Jessica Riches

From: Sarah Burrow
Sent: 28 February 2025 09:19
To: Gardiner Hanson; Jessica Riches
Cc: Harvey Wingfield; Julson Delishaj; Andrew Dennis; Charlie Cooper; John Longhorn; David Easton
Subject: RE: F/14/24/RES (IRM) & F/15/24/RES (RM1) - LLFA Response

Morning Gardiner,

I will proceed and take the catchment plan into account.

It had not been informing my consultation as it had not been uploaded to this application and I have not reviewed the updated information for RM4 yet (I have been instructed to review IRM first). However, I will adjust my comments accordingly where appropriate. I am sure you can appreciate that it is frustrating to be asked to consider additional documents mid-review. It is an unorthodox approach.

Kind regards

Sarah Burrow
Flood Risk and Drainage Engineer, Coastal Engineers and Flood Prevention

[redacted]

Usual working pattern:
Monday – Flexible between 8am and 6pm
Tuesday and Wednesday – 9:15am to 2:45pm
Thursday – 9am to 6pm
Friday – Flexible between 8am and 6pm

Arun District Council, Civic Centre, Maltravers Rd
Littlehampton, West Sussex, BN17 5LF
www.arun.gov.uk

From: Gardiner Hanson <gardiner.hanson@torandco.com>
Sent: 28 February 2025 08:14
To: Jessica Riches <[redacted]>
Cc: Harvey Wingfield <[redacted]>; Julson Delishaj <[redacted]>; Andrew Dennis <[redacted]>Charlie Cooper [redacted]; John Longhorn [redacted] David Easton <David.Easton@arun.gov.uk>; Sarah Burrow [redacted]
Subject: Re: F/14/24/RES (IRM) & F/15/24/RES (RM1) - LLFA Response

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Morning Jess,

Thanks for flagging the corrupted file. I'm not sure how that happened but please see updated attached.

The response letter had already been prepared in response to LLFA comments so we considered the sign-posting and supplemental information would only be helpful for eventual LLFA and ADC review. It's very welcome news that you've confirmed Sarah is now reviewing IRM.

We don't foresee how the attached would necessitate any formal re-consultation as the appended drainage catchment plan was already provided in response to RM4 and simply clarifies how site-wide Qbar calculations were derived. The appended 1 in 2-year calculations are only provided to supplement to the 1 in 1 year drainage calculations for IRM as requested by the LLFA. Overall, the overarching strategy outlined in our December submission remains unchanged.

Our apologies on potential confusion, but as outlined above, the information enclosed within was only provided to assist with officer review.

Happy to discuss on Monday if helpful.

Kind regards,

Gardiner Hanson
Technical Director
Planning

[redacted]

From: Jessica Riches <[redacted]>
Date: Thursday, 27 February 2025 at 18:16
To: Gardiner Hanson <[redacted]>
Cc: Harvey Wingfield <[redacted]>, Julson Delishaj <[redacted]>, Andrew Dennis <[redacted]>, Charlie Cooper <[redacted]>, John Longhorn <[redacted]>, David Easton <[redacted]>
Subject: RE: F/14/24/RES (IRM) & F/15/24/RES (RM1) - LLFA Response

Hi Gardiner,

Apologies, I had not seen this prior to sending out my email just now. I have tried opening the letter in your email, however it appears to be corrupted and cannot be opened (I have tried on my phone too).

Yes, as discussed, I have reached out to WSCC LLFA already to confirm which plans have been reviewed as part of their assessment. I am awaiting a final response on this.

I had also originally requested a short email to confirm that you wanted clarification on the plans / information reviewed by WSCC LLFA, not an additional signposting letter. As stated previously (see attached email), I had requested no further amended information on this application until all reviews by all engineers were complete and up to date as this was causing challenges with reviews. However, you reference in your email "Ardent have included a supplementary drainage catchment plan for information and additional 1 in 2 year drainage calculation within the appendix of the letter to provide final clarifications in response to the LLFA queries."

Sarah has been working on the applications as of today, as per my last email to you, however, this new information may impact upon the review and she may need to assess it now. Therefore, this may cause additional delays in receiving a response given the contents of this letter now updates various drainage information. This may also require formal re-consultation with WSCC LLFA.

I will have to liaise with my line manager on Monday about this and get back to you on how to approach this additional information.

Kind regards,

Jessica Riches *(She / Her)*
Principal Planning Officer
Strategic Development Team, Planning

Please note that I am on annual leave on 28th February.

[redacted]

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Littlehampton, West Sussex, BN17 5LF
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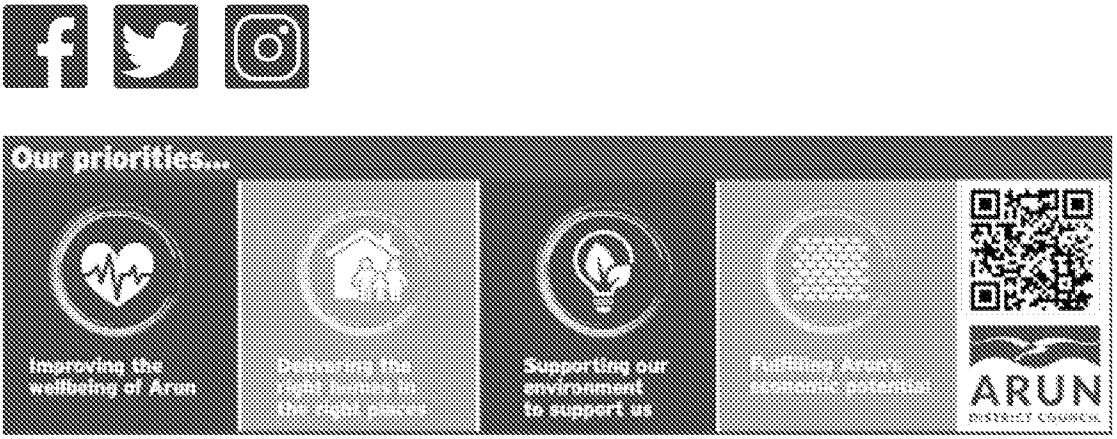

From: Gardiner Hanson <[redacted]>
Sent: 27 February 2025 16:27
To: Jessica Riches <[redacted]>
Cc: Julson Delishaj <[redacted]>; Charlie Cooper <[redacted]>; Andrew Dennis <[redacted]>; Harvey Wingfield <[redacted]>; John Longhorn <[redacted]>
Subject: F/14/24/RES (IRM) & F/15/24/RES (RM1) - LLFA Response

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Afternoon Jess,

As discussed yesterday, Ardent had been preparing the attached response to LLFA comments dated 17th Feb. 2025 related to the above referenced IRM and RM1 applications.

Based on our review, it appears that the LLFA may not have based their 17th Feb. response on the Jan. 2025 re-submission documents given the LLFA responses suggested they had reviewed the original drainage strategy (Sept 2024) and Ardent response Technical Note (dated 2nd Dec. 2024):

> *Annex*
> *The following documents have been reviewed, which have been submitted to support the application;*
> *Report: RM1 (North) Drainage Technical Note, prepared by Ardent, September 2024, REF 2205771-R17-C*
> *Report: F/15/24/RES &F/14/24/RES Technical Note, prepared by Ardent, December 2024, REF CC/2205771*

The attached response letter predominantly sign-posts to the documents/plans that were already re-submitted and to be re-consulted upon at the end of Jan. 2025. In addition, Ardent have included a supplementary drainage catchment plan for information and additional 1 in 2 year drainage calculation within the appendix of the letter to provide final clarifications in response to the LLFA queries.

We are of the view that the attached and review of the Jan. 2025 re-consultation documents/plans by the LLFA will fully resolve their queries and allow them to remove their standing objections to the above referenced applications.

If you could please share the attached with the LLFA (and ADC Drainage for information) that would be much appreciated.

Kind regards,

Gardiner Hanson
Technical Director
Planning

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T 02033 367530
gardiner.hanson@torandco.com

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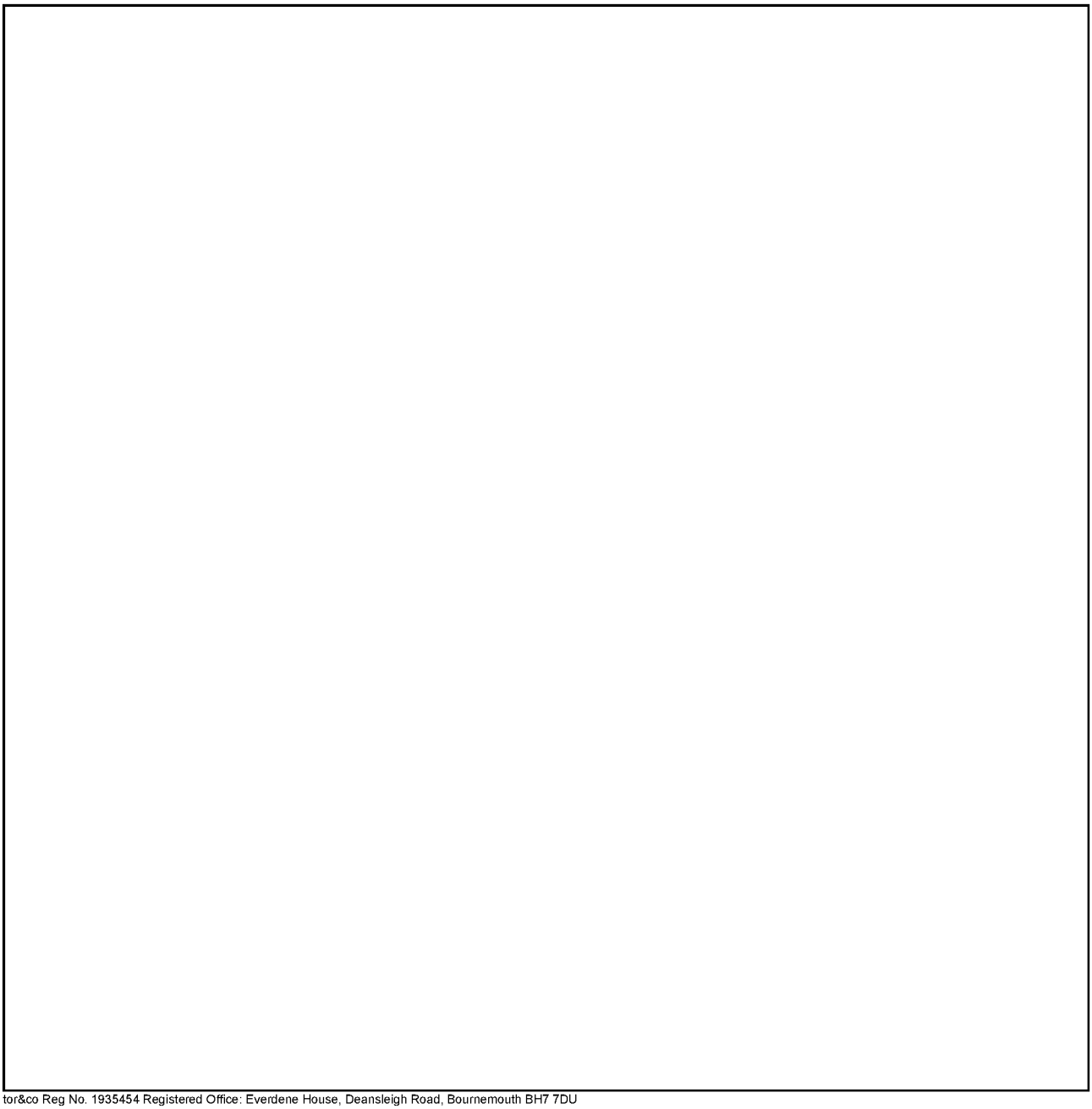
London
W1B 4BQ



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ARDENT
CONSULTING ENGINEERS

Our Ref: 2205771/VL/25-02-2025

Mat Jackson
West Sussex County Council
Ground Floor
Northleigh
County Hall
Chichester
PO19 1RH

27th February 2025

Dear Mat Jackson,

Ford Airfield – F/14/24/RES & F/15/24/RES –Drainage Drawings and Calculations

Ardent Consulting Engineers (ACE) was appointed by Vistry Homes Limited to advise on the Drainage and flood risk aspects of the proposals for a residential-led mixed-use development on Land at Ford Airfield, Ford.

