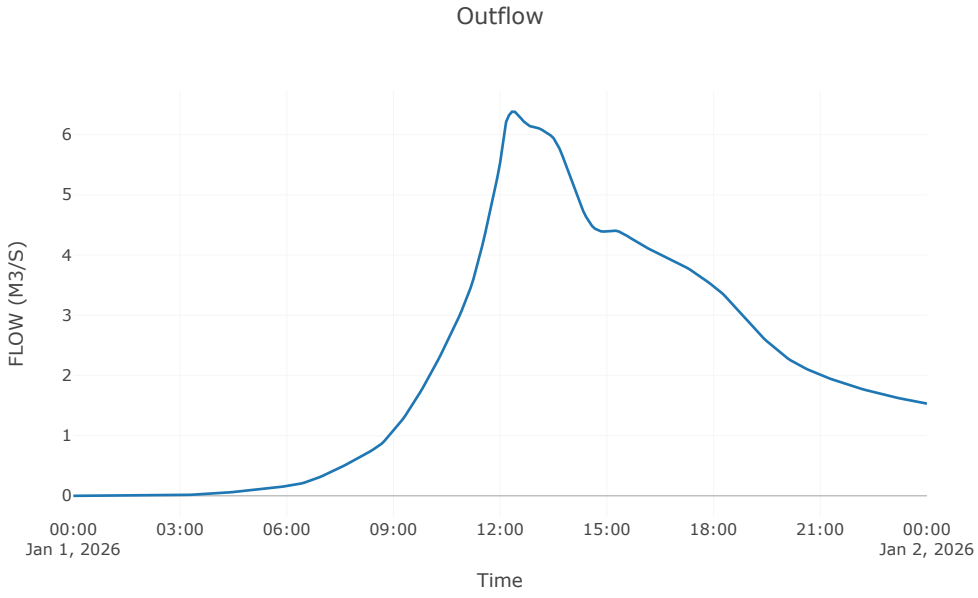

Combined Inflow
FLOW-COMBINE (M3/S)
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
150
100
50
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Spillway 1
FLOW (M3/S)
10
8
6
4
2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 1
FLOW (M3/S)
6
5
4
3
2
1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

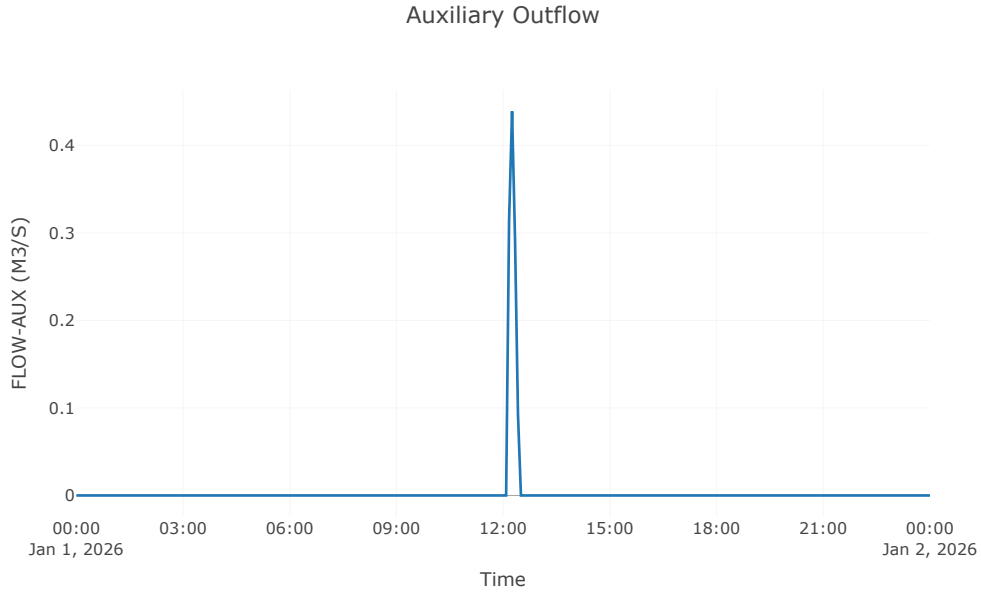

Pool Elevation
ELEVATION (M)
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

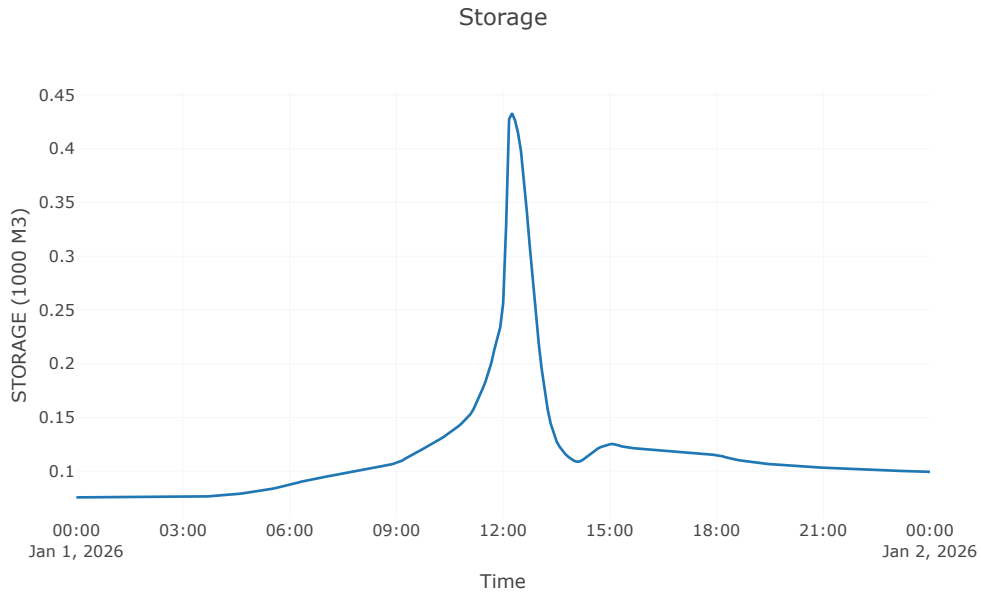

Outflow
FLOW (M3/S)
6
5
4
3
2
1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

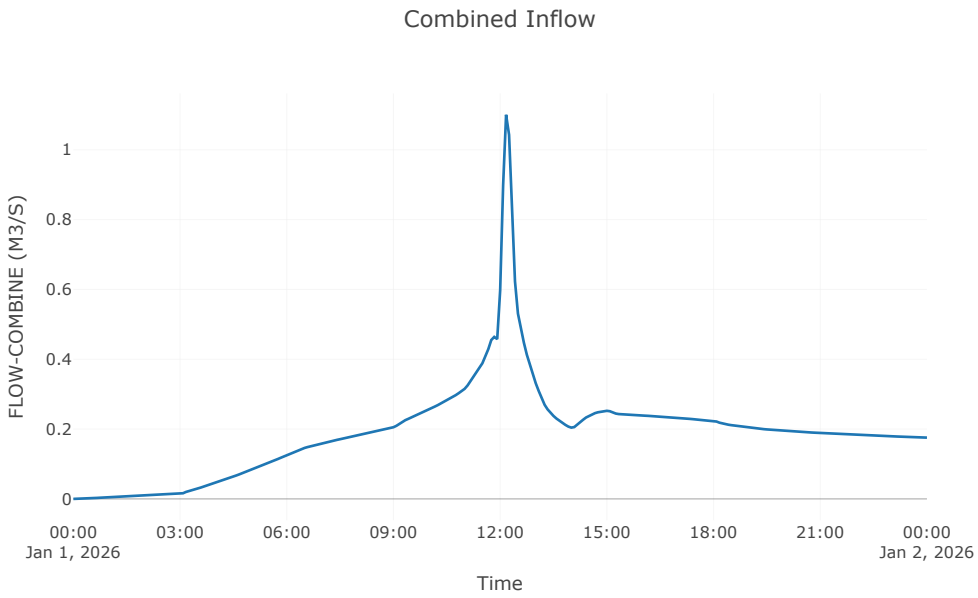
Reservoir: POND 2

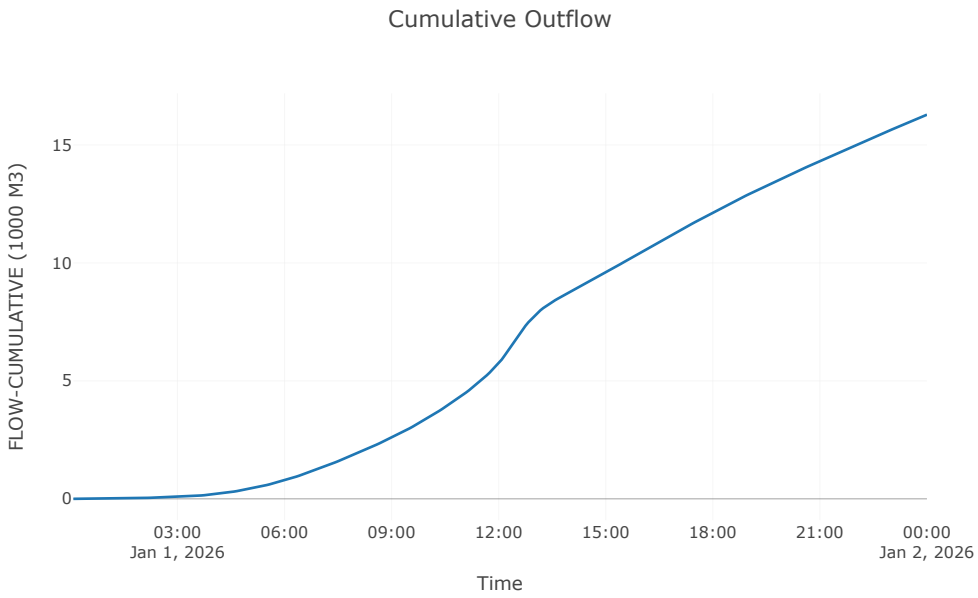
Downstream : Junction - MORVEN FERRY PIPE R

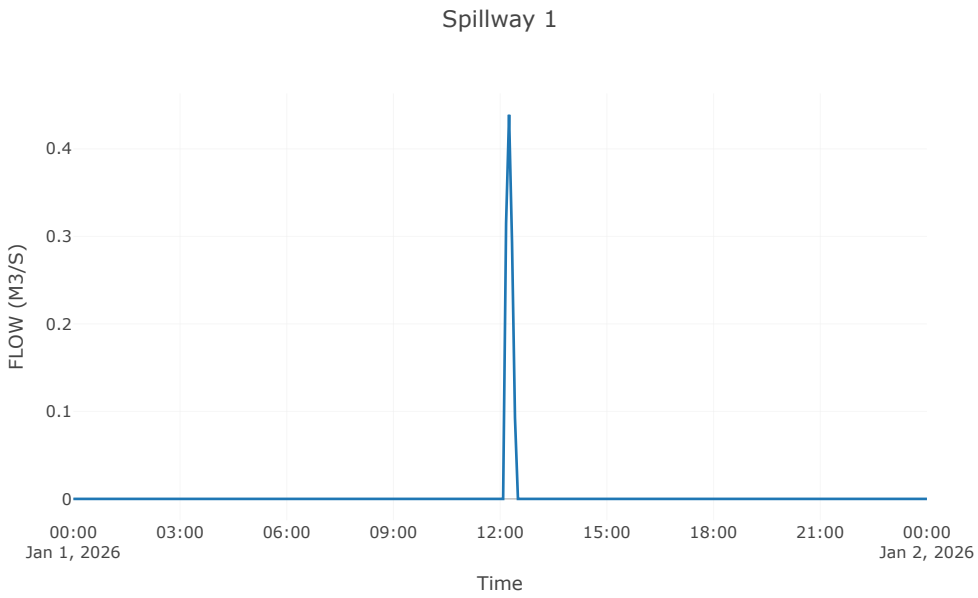
Results: POND 2	
Peak Discharge (M3/S)	0.63
Time of Peak Discharge	01Jan2026, 12:15
Volume (MM)	8.65
Peak Inflow (M3/S)	1.1
Time of Peak Inflow	01Jan2026, 12:10
Inflow Volume (M3)	16597.34
Maximum Storage (M3)	433.05
Peak Elevation (M)	0.74
Discharge Volume (M3)	16284.24

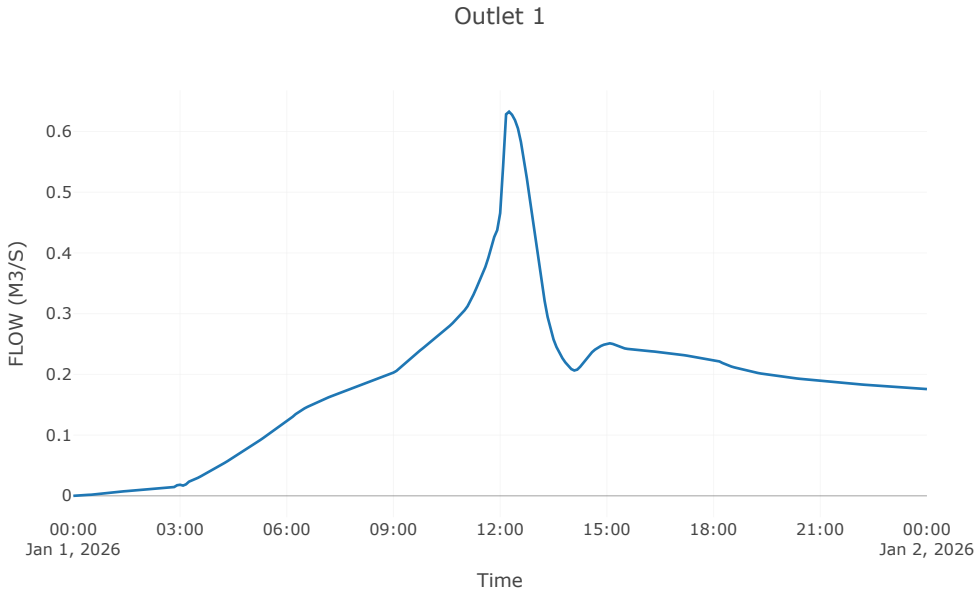


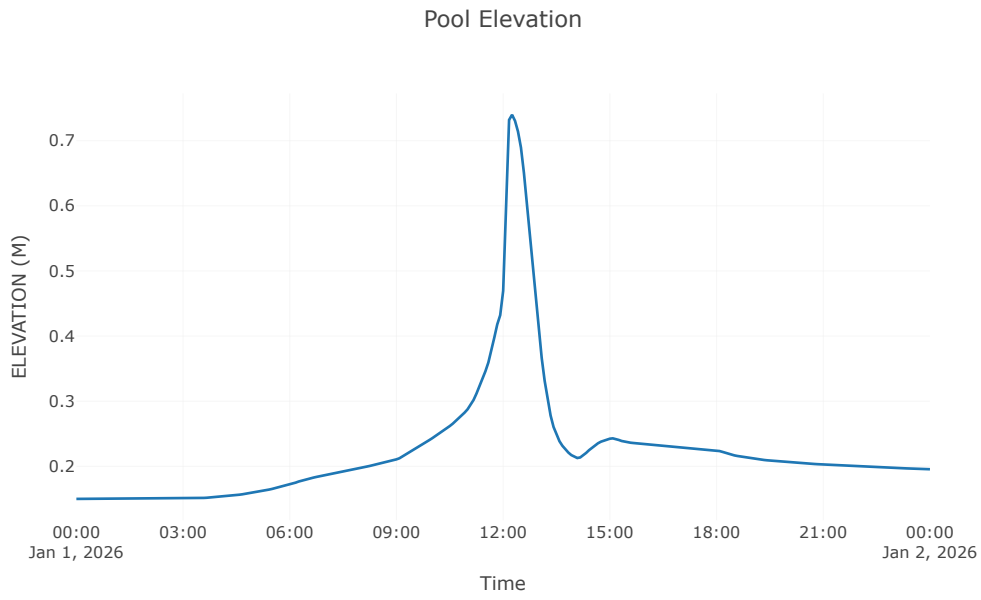


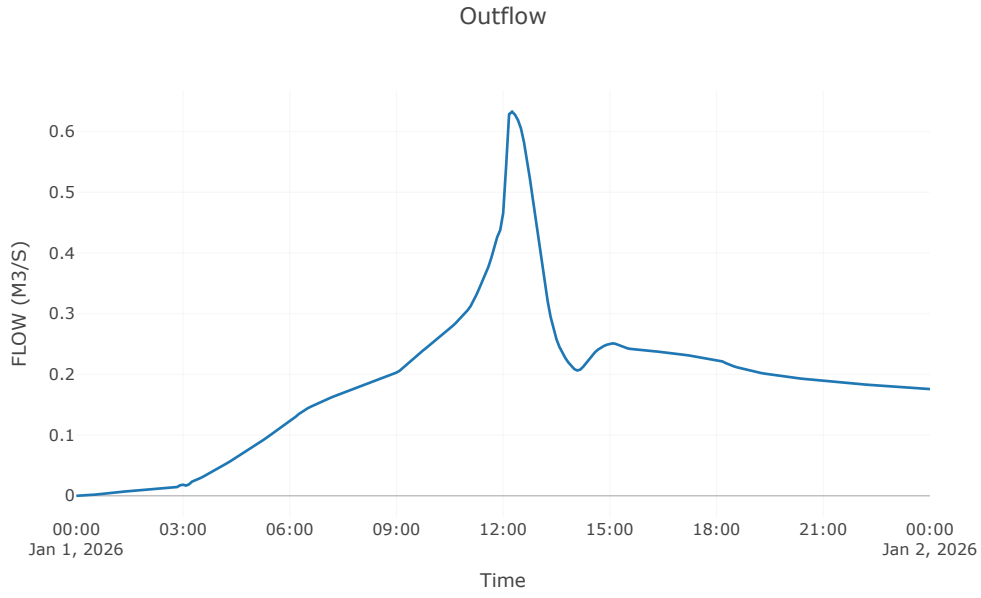

Combined Inflow
FLOW-COMBINE (M3/S)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
15
10
5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Spillway 1
FLOW (M3/S)
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 1
FLOW (M3/S)
0.6
0.5
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

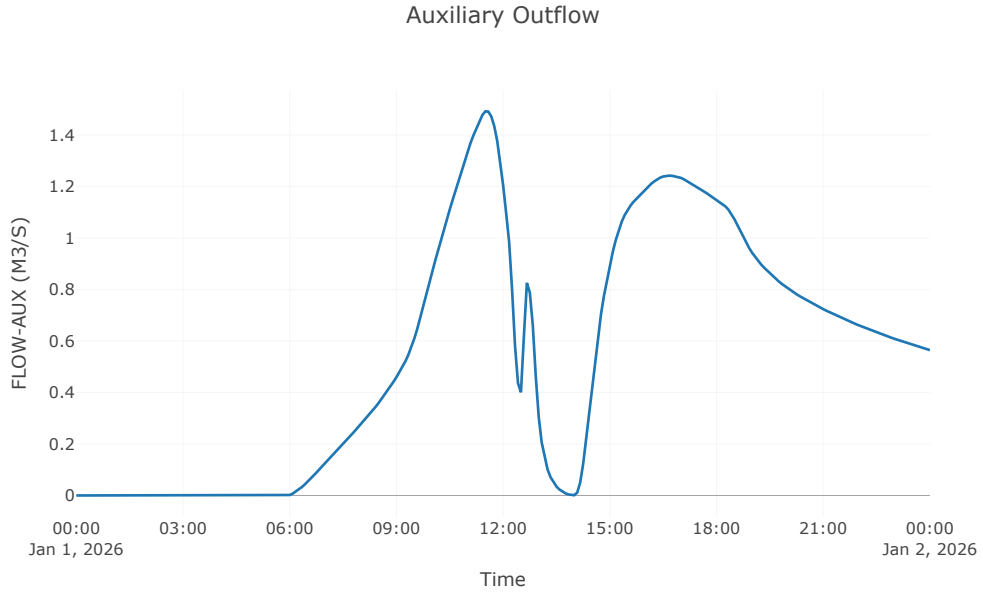

Pool Elevation
ELEVATION (M)
0.7
0.6
0.5
0.4
0.3
0.2
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

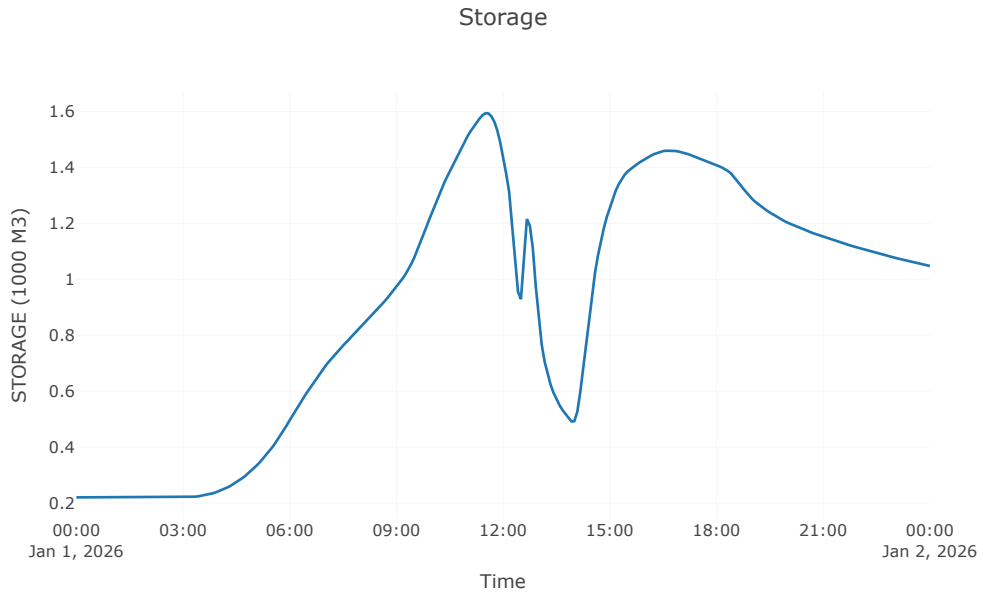

Outflow
FLOW (M3/S)
0.6
0.5
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

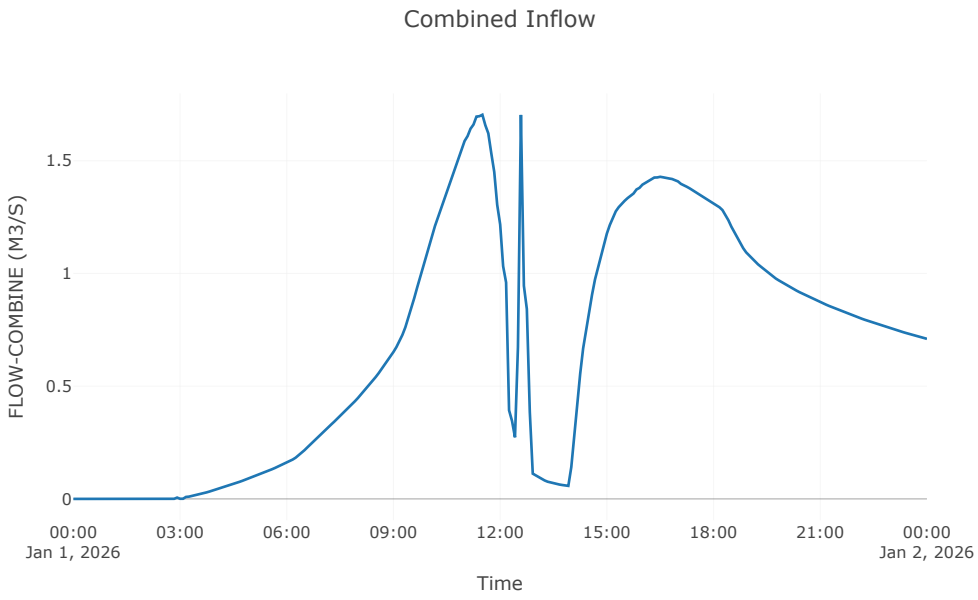
Reservoir: POND 3 DRYBASIN

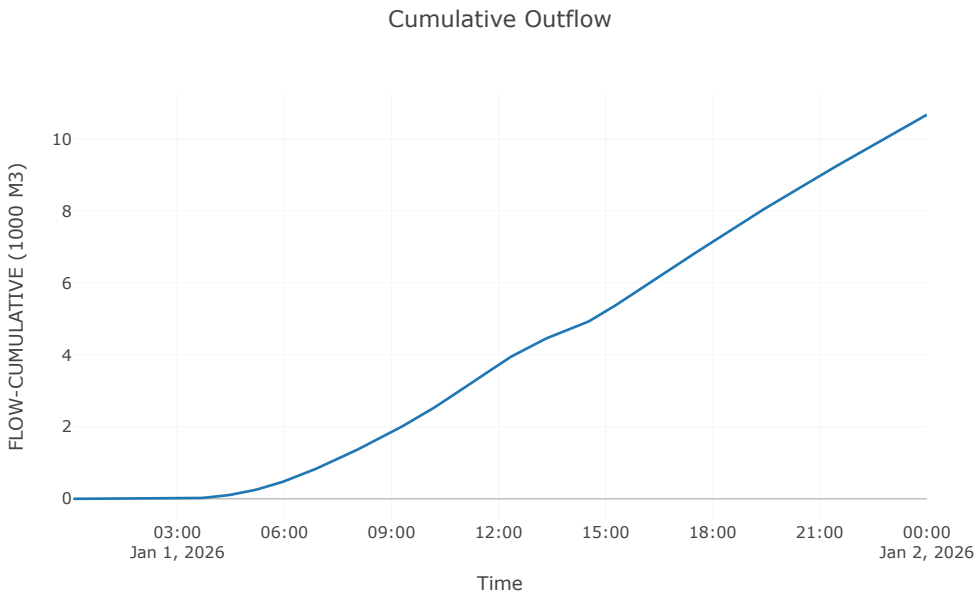
Downstream : Junction - POND 2

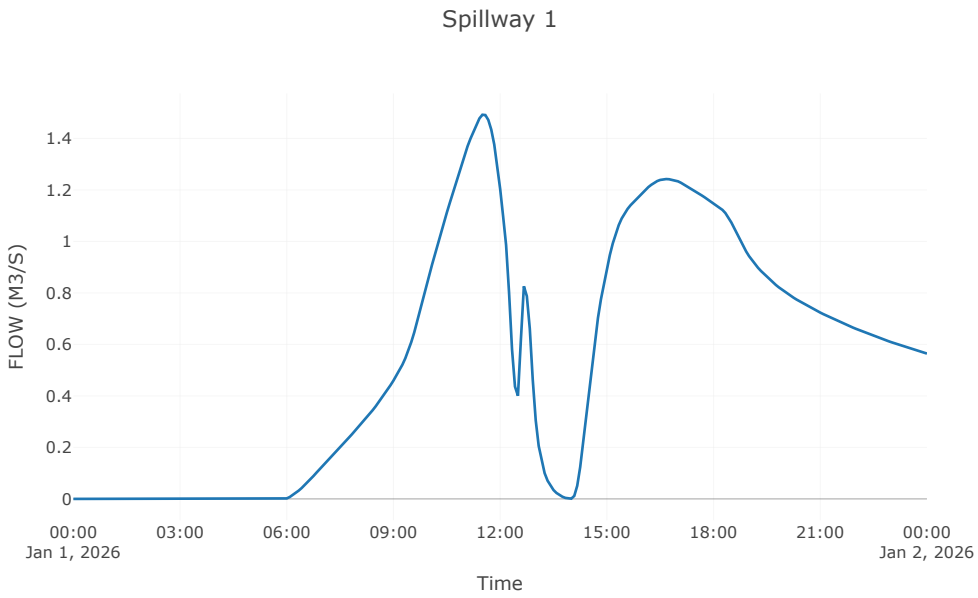
Results: POND 3 DRYBASIN	
Peak Discharge (M3/S)	0.19
Time of Peak Discharge	01Jan2026, 11:30
Volume (MM)	5.83
Peak Inflow (M3/S)	1.7
Time of Peak Inflow	01Jan2026, 11:30
Inflow Volume (M3)	58563.45
Maximum Storage (M3)	1593.75
Peak Elevation (M)	0.4
Discharge Volume (M3)	10676.17

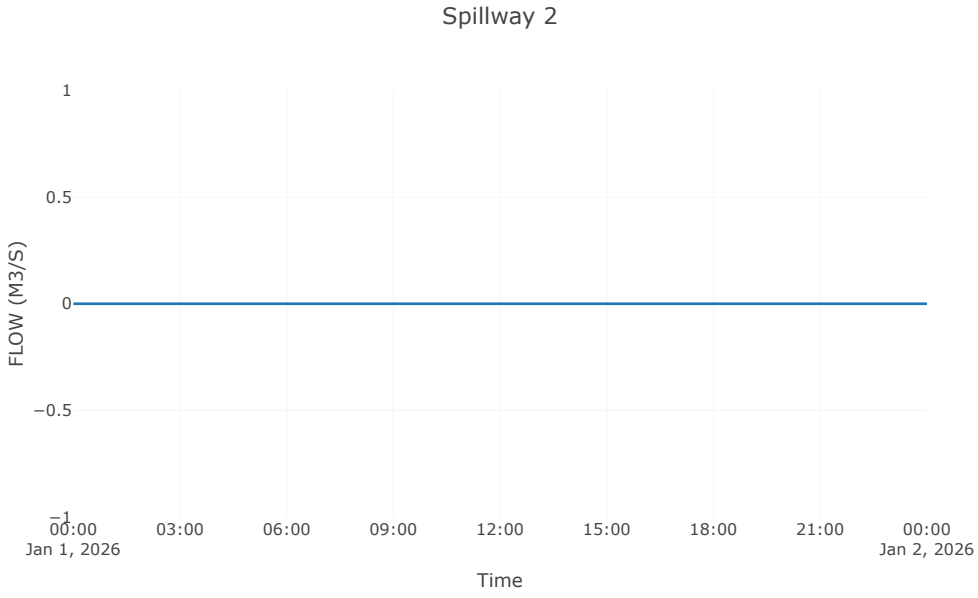


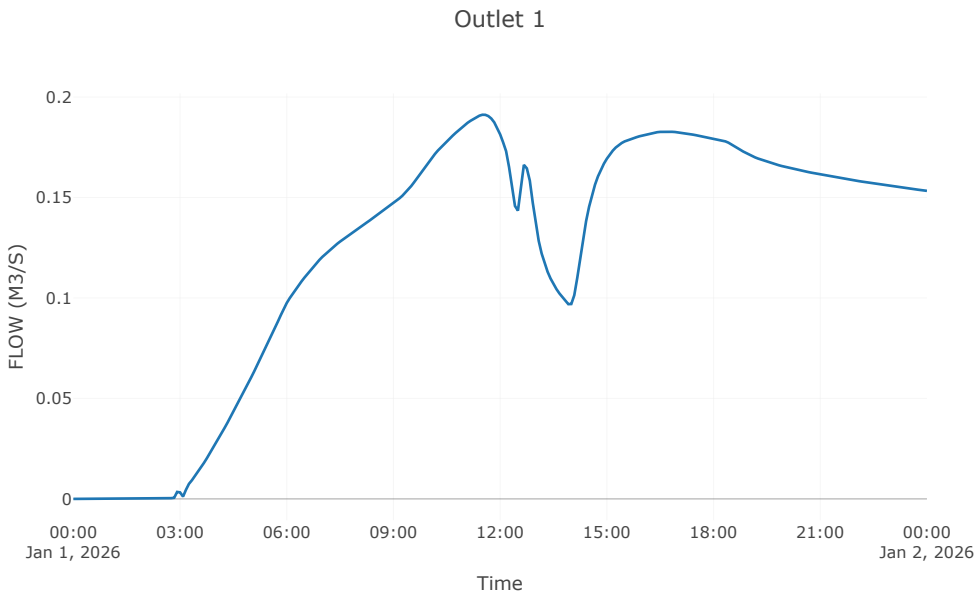


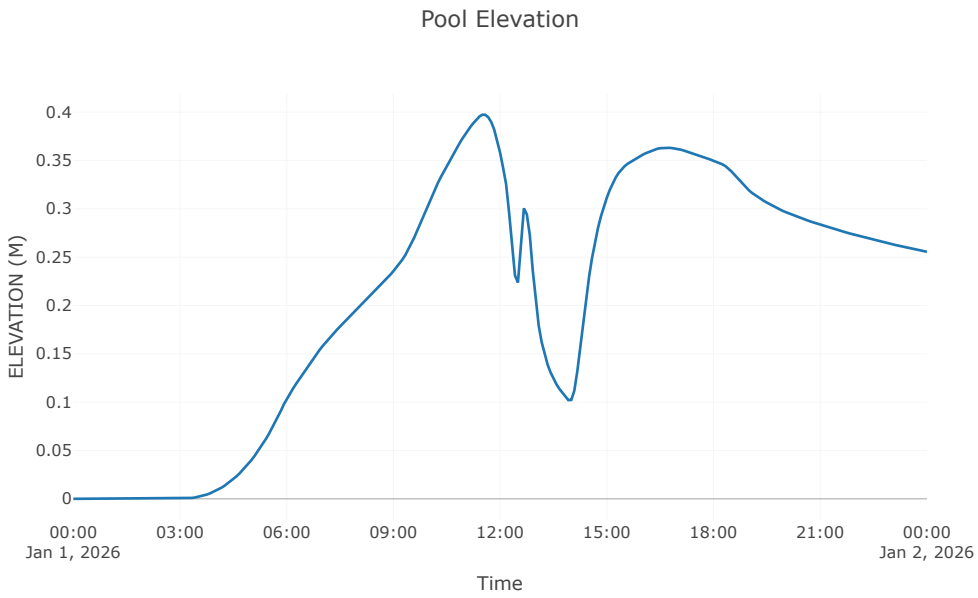

Combined Inflow
FLOW-COMBINE (M3/S)
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

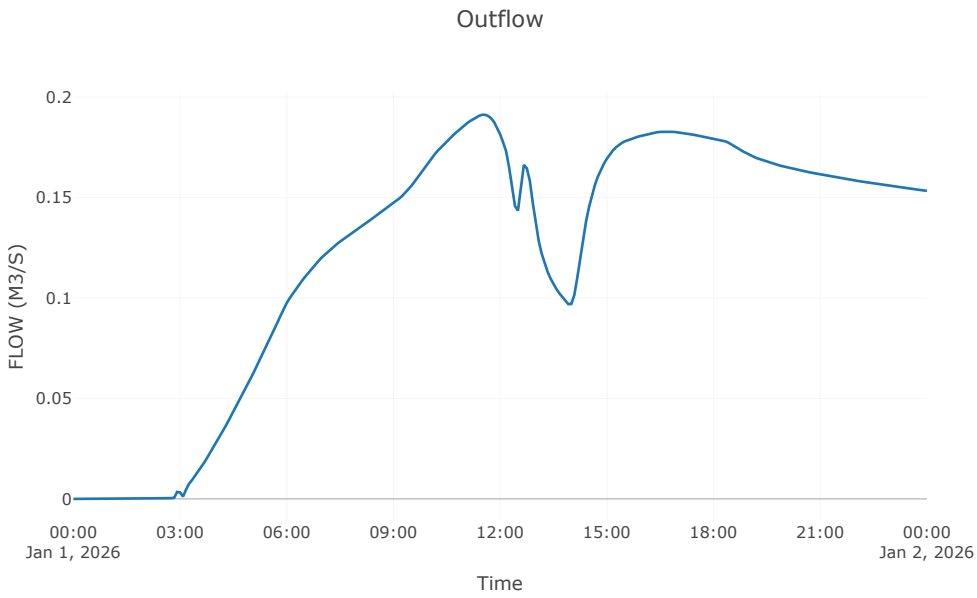

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
10
8
6
4
2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Spillway 1
FLOW (M3/S)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Spillway 2
FLOW (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 1
FLOW (M3/S)
0.2
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

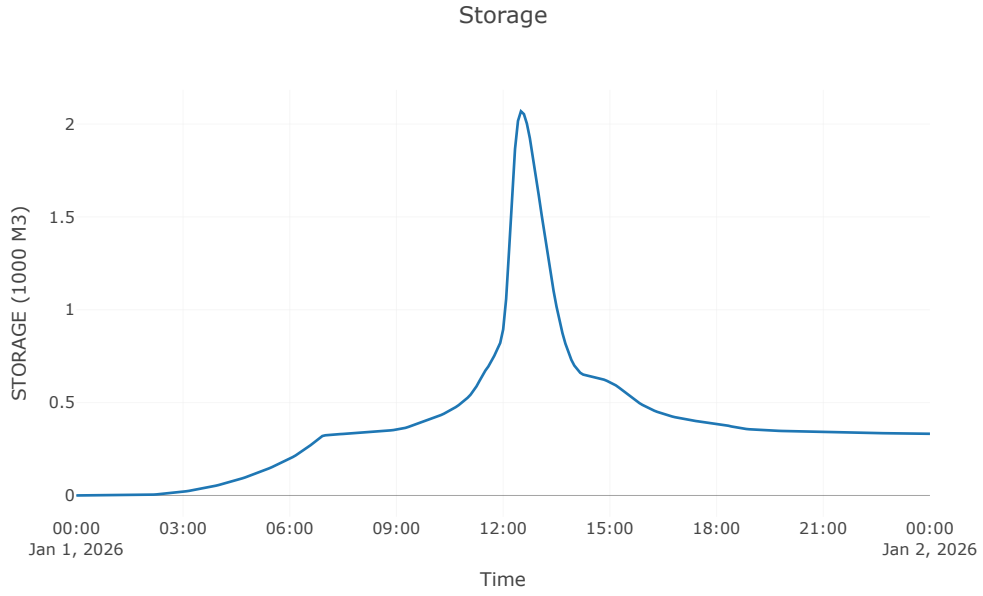

Pool Elevation
ELEVATION (M)
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

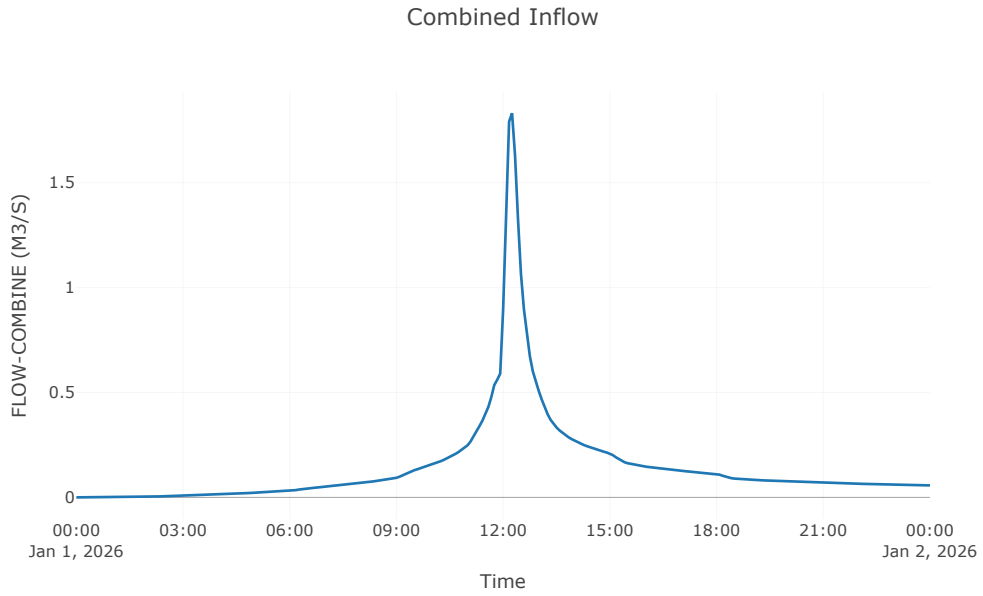

Outflow
0.2
0.15
0.1
0.05
0
FLOW (M3/S)
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

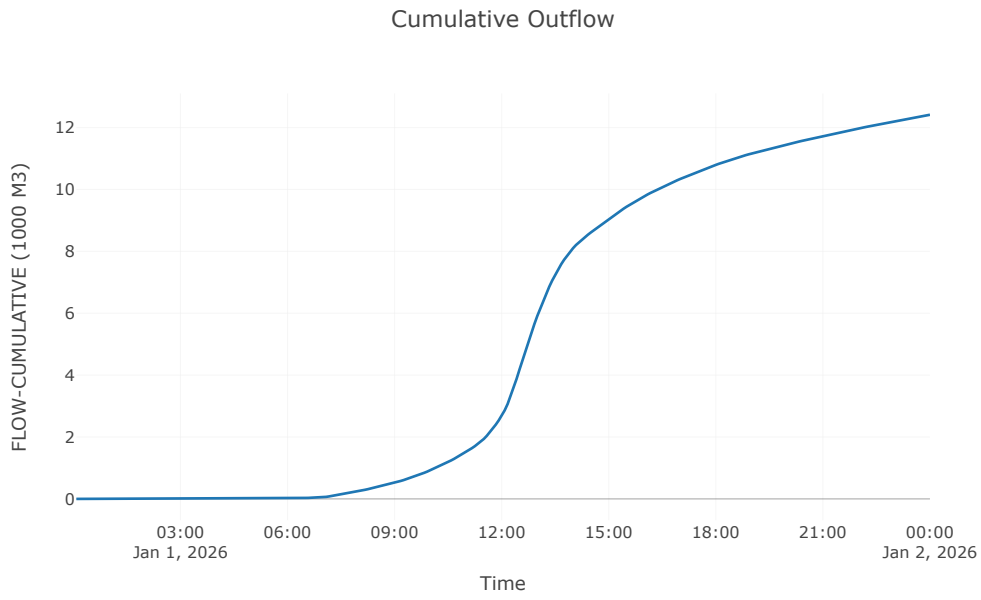
Reservoir: POND 5

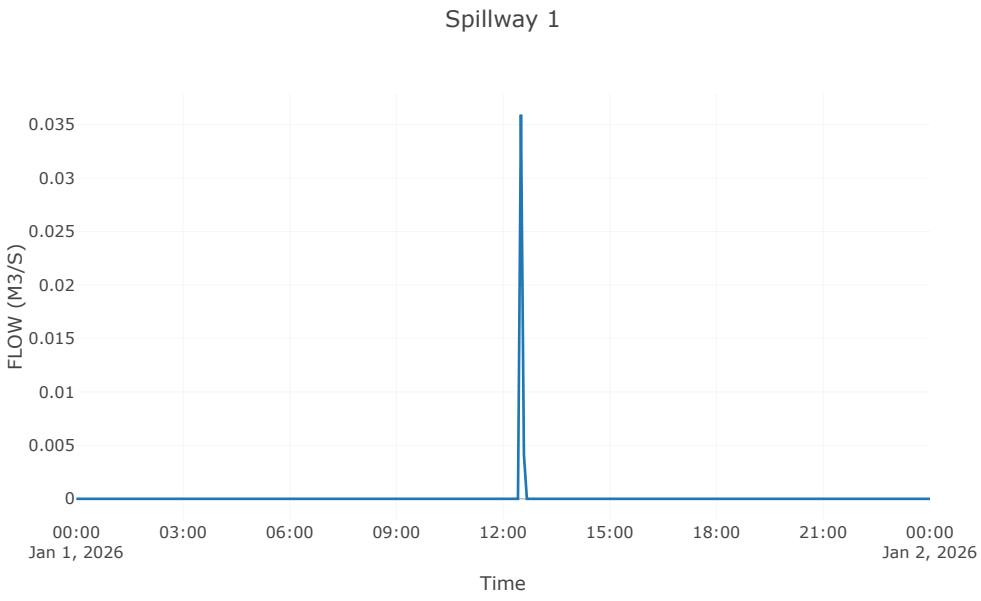
Downstream : Reach - POND 5 OLFP

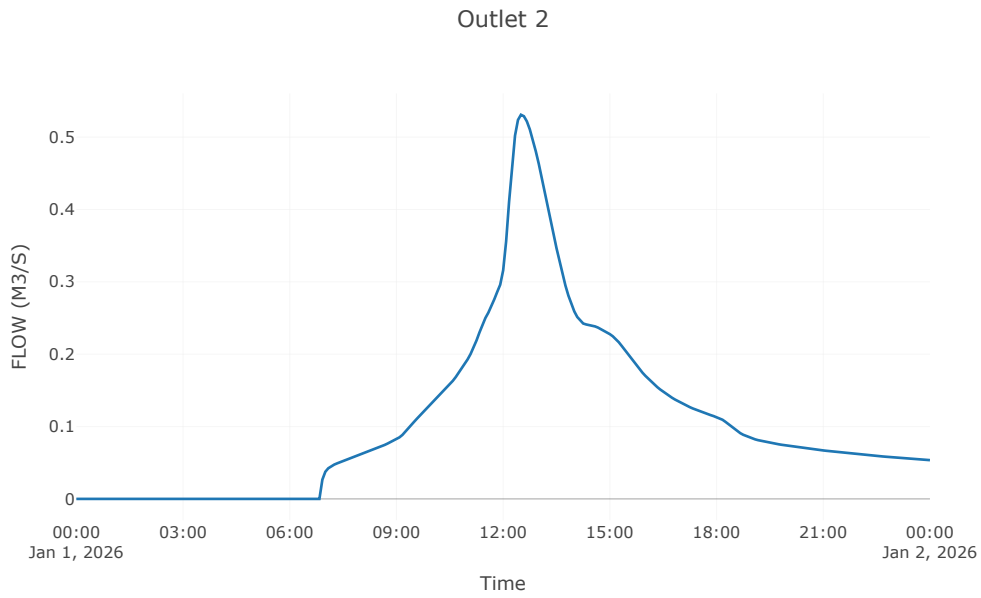
Results: POND 5	
Peak Discharge (M3/S)	1.05
Time of Peak Discharge	01Jan2026, 12:30
Volume (MM)	90.29
Peak Inflow (M3/S)	1.83
Time of Peak Inflow	01Jan2026, 12:15
Inflow Volume (M3)	12749.9
Maximum Storage (M3)	2068.59
Peak Elevation (M)	1.17
Discharge Volume (M3)	12414.62

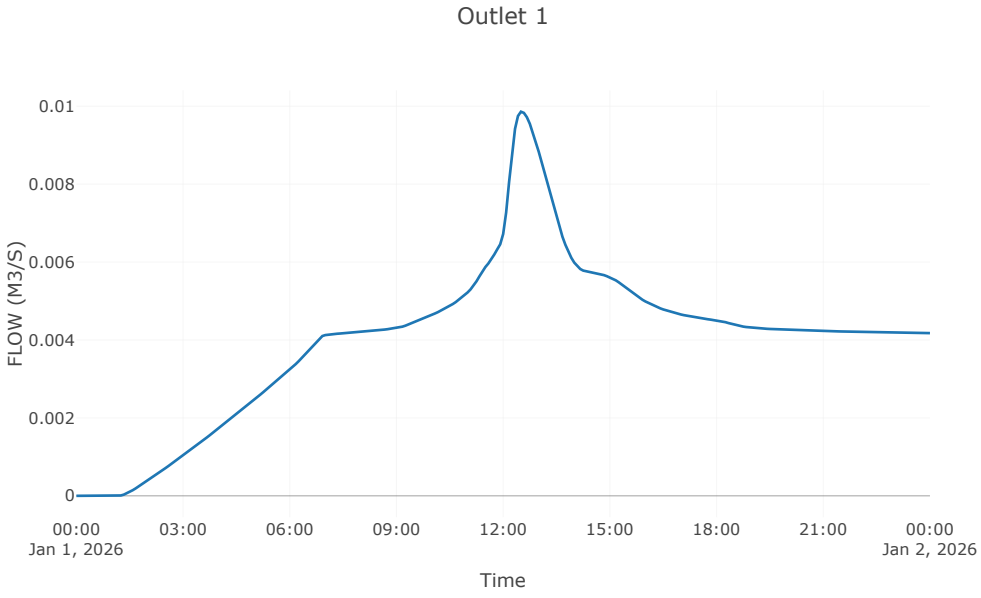


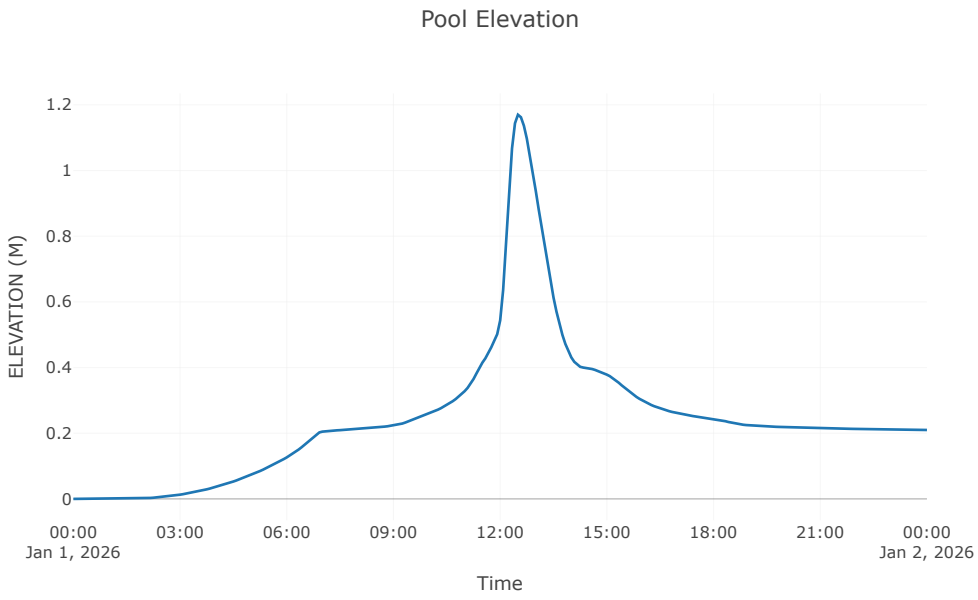


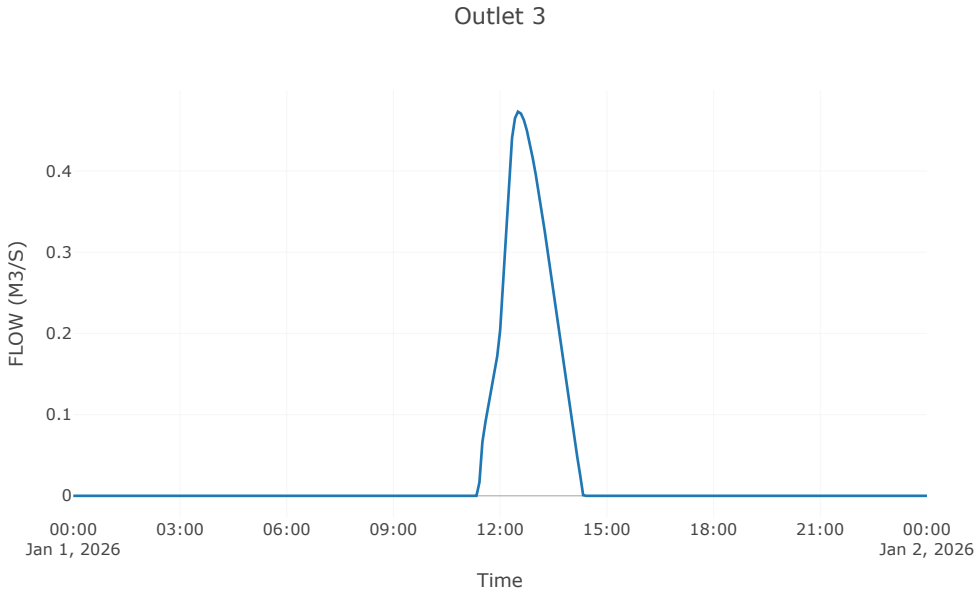

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
12
10
8
6
4
2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

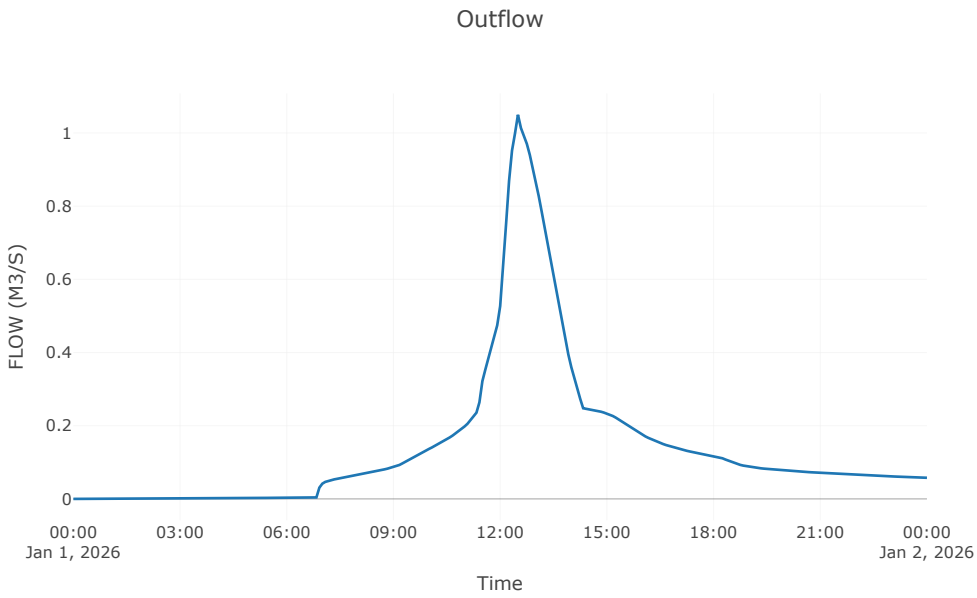

Spillway 1
FLOW (M3/S)
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 2
FLOW (M3/S)
0.5
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 1
FLOW (M3/S)
0.01
0.008
0.006
0.004
0.002
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Pool Elevation
ELEVATION (M)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 3
FLOW (M3/S)
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

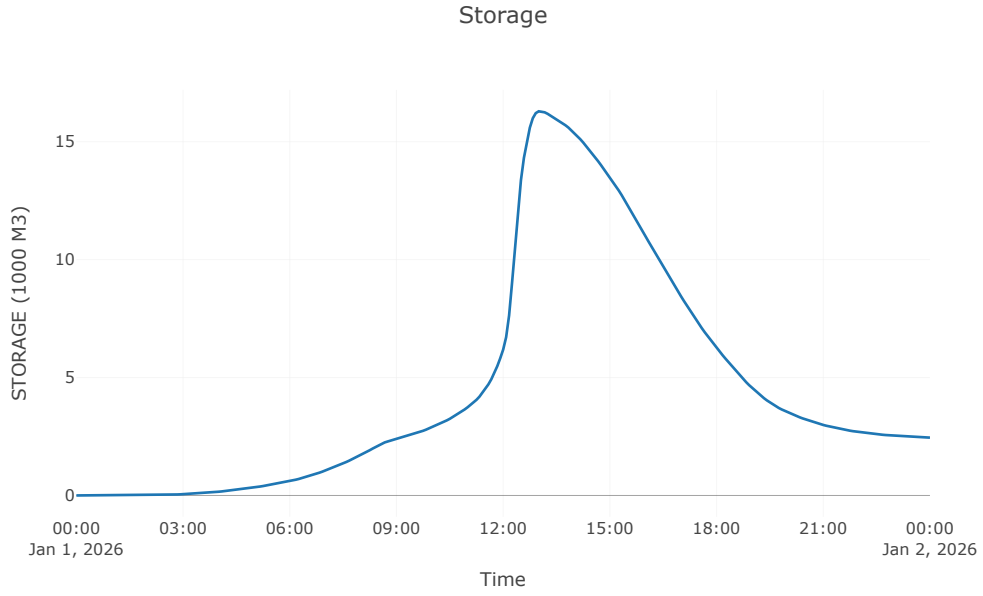

Outflow
FLOW (M3/S)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

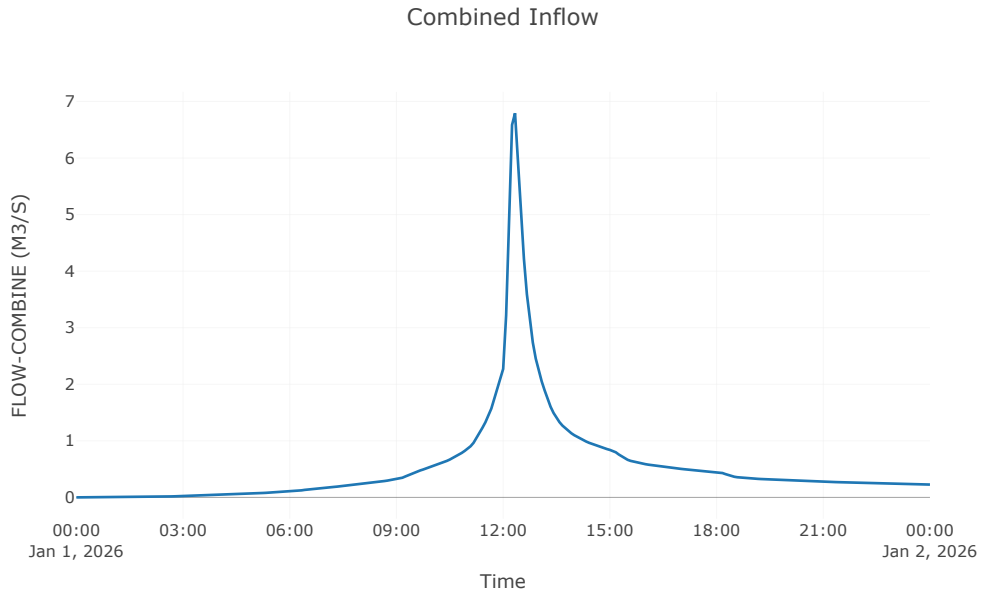
Reservoir: POND 6

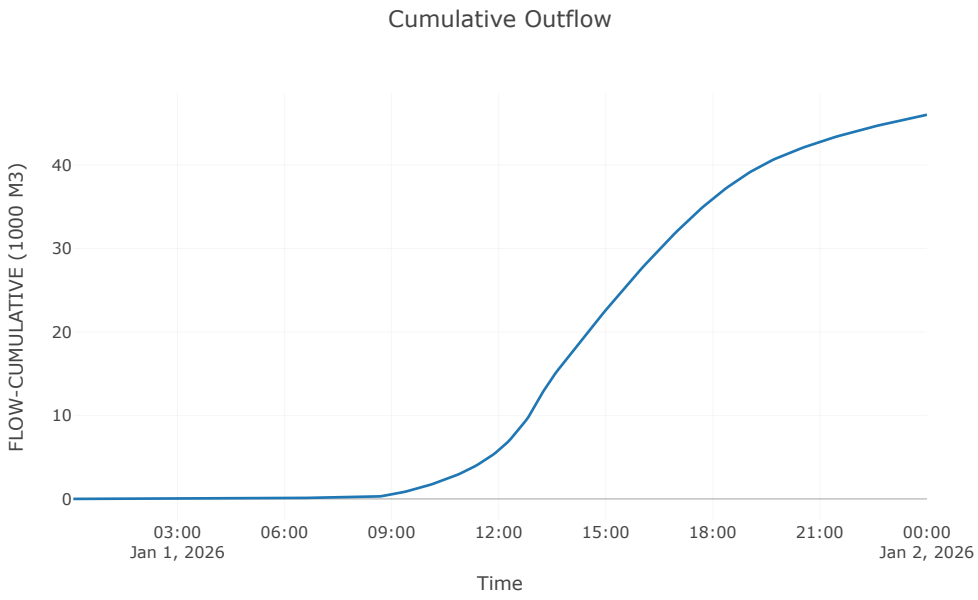
Downstream : Reach - CHANNEL 2

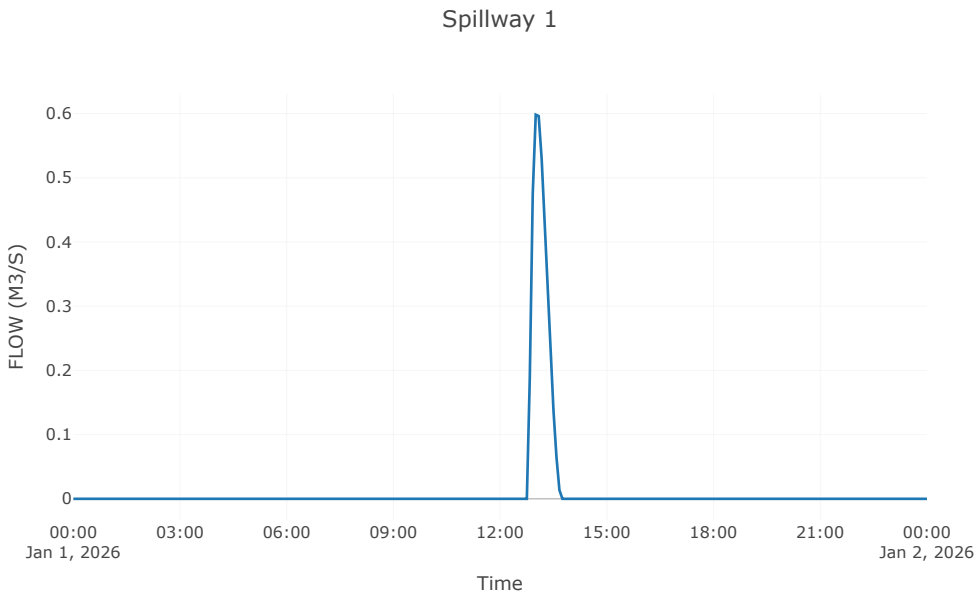
Results: POND 6

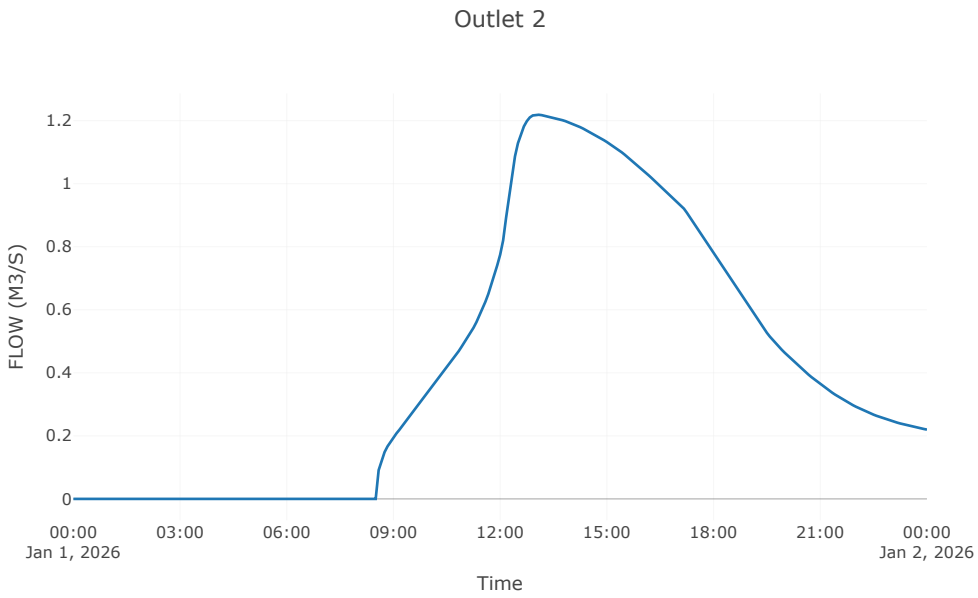
Peak Discharge (M3/S)	2.15
Time of Peak Discharge	01Jan2026, 13:00
Volume (MM)	82.17
Peak Inflow (M3/S)	6.79
Time of Peak Inflow	01Jan2026, 12:20
Inflow Volume (M3)	48477
Maximum Storage (M3)	16288.24
Peak Elevation (M)	3.06
Discharge Volume (M3)	46031.2

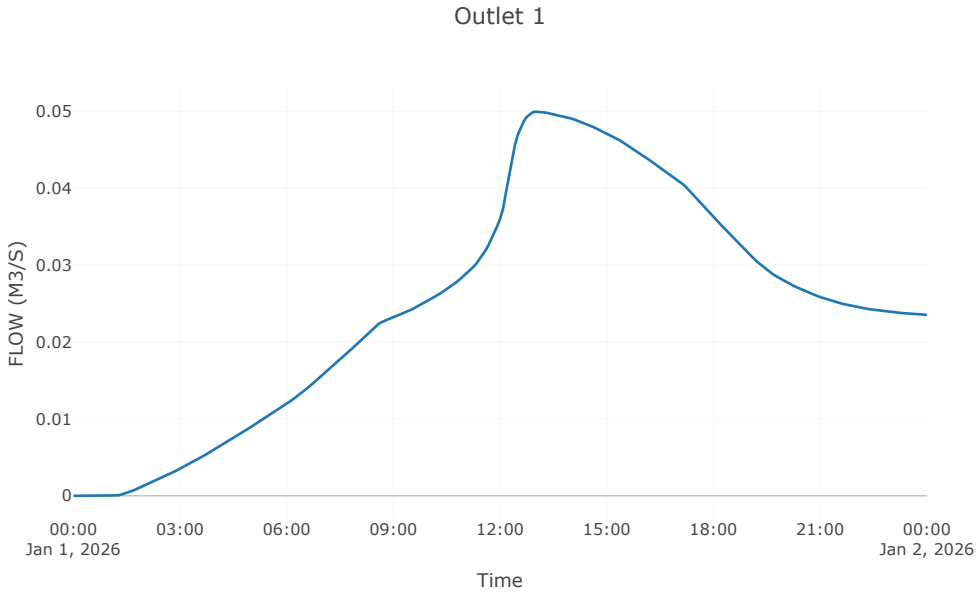


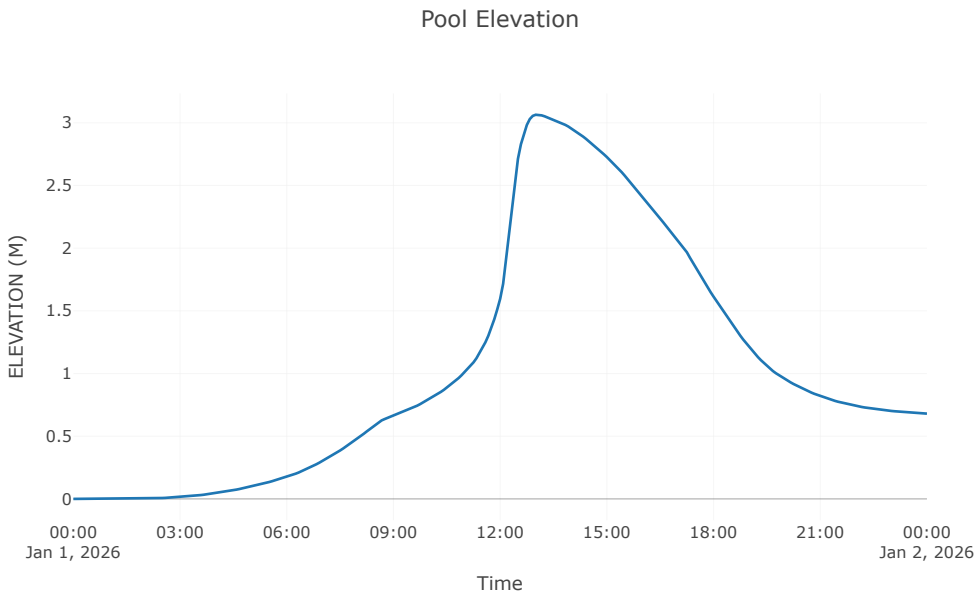


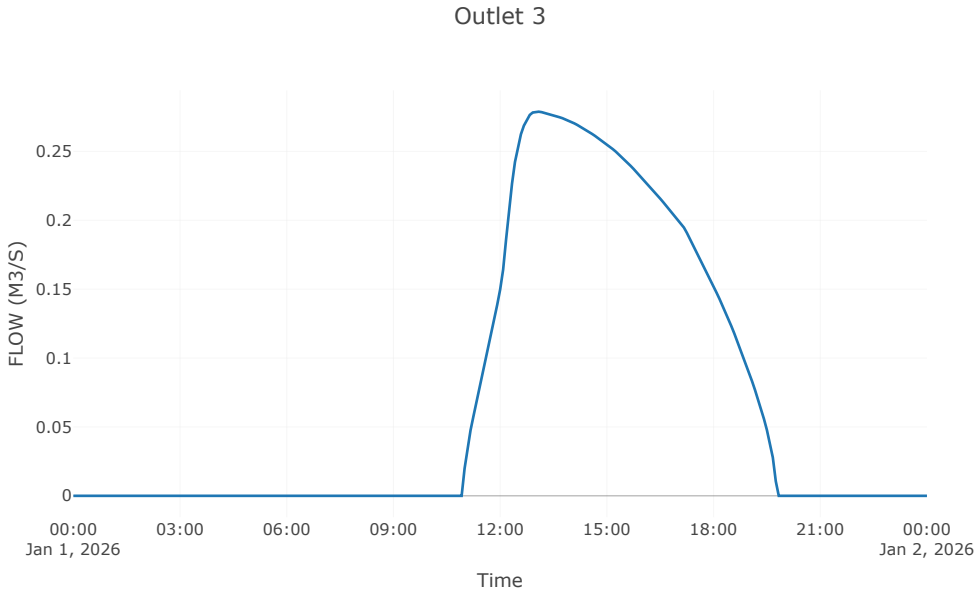

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
40
30
20
10
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

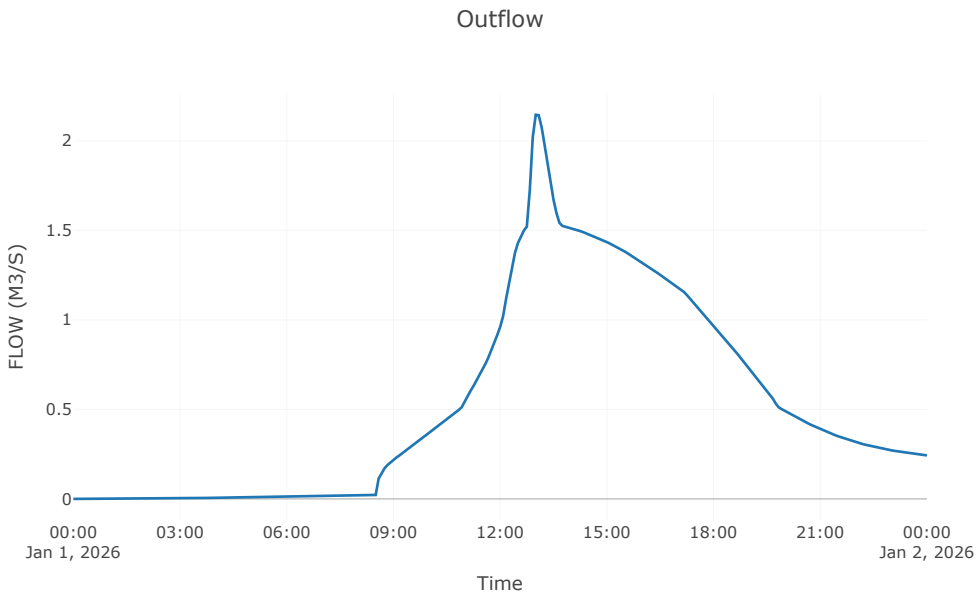

Spillway 1
FLOW (M3/S)
0.6
0.5
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 2
FLOW (M3/S)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 1
FLOW (M3/S)
0.05
0.04
0.03
0.02
0.01
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Pool Elevation
ELEVATION (M)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

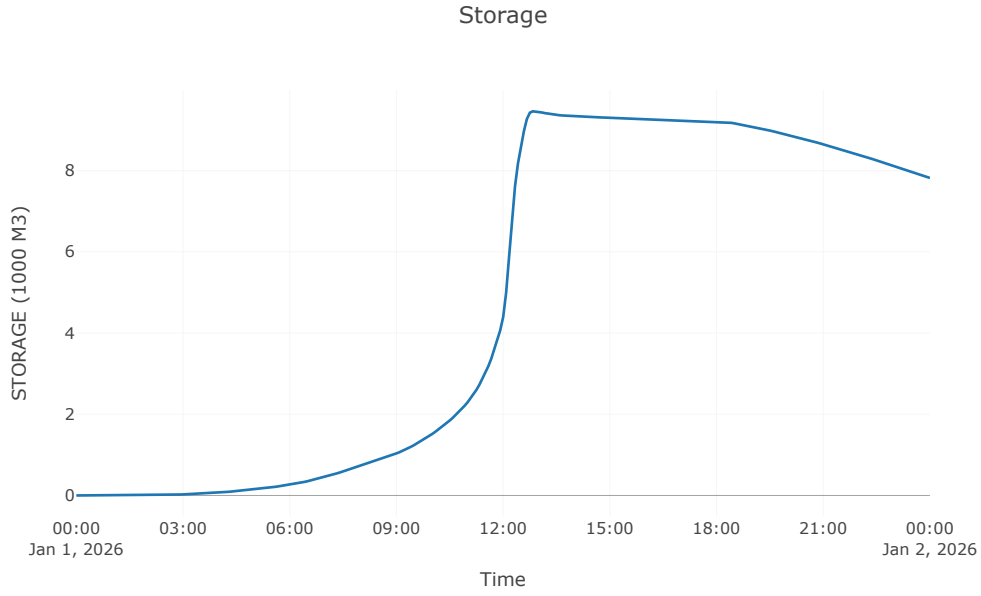

Outlet 3
FLOW (M3/S)
0.25
0.2
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

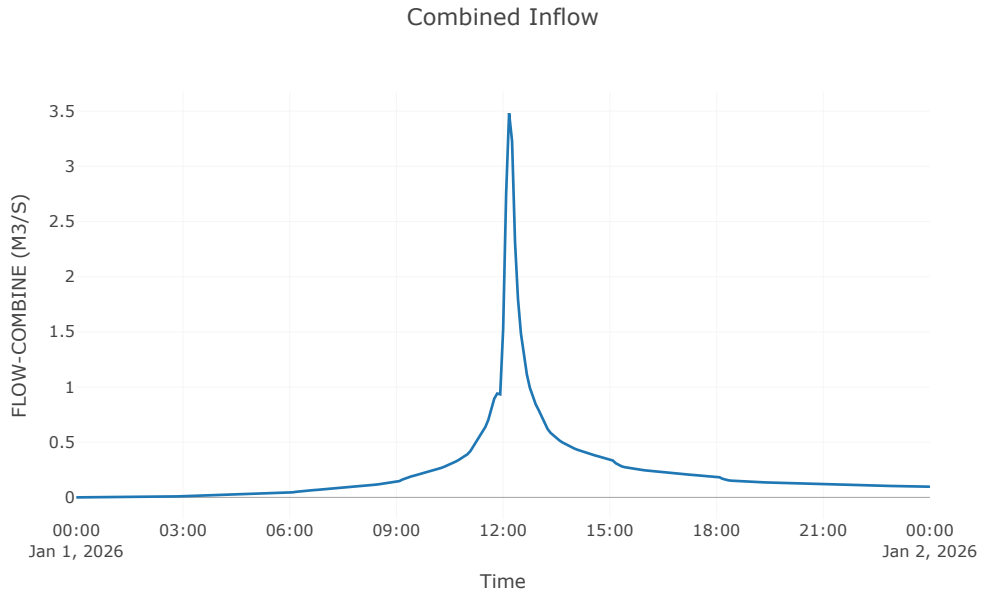

Outflow
FLOW (M3/S)
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

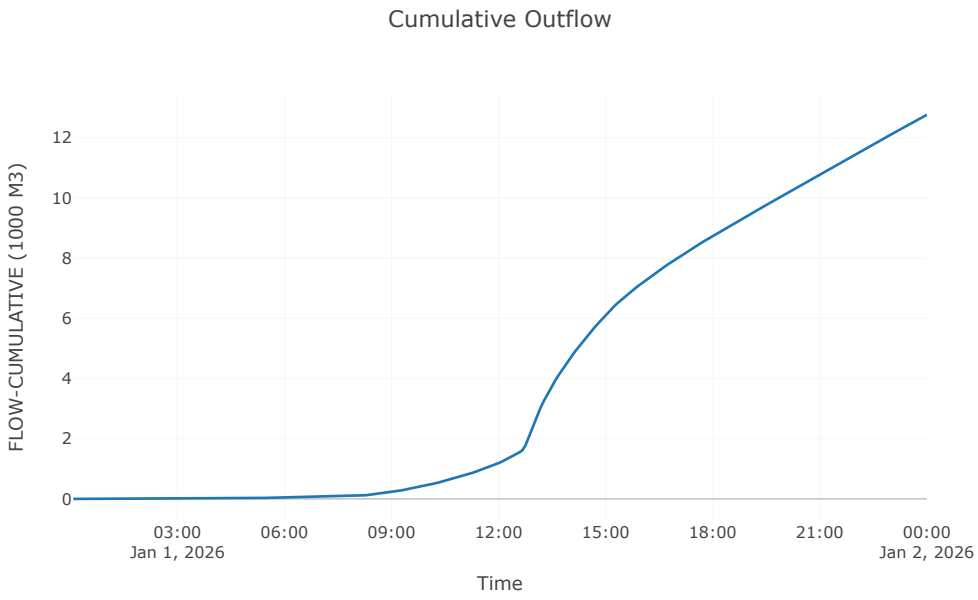
Reservoir: POND 7

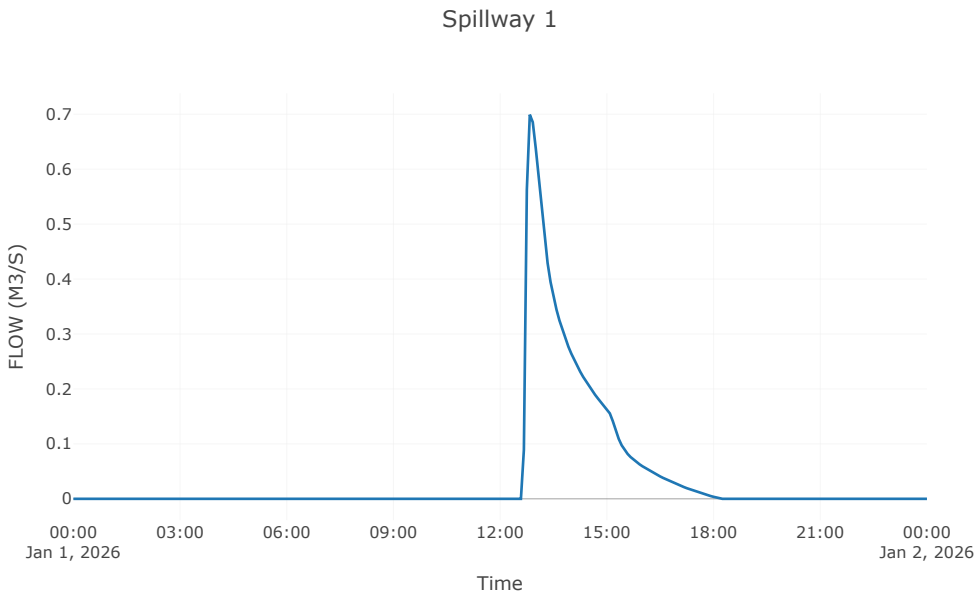
Downstream : Reach - WETLAND B

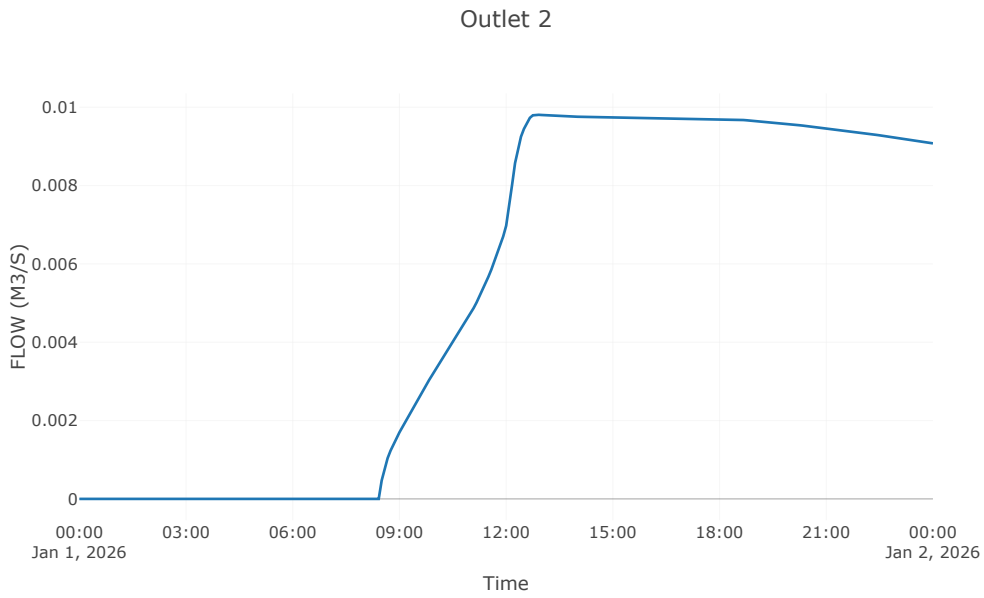
Results: POND 7	
Peak Discharge (M3/S)	0.89
Time of Peak Discharge	01Jan2026, 12:50
Volume (MM)	51.77
Peak Inflow (M3/S)	3.48
Time of Peak Inflow	01Jan2026, 12:10
Inflow Volume (M3)	20586.74
Maximum Storage (M3)	9461.34
Peak Elevation (M)	3.92
Discharge Volume (M3)	12767