This letter has been prepared in response to the latest consultation response from the LLFA regarding the Reserved Matters Applications for the site (Planning References: F/14/24/RES and F/15/24/RES). This letter addresses the LLFA's requests for clarification on the most recent drawings and calculations for the development site. A list of appended drawings and calculations can be found overleaf.

- **Point 3 –Drawings showing discharge rates**:
    - Drawings pertaining to the Infrastructure Reserved Matters and RM1 Phase.
    - Specifically, drawing no. 2205771–D131 IRM (Sheet 2) shows the attenuation basins and outfall from RM1.
    - Drawing 2205771 – D140 (Sheet 1 of 2) Drawing 2205771 - D141 (Sheet 2 of 2) relating to RM1
- **Point 4 – Qbar rates and updated drainage drawings including proposed basin:**
    - Refer to Greenfield runoff rate calculations enclosed. Qbar= 2.42 l/s/ha.
    - Drawing no. 2205771–D131 IRM (Sheet 2) shows the proposed basins.
    - Drawing no. 2205771-D250 shows the pre-development catchment and a comparison of pre and post-development discharge rates. This is enclosed as supplementary information for ease of understanding.
- **Point 6 – Updated Drainage Calculations:**
    - Refer to additional 2 year calculations (Drainage Calculations North) and (Drainage Calculations South (Network 1 and 2). The 1 in 1 year calculations have previously been provided and the 1 in 2 year runs have now been appended as supplementary information for West Sussex LLFA.
    - It should be noted that the calculations show some surcharging in the network during the 1 in 2 year event (for critical storm durations). This will be reviewed during the detailed design,

once the plot drainage is finalised, as this will reflect the final impermeable areas and actual capacity of the entire drainage network. It should also be noted that surcharging immediately upstream of the flow controls is expected, and unavoidable, and reflects the expected operation of the flow control.

Yours sincerely,

Charlie Cooper

Charlie Cooper
Associate Director

Enc.

Document Name	**Previous Drawings Ref. (December submission)**	**Updated Drawing Ref.**
Drawing 2205771–D130 IRM (Sheet 1)	**Rev B** - As previously submitted - 2205771-R16-C - Appendix D	
Drawing 2205771–D131 IRM (Sheet 2)	**Rev C** - As previously submitted - 2205771-R16-C - Appendix D	
Drawing 2205771–D132 IRM (Sheet 3)	**Rev C** - As previously submitted - 2205771-R16-C - Appendix D	
Drawing 2205771–D133 IRM (Sheet 4)	**Rev C** - As previously submitted - 2205771-R16-C - Appendix D	
Drawing 2205771–D134 IRM (Sheet 5)	**Rev B** - As previously submitted - 2205771-R16-C - Appendix D	
Drawing 2205771–D135 IRM (Sheet 6)	**Rev B** - As previously submitted - 2205771-R16-C - Appendix D	
Drawing 2205771–D136 IRM (Sheet 7)	**Rev B** - As previously submitted - 2205771-R16-C - Appendix D	
Drawing 2205771 – D140 RM1 (Sheet 1 of 2)	**Rev B** - As previously submitted - 2205771-R17-D – Appendix D	
Drawing 2205771 - D141 RM1 (Sheet 2 of 2)	**Rev B -** - As previously submitted - 2205771-R17-D – Appendix D	

ARUN DISTRICT COUNCIL F/15/24/RES

2205771-D250 Pre-development Catchment Areas Plan	**New drawing for ease of understanding**
Greenfield Runoff Rate Calculations	As previously submitted - 2205771-R16-C - Appendix E
IRM - Northern Infrastructure – 1 in 2 year	**Additional calculations**
IRM - Northern Infrastructure – 1 in 30 year	As previously submitted - 2205771 - R16-C - Appendix E
IRM - Northern Infrastructure – 1 in 100 year +CC	As previously submitted - 2205771 - R16-C - Appendix E
IRM - Southern Infrastructure – Outfall 1 – 1 in 2 year	**Additional calculations**
IRM - Southern Infrastructure – Outfall 1 – 1 in 30 year	As previously submitted - 2205771-R16-C - Appendix E
IRM - Southern Infrastructure – Outfall 1 – 1 in 100 year +CC	As previously submitted - 2205771-R16-C - Appendix E
IRM - Southern Infrastructure – Outfall 2 – 1 in 2 year	**Additional calculations**
IRM - Southern Infrastructure – Outfall 2 – 1 in 30 year	As previously submitted - 2205771-R16-C - Appendix E
IRM - Southern Infrastructure – Outfall 2 – 1 in 100 year +CC	As previously submitted - 2205771-R16-C - Appendix E

N

PRE AND POST-DEVELOPMENT DISCHARGE RATES		
CATCHMENT/ OUTFALL no.	PRE-DEVELOPMENT GREENFIELD RUNOFF RATE (QBAR) (l/s)	POST-DEVELOPMENT MAXIMUM ALLOWABLE DISCHARGE RATE (1 IN 100YR +CC) (l/s)
1	78.23	13.30
2	19.72	6.80
3	53.70	8.40

KEY

- SITE BOUNDARY
- EXISTING DITCH
- CATCHMENT 1
- CATCHMENT 2
- CATCHMENT 3
- NON-CONTRIBUTING AREAS

PRE-DEVELOPMENT CATCHMENT AREA 1
AREA - 32.33 ha
MEAN GREENFIELD RUNOFF RATE (Qbar) - 78.23 l/s (2.42 l/s/ha)
OUTFALL 1 POST-DEVELOPMENT DESIGN FLOW (1 IN 100YR+CC) - 13.30 l/s

AREAS DO NOT CURRENTLY DRAIN TO THE PROPOSED OUTFALL LOCATIONS

PRE-DEVELOPMENT CATCHMENT AREA 2
AREA - 8.15 ha
MEAN GREENFIELD RUNOFF RATE (Qbar) -19.72 l/s (2.42 l/s/ha)
OUTFALL 2 POST- DEVELOPMENT DESIGN FLOW RATE (1 IN 100YR+CC) - 6.8 l/s

PRE-DEVELOPMENT CATCHMENT AREA 3
AREA - 22.19 ha
MEAN GREENFIELD RUNOFF RATE (Qbar) - 53.70 l/s (2.42 l/s/ha)
OUTFALL 3 POST-DEVELOPMENT DESIGN FLOW RATE (1 IN 100YR+CC) - 8.4 l/s

0m 20m 100m
Scale: 1:2000 @ A0

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DRAFT

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Rev	Description	Drn	Chk	App	Date

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Web: www.ardent-ce.co.uk
E-mail: enquiries@ardent-ce.co.uk

Client: VISTRY SOUTH EAST

Project Title: FORD AIRFIELD, ARUN

Drawing Title: PRE-DEVELOPMENT DRAINAGE CATCHMENTS PLAN

A0 Scale	Date	Designed by
1:2000	03/02/2025	VL
Drawn by	**Checked by**	**Approved by**
VL	CC	CC

Drawing Number: 2205771- 250 Rev -

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File Location: y:\ardent projects\2205771 - ford airfield, arun, section 278 works\technical\acad\drawings\sketches\2205771-sk001 pre-development catchment areas plan.dwg

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
Spur 15	0.400	5.00	7.598	1200	499164.586	103023.093	1.998
201	0.032	5.00	7.548	1800	499188.476	103024.222	3.128
202	0.032	5.00	7.323	1800	499187.329	103047.320	2.985
Spur 14	0.200	5.00	7.501		499165.533	103045.387	2.521
Spur 13	1.333	5.00	7.533	1500	499193.793	103066.286	3.639
203	0.032	5.00	7.345	1350	499183.054	103058.759	3.478
Spur 12	0.680	5.00	7.755	1500	499174.824	103128.322	2.565
204	0.032	5.00	7.740	1350	499146.555	103106.854	3.976
205			7.994		499131.211	103127.074	4.255
206			8.080	1350	499125.297	103133.590	4.350
207	0.032	5.00	8.188		499115.928	103140.420	4.487
Spur 10	0.070	5.00	7.500	1200	499036.026	103232.241	2.210
208	0.092	5.00	7.302	1350	499025.262	103224.277	2.316
209	0.032	5.00	7.748	1500	499066.837	103165.583	3.095
210	0.032	5.00	8.001	1500	499086.141	103152.161	4.285
211			8.315	1500	499105.533	103144.951	4.647
212	0.154	5.00	8.085		499121.735	103188.260	4.509
213			8.406		499129.781	103197.173	4.854
Dummy 3	0.358	5.00	7.991	450	499093.327	103251.235	2.182
214			8.221	1650	499133.099	103199.667	4.677
215	0.154	5.00	7.867		499185.028	103238.696	4.453
216	0.153	5.00	7.602		499196.267	103250.829	4.221
217			7.445	1650	499201.696	103262.265	4.089
218			7.474		499203.931	103278.600	4.151
Spur 9	0.870	5.00	7.614		499179.282	103319.213	3.384
219			7.549	1650	499188.524	103323.301	4.321
220			7.503		499172.448	103369.943	4.421
221			7.502	1650	499160.704	103388.215	4.484
222			7.550		499151.387	103404.903	4.589
223			7.661	1650	499126.588	103476.761	4.925
224			7.350		499124.847	103496.261	4.671
Spur 11 Optional		5.00	7.251		498968.816	103274.239	2.841
Spur 8	0.140	5.00	7.586		498993.572	103285.027	1.816
225	0.032	5.00	7.597	1500	498982.590	103284.136	3.465
226	0.032	5.00	7.552	1500	498969.293	103304.802	3.463
227	0.032	5.00	7.624	1500	498953.136	103341.169	3.604
Spur 6	2.880	5.00	7.579		498913.959	103393.880	3.545
228			8.128	1350	498926.023	103397.479	4.743
229	0.032	5.00	7.906	1350	498935.528	103402.365	4.546
230			7.844		498946.292	103405.352	4.503
231			7.691	1350	498972.385	103412.939	4.395
Spur 7	1.170	5.00	8.170		499009.327	103417.714	1.575
232			8.106	1350	499006.799	103424.533	4.871
233			7.986	1350	499027.499	103433.612	4.789
Spur 44	0.185	5.00	8.004		499010.106	103455.721	2.434
Spur 16	0.785	5.00	7.644		499017.003	103466.949	3.179
234			7.353	1350	499019.683	103458.627	4.199
235			7.803		499029.034	103461.147	4.665
236			7.679	1650	499041.587	103466.614	4.864
Spur 45		5.00	7.236		499074.236	103484.375	1.886
237			7.314	1650	499075.573	103481.414	4.567
Spur 17	1.400	5.00	7.452		499120.908	103507.200	1.575