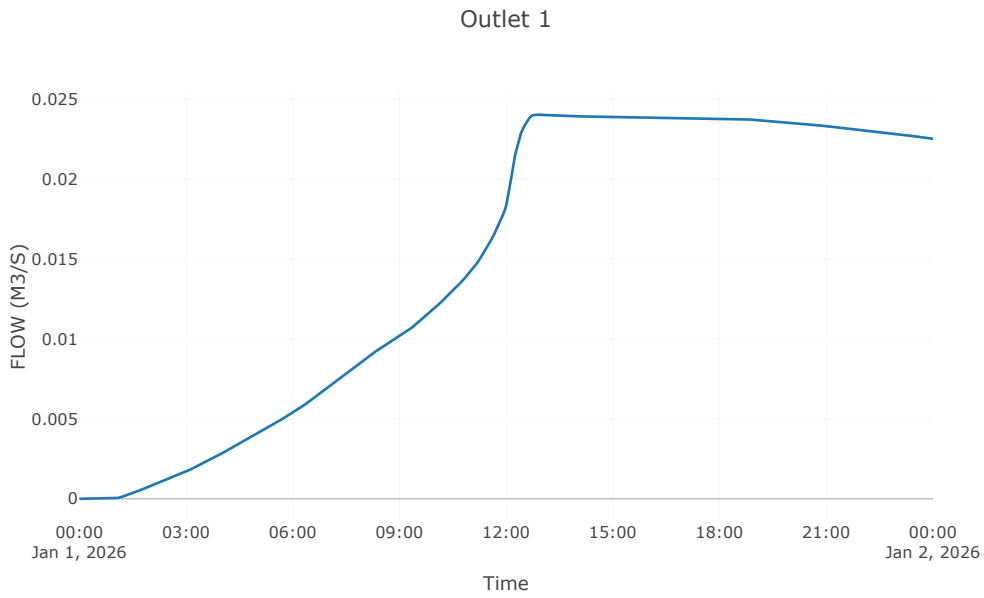


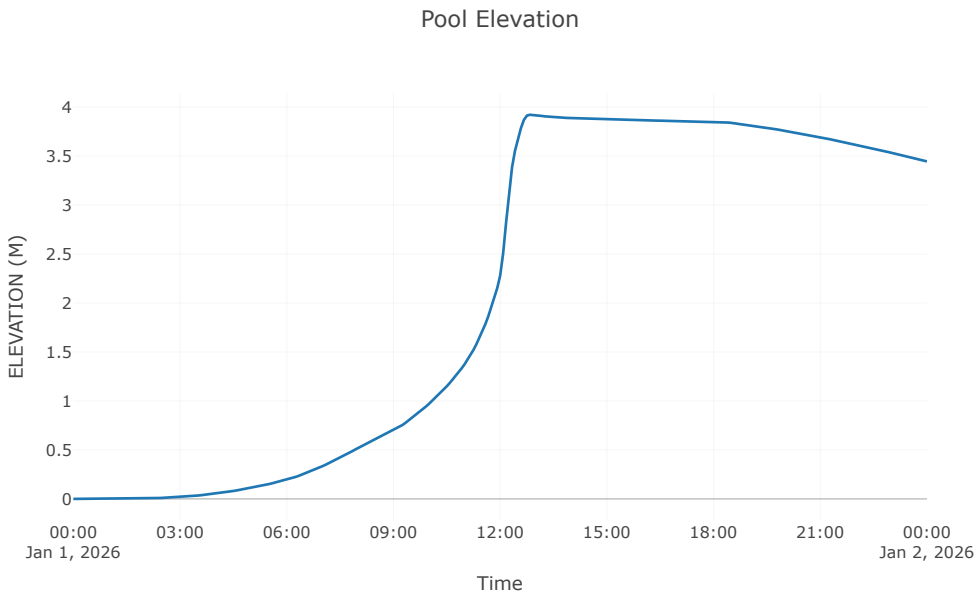


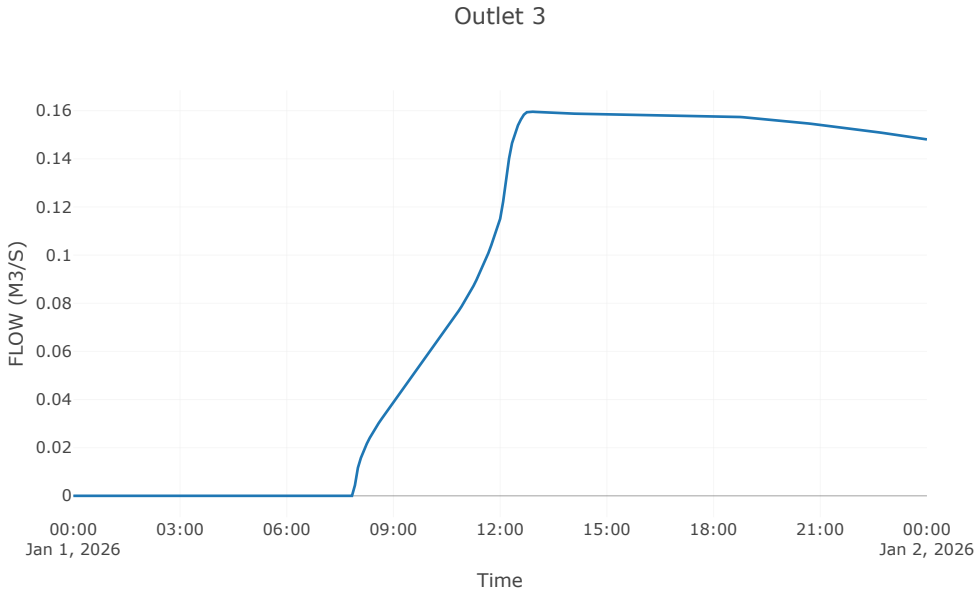

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
12
10
8
6
4
2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

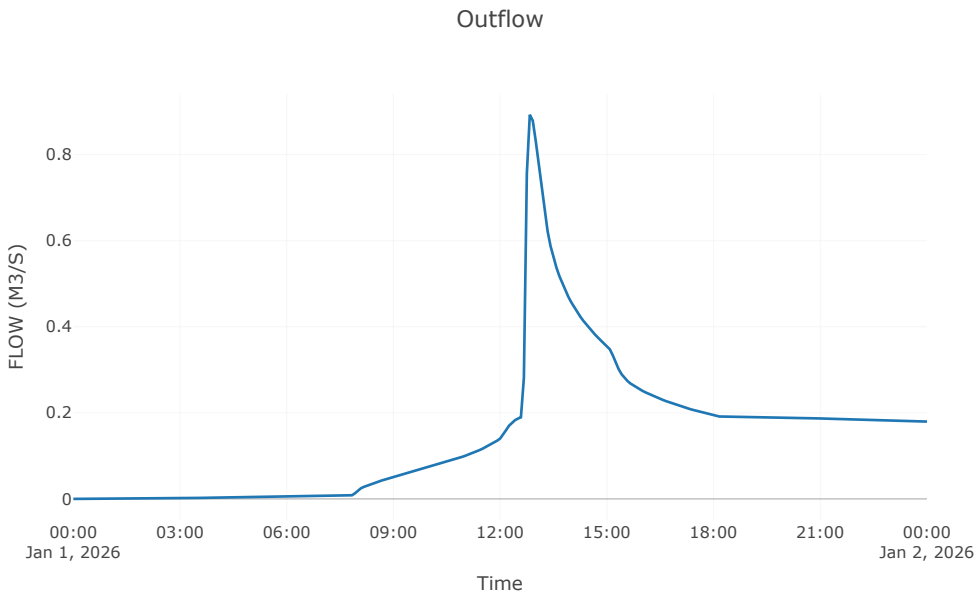

Spillway 1
FLOW (M3/S)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 2
0.01
0.008
0.006
0.004
0.002
0
FLOW (M3/S)
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 1
0.025
0.02
0.015
0.01
0.005
0
FLOW (M3/S)
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Pool Elevation
ELEVATION (M)
4
3.5
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outlet 3
FLOW (M3/S)
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

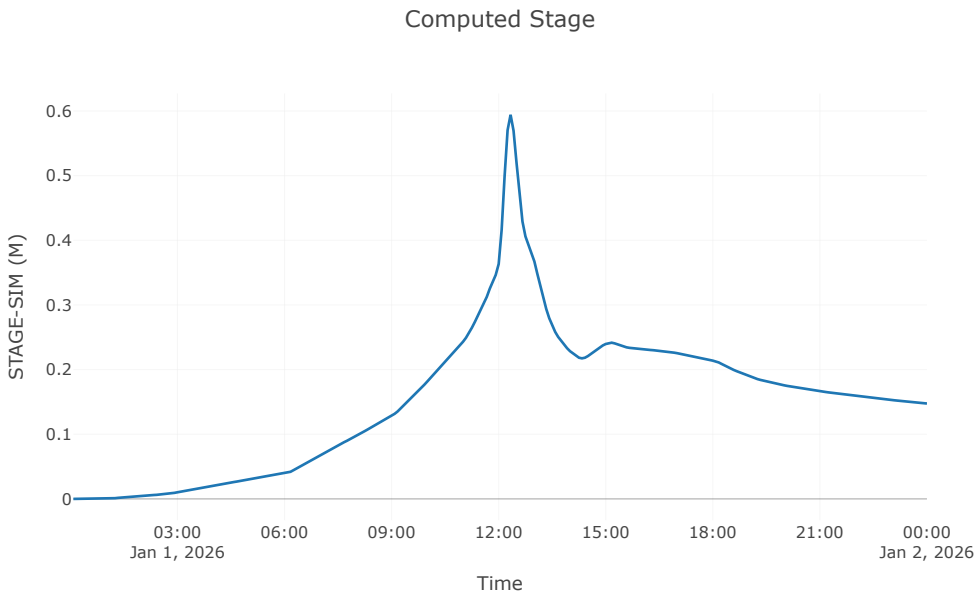

Outflow
FLOW (M3/S)
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

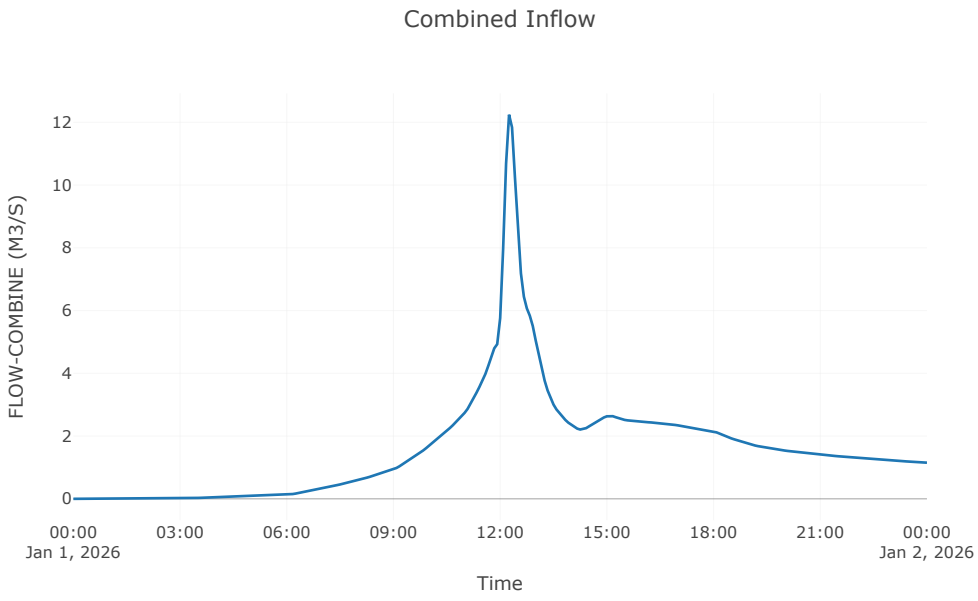
Reach: Reach-CHANNEL 1

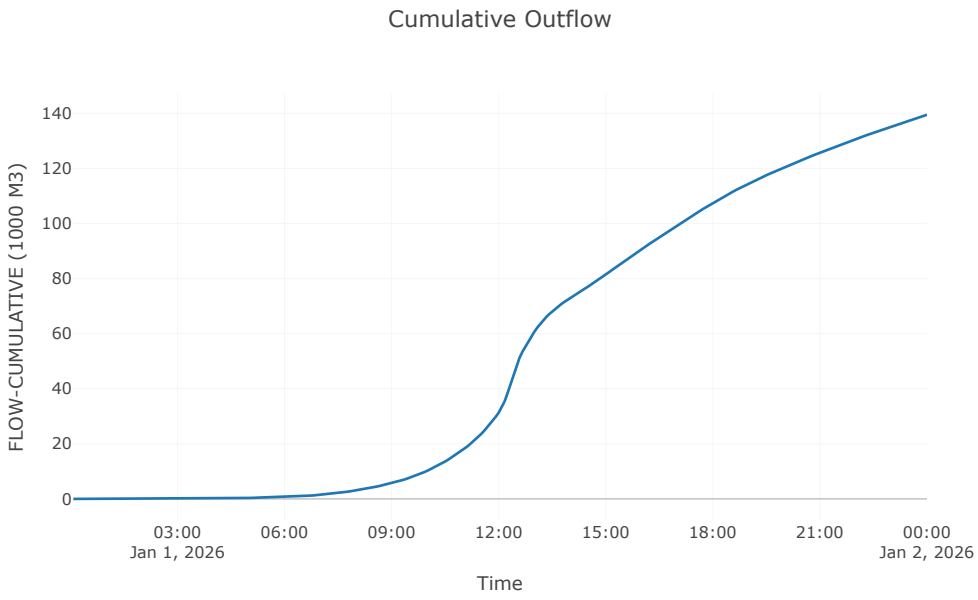
Downstream : Junction - POND 1

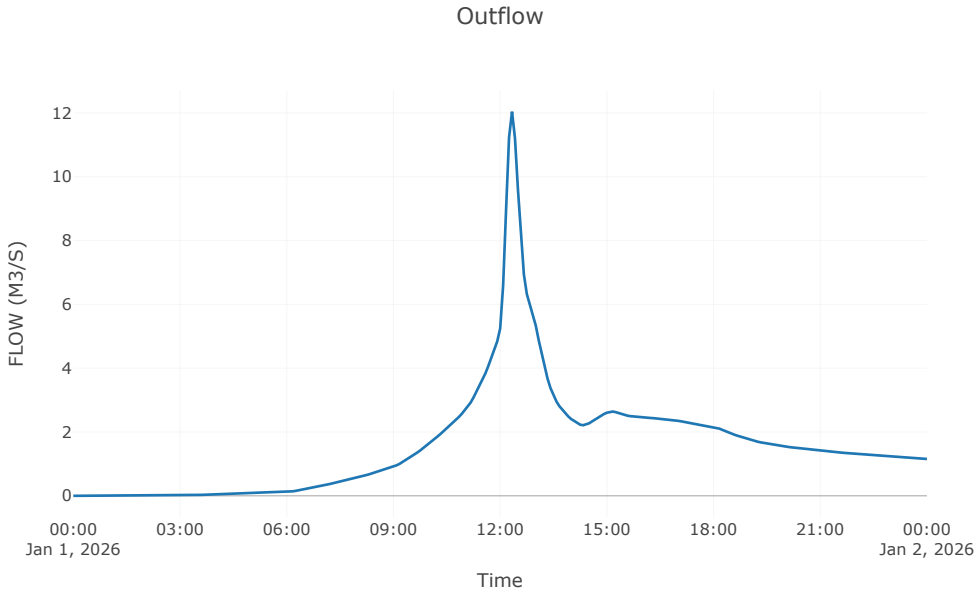
Route: Muskingum Cunge	
Method	Muskingum Cunge
Channel	Trapezoid
Length (M)	300
Energy Slope (M/M)	0.01
Mannings n	0.06
Bottom Width (M)	20
Side Slope (M/M)	3
Initial Variable	Combined Inflow
Space - Time Method	Automatic DX and DT
Index Parameter Type	Index Flow
Index Flow	15
Invert Elevation	0
Maximum Depth Iterations	20
Maximum Route Step Iterations	30

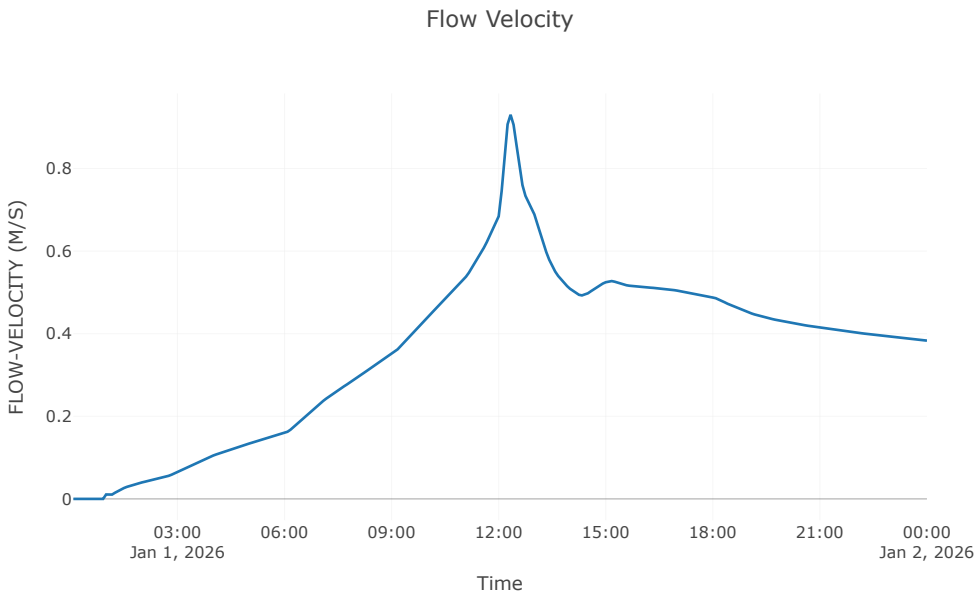
Results: Reach-CHANNEL 1	
Peak Discharge (M3/S)	12.04
Time of Peak Discharge	01Jan2026, 12:20
Volume (MM)	107.57
Peak Inflow (M3/S)	12.24
Inflow Volume (M3)	1.4E5


Computed Stage
STAGE-SIM (M)
0.6
0.5
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Combined Inflow
FLOW-COMBINE (M3/S)
12
10
8
6
4
2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
140
120
100
80
60
40
20
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outflow
FLOW (M3/S)
12
10
8
6
4
2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

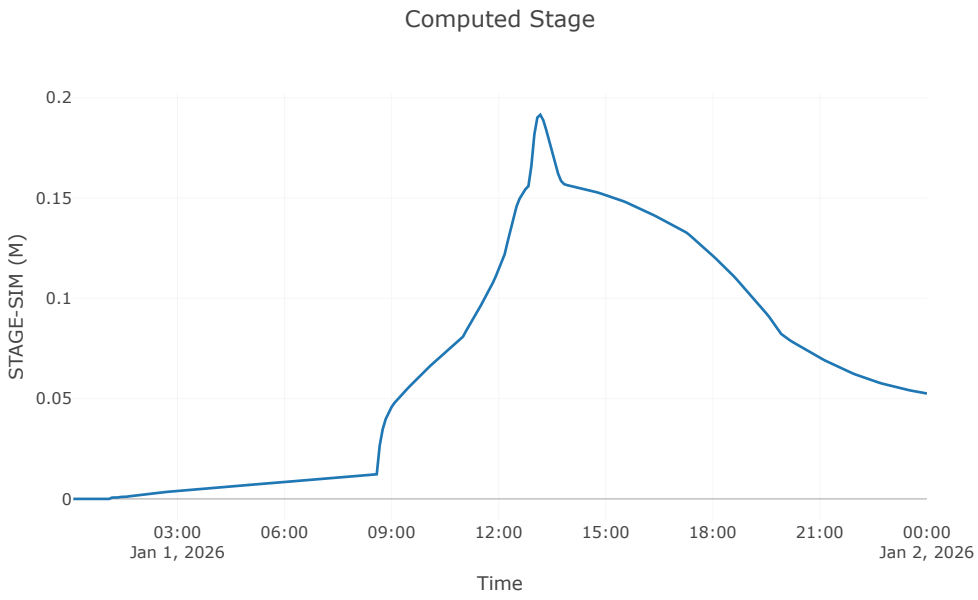

Flow Velocity
FLOW-VELOCITY (M/S)
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

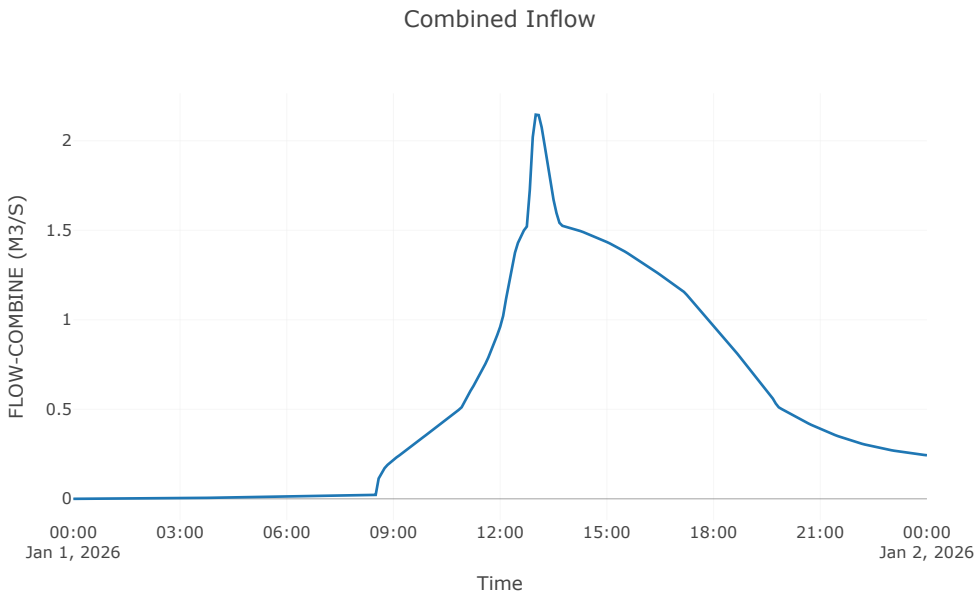
Reach: Reach-CHANNEL 2

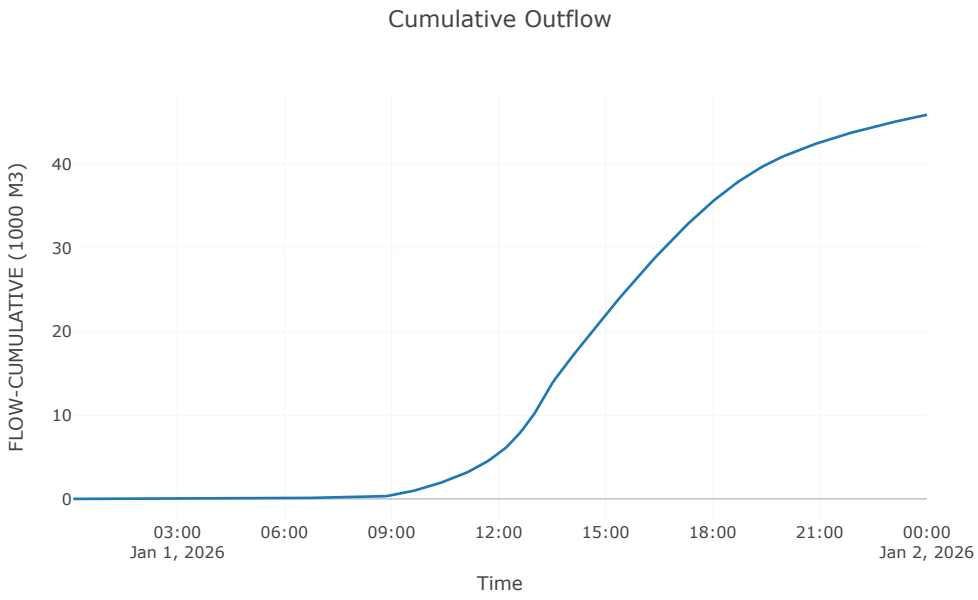
Downstream : Junction - POND 1

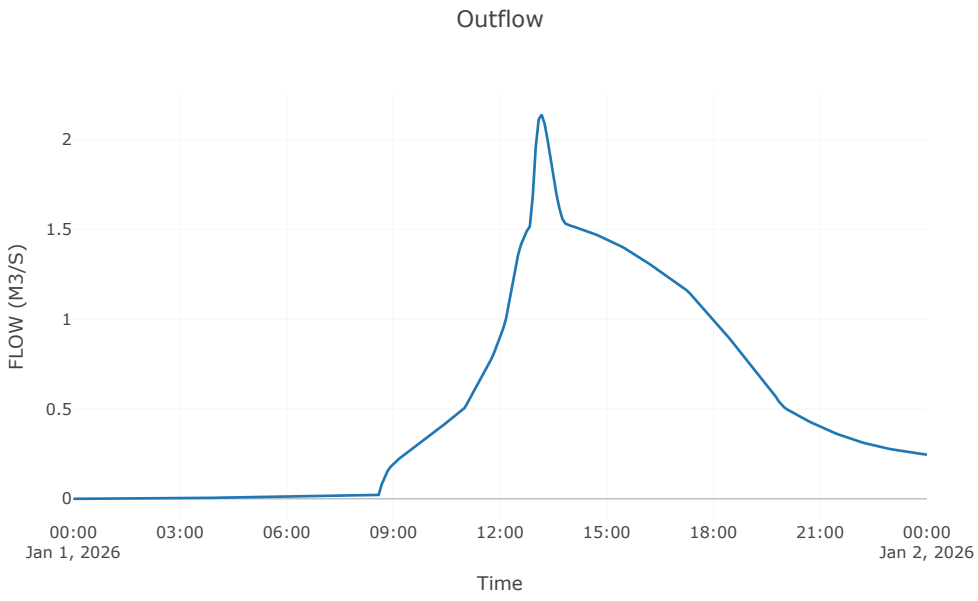
Route: Muskingum Cunge	
Method	Muskingum Cunge
Channel	Trapezoid
Length (M)	520
Energy Slope (M/M)	0.01
Mannings n	0.06
Bottom Width (M)	20
Side Slope (M/M)	3
Initial Variable	Combined Inflow
Space - Time Method	Automatic DX and DT
Index Parameter Type	Index Flow
Index Flow	15
Invert Elevation	0
Maximum Depth Iterations	20
Maximum Route Step Iterations	30

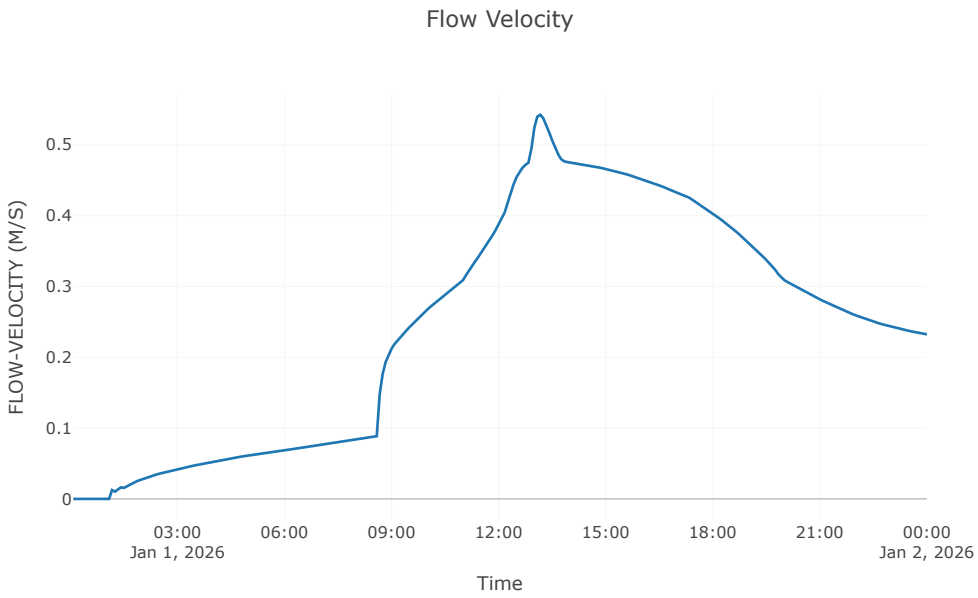
Results: Reach-CHANNEL 2	
Peak Discharge (M3/S)	2.14
Time of Peak Discharge	01Jan2026, 13:10
Volume (MM)	81.98
Peak Inflow (M3/S)	2.15
Inflow Volume (M3)	46031.2


Computed Stage
STAGE-SIM (M)
0.2
0.15
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Combined Inflow
FLOW-COMBINE (M3/S)
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
40
30
20
10
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outflow
FLOW (M3/S)
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

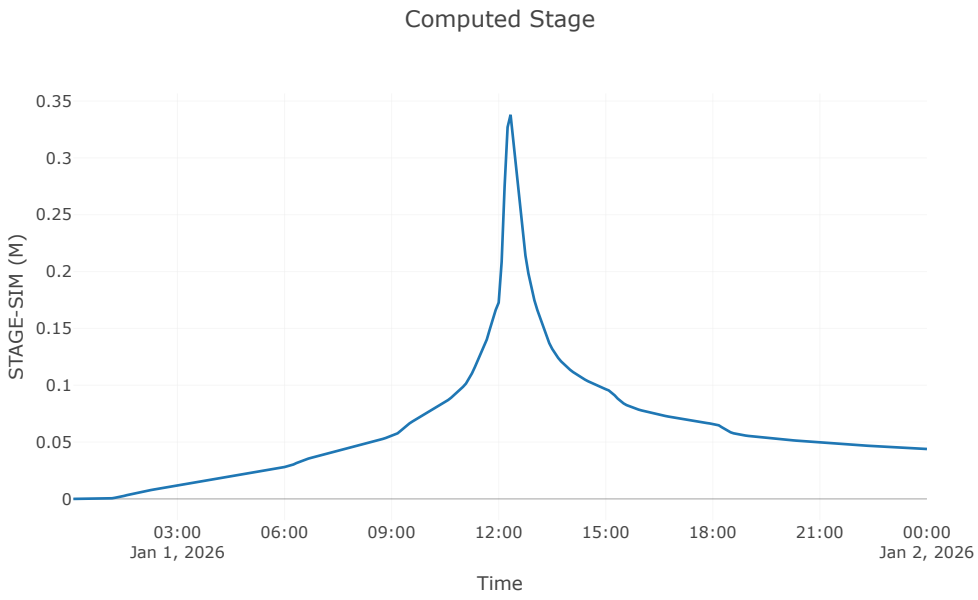

Flow Velocity
FLOW-VELOCITY (M/S)
0.5
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

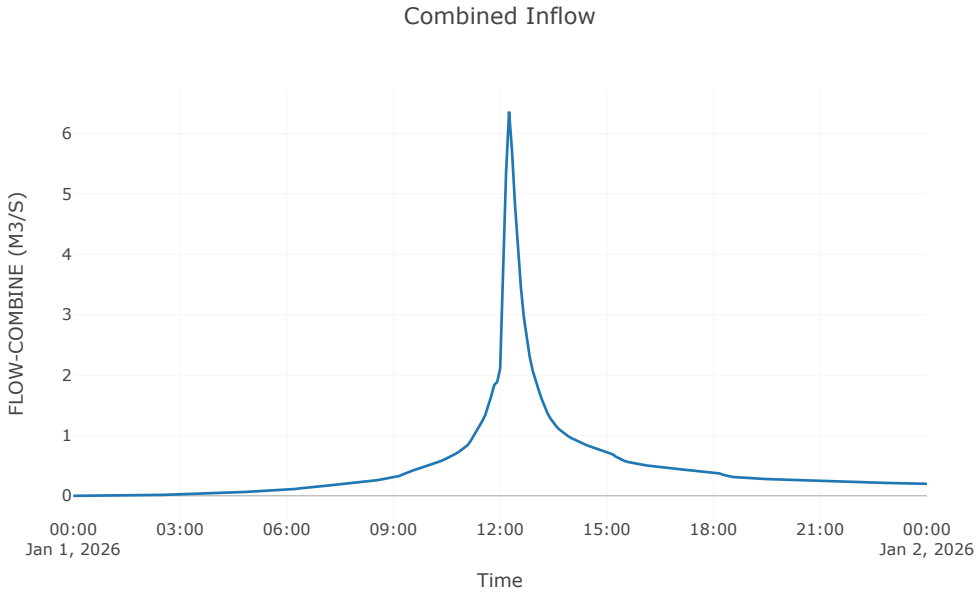
Reach: Reach-CHANNEL 3

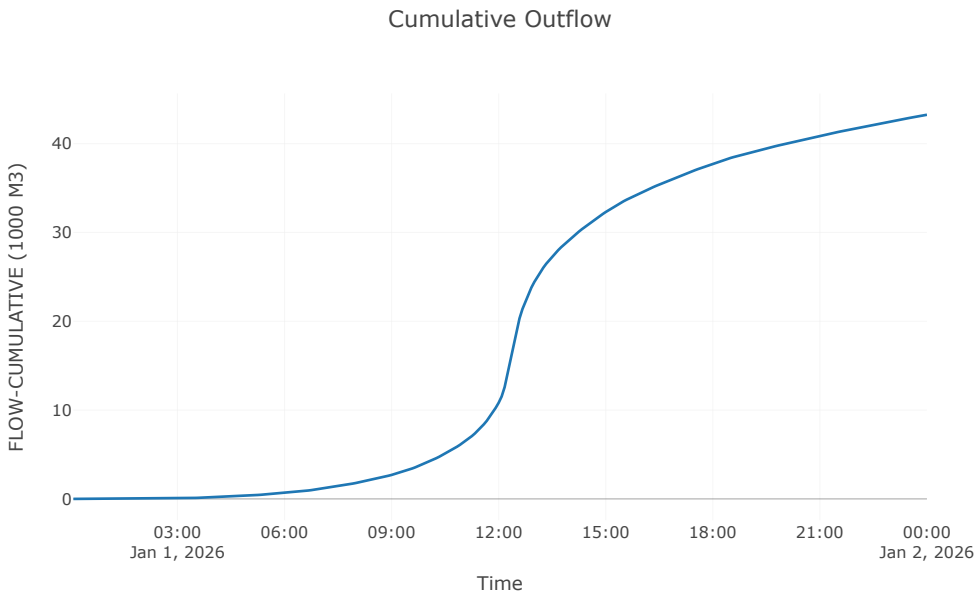
Downstream : Junction - POND 6

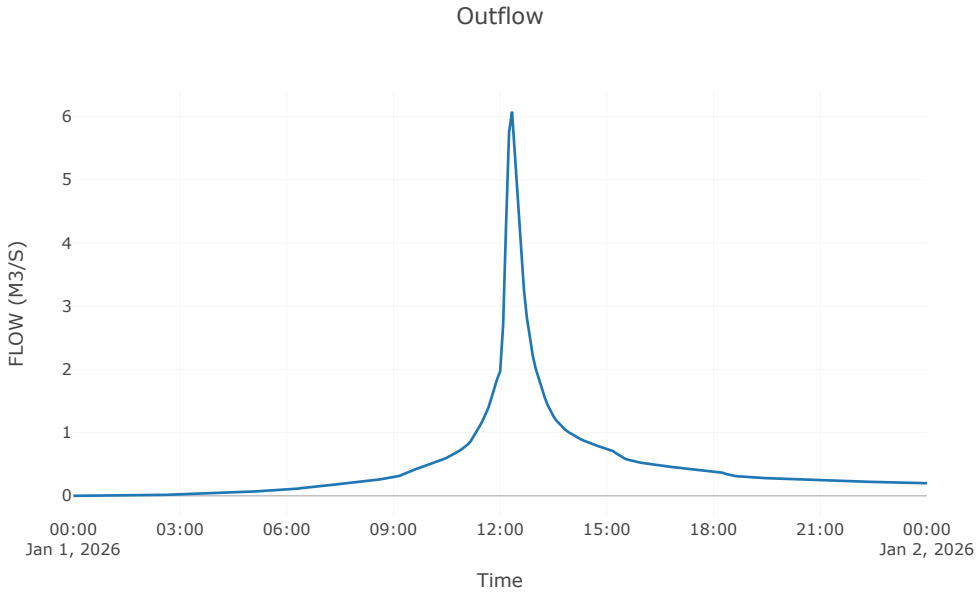
Route: Muskingum Cunge	
Method	Muskingum Cunge
Channel	Trapezoid
Length (M)	340
Energy Slope (M/M)	0.01
Mannings n	0.06
Bottom Width (M)	20
Side Slope (M/M)	3
Initial Variable	Combined Inflow
Space - Time Method	Automatic DX and DT
Index Parameter Type	Index Flow
Index Flow	15
Invert Elevation	0
Maximum Depth Iterations	20
Maximum Route Step Iterations	30

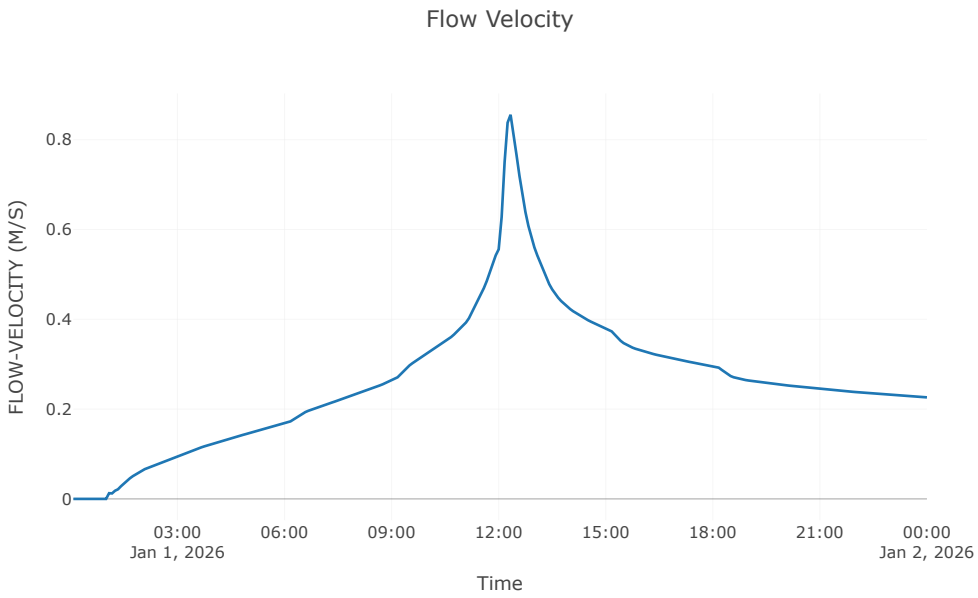
Results: Reach-CHANNEL 3	
Peak Discharge (M3/S)	6.08
Time of Peak Discharge	01Jan2026, 12:20
Volume (MM)	88.66
Peak Inflow (M3/S)	6.36
Inflow Volume (M3)	43296.26


Computed Stage
STAGE-SIM (M)
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Combined Inflow
FLOW-COMBINE (M3/S)
6
5
4
3
2
1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
40
30
20
10
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outflow
FLOW (M3/S)
6
5
4
3
2
1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

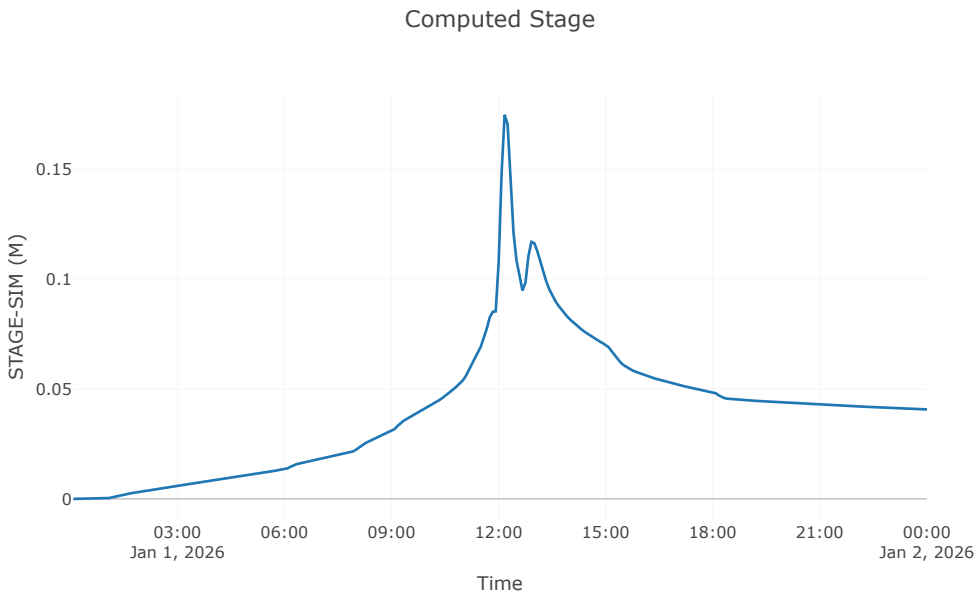

Flow Velocity
FLOW-VELOCITY (M/S)
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

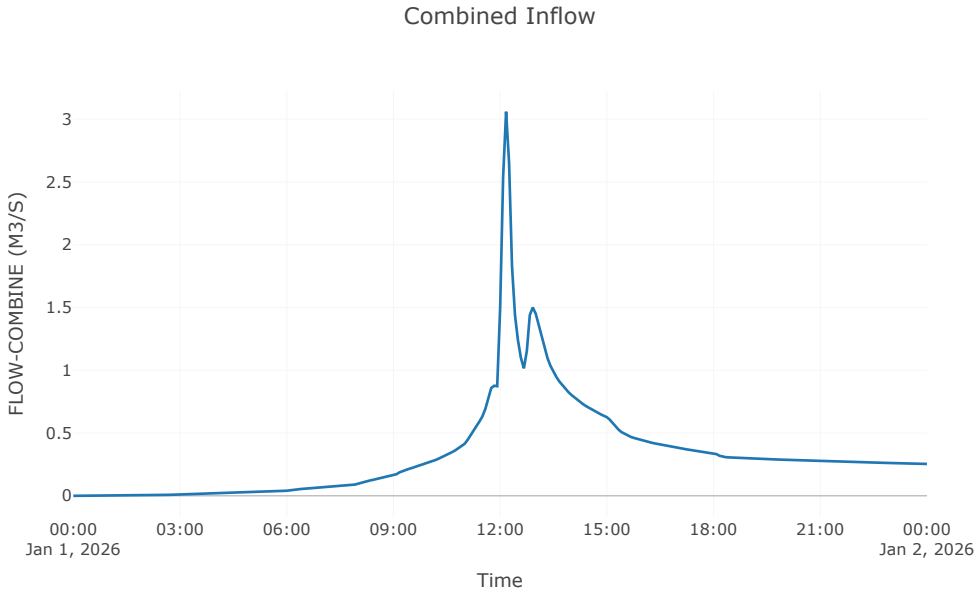
Reach: Reach-CHANNEL 4

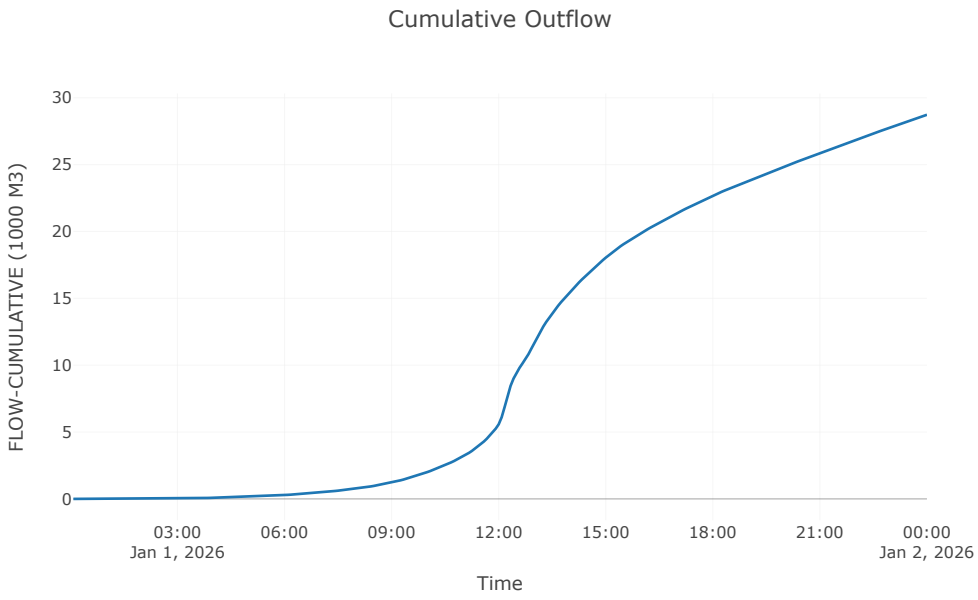
Downstream : Junction - CHANNEL 1

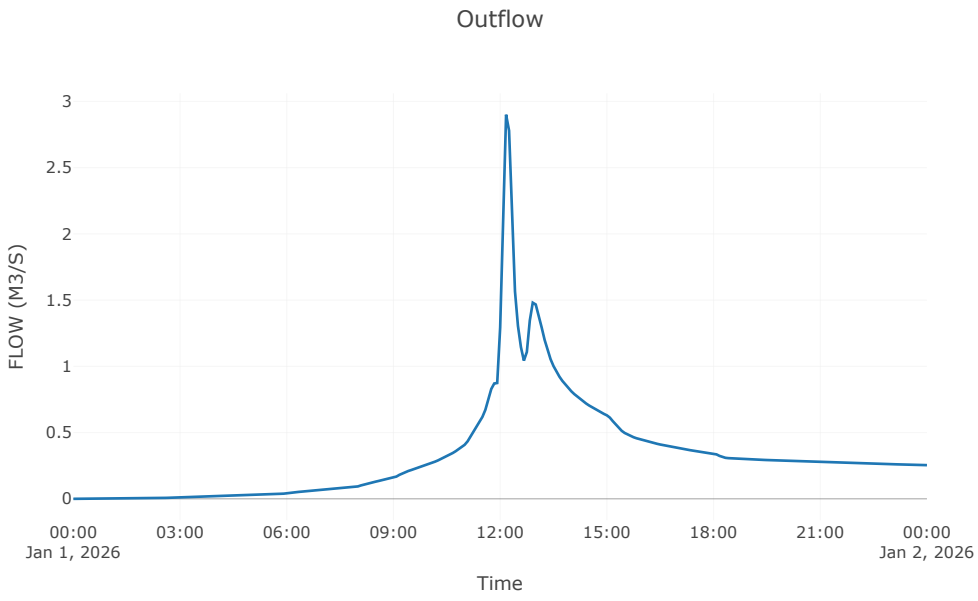
Route: Muskingum Cunge	
Method	Muskingum Cunge
Channel	Trapezoid
Length (M)	200
Energy Slope (M/M)	0.03
Mannings n	0.06
Bottom Width (M)	20
Side Slope (M/M)	3
Initial Variable	Combined Inflow
Space - Time Method	Automatic DX and DT
Index Parameter Type	Index Flow
Index Flow	15
Invert Elevation	0
Maximum Depth Iterations	20
Maximum Route Step Iterations	30

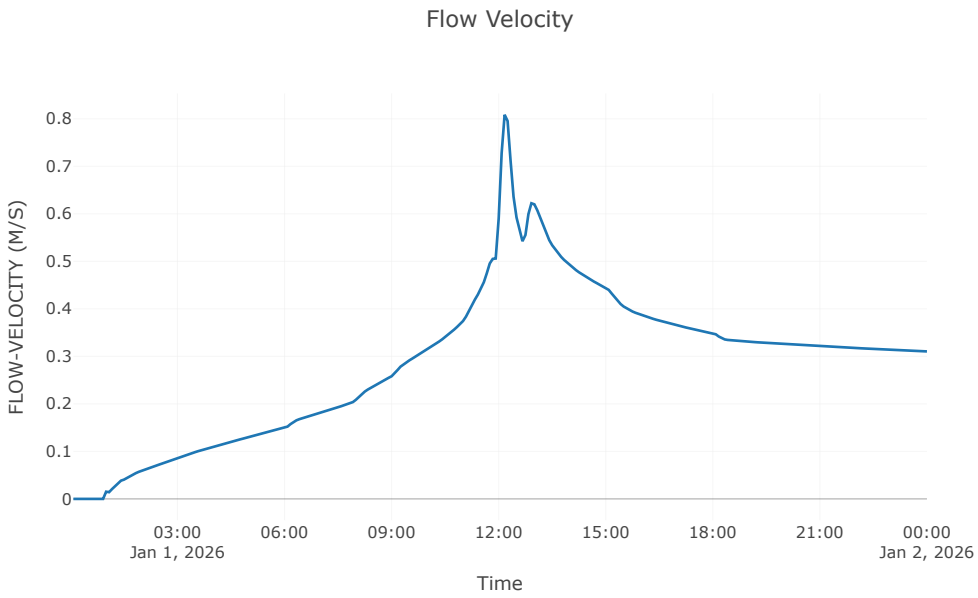
Results: Reach-CHANNEL 4	
Peak Discharge (M3/S)	2.9
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	66.49
Peak Inflow (M3/S)	3.06
Inflow Volume (M3)	28757.44


Computed Stage
STAGE-SIM (M)
0.15
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Combined Inflow
FLOW-COMBINE (M3/S)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
30
25
20
15
10
5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outflow
FLOW (M3/S)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

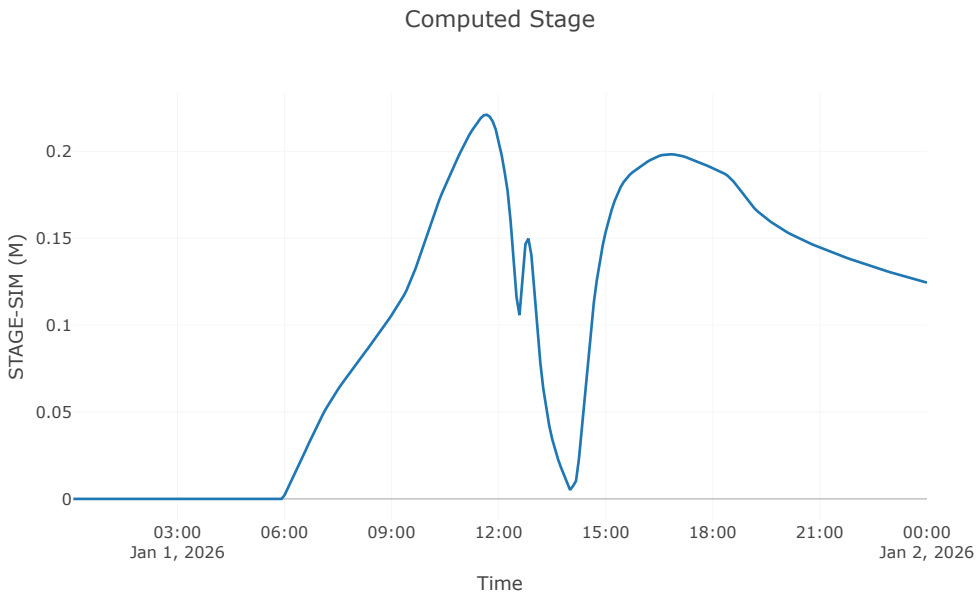

Flow Velocity
FLOW-VELOCITY (M/S)
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

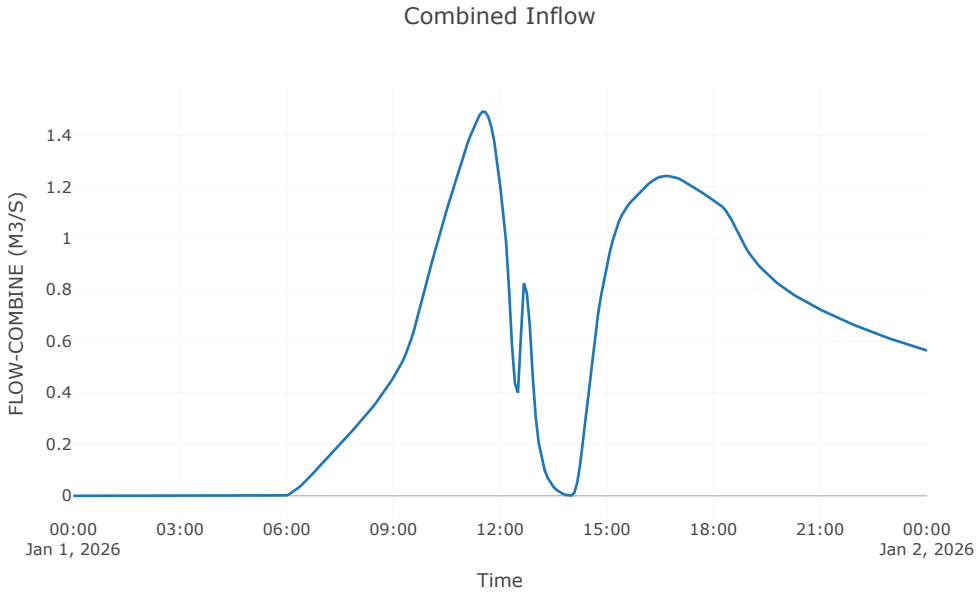
Reach: Reach-CHANNEL 5

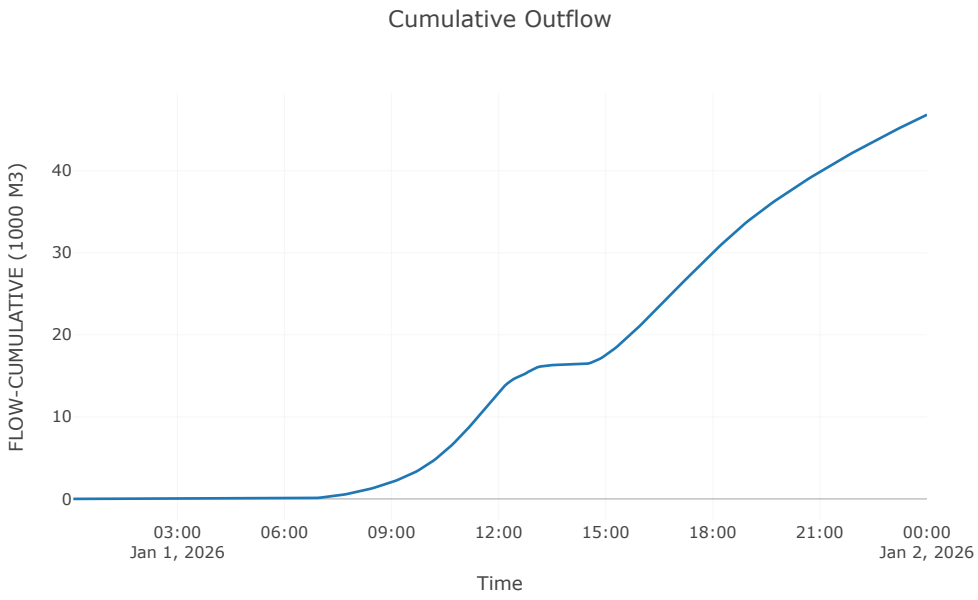
Downstream : Junction - CHANNEL 1

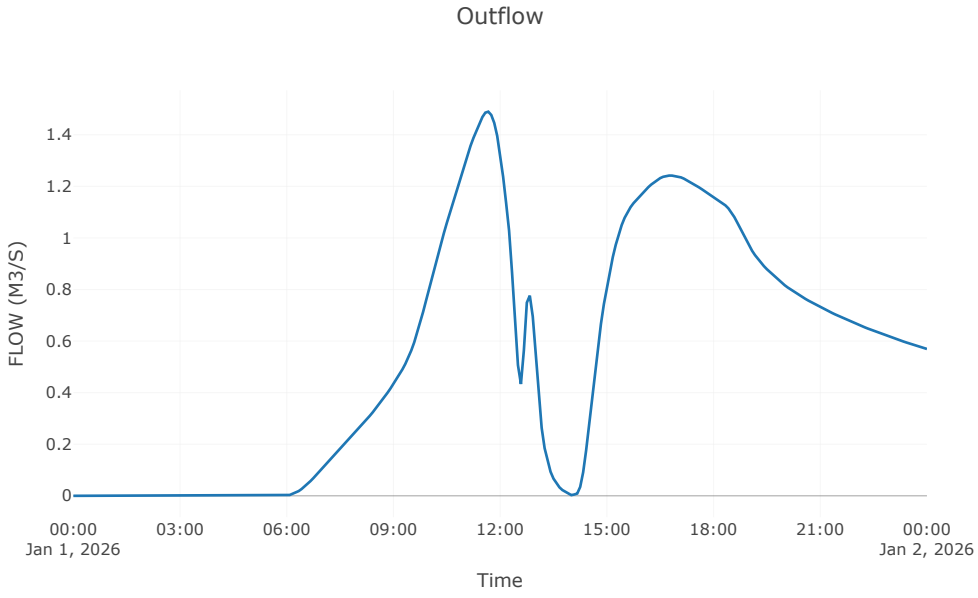
Route: Muskingum Cunge	
Method	Muskingum Cunge
Channel	Trapezoid
Length (M)	300
Energy Slope (M/M)	0
Mannings n	0.06
Bottom Width (M)	20
Side Slope (M/M)	3
Initial Variable	Combined Inflow
Space - Time Method	Automatic DX and DT
Index Parameter Type	Index Flow
Index Flow	15
Invert Elevation	0
Maximum Depth Iterations	20
Maximum Route Step Iterations	30

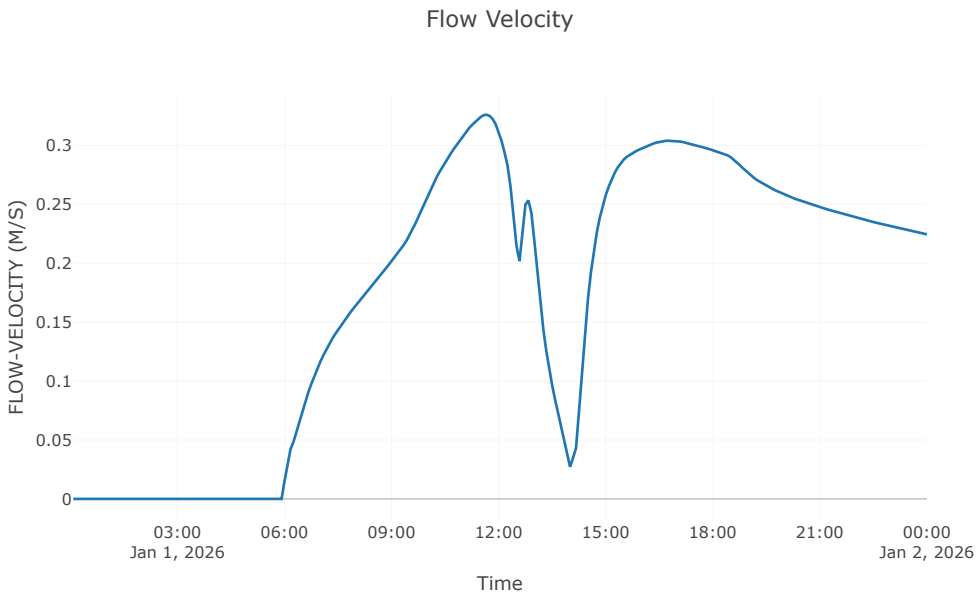
Results: Reach-CHANNEL 5	
Peak Discharge (M3/S)	1.49
Time of Peak Discharge	01Jan2026, 11:40
Peak Inflow (M3/S)	1.49
Inflow Volume (M3)	47070.13


Computed Stage
STAGE-SIM (M)
0.2
0.15
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Combined Inflow
FLOW-COMBINE (M3/S)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
40
30
20
10
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outflow
FLOW (M3/S)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

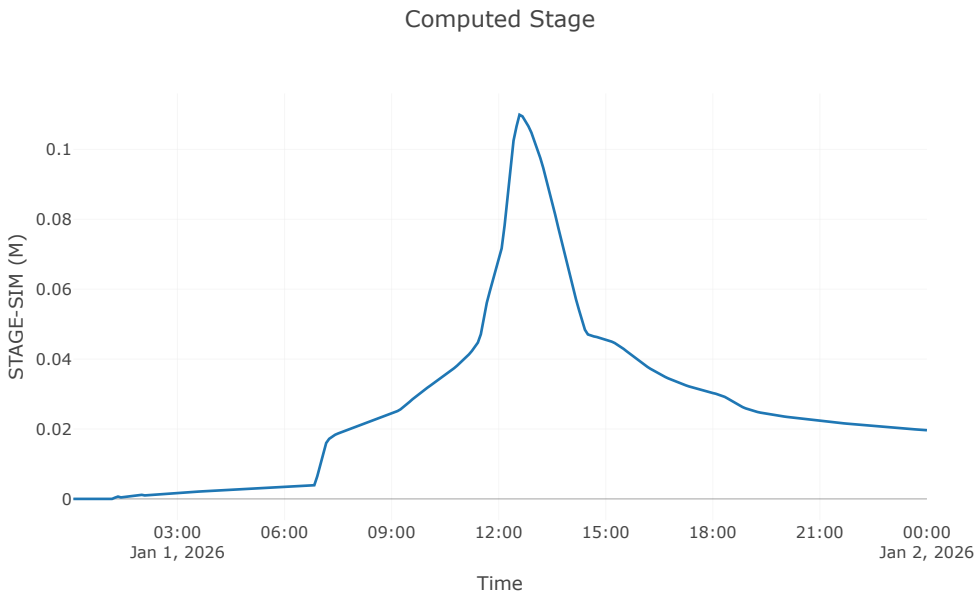

Flow Velocity
FLOW-VELOCITY (M/S)
0.3
0.25
0.2
0.15
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

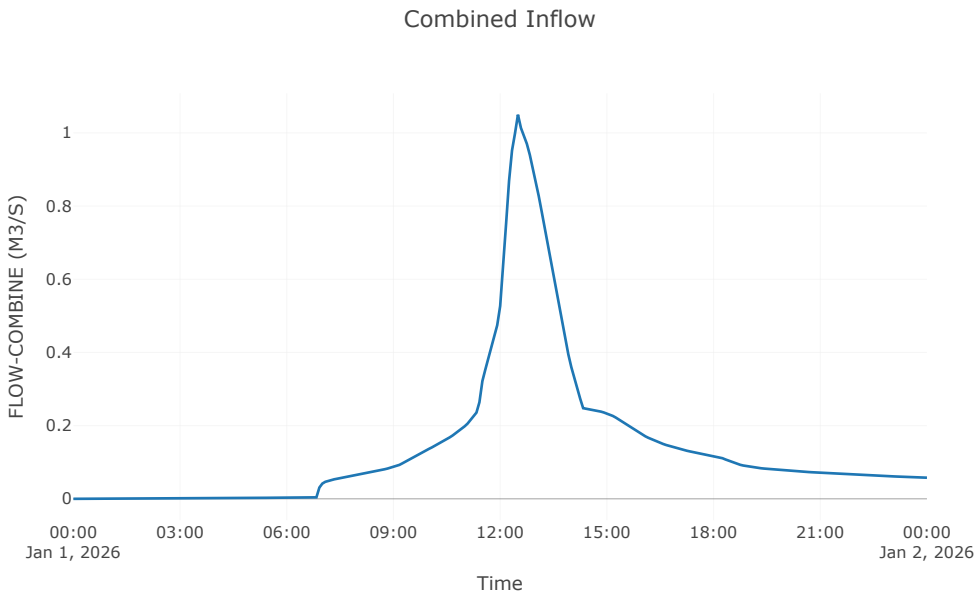
Reach: Reach-POND 5 OLFP

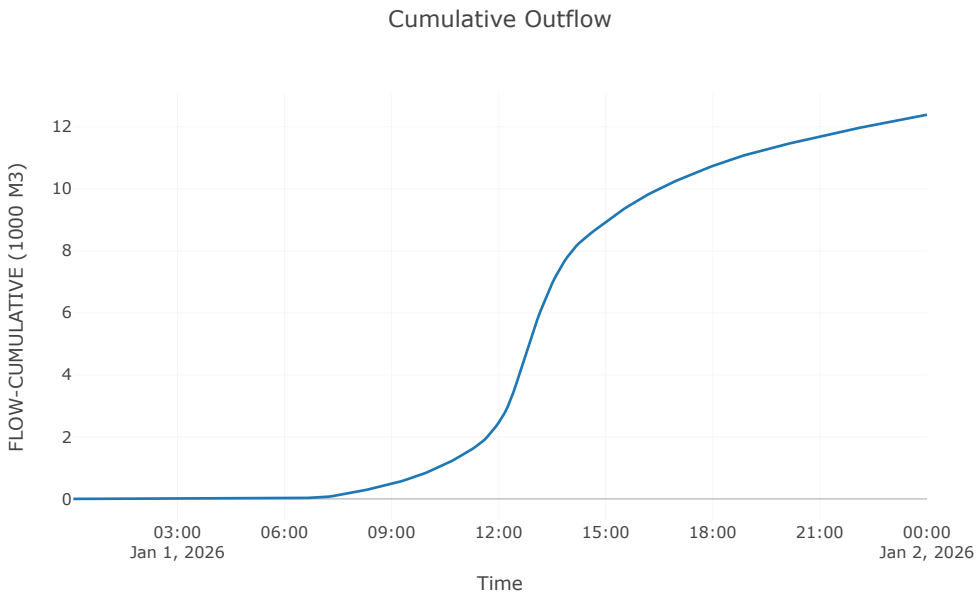
Downstream : Junction - EXIT OLFP

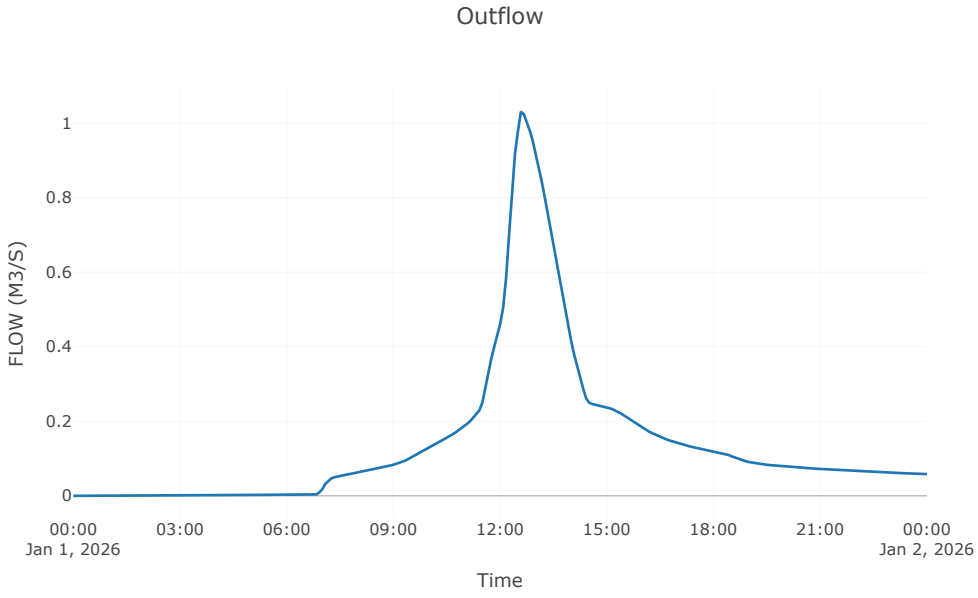
Route: Muskingum Cunge	
Method	Muskingum Cunge
Channel	Trapezoid
Length (M)	737.85
Energy Slope (M/M)	0.01
Mannings n	0.06
Bottom Width (M)	20
Side Slope (M/M)	3
Initial Variable	Combined Inflow
Space - Time Method	Automatic DX and DT
Index Parameter Type	Index Flow
Index Flow	15
Invert Elevation	0
Maximum Depth Iterations	20
Maximum Route Step Iterations	30

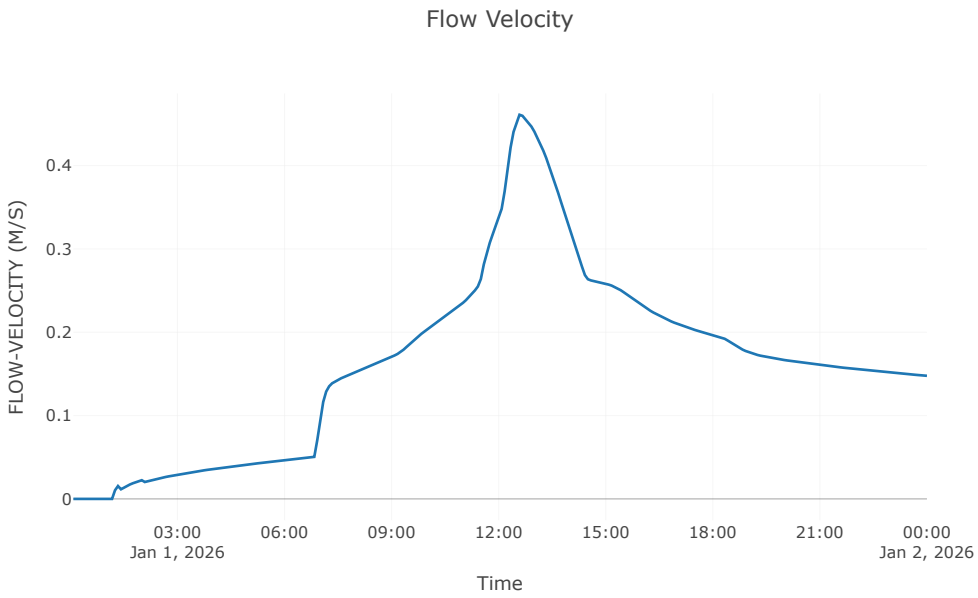
Results: Reach-POND 5 OLFP	
Peak Discharge (M3/S)	1.03
Time of Peak Discharge	01Jan2026, 12:35
Volume (MM)	90.11
Peak Inflow (M3/S)	1.05
Inflow Volume (M3)	12414.62


Computed Stage
STAGE-SIM (M)
0.1
0.08
0.06
0.04
0.02
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Combined Inflow
FLOW-COMBINE (M3/S)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
0
2
4
6
8
10
12
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outflow
FLOW (M3/S)
0
0.2
0.4
0.6
0.8
1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

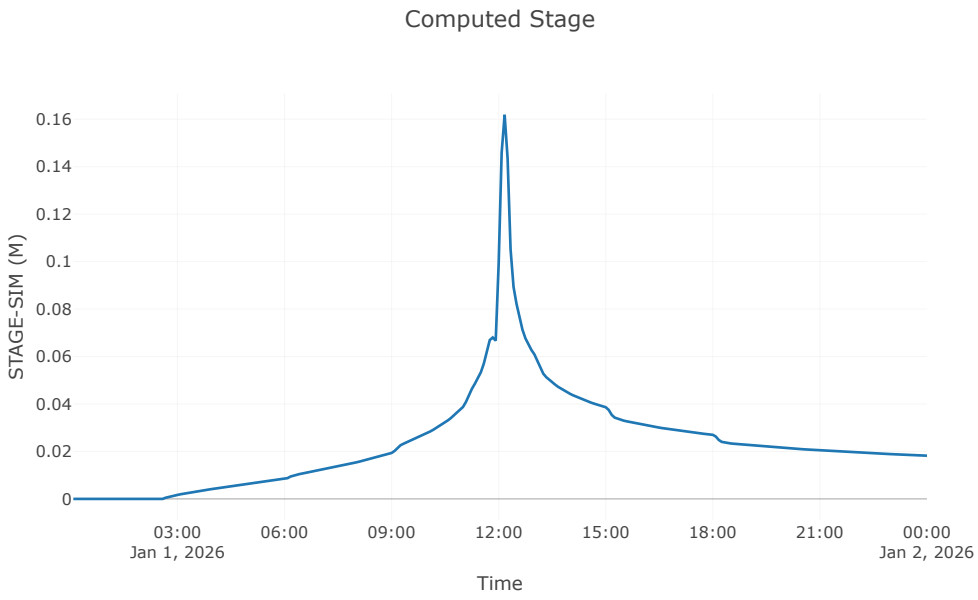

Flow Velocity
FLOW-VELOCITY (M/S)
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

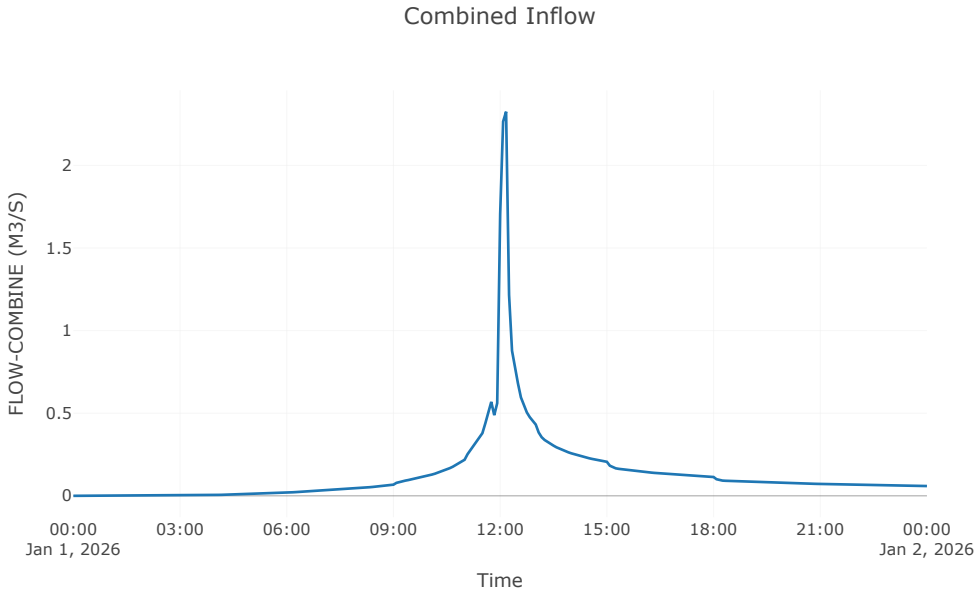
Reach: Reach-CHANNEL 6

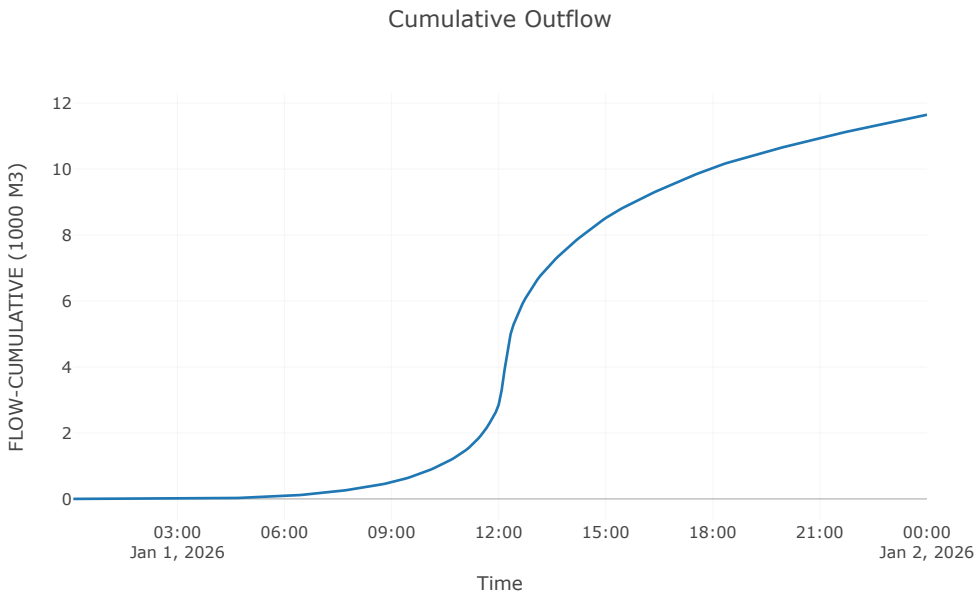
Downstream : Junction - POND 7

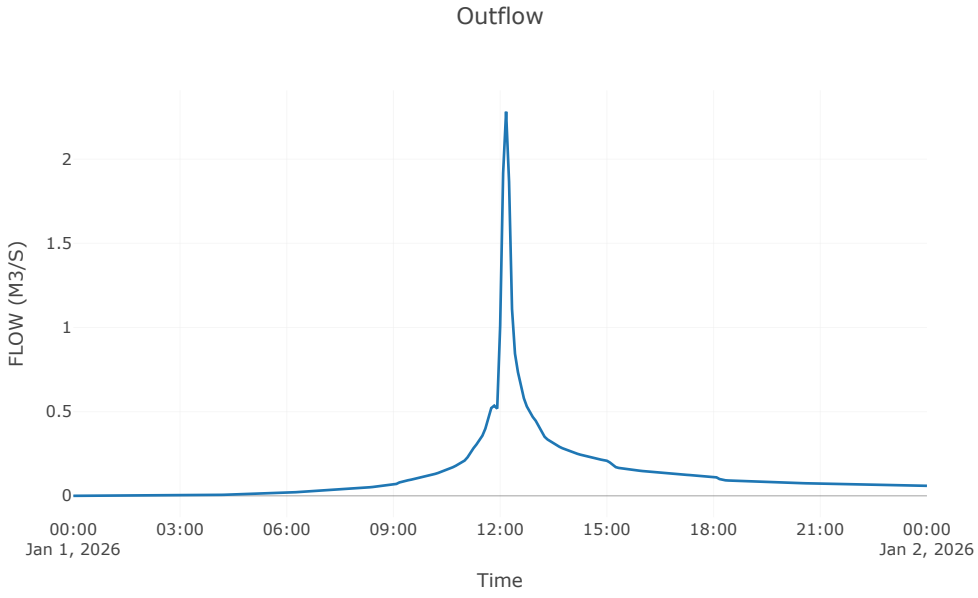
Route: Muskingum Cunge	
Method	Muskingum Cunge
Channel	Trapezoid
Length (M)	300
Energy Slope (M/M)	0.02
Mannings n	0.06
Bottom Width (M)	20
Side Slope (M/M)	3
Initial Variable	Combined Inflow
Space - Time Method	Automatic DX and DT
Index Parameter Type	Index Flow
Index Flow	15
Invert Elevation	0
Maximum Depth Iterations	20
Maximum Route Step Iterations	30

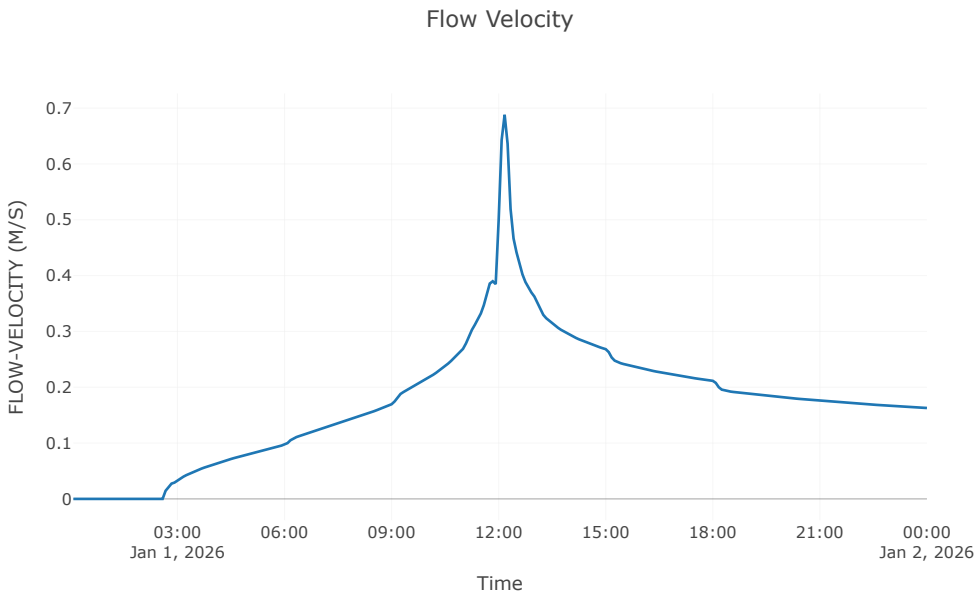
Results: Reach-CHANNEL 6	
Peak Discharge (M3/S)	2.28
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	72.4
Peak Inflow (M3/S)	2.32
Inflow Volume (M3)	11656.4


Computed Stage
STAGE-SIM (M)
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Combined Inflow
FLOW-COMBINE (M3/S)
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
12
10
8
6
4
2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outflow
FLOW (M3/S)
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

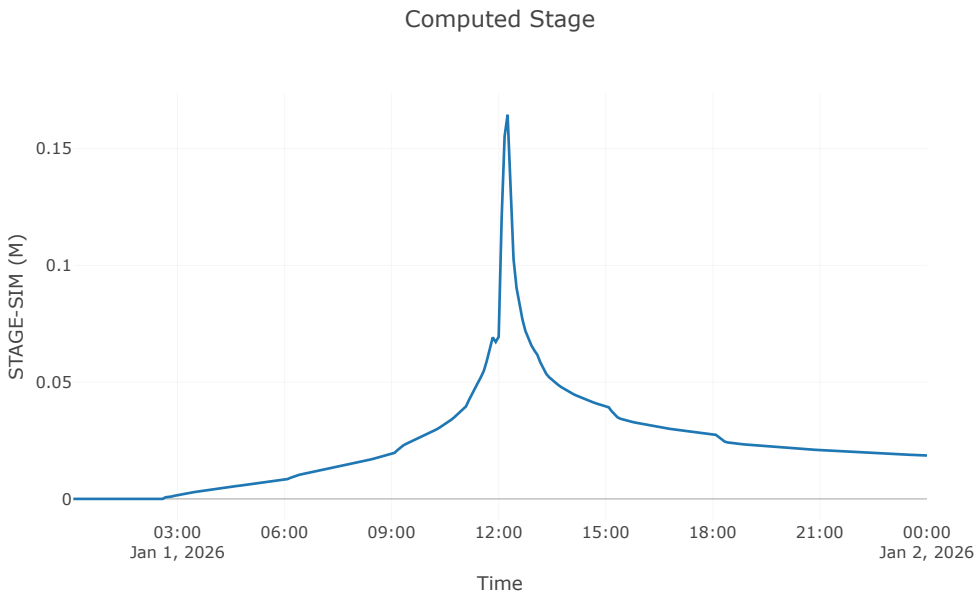

Flow Velocity
FLOW-VELOCITY (M/S)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

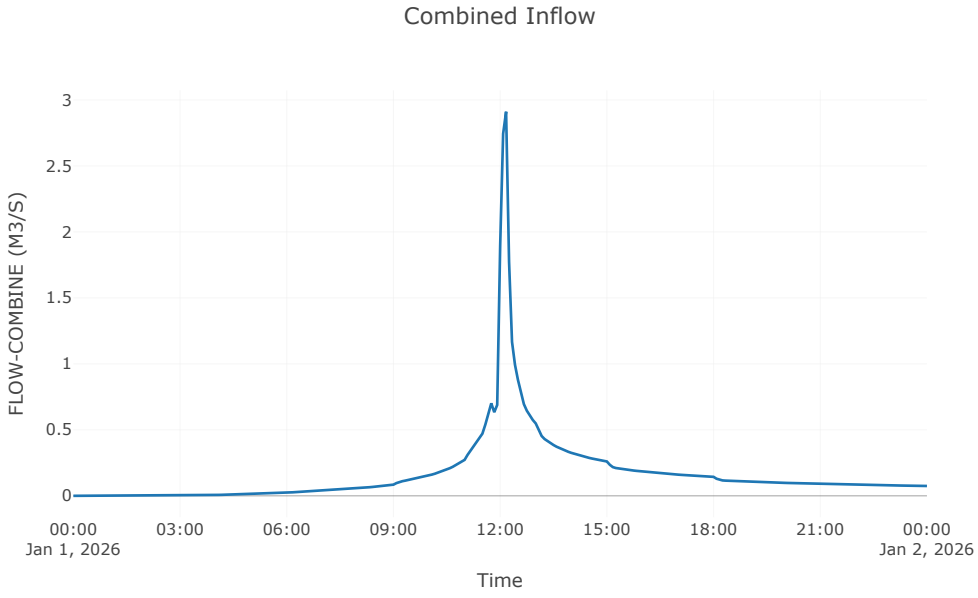
Reach: Reach-CHANNEL 8

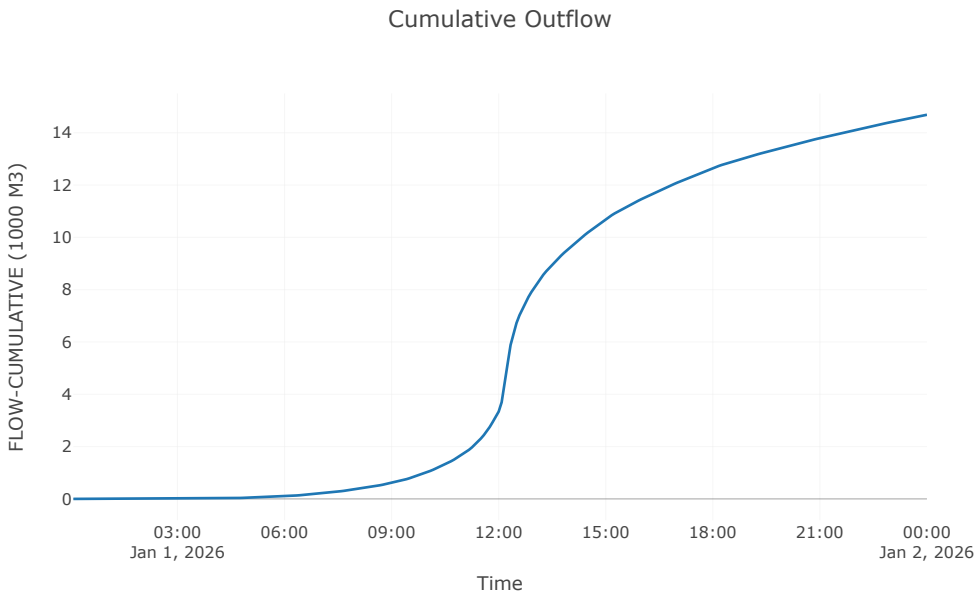
Downstream : Junction - CHANNEL 3

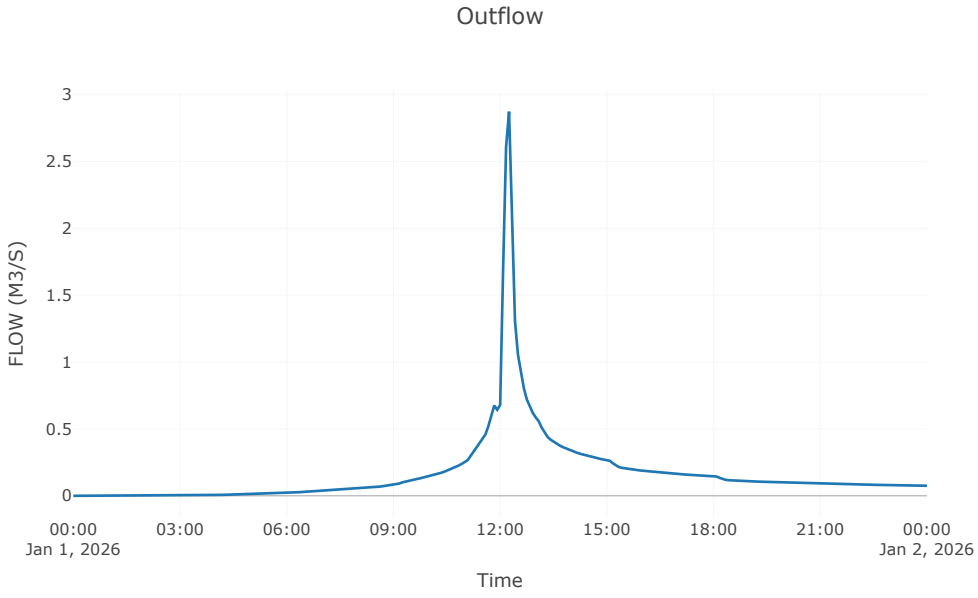
Route: Muskingum Cunge	
Method	Muskingum Cunge
Channel	Trapezoid
Length (M)	660
Energy Slope (M/M)	0.03
Mannings n	0.06
Bottom Width (M)	20
Side Slope (M/M)	3
Initial Variable	Combined Inflow
Space - Time Method	Automatic DX and DT
Index Parameter Type	Index Flow
Index Flow	15
Invert Elevation	0
Maximum Depth Iterations	20
Maximum Route Step Iterations	30

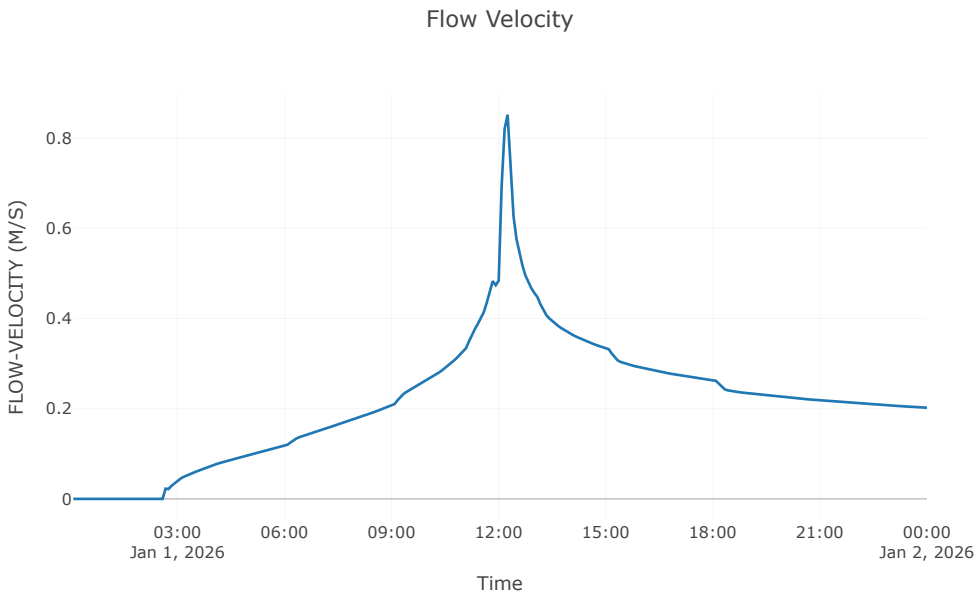
Results: Reach-CHANNEL 8	
Peak Discharge (M3/S)	2.87
Time of Peak Discharge	01Jan2026, 12:15
Volume (MM)	72.43
Peak Inflow (M3/S)	2.91
Inflow Volume (M3)	14687.86


Computed Stage
STAGE-SIM (M)
0.15
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Combined Inflow
FLOW-COMBINE (M3/S)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
0
2
4
6
8
10
12
14
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outflow
FLOW (M3/S)
0
0.5
1
1.5
2
2.5
3
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

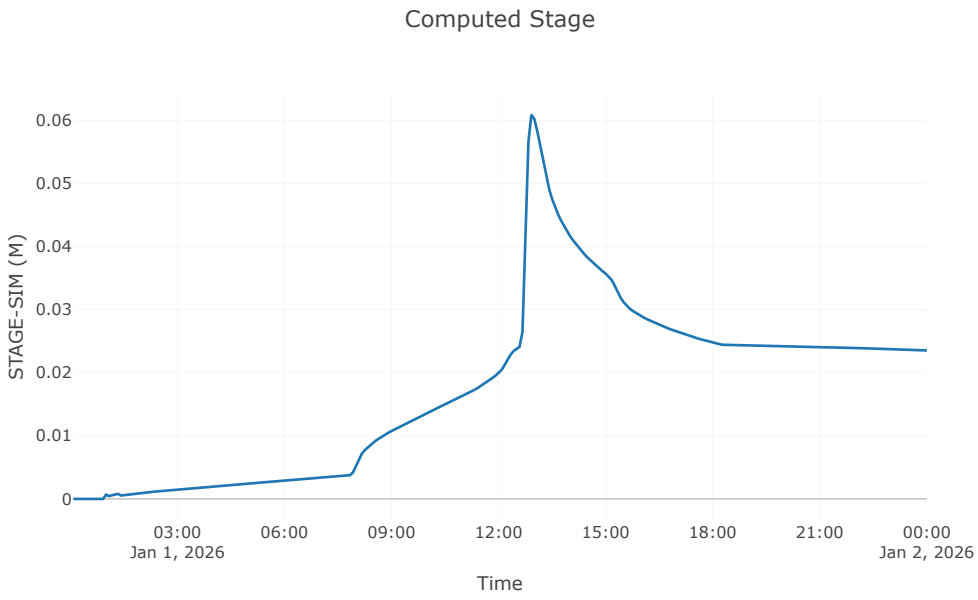

Flow Velocity
FLOW-VELOCITY (M/S)
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

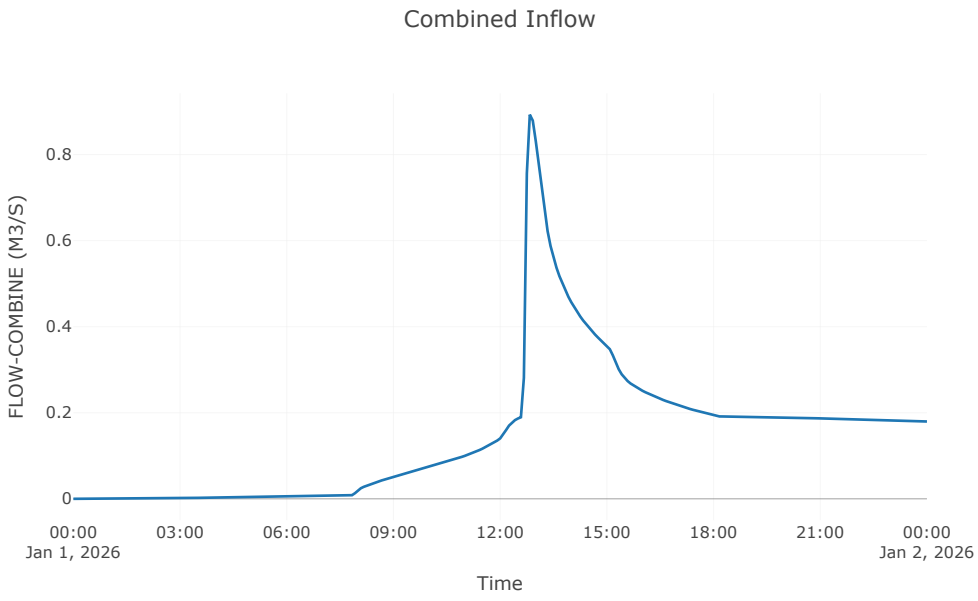
Reach: Reach-WETLAND B

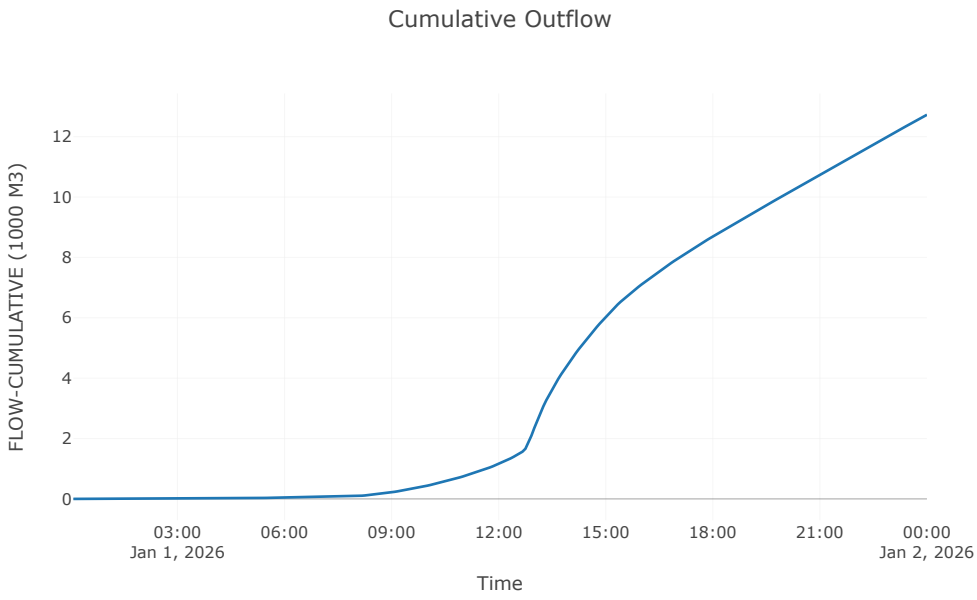
Downstream : Junction - CHANNEL 4

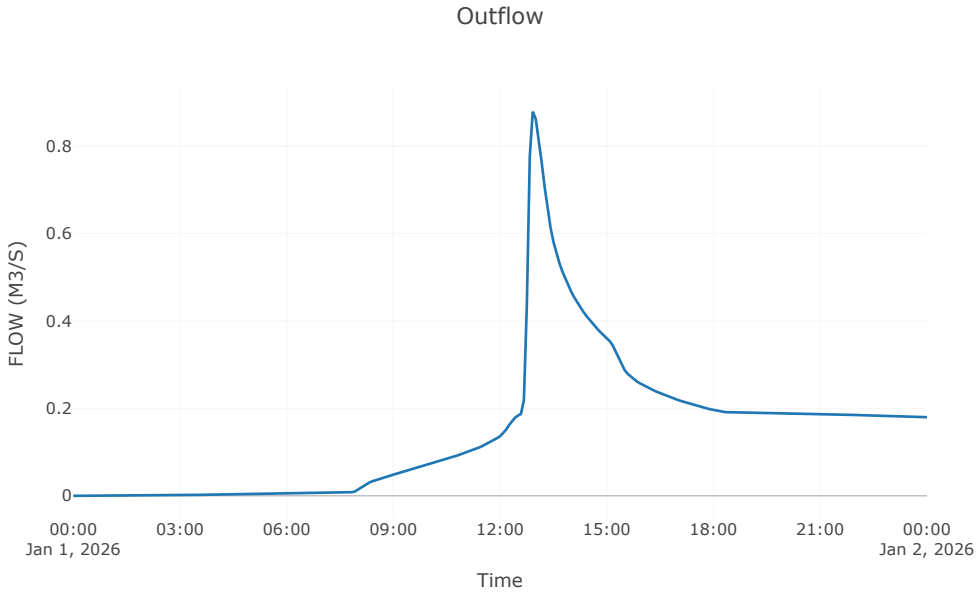
Route: Muskingum Cunge	
Method	Muskingum Cunge
Channel	Trapezoid
Length (M)	630
Energy Slope (M/M)	0.08
Mannings n	0.06
Bottom Width (M)	20
Side Slope (M/M)	3
Initial Variable	Combined Inflow
Space - Time Method	Automatic DX and DT
Index Parameter Type	Index Flow
Index Flow	15
Invert Elevation	0
Maximum Depth Iterations	20
Maximum Route Step Iterations	30

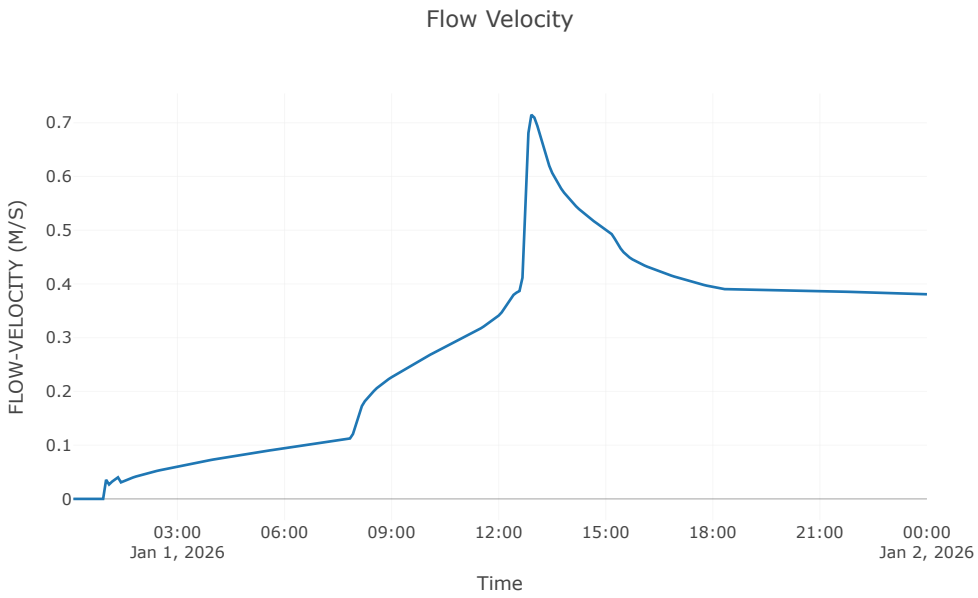
Results: Reach-WETLAND B	
Peak Discharge (M3/S)	0.88
Time of Peak Discharge	01Jan2026, 12:55
Volume (MM)	51.6
Peak Inflow (M3/S)	0.89
Inflow Volume (M3)	12767


Computed Stage
STAGE-SIM (M)
0.06
0.05
0.04
0.03
0.02
0.01
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Combined Inflow
FLOW-COMBINE (M3/S)
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
0
2
4
6
8
10
12
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outflow
FLOW (M3/S)
0
0.2
0.4
0.6
0.8
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

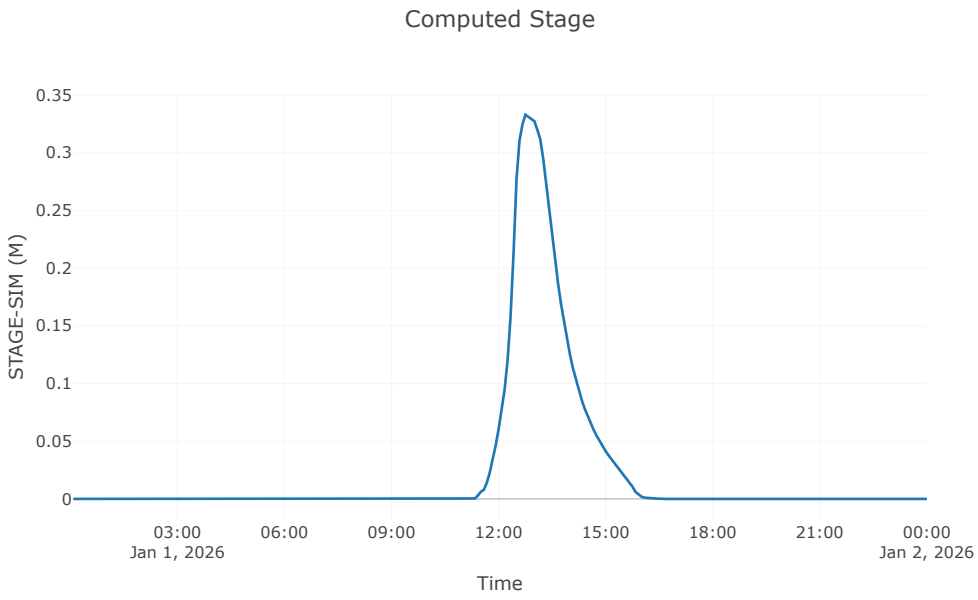

Flow Velocity
FLOW-VELOCITY (M/S)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

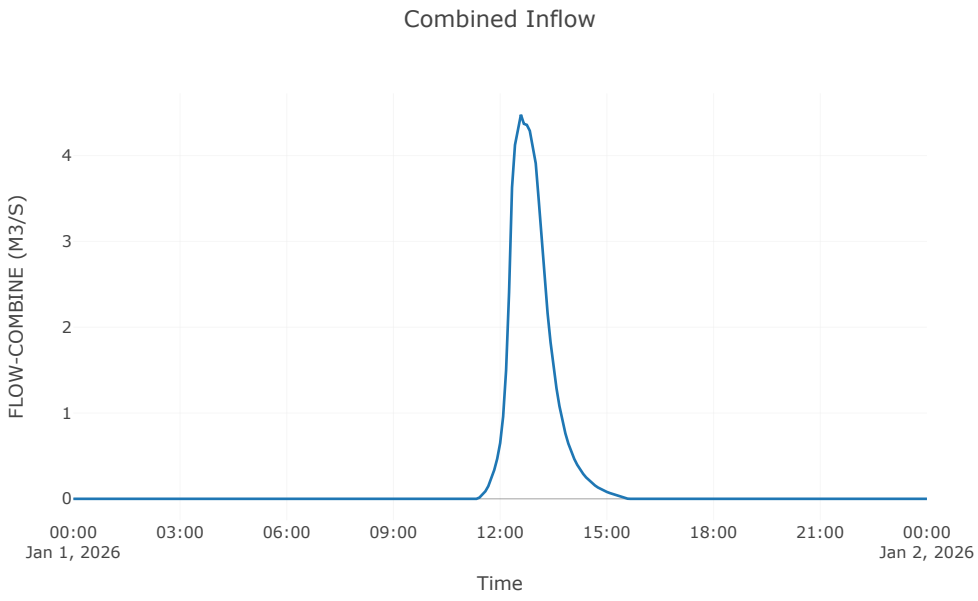
Reach: Reach-MORVEN FERRY SWALE

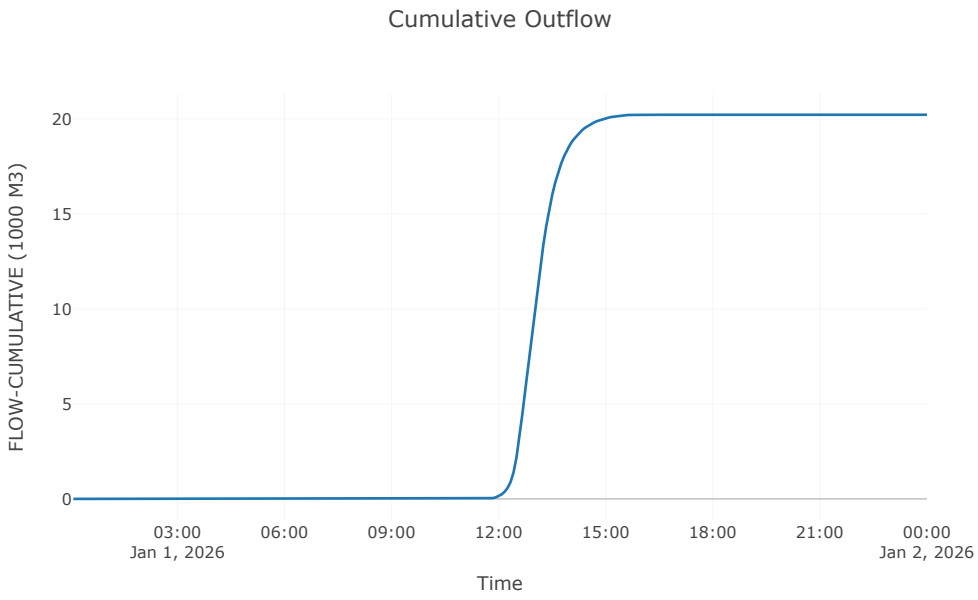
Downstream : Olfp outflow

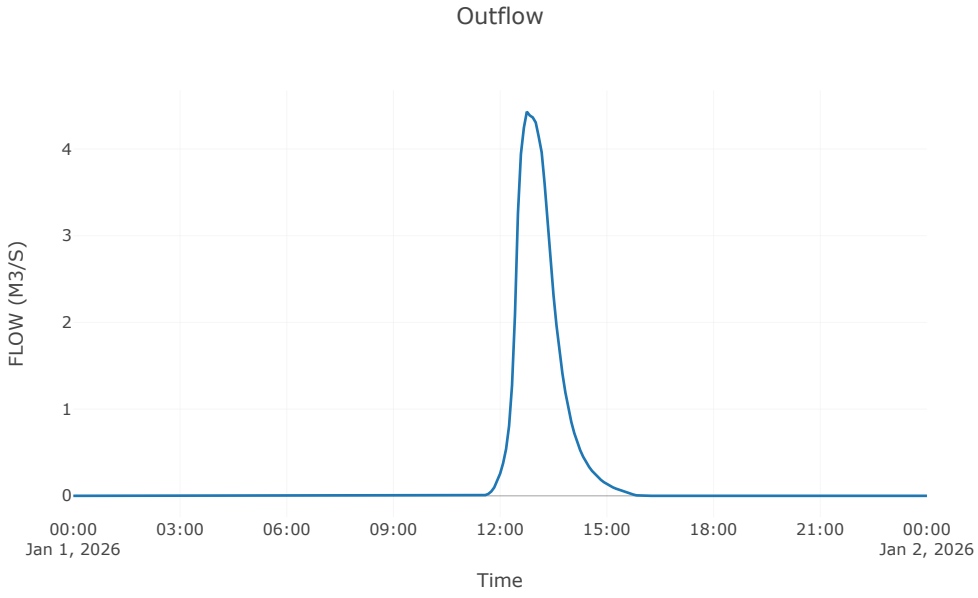
Route: Muskingum Cunge	
Method	Muskingum Cunge
Channel	Trapezoid
Length (M)	770
Energy Slope (M/M)	0.01
Mannings n	0.06
Bottom Width (M)	20
Side Slope (M/M)	3
Initial Variable	Combined Inflow
Space - Time Method	Automatic DX and DT
Index Parameter Type	Index Flow
Index Flow	15
Invert Elevation	0
Maximum Depth Iterations	20
Maximum Route Step Iterations	30

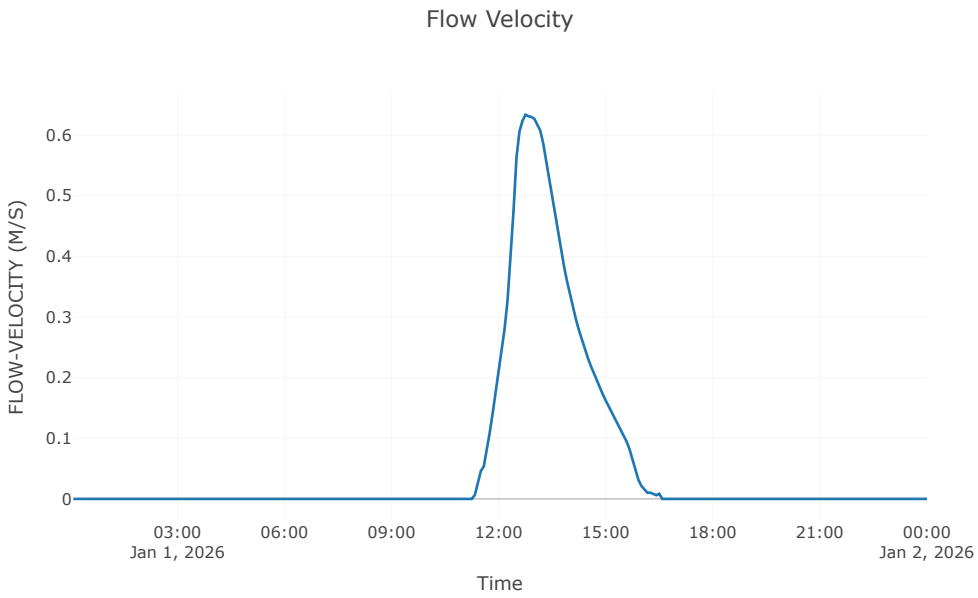
Results: Reach-MORVEN FERRY SWALE	
Peak Discharge (M3/S)	4.43
Time of Peak Discharge	01Jan2026, 12:45
Peak Inflow (M3/S)	4.48
Inflow Volume (M3)	20140.28


Computed Stage
STAGE-SIM (M)
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Combined Inflow
FLOW-COMBINE (M3/S)
4
3
2
1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
20
15
10
5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Outflow
FLOW (M3/S)
4
3
2
1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Flow Velocity
FLOW-VELOCITY (M/S)
0.6
0.5
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

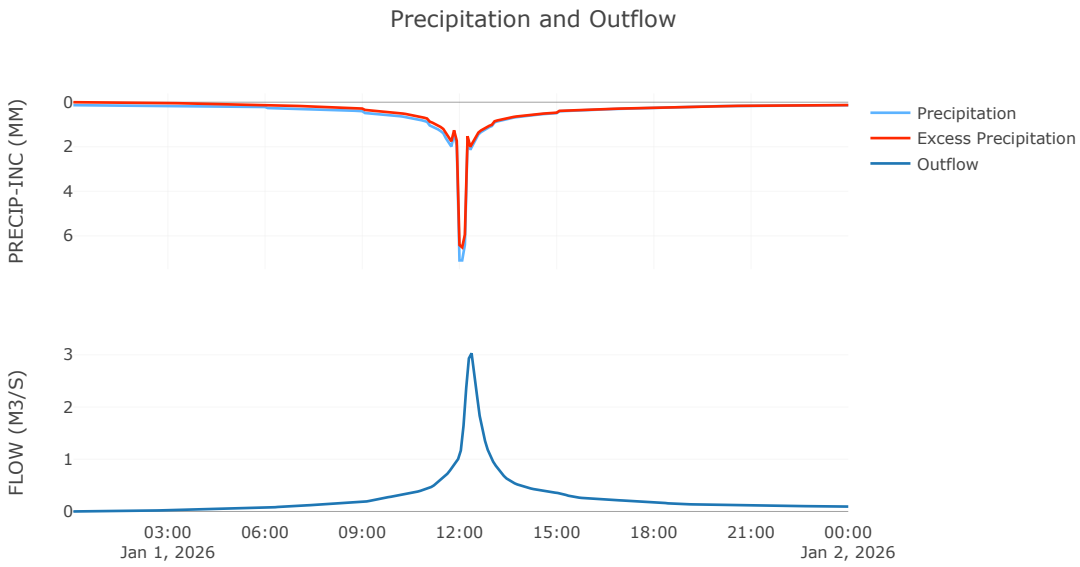
Subbasin: DIFFERENCE POND 1 INTERNAL

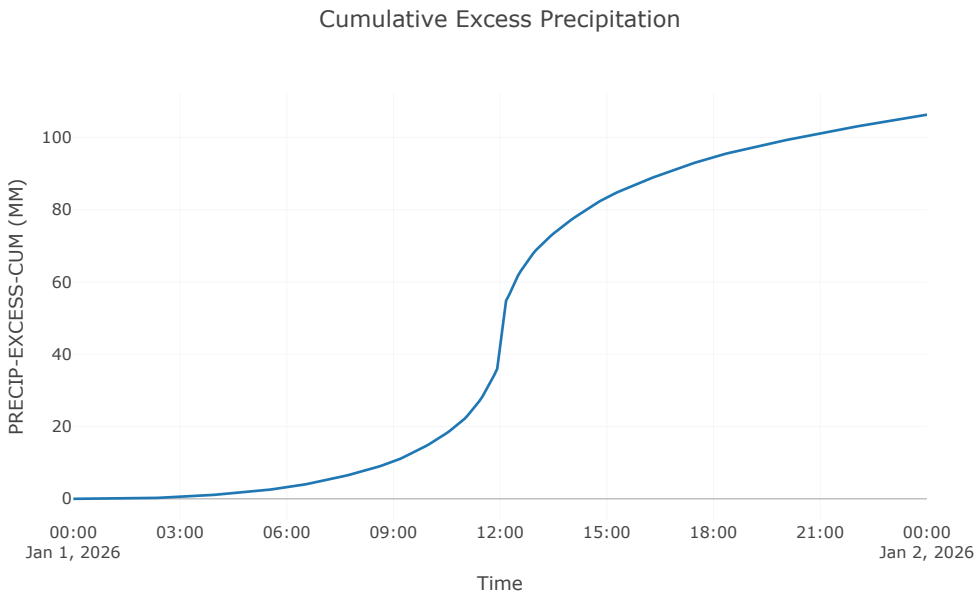
Area (KM2) : 0.21
Latitude Degrees : -44.99
Longitude Degrees : 168.84
Downstream : Junction - POND 1

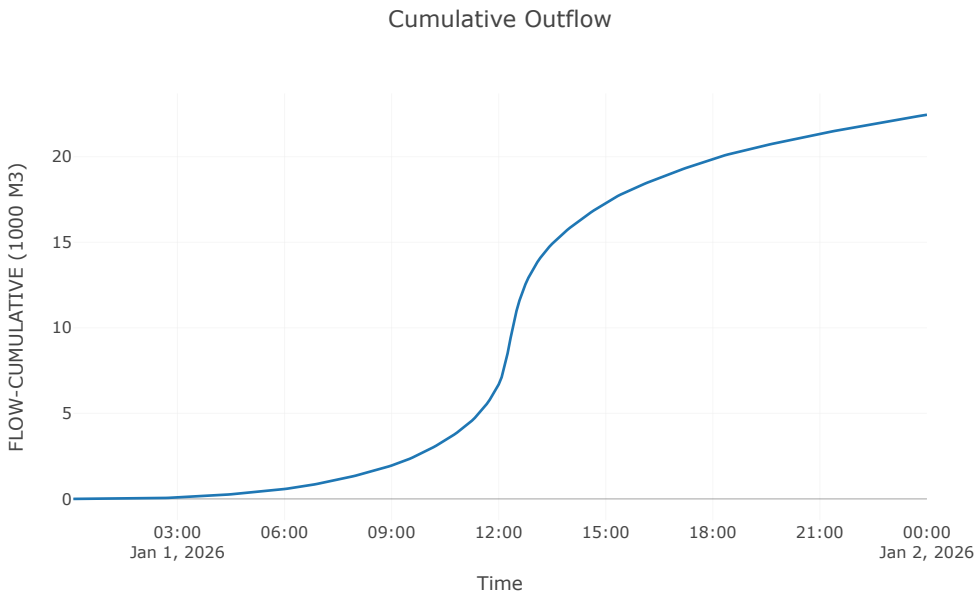
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	90.8
Initial Abstraction	1.29

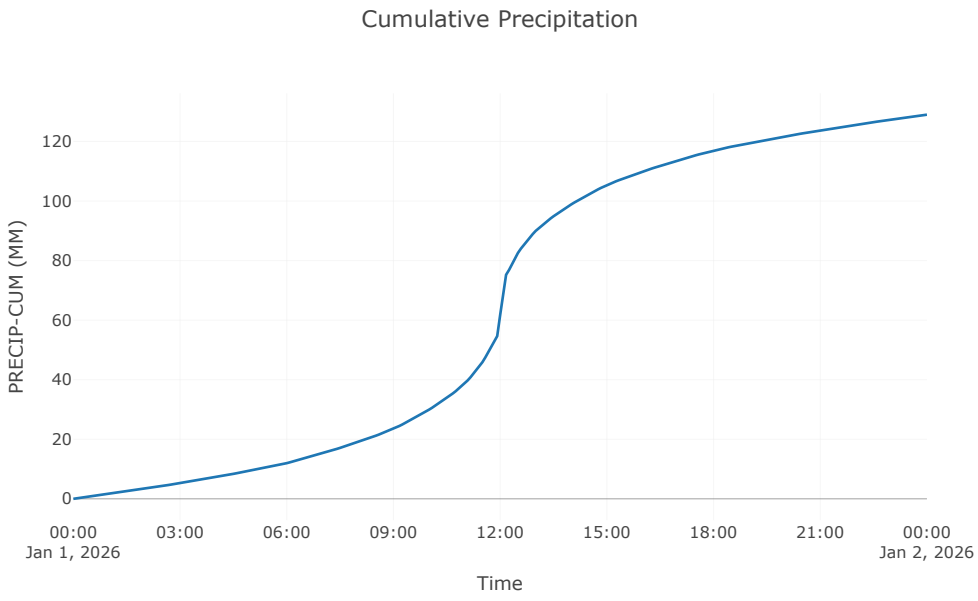
Transform: Scs	
Lag	15.03
Unitgraph Type	Standard

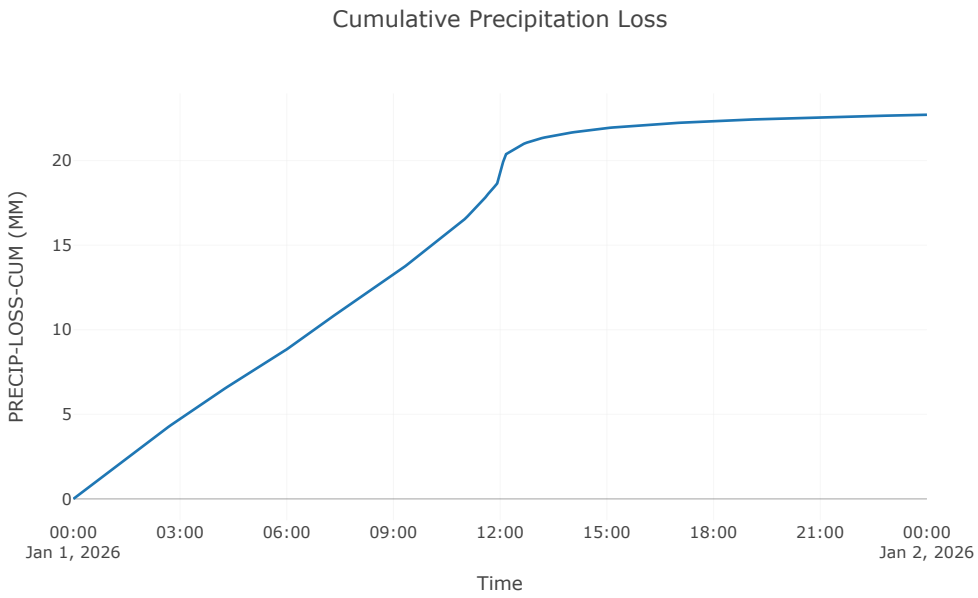
Results: DIFFERENCE POND 1 INTERNAL	
Peak Discharge (M3/S)	3.03
Time of Peak Discharge	01Jan2026, 12:20
Volume (MM)	105.76
Precipitation Volume (M3)	27386.7
Loss Volume (M3)	4821.19
Excess Volume (M3)	22565.51
Direct Runoff Volume (M3)	22453.41
Baseflow Volume (M3)	0

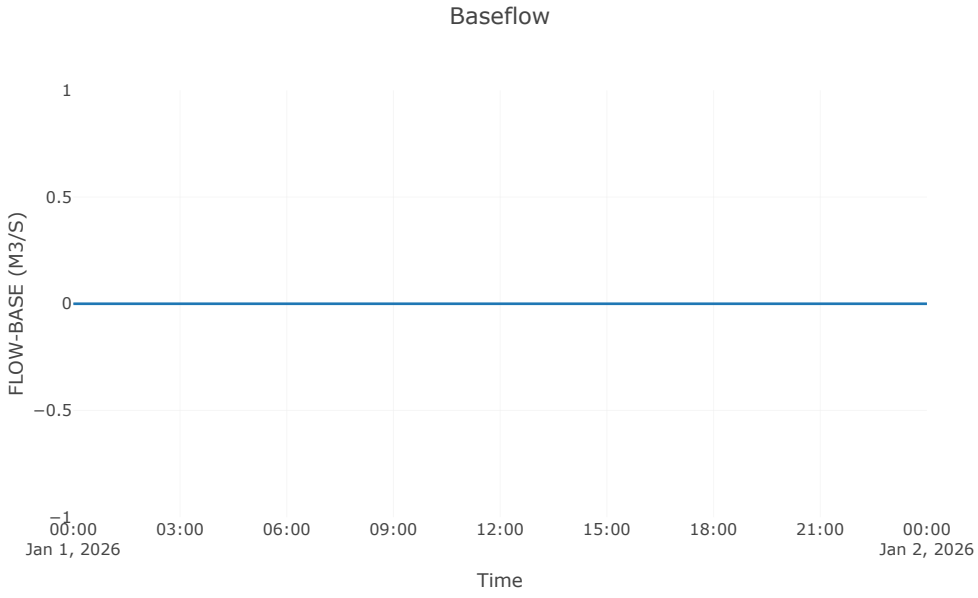

Precipitation and Outflow
PRECIP-INC (MM)
0
2
4
6
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
3
2
1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

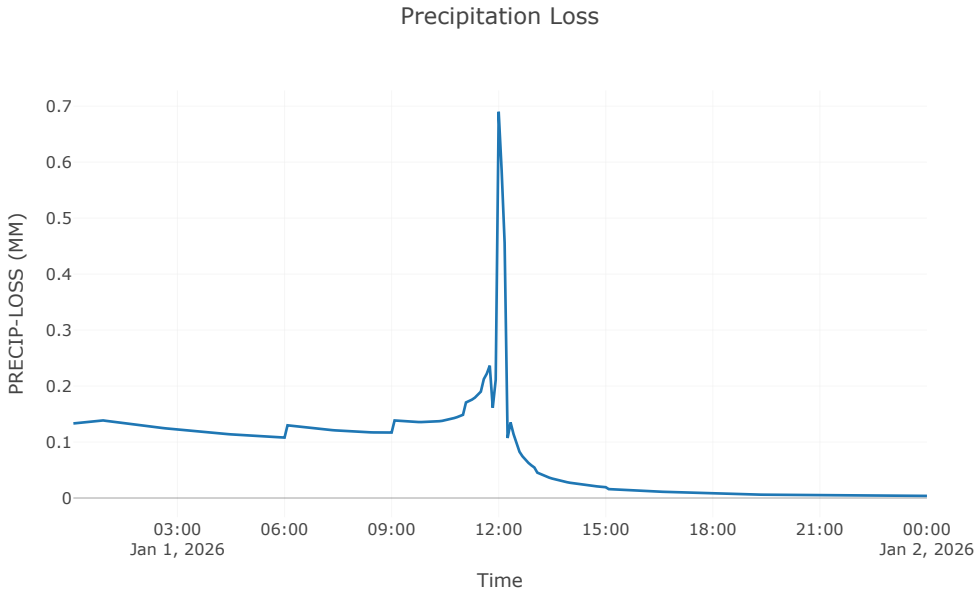

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
100
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

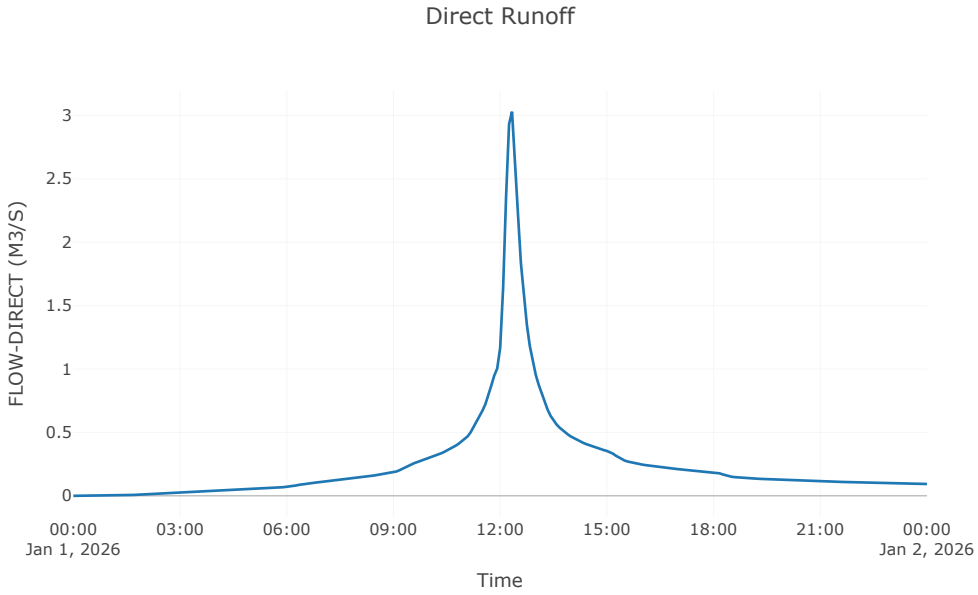

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
20
15
10
5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

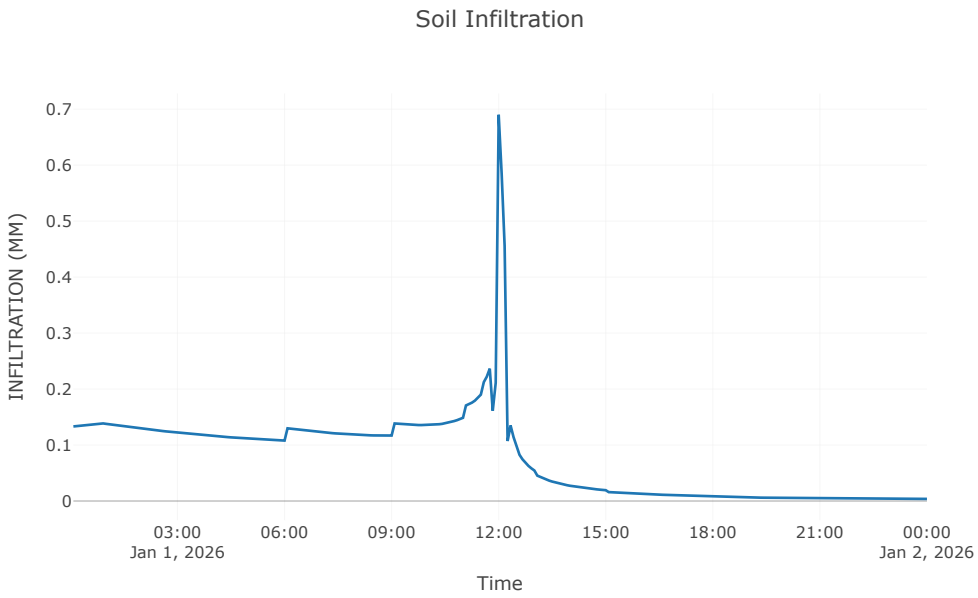

Cumulative Precipitation
PRECIP-CUM (MM)
120
100
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

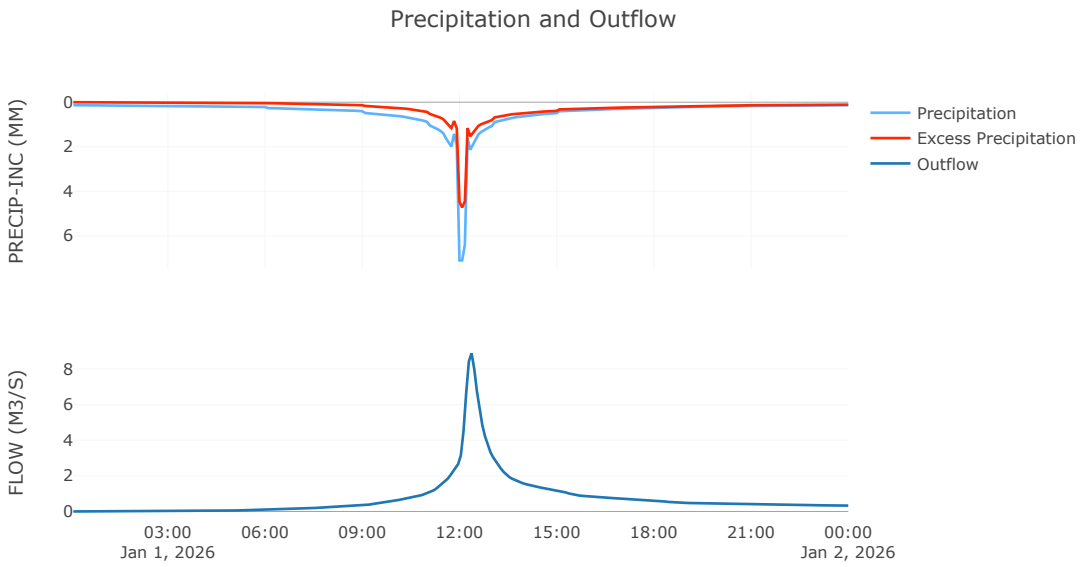
Subbasin: DIFFERENCE POND 1 UPSTREAM

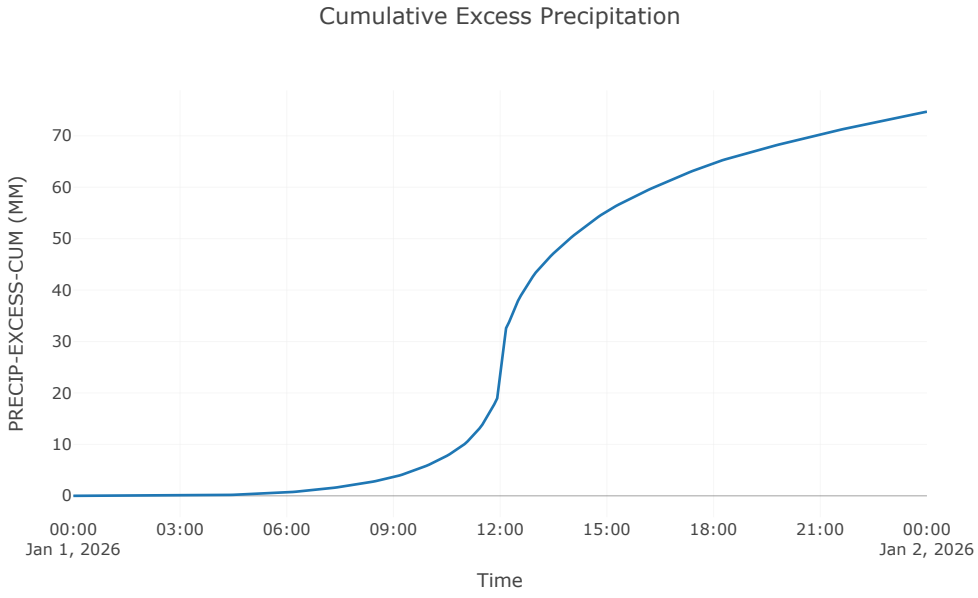
Area (KM2) : 0.86
Latitude Degrees : -44.99
Longitude Degrees : 168.84
Downstream : Junction - CHANNEL 1

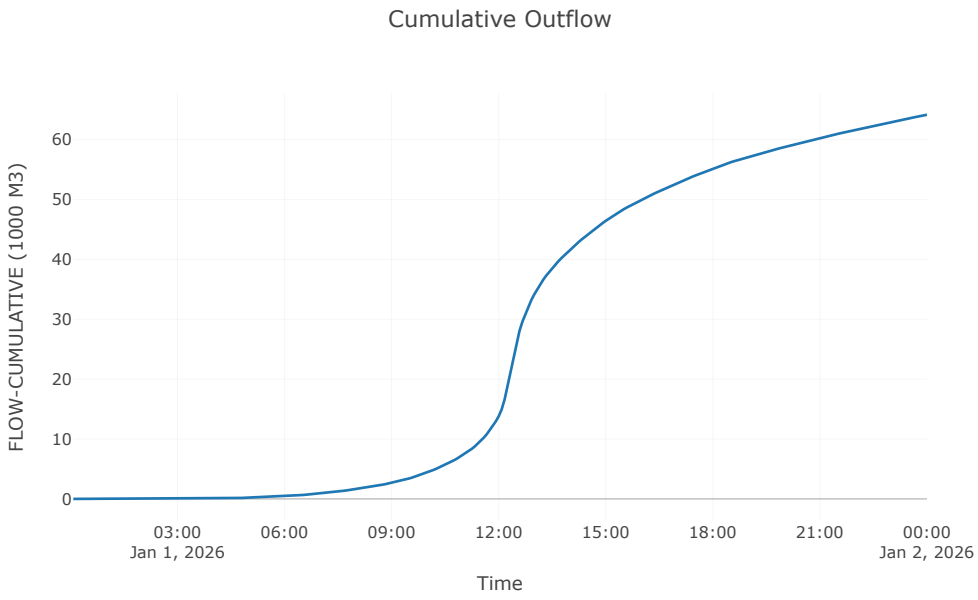
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	75.2
Initial Abstraction	4.19

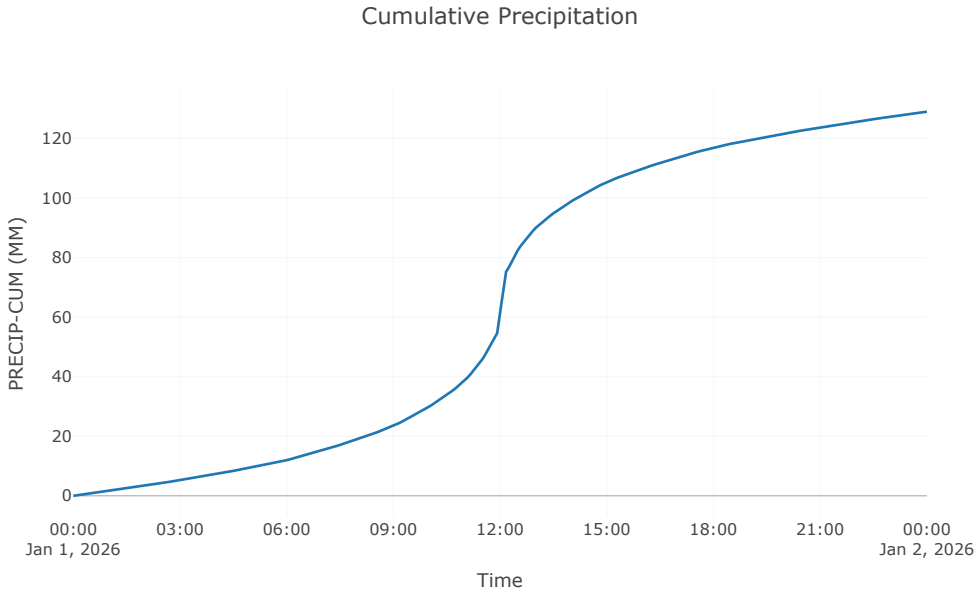
Transform: Scs	
Lag	15.18
Unitgraph Type	Standard

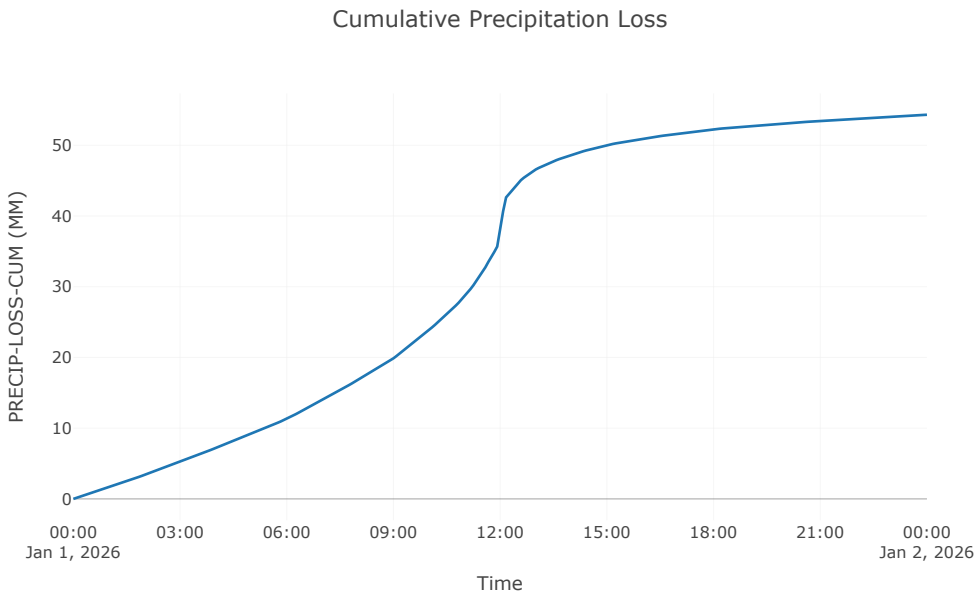
Results: DIFFERENCE POND 1 UPSTREAM	
Peak Discharge (M3/S)	8.88
Time of Peak Discharge	01Jan2026, 12:20
Volume (MM)	74.23
Precipitation Volume (M3)	1.12E5
Loss Volume (M3)	46955.15
Excess Volume (M3)	64565.35
Direct Runoff Volume (M3)	64167.83
Baseflow Volume (M3)	0

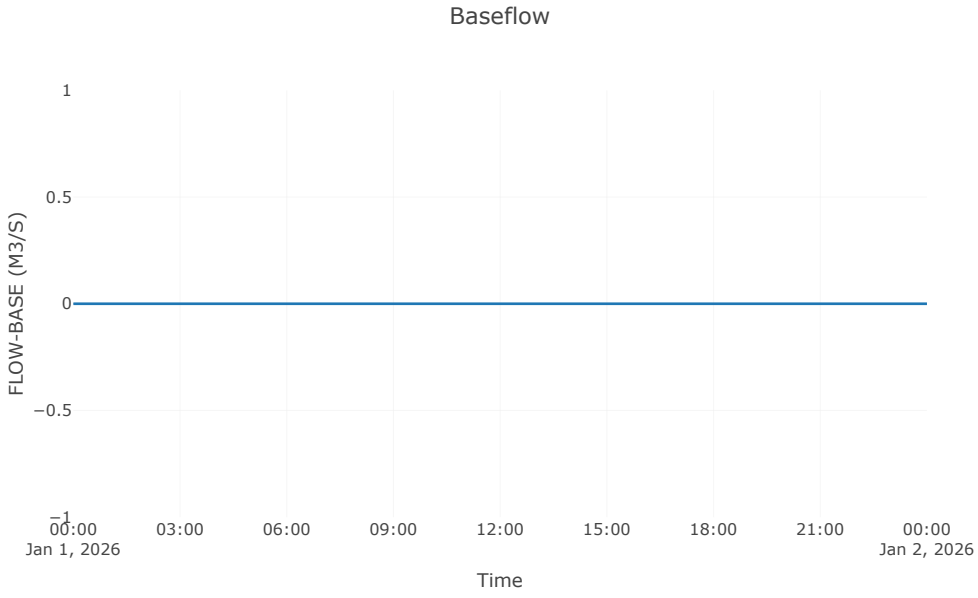

Precipitation and Outflow
PRECIP-INC (MM)
0
2
4
6
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
8
6
4
2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

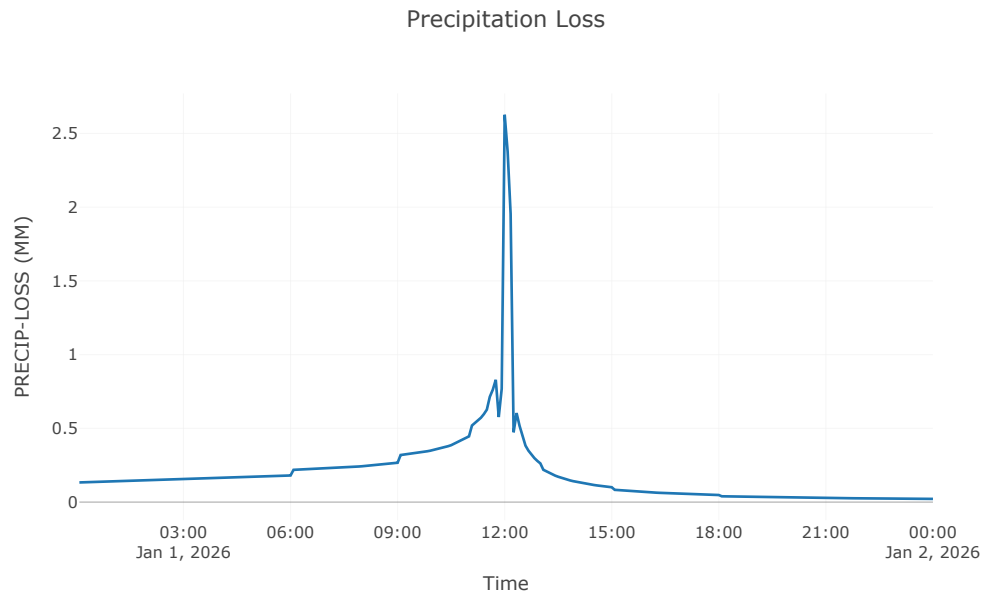

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

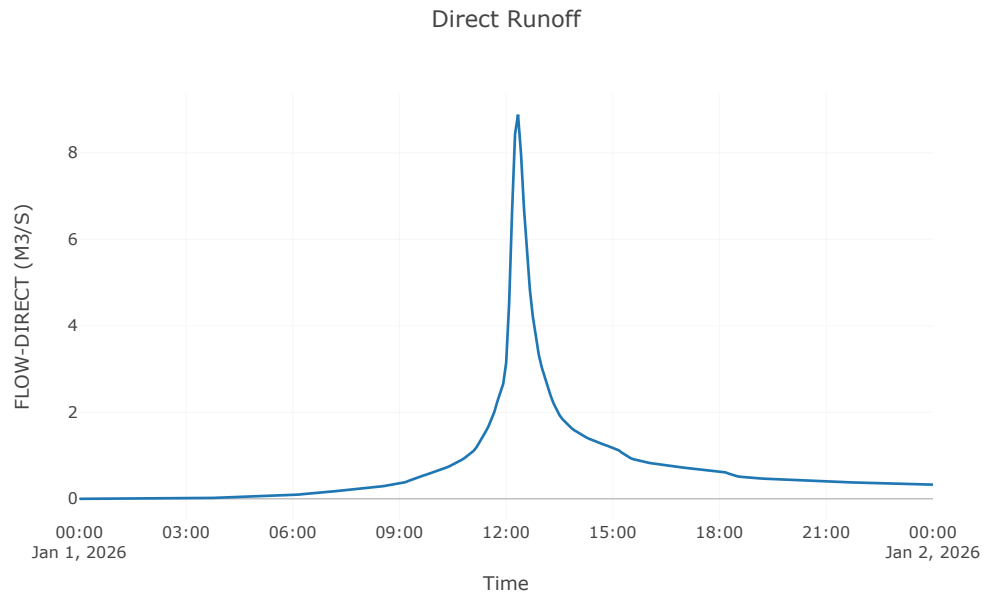

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
60
50
40
30
20
10
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

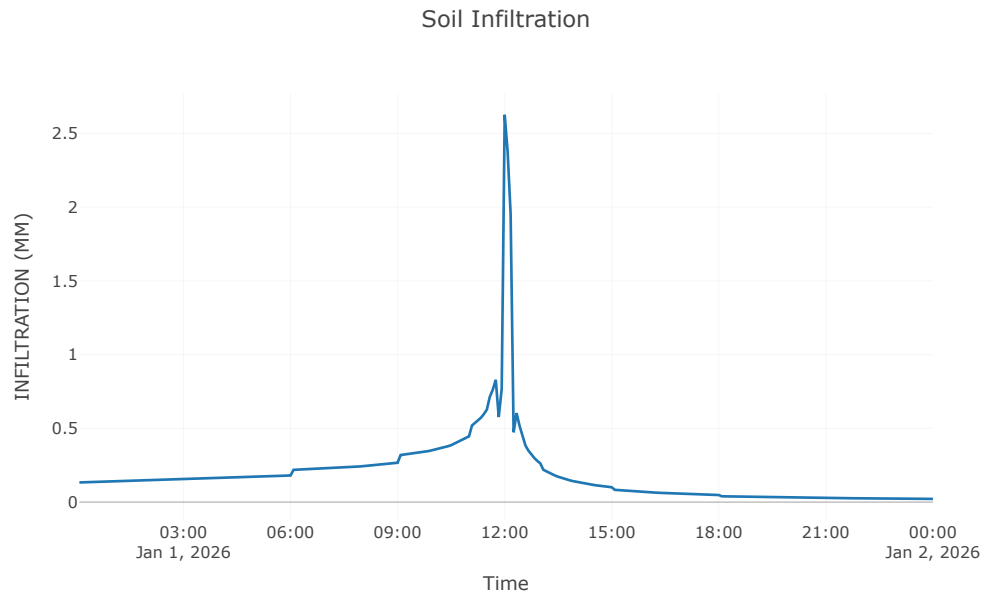

Cumulative Precipitation
PRECIP-CUM (MM)
120
100
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
8
6
4
2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

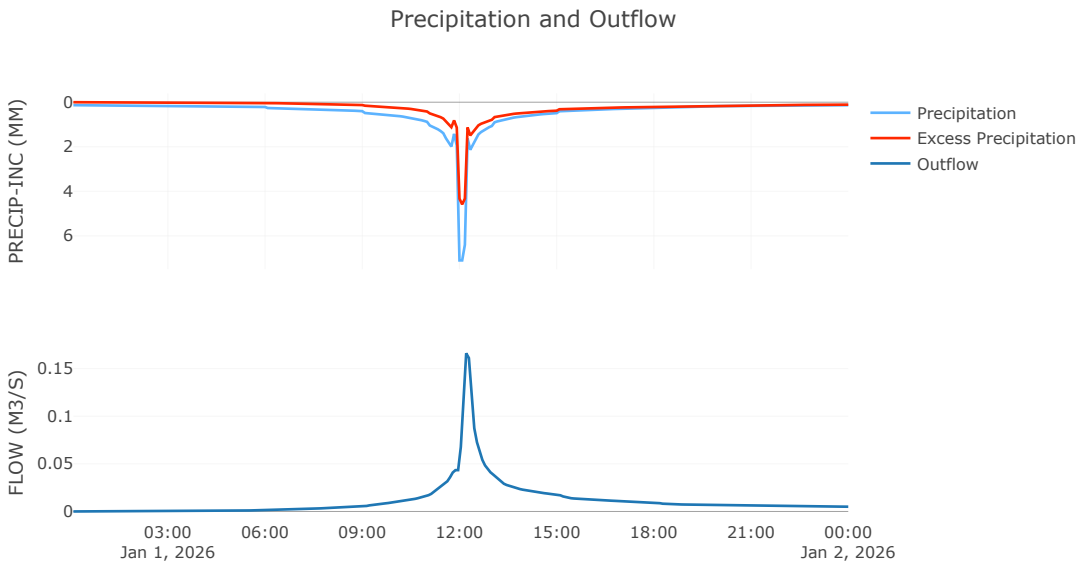
Subbasin: DIFFERENCE POND 1 UPSTREAM S

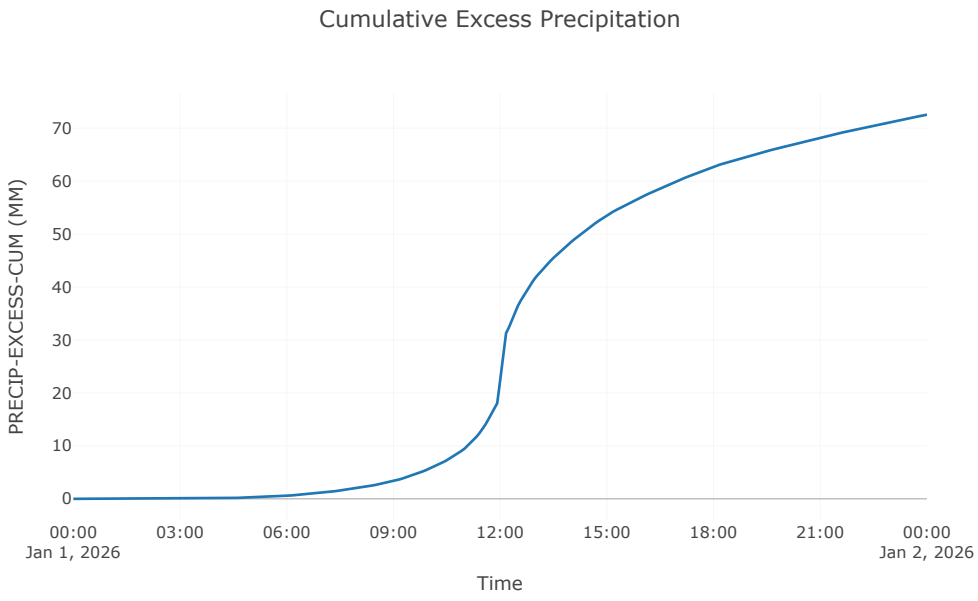
Area (KM2) : 0.01
Latitude Degrees : -44.99
Longitude Degrees : 168.85
Downstream : Junction - POND 1

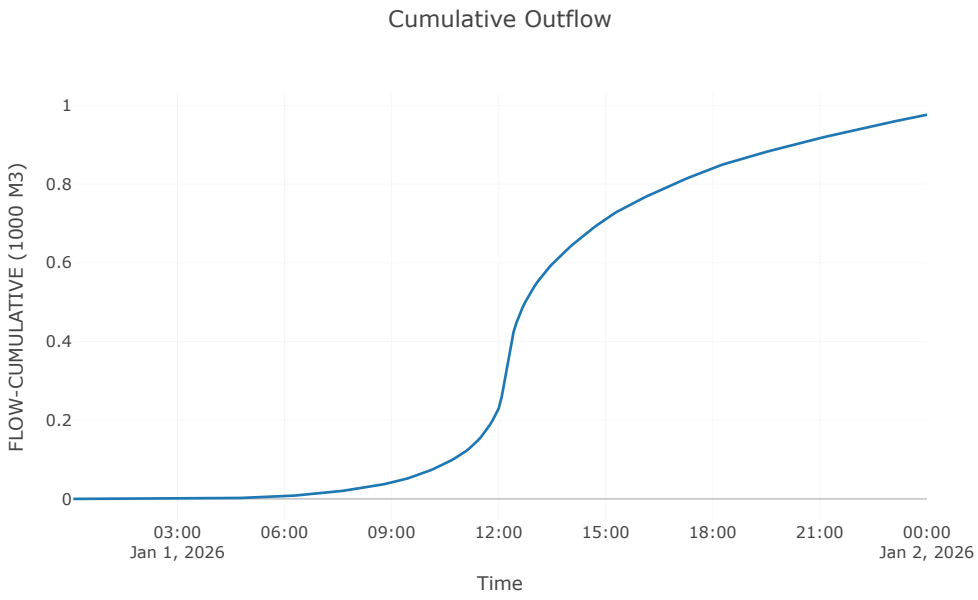
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	74
Initial Abstraction	4.46

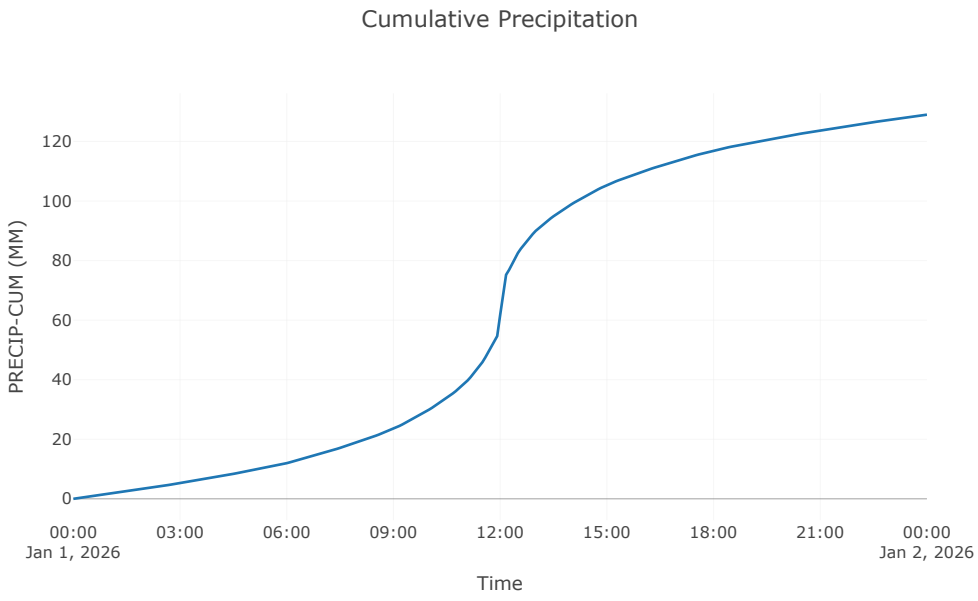
Transform: Scs	
Lag	8.07
Unitgraph Type	Standard