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Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
238			7.343	1650	499123.126	103502.123	4.682
Spur 18	0.200	5.00	7.137		499193.225	103543.287	2.262
239			7.353	1650	499196.872	103534.239	4.826
Spur 19	0.130	5.00	6.805		499243.526	103560.773	2.255
240			6.804	1650	499251.889	103558.198	4.377
241			6.600	1650	499267.304	103569.464	4.204
242			6.259	1650	499285.719	103565.600	3.891
243			6.259	1650	499294.729	103600.037	3.956
244			6.000	1650	499343.505	103598.872	3.778
245			6.000	1650	499352.001	103579.988	4.413
246			6.500	1200	499338.247	103550.897	2.211
247			6.400	1200	499336.790	103510.925	2.178
248			6.400		499349.716	103509.298	2.200
Spur 5	0.220	5.00	8.169		498910.933	103428.634	3.679
249	0.032	5.00	8.234	1500	498927.366	103433.036	4.039
Spur 4	0.500	5.00	8.172		498900.916	103492.081	4.002
250	0.032	5.00	8.089	1500	498913.184	103494.634	4.187
251	0.032	5.00	8.057	1500	498908.282	103545.488	4.259
Spur 3	0.500	5.00	7.382		498889.808	103598.946	3.212
252	0.032	5.00	7.397	1800	498907.572	103598.514	4.082
253	0.032	5.00	7.299	1800	498913.758	103660.138	4.087
Spur 1	0.700	5.00	7.424		498908.537	103846.451	3.494
254	0.032	5.00	7.987	1500	498938.961	103841.660	4.377
255	0.032	5.00	7.725	1500	498933.257	103793.220	4.199
Spur 2	0.750	5.00	7.431		498891.533	103725.473	3.481
256	0.032	5.00	7.560	1200	498926.114	103719.980	4.601
Spur 43	0.220	5.00	7.605		498948.935	103749.182	2.755
257	0.026	5.00	7.242	1200	498943.987	103716.688	4.313
Spur 24	0.090	5.00	7.682		498959.039	103705.067	3.754
258			7.515	1200	498960.608	103713.649	4.614
Spur 42	0.220	5.00	7.767		499001.728	103719.893	3.537
Spur 20	0.240	5.00	7.711		498996.776	103697.869	2.871
259	0.026	5.00	7.755	1200	498999.573	103706.526	4.920
Spur 41	0.130	5.00	7.613		499051.249	103703.706	3.263
260	0.026	5.00	7.691	1200	499046.438	103691.389	4.938
Spur 25	0.130	5.00	7.749		499055.732	103678.368	4.081
261			7.819	1200	499059.056	103685.542	5.089
Spur 21	0.290	5.00	7.654		499094.722	103655.229	3.134
262	0.026	5.00	7.779	1200	499100.331	103666.418	5.125
Spur 40	0.084	5.00	7.586		499134.834	103667.231	3.860
263			7.476	1200	499128.537	103653.491	4.874
Spur 26	0.080	5.00	7.352		499132.608	103640.948	2.382
264	0.026	5.00	7.386	1200	499136.771	103649.717	4.800
Spur 22	0.240	5.00	6.756		499183.432	103614.977	2.316
265	0.026	5.00	6.800	1200	499187.411	103625.677	4.307
Spur 23	0.270	5.00	6.341		499234.287	103612.717	2.371
266	0.026	5.00	6.670	1200	499202.428	103621.401	4.203
267			6.556		499214.996	103663.067	4.162
S278 Storage		5.00	6.275		498944.914	103902.661	2.241
S278 S6	0.230	5.00	6.835	1200	498943.518	103896.688	2.920
S278 S7			6.632	1200	498943.736	103885.262	2.784
S278 S8	0.032	5.00	7.512	1200	498942.580	103857.365	3.829

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Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
268	0.032	5.00	7.958	1200	498941.003	103834.844	4.557
Spur 35	0.073	5.00	7.655		498958.160	103821.285	2.205
Spur 27	0.200	5.00	7.516		498958.467	103842.641	4.027
269	0.020	5.00	7.249	1500	498959.687	103832.016	4.123
270	0.020	5.00	7.125	1500	498986.755	103827.919	4.067
Spur 36	0.200	5.00	7.426		499032.631	103805.011	2.546
Spur 28	0.250	5.00	7.353		499038.491	103820.252	2.393
271	0.020	5.00	6.968	1800	499036.213	103812.440	4.190
Spur 29	0.080	5.00	7.442		499072.717	103807.019	2.192
Spur 37	0.053	5.00	7.398		499064.291	103790.266	2.148
272	0.020	5.00	6.971	1800	499067.863	103797.176	4.281
Spur 38	0.150	5.00	7.555		499081.533	103778.710	2.635
273	0.020	5.00	7.094	1800	499086.445	103787.304	4.447
Spur 30	0.330	5.00	7.551		499100.526	103788.106	2.681
274	0.020	5.00	7.147	1800	499097.272	103781.925	4.525
Spur 31	0.070	5.00	7.585		499131.319	103765.768	2.335
275	0.020	5.00	7.124	1800	499126.809	103760.369	4.565
Spur 32	0.390	5.00	7.458		499160.591	103744.016	3.038
276	0.020	5.00	7.040	1800	499154.758	103737.580	4.543
Spur 39	0.250	5.00	7.445		499157.847	103725.251	2.415
277	0.020	5.00	7.013	1800	499162.698	103730.384	4.534
278	0.020	5.00	6.676	1800	499192.740	103705.167	4.262
Spur 33	0.360	5.00	6.795		499211.270	103699.873	2.685
279			6.493	1800	499208.109	103694.685	4.110
280			6.252	1350	499222.731	103685.776	3.898
281			5.828		499242.291	103680.152	3.508
282			4.915		499273.246	103674.875	2.647
Spur 34	0.270	5.00	5.096		499297.248	103683.454	1.980
283			4.609	1500	499297.060	103673.594	2.381
284			5.686	1500	499295.033	103608.199	3.567
285			5.362	1500	499330.361	103607.573	3.302
286			3.800	1500	499358.186	103685.419	1.878
287			3.810		499367.266	103695.131	1.910
288		5.00	6.400		499358.712	103556.598	2.300
289			6.000	1650	499361.760	103577.090	4.430
290			3.800	1350	499382.829	103647.539	1.860
291			3.810		499386.956	103659.733	1.910
292		5.00	3.800		499438.229	103757.672	2.100
293			3.850	1800	499432.495	103768.320	2.170
294			3.446	1200	499409.929	103808.231	2.036
Ex Outfall			2.140		499411.839	103817.234	0.840
Ex Ditch			2.300		499412.938	103825.150	1.047
209a			7.866	1500	499075.818	103158.001	3.250

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ARUN DISTRICT COUNCIL F/15/24/RES

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.027	247	248	12.028	0.600	4.222	4.200	0.022	592.2	1050	13.60	50.0
1.026	246	247	39.999	0.600	4.289	4.222	0.067	597.0	1050	13.44	50.0
1.025	245	246	32.179	0.600	4.343	4.289	0.054	595.9	1050	12.97	50.0
1.024	244	245	20.707	0.600	2.222	2.187	0.035	591.6	1650	12.58	50.0
1.023	243	244	48.790	0.600	2.303	2.222	0.081	602.3	1650	12.40	50.0
1.026_2	242	243	35.596	0.600	2.368	2.303	0.065	547.6	1650	11.98	50.0
1.025_1	241	242	18.816	0.600	2.396	2.368	0.028	672.0	1650	11.65	50.0
1.024_1	240	241	19.093	0.600	2.433	2.396	0.037	516.0	1650	11.47	50.0
1.023_1	239	240	60.008	0.600	2.527	2.427	0.100	600.0	1650	11.31	50.0
17.000	Spur 19	240	8.750	0.600	4.550	3.933	0.617	14.2	150	5.05	50.0
1.022	238	239	80.436	0.600	2.661	2.527	0.134	600.3	1650	10.77	50.0
16.000	Spur 18	239	9.755	0.600	4.875	4.817	0.058	168.2	225	5.16	50.0
1.021	224	238	6.109	0.600	2.679	2.661	0.018	338.0	1650	10.05	50.0
15.000	Spur 17	238	5.540	0.600	5.877	5.768	0.109	50.8	375	5.04	50.0
8.012	237	238	51.067	0.600	2.747	2.661	0.086	600.0	1650	9.06	50.0
14.000	Spur 45	237	3.249	0.600	5.350	5.317	0.032	98.5	150	5.05	50.0
8.011	236	237	37.069	0.600	2.815	2.747	0.068	545.1	1650	8.59	50.0
8.010	235	236	13.692	0.600	3.138	3.115	0.023	595.3	1350	8.27	50.0
8.009	234	235	9.685	0.600	3.154	3.138	0.016	605.3	1350	8.13	50.0
12.000	Spur 44	234	10.008	0.600	5.570	5.511	0.059	169.6	225	5.17	50.0
13.000	Spur 16	234	8.743	0.600	4.465	4.148	0.317	27.6	300	5.05	50.0
8.008	233	234	26.208	0.600	3.197	3.154	0.043	609.5	1350	8.03	50.0
8.007	232	233	22.604	0.600	3.235	3.197	0.038	594.8	1350	7.76	50.0
11.000	Spur 7	232	7.273	0.600	6.595	6.531	0.064	113.6	375	5.07	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.027	1.409	1219.6	1586.5	1.128	1.150	11.706	0.0	1050	1.417
1.026	1.403	1214.7	1586.5	1.161	1.128	11.706	0.0	1050	1.411
1.025	1.404	1215.8	1586.5	0.607	1.161	11.706	0.0	1050	1.413
1.024	1.861	3980.3	1586.5	2.128	2.163	11.706	0.0	722	1.762
1.023	1.845	3944.5	1586.5	2.306	2.128	11.706	0.0	726	1.751
1.026_2	1.935	4138.2	1586.5	2.241	2.306	11.706	0.0	706	1.814
1.025_1	1.746	3733.1	1586.5	2.554	2.241	11.706	0.0	750	1.679
1.024_1	1.994	4263.9	1586.5	2.721	2.554	11.706	0.0	695	1.856
1.023_1	1.848	3952.3	1568.8	3.176	2.727	11.576	0.0	721	1.748
17.000	2.689	47.5	17.6	2.105	2.721	0.130	0.0	63	2.488
1.022	1.848	3951.4	1541.7	3.032	3.176	11.376	0.0	713	1.740
16.000	1.005	40.0	27.1	2.037	2.311	0.200	0.0	136	1.077
1.021	2.467	5274.9	635.3	3.021	3.032	4.688	0.0	381	1.702
15.000	2.546	281.2	189.7	1.200	1.200	1.400	0.0	226	2.724
8.012	1.848	3952.3	716.7	2.917	3.032	5.288	0.0	471	1.426
14.000	1.013	17.9	0.0	1.736	1.847	0.000	0.0	0	0.000
8.011	1.940	4147.8	716.7	2.214	2.917	5.288	0.0	459	1.477
8.010	1.641	2348.3	716.7	3.315	3.214	5.288	0.0	509	1.452
8.009	1.627	2328.7	716.7	3.449	3.315	5.288	0.0	511	1.442
12.000	1.001	39.8	25.1	2.209	1.617	0.185	0.0	130	1.056
13.000	3.005	212.4	106.4	2.870	2.905	0.785	0.0	150	3.007
8.008	1.621	2320.6	585.2	3.429	2.849	4.318	0.0	459	1.365
8.007	1.641	2349.3	585.2	3.521	3.430	4.318	0.0	456	1.377
11.000	1.699	187.6	158.6	1.200	1.200	1.170	0.0	266	1.895