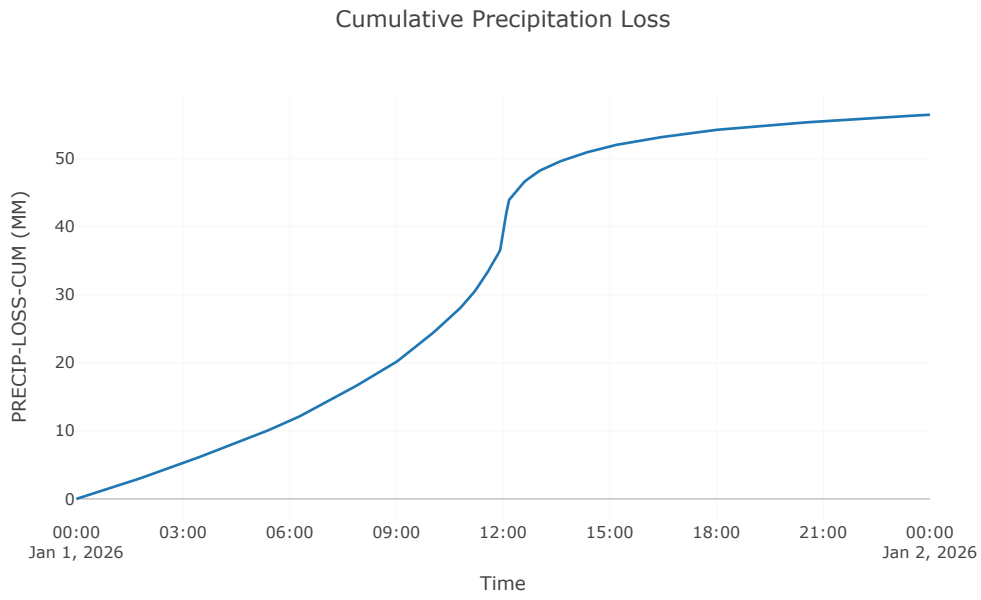
Results: DIFFERENCE POND 1 UPSTREAM S	
Peak Discharge (M3/S)	0.17
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	72.3
Precipitation Volume (M3)	1741.5
Loss Volume (M3)	762.06
Excess Volume (M3)	979.44
Direct Runoff Volume (M3)	976.08
Baseflow Volume (M3)	0

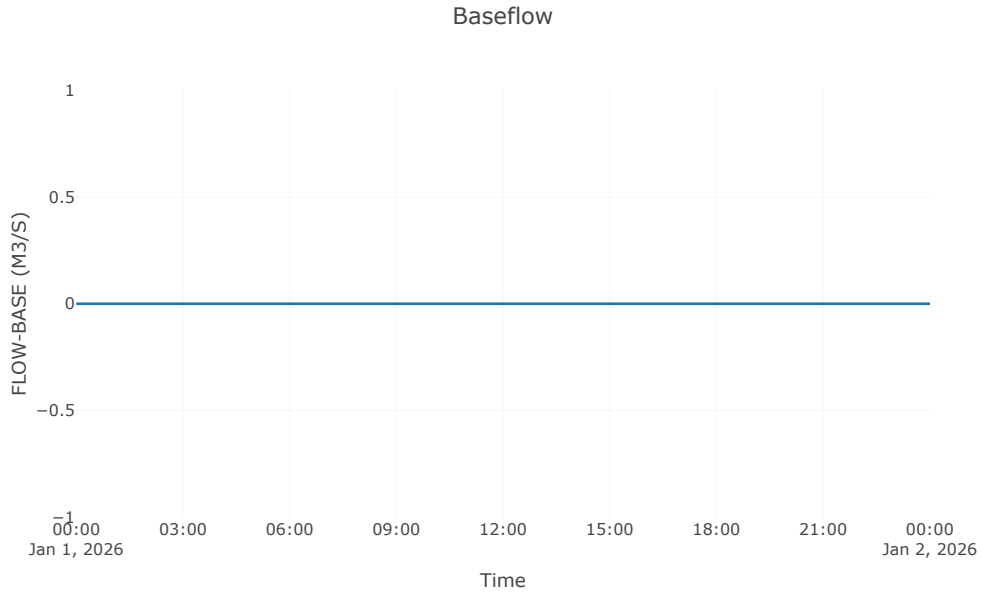

Precipitation and Outflow
PRECIP-INC (MM)
0
2
4
6
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
0.15
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

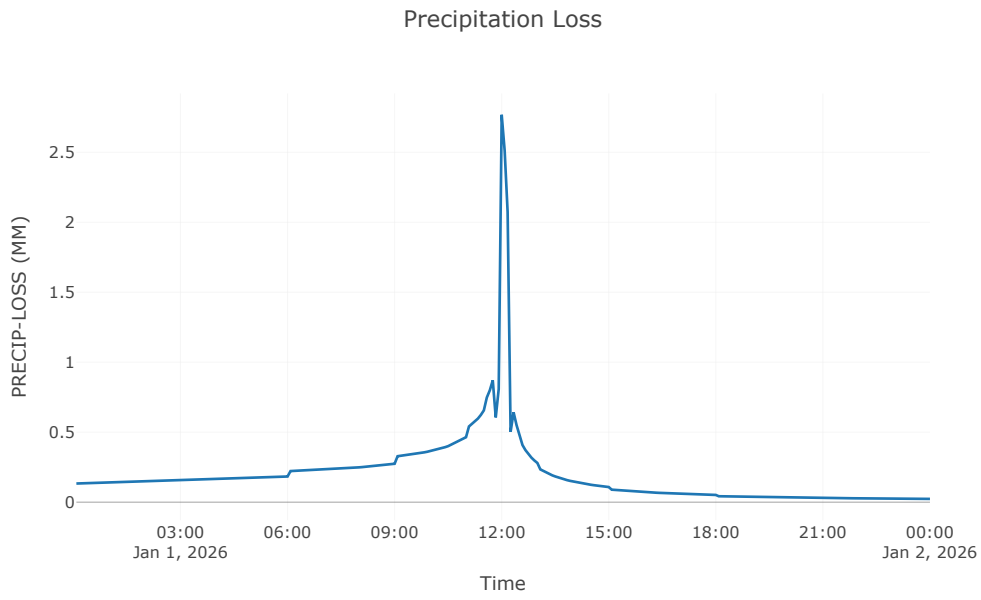

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

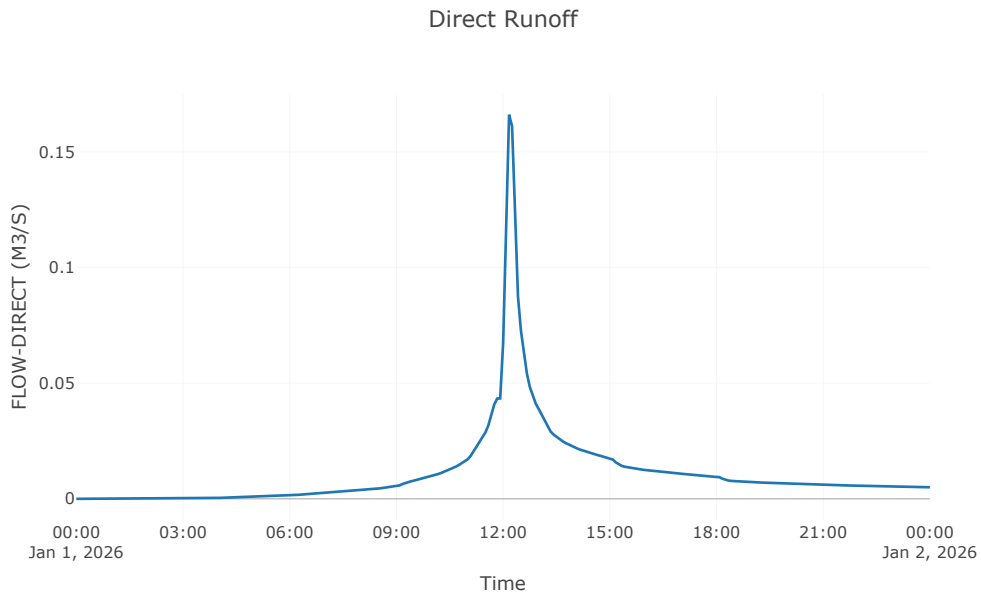

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

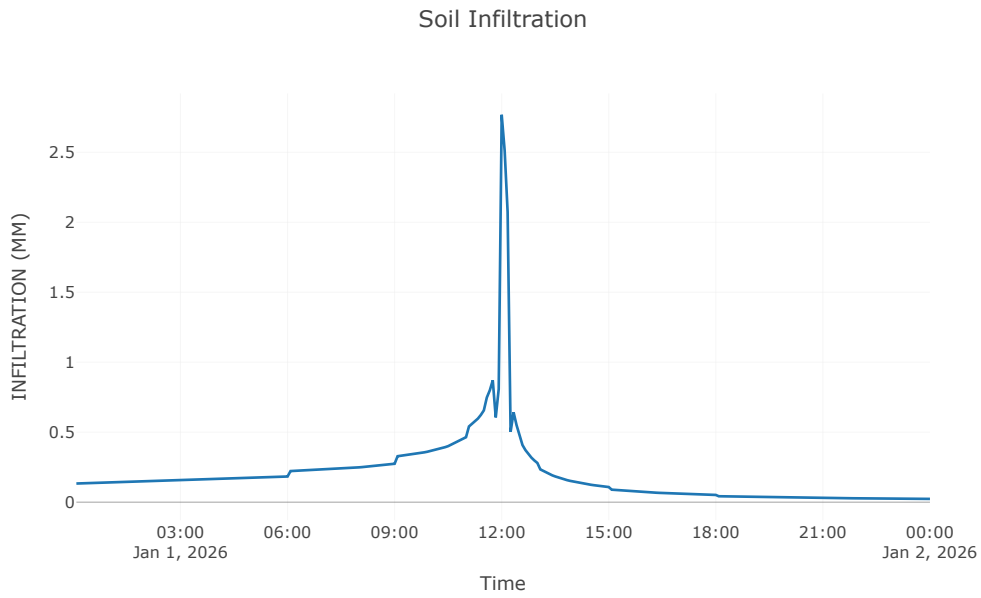

Cumulative Precipitation
PRECIP-CUM (MM)
120
100
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
0
10
20
30
40
50
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

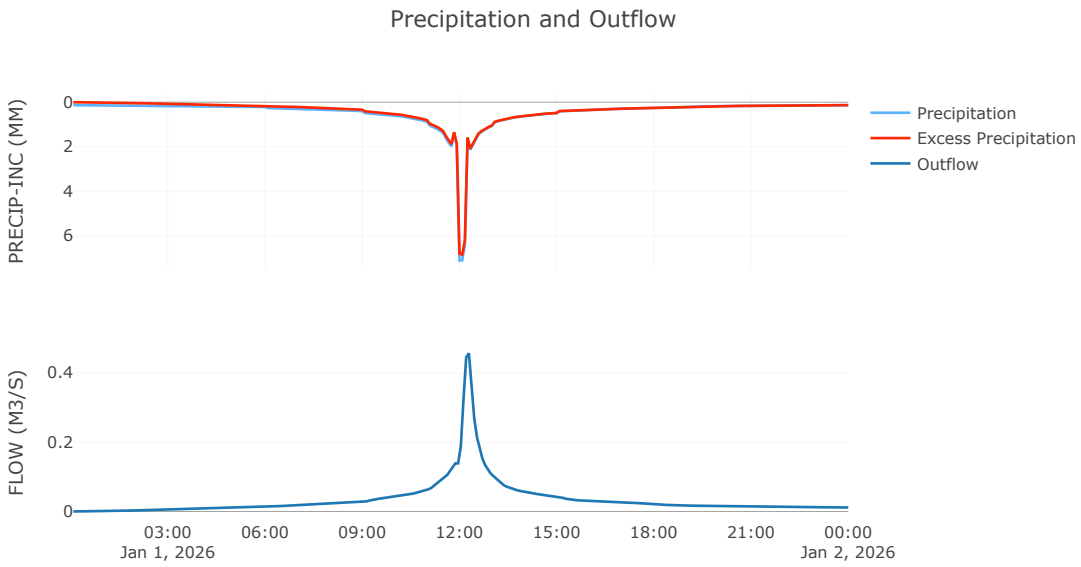
Subbasin: DIFFERENCE POND 2 INTERNAL

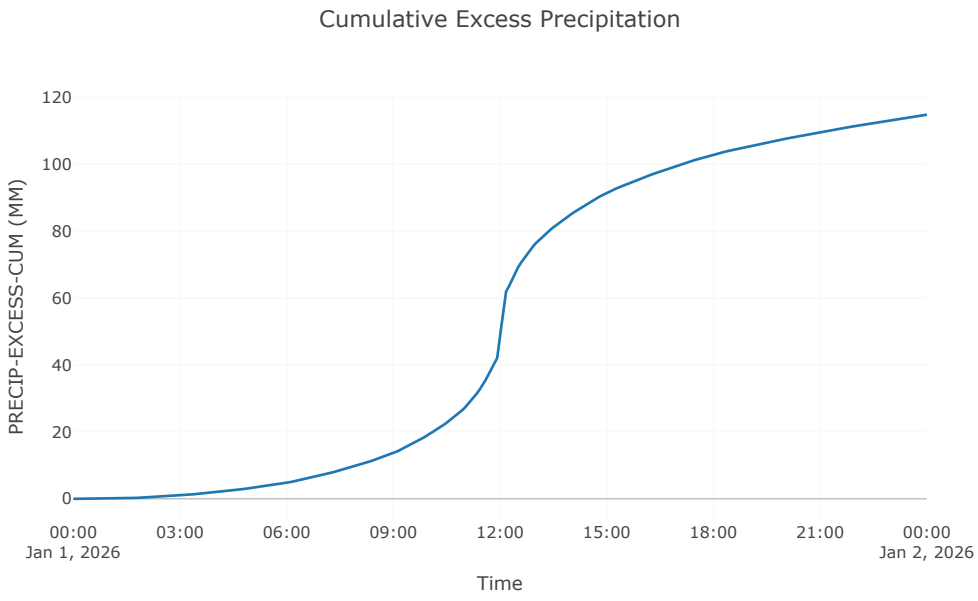
Area (KM2) : 0.03
Latitude Degrees : -44.99
Longitude Degrees : 168.85
Downstream : Junction - POND 2

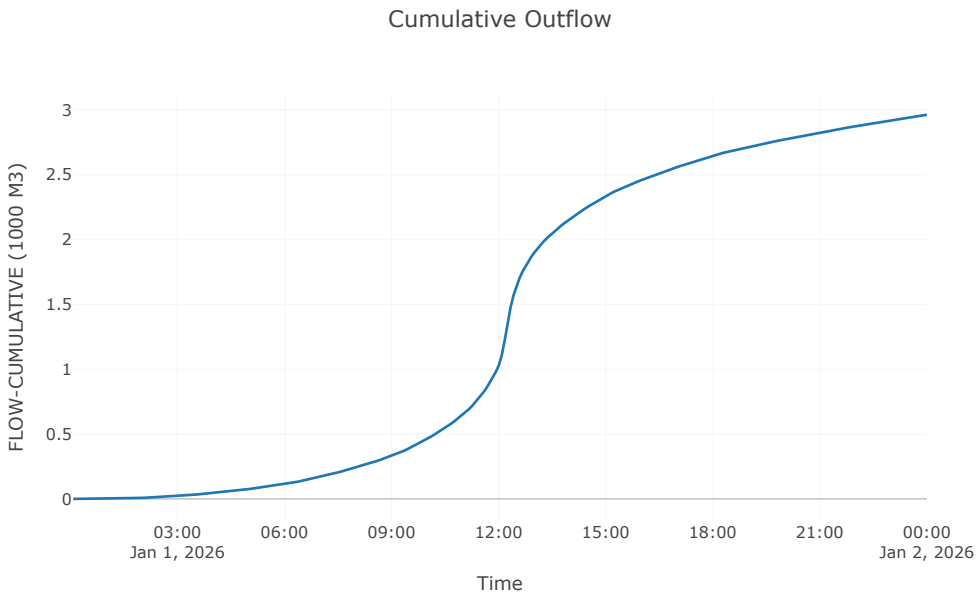
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	94.4
Initial Abstraction	0.75

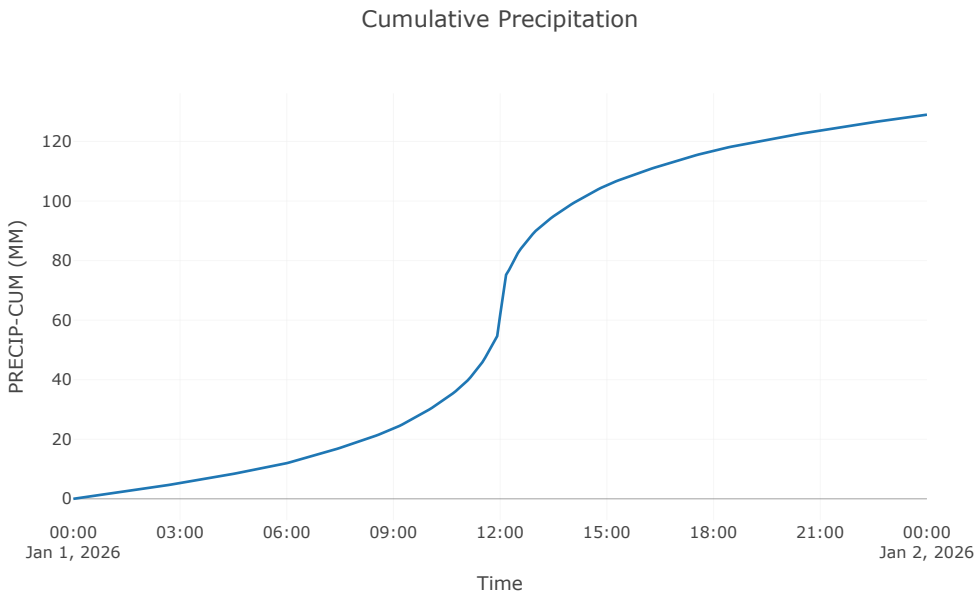
Transform: Scs	
Lag	9.53
Unitgraph Type	Standard

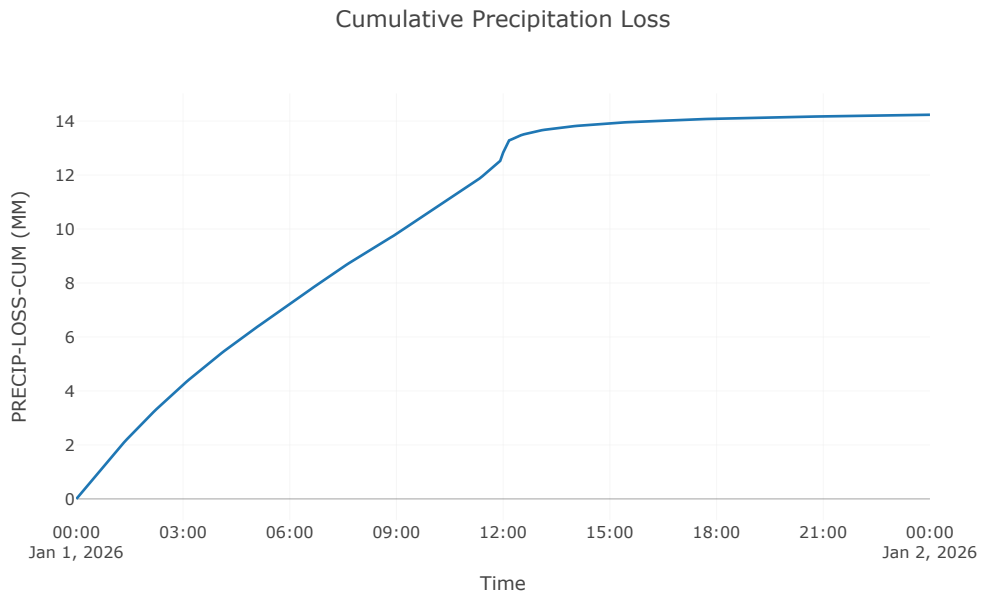
Results: DIFFERENCE POND 2 INTERNAL	
Peak Discharge (M3/S)	0.46
Time of Peak Discharge	01Jan2026, 12:15
Volume (MM)	114.42
Precipitation Volume (M3)	3341.1
Loss Volume (M3)	368.65
Excess Volume (M3)	2972.45
Direct Runoff Volume (M3)	2963.45
Baseflow Volume (M3)	0

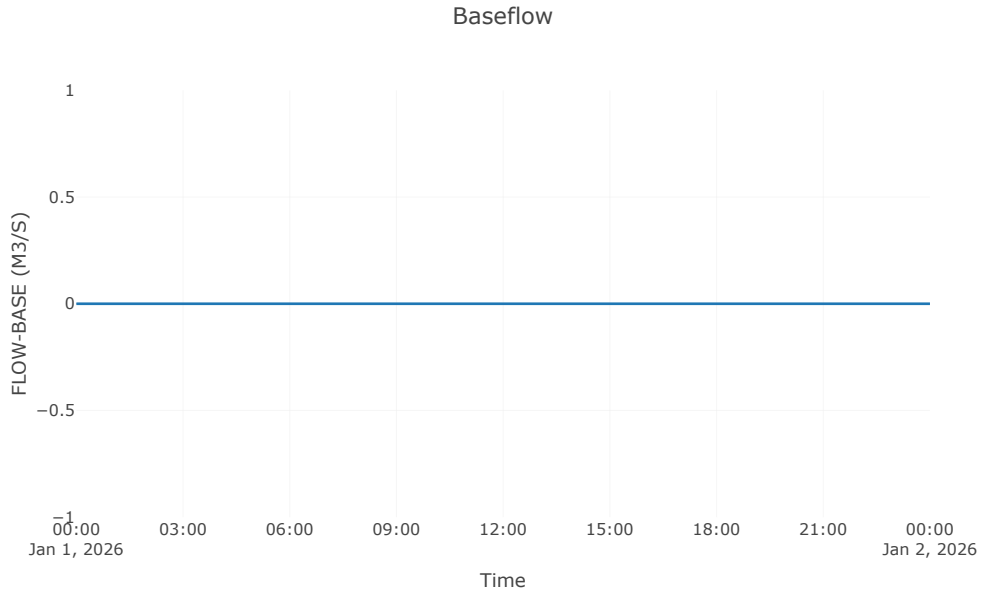

Precipitation and Outflow
PRECIP-INC (MM)
0
2
4
6
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

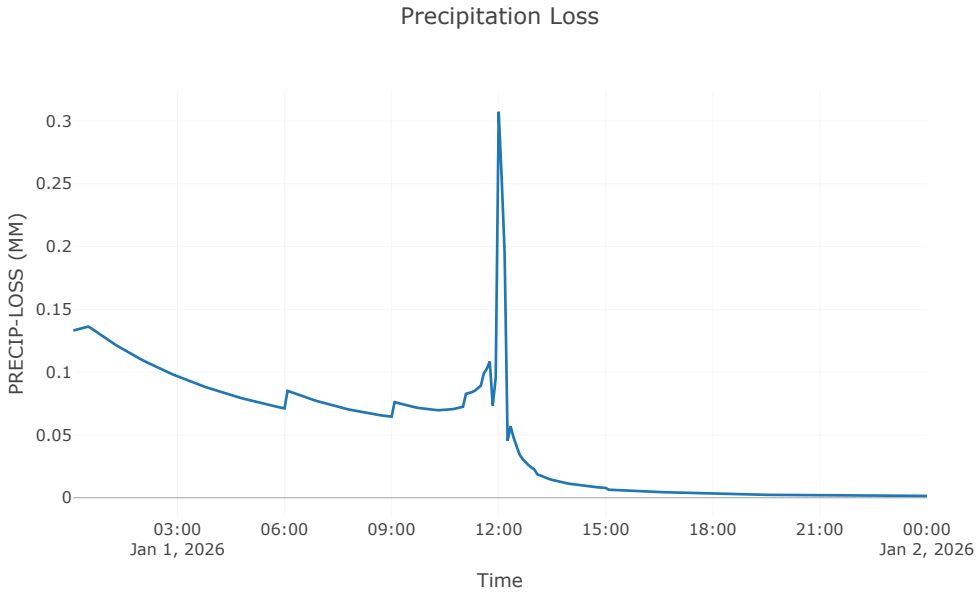

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
120
100
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

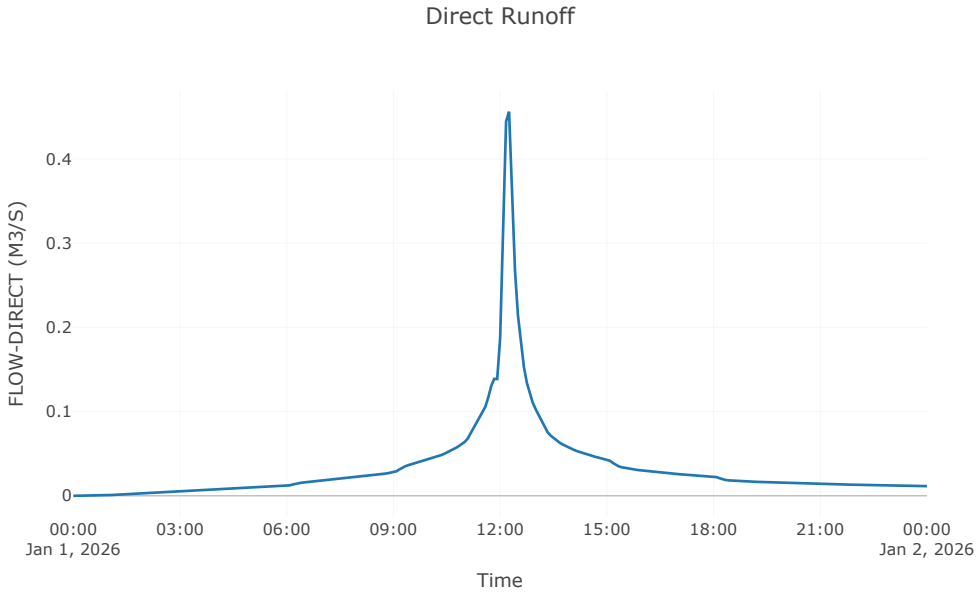

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
3
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

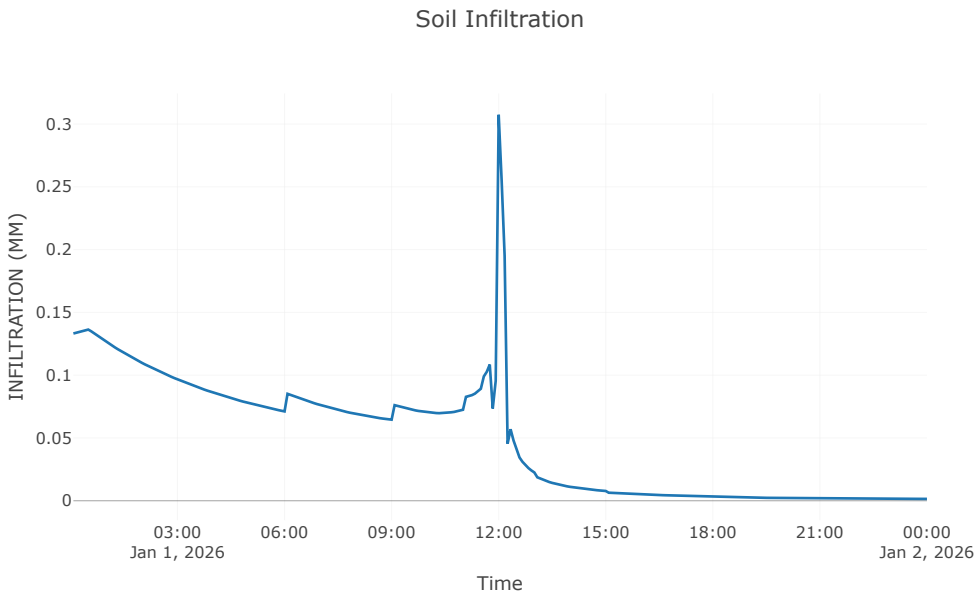

Cumulative Precipitation
PRECIP-CUM (MM)
120
100
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
14
12
10
8
6
4
2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
0.3
0.25
0.2
0.15
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
0.3
0.25
0.2
0.15
0.1
0.05
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

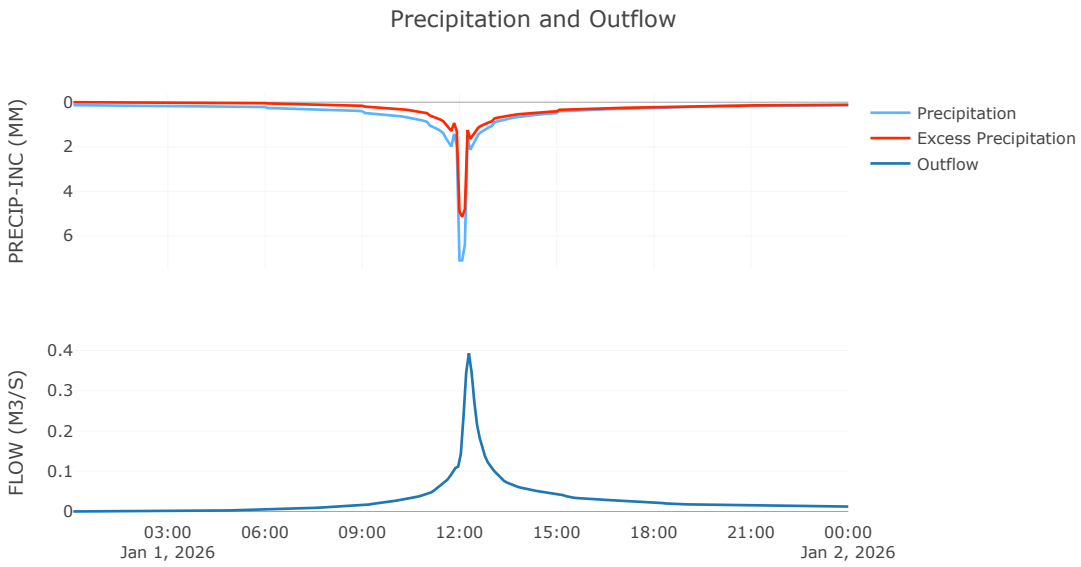
Subbasin: DIFFERENCE POND 2 UPSTREAM

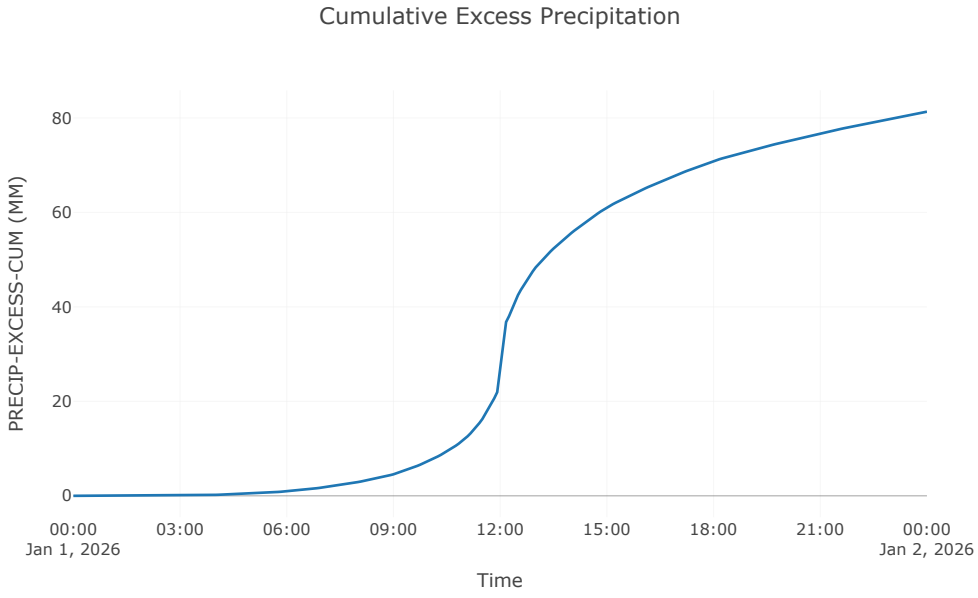
Area (KM2) : 0.03
Latitude Degrees : -44.99
Longitude Degrees : 168.85
Downstream : Pond 3 drybasin

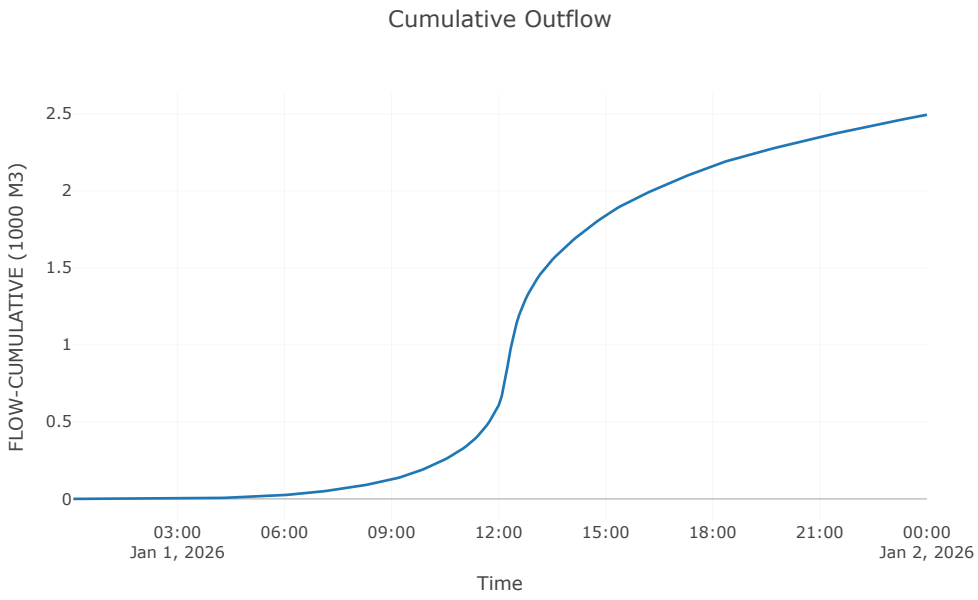
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	78.8
Initial Abstraction	3.42

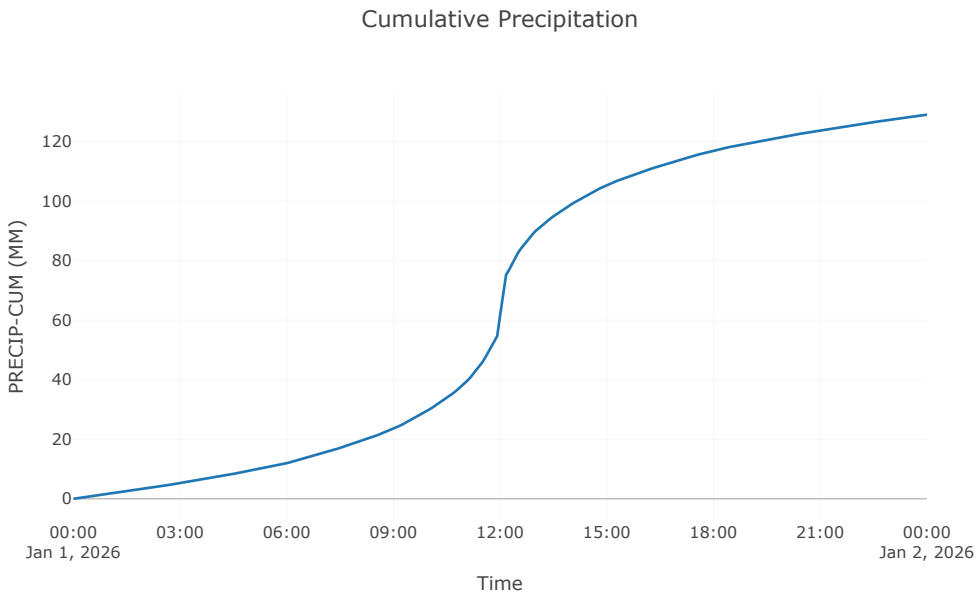
Transform: Scs	
Lag	11.22
Unitgraph Type	Standard

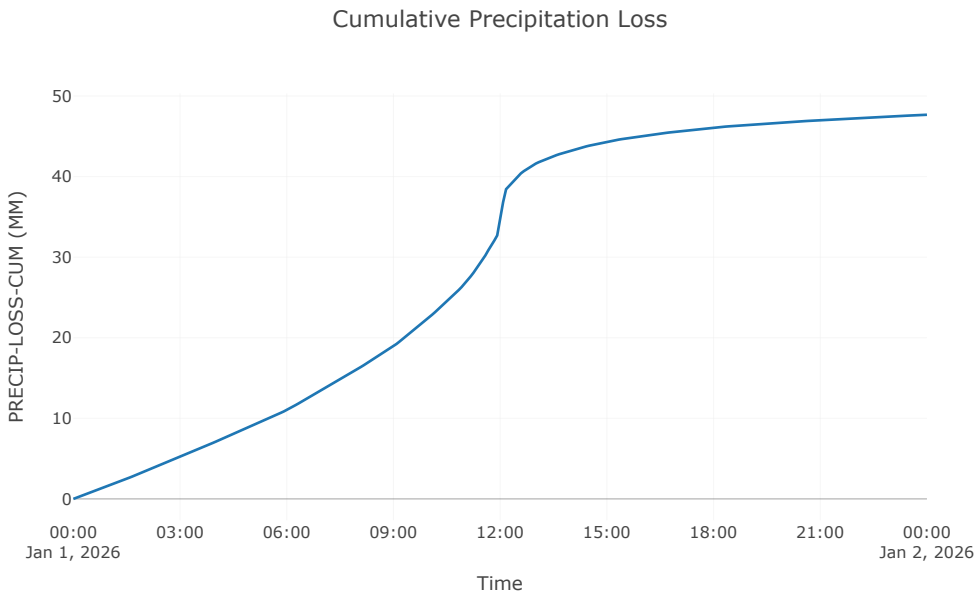
Results: DIFFERENCE POND 2 UPSTREAM	
Peak Discharge (M3/S)	0.39
Time of Peak Discharge	01Jan2026, 12:15
Volume (MM)	80.97
Precipitation Volume (M3)	3973.2
Loss Volume (M3)	1468.36
Excess Volume (M3)	2504.84
Direct Runoff Volume (M3)	2493.77
Baseflow Volume (M3)	0

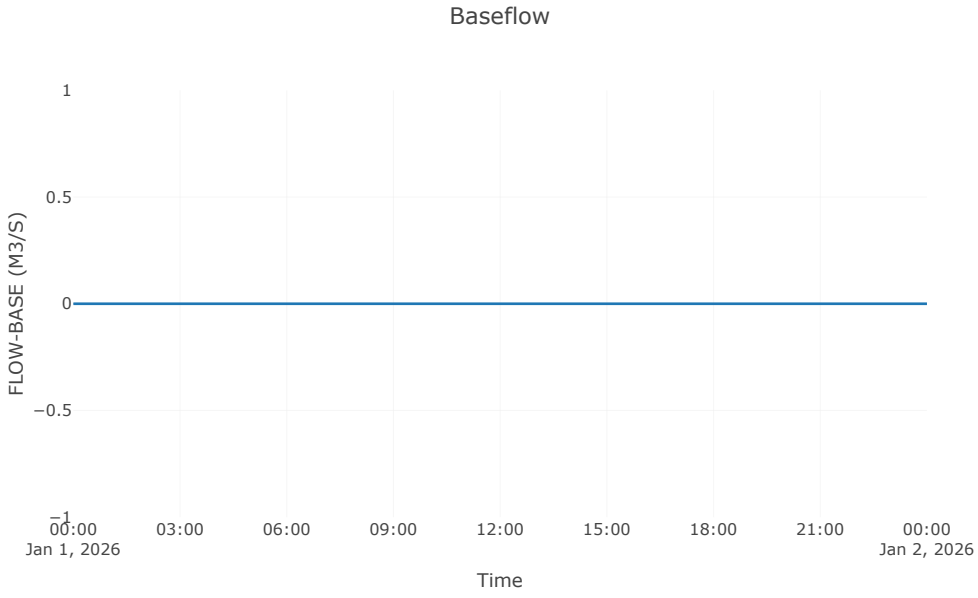

Precipitation and Outflow
PRECIP-INC (MM)
0
2
4
6
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

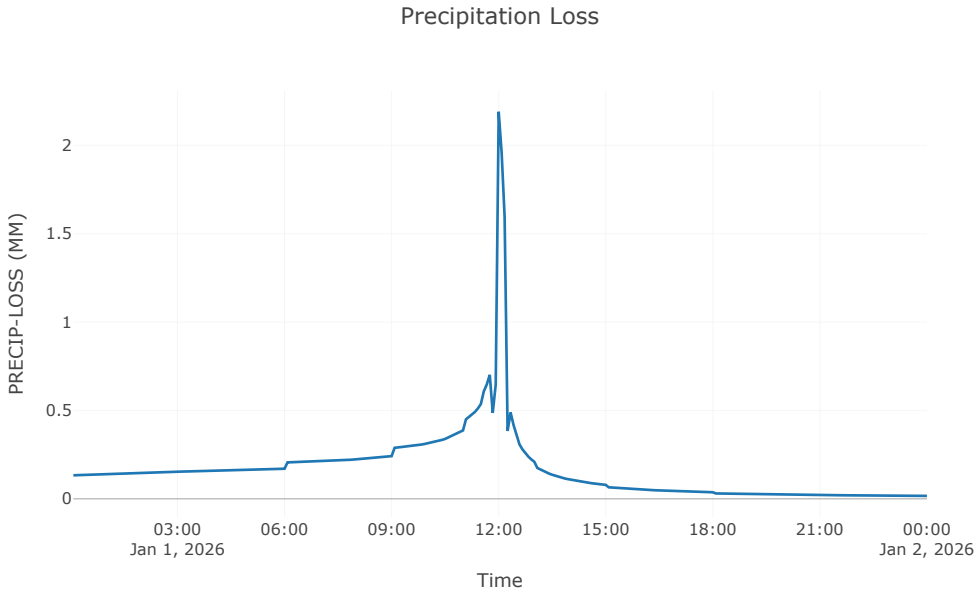

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

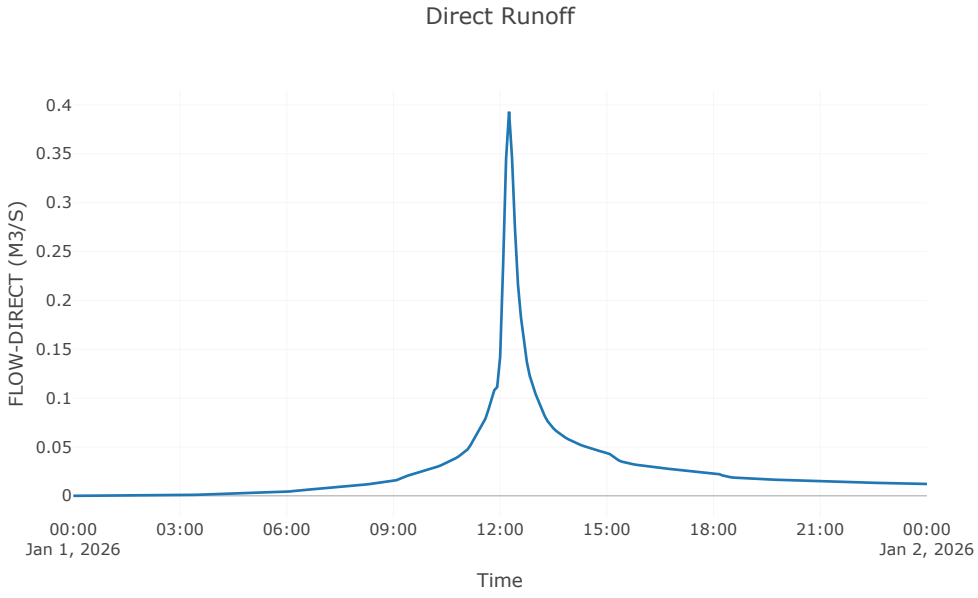

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

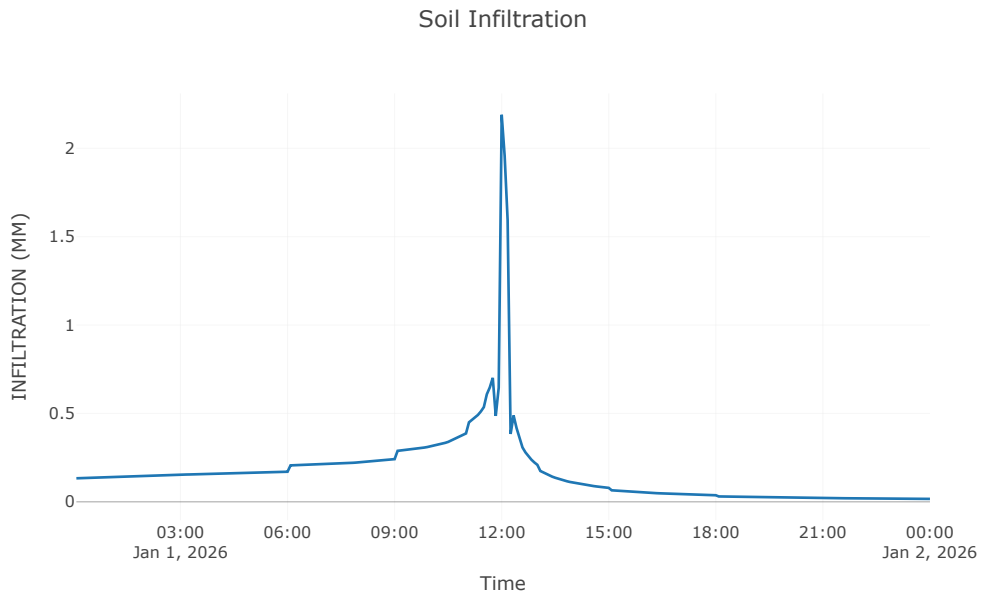

Cumulative Precipitation
PRECIP-CUM (MM)
120
100
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

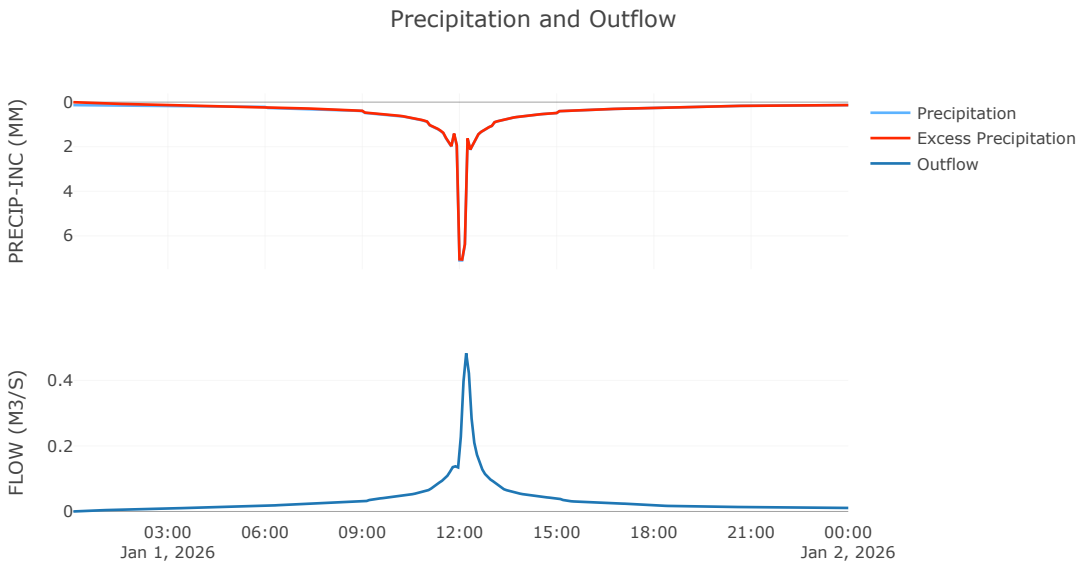
Subbasin: DIFFERENCE POND 2 SOUTH

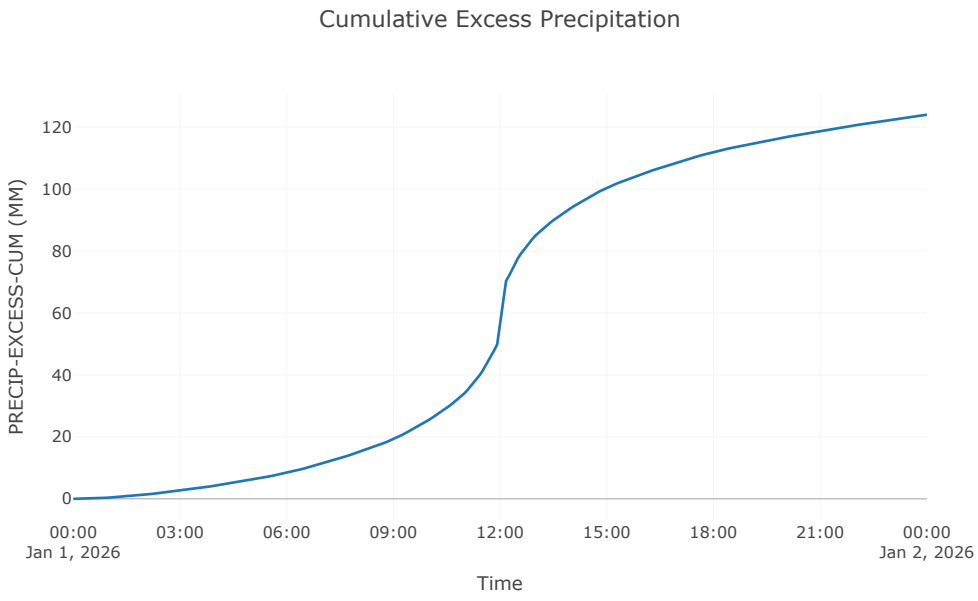
Area (KM2) : 0.02
Latitude Degrees : -44.99
Longitude Degrees : 168.85
Downstream : Junction - POND 2

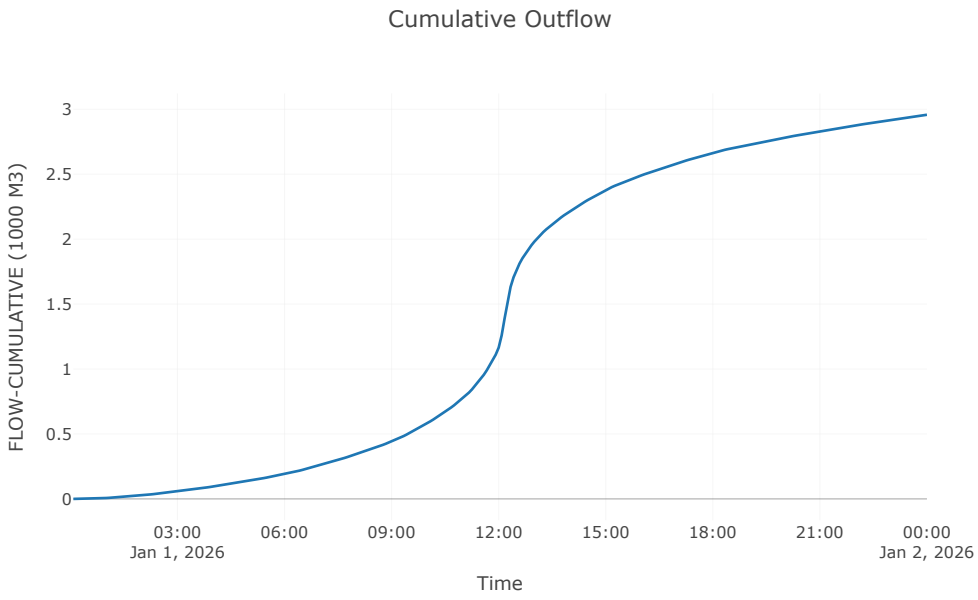
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	98
Initial Abstraction	0

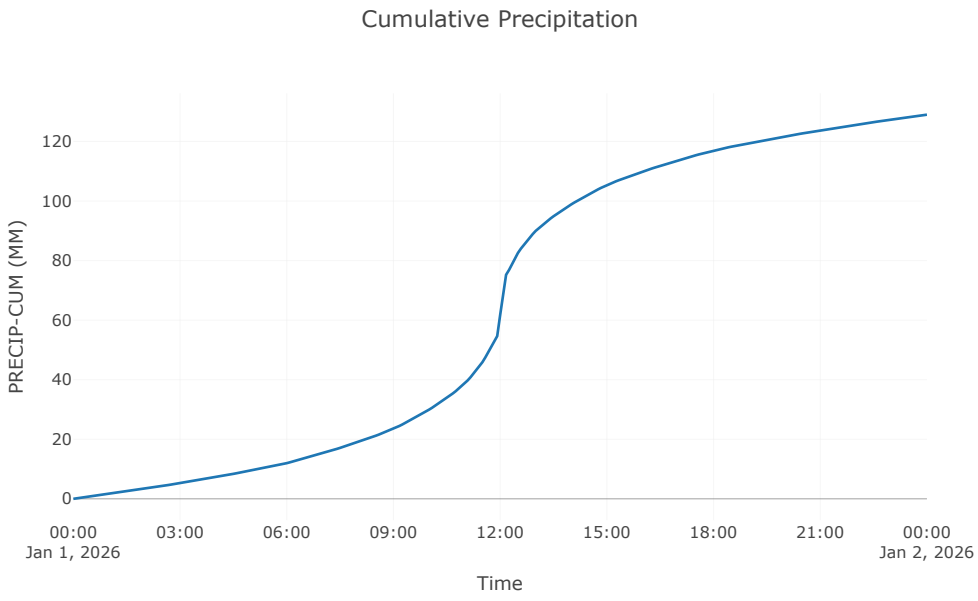
Transform: Scs	
Lag	6.97
Unitgraph Type	Standard

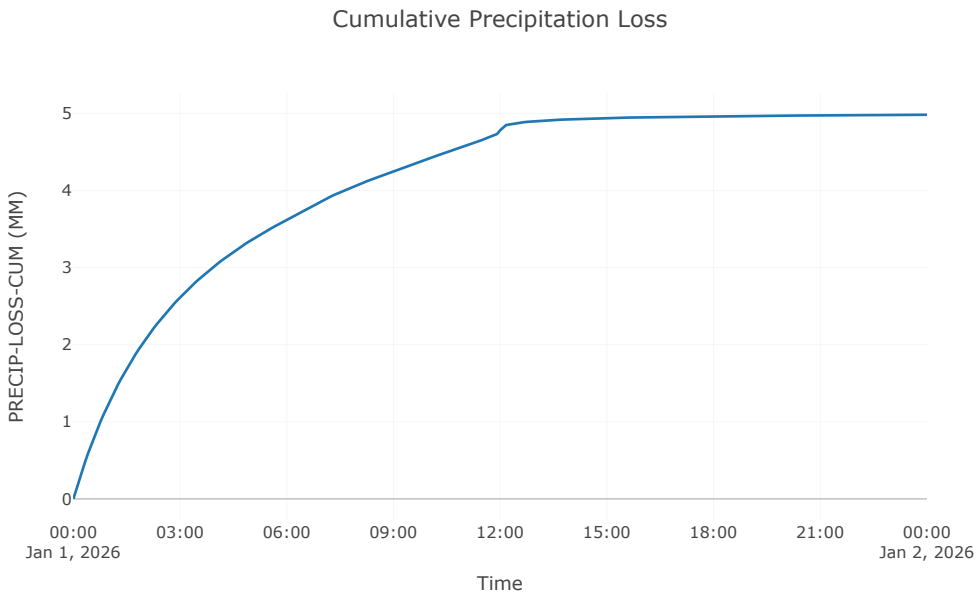
Results: DIFFERENCE POND 2 SOUTH	
Peak Discharge (M3/S)	0.48
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	123.75
Precipitation Volume (M3)	3083.1
Loss Volume (M3)	119.1
Excess Volume (M3)	2964
Direct Runoff Volume (M3)	2957.72
Baseflow Volume (M3)	0

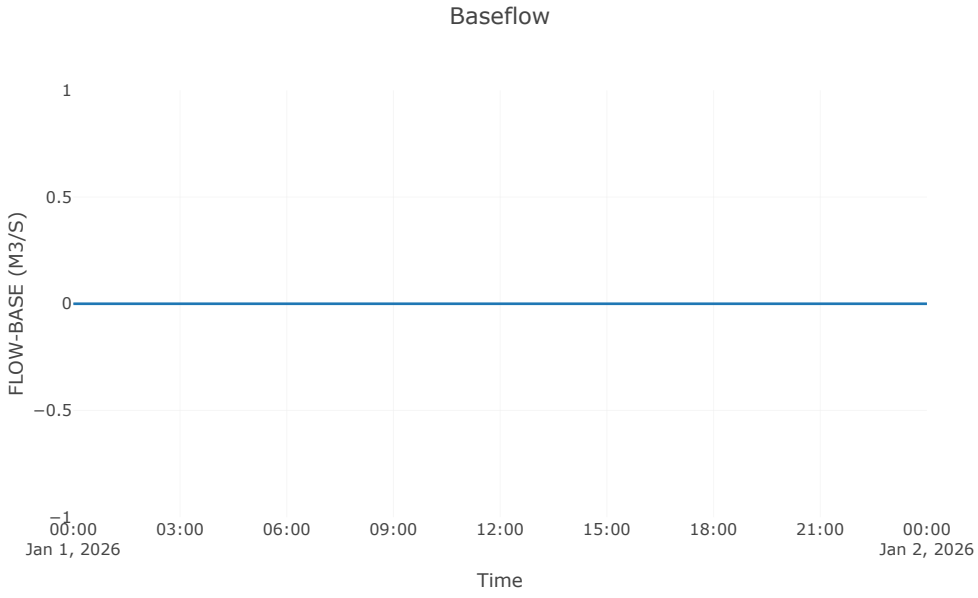

Precipitation and Outflow
PRECIP-INC (MM)
0
2
4
6
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

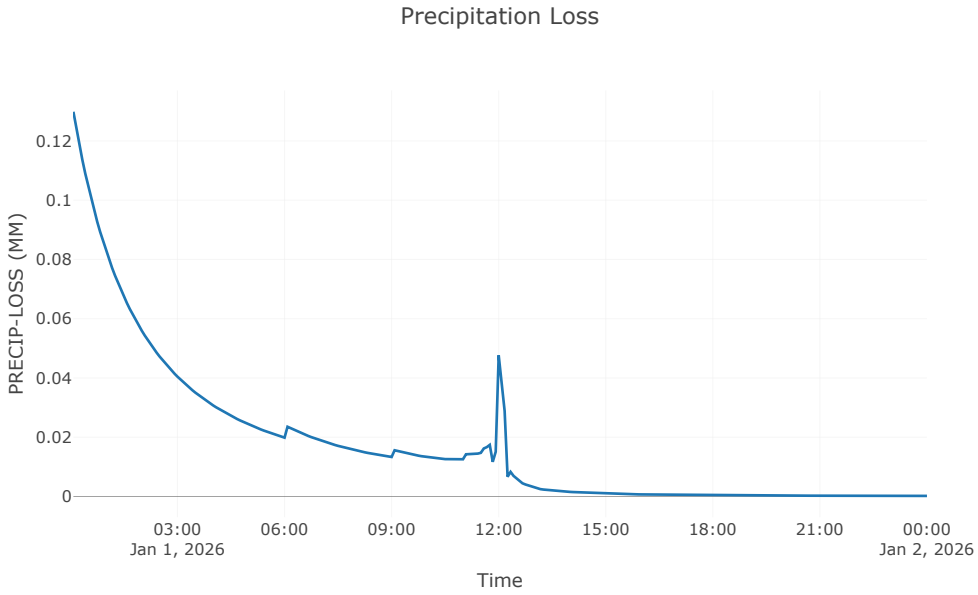

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
120
100
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

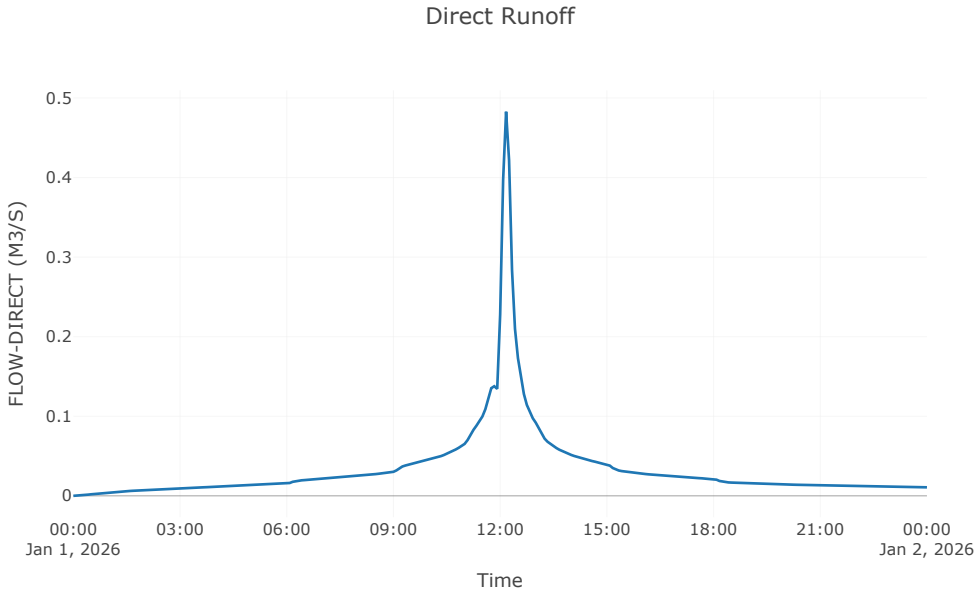

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
3
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

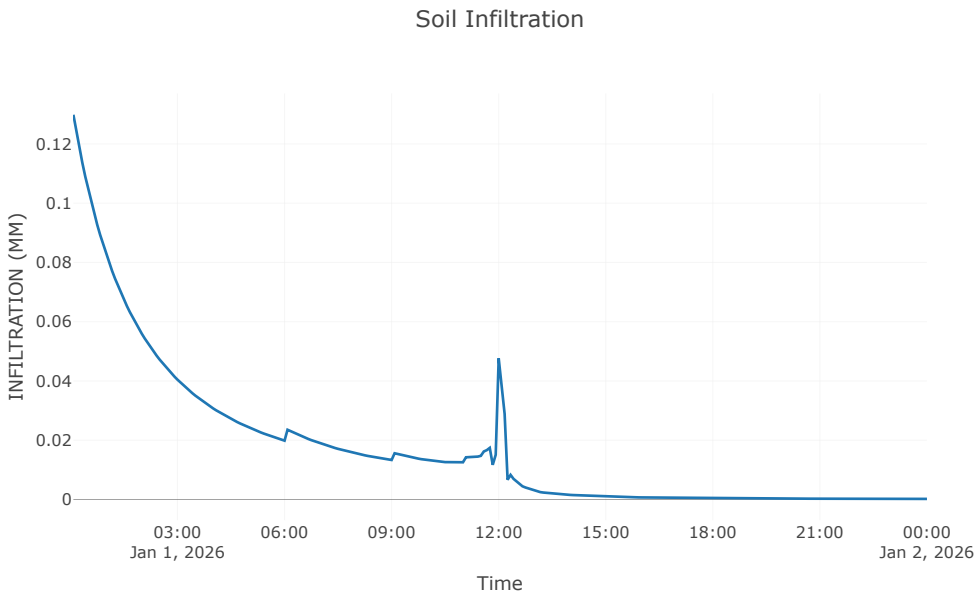

Cumulative Precipitation
PRECIP-CUM (MM)
120
100
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
0
1
2
3
4
5
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
0.12
0.1
0.08
0.06
0.04
0.02
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
0.5
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
0.12
0.1
0.08
0.06
0.04
0.02
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

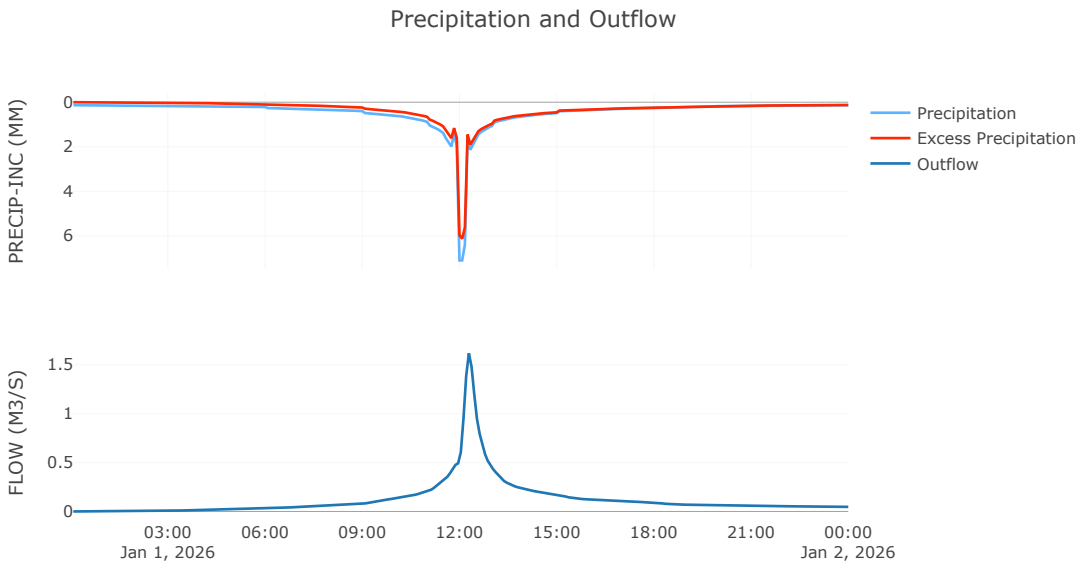
Subbasin: DIFFERENCE POND 5 INTERNAL

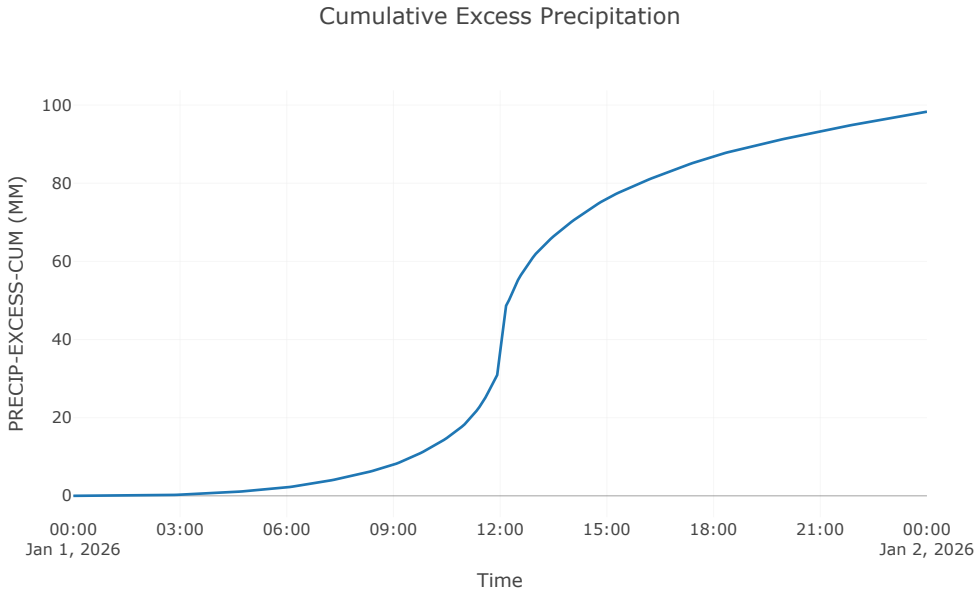
Area (KM2) : 0.11
Latitude Degrees : -45
Longitude Degrees : 168.84
Downstream : Pond 5

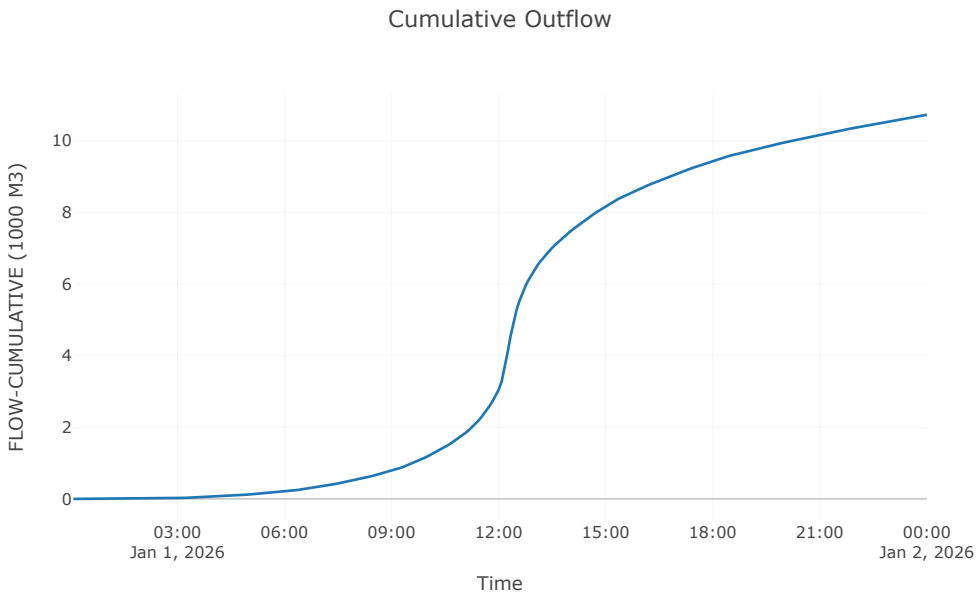
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	87.2
Initial Abstraction	1.86

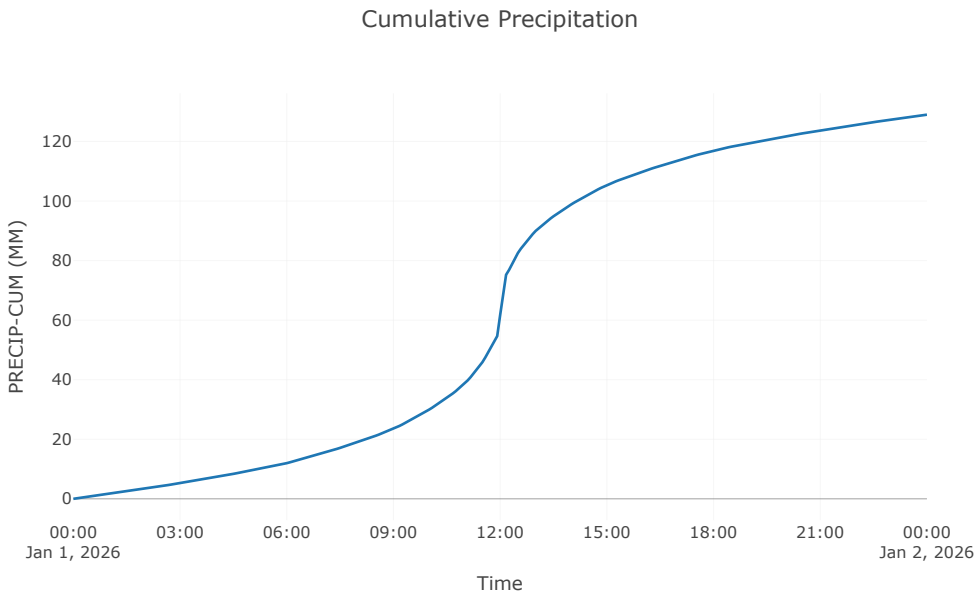
Transform: Scs	
Lag	12.18
Unitgraph Type	Standard

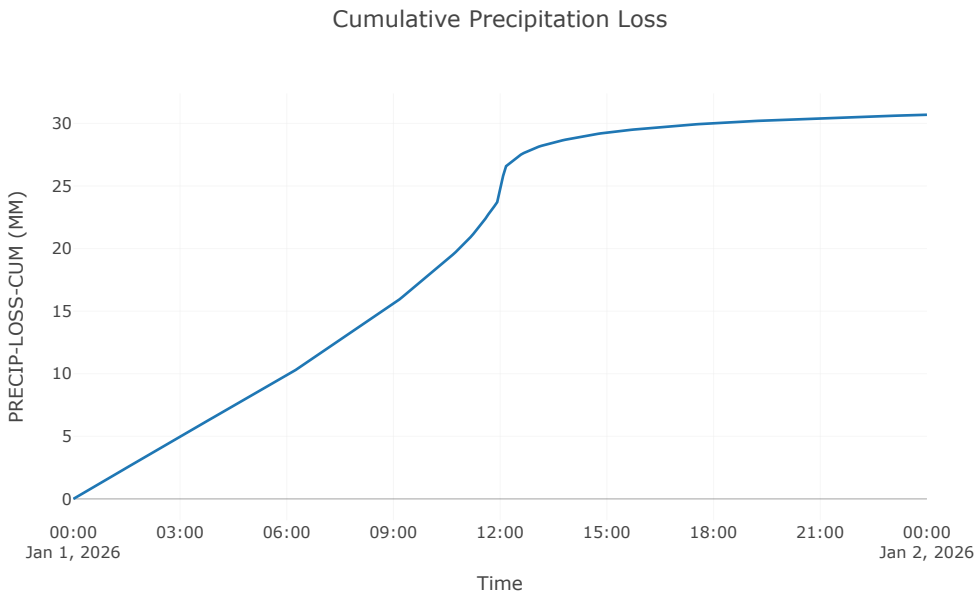
Results: DIFFERENCE POND 5 INTERNAL	
Peak Discharge (M3/S)	1.62
Time of Peak Discharge	01Jan2026, 12:15
Volume (MM)	97.89
Precipitation Volume (M3)	14138.4
Loss Volume (M3)	3363.61
Excess Volume (M3)	10774.79
Direct Runoff Volume (M3)	10728.72
Baseflow Volume (M3)	0

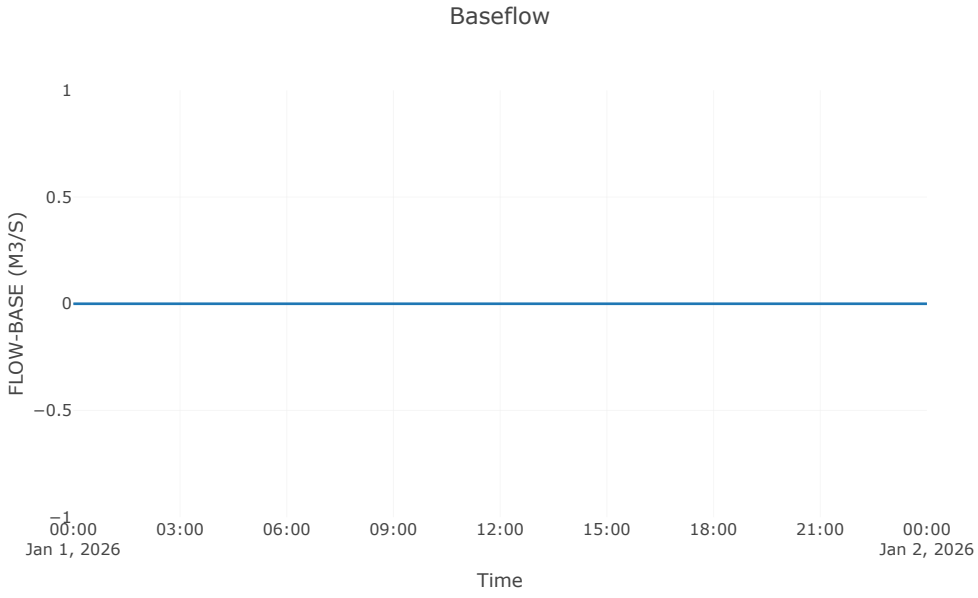

Precipitation and Outflow
PRECIP-INC (MM)
0
2
4
6
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

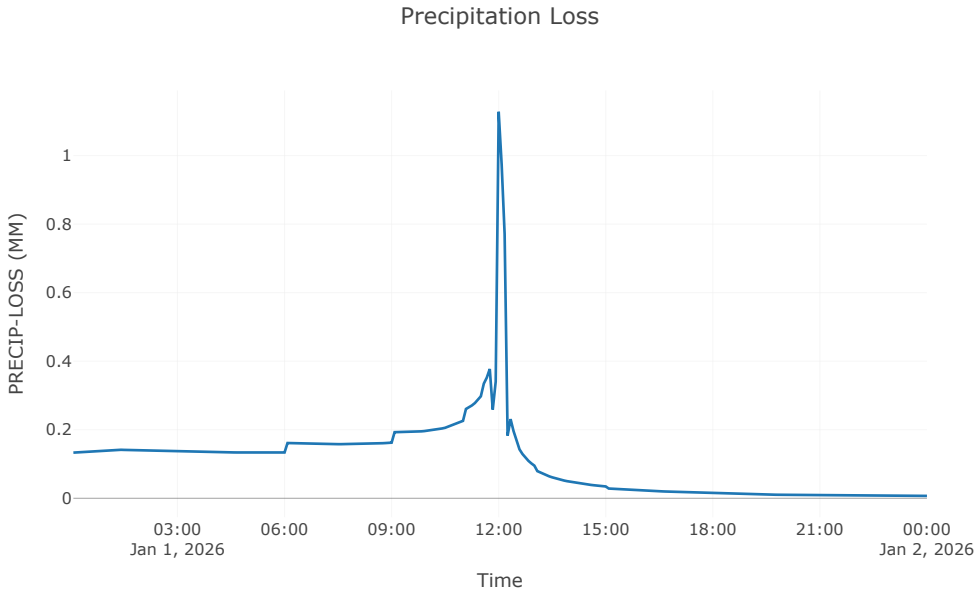

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
100
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

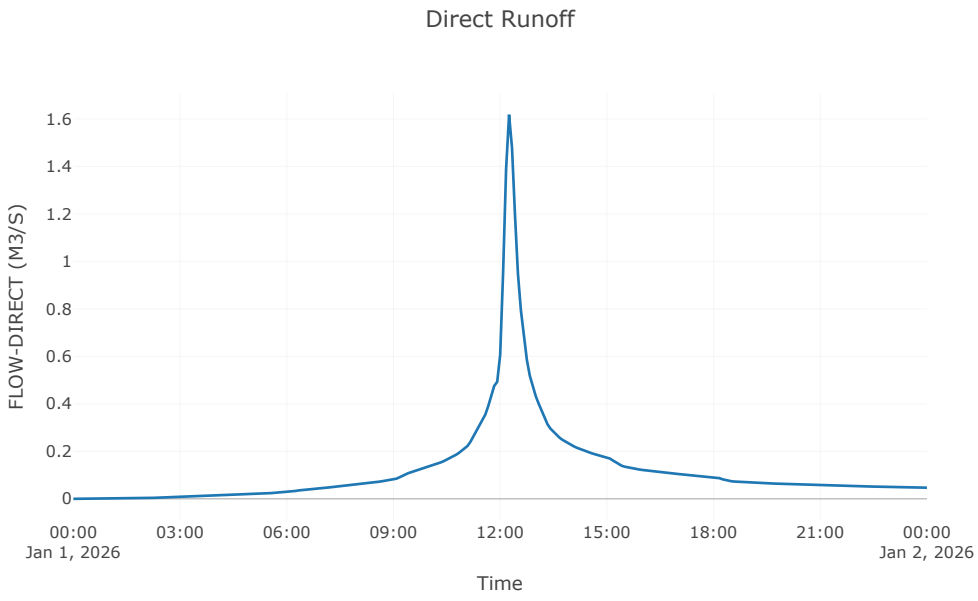

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
10
8
6
4
2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

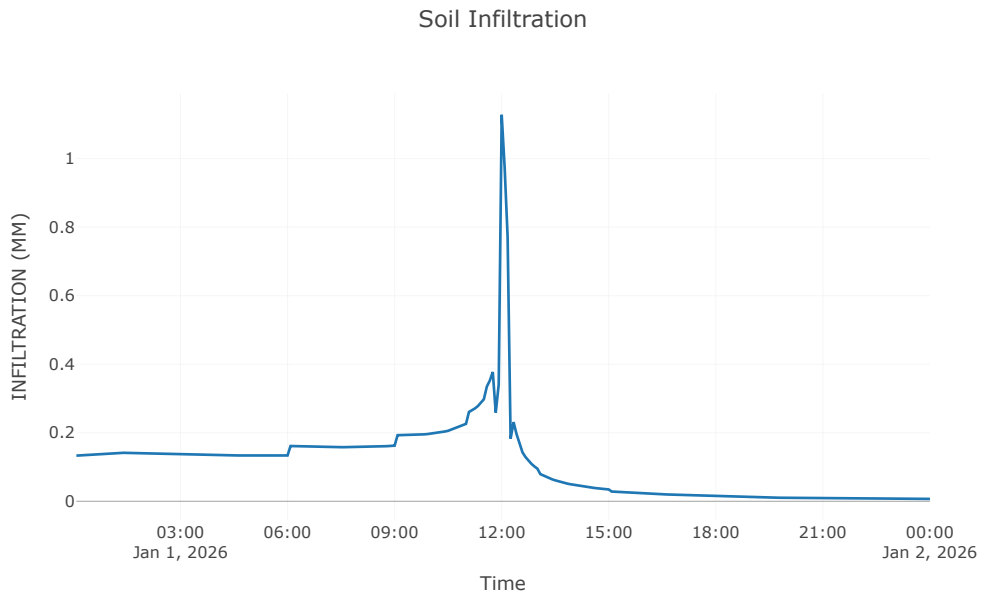

Cumulative Precipitation
PRECIP-CUM (MM)
120
100
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
30
25
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

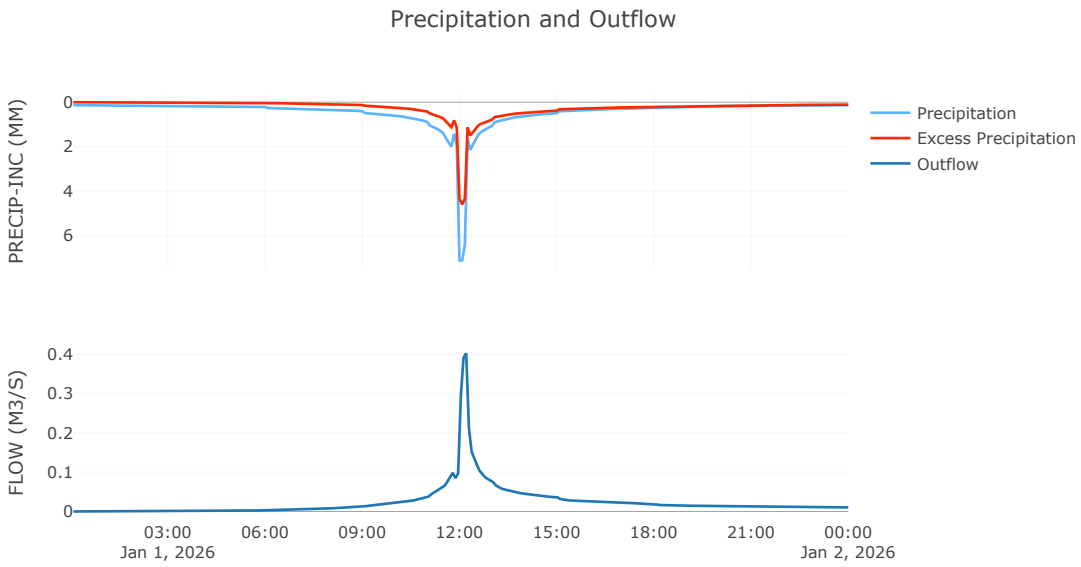
Subbasin: DIFFERENCE POND 5 UPSTREAM

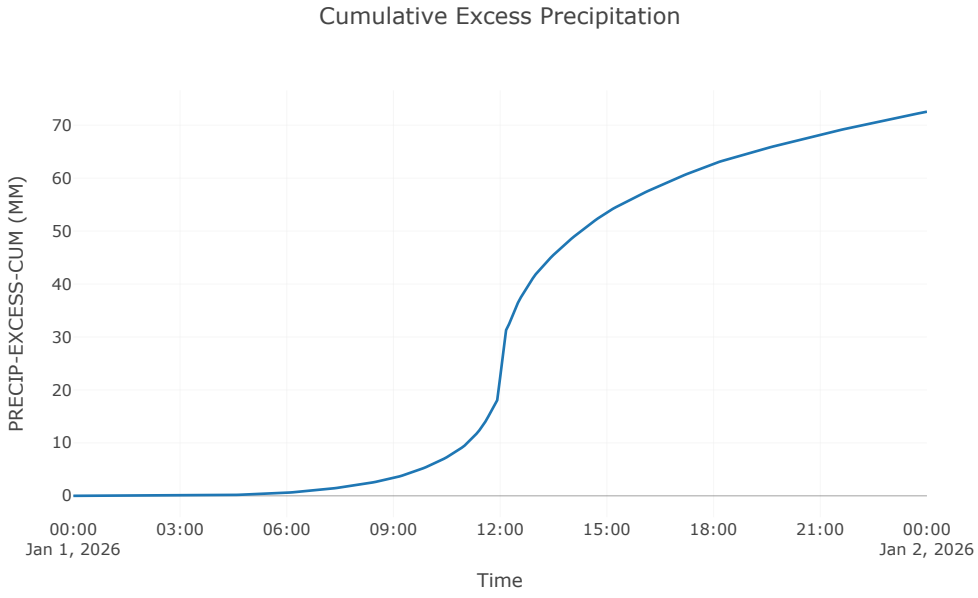
Area (KM2) : 0.03
Latitude Degrees : -45
Longitude Degrees : 168.84
Downstream : Pond 5

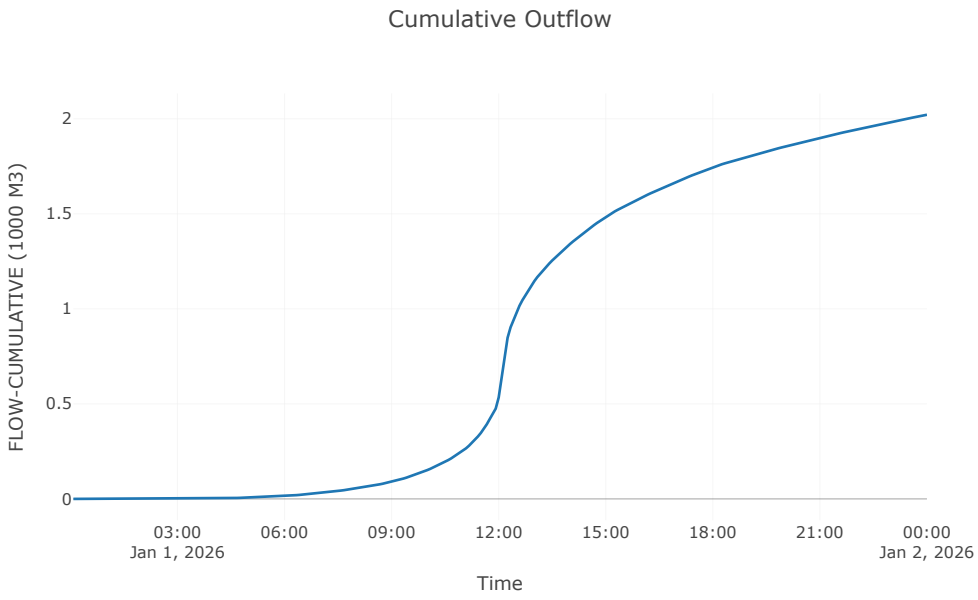
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	74
Initial Abstraction	4.46

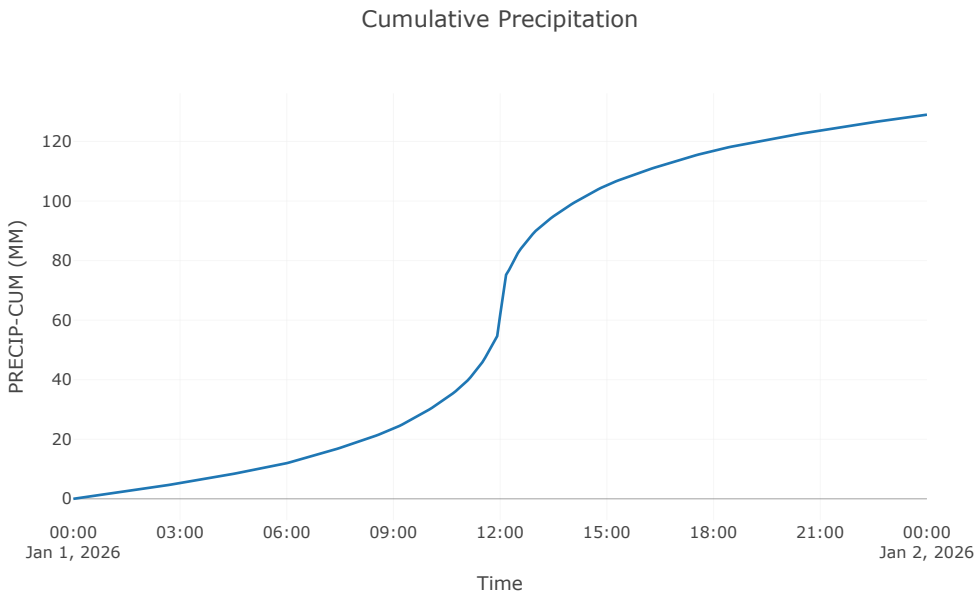
Transform: Scs	
Lag	3.21
Unitgraph Type	Standard

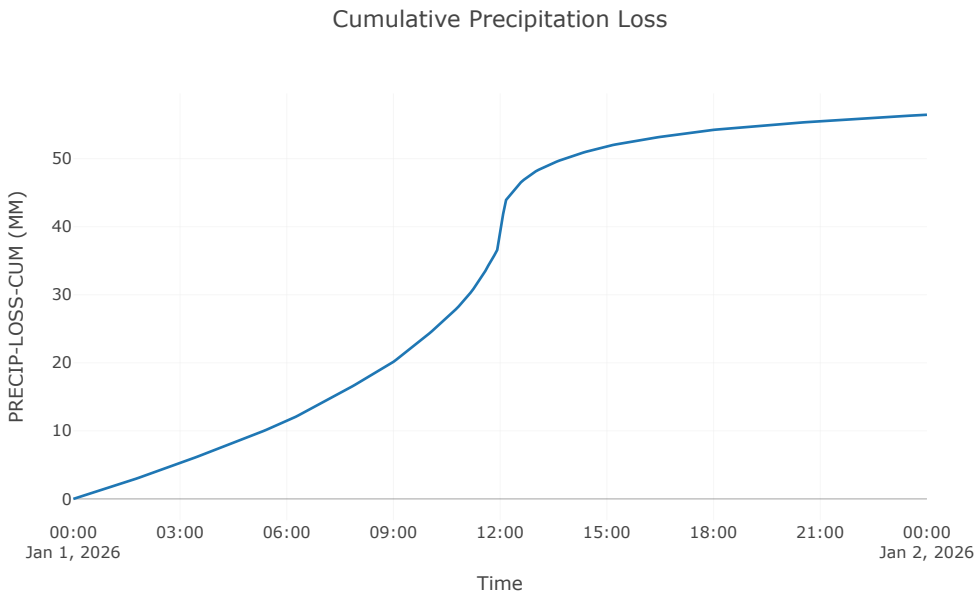
Results: DIFFERENCE POND 5 UPSTREAM	
Peak Discharge (M3/S)	0.4
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	72.44
Precipitation Volume (M3)	3599.1
Loss Volume (M3)	1574.92
Excess Volume (M3)	2024.18
Direct Runoff Volume (M3)	2021.18
Baseflow Volume (M3)	0

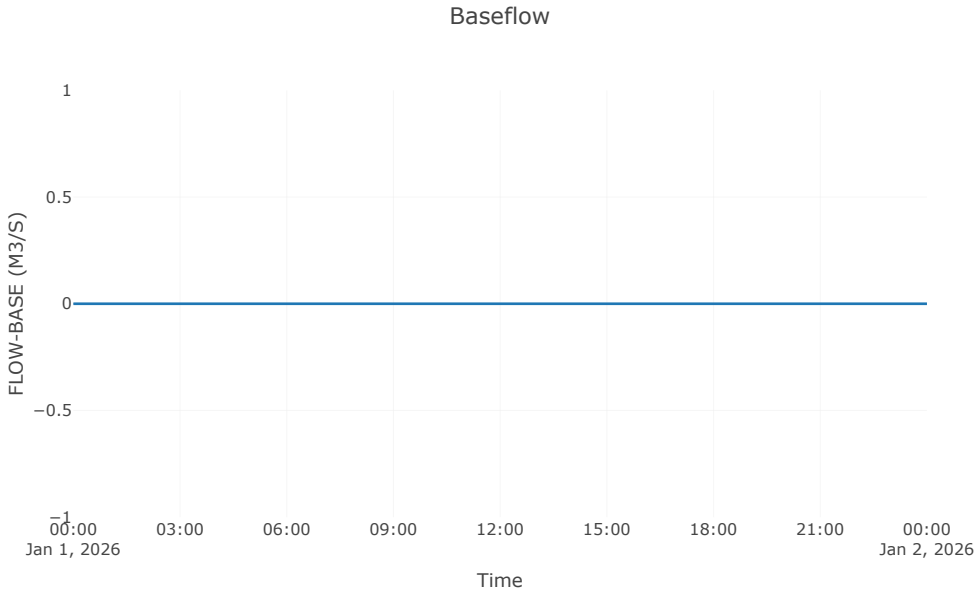

Precipitation and Outflow
PRECIP-INC (MM)
0
2
4
6
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

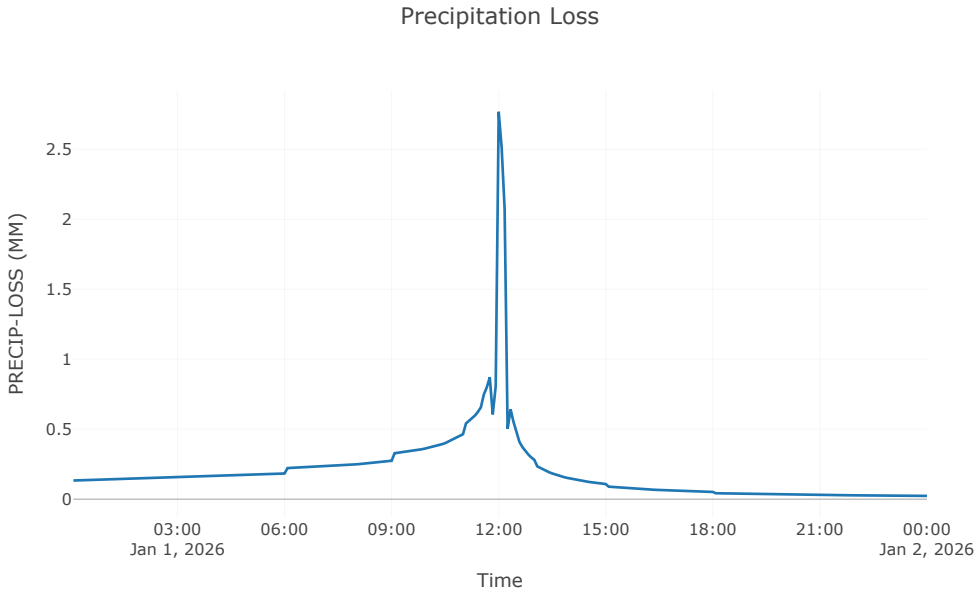

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

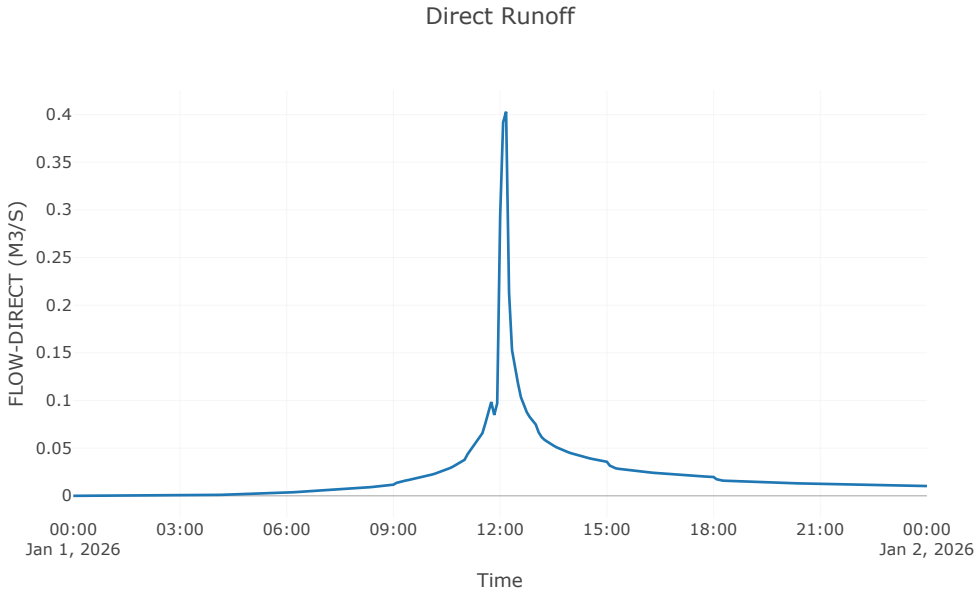

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

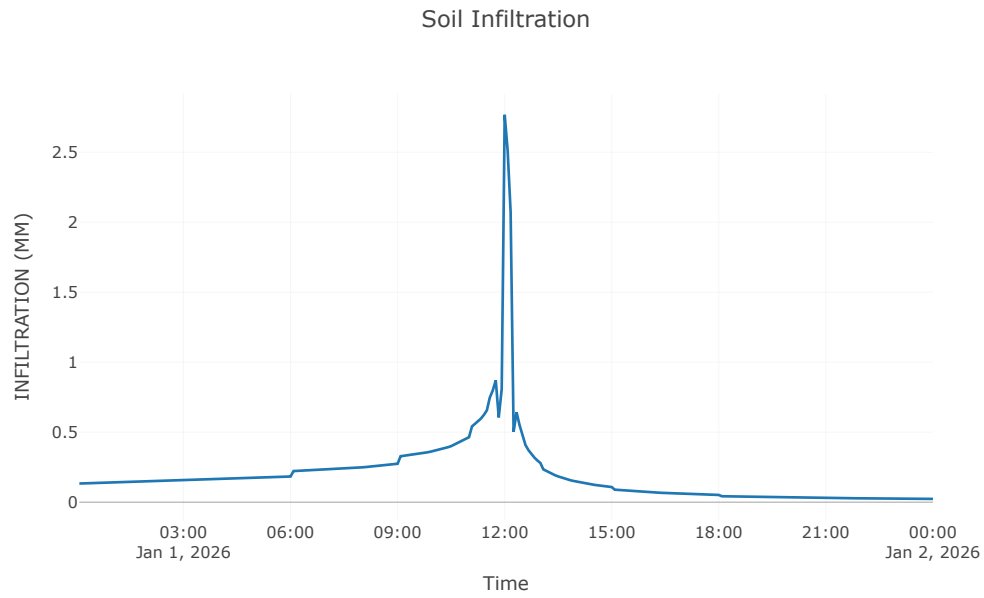

Cumulative Precipitation
PRECIP-CUM (MM)
120
100
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

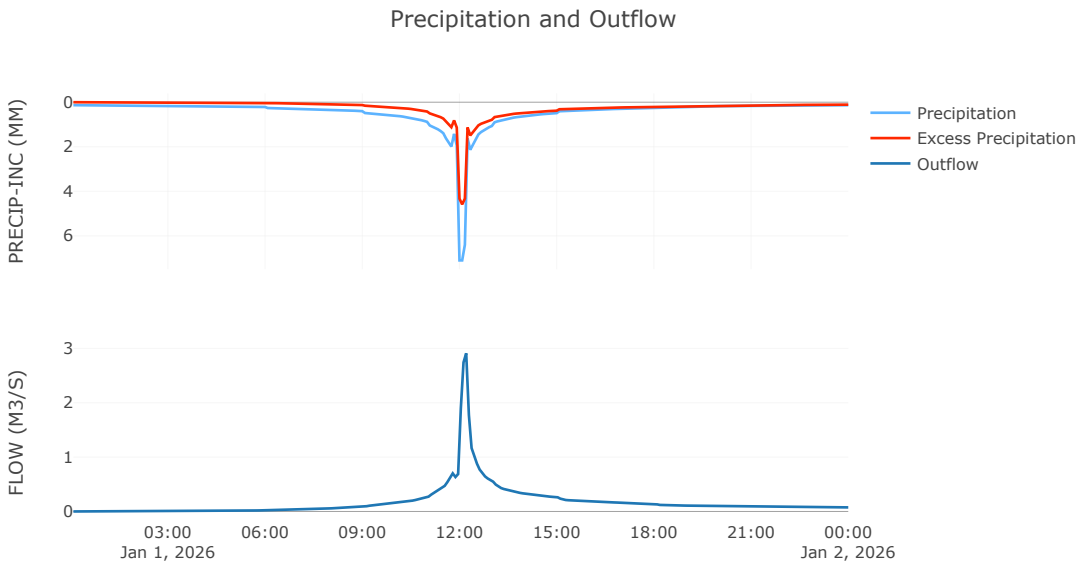
Subbasin: DIFFERENCE POND 6 UPSTREAM

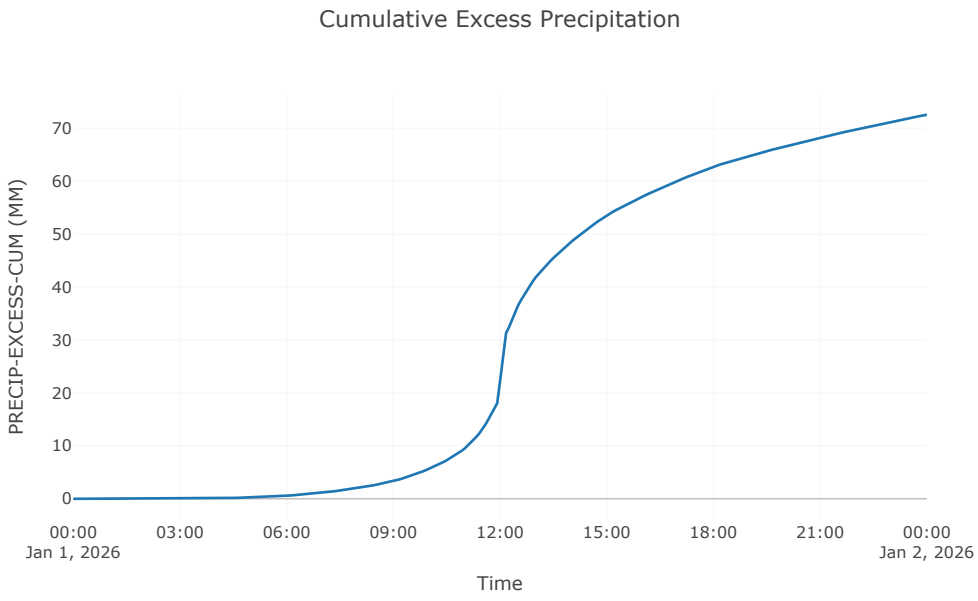
Area (KM2) : 0.2
Latitude Degrees : -44.99
Longitude Degrees : 168.83
Downstream : Reach - CHANNEL 8

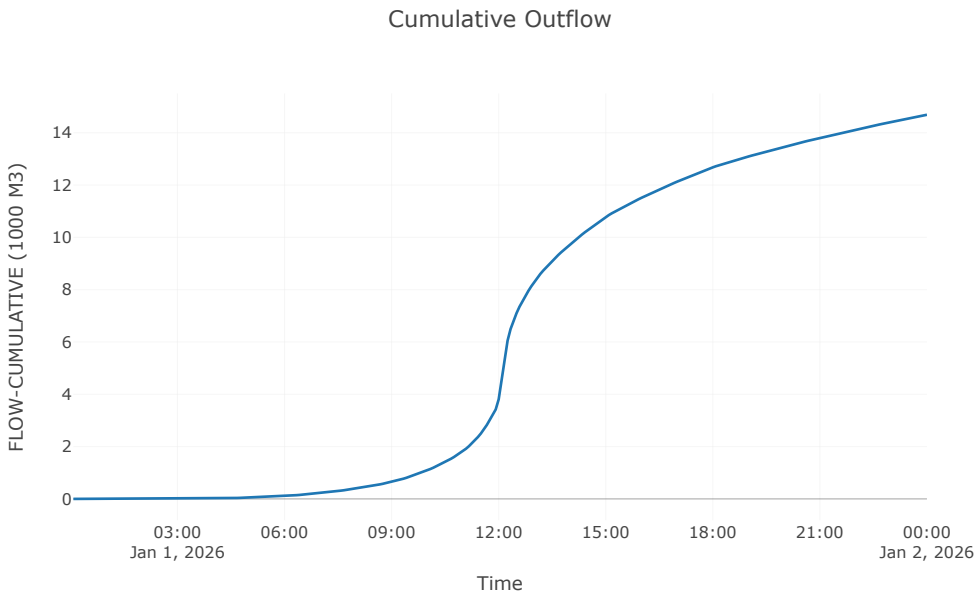
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	74
Initial Abstraction	4.46

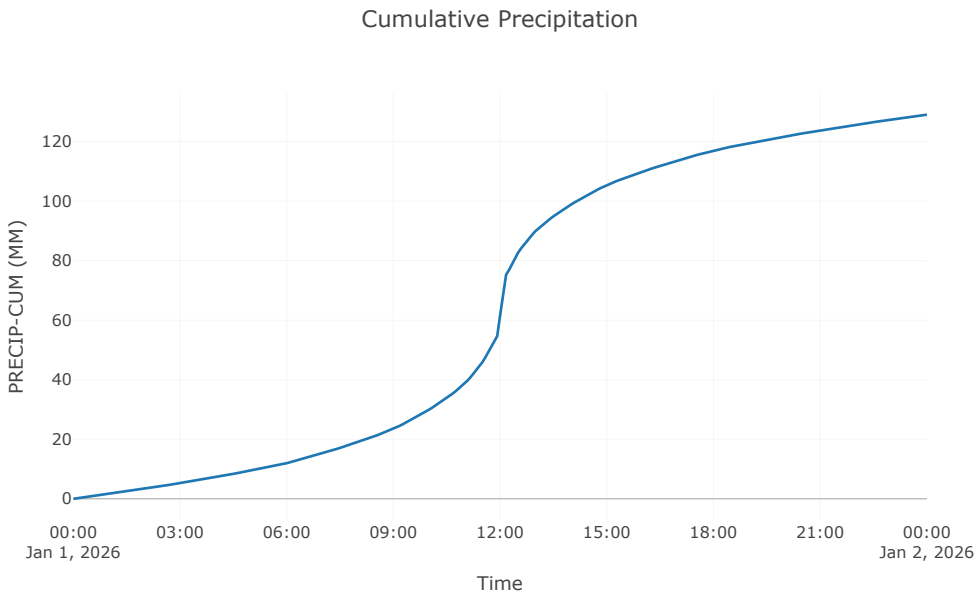
Transform: Scs	
Lag	3.86
Unitgraph Type	Standard

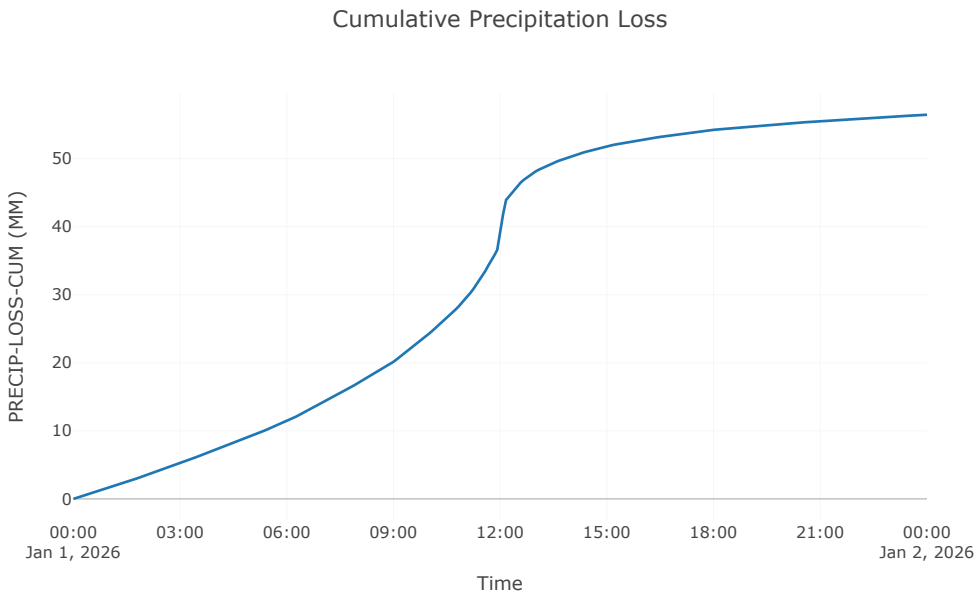
Results: DIFFERENCE POND 6 UPSTREAM	
Peak Discharge (M3/S)	2.91
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	72.43
Precipitation Volume (M3)	26161.2
Loss Volume (M3)	11447.83
Excess Volume (M3)	14713.37
Direct Runoff Volume (M3)	14687.86
Baseflow Volume (M3)	0

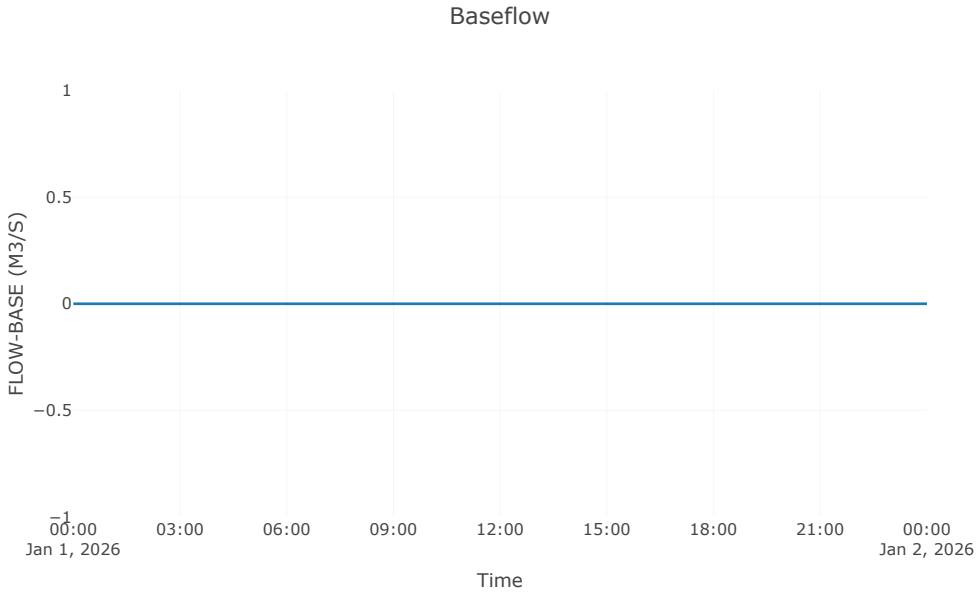

Precipitation and Outflow
PRECIP-INC (MM)
0
2
4
6
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
3
2
1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

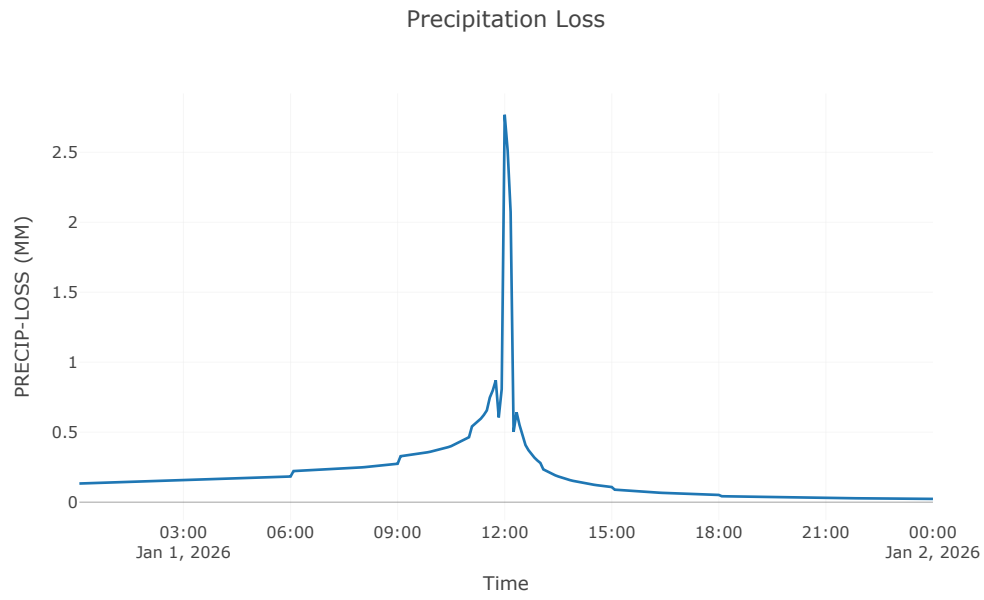

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

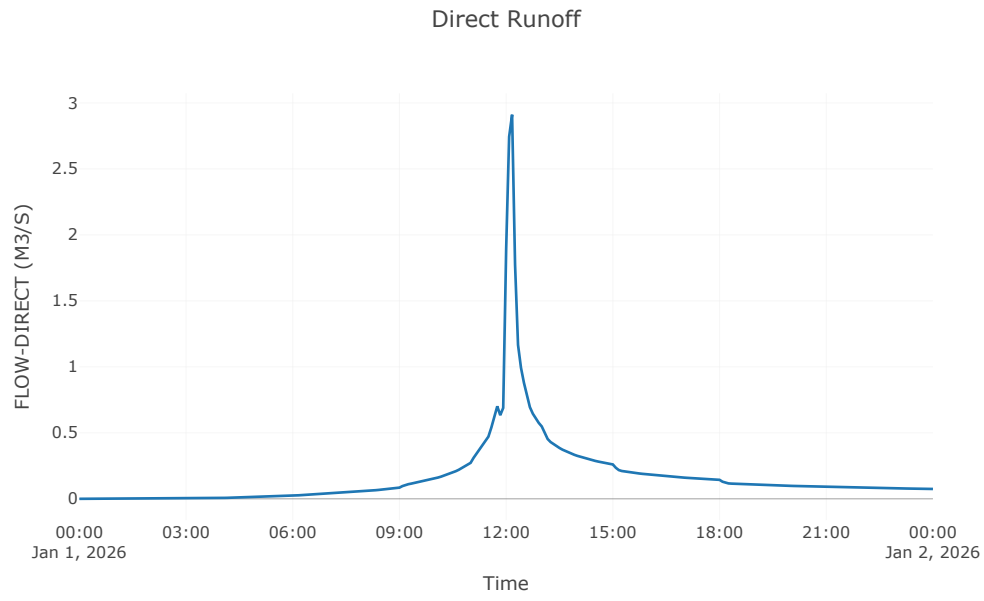

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
14
12
10
8
6
4
2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

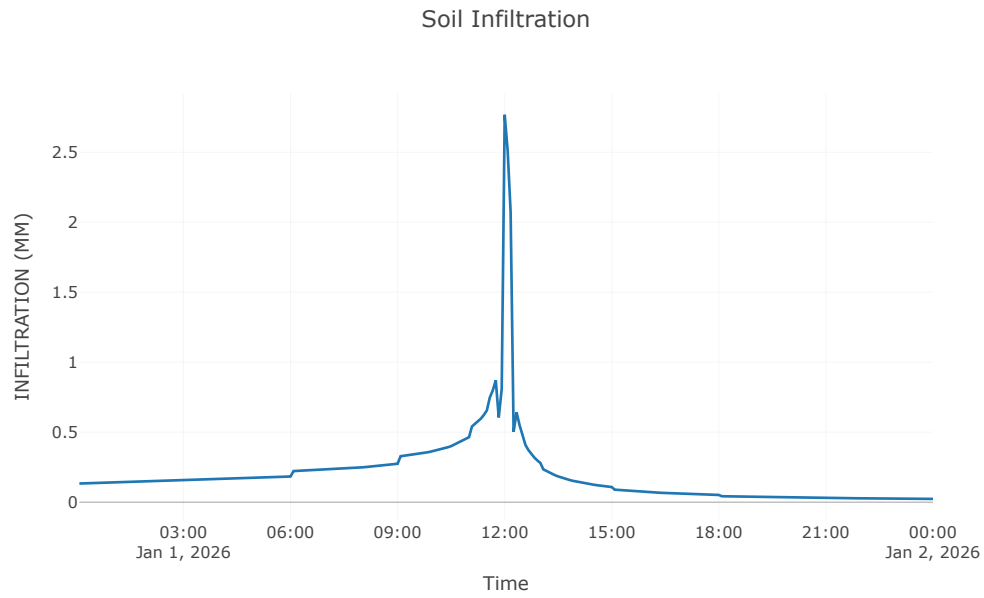

Cumulative Precipitation
PRECIP-CUM (MM)
120
100
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

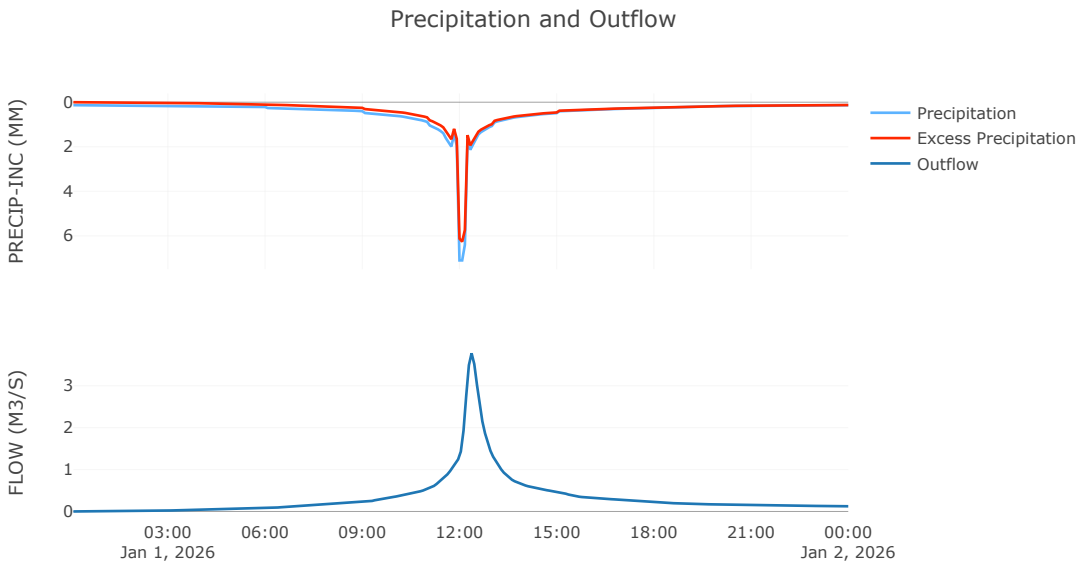
Subbasin: DIFFERENCE POND 6 INTERNAL

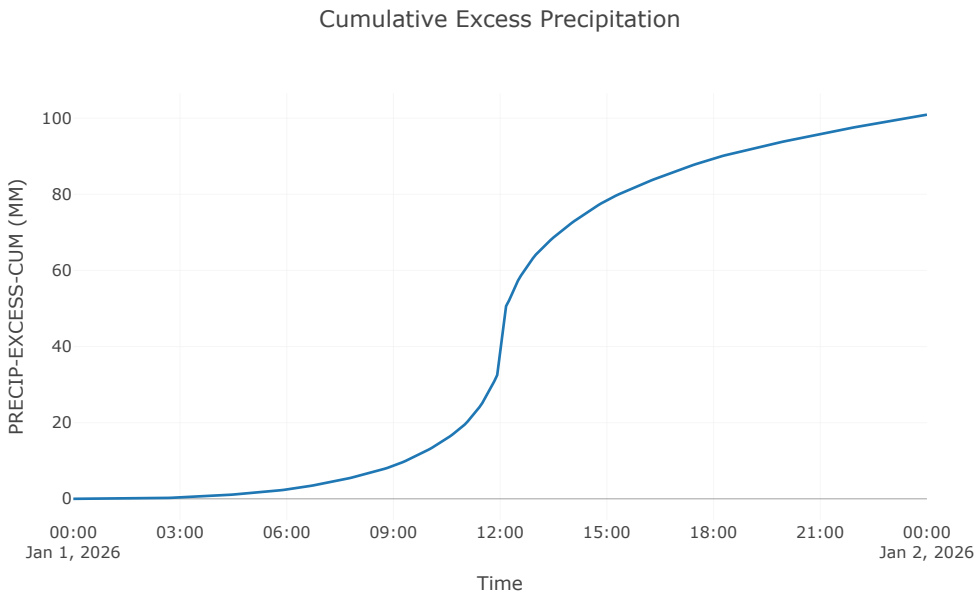
Area (KM2) : 0.29
Latitude Degrees : -45
Longitude Degrees : 168.84
Downstream : Junction - CHANNEL 3

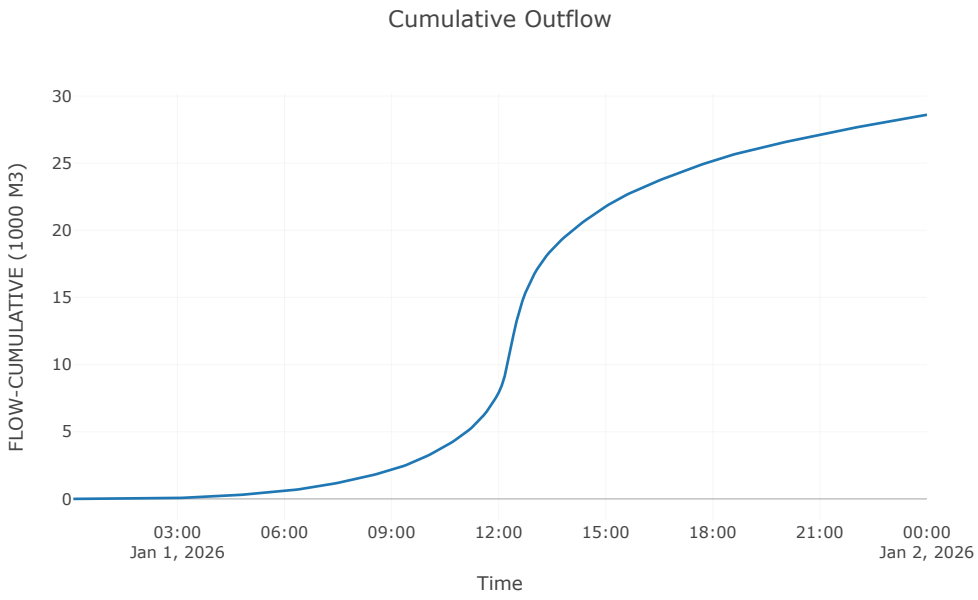
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	88.4
Initial Abstraction	1.67

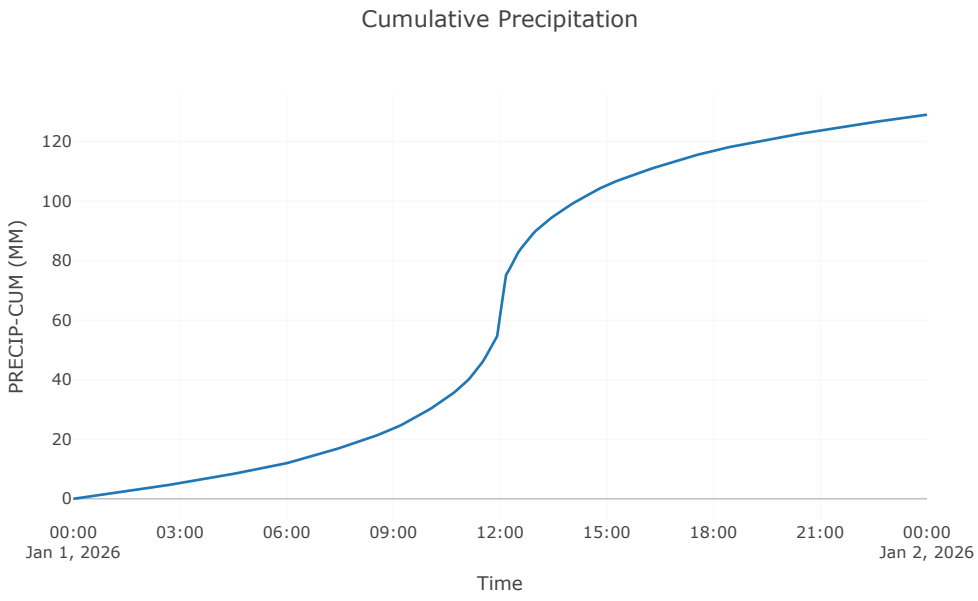
Transform: Scs	
Lag	16.51
Unitgraph Type	Standard

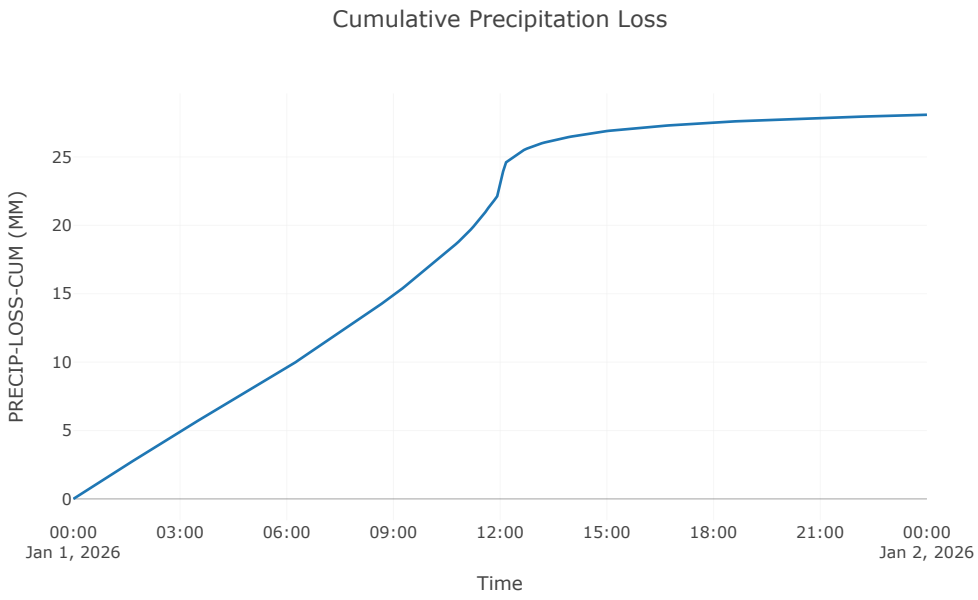
Results: DIFFERENCE POND 6 INTERNAL	
Peak Discharge (M3/S)	3.78
Time of Peak Discharge	01Jan2026, 12:20
Volume (MM)	100.34
Precipitation Volume (M3)	36777.9
Loss Volume (M3)	8007.22
Excess Volume (M3)	28770.68
Direct Runoff Volume (M3)	28608.09
Baseflow Volume (M3)	0

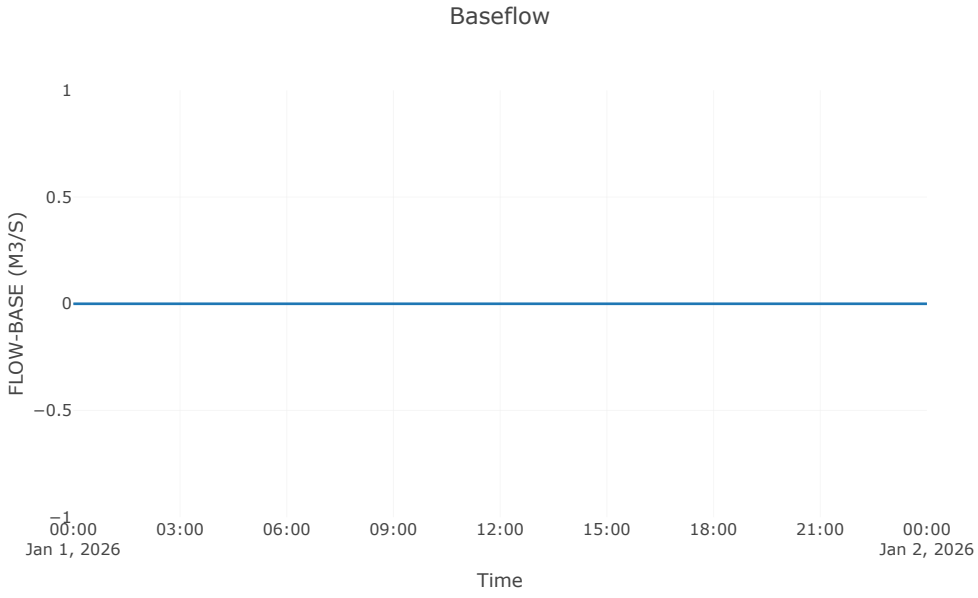

Precipitation and Outflow
PRECIP-INC (MM)
0
2
4
6
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
3
2
1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

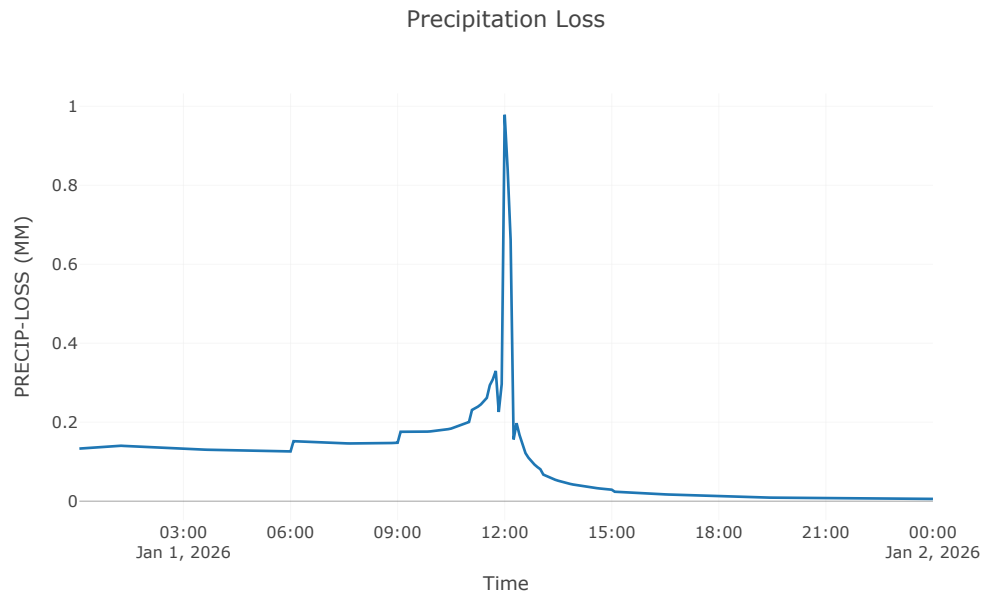

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
100
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

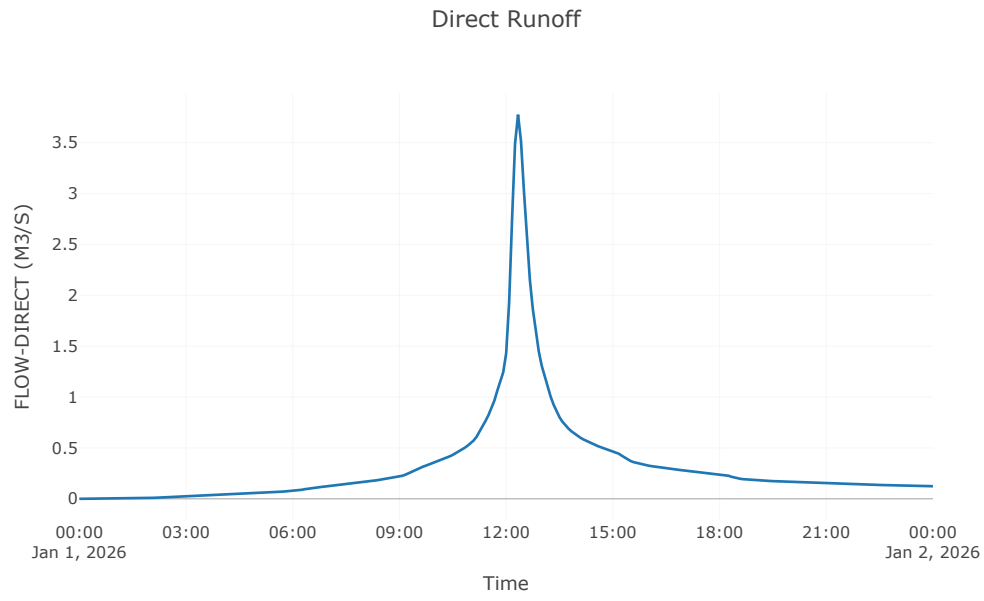

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
30
25
20
15
10
5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

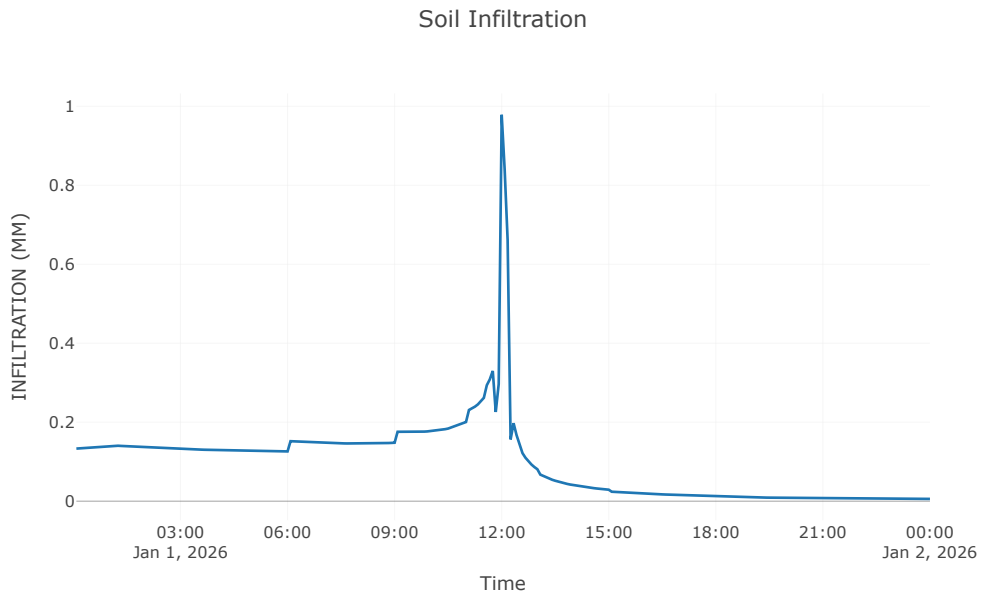

Cumulative Precipitation
PRECIP-CUM (MM)
120
100
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
25
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
3.5
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

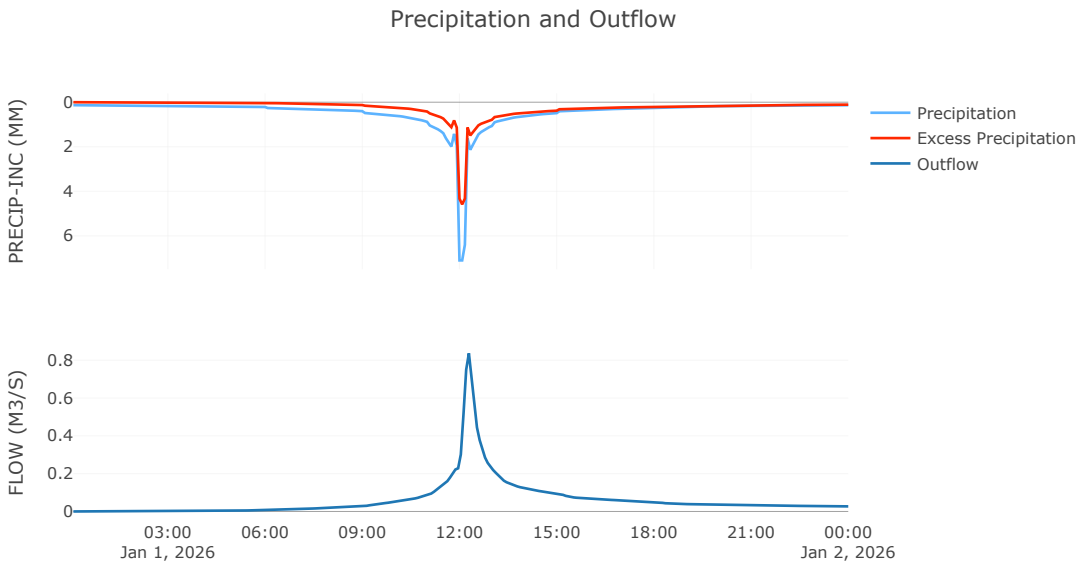
Subbasin: DIFFERENCE POND 6 SOUTH

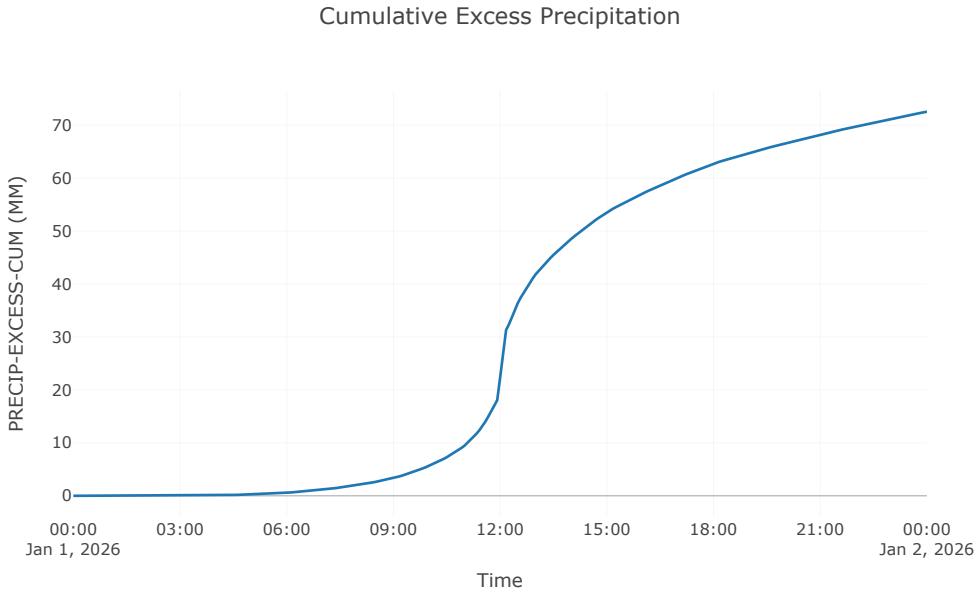
Area (KM2) : 0.07
Latitude Degrees : -45
Longitude Degrees : 168.84
Downstream : Junction - POND 6

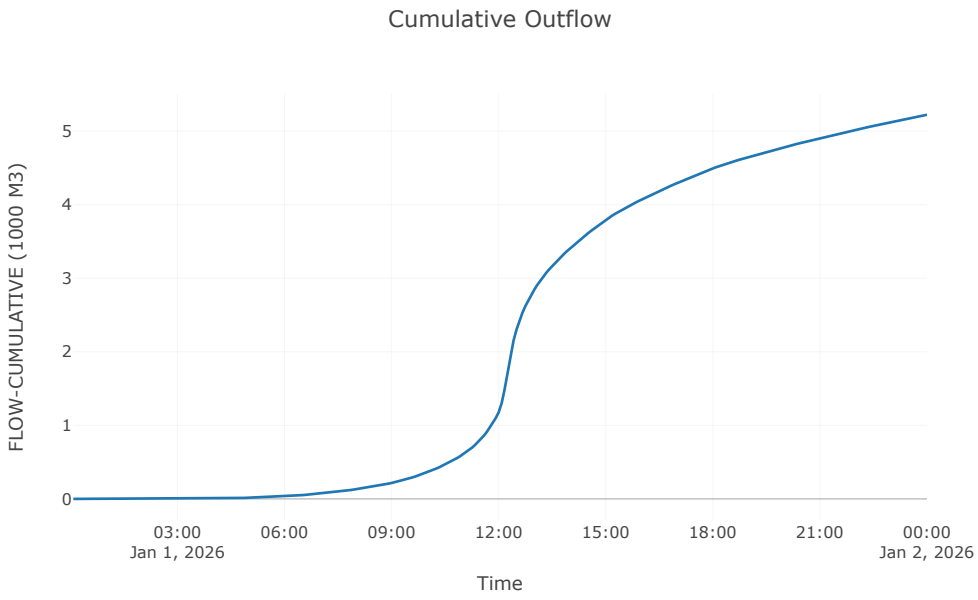
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	74
Initial Abstraction	4.46

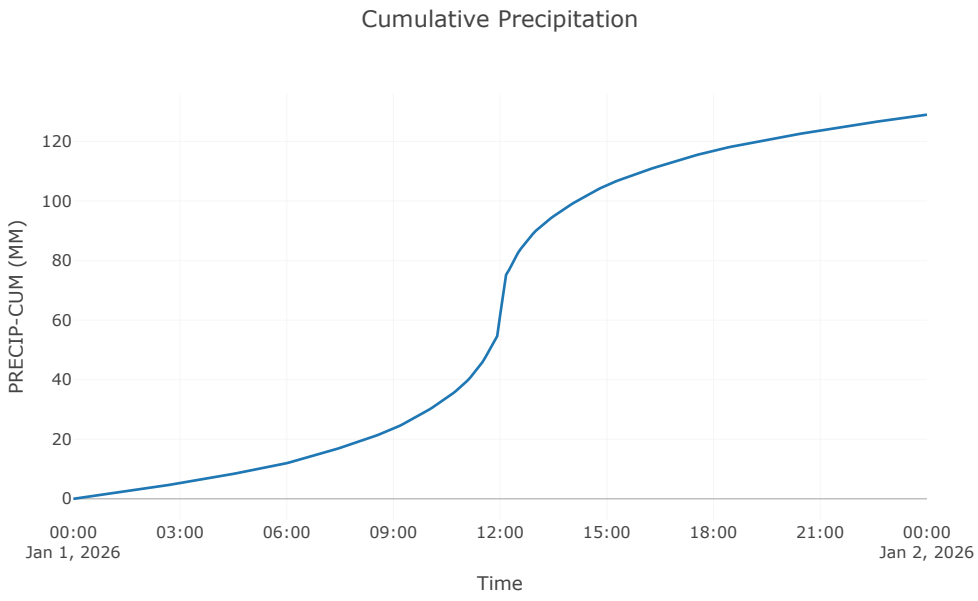
Transform: Scs	
Lag	10.61
Unitgraph Type	Standard

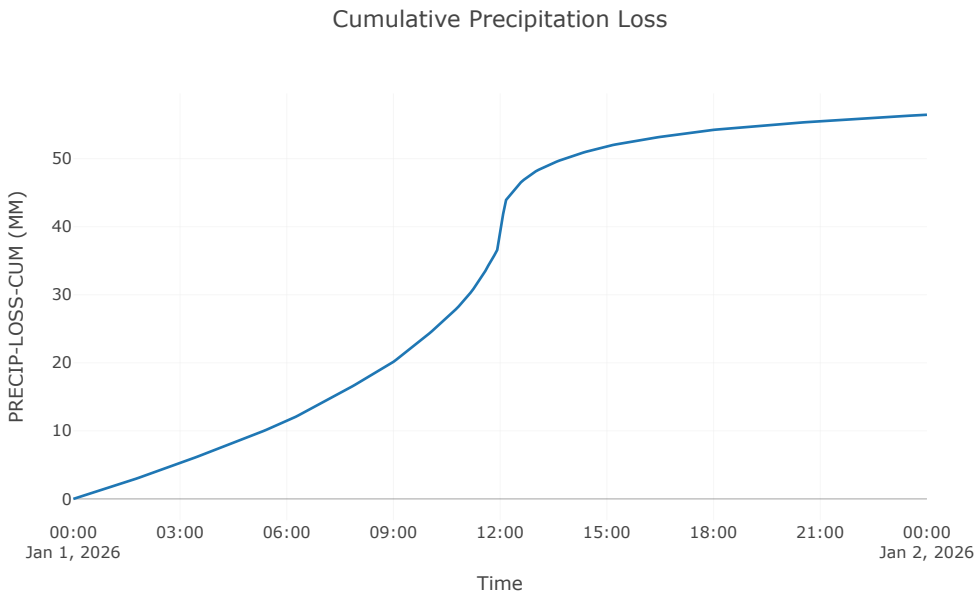
Results: DIFFERENCE POND 6 SOUTH	
Peak Discharge (M3/S)	0.84
Time of Peak Discharge	01Jan2026, 12:15
Volume (MM)	72.23
Precipitation Volume (M3)	9326.7
Loss Volume (M3)	4081.25
Excess Volume (M3)	5245.45
Direct Runoff Volume (M3)	5222.2
Baseflow Volume (M3)	0

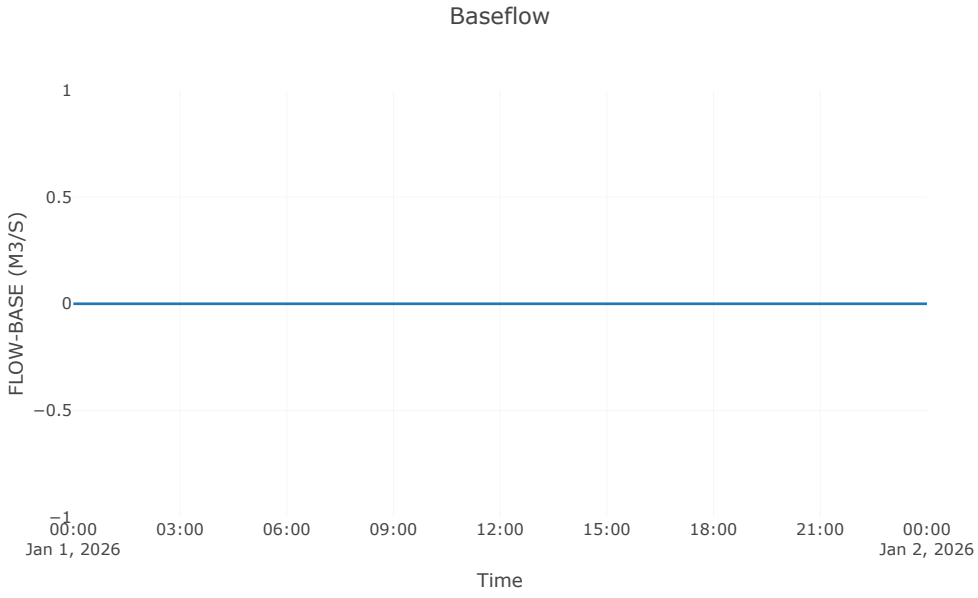

Precipitation and Outflow
PRECIP-INC (MM)
0
2
4
6
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

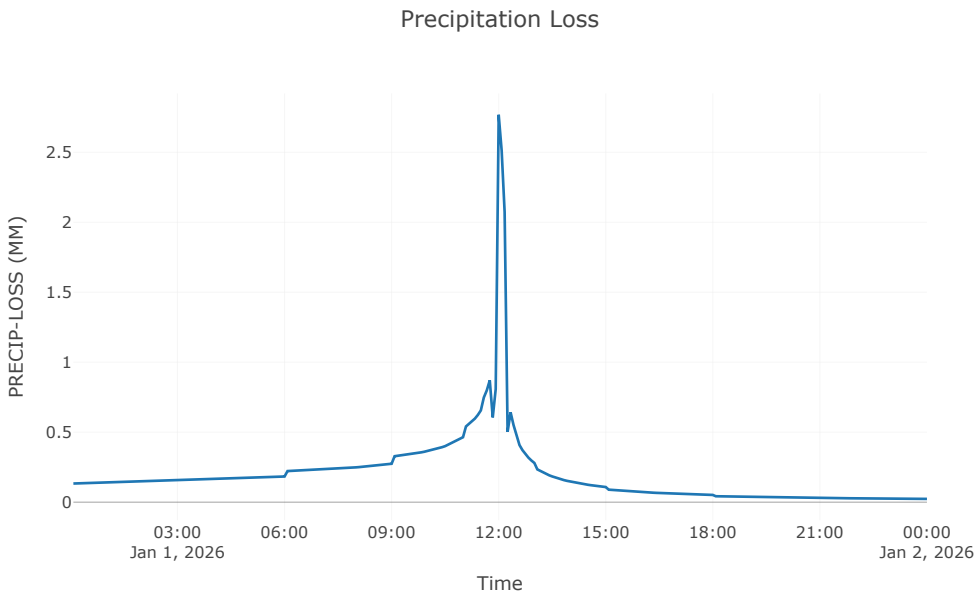

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

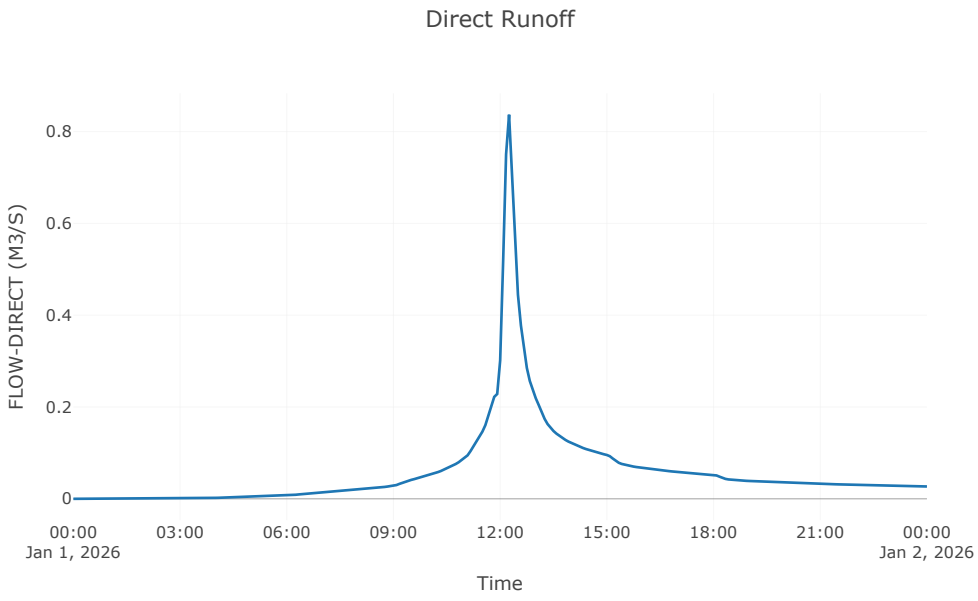

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
0
1
2
3
4
5
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

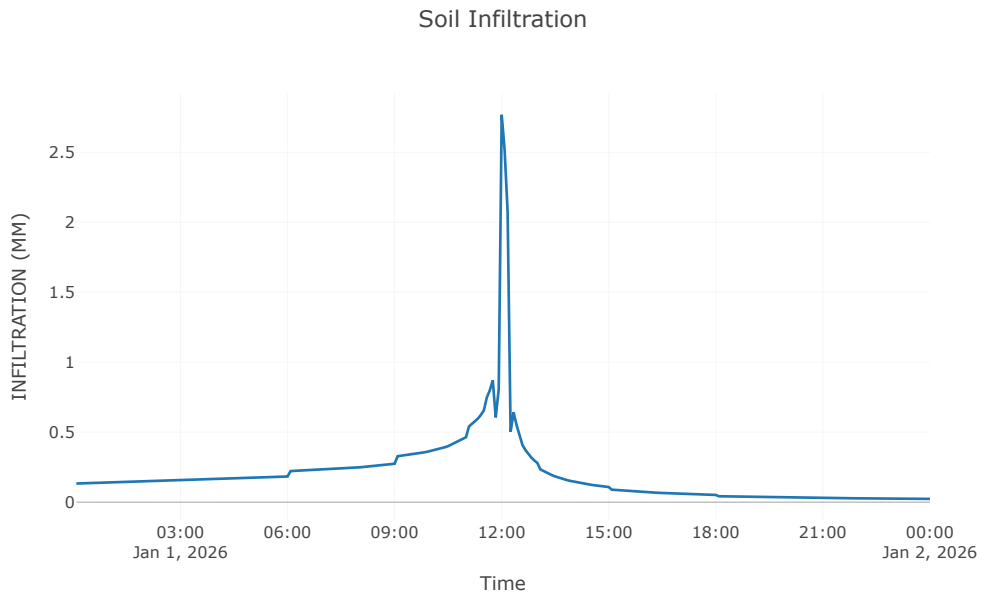

Cumulative Precipitation
PRECIP-CUM (MM)
0
20
40
60
80
100
120
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

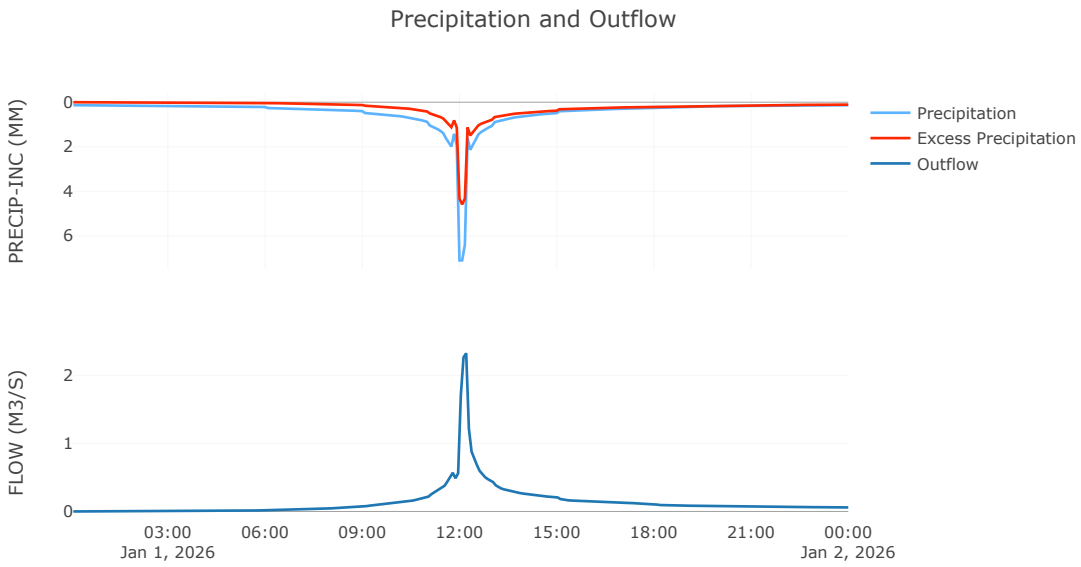
Subbasin: DIFFERENCE POND 7 UPSTREAM

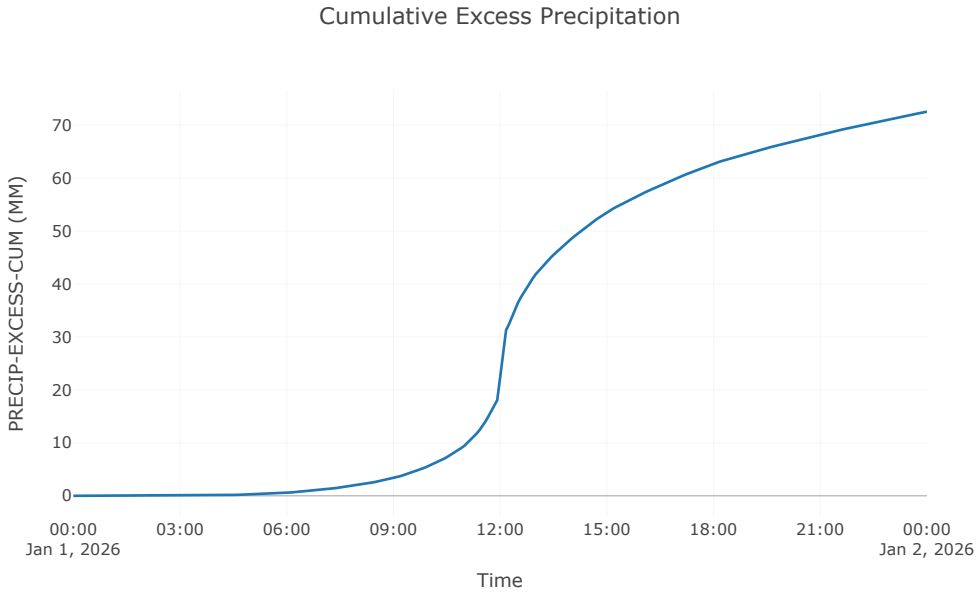
Area (KM2) : 0.16
Latitude Degrees : -44.99
Longitude Degrees : 168.83
Downstream : Reach - CHANNEL 6

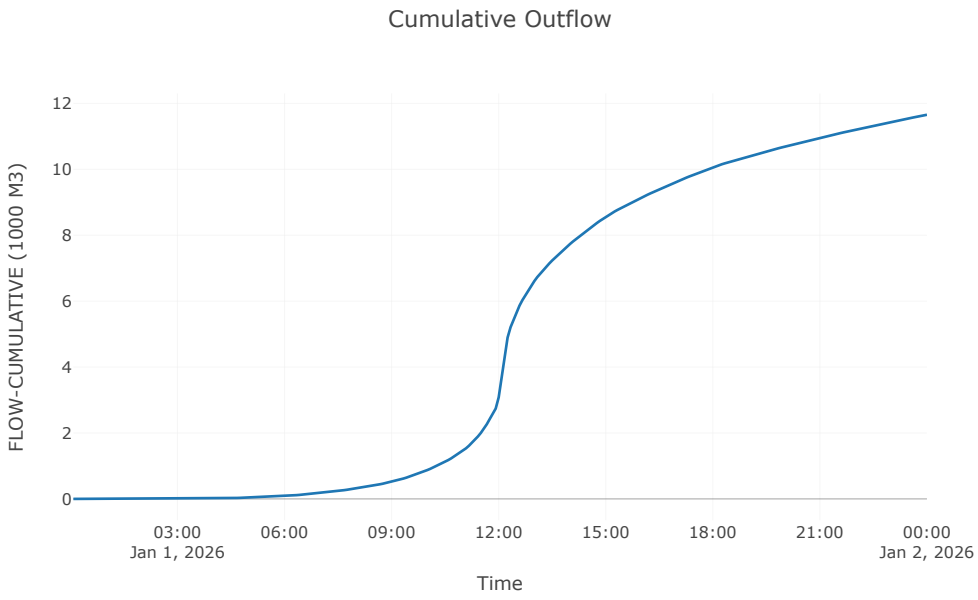
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	74
Initial Abstraction	4.46