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Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
8.006	231	232	36.315	0.600	3.296	3.235	0.061	595.3	1350	7.53	50.0
9.005	230	231	27.174	0.600	3.341	3.296	0.045	603.9	1350	7.16	50.0
8.004	229	230	11.171	0.600	3.360	3.341	0.019	587.9	1350	6.89	50.0
8.003	227	229	62.679	0.600	4.020	3.360	0.660	96.5	600	6.77	50.0
10.001	228	229	10.687	0.600	3.385	3.360	0.025	427.5	1350	5.21	50.0
10.000_1	Spur 6	228	12.589	0.600	4.034	3.985	0.049	256.9	750	5.12	50.0
8.002	226	227	33.795	0.600	4.089	4.020	0.069	576.7	600	6.34	50.0
8.001	225	226	24.574	0.600	4.132	4.089	0.043	571.5	600	5.69	50.0
10.000	Spur 8	225	11.018	0.600	5.770	5.705	0.065	169.5	225	5.18	50.0
9.000	Spur 11 Optional	225	18.961	0.600	4.410	4.357	0.053	320.0	375	5.28	50.0
1.020	223	224	19.578	0.600	2.736	2.679	0.057	343.5	1650	10.00	50.0
1.019	222	223	76.017	0.600	2.961	2.736	0.225	338.0	1650	9.87	50.0
1.018	221	222	19.113	0.600	3.018	2.961	0.057	338.0	1650	9.36	50.0
1.017	220	221	21.721	0.600	3.082	3.018	0.064	338.0	1650	9.23	50.0
1.016	219	220	49.335	0.600	3.228	3.082	0.146	338.0	1650	9.08	50.0
1.015	218	219	47.282	0.600	3.323	3.228	0.095	500.0	1650	8.75	50.0
7.000	Spur 9	219	10.106	0.600	4.230	4.205	0.025	404.2	450	5.17	50.0
1.014	217	218	16.487	0.600	3.356	3.323	0.033	500.0	1650	8.36	50.0
1.013	216	217	12.659	0.600	3.381	3.356	0.025	500.0	1650	8.22	50.0
1.012	215	216	16.539	0.600	3.414	3.381	0.033	500.0	1650	8.12	50.0
1.011	214	215	64.361	0.600	3.544	3.414	0.130	500.0	1650	7.98	50.0
1.010	213	214	4.151	0.600	3.552	3.544	0.008	500.0	1500	7.45	50.0
6.000_1	Dummy 3	214	65.124	0.600	5.809	5.649	0.160	407.0	450	6.08	50.0
1.009	212	213	12.007	0.600	3.576	3.552	0.024	500.0	1500	7.41	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
8.006	1.641	2348.3	426.6	3.045	3.521	3.148	0.0	386	1.265
9.005	1.629	2331.5	426.6	3.153	3.045	3.148	0.0	387	1.258
8.004	1.651	2363.1	426.6	3.196	3.153	3.148	0.0	385	1.271
8.003	2.479	701.0	32.0	3.004	2.946	0.236	0.0	86	1.286
10.001	1.938	2774.4	390.3	3.398	3.196	2.880	0.0	338	1.394
10.000_1	1.741	769.1	390.3	2.795	3.398	2.880	0.0	378	1.747
8.002	1.007	284.6	27.6	2.863	3.004	0.204	0.0	125	0.648
8.001	1.011	285.9	23.3	2.865	2.863	0.172	0.0	115	0.619
10.000	1.001	39.8	19.0	1.591	1.667	0.140	0.0	109	0.990
9.000	1.007	111.2	0.0	2.466	2.865	0.000	0.0	0	0.000
1.020	2.447	5232.5	635.3	3.275	3.021	4.688	0.0	382	1.692
1.019	2.467	5274.9	635.3	2.939	3.275	4.688	0.0	381	1.702
1.018	2.467	5274.9	635.3	2.854	2.939	4.688	0.0	381	1.702
1.017	2.467	5274.9	635.3	2.771	2.854	4.688	0.0	381	1.702
1.016	2.467	5274.9	635.3	2.671	2.771	4.688	0.0	381	1.702
1.015	2.026	4332.1	517.4	2.501	2.671	3.818	0.0	379	1.394
7.000	1.005	159.8	117.9	2.484	2.484	0.870	0.0	289	1.095
1.014	2.026	4332.1	517.4	2.439	2.501	3.818	0.0	379	1.394
1.013	2.026	4332.1	517.4	2.571	2.439	3.818	0.0	379	1.394
1.012	2.026	4332.1	496.7	2.803	2.571	3.665	0.0	372	1.379
1.011	2.026	4332.1	475.8	3.027	2.803	3.511	0.0	364	1.363
1.010	1.911	3377.1	427.3	3.354	3.177	3.153	0.0	356	1.336
6.000_1	1.001	159.2	48.5	1.732	2.122	0.358	0.0	170	0.883
1.009	1.911	3377.1	427.3	3.009	3.354	3.153	0.0	356	1.336

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Links

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1.008	211	212	46.340	0.600	3.668	3.576	0.092	500.0	1500	7.31	50.0
1.007	207	211	11.340	0.600	3.701	3.668	0.033	343.6	1500	6.81	50.0
5.004	210	211	20.689	0.600	3.716	3.668	0.048	431.0	1500	6.90	50.0
5.003	209a	210	11.860	0.600	4.616	4.595	0.021	564.8	600	6.74	50.0
5.002	209	209a	11.754	0.600	4.653	4.616	0.037	317.7	600	6.54	50.0
5.001	208	209	71.927	0.600	4.986	4.803	0.183	393.0	450	6.40	50.0
6.000	Spur 10	208	13.390	0.600	5.290	5.211	0.079	169.5	225	5.22	50.0
1.006	206	207	11.594	0.600	3.730	3.718	0.012	966.2	1350	6.73	50.0
1.005	205	206	8.800	0.600	3.739	3.730	0.009	977.7	1350	6.58	50.0
1.004	204	205	25.383	0.600	3.764	3.739	0.025	1015.3	1350	6.46	50.0
1.003	203	204	60.376	0.600	3.868	3.764	0.104	580.5	1350	6.13	50.0
4.000	Spur 12	204	35.497	0.600	5.190	4.664	0.526	67.5	600	5.20	50.0
1.002	202	203	12.212	0.600	4.338	4.318	0.020	610.6	900	5.52	50.0
2.000	Spur 14	203	22.041	0.600	4.980	4.850	0.130	169.5	225	5.37	50.0
3.000	Spur 13	203	13.114	0.600	3.894	3.867	0.027	485.7	525	5.22	50.0
1.001	201	202	23.126	0.600	4.420	4.338	0.082	282.0	900	5.36	50.0
1.000	Spur 15	201	23.917	0.600	5.600	4.938	0.662	36.1	300	5.15	50.0
49.002	290	291	12.873	0.600	1.940	1.900	0.040	321.8	375	6.61	50.0
49.001	289	290	73.532	0.600	2.170	1.940	0.230	319.7	375	6.40	50.0
1.026_1	245	289	10.180	0.600	2.187	2.170	0.017	598.8	1650	5.09	50.0
48.000	288	289	20.717	0.600	4.100	4.035	0.065	320.0	1050	5.18	50.0
19.024	286	287	13.295	0.600	1.922	1.900	0.022	604.3	1500	15.95	50.0
19.023	285	286	82.660	0.600	2.060	1.922	0.138	599.1	1500	15.83	50.0
19.022	284	285	35.334	0.600	2.119	2.060	0.059	598.9	1500	15.04	50.0

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1.008	1.911	3377.1	406.4	3.147	3.009	2.999	0.0	346	1.316
1.007	2.308	4078.3	375.8	2.967	3.147	2.773	0.0	302	1.476
5.004	2.059	3639.0	30.6	2.705	3.147	0.226	0.0	95	0.659
5.003	1.017	287.6	26.3	2.650	2.806	0.194	0.0	121	0.642
5.002	1.361	384.7	26.3	2.495	2.650	0.194	0.0	105	0.794
5.001	1.019	162.1	22.0	1.866	2.495	0.162	0.0	111	0.720
6.000	1.001	39.8	9.5	1.985	1.866	0.070	0.0	74	0.822
1.006	1.285	1839.5	371.5	3.000	3.120	2.741	0.0	408	1.019
1.005	1.277	1828.5	371.5	2.905	3.000	2.741	0.0	409	1.014
1.004	1.253	1794.0	371.5	2.626	2.905	2.741	0.0	413	1.000
1.003	1.661	2378.2	275.0	2.127	2.626	2.029	0.0	306	1.131
4.000	2.967	838.9	92.2	1.965	2.476	0.680	0.0	133	1.982
1.002	1.260	801.8	62.9	2.085	2.127	0.464	0.0	168	0.767
2.000	1.001	39.8	27.1	2.296	2.270	0.200	0.0	137	1.075
3.000	1.009	218.5	180.7	3.114	2.953	1.333	0.0	366	1.122
1.001	1.860	1183.5	58.5	2.228	2.085	0.432	0.0	134	0.994
1.000	2.624	185.5	54.2	1.698	2.310	0.400	0.0	110	2.284
49.002	1.004	110.9	0.0	1.485	1.535	0.000	0.0	0	0.000
49.001	1.008	111.3	0.0	3.455	1.485	0.000	0.0	0	0.000
1.026_1	1.850	3956.2	0.0	2.163	2.180	0.000	0.0	0	0.000
48.000	1.921	1663.1	0.0	1.250	0.915	0.000	0.0	0	0.000
19.024	1.737	3069.8	1121.1	0.378	0.410	8.272	0.0	625	1.609
19.023	1.745	3083.4	1121.1	1.802	0.378	8.272	0.0	624	1.615
19.022	1.745	3083.8	1121.1	2.067	1.802	8.272	0.0	623	1.614

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19.021	283	284	65.426	0.600	2.228	2.119	0.109	600.2	1500	14.70	50.0
19.020	282	283	23.848	0.600	2.268	2.228	0.040	596.2	1350	14.07	50.0
47.000	Spur 34	283	9.862	0.600	3.116	3.075	0.041	240.5	300	5.16	50.0
19.019	281	282	31.402	0.600	2.320	2.268	0.052	603.9	1350	13.83	50.0
19.018	280	281	20.352	0.600	2.354	2.320	0.034	598.6	1350	13.51	50.0
18.017	267	280	23.990	0.600	2.394	2.354	0.040	599.8	1200	13.30	50.0
35.015	279	280	17.122	0.600	2.383	2.354	0.029	590.4	900	10.53	50.0
46.000	Spur 33	279	6.075	0.600	4.110	4.085	0.025	243.0	200	5.10	50.0
35.014	278	279	18.603	0.600	2.414	2.383	0.031	600.1	900	10.31	50.0
35.013	277	278	39.223	0.600	2.479	2.414	0.065	603.4	900	10.07	50.0
45.000	Spur 39	277	7.063	0.600	5.030	4.988	0.042	168.2	225	5.12	50.0
35.012	276	277	10.716	0.600	2.497	2.479	0.018	595.3	750	9.55	50.0
44.000	Spur 32	276	8.686	0.600	4.420	4.384	0.036	241.3	300	5.14	50.0
35.011	275	276	36.062	0.600	2.559	2.497	0.062	581.6	750	9.39	50.0
43.000	Spur 31	275	7.035	0.600	5.250	5.180	0.070	100.5	150	5.12	50.0
35.010	274	275	36.566	0.600	2.622	2.559	0.063	580.4	750	8.87	50.0
42.000	Spur 30	274	6.985	0.600	4.870	4.841	0.029	240.9	300	5.12	50.0
35.009	273	274	12.090	0.600	2.647	2.622	0.025	483.6	750	8.34	50.0
41.000	Spur 38	273	9.699	0.600	4.920	4.861	0.059	167.8	225	5.16	50.0
35.008	272	273	21.042	0.600	2.690	2.647	0.043	489.3	750	8.18	50.0
40.000	Spur 37	272	7.770	0.600	5.250	5.172	0.078	99.7	150	5.13	50.0
30.000	Spur 29	272	10.975	0.600	5.250	5.141	0.109	100.7	150	5.13	50.0
35.007	271	272	35.138	0.600	2.778	2.690	0.088	399.3	750	7.91	50.0
37.000	Spur 36	271	8.247	0.600	4.880	4.831	0.049	168.3	225	5.14	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
19.021	1.743	3080.3	1121.1	0.884	2.067	8.272	0.0	624	1.613
19.020	1.639	2346.5	1084.5	1.297	1.031	8.002	0.0	644	1.609
47.000	1.009	71.3	36.6	1.680	1.234	0.270	0.0	152	1.015
19.019	1.629	2331.4	1084.5	2.158	1.297	8.002	0.0	646	1.601
19.018	1.636	2341.8	1084.5	2.548	2.158	8.002	0.0	645	1.607
18.017	1.520	1719.1	691.4	2.962	2.628	5.102	0.0	528	1.442
35.015	1.282	815.5	393.0	3.210	2.998	2.900	0.0	440	1.270
46.000	1.004	71.0	48.8	2.385	2.108	0.360	0.0	183	1.079
35.014	1.271	808.9	344.2	3.382	3.210	2.540	0.0	409	1.222
35.013	1.268	806.6	341.5	3.634	3.362	2.520	0.0	408	1.218
45.000	1.005	40.0	33.9	2.190	1.800	0.250	0.0	160	1.124
35.012	1.139	503.4	304.9	3.793	3.764	2.250	0.0	422	1.191
44.000	1.008	71.2	52.9	2.738	2.356	0.390	0.0	193	1.100
35.011	1.153	509.3	249.4	3.815	3.793	1.840	0.0	370	1.147
43.000	1.002	17.7	9.5	2.185	1.794	0.070	0.0	78	1.019
35.010	1.154	509.9	237.2	3.775	3.815	1.750	0.0	359	1.134
42.000	1.008	71.3	44.7	2.381	2.006	0.330	0.0	173	1.063
35.009	1.266	559.1	189.7	3.697	3.775	1.400	0.0	300	1.149
41.000	1.006	40.0	20.3	2.410	2.008	0.150	0.0	114	1.011
35.008	1.258	555.8	166.7	3.531	3.697	1.230	0.0	280	1.106
40.000	1.006	17.8	7.2	1.998	1.649	0.053	0.0	67	0.954
39.000	1.001	17.7	10.8	2.042	1.680	0.080	0.0	85	1.050
35.007	1.394	615.8	146.0	3.440	3.531	1.077	0.0	247	1.152
37.000	1.005	39.9	27.1	2.321	1.912	0.200	0.0	136	1.077

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Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
28.000	Spur 28	271	8.127	0.600	4.960	4.912	0.048	169.5	225	5.14	50.0
35.006	270	271	51.824	0.600	3.058	2.928	0.130	398.6	525	7.49	50.0
35.005	269	270	27.376	0.600	3.126	3.058	0.068	402.6	525	6.71	50.0
35.000_1	Spur 35	269	10.839	0.600	5.450	5.342	0.108	100.4	150	5.18	50.0
36.000	Spur 27	269	10.695	0.600	3.489	3.426	0.063	169.8	225	5.18	50.0
35.004	268	269	18.897	0.600	3.401	3.276	0.125	151.2	300	6.30	50.0
35.003	S278 S8	268	22.576	0.600	3.683	3.476	0.207	109.1	225	6.05	50.0
35.002	S278 S7	S278 S8	27.021	0.600	3.848	3.683	0.165	163.2	225	5.75	50.0
35.001	S278 S6	S278 S7	11.428	0.600	3.915	3.848	0.067	170.6	225	5.29	50.0
35.000	S278 Storage	S278 S6	6.134	0.600	4.034	3.994	0.040	153.4	225	5.10	50.0
18.016	266	267	43.520	0.600	2.467	2.394	0.073	596.2	1200	13.04	50.0
18.015	265	266	15.614	0.600	2.493	2.467	0.026	600.0	1200	12.56	50.0
33.000	Spur 23	266	33.021	0.600	3.970	3.442	0.528	62.5	225	5.33	50.0
18.014	264	265	56.057	0.600	2.586	2.493	0.093	600.0	1200	12.39	50.0
32.000	Spur 22	265	11.416	0.600	4.440	4.372	0.068	167.9	225	5.19	50.0
18.013	263	264	9.058	0.600	2.602	2.586	0.016	566.1	1200	11.78	50.0
31.000	Spur 26	264	9.707	0.600	4.970	4.912	0.058	167.4	225	5.16	50.0
18.012	262	263	31.027	0.600	2.654	2.602	0.052	596.7	1200	11.68	50.0
30.000	Spur 40	263	15.114	0.600	3.726	3.575	0.151	100.0	225	5.19	50.0
18.011	261	262	45.490	0.600	2.730	2.654	0.076	598.6	1200	11.34	50.0
29.000	Spur 21	262	12.518	0.600	4.520	4.446	0.074	169.2	225	5.21	50.0
18.010	260	261	13.907	0.600	2.753	2.720	0.033	600.0	1200	10.84	50.0
28.000	Spur 25	261	7.907	0.600	3.668	3.621	0.047	170.0	225	5.13	50.0
18.009	259	260	49.249	0.600	2.835	2.753	0.082	600.6	1200	10.69	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
28.000	1.001	39.8	33.9	2.168	1.831	0.250	0.0	160	1.121
35.006	1.115	241.5	82.3	3.542	3.515	0.607	0.0	210	1.013
35.005	1.110	240.3	79.6	3.598	3.542	0.587	0.0	207	1.001
35.000_1	1.003	17.7	9.9	2.055	1.757	0.073	0.0	80	1.029
36.000	1.000	39.8	27.1	3.802	3.598	0.200	0.0	137	1.075
35.004	1.276	90.2	39.8	4.257	3.673	0.294	0.0	140	1.239
35.003	1.251	49.7	35.5	3.604	4.257	0.262	0.0	141	1.357
35.002	1.002	39.8	31.2	2.559	3.604	0.230	0.0	150	1.105
35.001	0.998	39.7	31.2	2.695	2.559	0.230	0.0	151	1.102
35.000	1.053	41.9	0.0	2.016	2.616	0.000	0.0	0	0.000
18.016	1.525	1724.3	691.4	3.003	3.962	5.102	0.0	527	1.445
18.015	1.520	1718.7	651.3	3.107	3.003	4.806	0.0	511	1.420
33.000	1.656	65.9	36.6	2.146	3.003	0.270	0.0	120	1.699
18.014	1.520	1718.7	615.3	3.600	3.107	4.540	0.0	494	1.400
32.000	1.006	40.0	32.5	2.091	2.203	0.240	0.0	154	1.117
18.013	1.565	1769.8	600.9	3.674	3.600	4.434	0.0	480	1.423
31.000	1.008	40.1	10.8	2.157	2.249	0.080	0.0	80	0.858
18.012	1.524	1723.5	589.5	3.835	3.674	4.350	0.0	482	1.388
30.000	1.307	52.0	11.4	3.635	3.676	0.084	0.0	72	1.054
18.011	1.522	1720.8	546.7	3.889	3.925	4.034	0.0	463	1.359
29.000	1.002	39.8	39.3	2.909	3.103	0.290	0.0	182	1.137
18.010	1.520	1718.7	529.1	3.798	3.889	3.904	0.0	454	1.346
28.000	1.000	39.7	17.6	3.656	3.973	0.130	0.0	105	0.971
18.009	1.519	1717.8	507.9	3.720	3.798	3.748	0.0	445	1.333

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Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
27.000	Spur 41	260	13.223	0.600	4.350	4.296	0.054	244.9	300	5.22	50.0
18.008	258	259	39.611	0.600	2.901	2.835	0.066	600.2	1200	10.15	50.0
26.000	Spur 20	259	9.098	0.600	4.840	4.786	0.054	168.5	225	5.15	50.0
25.000	Spur 42	259	13.540	0.600	4.230	4.150	0.080	169.3	225	5.23	50.0
18.007	257	258	16.897	0.600	2.929	2.901	0.028	603.4	1200	9.72	50.0
24.000	Spur 24	258	8.724	0.600	3.928	3.876	0.052	167.8	225	5.14	50.0
18.006	256	257	18.174	0.600	2.959	2.929	0.030	605.8	1050	9.53	50.0
23.000	Spur 43	257	32.369	0.600	4.850	4.656	0.194	169.4	225	5.55	50.0
18.005	253	256	61.104	0.600	3.212	3.109	0.103	593.2	900	9.31	50.0
22.000	Spur 2	256	35.015	0.600	3.950	3.633	0.317	110.5	300	5.39	50.0
21.002	255	256	73.587	0.600	3.526	3.400	0.126	584.0	600	7.55	50.0
21.001	254	255	48.775	0.600	3.610	3.526	0.084	580.7	600	6.32	50.0
21.000	Spur 1	254	30.799	0.600	3.930	3.835	0.095	324.2	375	5.51	50.0
18.004	252	253	61.924	0.600	3.315	3.212	0.103	601.3	900	8.52	50.0
18.003	251	252	53.031	0.600	3.798	3.690	0.108	491.0	525	7.70	50.0
20.000	Spur 3	252	17.769	0.600	4.170	3.915	0.255	69.7	300	5.16	50.0
18.002	250	251	51.090	0.600	3.902	3.798	0.104	491.2	525	6.82	50.0
18.001	249	250	63.210	0.600	4.195	3.902	0.293	215.7	525	5.98	50.0
19.000	Spur 4	250	12.531	0.600	4.170	4.118	0.052	241.0	300	5.21	50.0
18.000	Spur 5	249	17.012	0.600	4.490	4.420	0.070	243.0	300	5.28	50.0
50.003	Ex Outfall	Ex Ditch	7.092	0.600	1.300	1.253	0.047	170.0	225	6.19	50.0
51.002	294	Ex Outfall	9.203	0.600	1.410	1.300	0.110	83.7	225	6.06	50.0
51.001	293	294	45.849	0.600	1.680	1.410	0.270	169.8	225	5.95	50.0
51.000	292	293	12.094	0.600	1.700	1.680	0.020	604.7	675	5.19	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
27.000	1.000	70.7	17.6	2.963	3.095	0.130	0.0	102	0.834
18.008	1.519	1718.5	442.1	3.414	3.720	3.262	0.0	412	1.285
26.000	1.004	39.9	32.5	2.646	2.764	0.240	0.0	155	1.117
25.000	1.002	39.8	29.8	3.312	3.380	0.220	0.0	145	1.096
18.007	1.515	1713.7	429.9	3.113	3.414	3.172	0.0	407	1.273
24.000	1.006	40.0	12.2	3.529	3.414	0.090	0.0	85	0.885
18.006	1.392	1205.7	396.5	3.551	3.263	2.926	0.0	413	1.255
23.000	1.001	39.8	29.8	2.530	2.361	0.220	0.0	145	1.096
18.005	1.279	813.6	187.0	3.187	3.551	1.380	0.0	291	1.048
22.000	1.495	105.7	101.6	3.191	3.627	0.750	0.0	238	1.693
21.002	1.000	282.8	103.5	3.509	3.560	0.764	0.0	250	0.925
21.001	1.003	283.6	99.2	3.777	3.599	0.732	0.0	244	0.917
21.000	1.001	110.5	94.9	3.119	3.777	0.700	0.0	269	1.120
18.004	1.270	808.0	182.7	3.182	3.187	1.348	0.0	289	1.036
18.003	1.004	217.3	110.6	3.754	3.182	0.816	0.0	265	1.008
20.000	1.886	133.3	67.8	2.912	3.182	0.500	0.0	151	1.893
18.002	1.004	217.3	106.3	3.662	3.754	0.784	0.0	259	0.998
18.001	1.521	329.2	34.2	3.514	3.662	0.252	0.0	113	0.997
19.000	1.008	71.3	67.8	3.702	3.671	0.500	0.0	235	1.141
18.000	1.004	71.0	29.8	3.379	3.514	0.220	0.0	136	0.962
50.003	1.000	39.7	0.0	0.615	0.622	0.000	0.0	0	0.000
51.002	1.430	56.9	0.0	1.811	0.615	0.000	0.0	0	0.000
51.001	1.000	39.8	0.0	1.945	1.811	0.000	0.0	0	0.000
51.000	1.058	378.7	0.0	1.425	1.495	0.000	0.0	0	0.000

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Simulation Settings

Rainfall Methodology	FEH-22	Analysis Speed	Detailed	Additional Storage (m³/ha)	35.0
Summer CV	1.000	Skip Steady State	x	Check Discharge Rate(s)	x
Winter CV	1.000	Drain Down Time (mins)	2000	Check Discharge Volume	x

Storm Durations

15	60	180	360	600	960	2160	4320	7200	10080
30	120	240	480	720	1440	2880	5760	8640	

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
2	0	0	0
30	0	0	0

Node 293 Online Hydro-Brake® Control

Flap Valve	✓	Objective	(HE) Minimise upstream storage
Downstream Link	51.001	Sump Available	✓
Replaces Downstream Link	✓	Product Number	CTL-SHE-0154-1330-1820-1330
Invert Level (m)	1.680	Min Outlet Diameter (m)	0.225
Design Depth (m)	1.820	Min Node Diameter (mm)	1500
Design Flow (l/s)	13.3		

Node 289 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Downstream Link	49.001	Sump Available	✓
Replaces Downstream Link	✓	Product Number	CTL-SHE-0129-1330-3830-1330
Invert Level (m)	2.170	Min Outlet Diameter (m)	0.150
Design Depth (m)	3.830	Min Node Diameter (mm)	1500
Design Flow (l/s)	13.3		

Node S278 S7 Online Hydro-Brake® Control

Flap Valve	✓	Objective	(HE) Minimise upstream storage
Downstream Link	35.002	Sump Available	✓
Replaces Downstream Link	✓	Product Number	CTL-SHE-0094-4000-1037-4000
Invert Level (m)	3.848	Min Outlet Diameter (m)	0.150
Design Depth (m)	1.037	Min Node Diameter (mm)	1200
Design Flow (l/s)	4.0		

Node 292 Flow through Pond Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Main Channel Length (m)	104.045
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	1.700	Main Channel Slope (1:X)	500.0
Safety Factor	2.0	Time to half empty (mins)		Main Channel n	0.030

Inlets

291	287

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	615.7	0.0	0.300	6490.6	0.0	1.300	8081.0	0.0	2.100	9337.0	0.0
0.299	620.0	0.0	0.800	7312.0	0.0	1.800	8865.3	0.0			

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Node 288 Flow through Pond Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Main Channel Length (m)	63.936
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	4.100	Main Channel Slope (1:X)	500.0
Safety Factor	2.0	Time to half empty (mins)	0	Main Channel n	0.035

Inlets

248

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	346.7	0.0	0.099	346.7	0.0	0.100	5421.2	0.0	1.900	8141.3	0.0

Node S278 Storage Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	4.034
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	0

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	182.0	0.0	0.800	182.0	0.0	0.801	0.0	0.0