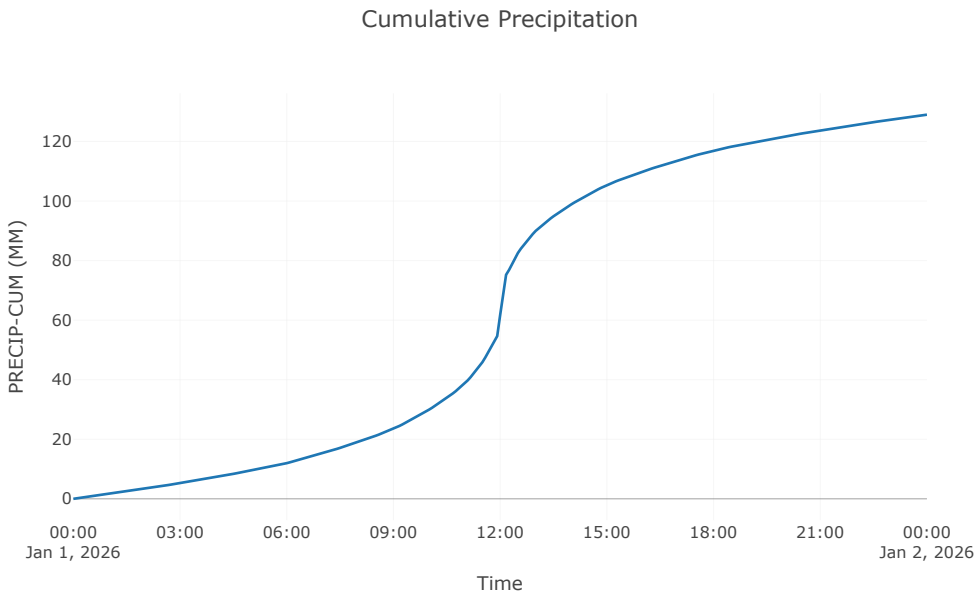
Transform: Scs	
Lag	3.16
Unitgraph Type	Standard

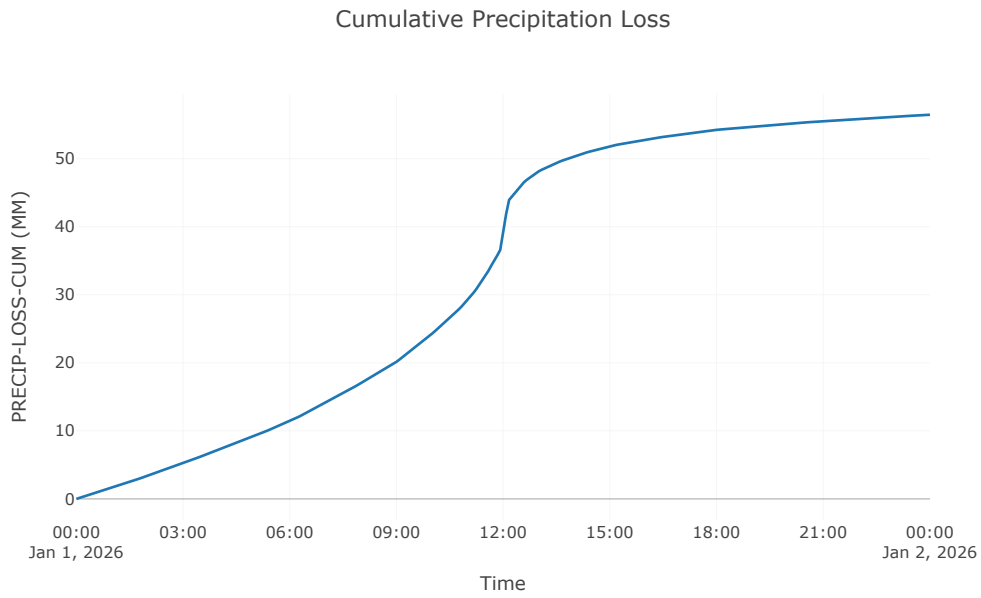
Results: DIFFERENCE POND 7 UPSTREAM	
Peak Discharge (M3/S)	2.32
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	72.44
Precipitation Volume (M3)	20756.1
Loss Volume (M3)	9082.63
Excess Volume (M3)	11673.47
Direct Runoff Volume (M3)	11656.4
Baseflow Volume (M3)	0

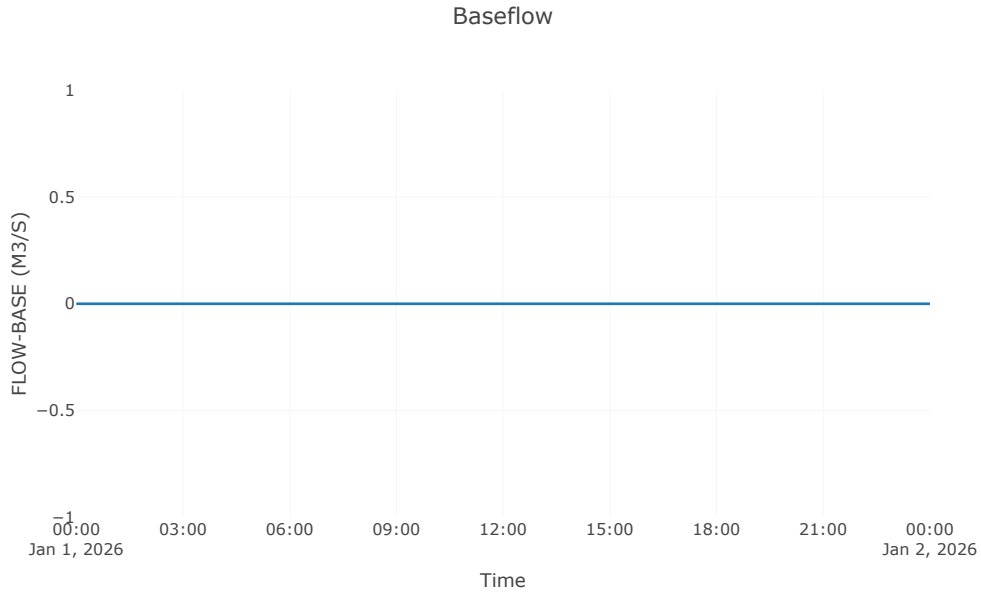

Precipitation and Outflow
PRECIP-INC (MM)
0
2
4
6
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
2
1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

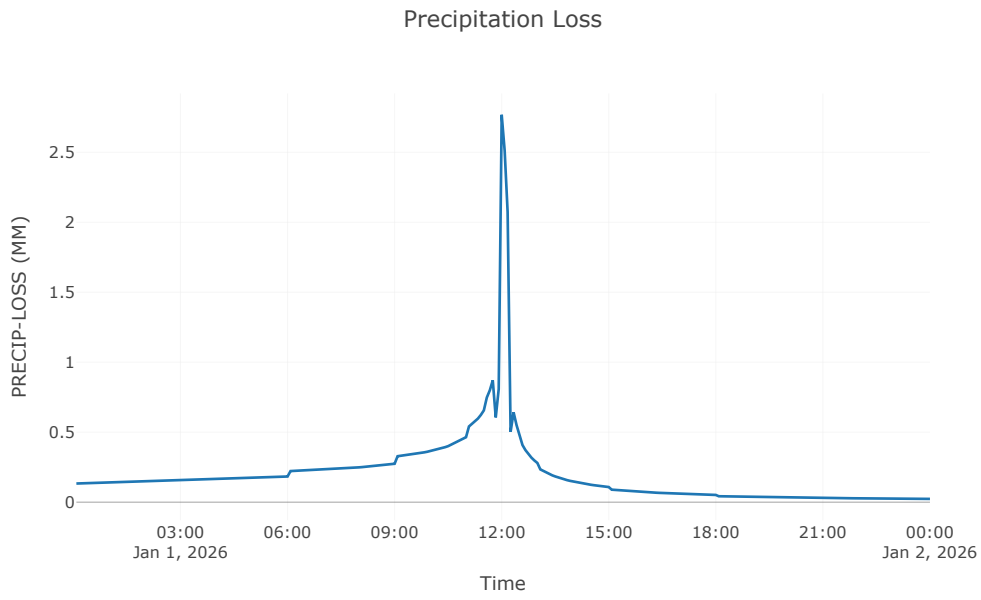

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

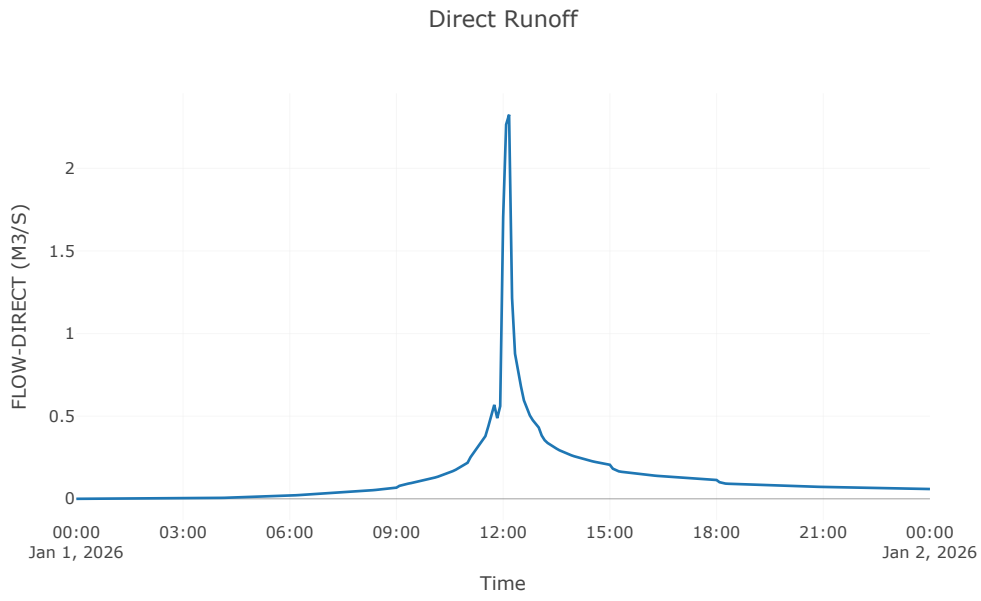

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
12
10
8
6
4
2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

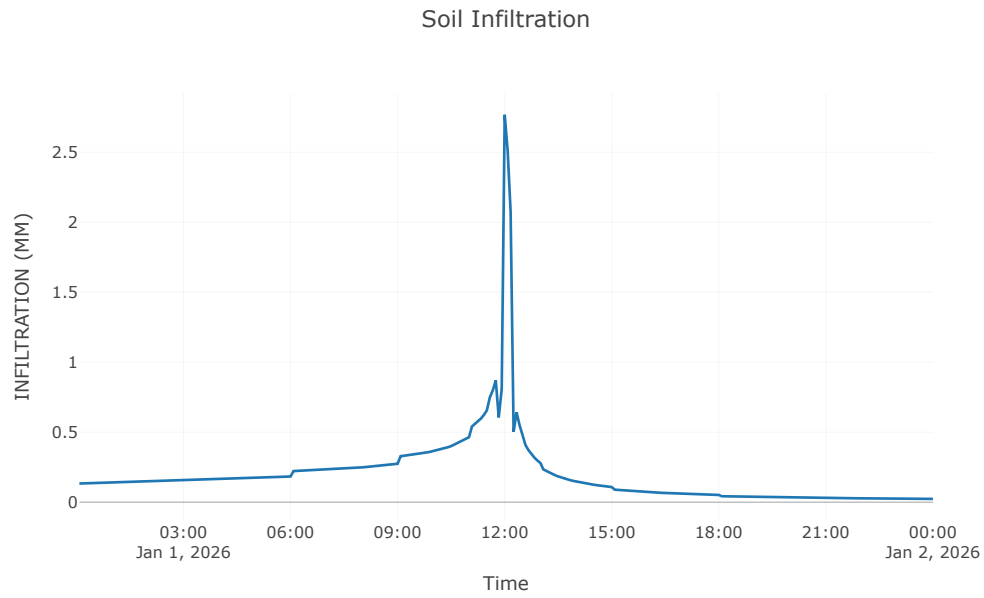

Cumulative Precipitation
PRECIP-CUM (MM)
120
100
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

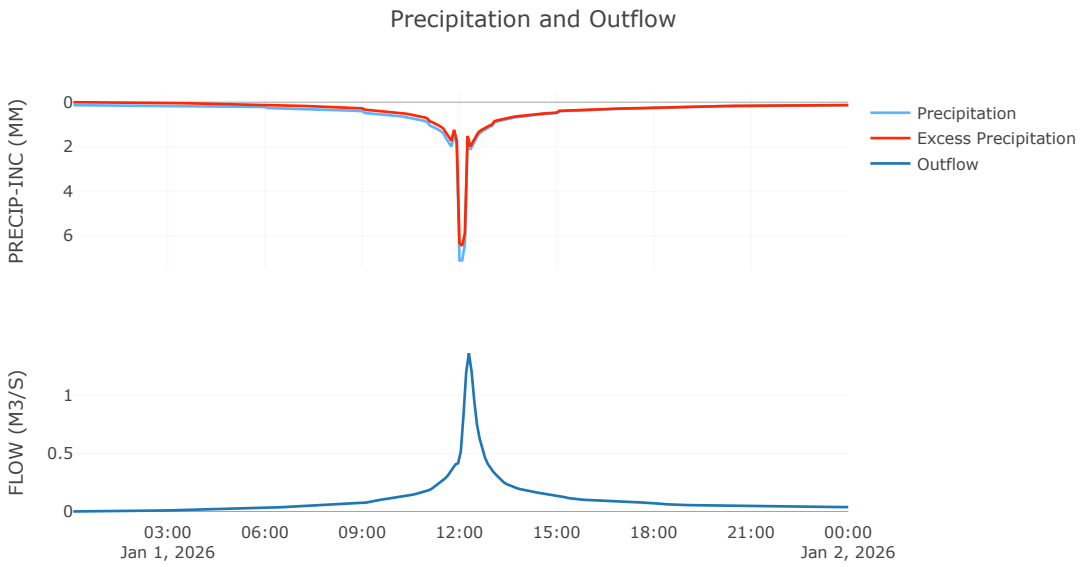
Subbasin: DIFFERENCE POND 7 INTERNAL

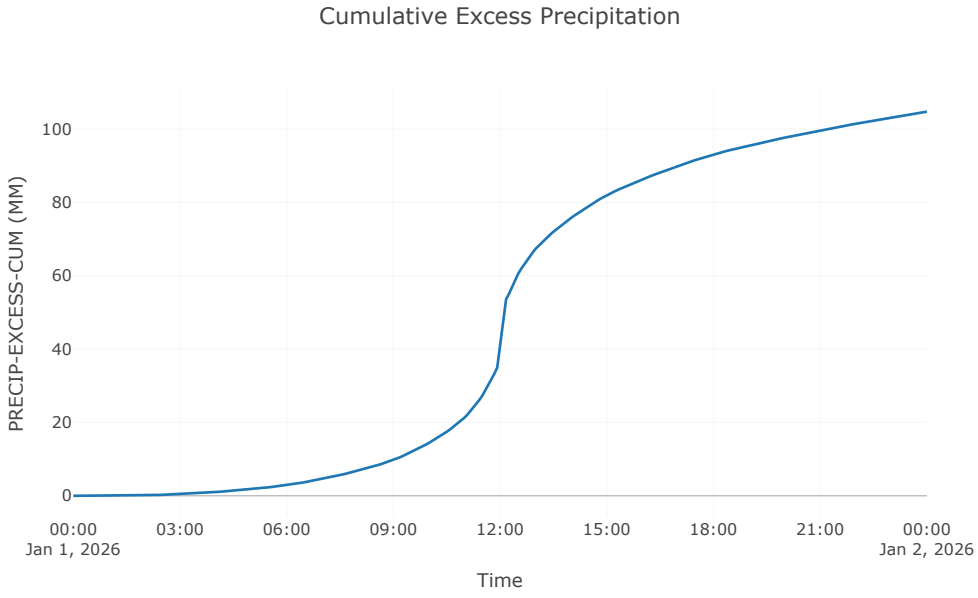
Area (KM2) : 0.09
Latitude Degrees : -44.99
Longitude Degrees : 168.84
Downstream : Junction - POND 7

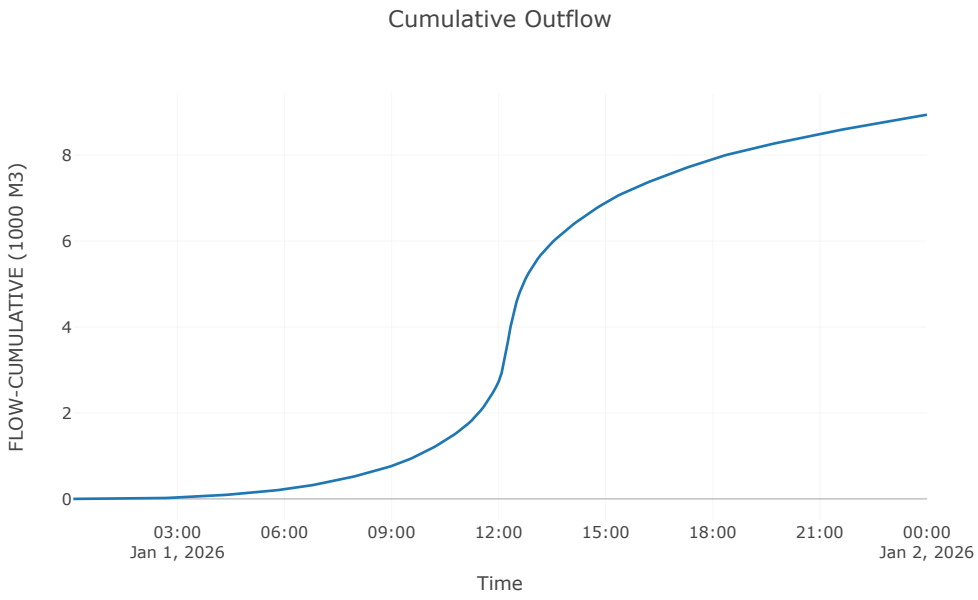
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	90.1
Initial Abstraction	1.4

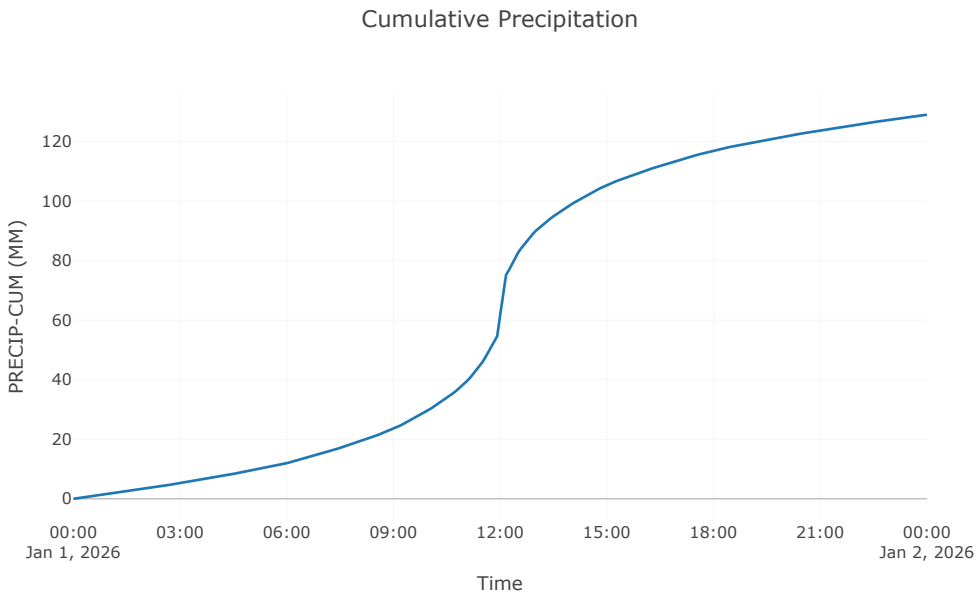
Transform: Scs	
Lag	11.53
Unitgraph Type	Standard

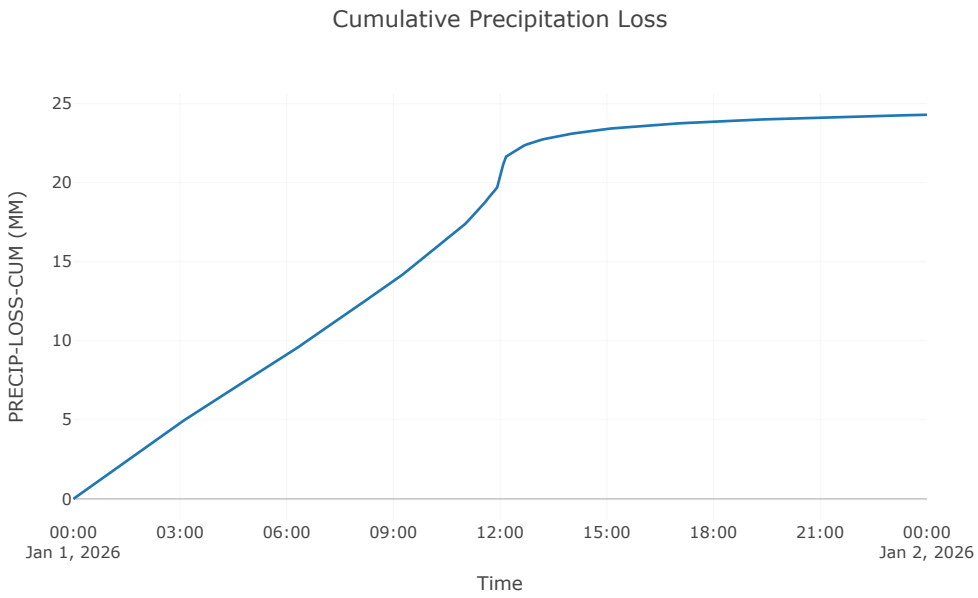
Results: DIFFERENCE POND 7 INTERNAL	
Peak Discharge (M3/S)	1.36
Time of Peak Discharge	01Jan2026, 12:15
Volume (MM)	104.29
Precipitation Volume (M3)	11055.3
Loss Volume (M3)	2082.53
Excess Volume (M3)	8972.77
Direct Runoff Volume (M3)	8937.87
Baseflow Volume (M3)	0

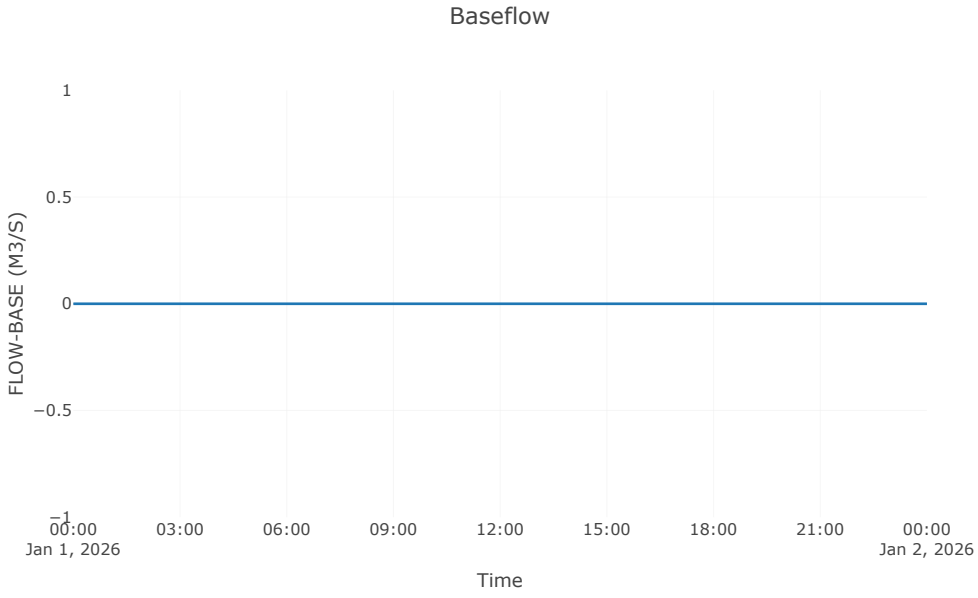

Precipitation and Outflow
PRECIP-INC (MM)
0
2
4
6
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

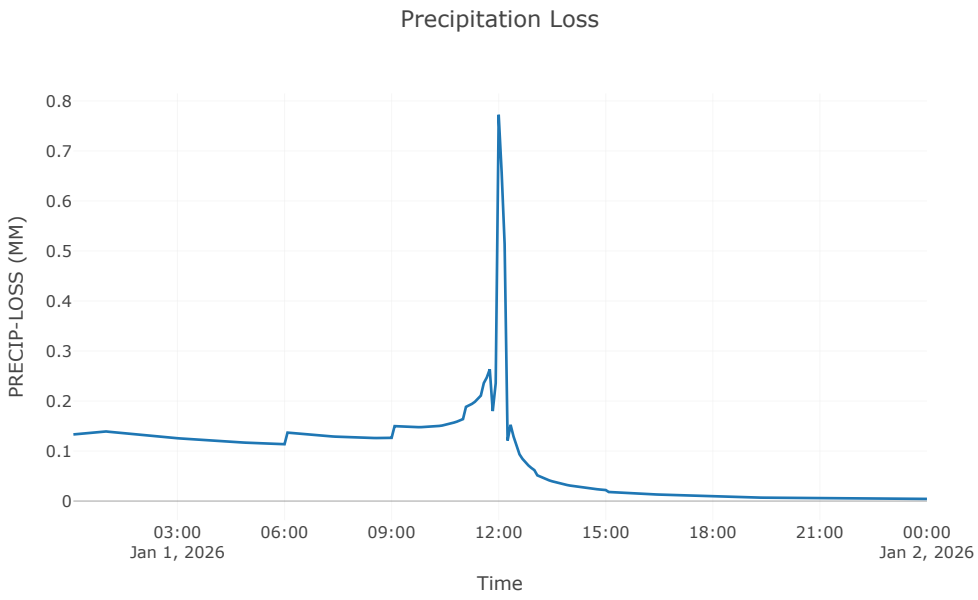

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
100
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

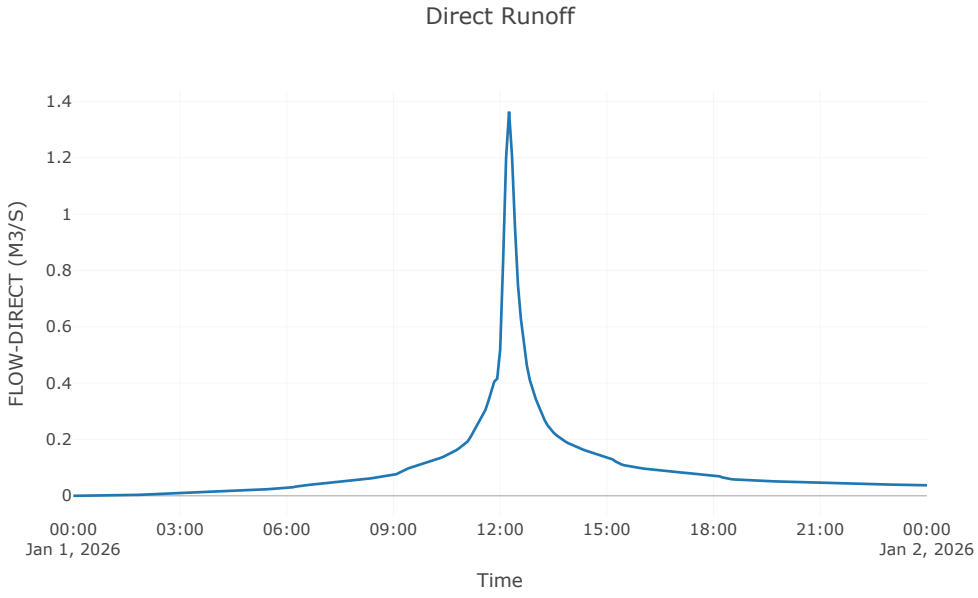

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
0
2
4
6
8
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

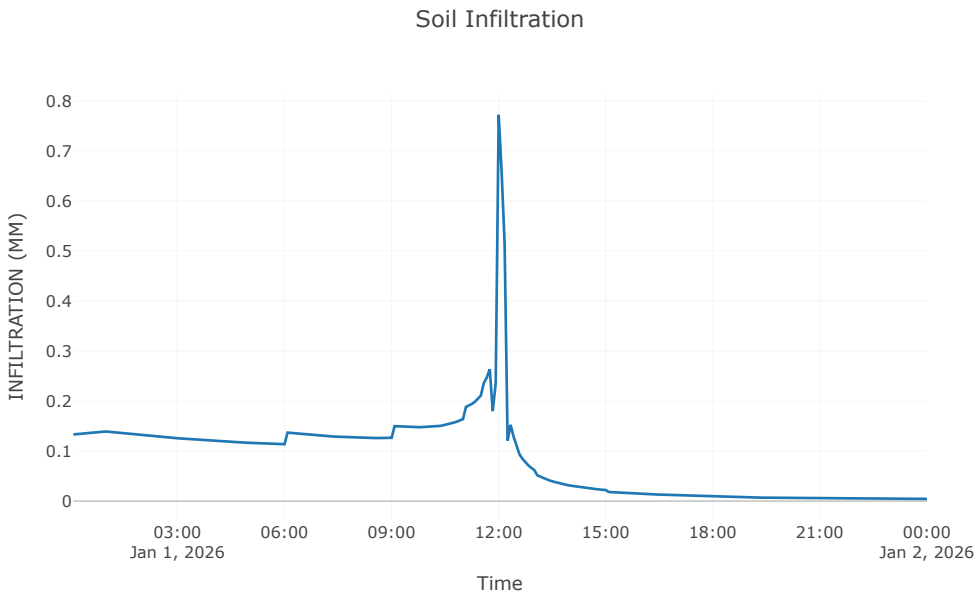

Cumulative Precipitation
PRECIP-CUM (MM)
0
20
40
60
80
100
120
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
25
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

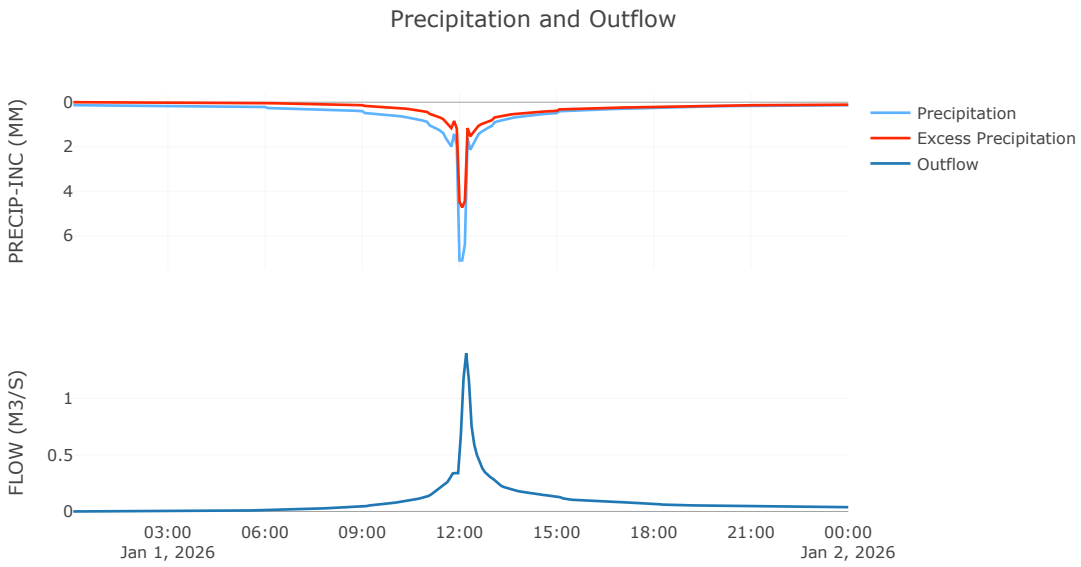
Subbasin: DIFFERENCE WETLAND B UPSTRE

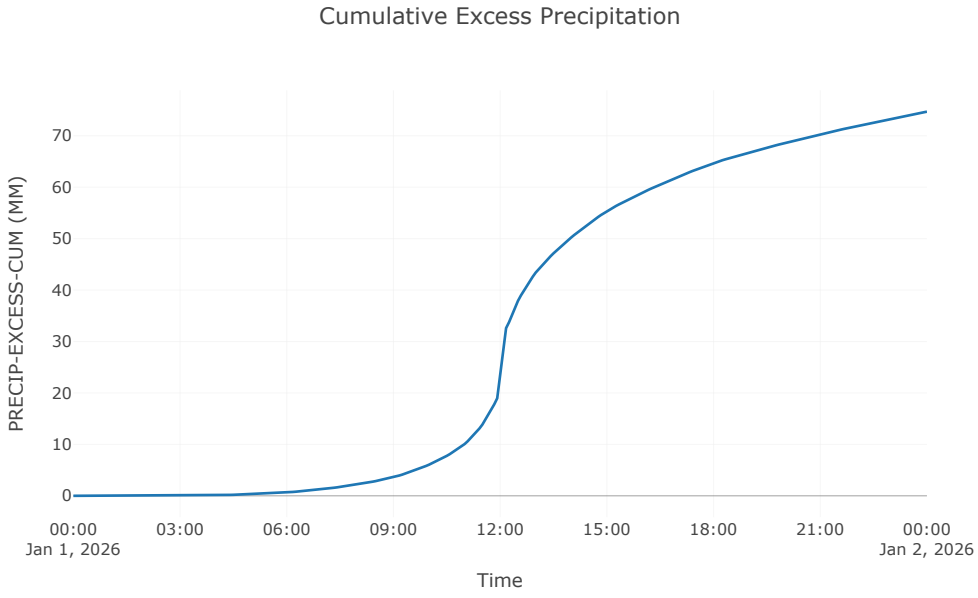
Area (KM2) : 0.1
Latitude Degrees : -44.99
Longitude Degrees : 168.84
Downstream : Junction - CHANNEL 4

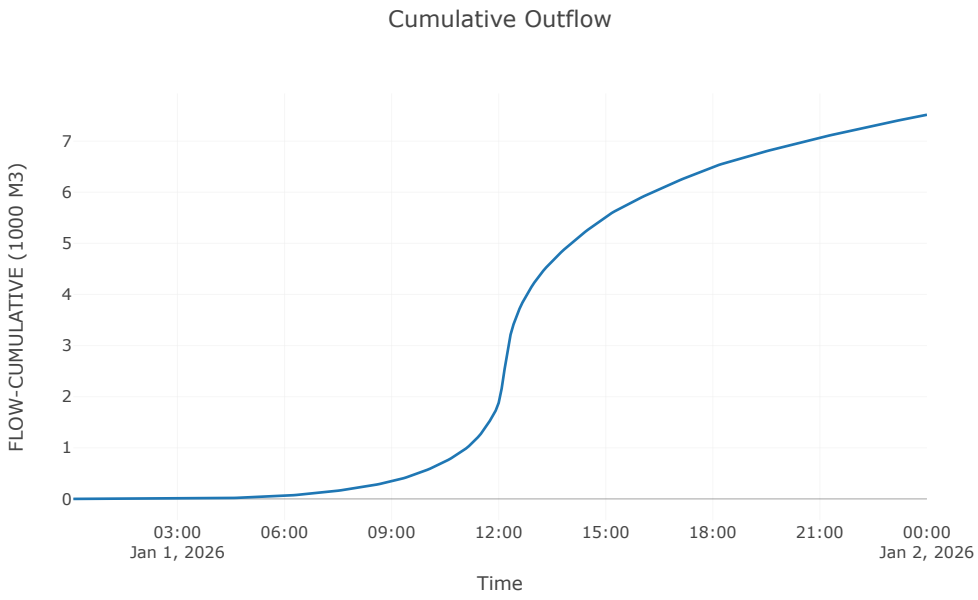
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	75.2
Initial Abstraction	4.19

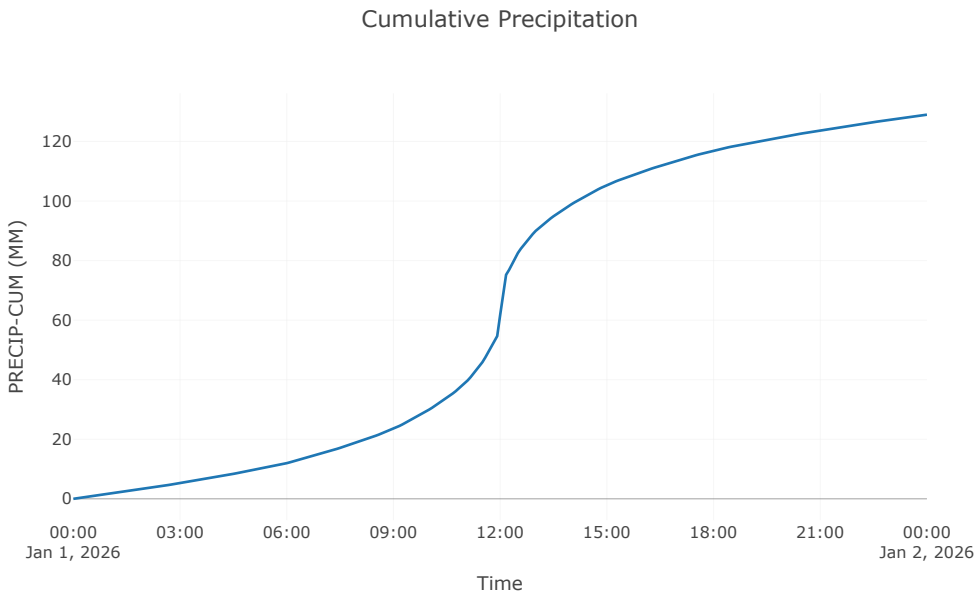
Transform: Scs	
Lag	6.14
Unitgraph Type	Standard

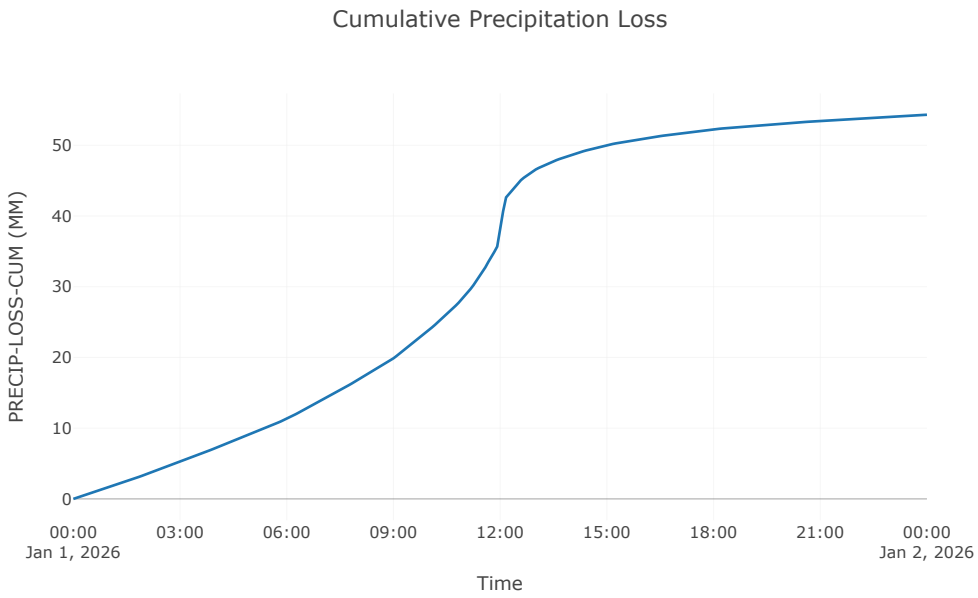
Results: DIFFERENCE WETLAND B UPSTRE	
Peak Discharge (M3/S)	1.4
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	74.49
Precipitation Volume (M3)	13016.1
Loss Volume (M3)	5480.36
Excess Volume (M3)	7535.74
Direct Runoff Volume (M3)	7516.11
Baseflow Volume (M3)	0

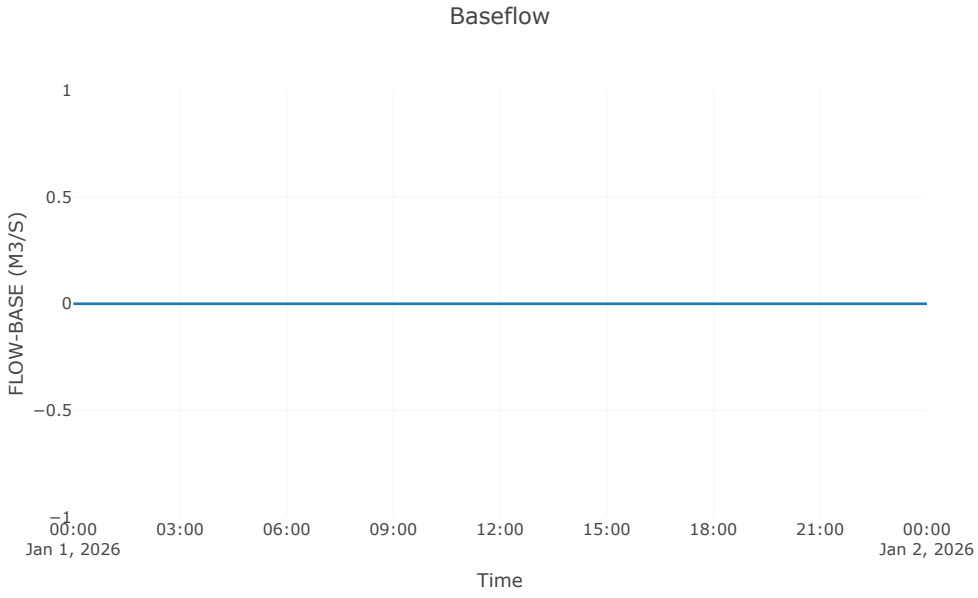

Precipitation and Outflow
PRECIP-INC (MM)
0
2
4
6
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

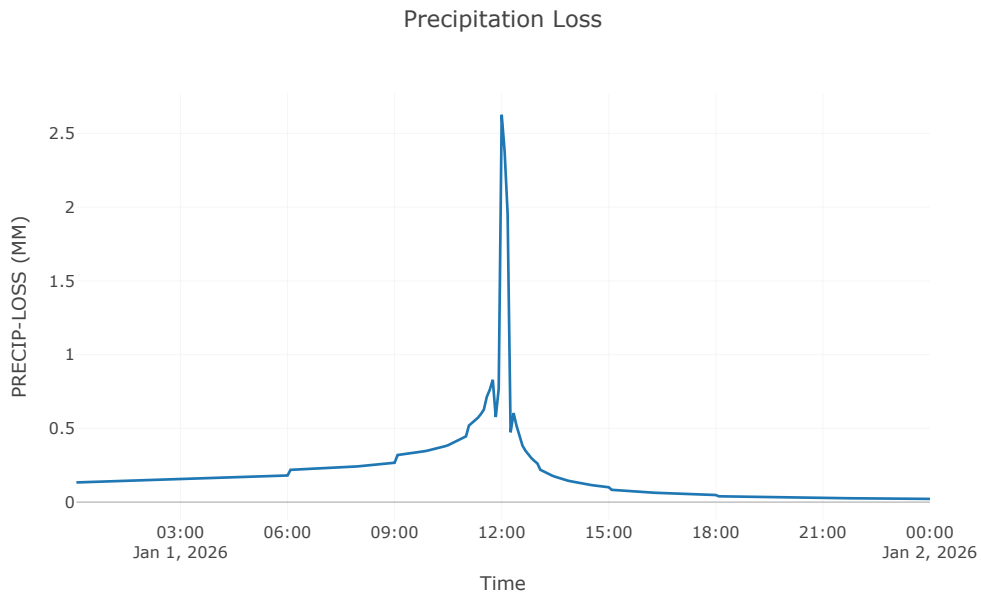

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

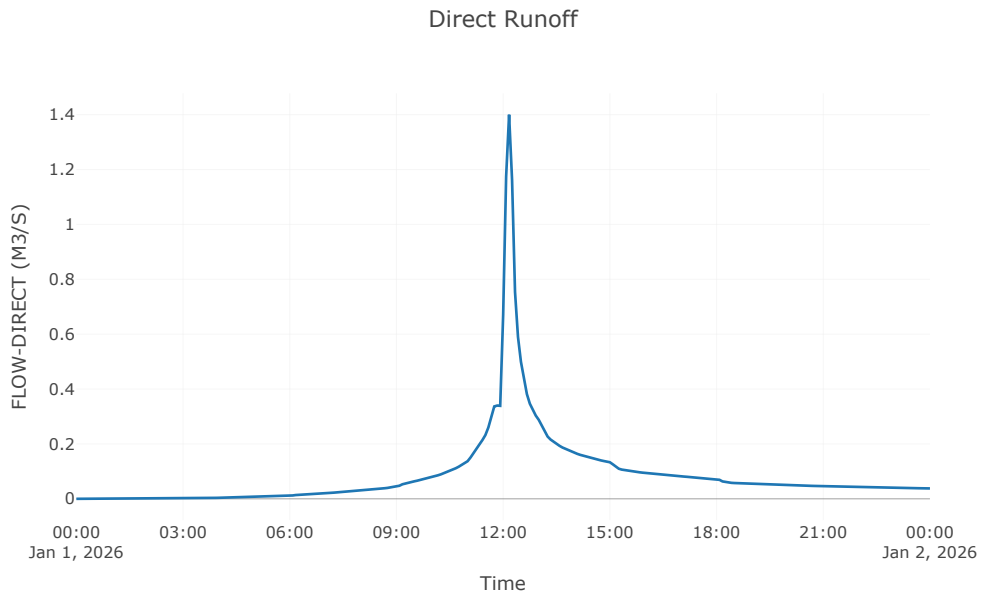

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
0
1
2
3
4
5
6
7
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

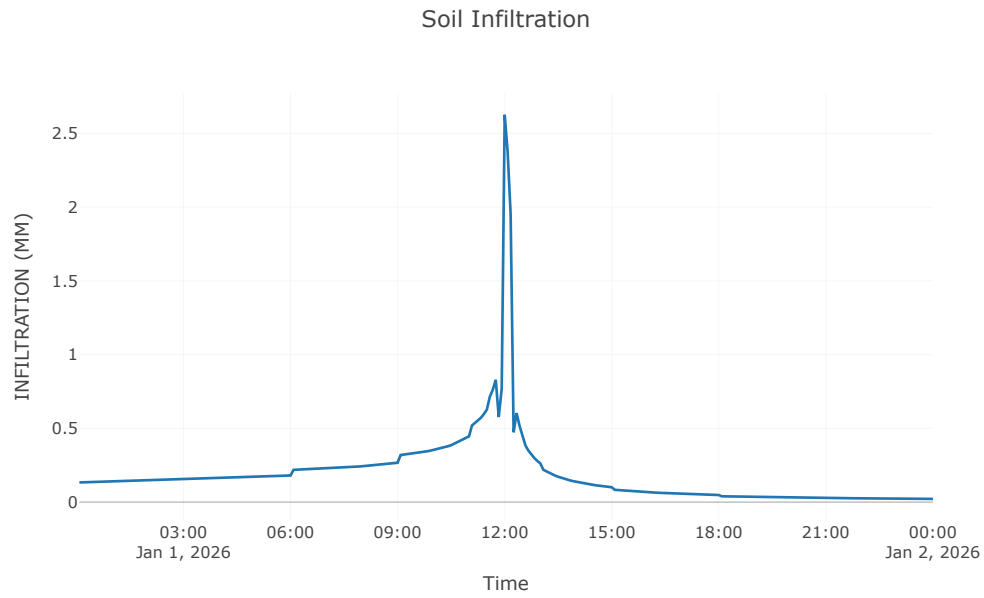

Cumulative Precipitation
PRECIP-CUM (MM)
0
20
40
60
80
100
120
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

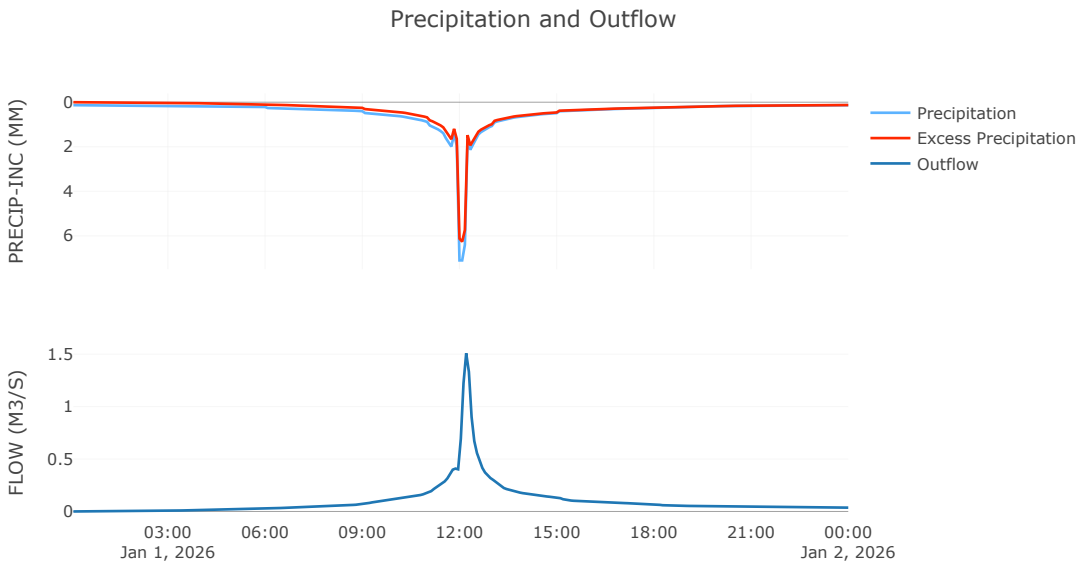
Subbasin: DIFFERENCE WETLAND B INTERN

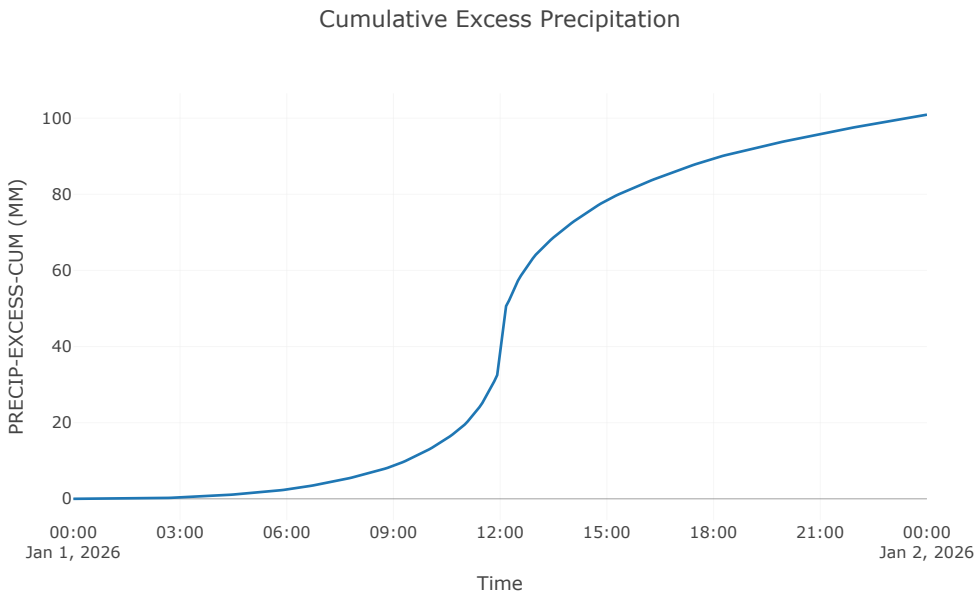
Area (KM2) : 0.08
Latitude Degrees : -44.99
Longitude Degrees : 168.84
Downstream : Junction - CHANNEL 4

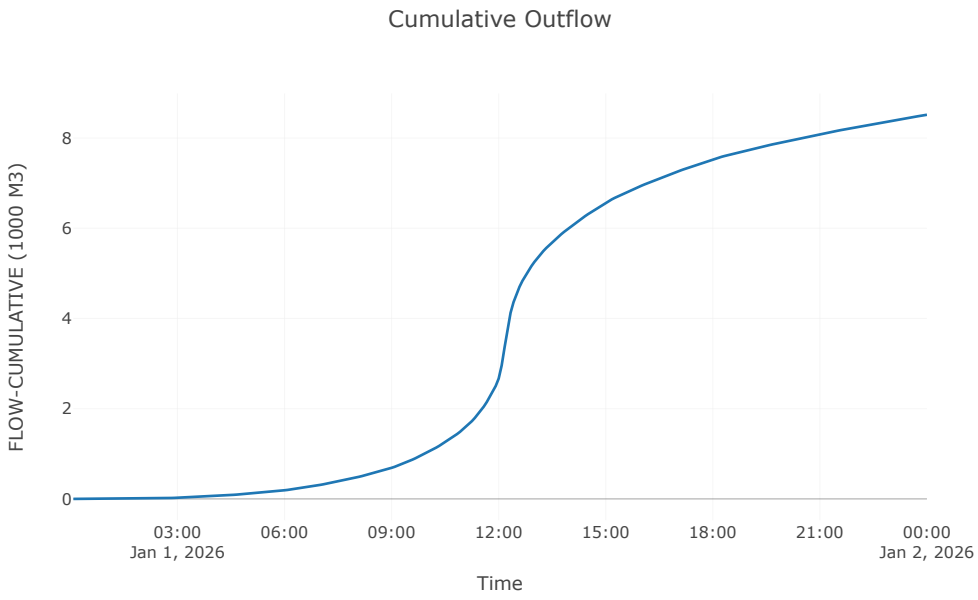
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	88.4
Initial Abstraction	1.67

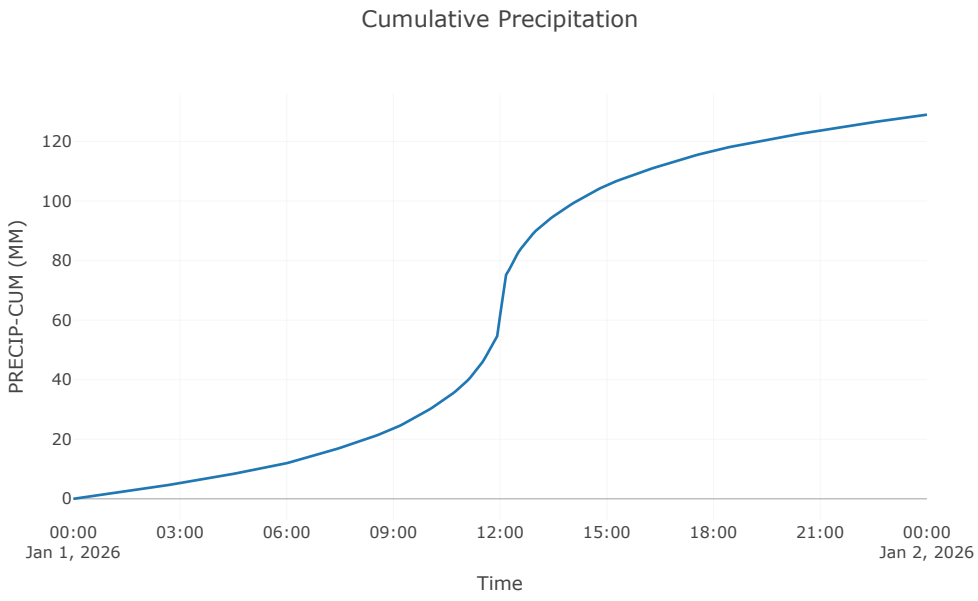
Transform: Scs	
Lag	6.97
Unitgraph Type	Standard

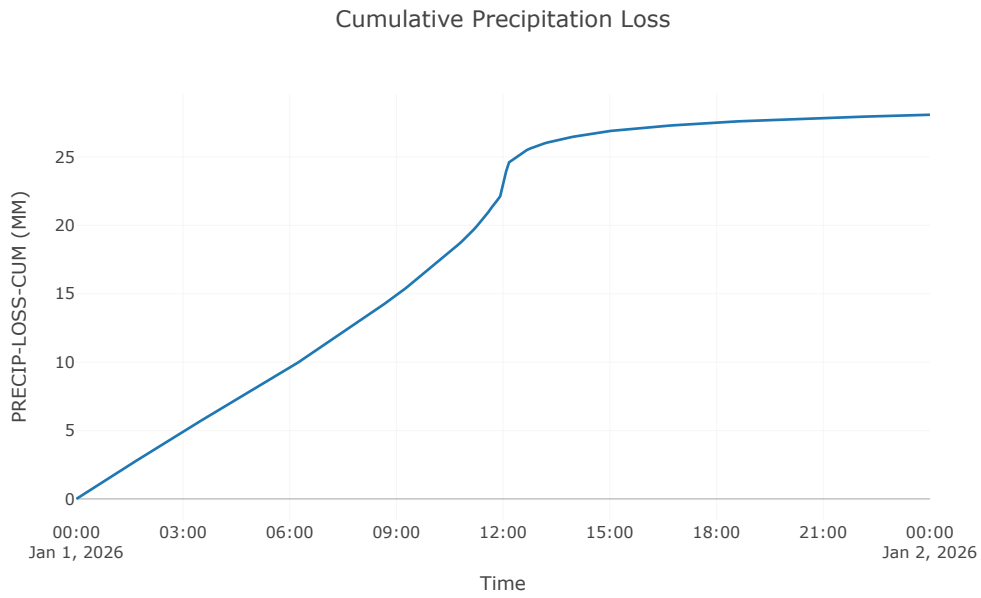
Results: DIFFERENCE WETLAND B INTERN	
Peak Discharge (M3/S)	1.51
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	100.66
Precipitation Volume (M3)	10913.4
Loss Volume (M3)	2376.05
Excess Volume (M3)	8537.35
Direct Runoff Volume (M3)	8516.07
Baseflow Volume (M3)	0

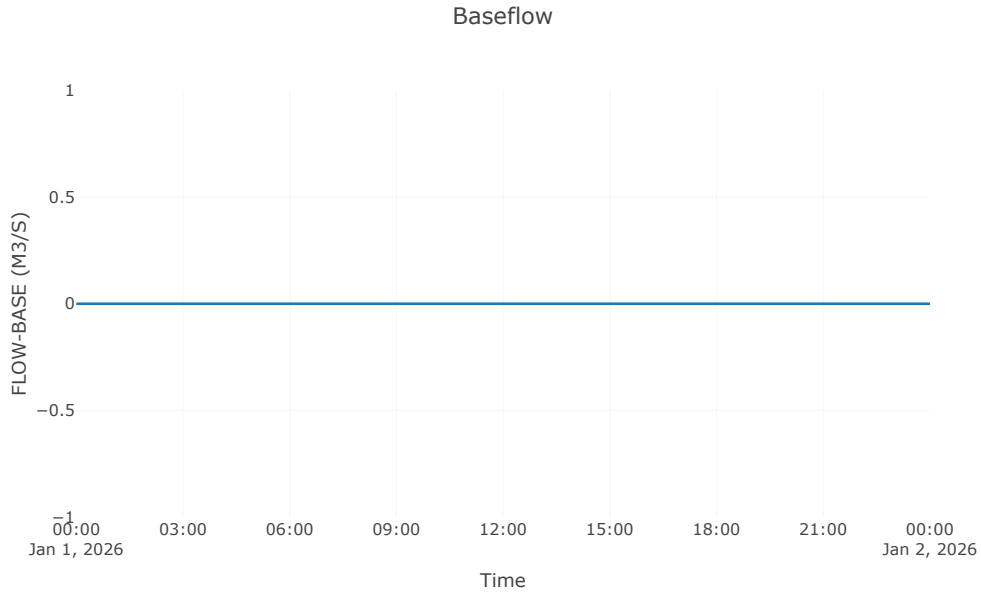

Precipitation and Outflow
PRECIP-INC (MM)
0
2
4
6
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

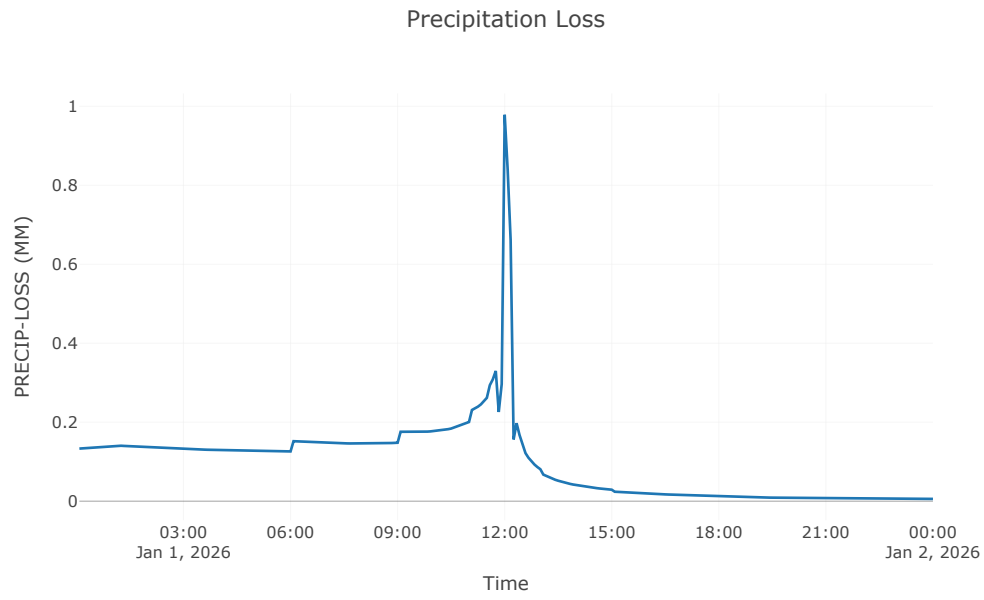

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
100
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

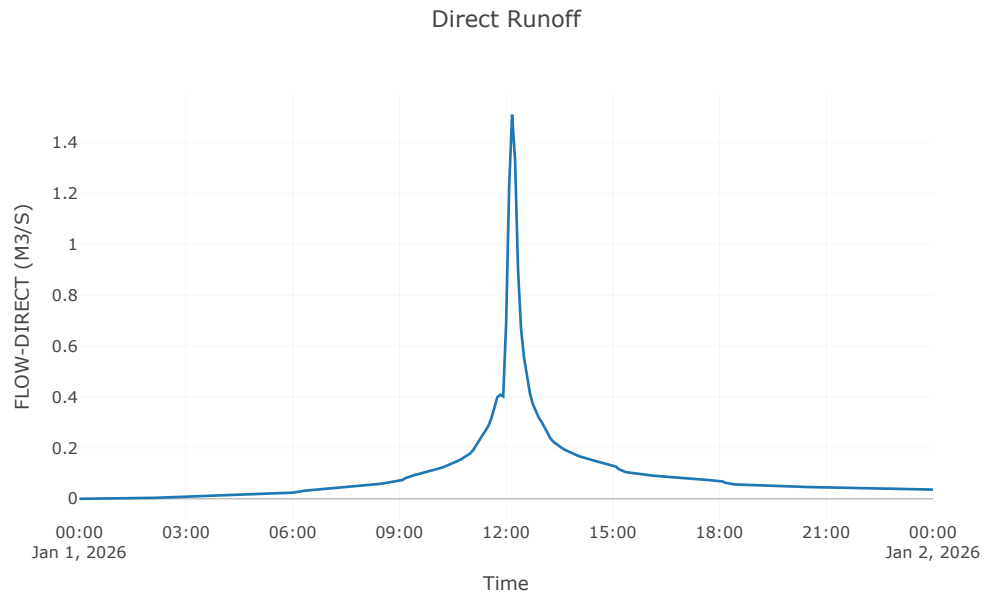

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
8
6
4
2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

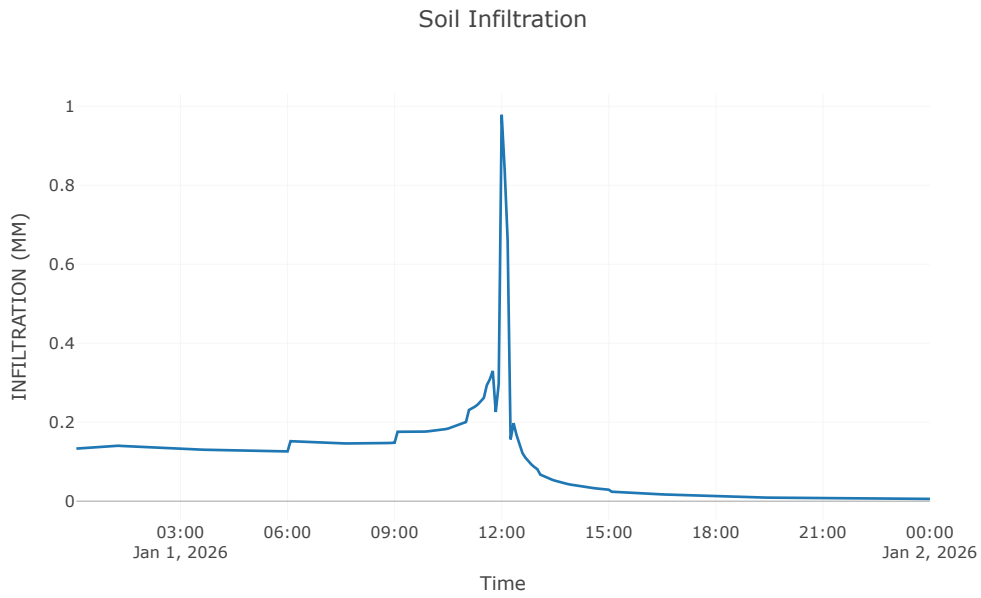

Cumulative Precipitation
PRECIP-CUM (MM)
120
100
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
25
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
1
0.8
0.6
0.4
0.2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

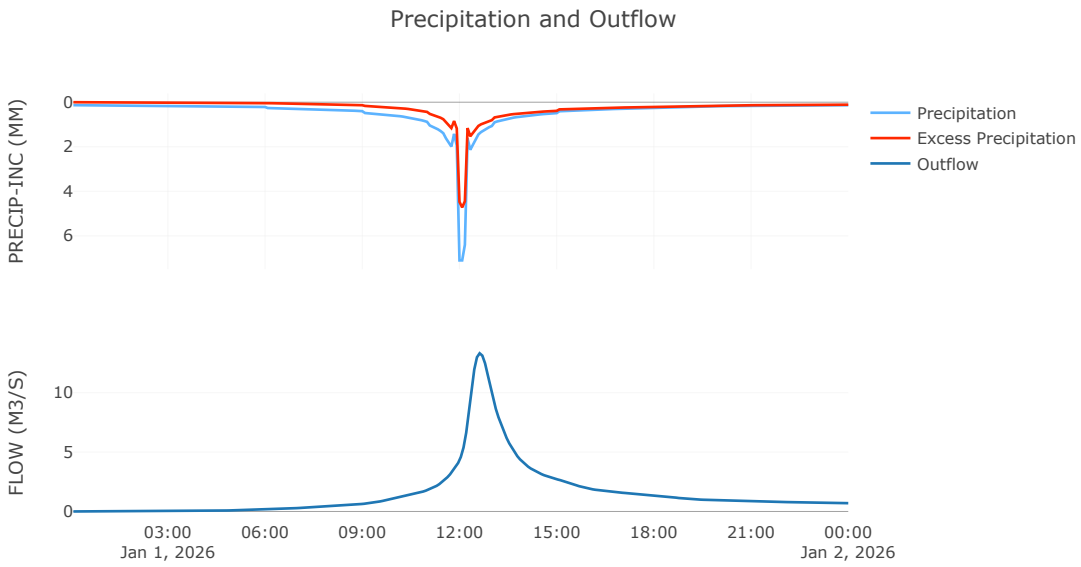
Subbasin: MORVEN FERRY VECTORISED

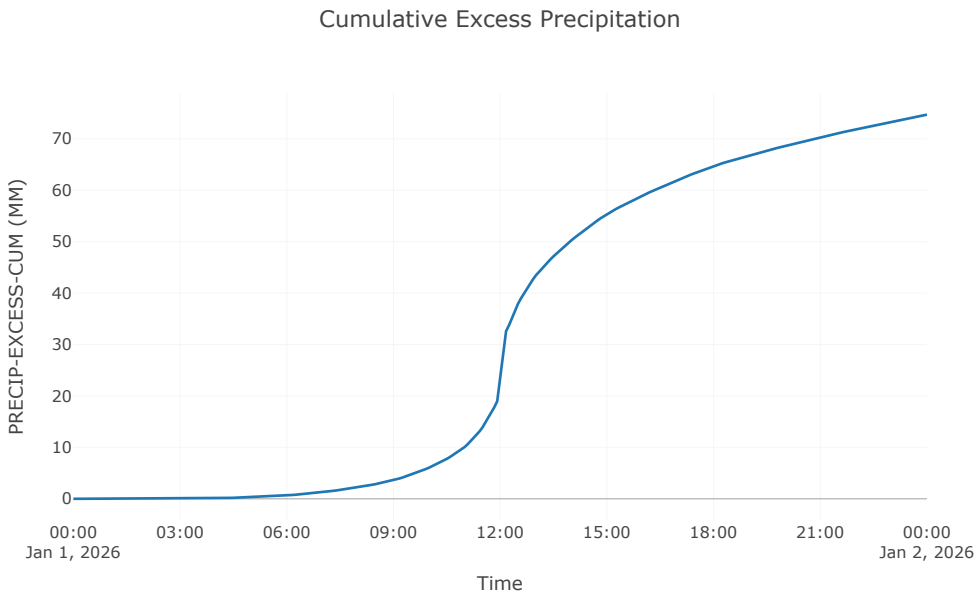
Area (KM2) : 1.8
Latitude Degrees : -44.98
Longitude Degrees : 168.84
Downstream : Swale morven ferry l

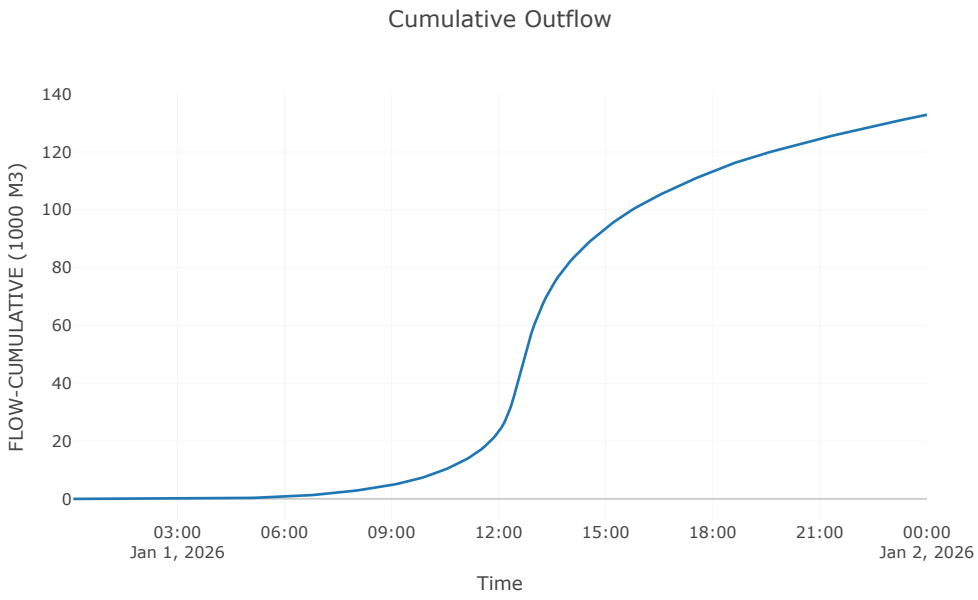
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	75.2
Initial Abstraction	4.19

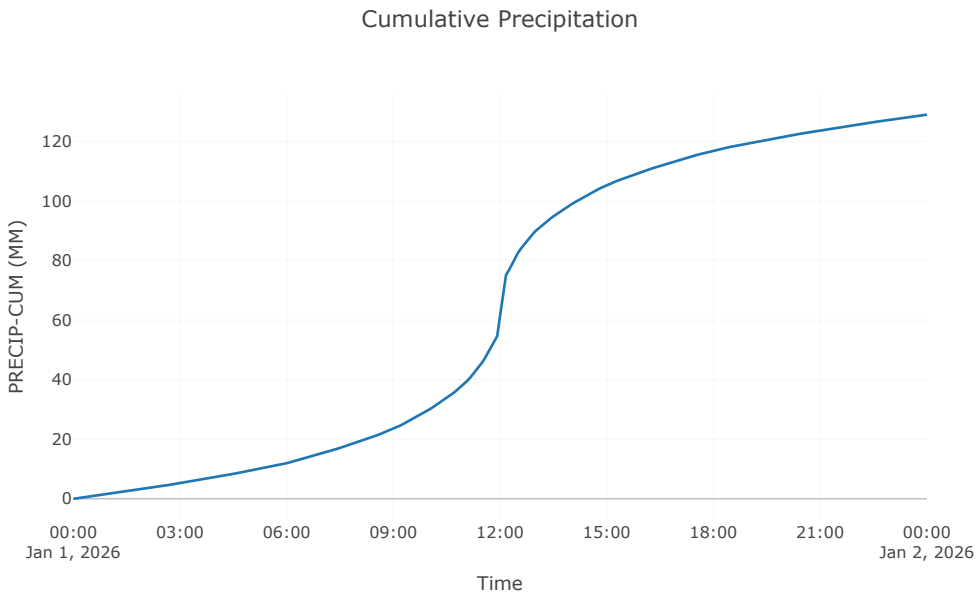
Transform: Scs	
Lag	30.44
Unitgraph Type	Standard

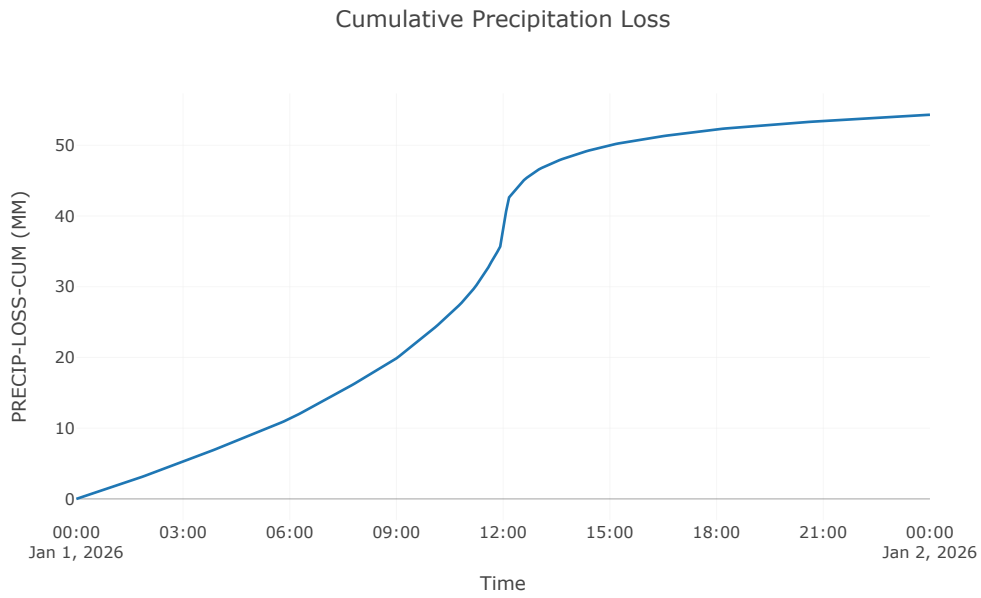
Results: MORVEN FERRY VECTORISED	
Peak Discharge (M3/S)	13.32
Time of Peak Discharge	01Jan2026, 12:35
Volume (MM)	73.77
Precipitation Volume (M3)	2.32E5
Loss Volume (M3)	97853.55
Excess Volume (M3)	1.35E5
Direct Runoff Volume (M3)	1.33E5
Baseflow Volume (M3)	0

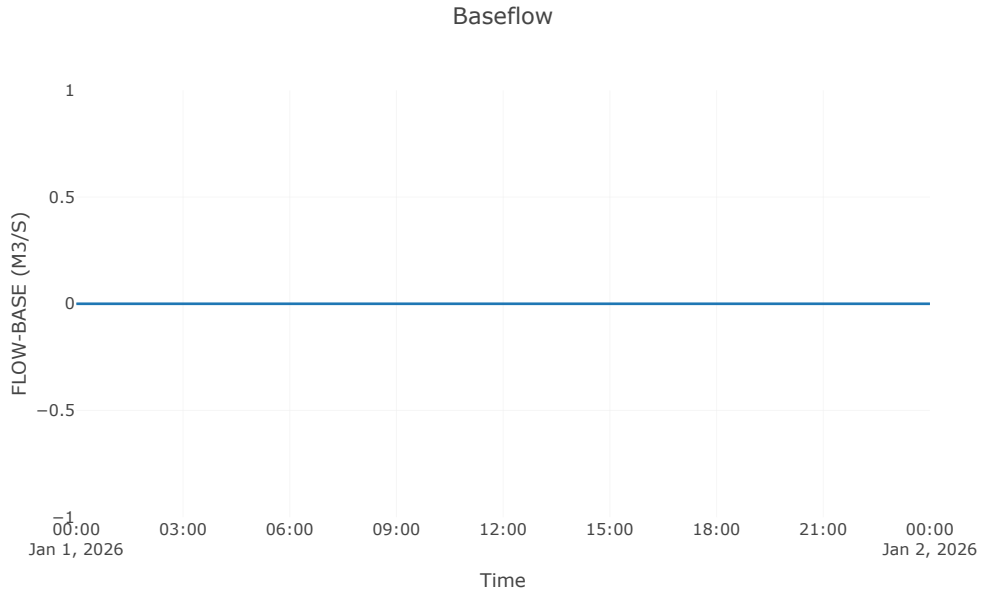

Precipitation and Outflow
PRECIP-INC (MM)
0
2
4
6
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
10
5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