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Results for 2 year Critical Storm Duration. Lowest mass balance: 93.45%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	Spur 15	10	5.741	0.141	75.2	1.1498	0.0000	OK
10080 minute summer	201	7080	4.669	0.249	2.4	0.7231	0.0000	OK
10080 minute summer	202	7080	4.669	0.331	3.9	0.9673	0.0000	OK
15 minute summer	Spur 14	10	5.156	0.176	37.6	0.4879	0.0000	OK
10080 minute summer	Spur 13	7080	4.670	0.776	6.7	11.3130	0.0000	SURCHARGED
10080 minute summer	203	7080	4.669	0.802	10.9	1.4065	0.0000	OK
15 minute summer	Spur 12	10	5.355	0.165	127.9	1.8175	0.0000	OK
10080 minute summer	204	7200	4.669	0.905	18.4	1.5505	0.0000	OK
10080 minute summer	205	7200	4.669	0.930	22.2	0.0000	0.0000	OK
10080 minute summer	206	7200	4.669	0.939	22.9	1.3438	0.0000	OK
10080 minute summer	207	7200	4.669	0.968	23.3	0.2420	0.0000	OK
15 minute summer	Spur 10	10	5.383	0.093	13.2	0.2091	0.0000	OK
15 minute summer	208	11	5.116	0.130	30.3	0.3664	0.0000	OK
15 minute summer	209	11	4.786	0.133	33.8	0.2826	0.0000	OK
10080 minute summer	210	7200	4.669	0.953	6.1	1.9336	0.0000	OK
10080 minute summer	211	7200	4.669	1.001	24.3	1.7688	0.0000	OK
10080 minute summer	212	7140	4.669	1.093	24.9	1.3063	0.0000	OK
10080 minute summer	213	7140	4.669	1.117	23.1	0.0000	0.0000	OK
15 minute summer	Dummy 3	11	6.013	0.204	67.3	1.2058	0.0000	OK
10080 minute summer	214	7140	4.669	1.125	23.5	2.4055	0.0000	OK
10080 minute summer	215	7140	4.669	1.255	21.2	1.5185	0.0000	OK
10080 minute summer	216	7140	4.669	1.288	19.9	1.6346	0.0000	OK
10080 minute summer	217	7140	4.669	1.313	23.0	2.8077	0.0000	OK
10080 minute summer	218	7140	4.669	1.346	24.0	0.0000	0.0000	OK
10080 minute summer	Spur 9	6840	4.670	0.440	7.8	3.9607	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	Spur 15	1.000	201	74.2	2.391	0.400	0.7423	
10080 minute summer	201	1.001	202	3.8	0.320	0.003	4.0977	
10080 minute summer	202	1.002	203	5.3	0.441	0.007	2.6909	
15 minute summer	Spur 14	2.000	203	36.8	1.160	0.923	0.7011	
10080 minute summer	Spur 13	3.000	203	6.6	0.400	0.030	2.8331	
10080 minute summer	203	1.003	204	16.8	0.310	0.007	57.3158	
15 minute summer	Spur 12	4.000	204	125.9	2.108	0.150	2.1232	
10080 minute summer	204	1.004	205	22.2	0.346	0.012	26.2085	
10080 minute summer	205	1.005	206	22.9	0.391	0.013	9.2738	
10080 minute summer	206	1.006	207	23.2	0.565	0.013	12.3690	
10080 minute summer	207	1.007	211	23.5	0.448	0.006	13.8943	
15 minute summer	Spur 10	6.000	208	13.0	0.871	0.326	0.1998	
15 minute summer	208	5.001	209	28.1	0.821	0.173	2.4905	
15 minute summer	209	5.002	209a	33.4	0.713	0.087	0.5525	
10080 minute summer	210	5.004	211	-5.4	0.068	-0.001	25.1262	
10080 minute summer	211	1.008	212	24.5	0.427	0.007	60.6657	
10080 minute summer	212	1.009	213	23.1	0.422	0.007	16.7027	
10080 minute summer	213	1.010	214	22.6	0.414	0.007	5.8616	
15 minute summer	Dummy 3	6.000_1	214	64.6	1.019	0.406	4.1369	
10080 minute summer	214	1.011	215	20.8	0.426	0.005	106.7794	
10080 minute summer	215	1.012	216	19.4	0.423	0.004	29.1452	
10080 minute summer	216	1.013	217	23.0	0.436	0.005	22.8115	
10080 minute summer	217	1.014	218	24.0	0.433	0.006	30.3430	
10080 minute summer	218	1.015	219	21.3	0.424	0.005	90.6987	
10080 minute summer	Spur 9	7.000	219	7.1	0.470	0.044	1.5968	

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Results for 2 year Critical Storm Duration. Lowest mass balance: 93.45%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
10080 minute summer	219	7140	4.669	1.441	21.3	3.0813	0.0000	OK
10080 minute summer	220	7140	4.669	1.587	19.9	0.0000	0.0000	OK
10080 minute summer	221	7140	4.669	1.651	19.0	3.5303	0.0000	SURCHARGED
10080 minute summer	222	7140	4.669	1.708	18.8	0.0000	0.0000	SURCHARGED
10080 minute summer	223	7140	4.670	1.934	18.4	4.1355	0.0000	SURCHARGED
10080 minute summer	224	7140	4.670	1.991	18.3	0.0000	0.0000	SURCHARGED
10080 minute summer	Spur 11 Optional	6840	4.670	0.260	1.6	0.0000	0.0000	OK
15 minute summer	Spur 8	10	5.908	0.138	26.3	0.3720	0.0000	OK
10080 minute summer	225	7020	4.670	0.538	2.4	1.1246	0.0000	OK
10080 minute summer	226	6840	4.670	0.581	3.6	1.2154	0.0000	OK
10080 minute summer	227	6840	4.670	0.650	5.5	1.3504	0.0000	SURCHARGED
10080 minute summer	Spur 6	6840	4.670	0.636	14.5	18.0850	0.0000	OK
10080 minute summer	228	6840	4.670	1.285	20.4	1.8389	0.0000	OK
10080 minute summer	229	7020	4.669	1.309	20.4	2.1972	0.0000	OK
10080 minute summer	230	7020	4.670	1.329	21.0	0.0000	0.0000	OK
10080 minute summer	231	7020	4.670	1.374	23.7	1.9655	0.0000	SURCHARGED
15 minute summer	Spur 7	11	7.001	0.406	219.9	10.5581	0.0000	SURCHARGED
10080 minute summer	232	7140	4.669	1.434	25.4	2.0521	0.0000	SURCHARGED
10080 minute summer	233	7140	4.669	1.472	20.8	2.1062	0.0000	SURCHARGED
15 minute summer	Spur 44	10	5.739	0.169	34.8	0.4488	0.0000	OK
15 minute summer	Spur 16	10	4.674	0.209	147.5	1.8088	0.0000	OK
10080 minute summer	234	7140	4.669	1.515	25.0	2.1676	0.0000	SURCHARGED
10080 minute summer	235	7140	4.669	1.531	24.9	0.0000	0.0000	SURCHARGED
10080 minute summer	236	7140	4.669	1.854	24.8	3.9638	0.0000	SURCHARGED
15 minute summer	Spur 45	1	5.350	0.000	0.0	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
10080 minute summer	219	1.016	220	19.9	0.499	0.004	100.6132	
10080 minute summer	220	1.017	221	19.0	0.491	0.004	45.9717	
10080 minute summer	221	1.018	222	18.8	0.481	0.004	40.7000	
10080 minute summer	222	1.019	223	18.4	0.429	0.003	161.9302	
10080 minute summer	223	1.020	224	18.3	0.340	0.003	41.7047	
10080 minute summer	224	1.021	238	19.8	0.224	0.004	13.0133	
10080 minute summer	Spur 11 Optional	9.000	225	-1.6	-0.030	-0.015	1.5249	
15 minute summer	Spur 8	10.000	225	25.9	1.049	0.652	0.2724	
10080 minute summer	225	8.001	226	3.5	0.177	0.012	6.7035	
10080 minute summer	226	8.002	227	5.4	0.244	0.019	11.1600	
10080 minute summer	227	8.003	229	6.3	0.102	0.009	17.9369	
10080 minute summer	Spur 6	10.000_1	228	20.4	0.643	0.026	5.1605	
10080 minute summer	228	10.001	229	20.1	0.381	0.007	15.0434	
10080 minute summer	229	8.004	230	21.0	0.389	0.009	15.8355	
10080 minute summer	230	9.005	231	23.7	0.395	0.010	38.6835	
10080 minute summer	231	8.006	232	22.0	0.346	0.009	51.7849	
15 minute summer	Spur 7	11.000	232	208.9	1.903	1.113	0.7751	
10080 minute summer	232	8.007	233	20.8	0.412	0.009	32.2331	
10080 minute summer	233	8.008	234	20.1	0.380	0.009	37.3724	
15 minute summer	Spur 44	12.000	234	34.4	1.123	0.864	0.3062	
15 minute summer	Spur 16	13.000	234	146.2	3.015	0.688	0.4235	
10080 minute summer	234	8.009	235	24.9	0.436	0.011	13.8107	
10080 minute summer	235	8.010	236	24.8	0.573	0.011	19.5247	
10080 minute summer	236	8.011	237	24.6	0.372	0.006	78.9638	
15 minute summer	Spur 45	14.000	237	0.0	0.000	0.000	0.0000	

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Results for 2 year Critical Storm Duration. Lowest mass balance: 93.45%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
10080 minute summer	237	7020	4.669	1.922	24.6	4.1088	0.0000	SURCHARGED
15 minute summer	Spur 17	11	6.215	0.338	263.2	10.5120	0.0000	OK
10080 minute summer	238	7020	4.669	2.008	49.8	4.2935	0.0000	SURCHARGED
15 minute summer	Spur 18	10	5.053	0.178	37.6	0.5520	0.0000	OK
10080 minute summer	239	7080	4.669	2.142	50.8	4.5788	0.0000	SURCHARGED
10080 minute summer	Spur 19	7020	4.669	0.119	1.4	0.2399	0.0000	OK
10080 minute summer	240	7140	4.669	2.242	51.5	4.7925	0.0000	SURCHARGED
10080 minute summer	241	7140	4.669	2.273	51.5	4.8590	0.0000	SURCHARGED
10080 minute summer	242	7140	4.669	2.301	51.4	4.9189	0.0000	SURCHARGED
10080 minute summer	243	7200	4.669	2.366	51.4	5.0578	0.0000	SURCHARGED
10080 minute summer	244	7200	4.668	2.446	51.4	5.2306	0.0000	SURCHARGED
10080 minute summer	245	7020	4.668	2.481	51.4	5.3053	0.0000	OK
10080 minute summer	246	7020	4.669	0.380	9.9	0.4294	0.0000	OK
10080 minute summer	247	7080	4.668	0.446	6.1	0.5048	0.0000	OK
10080 minute summer	248	7140	4.668	0.468	20.1	0.0000	0.0000	OK
15 minute summer	Spur 5	10	4.658	0.168	41.4	0.3506	0.0000	OK
15 minute summer	249	11	4.325	0.130	46.9	0.2667	0.0000	OK
15 minute summer	Spur 4	10	4.479	0.309	94.0	1.3507	0.0000	SURCHARGED
15 minute summer	250	11	4.222	0.320	143.7	0.6516	0.0000	OK
15 minute summer	251	12	4.110	0.312	146.3	0.6340	0.0000	OK
15 minute summer	Spur 3	10	4.366	0.196	94.0	1.0656	0.0000	OK
15 minute summer	252	12	3.655	0.340	228.5	0.9579	0.0000	OK
15 minute summer	253	13	3.567	0.355	233.0	1.0011	0.0000	OK
15 minute summer	Spur 1	10	4.263	0.333	131.6	2.3364	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
10080 minute summer	237	8.012	238	24.5	0.269	0.006	110.4863	
15 minute summer	Spur 17	15.000	238	255.4	2.653	0.908	0.5288	
10080 minute summer	238	1.022	239	49.8	0.423	0.013	171.3435	
15 minute summer	Spur 18	16.000	239	37.1	1.153	0.928	0.3134	
10080 minute summer	239	1.023_1	240	50.8	0.388	0.013	127.8281	
10080 minute summer	Spur 19	17.000	240	2.1	0.871	0.043	0.1425	
10080 minute summer	240	1.024_1	241	51.5	0.393	0.012	40.6716	
10080 minute summer	241	1.025_1	242	51.4	0.383	0.014	40.0815	
10080 minute summer	242	1.026_2	243	51.4	0.381	0.012	75.8260	
10080 minute summer	243	1.023	244	51.4	0.312	0.013	103.9317	
10080 minute summer	244	1.024	245	51.4	0.179	0.013	44.1097	
10080 minute summer	245	1.025	246	9.9	0.102	0.008	8.1839	
10080 minute summer	245	1.026_1	289	50.8	0.104	0.013	21.6853	
10080 minute summer	246	1.026	247	6.1	0.044	0.005	12.6065	
10080 minute summer	247	1.027	248	7.3	0.036	0.006	4.7000	
10080 minute summer	248	Flow through pond	288	-19.7	-0.007	0.000	2318.7813	
15 minute summer	Spur 5	18.000	249	40.9	1.056	0.576	0.6591	
15 minute summer	249	18.001	250	46.4	0.539	0.141	5.6779	
15 minute summer	Spur 4	19.000	250	92.2	1.372	1.294	0.8143	
15 minute summer	250	18.002	251	140.6	1.078	0.647	6.8646	
15 minute summer	251	18.003	252	142.7	1.206	0.657	6.2748	
15 minute summer	Spur 3	20.000	252	92.9	1.989	0.697	0.8298	
15 minute summer	252	18.004	253	228.3	1.059	0.283	13.8301	
15 minute summer	253	18.005	256	218.7	0.934	0.269	15.5470	
15 minute summer	Spur 1	21.000	254	128.5	1.366	1.163	2.8702	

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Results for 2 year Critical Storm Duration. Lowest mass balance: 93.45%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	254	11	3.909	0.299	134.2	0.6051	0.0000	OK
15 minute summer	255	12	3.818	0.292	139.5	0.5940	0.0000	OK
15 minute summer	Spur 2	11	4.442	0.492	141.0	3.7117	0.0000	SURCHARGED
15 minute summer	256	13	3.514	0.555	479.7	0.7624	0.0000	OK
15 minute summer	Spur 43	11	5.040	0.190	41.4	0.5313	0.0000	OK
15 minute summer	257	13	3.473	0.544	504.1	0.7294	0.0000	OK
15 minute summer	Spur 24	10	4.034	0.106	16.9	0.0887	0.0000	OK
15 minute summer	258	13	3.433	0.532	508.2	0.6020	0.0000	OK
15 minute summer	Spur 42	10	4.424	0.194	41.4	0.4215	0.0000	OK
15 minute summer	Spur 20	10	5.050	0.210	45.1	0.6134	0.0000	OK
15 minute summer	259	13	3.385	0.550	565.7	0.7239	0.0000	OK
15 minute summer	Spur 41	10	4.474	0.124	24.4	0.1734	0.0000	OK
15 minute summer	260	13	3.330	0.577	570.5	0.7594	0.0000	OK
15 minute summer	Spur 25	10	3.801	0.133	24.4	0.1478	0.0000	OK
15 minute summer	261	14	3.291	0.561	573.7	0.6346	0.0000	OK
15 minute summer	Spur 21	10	4.796	0.276	54.5	0.8926	0.0000	SURCHARGED
15 minute summer	262	14	3.242	0.588	596.5	0.7702	0.0000	OK
15 minute summer	Spur 40	10	3.813	0.087	15.8	0.0662	0.0000	OK
15 minute summer	263	14	3.197	0.595	584.3	0.6726	0.0000	OK
15 minute summer	Spur 26	10	5.068	0.098	15.0	0.1155	0.0000	OK
15 minute summer	264	14	3.154	0.568	590.3	0.7504	0.0000	OK
15 minute summer	Spur 22	10	4.649	0.209	45.1	0.7595	0.0000	OK
30 minute summer	265	22	3.094	0.601	597.6	0.8069	0.0000	OK
15 minute summer	Spur 23	10	4.120	0.150	50.8	0.5987	0.0000	OK
30 minute summer	266	22	3.048	0.581	621.4	0.7821	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	254	21.001	255	133.8	1.059	0.472	6.6230	
15 minute summer	255	21.002	256	132.7	1.124	0.469	8.7399	
15 minute summer	Spur 2	22.000	256	132.8	1.887	1.257	2.4108	
15 minute summer	256	18.006	257	463.9	1.036	0.385	8.3005	
15 minute summer	Spur 43	23.000	257	40.3	1.188	1.012	1.1124	
15 minute summer	257	18.007	258	495.3	1.043	0.289	8.2675	
15 minute summer	Spur 24	24.000	258	16.8	0.945	0.419	0.1547	
15 minute summer	258	18.008	259	506.0	1.040	0.294	19.5354	
15 minute summer	Spur 42	25.000	259	40.8	1.188	1.024	0.4632	
15 minute summer	Spur 20	26.000	259	44.4	1.224	1.111	0.3272	
15 minute summer	259	18.009	260	554.2	1.089	0.323	25.6148	
15 minute summer	Spur 41	27.000	260	24.1	0.903	0.341	0.3535	
15 minute summer	260	18.010	261	560.5	1.084	0.326	7.3215	
15 minute summer	Spur 25	28.000	261	24.2	1.031	0.609	0.1857	
15 minute summer	261	18.011	262	561.4	1.079	0.326	24.2548	
15 minute summer	Spur 21	29.000	262	53.3	1.350	1.338	0.4740	
15 minute summer	262	18.012	263	578.8	1.076	0.336	17.1664	
15 minute summer	Spur 40	30.000	263	15.6	1.132	0.301	0.2090	
15 minute summer	263	18.013	264	583.5	1.096	0.330	4.9015	
15 minute summer	Spur 26	31.000	264	14.9	0.919	0.371	0.1571	
15 minute summer	264	18.014	265	587.2	1.081	0.342	30.4613	
15 minute summer	Spur 22	32.000	265	44.1	1.222	1.102	0.4097	
30 minute summer	265	18.015	266	599.2	1.084	0.349	8.6280	
15 minute summer	Spur 23	33.000	266	49.8	1.811	0.756	0.9110	
30 minute summer	266	18.016	267	623.0	1.115	0.361	24.3184	

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Results for 2 year Critical Storm Duration. Lowest mass balance: 93.45%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	267	22	3.006	0.612	623.0	0.0000	0.0000	OK
180 minute summer	S278 Storage	124	4.144	0.110	13.3	19.0729	0.0000	OK
15 minute summer	S278 S6	10	4.201	0.286	43.3	1.1117	0.0000	SURCHARGED
15 minute summer	S278 S7	10	4.200	0.352	7.9	0.3983	0.0000	SURCHARGED
15 minute summer	S278 S8	10	3.753	0.070	10.0	0.0995	0.0000	OK
15 minute summer	268	10	3.489	0.088	15.9	0.1213	0.0000	OK
15 minute summer	Spur 35	10	5.553	0.103	13.7	0.1190	0.0000	OK
15 minute summer	Spur 27	10	3.668	0.179	37.6	0.3111	0.0000	OK
15 minute summer	269	11	3.331	0.205	70.2	0.3963	0.0000	OK
15 minute summer	270	11	3.260	0.202	73.1	0.3912	0.0000	OK
15 minute summer	Spur 36	10	5.059	0.179	37.6	0.4921	0.0000	OK
15 minute summer	Spur 28	10	5.178	0.218	47.0	0.7983	0.0000	OK
15 minute summer	271	12	3.122	0.344	157.5	0.9325	0.0000	OK
15 minute summer	Spur 29	10	5.360	0.110	15.0	0.1407	0.0000	OK
15 minute summer	Spur 37	10	5.334	0.084	10.0	0.0724	0.0000	OK
15 minute summer	272	12	3.109	0.419	176.7	1.1354	0.0000	OK
15 minute summer	Spur 38	10	5.065	0.145	28.2	0.2883	0.0000	OK
15 minute summer	273	12	3.095	0.448	194.9	1.2099	0.0000	OK
15 minute summer	Spur 30	10	5.086	0.216	62.1	0.9321	0.0000	OK
15 minute summer	274	12	3.079	0.457	249.7	1.2334	0.0000	OK
15 minute summer	Spur 31	10	5.352	0.102	13.2	0.1065	0.0000	OK
15 minute summer	275	13	3.048	0.489	253.7	1.3184	0.0000	OK
15 minute summer	Spur 32	10	4.662	0.242	73.3	1.0871	0.0000	OK
30 minute summer	276	21	3.028	0.531	287.7	1.4332	0.0000	OK
15 minute summer	Spur 39	10	5.247	0.217	47.0	0.7857	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute summer	267	18.017	280	624.1	1.083	0.363	14.0055	
180 minute summer	S278 Storage	35.000	S278 S6	-13.3	-0.904	-0.317	0.1457	
15 minute summer	S278 S6	35.001	S278 S7	7.9	0.582	0.199	0.4545	
15 minute summer	S278 S7	Hydro-Brake®	S278 S8	4.0				
15 minute summer	S278 S8	35.003	268	9.9	0.964	0.198	0.2313	
15 minute summer	268	35.004	269	15.7	0.945	0.174	0.3143	
15 minute summer	Spur 35	35.000_1	269	13.6	1.083	0.765	0.1356	
15 minute summer	Spur 27	36.000	269	37.2	1.154	0.935	0.3445	
15 minute summer	269	35.005	270	69.5	0.945	0.289	2.1106	
15 minute summer	270	35.006	271	71.9	1.021	0.298	3.7825	
15 minute summer	Spur 36	37.000	271	37.2	1.153	0.930	0.2656	
15 minute summer	Spur 28	38.000	271	46.0	1.240	1.156	0.2983	
15 minute summer	271	35.007	272	148.9	0.804	0.242	7.9046	
15 minute summer	Spur 29	39.000	272	14.8	1.099	0.839	0.1481	
15 minute summer	Spur 37	40.000	272	9.9	1.009	0.557	0.0763	
15 minute summer	272	35.008	273	165.1	0.683	0.297	5.5475	
15 minute summer	Spur 38	41.000	273	27.9	1.068	0.697	0.2584	
15 minute summer	273	35.009	274	189.4	0.727	0.339	3.3556	
15 minute summer	Spur 30	42.000	274	61.4	1.200	0.862	0.3574	
15 minute summer	274	35.010	275	240.1	0.896	0.471	10.6760	
15 minute summer	Spur 31	43.000	275	13.1	1.067	0.739	0.0863	
15 minute summer	275	35.011	276	247.1	0.797	0.485	11.4296	
15 minute summer	Spur 32	44.000	276	72.5	1.272	1.017	0.4933	
30 minute summer	276	35.012	277	278.0	0.909	0.552	3.5712	
15 minute summer	Spur 39	45.000	277	46.1	1.245	1.154	0.2586	