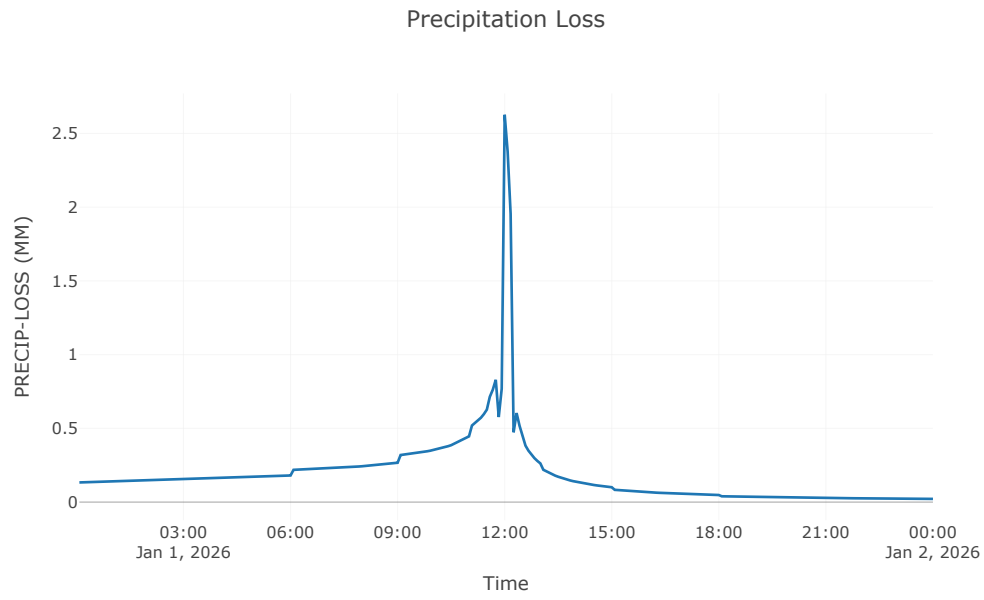

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

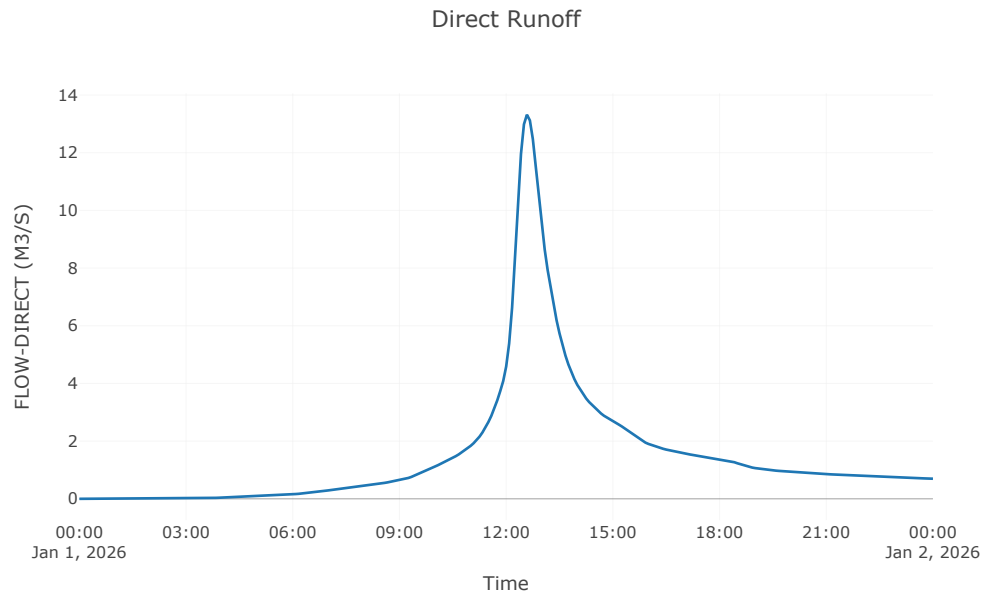

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
140
120
100
80
60
40
20
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

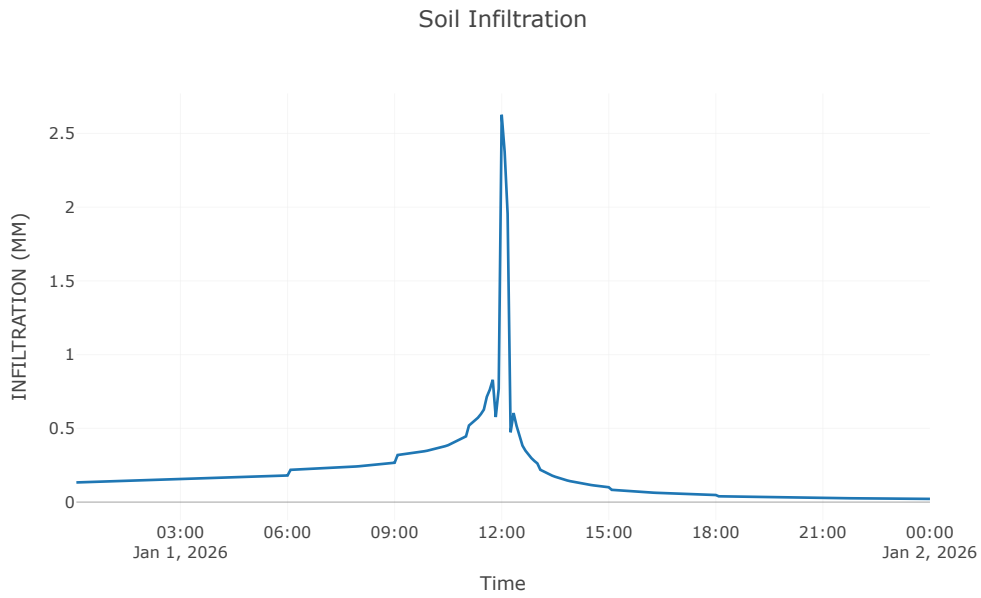

Cumulative Precipitation
PRECIP-CUM (MM)
120
100
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
14
12
10
8
6
4
2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Soil Infiltration
INFILTRATION (MM)
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

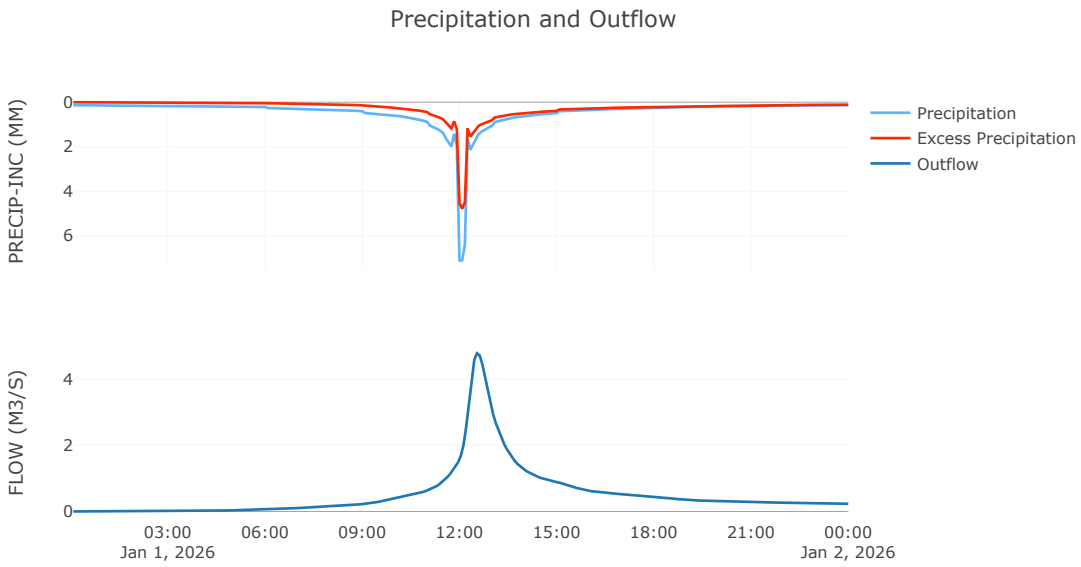
Subbasin: DIFFERENCE DOWNSTREAM EXIT

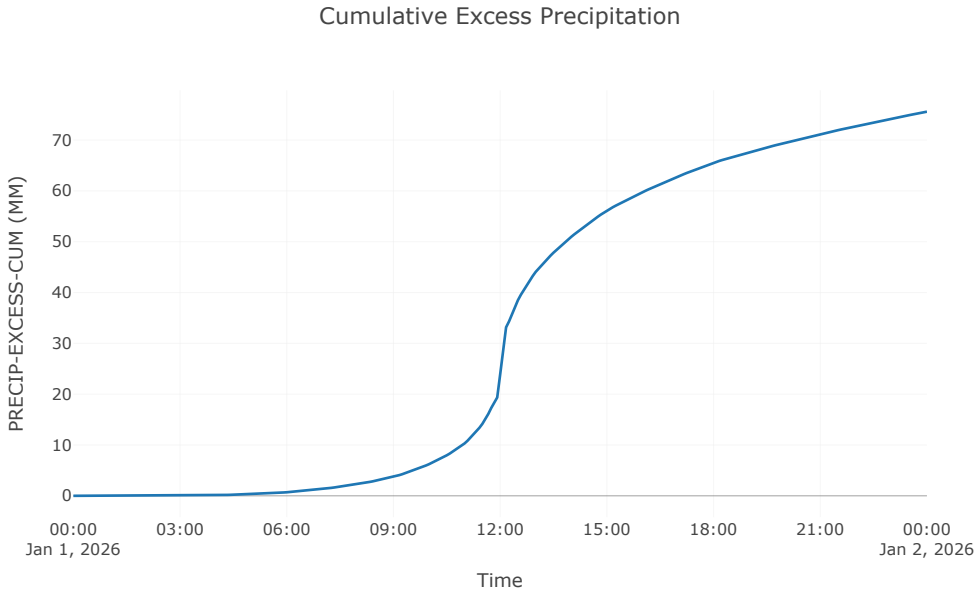
Area (KM2) : 0.6
Latitude Degrees : -45
Longitude Degrees : 168.85
Downstream : Junction - EXIT OLFP

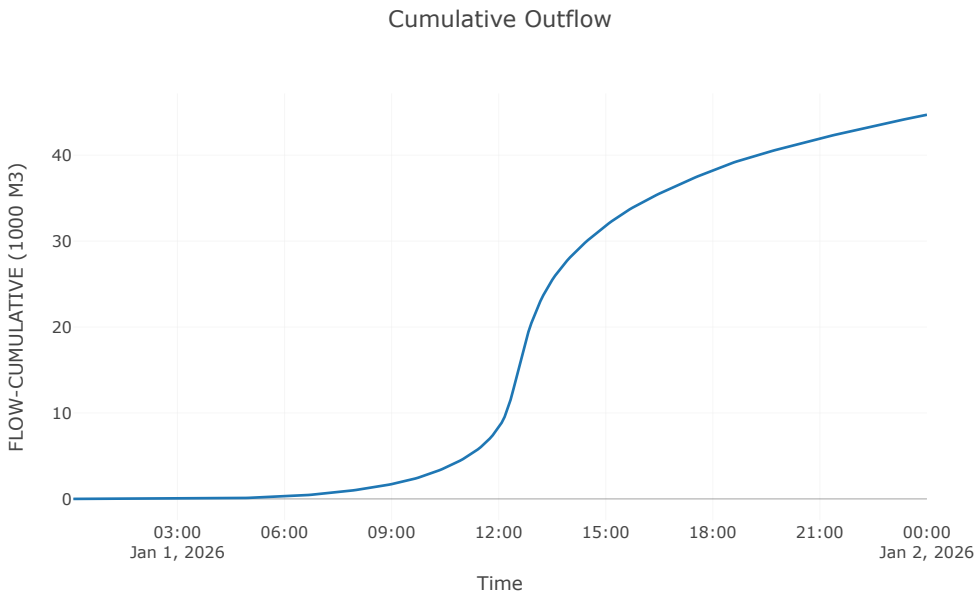
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	75.7
Initial Abstraction	4.08

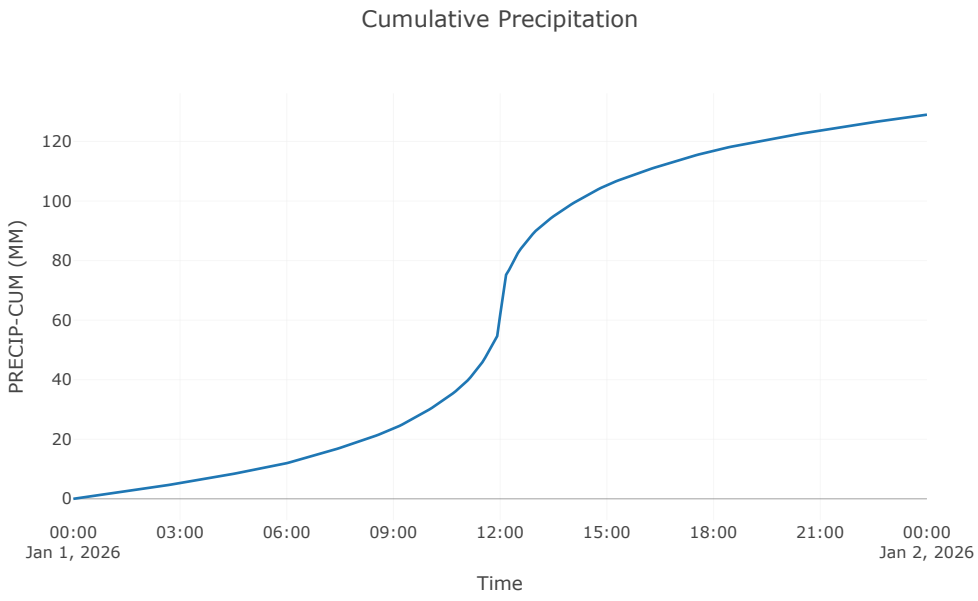
Transform: Scs	
Lag	26.55
Unitgraph Type	Standard

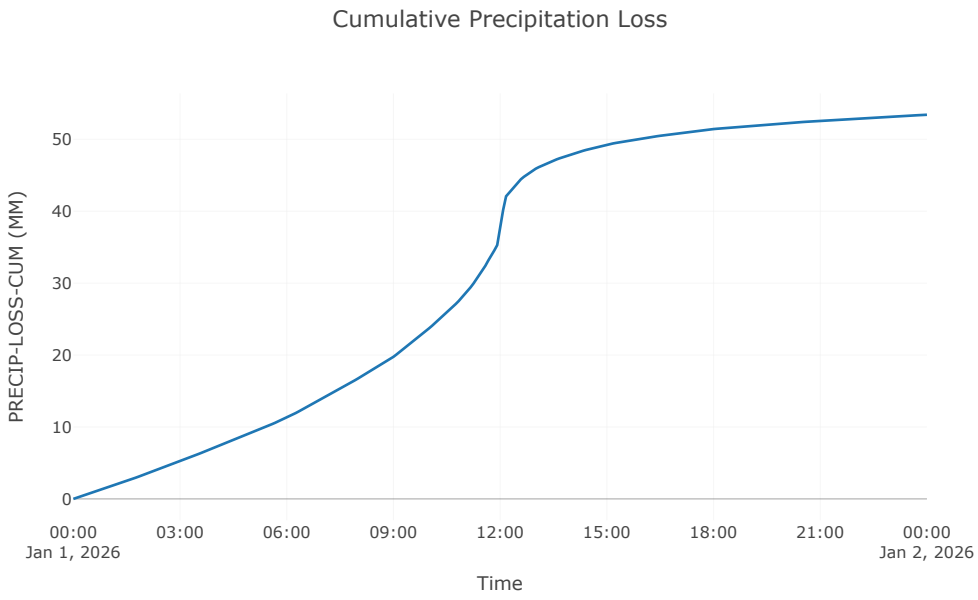
Results: DIFFERENCE DOWNSTREAM EXIT	
Peak Discharge (M3/S)	4.78
Time of Peak Discharge	01Jan2026, 12:30
Volume (MM)	74.78
Precipitation Volume (M3)	77116.2
Loss Volume (M3)	31931.18
Excess Volume (M3)	45185.02
Direct Runoff Volume (M3)	44704.07
Baseflow Volume (M3)	0

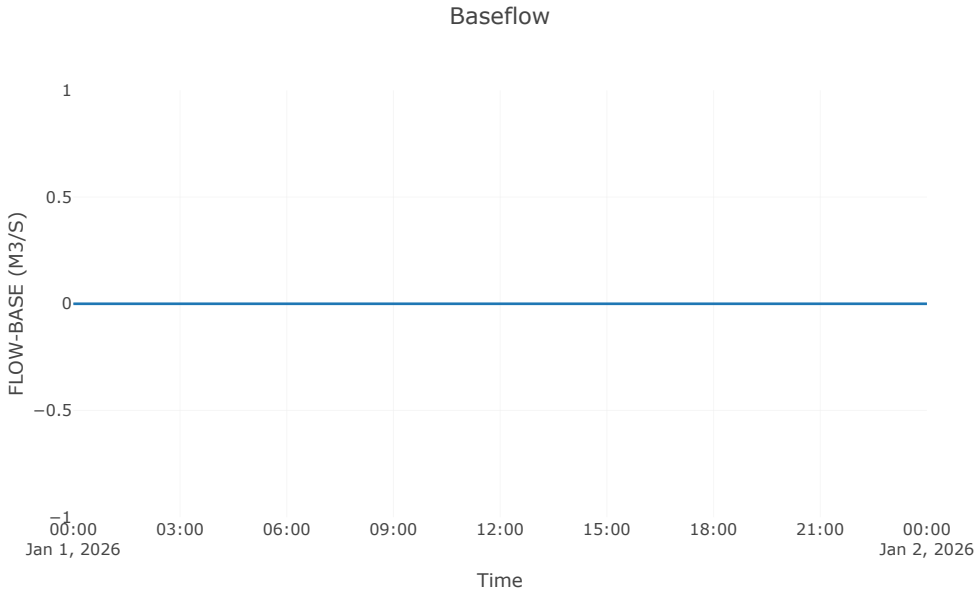

Precipitation and Outflow
PRECIP-INC (MM)
0
2
4
6
Precipitation
Excess Precipitation
Outflow
FLOW (M3/S)
4
2
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026

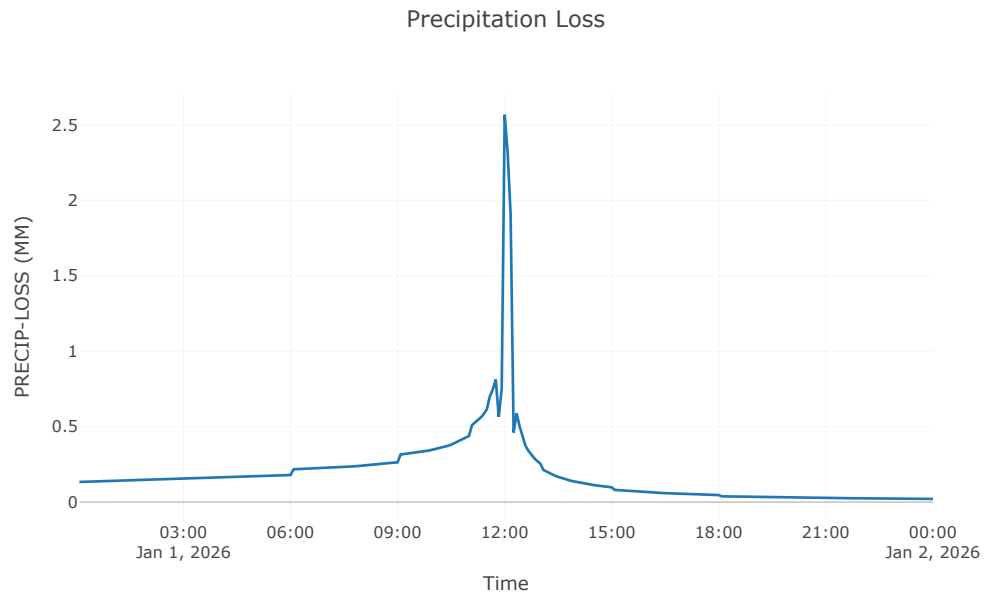

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (MM)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

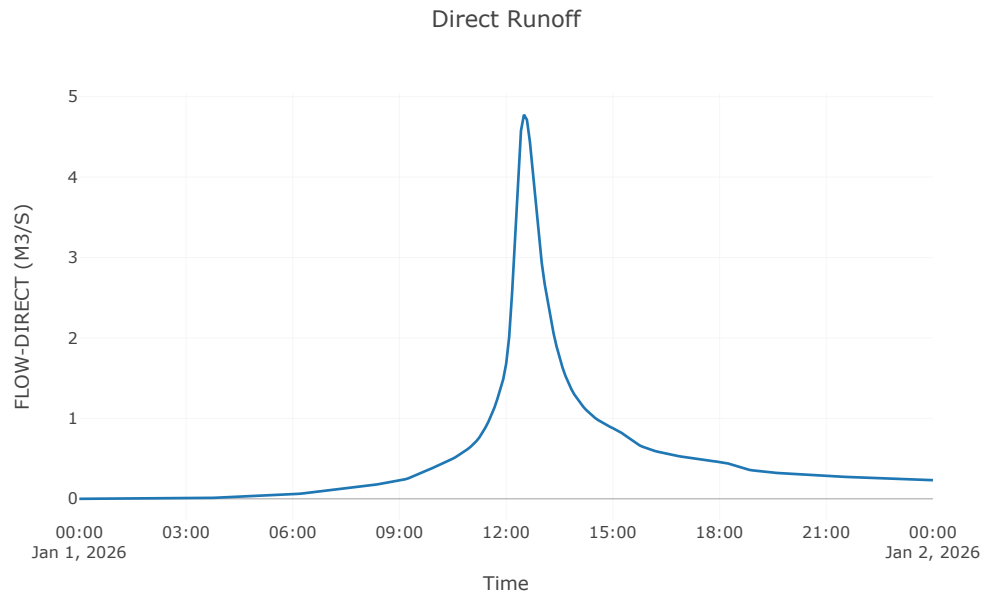

Cumulative Outflow
FLOW-CUMULATIVE (1000 M3)
40
30
20
10
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

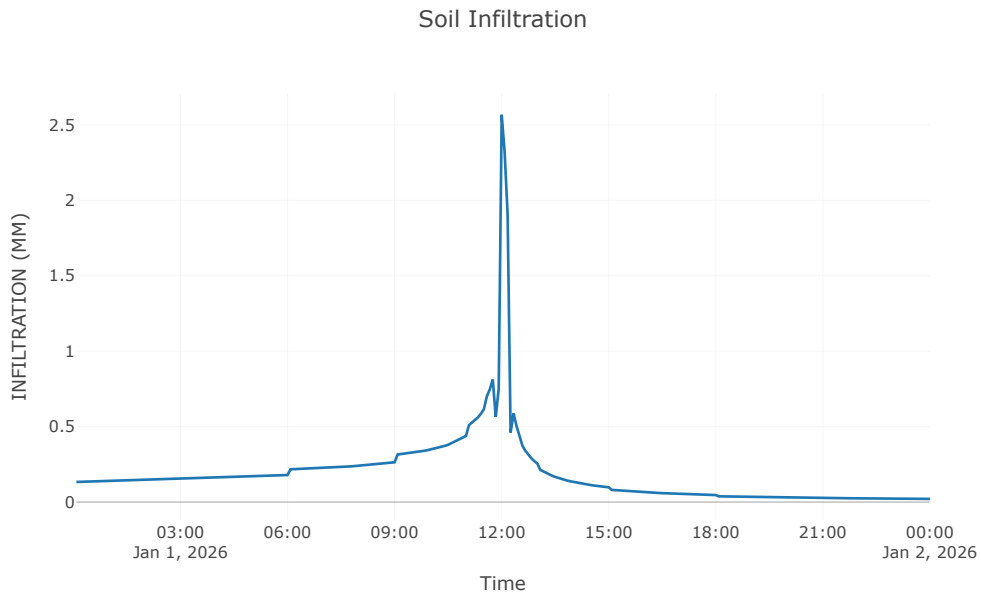

Cumulative Precipitation
PRECIP-CUM (MM)
120
100
80
60
40
20
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (MM)
50
40
30
20
10
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Baseflow
FLOW-BASE (M3/S)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Precipitation Loss
PRECIP-LOSS (MM)
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time


Direct Runoff
FLOW-DIRECT (M3/S)
5
4
3
2
1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

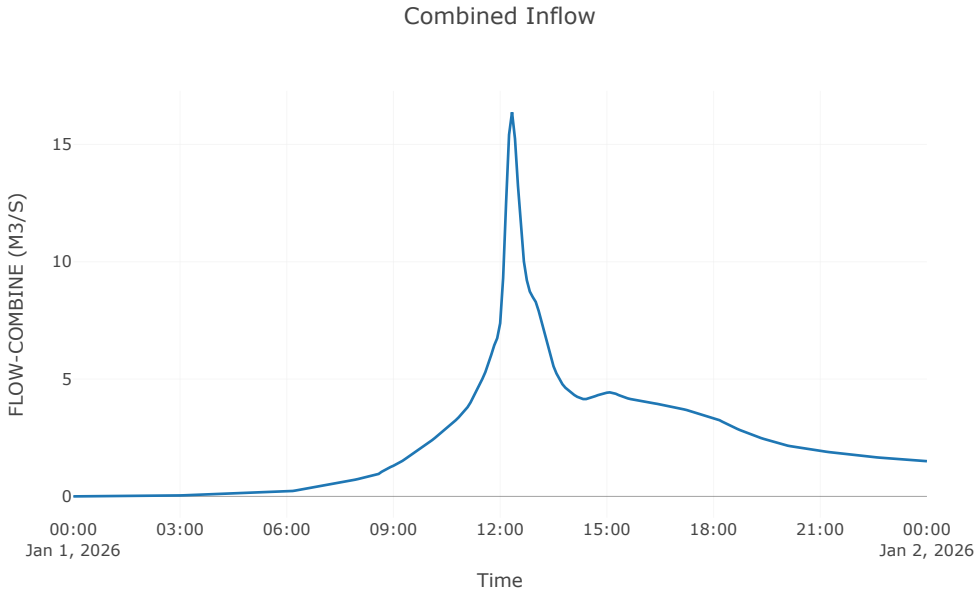

Soil Infiltration
INFILTRATION (MM)
2.5
2
1.5
1
0.5
0
03:00
Jan 1, 2026
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

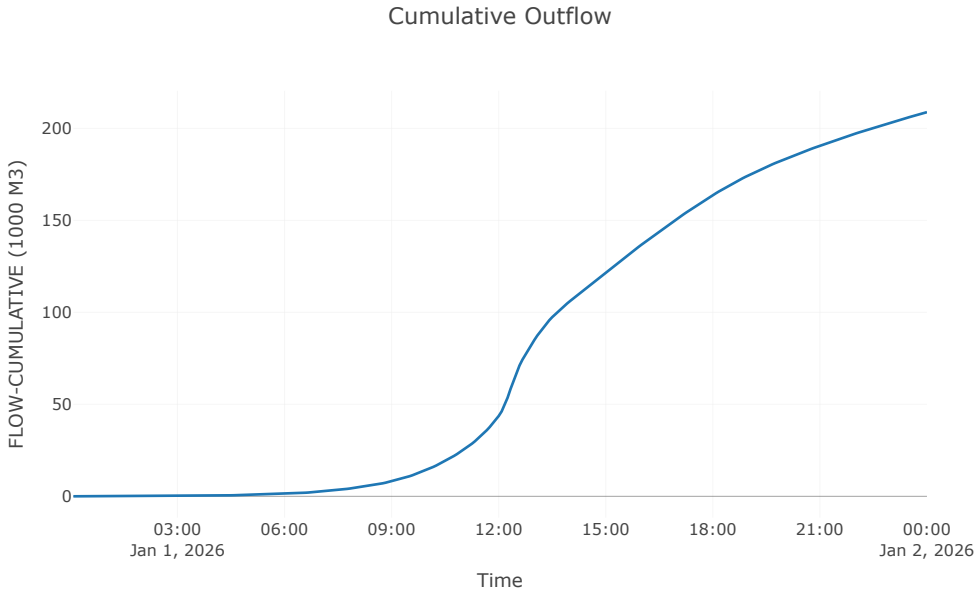
Junction: Junction-POND 1

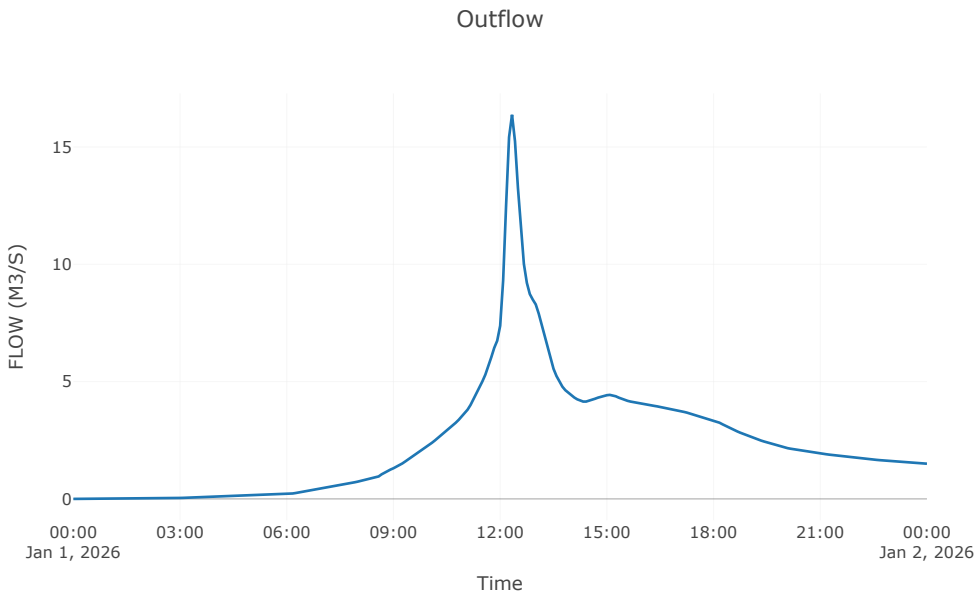
Downstream : Pond 1

Results: Junction-POND 1

Peak Discharge (M3/S)	16.37
Time of Peak Discharge	01Jan2026, 12:20
Volume (MM)	100.27





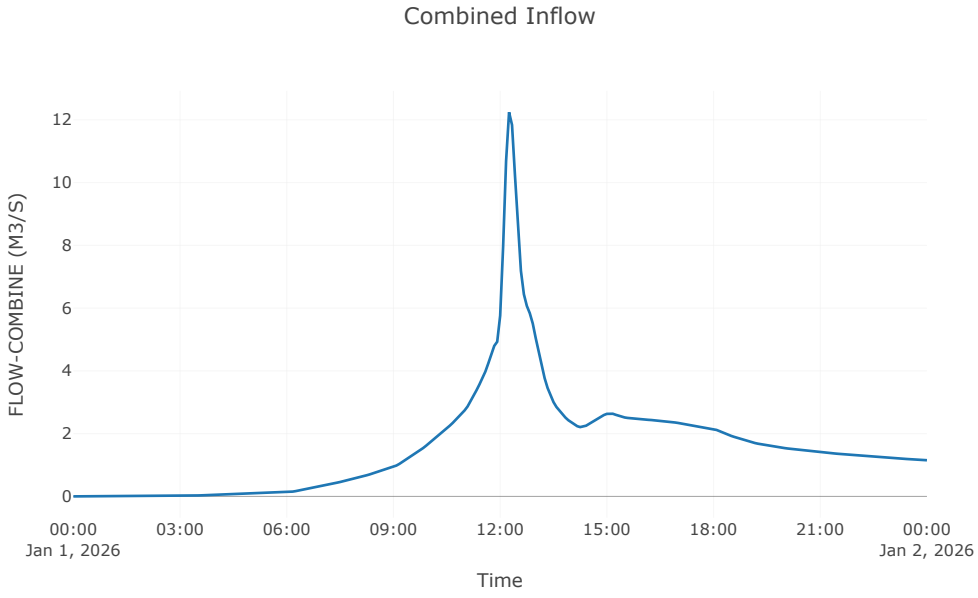

Outflow
FLOW (M3/S)
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

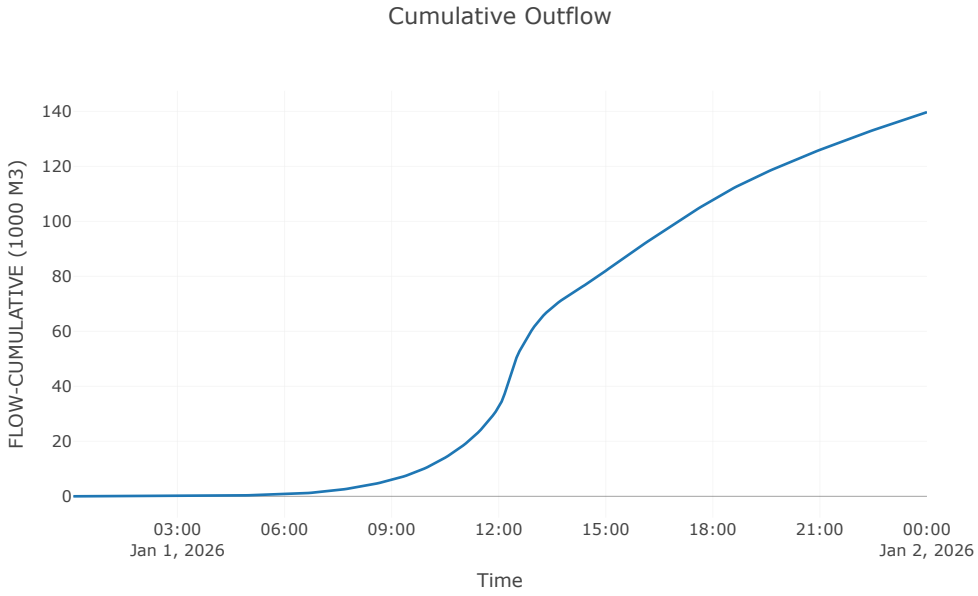
Junction: Junction-CHANNEL 1

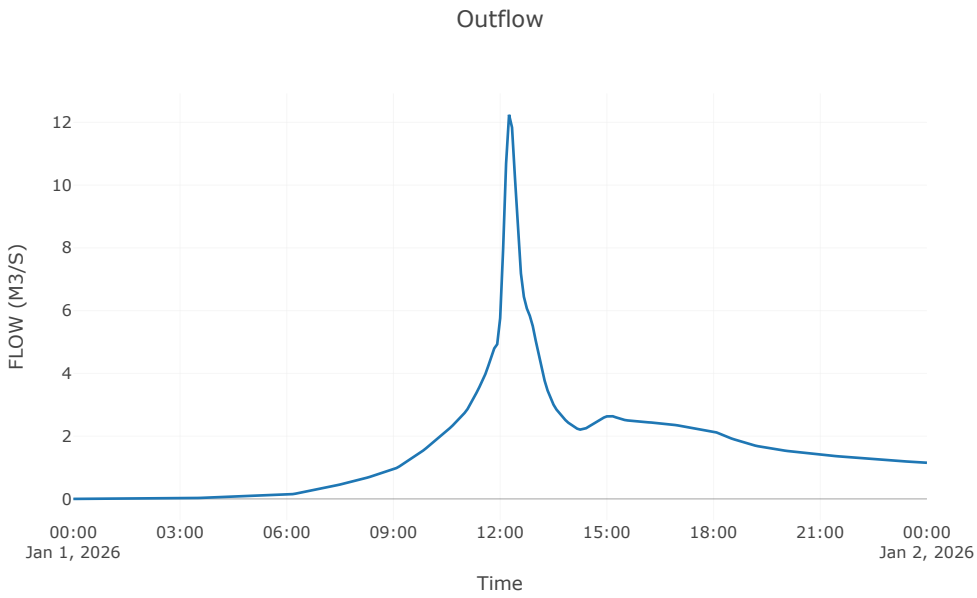
Downstream : Reach - CHANNEL 1

Results: Junction-CHANNEL 1

Peak Discharge (M3/S)	12.24
Time of Peak Discharge	01Jan2026, 12:15
Volume (MM)	107.76





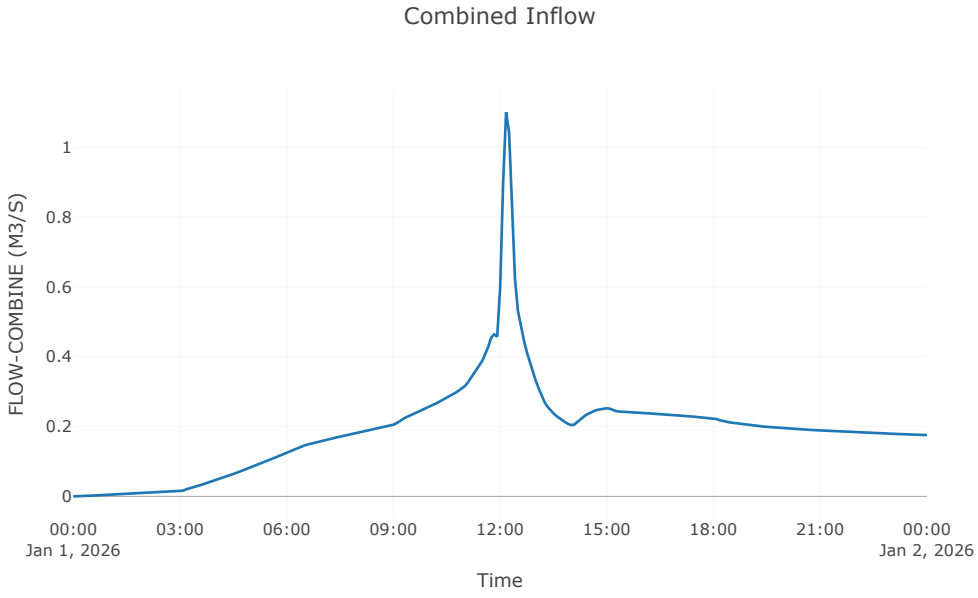

Outflow
FLOW (M3/S)
12
10
8
6
4
2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

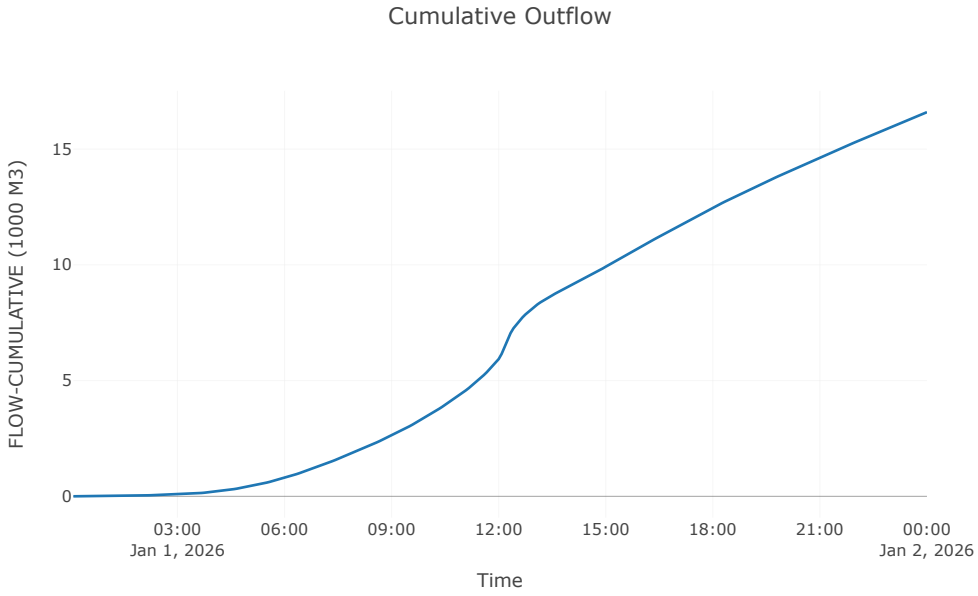
Junction: Junction-POND 2

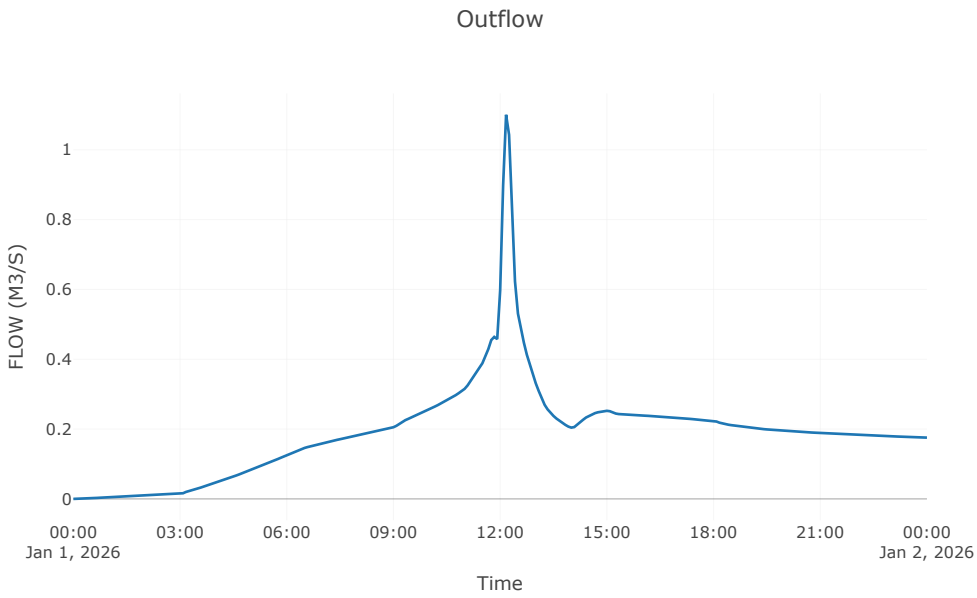
Downstream : Pond 2

Results: Junction-POND 2

Peak Discharge (M3/S)	1.1
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	8.82





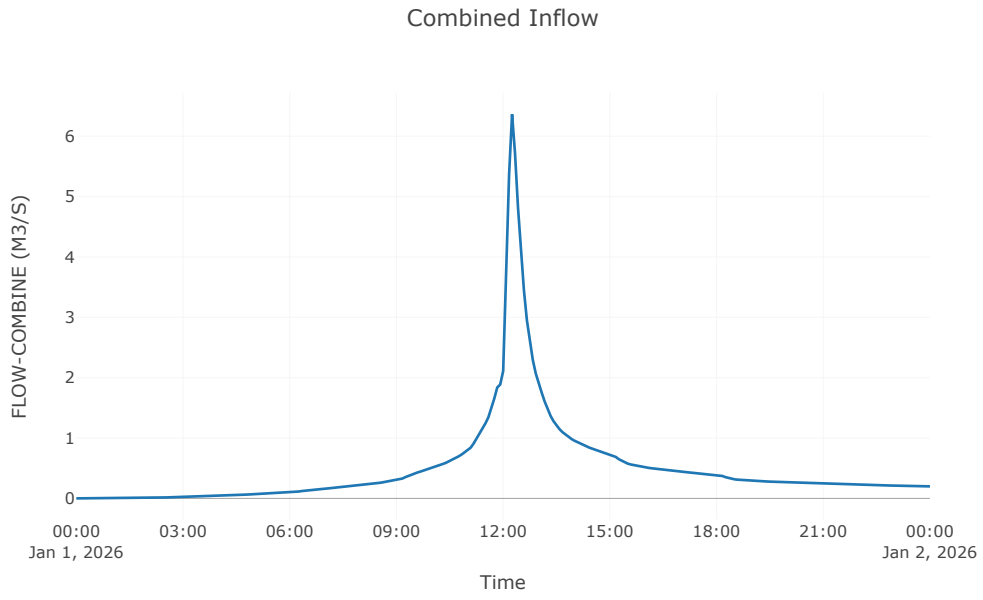

Outflow
FLOW (M3/S)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

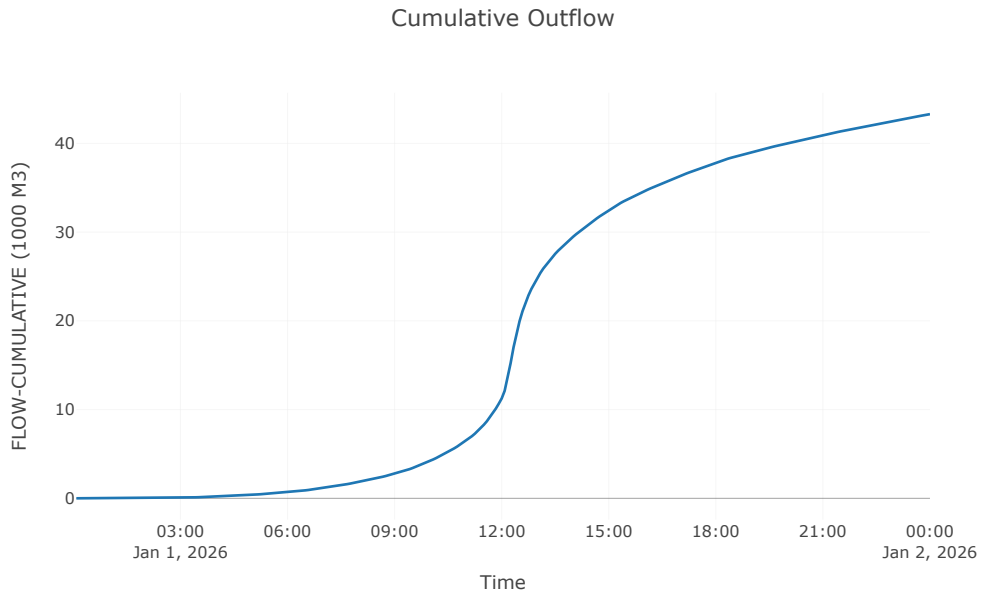
Junction: Junction-CHANNEL 3

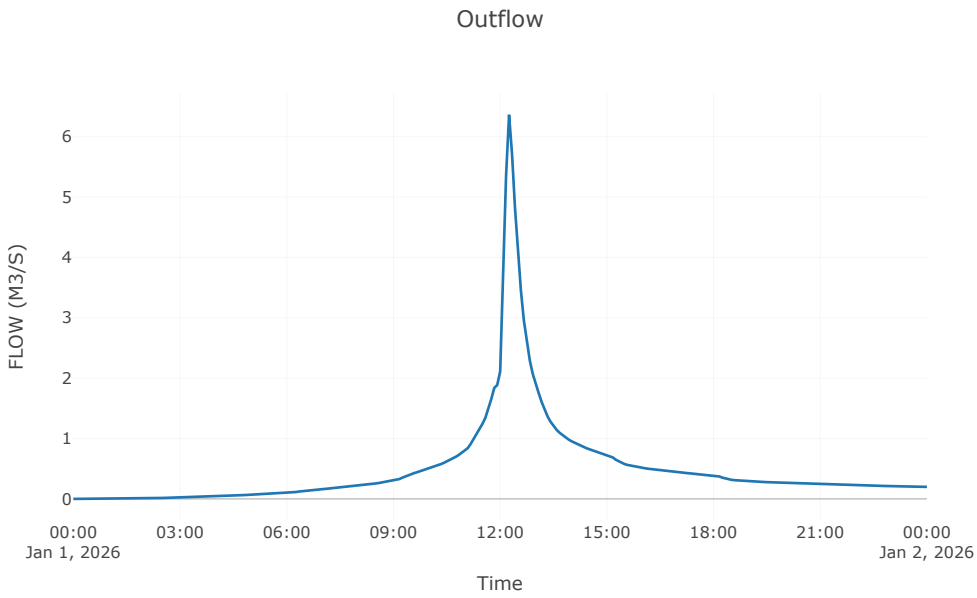
Downstream : Reach - CHANNEL 3

Results: Junction-CHANNEL 3

Peak Discharge (M3/S)	6.36
Time of Peak Discharge	01Jan2026, 12:15
Volume (MM)	88.74





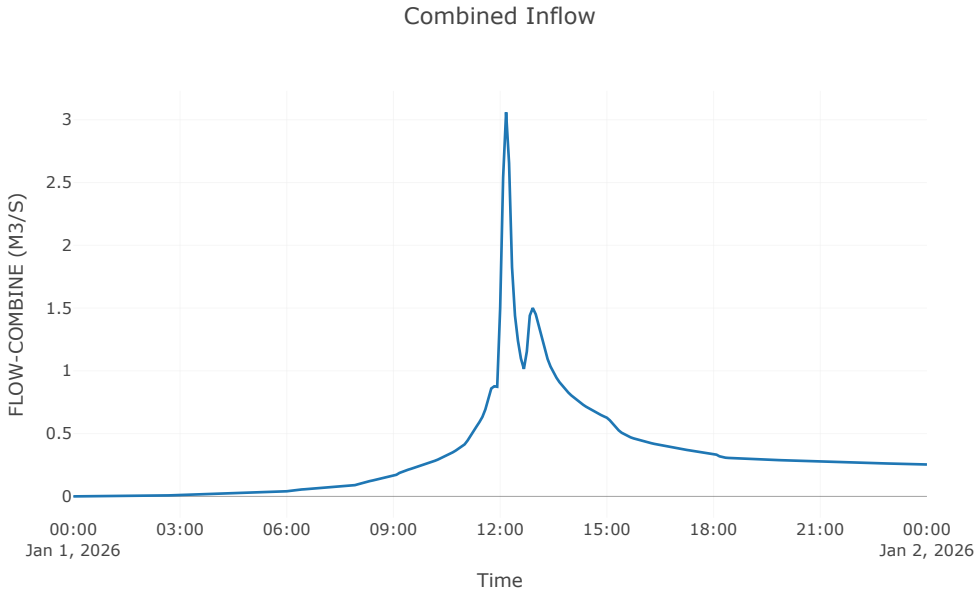

Outflow
FLOW (M3/S)
0
1
2
3
4
5
6
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

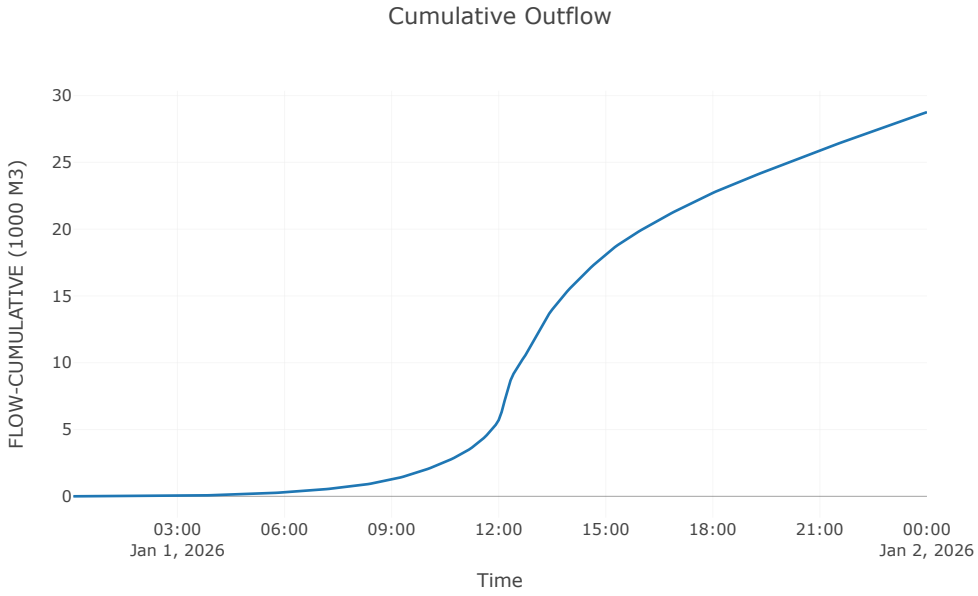
Junction: Junction-CHANNEL 4

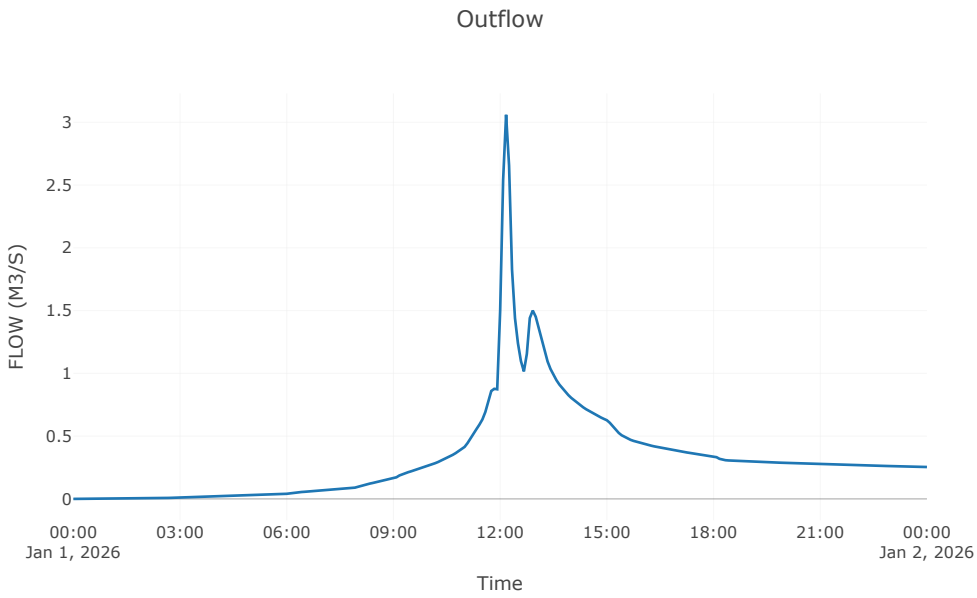
Downstream : Reach - CHANNEL 4

Results: Junction-CHANNEL 4

Peak Discharge (M3/S)	3.06
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	66.55





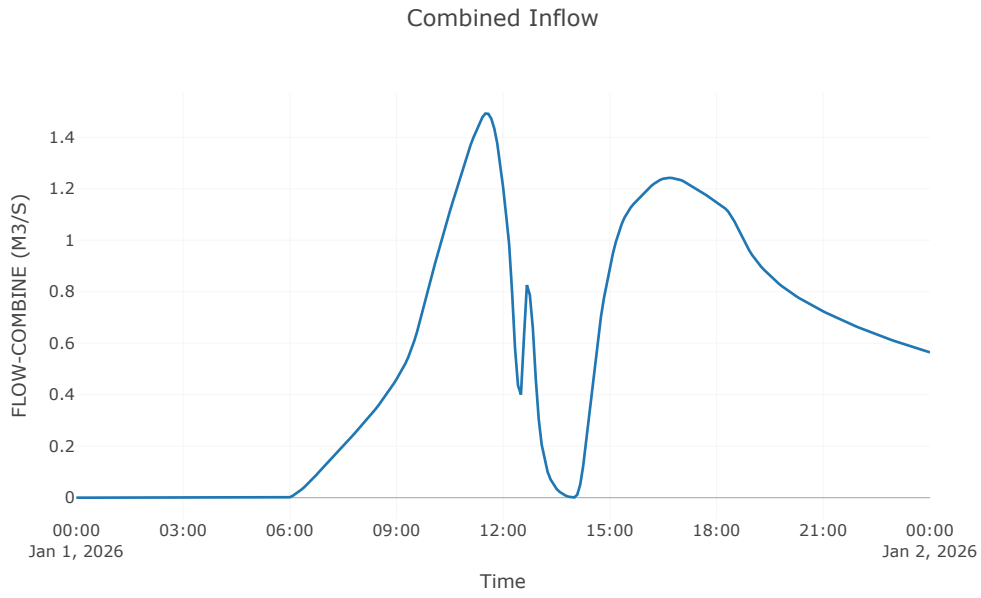

Outflow
FLOW (M3/S)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

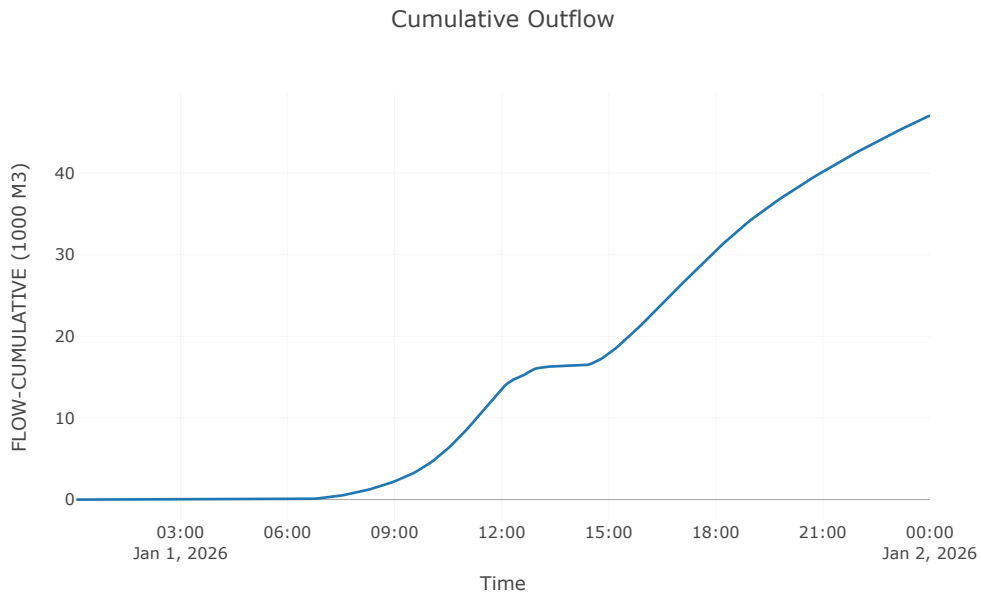
Junction: Junction-CHANNEL 5

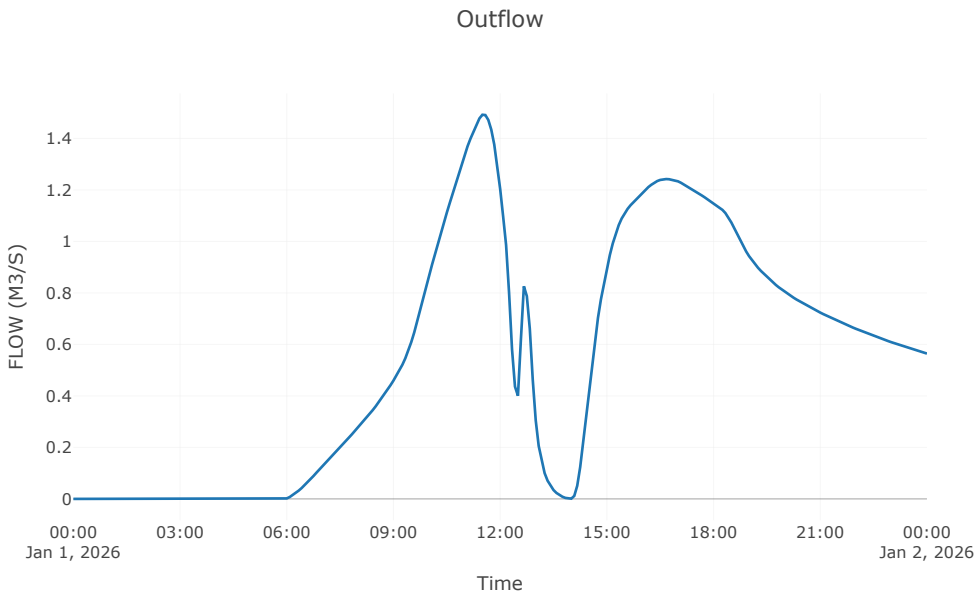
Downstream : Reach - CHANNEL 5

Results: Junction-CHANNEL 5

Peak Discharge (M3/S)	1.49
Time of Peak Discharge	01Jan2026, 11:30





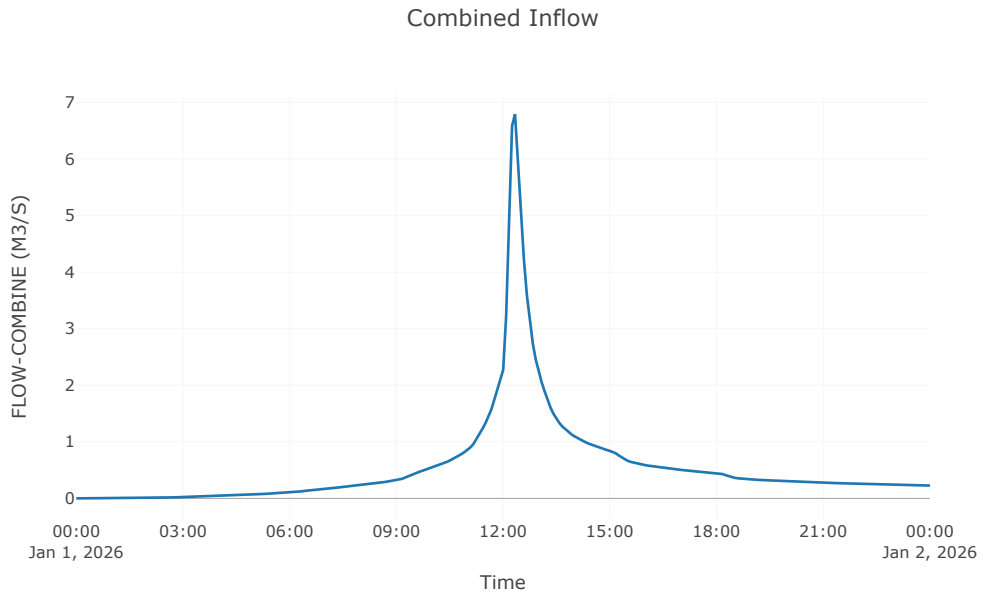

Outflow
FLOW (M3/S)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

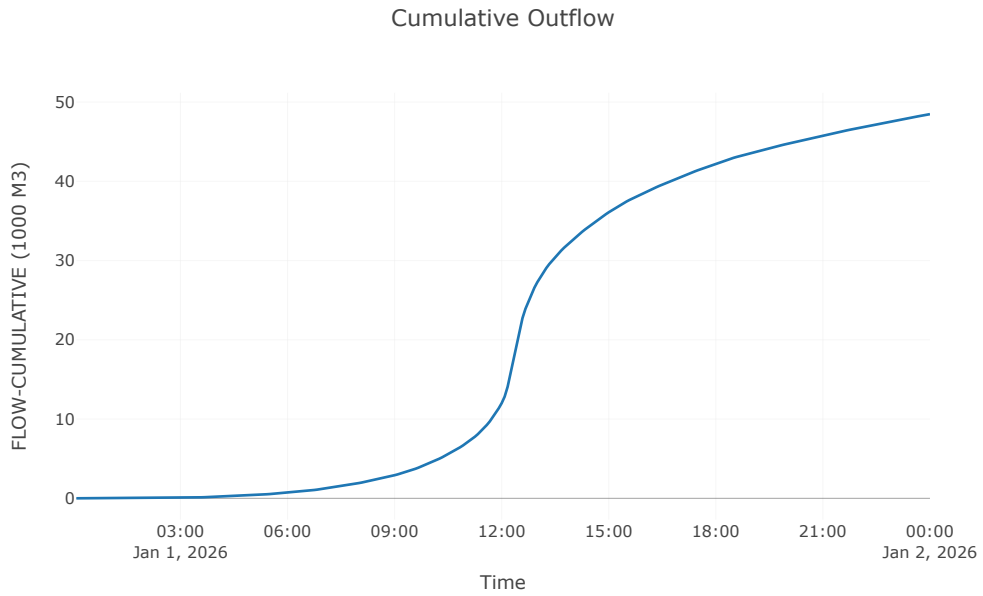
Junction: Junction-POND 6

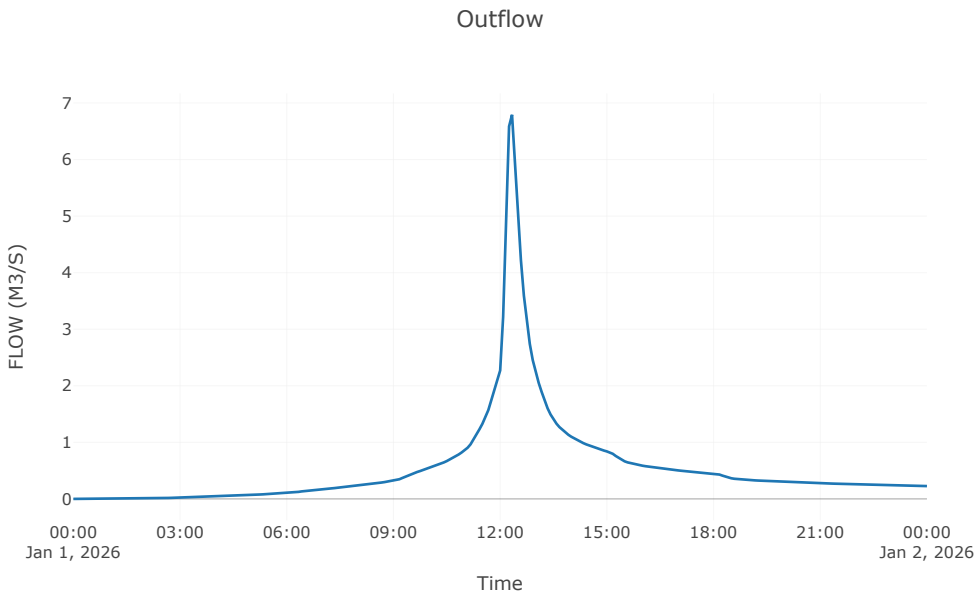
Downstream : Pond 6

Results: Junction-POND 6

Peak Discharge (M3/S)	6.79
Time of Peak Discharge	01Jan2026, 12:20
Volume (MM)	86.54





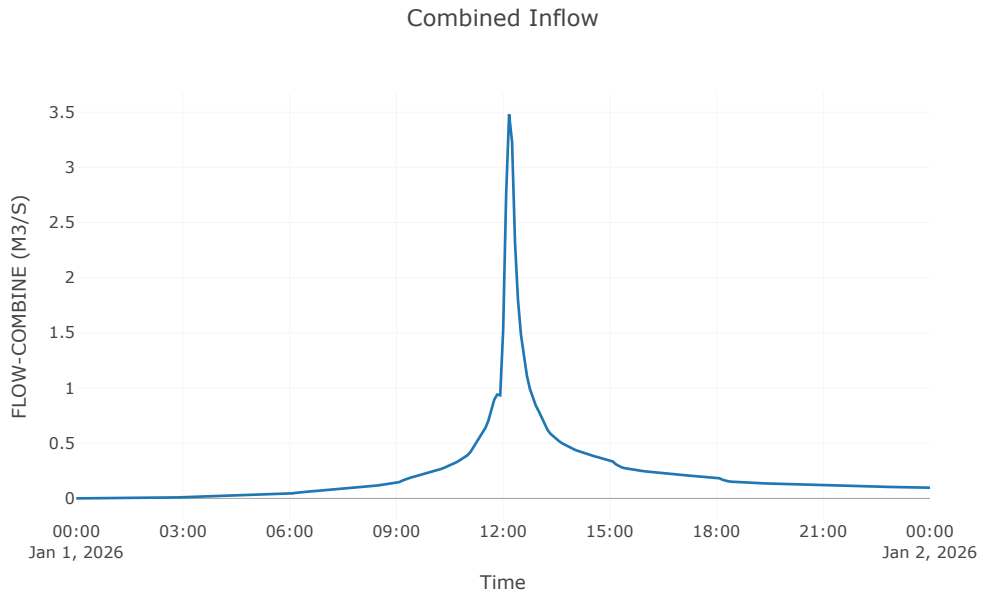

Outflow
FLOW (M3/S)
7
6
5
4
3
2
1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

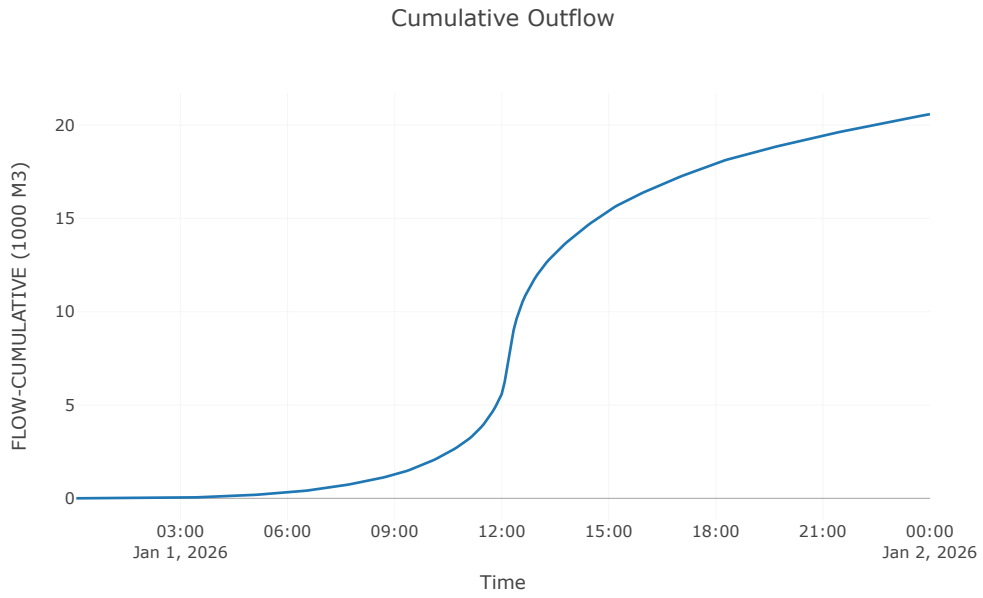
Junction: Junction-POND 7

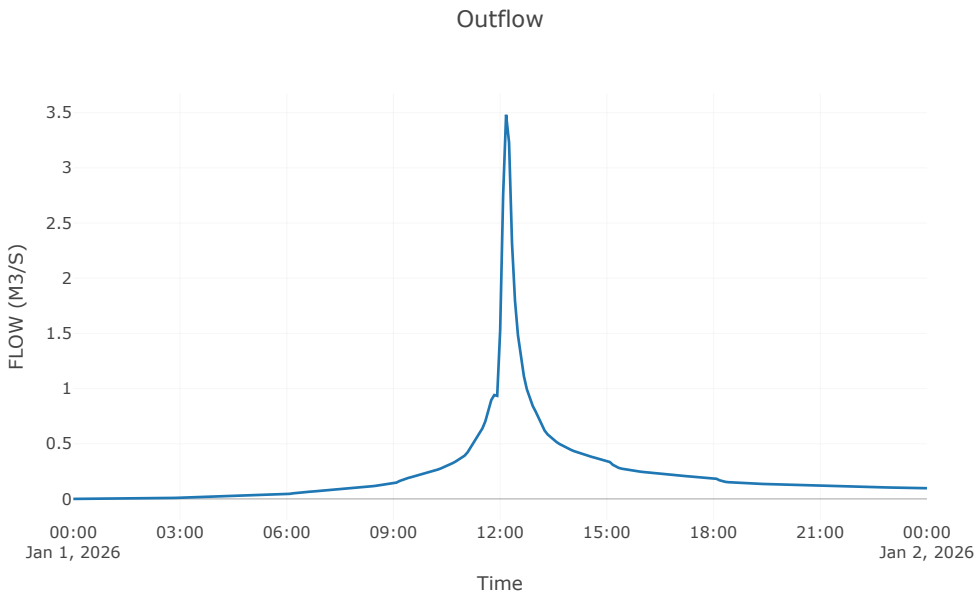
Downstream : Pond 7

Results: Junction-POND 7

Peak Discharge (M3/S)	3.48
Time of Peak Discharge	01Jan2026, 12:10
Volume (MM)	83.48





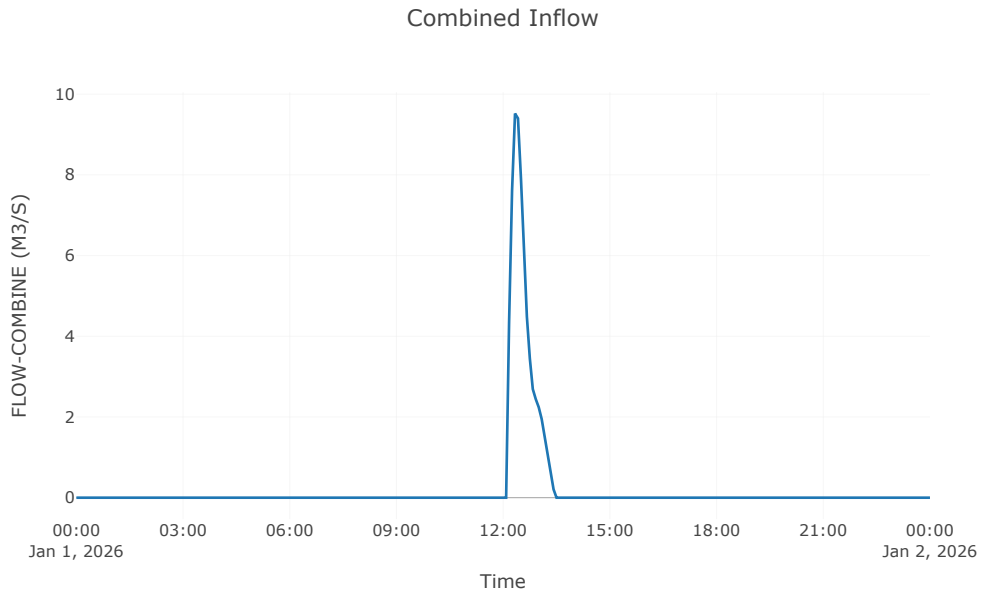

Outflow
FLOW (M3/S)
3.5
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

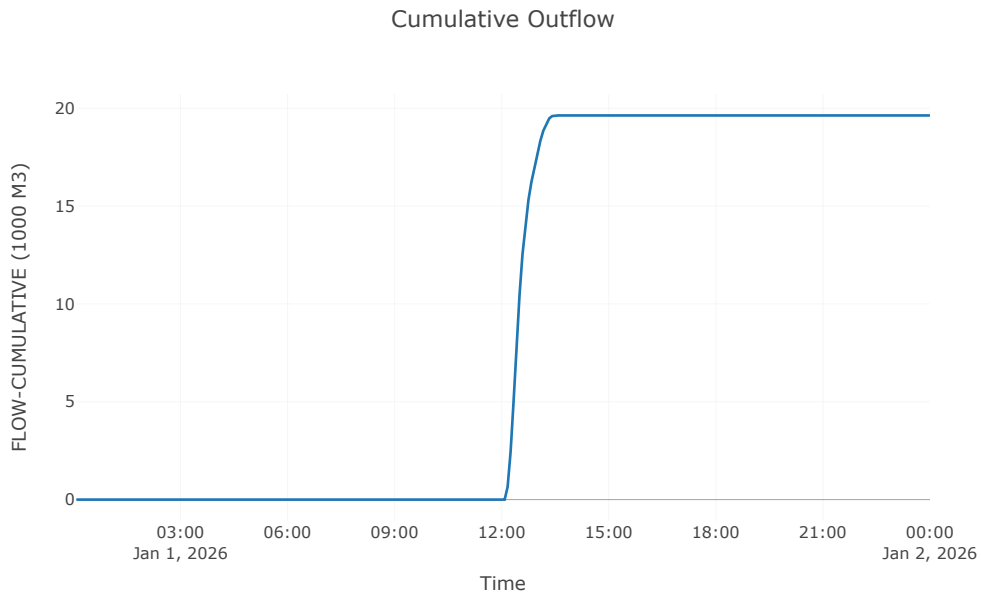
Junction: Junction- POND 1 SPILL

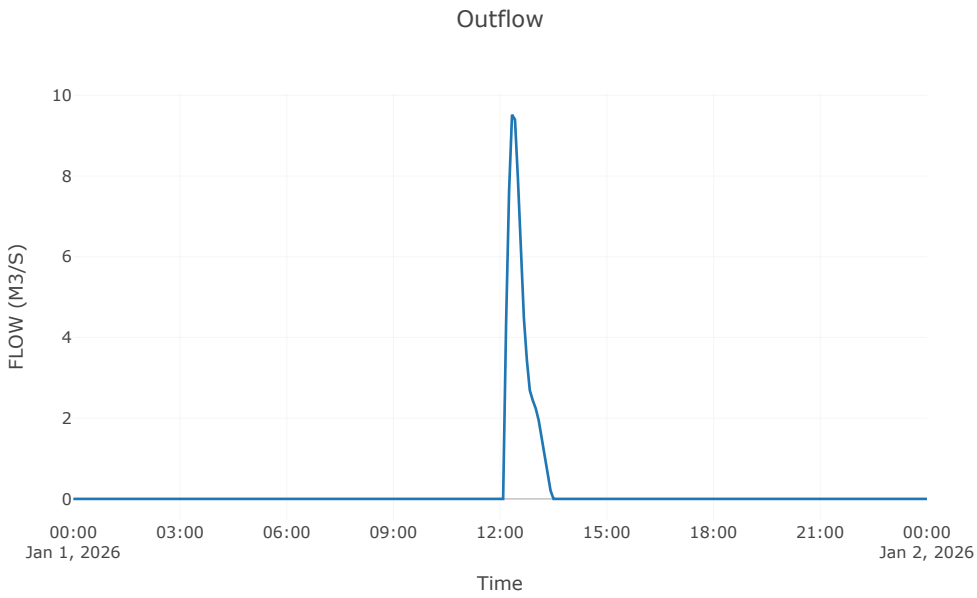
Downstream : Junction - MORVEN FERRY ROAD

Results: Junction- POND 1 SPILL

Peak Discharge (M3/S)	9.52
Time of Peak Discharge	01Jan2026, 12:20





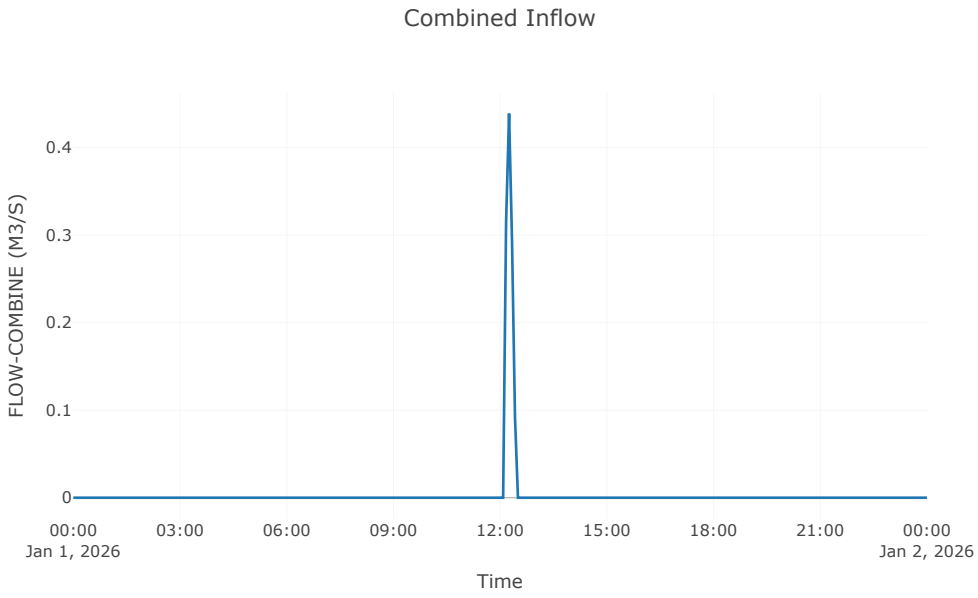

Outflow
FLOW (M3/S)
10
8
6
4
2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

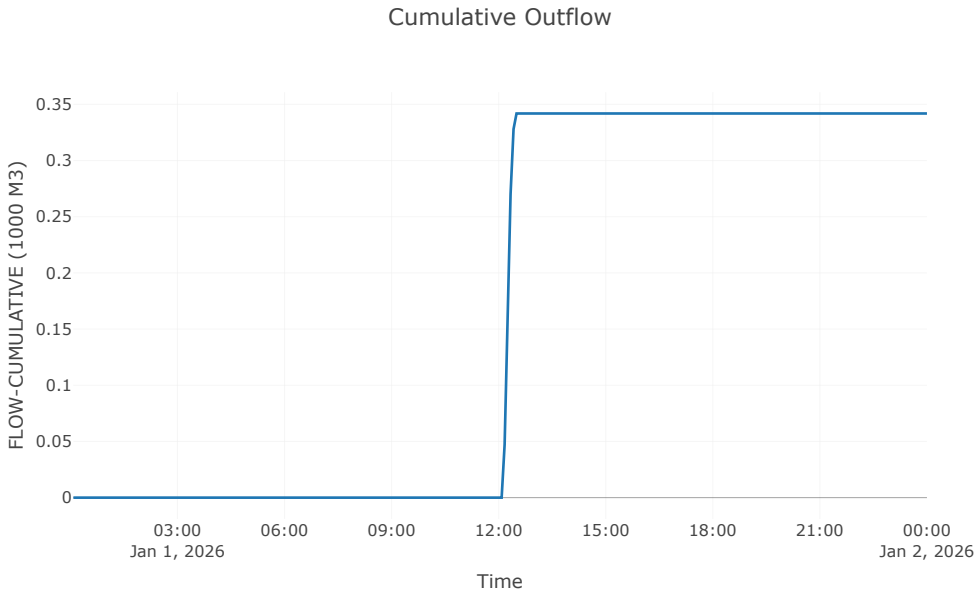
Junction: Junction-POND 2 SPILL

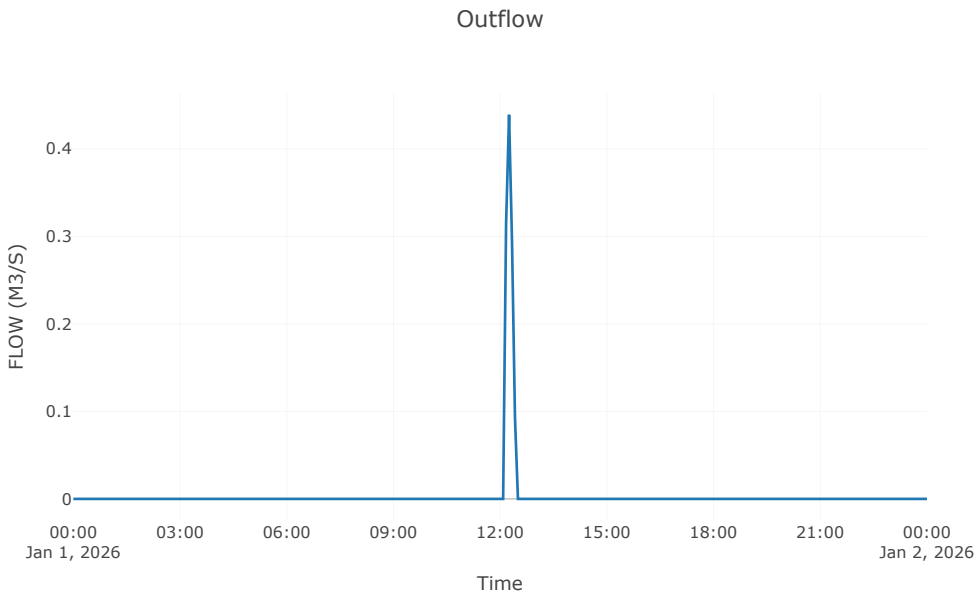
Downstream : Junction - MORVEN FERRY ROAD

Results: Junction-POND 2 SPILL

Peak Discharge (M3/S)	0.44
Time of Peak Discharge	01Jan2026, 12:15





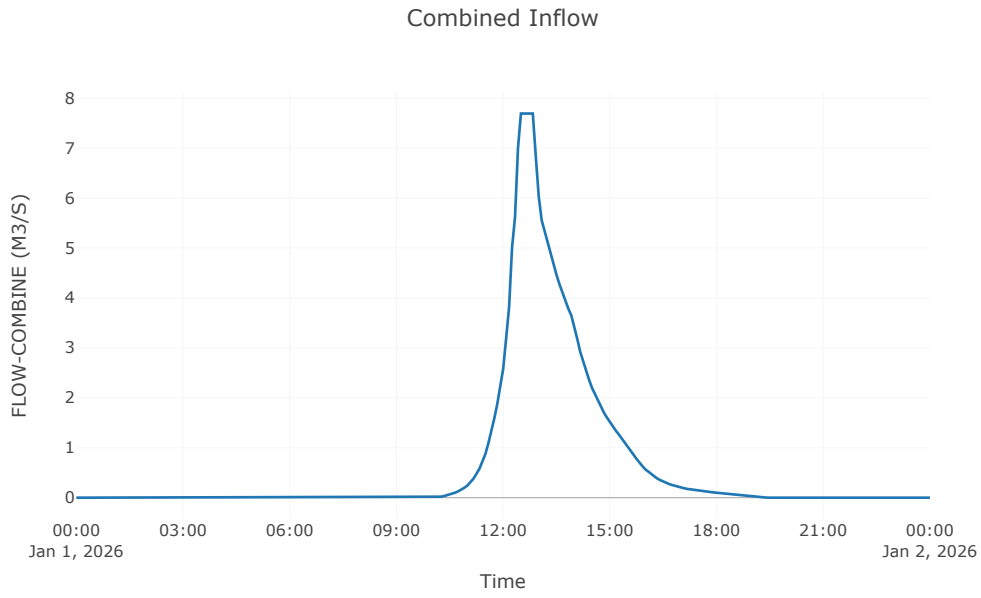

Outflow
FLOW (M3/S)
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

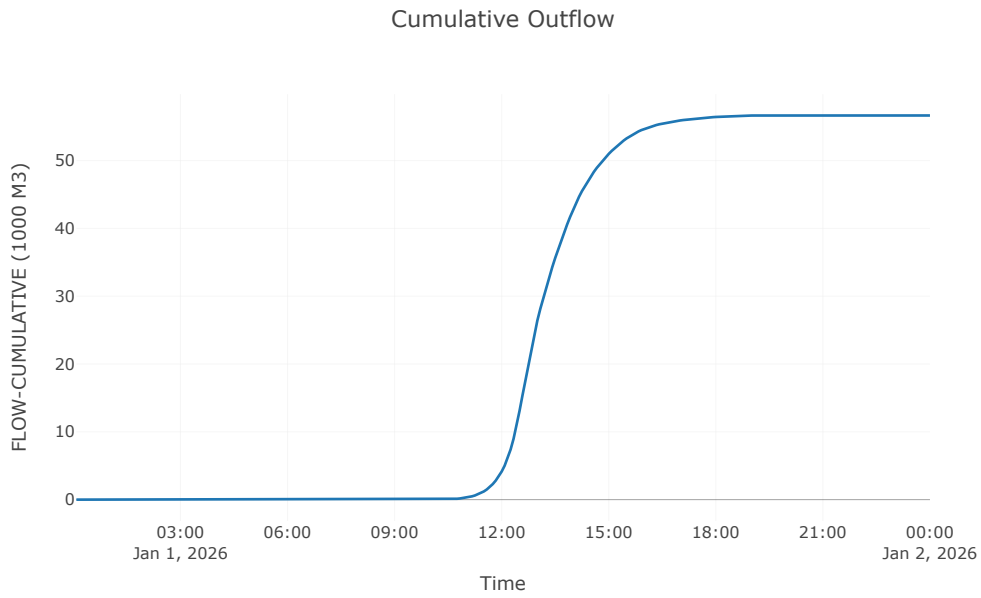
Junction: Junction-PIPE MORVEN FERRY L

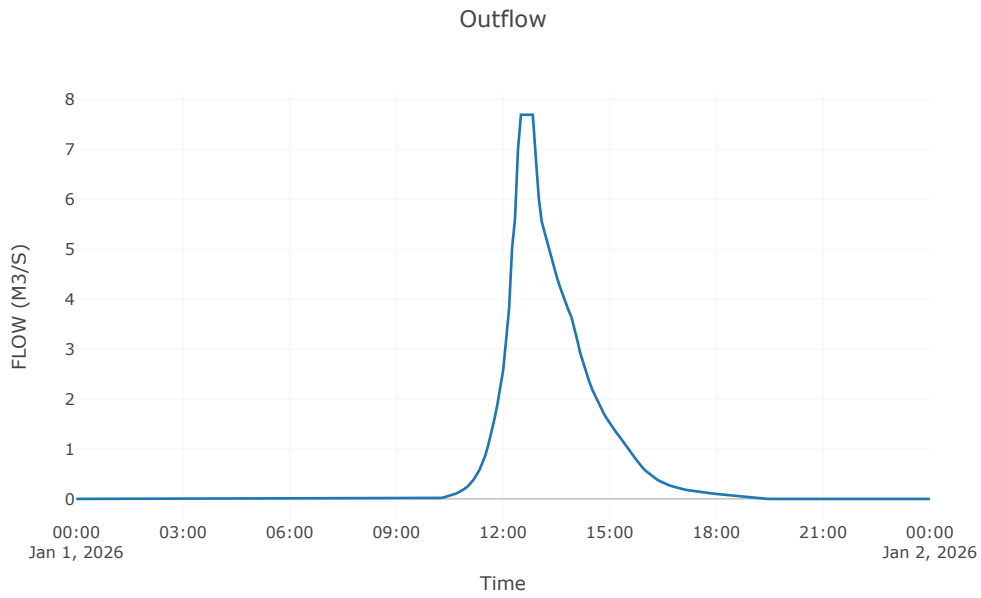
Downstream : Pipe outflow

Results: Junction-PIPE MORVEN FERRY L

Peak Discharge (M3/S)	7.69
Time of Peak Discharge	01Jan2026, 12:30





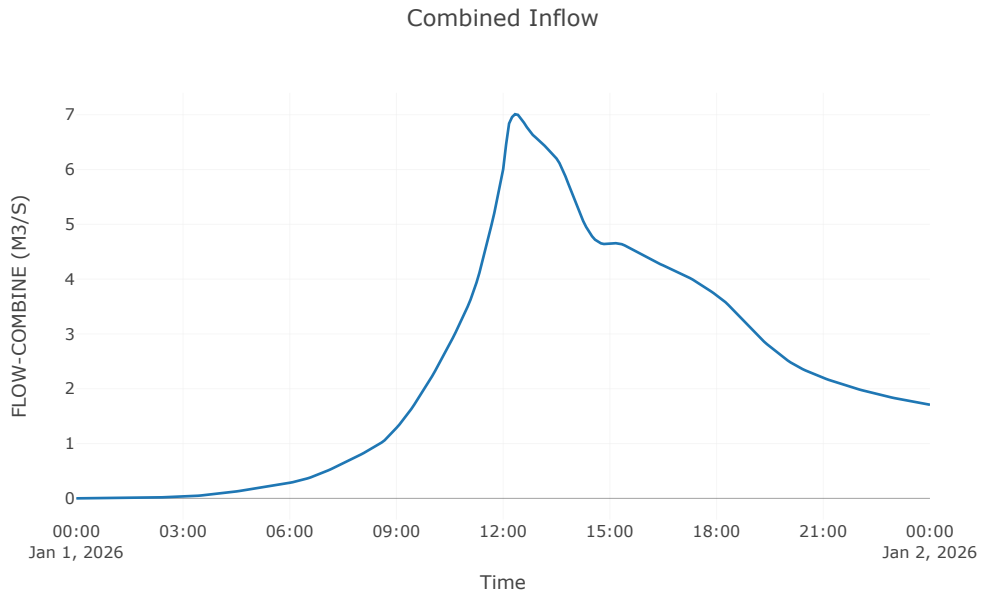

Outflow
FLOW (M3/S)
8
7
6
5
4
3
2
1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

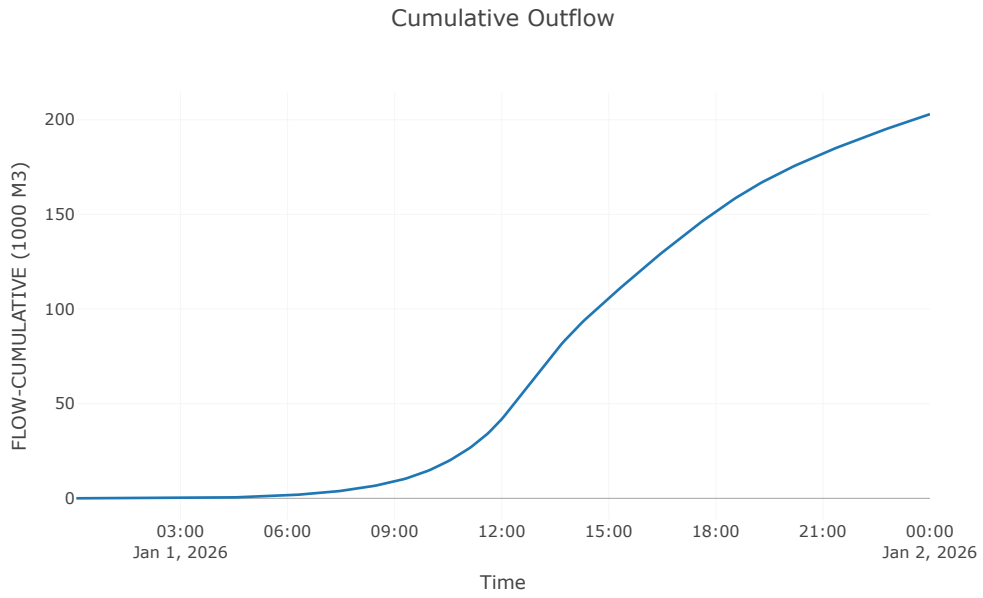
Junction: Junction-MORVEN FERRY PIPE R

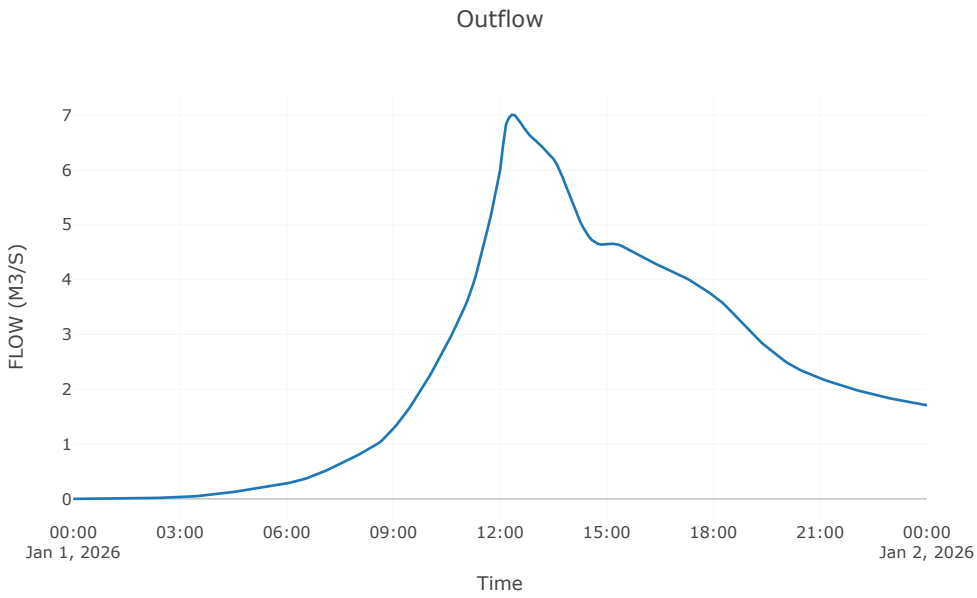
Downstream : Pipe outflow

Results: Junction-MORVEN FERRY PIPE R

Peak Discharge (M3/S)	7.01
Time of Peak Discharge	01Jan2026, 12:20
Volume (MM)	51.19





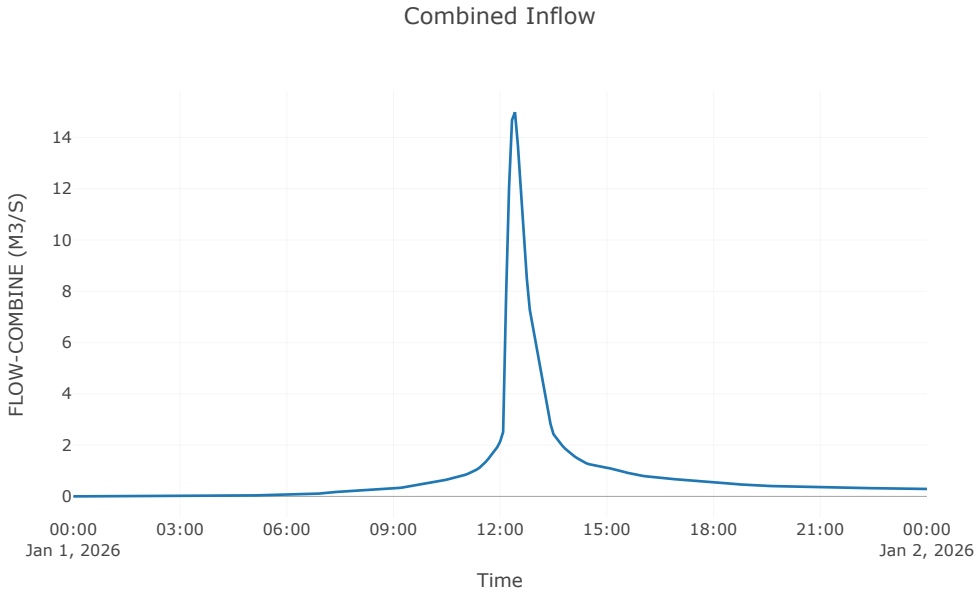

Outflow
FLOW (M3/S)
0
1
2
3
4
5
6
7
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

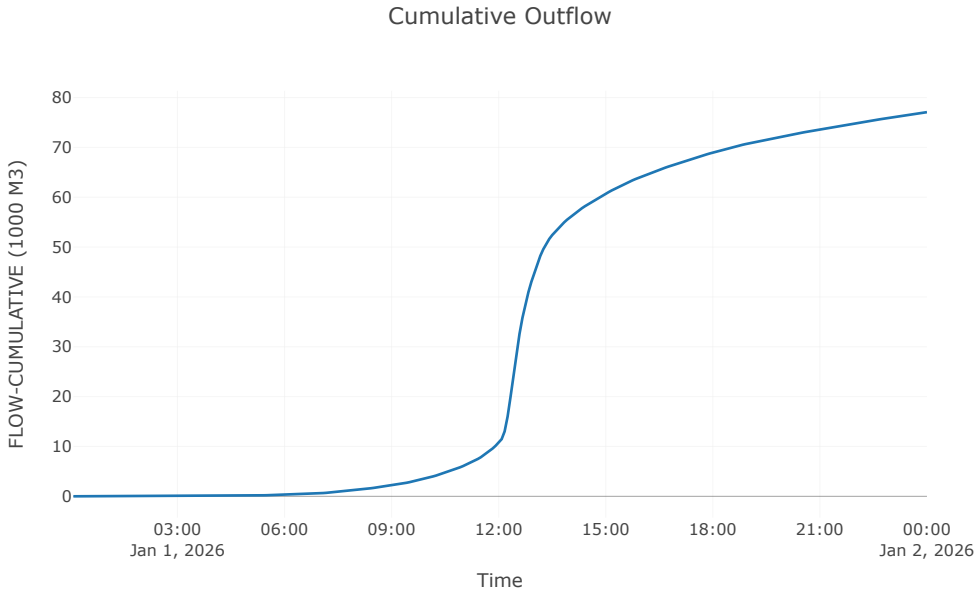
Junction: Junction-MORVEN FERRY ROAD

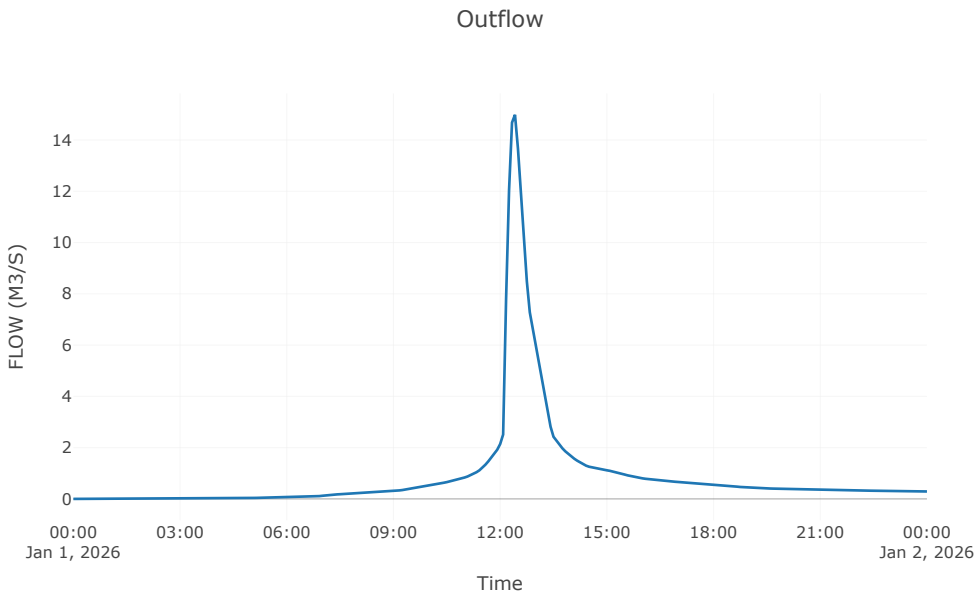
Downstream : Olfp outflow

Results: Junction-MORVEN FERRY ROAD

Peak Discharge (M3/S)	14.99
Time of Peak Discharge	01Jan2026, 12:25
Volume (MM)	104.81





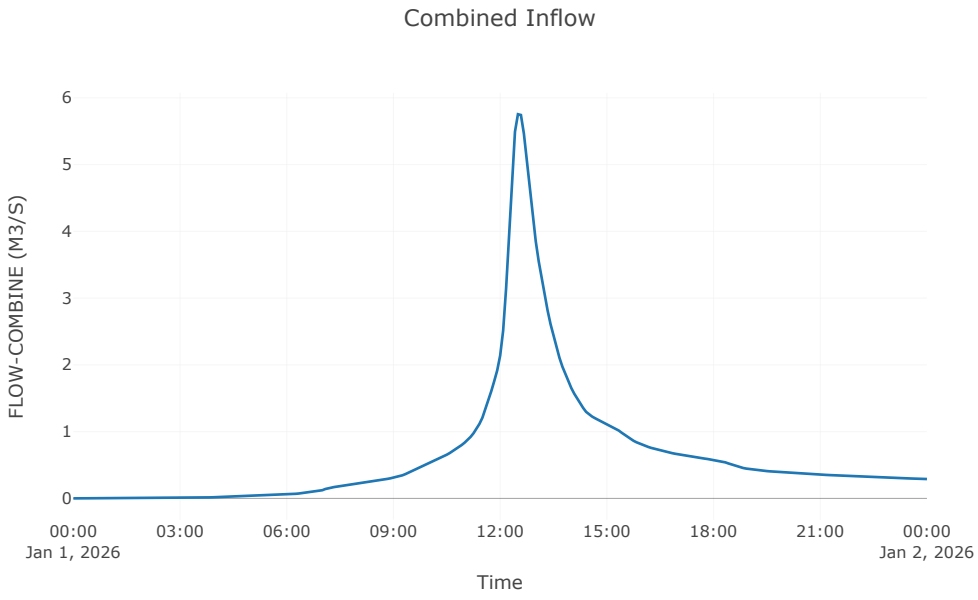

Outflow
FLOW (M3/S)
14
12
10
8
6
4
2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

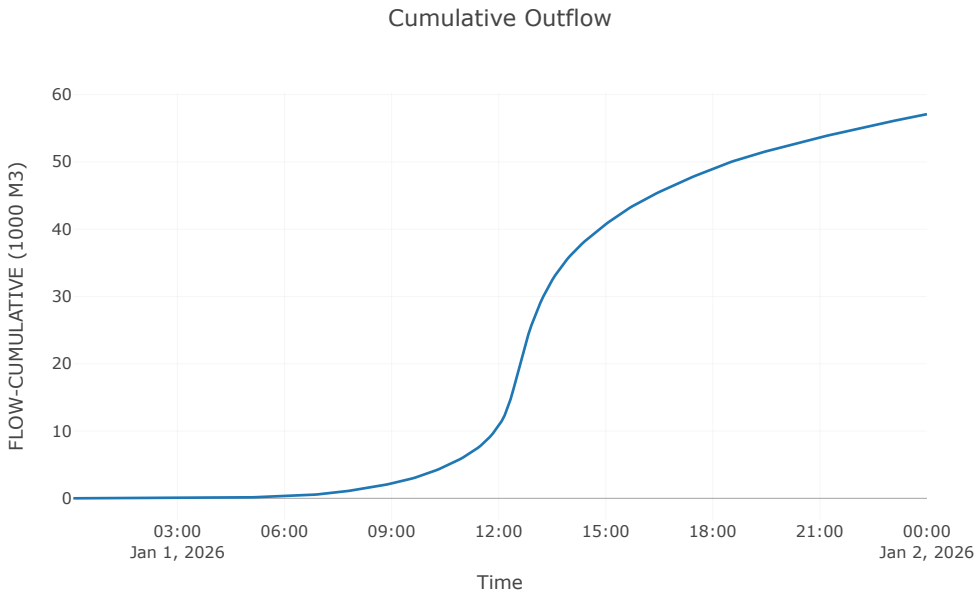
Junction: Junction-EXIT OLFP

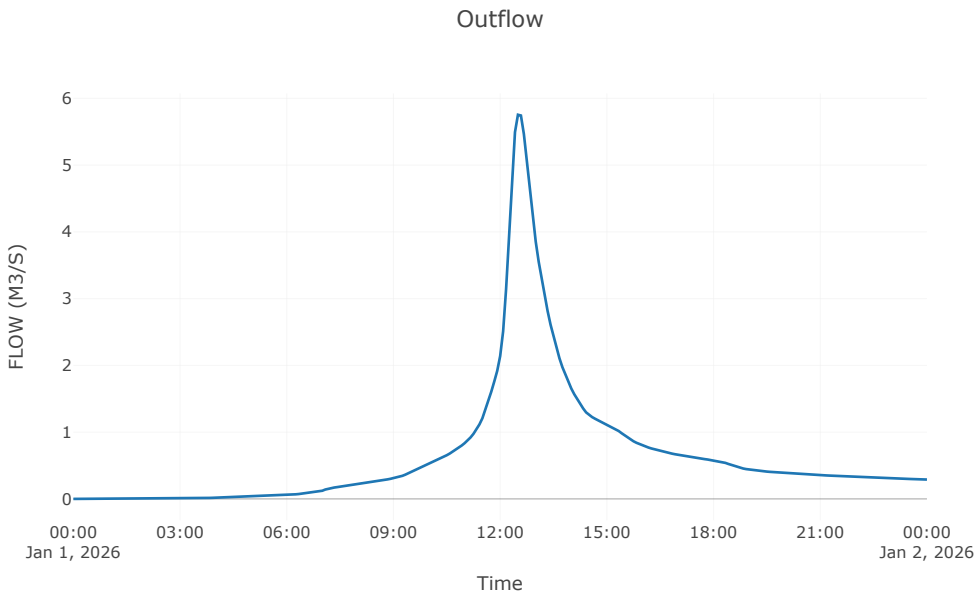
Downstream : Junction - MORVEN FERRY ROAD

Results: Junction-EXIT OLFP

Peak Discharge (M3/S)	5.75
Time of Peak Discharge	01Jan2026, 12:30
Volume (MM)	77.65





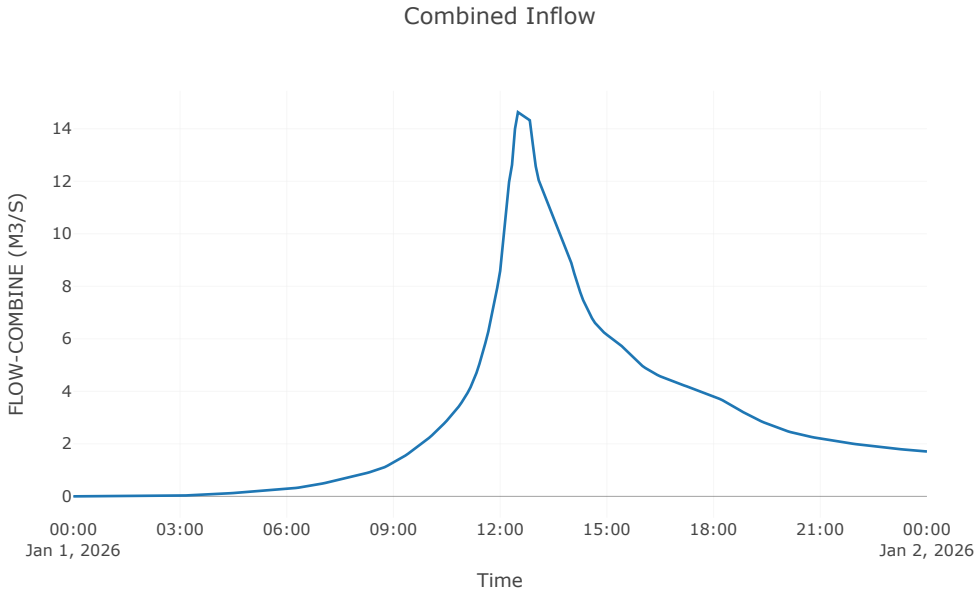

Outflow
FLOW (M3/S)
6
5
4
3
2
1
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

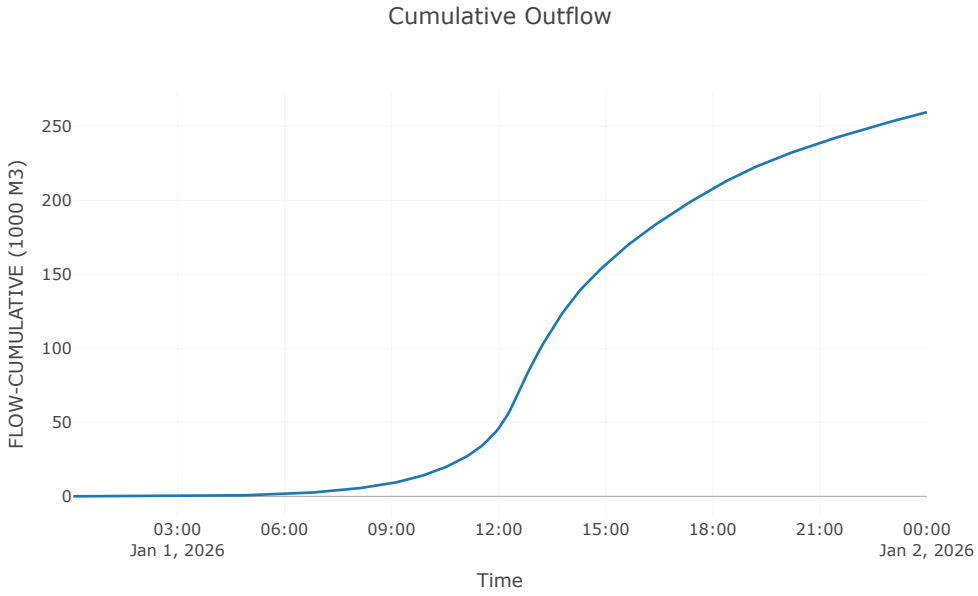
Junction: PIPE OUTFLOW

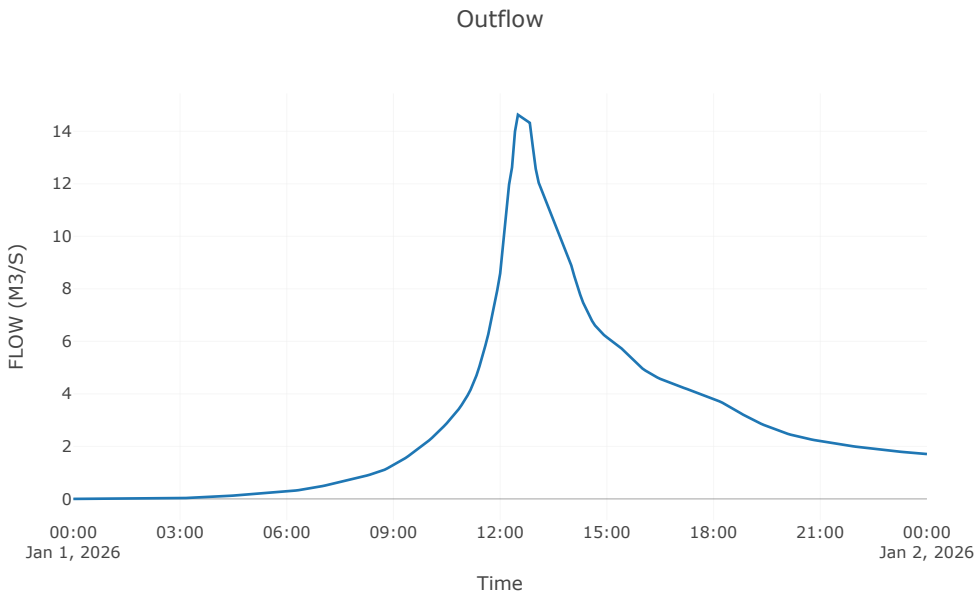
Downstream : Downstream exit

Results: PIPE OUTFLOW

Peak Discharge (M3/S)	14.63
Time of Peak Discharge	01Jan2026, 12:30
Volume (MM)	65.48





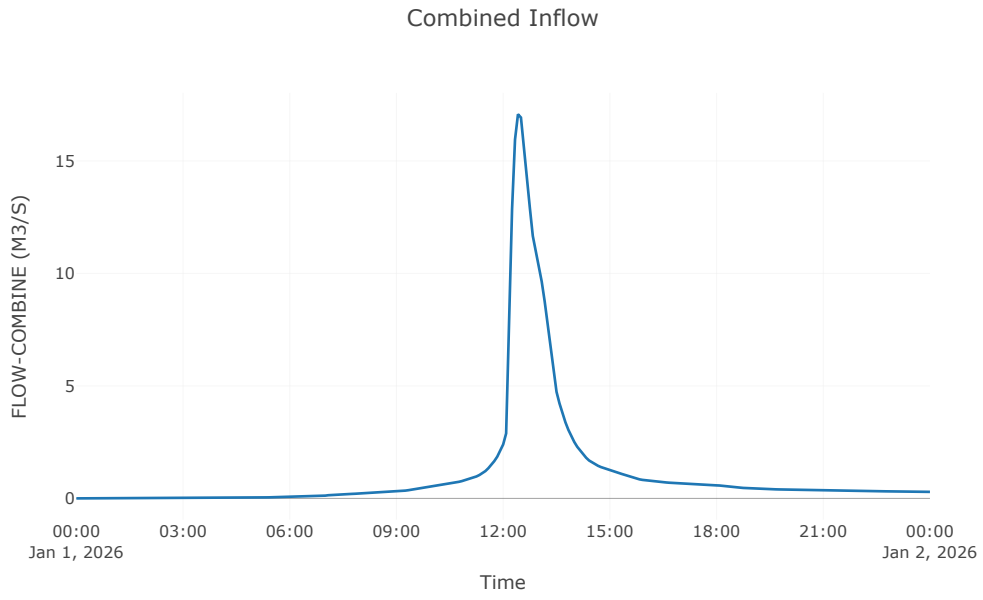

Outflow
FLOW (M3/S)
14
12
10
8
6
4
2
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

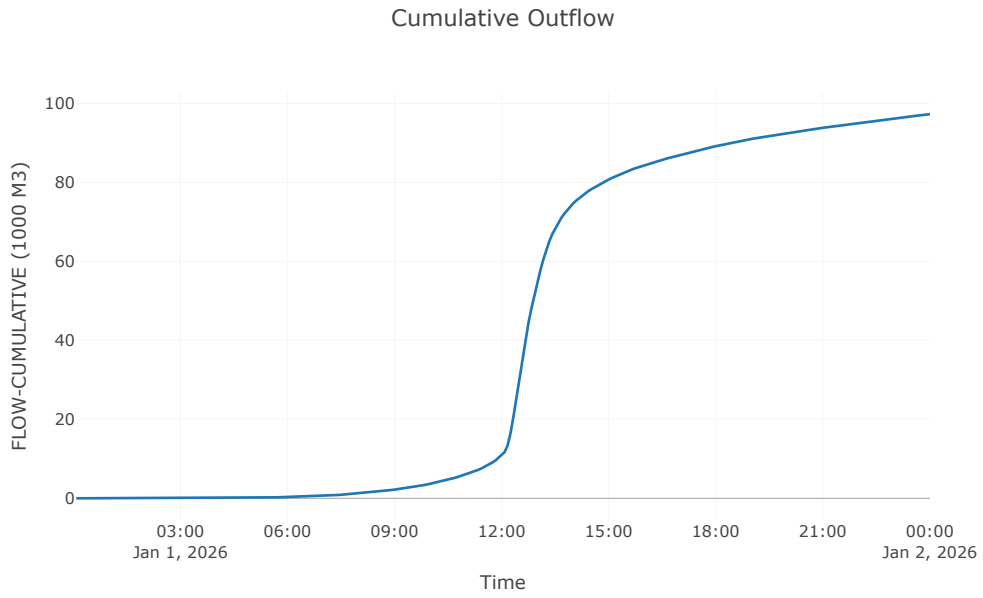
Junction: OLFP OUTFLOW

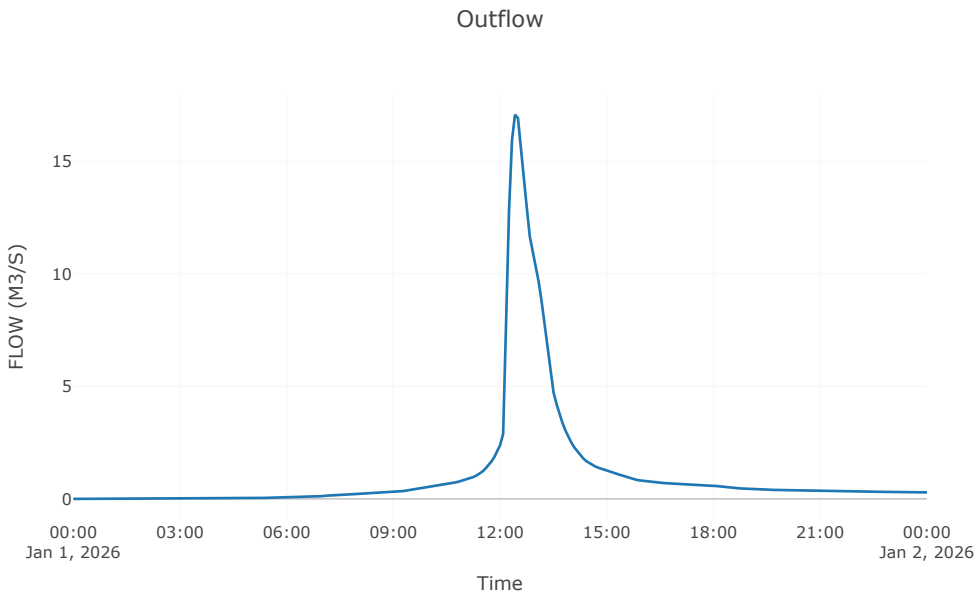
Downstream : Downstream exit

Results: OLFP OUTFLOW

Peak Discharge (M3/S)	17.08
Time of Peak Discharge	01Jan2026, 12:25
Volume (MM)	132.31

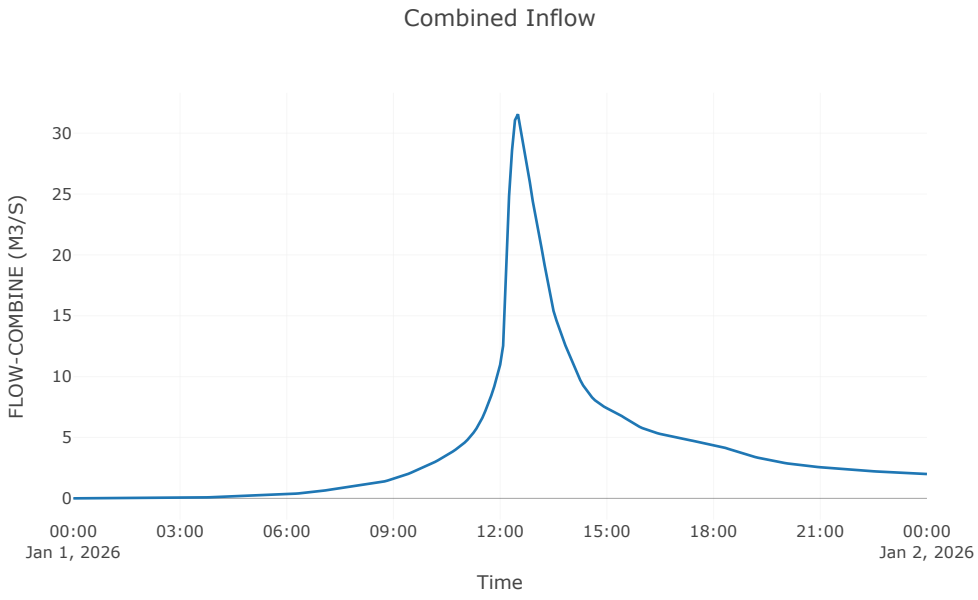


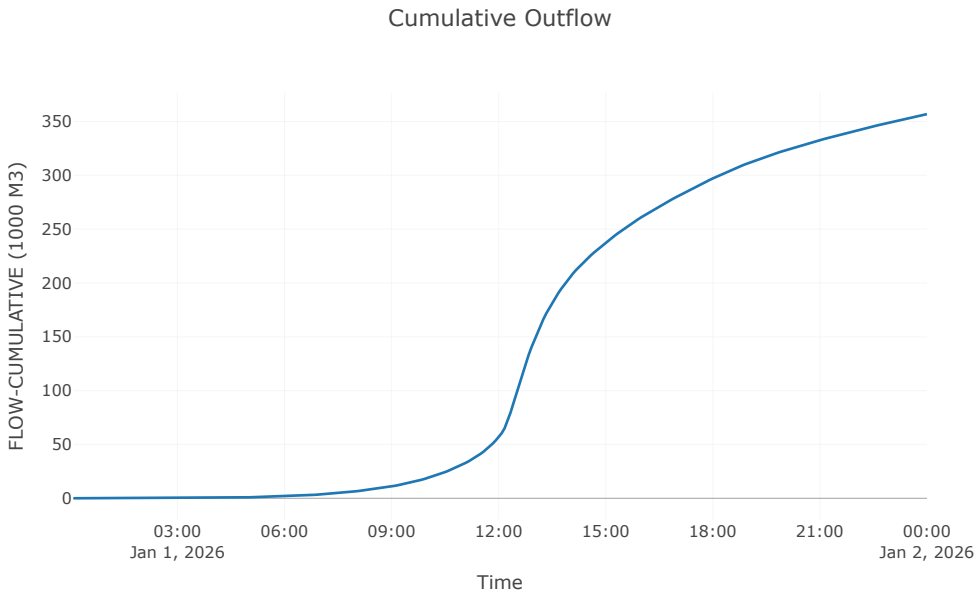


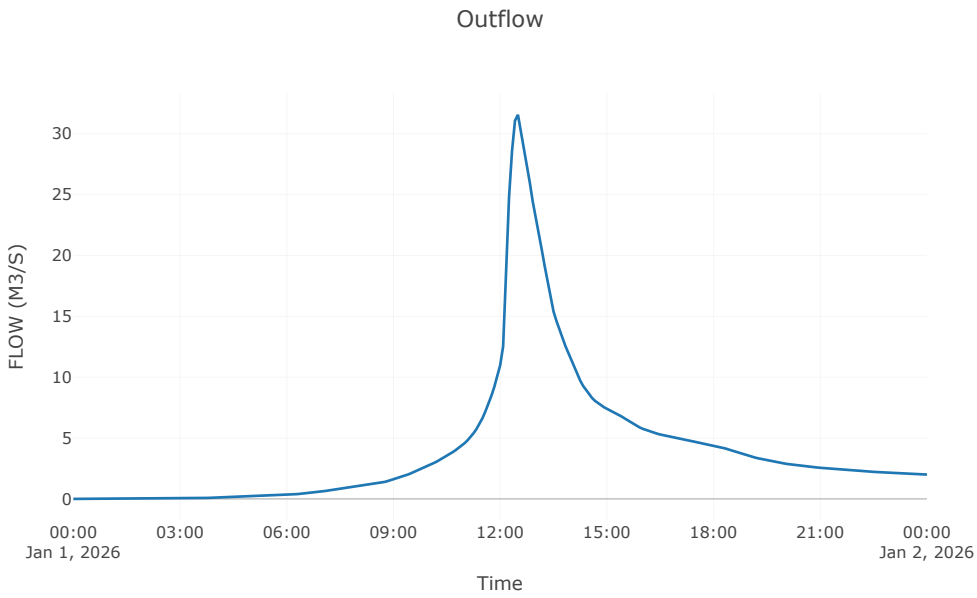

Outflow
FLOW (M3/S)
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

Sink: DOWNSTREAM EXIT

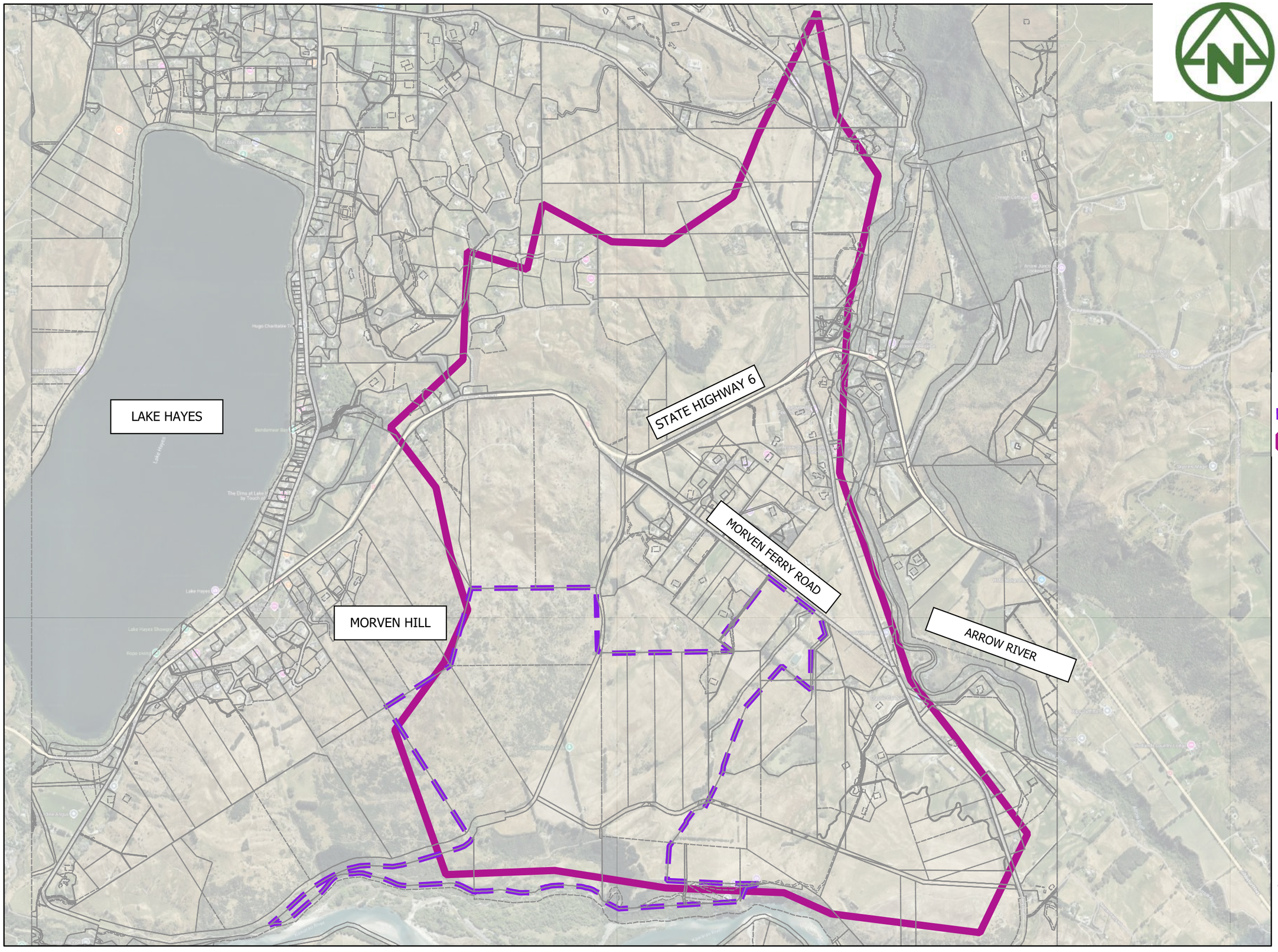
Results: DOWNSTREAM EXIT	
Peak Discharge (M3/S)	31.56
Time of Peak Discharge	01Jan2026, 12:30
Volume (MM)	75.93






Outflow
FLOW (M3/S)
30
25
20
15
10
5
0
00:00
Jan 1, 2026
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Jan 2, 2026
Time

APPENDIX C – PRE-DEVELOPMENT FLOOD PLANS



LEGEND

SITE EXTENT

MODEL EXTENT

MAP PROJECTION:
NZGD2000 / Mount Nicholas 2000
(EPSG:2128)

REV	DESCRIPTION	DRN	BYCHK	BY APP	BY DATE
A	FIRST ISSUE	PK	SL	JK	11/02/2026

PLOT DATE ----

MCKENZIE & CO.

WWW.MCKENZIEANDCO.CO.NZ

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CLIENT: RIDGEBURN LTD

PROJECT: RIDGEBURN
122 MORVEN FERRY ROAD
ARROW JUNCTION
QUEENSTOWN

TITLE: STORMWATER
PRE-DEVELOPMENT
HYDRAULIC MODEL EXTENT PLAN

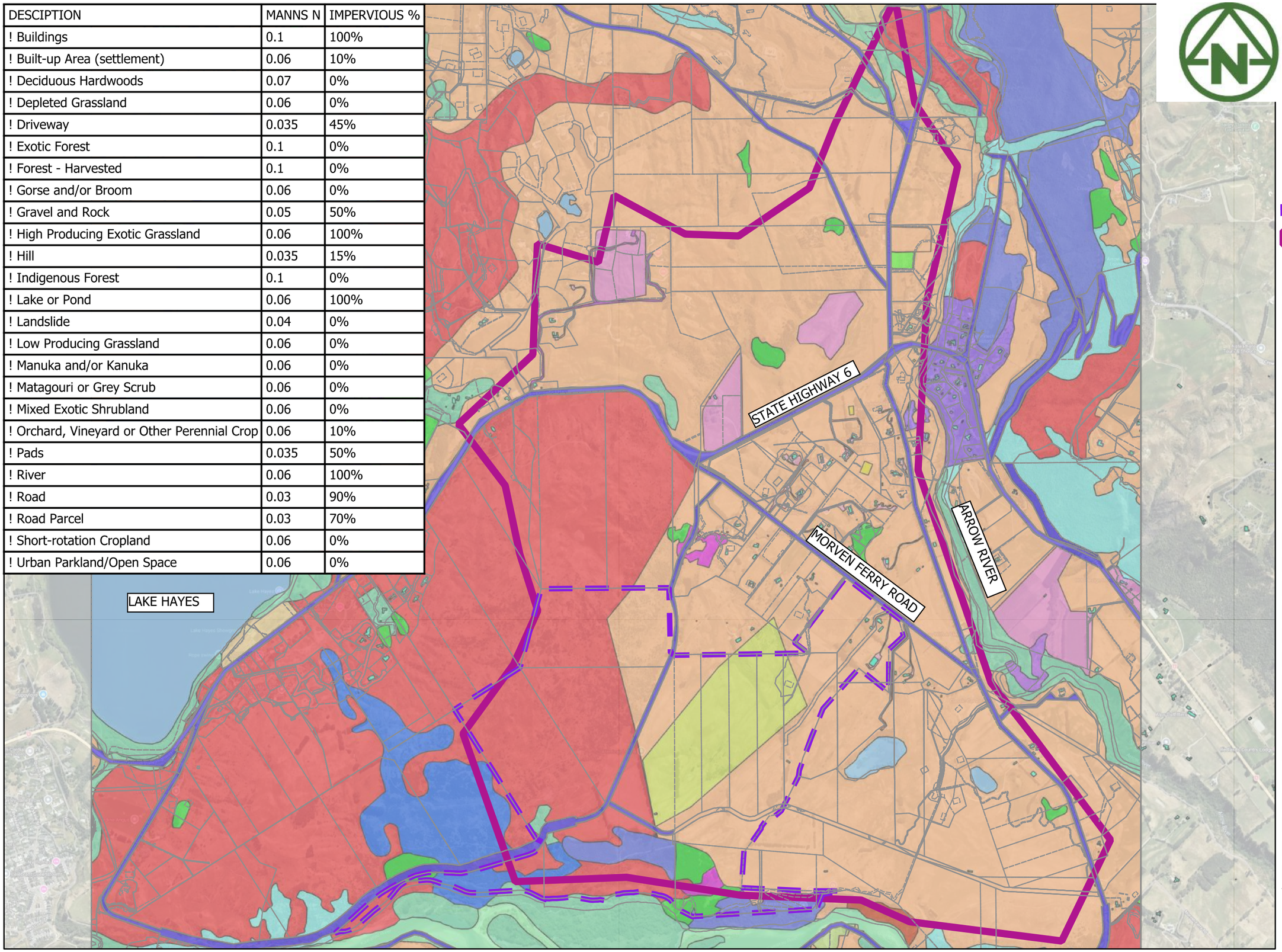
PURPOSE OF ISSUE: RESOURCE CONSENT

SCALE: 1:25,500

DRAWING NO: 4048-0-4500

REV: A

DESCIPTION	MANNS N	IMPERVIOUS %
! Buildings	0.1	100%
! Built-up Area (settlement)	0.06	10%
! Deciduous Hardwoods	0.07	0%
! Depleted Grassland	0.06	0%
! Driveway	0.035	45%
! Exotic Forest	0.1	0%
! Forest - Harvested	0.1	0%
! Gorse and/or Broom	0.06	0%
! Gravel and Rock	0.05	50%
! High Producing Exotic Grassland	0.06	100%
! Hill	0.035	15%
! Indigenous Forest	0.1	0%
! Lake or Pond	0.06	100%
! Landslide	0.04	0%
! Low Producing Grassland	0.06	0%
! Manuka and/or Kanuka	0.06	0%
! Matagouri or Grey Scrub	0.06	0%
! Mixed Exotic Shrubland	0.06	0%
! Orchard, Vineyard or Other Perennial Crop	0.06	10%
! Pads	0.035	50%
! River	0.06	100%
! Road	0.03	90%
! Road Parcel	0.03	70%
! Short-rotation Cropland	0.06	0%
! Urban Parkland/Open Space	0.06	0%



LEGEND

- SITE EXTENT
- MODEL EXTENT

LC_Existing_Modded

- Buildings
- Built-up Area (settlement)
- Deciduous Hardwoods
- Depleted Grassland
- Driveway
- Exotic Forest
- Forest - Harvested
- Gorse and/or Broom
- Gravel and Rock
- High Producing Exotic Grassland
- Hill
- Indigenous Forest
- Lake or Pond
- Landslide
- Low Producing Grassland
- Manuka and/or Kanuka
- Matagouri or Grey Scrub
- Mixed Exotic Shrubland
- Orchard, Vineyard or Crop
- Pads
- River
- Road
- Road Parcel
- Short-rotation Cropland
- Urban Parkland/Open Space

MAP PROJECTION:
NZGD2000 / Mount Nicholas 2000 (EPSG:2128)

REV	DESCRIPTION	DRN	CHK	APP	DATE
A	FIRST ISSUE	PK	SL	JK	11/02/2026

PLOT DATE ----

MCKENZIE & CO.

WWW.MCKENZIEANDCO.CO.NZ

CLIENT: RIDGEBURN LTD

PROJECT: RIDGEBURN
122 MORVEN FERRY ROAD
ARROW JUNCTION
QUEENSTOWN

TITLE: STORMWATER
PRE-DEVELOPMENT
LAND COVER PLAN

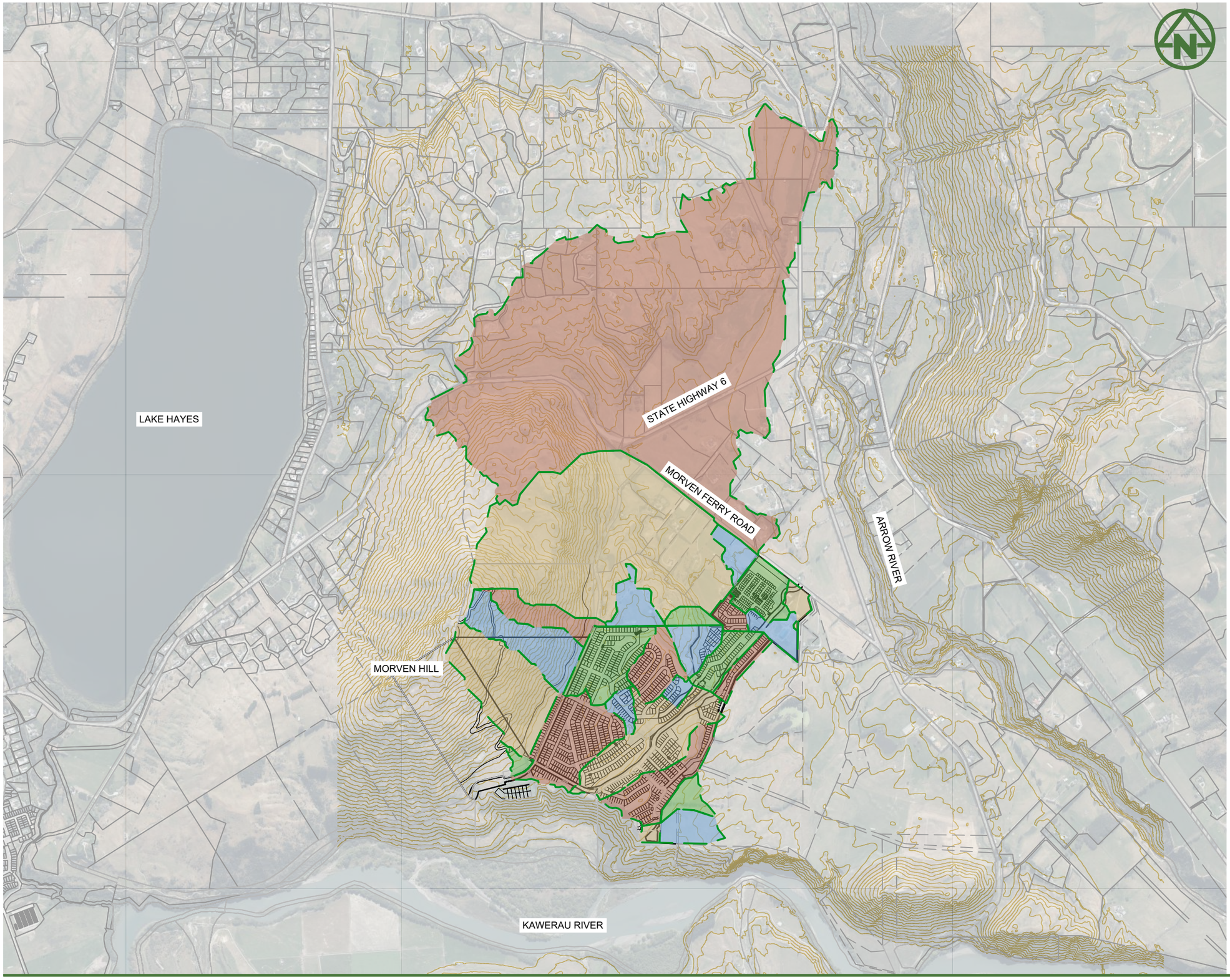
PURPOSE OF ISSUE: RESOURCE CONSENT

SCALE: 1:25,000

DRAWING NO: 4048-0-4501

REV: A

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NOTES

1. DATA RECEIVED FROM VIRIDIS ON 04/11/2025. REFER TO VIRIDIS DRAWING 10339-MAP2-3 FOR DETAILS.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE ENGINEERING INFRASTRUCTURE AND SERVICING REPORT.
3. COORDINATE REFERENCE SYSTEM IS EPSG:2128 - NZGD2000 / MOUNT NICHOLAS 2000.
4. CATCHMENTS DELINEATED IN QGIS WERE USED TO COMPUTE EXISTING WETLAND FLOWS FOR PRE- AND POST-DEVELOPMENT USING TP108 HYDROLOGY PARAMETERS MODELLED IN HEC-HMS.

LEGEND:

SITE BOUNDARY

PROPOSED PRE-DEVELOPMENT CATCHMENT BOUNDARY

EXISTING CONTOUR (1.0m)

CATCHMENT AREAS

MCKENZIE & CO.

REV	DESCRIPTION	DRN BY	CHK BY	APP BY	DATE
A	FIRST ISSUE	TDW	TDW		12/02/26

CLIENT: RIDGEBURN LTD

PROJECT: RIDGEBURN
122 MORVEN FERRY ROAD
ARROW JUNCTION
QUEENSTOWN

TITLE: STORMWATER
1% AEP PRE DEVELOPMENT
OVERLAND FLOW PATH
CATCHMENT PLAN - OVERALL

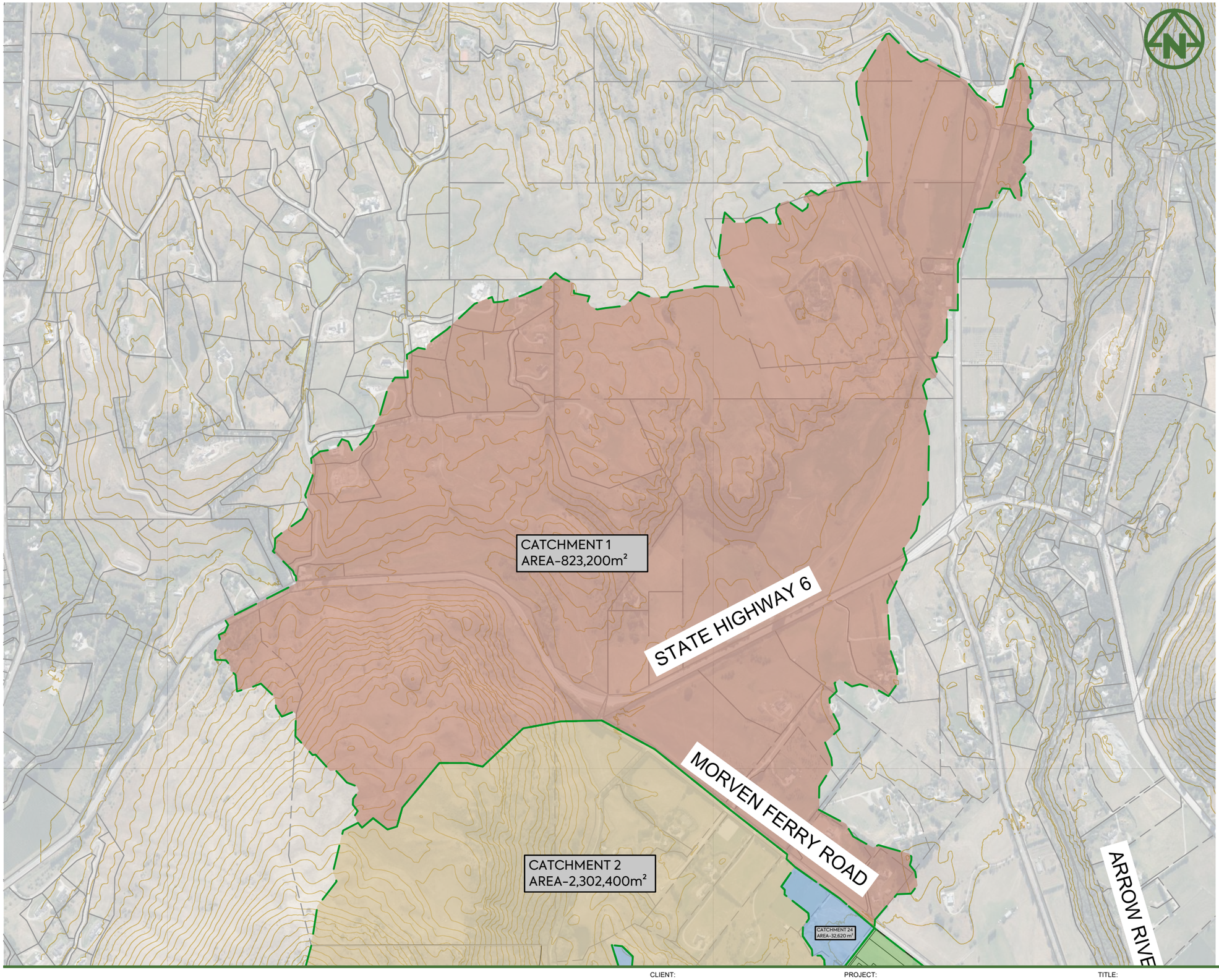
PURPOSE OF ISSUE: FOR INFORMATION

SCALE: 1:20000m @ A3
DO NOT SCALE

DRAWING NO: 4048-0-4502

REV: A

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NOTES

1. DATA RECEIVED FROM VIRIDIS ON 04/11/2025. REFER TO VIRIDIS DRAWING 10339-MAP2-3 FOR DETAILS.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE ENGINEERING INFRASTRUCTURE AND SERVICING REPORT.
3. COORDINATE REFERENCE SYSTEM IS EPSG:2128 - NZGD2000 / MOUNT NICHOLAS 2000.
4. CATCHMENTS DELINEATED IN QGIS WERE USED TO COMPUTE EXISTING WETLAND FLOWS FOR PRE- AND POST-DEVELOPMENT USING TP108 HYDROLOGY PARAMETERS MODELLED IN HEC-HMS.

LEGEND:

SITE BOUNDARY

PROPOSED PRE-DEVELOPMENT CATCHMENT BOUNDARY

EXISTING CONTOUR (1.0m)

CATCHMENT AREAS

MCKENZIE & CO.

REV	DESCRIPTION	DRN BY	CHK BY	APP BY	DATE
A	FIRST ISSUE	TDW	TDW		12/02/26

CLIENT: RIDGEBURN LTD

PROJECT: RIDGEBURN
122 MORVEN FERRY ROAD
ARROW JUNCTION
QUEENSTOWN

TITLE: STORMWATER
1% AEP PRE DEVELOPMENT
OVERLAND FLOW PATH
CATCHMENT PLAN - SHEET 1

PURPOSE OF ISSUE: FOR INFORMATION

SCALE: 1:10000m @ A3
DO NOT SCALE

DRAWING NO: 4048-0-4503

REV: A

PLOT DATE 2026-02-18 11:53:59 WWW.MCKENZIEANDCO.CO.NZ THIS DRAWING IS SOLELY FOR USE BY THE CLIENT ON THIS PROJECT ONLY. NO LIABILITY IS ACCEPTED IN ITS USE BY ANY OTHER ENTITY OR FOR ANY OTHER PURPOSE

MORVEN FERRY ROAD

CATCHMENT 2
AREA-2,302,400m²

CATCHMENT 24
AREA-32,620 m²

CATCHMENT 9
AREA-68,553m²

CATCHMENT 10
AREA-19,270 m²

CATCHMENT 3
AREA-65,886 m²

CATCHMENT 6
AREA-49,349m²

CATCHMENT 7
AREA-21,637 m²

CATCHMENT 8
AREA-22,751 m²

CATCHMENT 11
AREA-35,530 m²

CATCHMENT 14
AREA-49,319m²

CATCHMENT 13
AREA-50,515m²

CATCHMENT 4
AREA-123,900 m²

CATCHMENT 16
AREA-116,200m²

KAWERAU RIVER

NOTES

1. DATA RECEIVED FROM VIRIDIS ON 04/11/2025. REFER TO VIRIDIS DRAWING 10339-MAP2-3 FOR DETAILS.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE ENGINEERING INFRASTRUCTURE AND SERVICING REPORT.
3. COORDINATE REFERENCE SYSTEM IS EPSG:2128 - NZGD2000 / MOUNT NICHOLAS 2000.
4. CATCHMENTS DELINEATED IN QGIS WERE USED TO COMPUTE EXISTING WETLAND FLOWS FOR PRE- AND POST-DEVELOPMENT USING TP108 HYDROLOGY PARAMETERS MODELLED IN HEC-HMS.

LEGEND:

SITE BOUNDARY

PROPOSED PRE-DEVELOPMENT CATCHMENT BOUNDARY

EXISTING CONTOUR (1.0m)

CATCHMENT AREAS

MCKENZIE & CO.

REV	DESCRIPTION	DRN BY	CHK BY	APP BY	DATE
A	FIRST ISSUE	TDW	TDW		12/02/26

CLIENT: RIDGEBURN LTD

PROJECT: RIDGEBURN
122 MORVEN FERRY ROAD
ARROW JUNCTION
QUEENSTOWN

TITLE: STORMWATER
1% AEP PRE DEVELOPMENT
OVERLAND FLOW PATH
CATCHMENT PLAN-SHEET 2

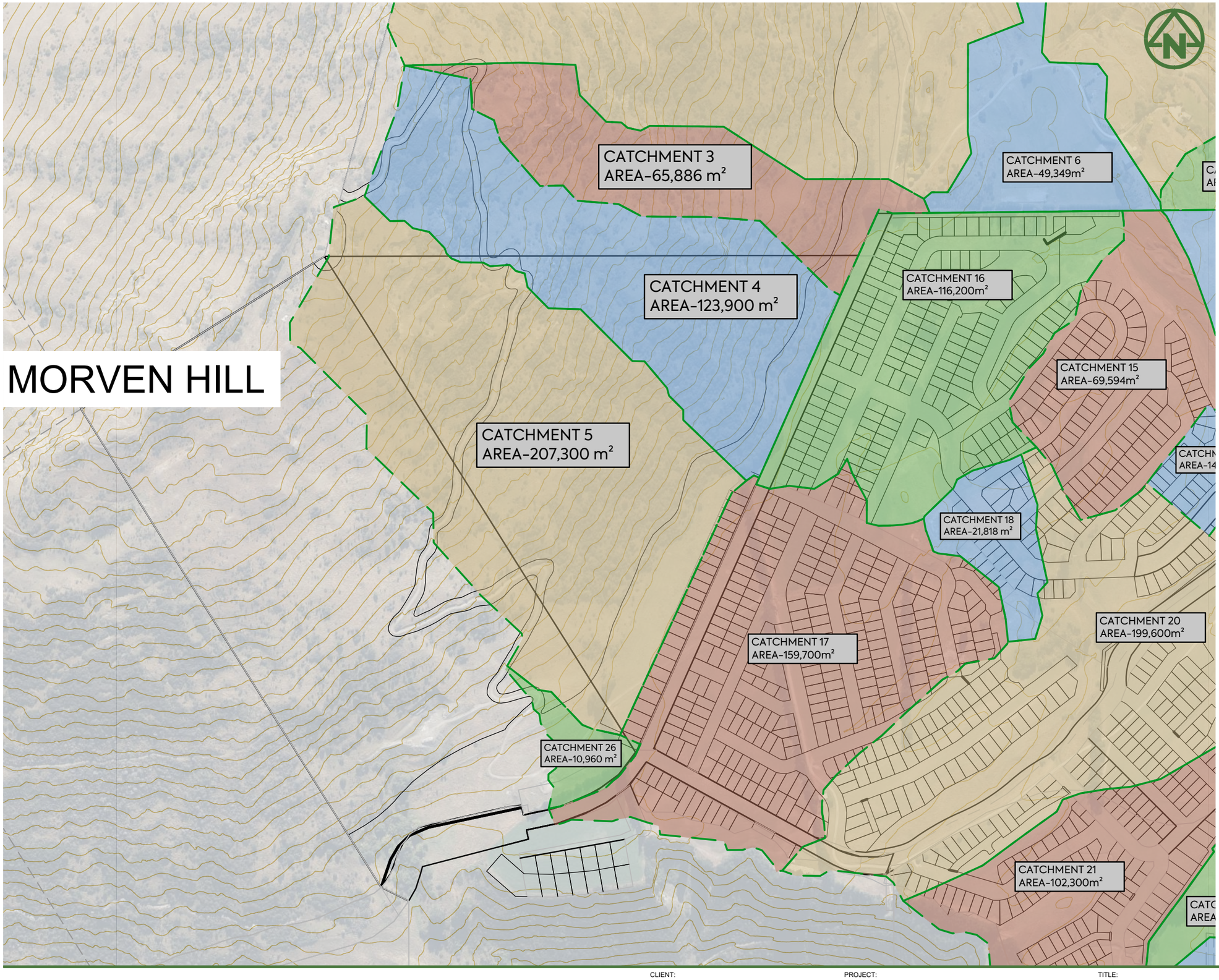
PURPOSE OF ISSUE: RESOURCE CONSENT

SCALE: 1:5000m @ A3
DO NOT SCALE

DRAWING NO: 4048-0-4504

REV: A

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NOTES

1. DATA RECEIVED FROM VIRIDIS ON 04/11/2025. REFER TO VIRIDIS DRAWING 10339-MAP2-3 FOR DETAILS.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE ENGINEERING INFRASTRUCTURE AND SERVICING REPORT.
3. COORDINATE REFERENCE SYSTEM IS EPSG:2128 - NZGD2000 / MOUNT NICHOLAS 2000.
4. CATCHMENTS DELINEATED IN QGIS WERE USED TO COMPUTE EXISTING WETLAND FLOWS FOR PRE- AND POST-DEVELOPMENT USING TP108 HYDROLOGY PARAMETERS MODELLED IN HEC-HMS.

LEGEND:

SITE BOUNDARY

PROPOSED PRE-DEVELOPMENT CATCHMENT BOUNDARY

EXISTING CONTOUR (1.0m)

CATCHMENT AREAS

MCKENZIE & CO.

REV	DESCRIPTION	DRN BY	CHK BY	APP BY	DATE
A	FIRST ISSUE	TDW	TDW		12/02/26

CLIENT: RIDGEBURN LTD

PROJECT: RIDGEBURN
122 MORVEN FERRY ROAD
ARROW JUNCTION
QUEENSTOWN

TITLE: STORMWATER
1% AEP PRE DEVELOPMENT
OVERLAND FLOW PATH
CATCHMENT PLAN-SHEET 3

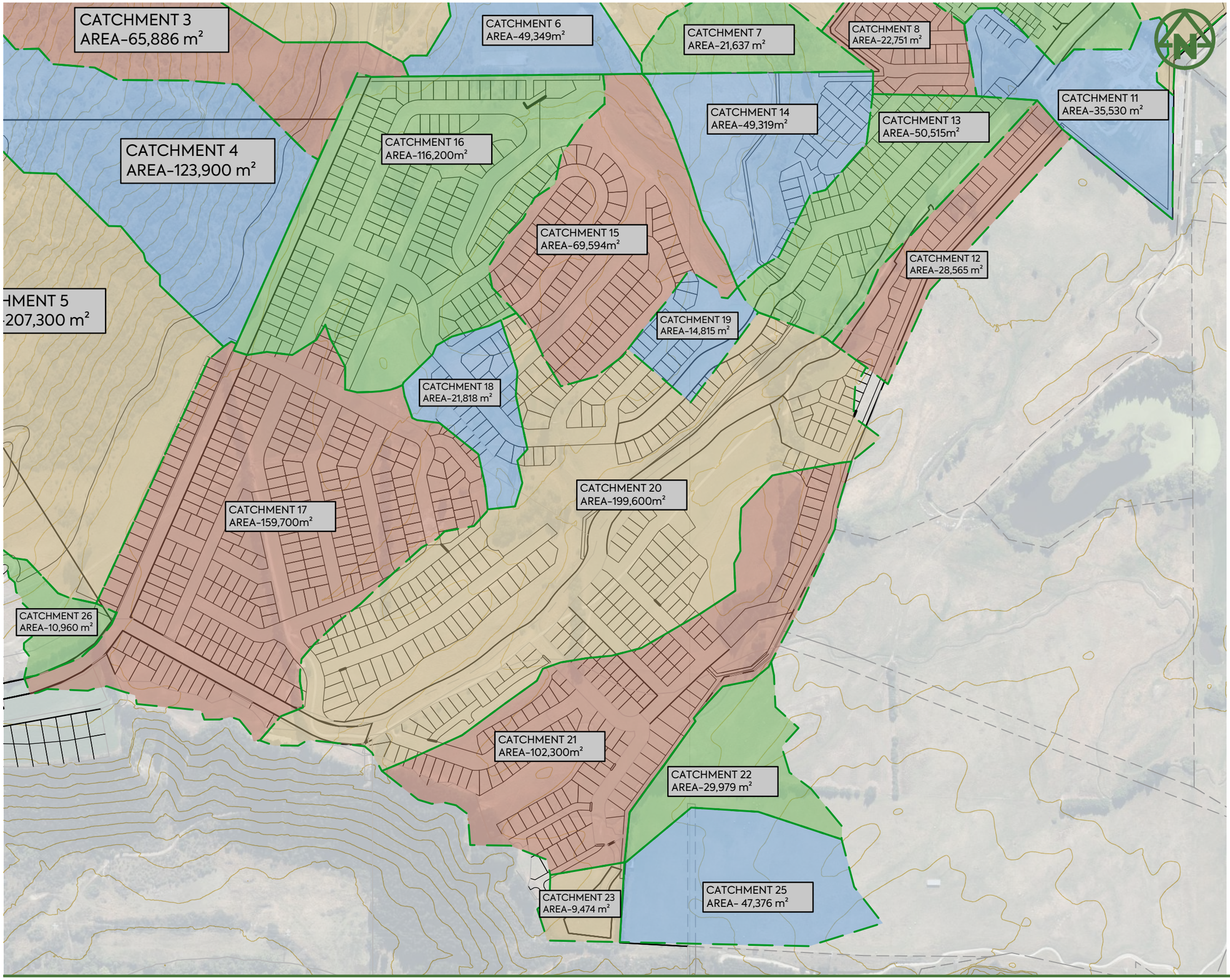
PURPOSE OF ISSUE: RESOURCE CONSENT

SCALE: 1:5000m @ A3
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DRAWING NO: 4048-0-4505

REV: A

PLOT DATE 2026-02-18 11:54:31 WWW.MCKENZIEANDCO.CO.NZ THIS DRAWING IS SOLELY FOR USE BY THE CLIENT ON THIS PROJECT ONLY. NO LIABILITY IS ACCEPTED IN ITS USE BY ANY OTHER ENTITY OR FOR ANY OTHER PURPOSE



NOTES

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2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE ENGINEERING INFRASTRUCTURE AND SERVICING REPORT.
3. COORDINATE REFERENCE SYSTEM IS EPSG:2128 - NZGD2000 / MOUNT NICHOLAS 2000.
4. CATCHMENTS DELINEATED IN QGIS WERE USED TO COMPUTE EXISTING WETLAND FLOWS FOR PRE- AND POST-DEVELOPMENT USING TP108 HYDROLOGY PARAMETERS MODELLED IN HEC-HMS.

LEGEND:

SITE BOUNDARY

PROPOSED PRE-DEVELOPMENT CATCHMENT BOUNDARY

EXISTING CONTOUR (1.0m)

CATCHMENT AREAS

MCKENZIE & CO.

REV	DESCRIPTION	DRN BY	CHK BY	APP BY	DATE
A	FIRST ISSUE	TDW	TDW		12/02/26

CLIENT: RIDGEBURN LTD

PROJECT: RIDGEBURN
122 MORVEN FERRY ROAD
ARROW JUNCTION
QUEENSTOWN

TITLE: STORMWATER
1% AEP PRE DEVELOPMENT
OVERLAND FLOW PATH
CATCHMENT PLAN-SHEET 4

PURPOSE OF ISSUE: RESOURCE CONSENT

SCALE: 1:5000m @ A3
DO NOT SCALE

DRAWING NO: 4048-0-4506

REV: A

PLOT DATE 2026-02-18 11:54:48 WWW.MCKENZIEANDCO.CO.NZ THIS DRAWING IS SOLELY FOR USE BY THE CLIENT ON THIS PROJECT ONLY. NO LIABILITY IS ACCEPTED IN ITS USE BY ANY OTHER ENTITY OR FOR ANY OTHER PURPOSE