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Results for 2 year Critical Storm Duration. Lowest mass balance: 93.45%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	277	21	3.010	0.531	320.5	1.4325	0.0000	OK
30 minute summer	278	21	2.995	0.581	309.9	1.5748	0.0000	OK
15 minute summer	Spur 33	10	4.339	0.229	67.7	1.0736	0.0000	OK
30 minute summer	279	22	2.986	0.603	346.8	1.5351	0.0000	OK
30 minute summer	280	22	2.976	0.622	901.5	0.8907	0.0000	OK
30 minute summer	281	22	2.923	0.603	897.8	0.0000	0.0000	OK
30 minute summer	282	22	2.895	0.627	897.4	0.0000	0.0000	OK
15 minute summer	Spur 34	10	3.306	0.190	50.8	0.9091	0.0000	OK
30 minute summer	283	23	2.841	0.613	914.4	1.0838	0.0000	OK
10080 minute winter	284	9240	2.779	0.660	26.8	1.1669	0.0000	OK
10080 minute winter	285	9240	2.779	0.719	26.6	1.2711	0.0000	OK
10080 minute winter	286	9240	2.779	0.857	26.3	1.5150	0.0000	OK
10080 minute winter	287	9240	2.782	0.882	60.7	0.0000	0.0000	OK
10080 minute summer	288	7080	4.668	0.568	41.4	0.0000	0.0000	OK
10080 minute summer	289	7020	4.669	2.499	50.8	5.3422	0.0000	SURCHARGED
10080 minute winter	290	9240	2.781	0.841	9.6	1.2028	0.0000	SURCHARGED
10080 minute winter	291	9240	2.780	0.880	9.6	0.0000	0.0000	OK
10080 minute winter	292	9240	2.779	1.079	24.7	0.0000	0.0000	SURCHARGED
10080 minute winter	293	9240	2.779	1.099	13.3	2.7960	0.0000	SURCHARGED
4320 minute summer	294	5040	2.093	0.683	13.3	0.7727	0.0000	SURCHARGED
5760 minute winter	Ex Outfall	3780	2.085	0.785	13.3	0.0000	0.0000	FLOOD RISK
15 minute summer	Ex Ditch	1	2.080	0.827	7.9	0.0000	0.0000	OK
15 minute summer	209a	12	4.753	0.137	33.4	0.2418	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute summer	277	35.013	278	306.8	0.851	0.380	16.1222	
30 minute summer	278	35.014	279	294.7	0.743	0.364	8.2244	
15 minute summer	Spur 33	46.000	279	67.0	1.238	0.944	0.3283	
30 minute summer	279	35.015	280	333.4	0.855	0.409	7.8724	
30 minute summer	280	19.018	281	897.8	1.441	0.383	12.8115	
30 minute summer	281	19.019	282	897.4	1.429	0.385	19.8666	
30 minute summer	282	19.020	283	894.2	1.405	0.381	15.2231	
15 minute summer	Spur 34	47.000	283	50.1	1.120	0.703	0.4410	
30 minute summer	283	19.021	284	904.4	1.351	0.294	44.8109	
10080 minute winter	284	19.022	285	26.6	0.311	0.009	27.9340	
10080 minute winter	285	19.023	286	26.3	0.290	0.009	77.4994	
10080 minute winter	286	19.024	287	37.8	0.363	0.012	14.0703	
10080 minute winter	287	Flow through pond	292	24.7	0.034	0.000	4909.0454	
10080 minute summer	288	48.000	289	-41.4	-0.275	-0.025	10.5756	
10080 minute summer	289	Hydro-Brake®	290	9.6				
10080 minute winter	290	49.002	291	9.6	0.527	0.086	1.4199	
10080 minute winter	291	Flow through pond	292	24.7	0.034	0.000	4909.0454	
10080 minute winter	292	51.000	293	13.3	0.139	0.035	4.3173	
10080 minute winter	293	Hydro-Brake®	294	13.3				
4320 minute summer	294	51.002	Ex Outfall	13.3	0.349	0.234	0.3660	
5760 minute winter	Ex Outfall	50.003	Ex Ditch	13.3	0.334	0.334	0.3179	5047.4
15 minute summer	209a	5.003	210	33.6	0.785	0.117	0.5094	

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Results for 30 year Critical Storm Duration. Lowest mass balance: 93.45%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	Spur 15	11	6.012	0.412	190.9	3.3508	0.0000	SURCHARGED
60 minute summer	201	36	5.744	1.324	576.4	3.8436	0.0000	SURCHARGED
30 minute summer	202	22	5.990	1.652	201.0	4.8239	0.0000	SURCHARGED
60 minute summer	Spur 14	37	5.872	0.892	65.9	2.4772	0.0000	SURCHARGED
60 minute summer	Spur 13	36	5.840	1.946	438.9	28.3941	0.0000	SURCHARGED
30 minute summer	203	22	5.967	2.100	868.4	3.6811	0.0000	SURCHARGED
60 minute summer	Spur 12	37	5.634	0.444	251.9	4.9014	0.0000	OK
60 minute summer	204	36	5.715	1.951	887.1	3.3421	0.0000	SURCHARGED
60 minute summer	205	36	5.663	1.924	867.8	0.0000	0.0000	SURCHARGED
60 minute summer	206	36	5.646	1.916	856.0	2.7424	0.0000	SURCHARGED
60 minute summer	207	36	5.629	1.928	855.1	0.4819	0.0000	SURCHARGED
60 minute summer	Spur 10	37	6.059	0.769	23.1	1.7220	0.0000	SURCHARGED
60 minute summer	208	37	5.856	0.870	169.9	2.4541	0.0000	SURCHARGED
60 minute summer	209	36	5.770	1.117	182.2	2.3775	0.0000	SURCHARGED
60 minute summer	210	36	5.636	1.920	105.0	3.8957	0.0000	SURCHARGED
60 minute summer	211	36	5.616	1.948	933.3	3.4425	0.0000	SURCHARGED
60 minute summer	212	37	5.577	2.001	976.4	2.3915	0.0000	SURCHARGED
60 minute summer	213	37	5.568	2.016	989.6	0.0000	0.0000	SURCHARGED
15 minute summer	Dummy 3	11	6.187	0.378	170.9	2.2318	0.0000	OK
60 minute summer	214	37	5.556	2.012	1088.2	4.3018	0.0000	SURCHARGED
60 minute summer	215	36	5.438	2.024	1145.7	2.4496	0.0000	SURCHARGED
30 minute summer	216	20	5.456	2.075	1437.4	2.6326	0.0000	SURCHARGED
30 minute summer	217	20	5.544	2.188	1403.9	4.6789	0.0000	SURCHARGED
60 minute summer	218	36	5.402	2.079	1231.1	0.0000	0.0000	SURCHARGED
60 minute summer	Spur 9	36	5.618	1.388	286.5	12.4886	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	Spur 15	1.000	201	178.3	2.752	0.961	1.5422	
60 minute summer	201	1.001	202	-451.9	0.992	-0.382	14.6567	
30 minute summer	202	1.002	203	197.2	1.169	0.246	7.7396	
60 minute summer	Spur 14	2.000	203	65.4	1.644	1.642	0.8766	
60 minute summer	Spur 13	3.000	203	434.7	2.012	1.990	2.8331	
30 minute summer	203	1.003	204	847.5	1.067	0.356	86.0956	
60 minute summer	Spur 12	4.000	204	266.4	2.447	0.318	8.9646	
60 minute summer	204	1.004	205	867.8	1.268	0.484	36.1959	
60 minute summer	205	1.005	206	856.0	1.327	0.468	12.5487	
60 minute summer	206	1.006	207	844.6	1.423	0.459	16.5329	
60 minute summer	207	1.007	211	838.1	1.346	0.205	19.9639	
60 minute summer	Spur 10	6.000	208	49.2	1.237	1.236	0.5325	
60 minute summer	208	5.001	209	-130.1	0.972	-0.802	11.3964	
60 minute summer	209	5.002	209a	-120.4	0.831	-0.313	3.3108	
60 minute summer	210	5.004	211	134.2	0.261	0.037	36.4226	
60 minute summer	211	1.008	212	944.8	1.332	0.280	81.4047	
60 minute summer	212	1.009	213	989.6	1.309	0.293	21.1381	
60 minute summer	213	1.010	214	1002.3	1.312	0.297	7.3078	
15 minute summer	Dummy 3	6.000_1	214	165.1	1.317	1.037	8.0885	
60 minute summer	214	1.011	215	1114.1	1.303	0.257	138.3789	
60 minute summer	215	1.012	216	1162.4	1.188	0.268	35.2311	
30 minute summer	216	1.013	217	1403.9	1.471	0.324	26.9660	
30 minute summer	217	1.014	218	1343.7	1.497	0.310	35.1203	
60 minute summer	218	1.015	219	1236.4	1.089	0.285	100.7194	
60 minute summer	Spur 9	7.000	219	286.3	1.817	1.792	1.6012	

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Results for 30 year Critical Storm Duration. Lowest mass balance: 93.45%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	219	37	5.432	2.204	1377.7	4.7123	0.0000	SURCHARGED
60 minute summer	220	37	5.469	2.387	1359.5	0.0000	0.0000	SURCHARGED
60 minute summer	221	37	5.476	2.458	1345.9	5.2557	0.0000	SURCHARGED
60 minute summer	222	37	5.468	2.507	1316.8	0.0000	0.0000	SURCHARGED
60 minute summer	223	37	5.426	2.690	1307.2	5.7512	0.0000	SURCHARGED
60 minute summer	224	37	5.406	2.727	1332.5	0.0000	0.0000	SURCHARGED
60 minute summer	Spur 11 Optional	34	5.737	1.327	30.1	0.0000	0.0000	SURCHARGED
15 minute summer	Spur 8	10	6.127	0.357	66.8	0.9633	0.0000	SURCHARGED
60 minute summer	225	37	5.740	1.608	100.2	3.3597	0.0000	SURCHARGED
60 minute summer	226	37	5.709	1.620	268.1	3.3876	0.0000	SURCHARGED
60 minute summer	227	37	5.536	1.516	292.0	3.1495	0.0000	SURCHARGED
60 minute summer	Spur 6	38	5.609	1.575	948.4	44.7941	0.0000	SURCHARGED
60 minute summer	228	38	5.547	2.162	1004.4	3.0933	0.0000	SURCHARGED
60 minute summer	229	38	5.538	2.178	1020.9	3.6552	0.0000	SURCHARGED
60 minute summer	230	38	5.534	2.193	1024.8	0.0000	0.0000	SURCHARGED
60 minute summer	231	38	5.525	2.229	1026.2	3.1897	0.0000	SURCHARGED
15 minute summer	Spur 7	11	7.704	1.109	558.3	28.8308	0.0000	SURCHARGED
60 minute summer	232	38	5.506	2.271	1379.8	3.2501	0.0000	SURCHARGED
60 minute summer	233	38	5.484	2.287	1373.7	3.2728	0.0000	SURCHARGED
15 minute summer	Spur 44	10	6.073	0.503	88.3	1.3368	0.0000	SURCHARGED
15 minute summer	Spur 16	11	5.712	1.247	374.7	10.7795	0.0000	SURCHARGED
60 minute summer	234	38	5.459	2.305	1654.9	3.2981	0.0000	SURCHARGED
60 minute summer	235	38	5.444	2.306	1652.1	0.0000	0.0000	SURCHARGED
60 minute summer	236	38	5.426	2.611	1649.1	5.5818	0.0000	SURCHARGED
60 minute summer	Spur 45	38	5.406	0.056	1.7	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute summer	219	1.016	220	1359.5	1.280	0.258	105.0926	
60 minute summer	220	1.017	221	1345.9	1.250	0.255	46.2697	
60 minute summer	221	1.018	222	1316.7	1.314	0.250	40.7142	
60 minute summer	222	1.019	223	1307.2	0.873	0.248	161.9302	
60 minute summer	223	1.020	224	1332.5	0.626	0.255	41.7047	
60 minute summer	224	1.021	238	1346.4	0.632	0.255	13.0133	
60 minute summer	Spur 11 Optional	9.000	225	45.3	0.411	0.408	1.8707	
15 minute summer	Spur 8	10.000	225	65.6	1.650	1.648	0.4288	
60 minute summer	225	8.001	226	139.4	0.722	0.488	6.9219	
60 minute summer	226	8.002	227	-257.6	1.032	-0.905	11.2093	
60 minute summer	227	8.003	229	-281.5	-0.999	-0.402	17.9369	
60 minute summer	Spur 6	10.000_1	228	1004.4	2.300	1.306	5.5407	
60 minute summer	228	10.001	229	1008.6	1.011	0.364	15.2396	
60 minute summer	229	8.004	230	1024.8	1.053	0.434	15.9297	
60 minute summer	230	9.005	231	1026.2	0.971	0.440	38.7499	
60 minute summer	231	8.006	232	1024.9	0.828	0.436	51.7849	
15 minute summer	Spur 7	11.000	232	523.2	4.744	2.789	0.7941	
60 minute summer	232	8.007	233	1373.7	1.072	0.585	32.2331	
60 minute summer	233	8.008	234	1369.3	1.024	0.590	37.3724	
15 minute summer	Spur 44	12.000	234	86.8	2.183	2.181	0.3940	
15 minute summer	Spur 16	13.000	234	358.2	5.088	1.687	0.6157	
60 minute summer	234	8.009	235	1652.1	1.388	0.709	13.8107	
60 minute summer	235	8.010	236	1649.1	1.526	0.702	19.5247	
60 minute summer	236	8.011	237	1638.9	0.917	0.395	78.9638	
60 minute summer	Spur 45	14.000	237	2.6	-0.369	0.147	0.0261	

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Results for 30 year Critical Storm Duration. Lowest mass balance: 93.45%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	237	37	5.403	2.656	1638.9	5.6780	0.0000	SURCHARGED
15 minute summer	Spur 17	11	7.086	1.209	668.1	37.5984	0.0000	SURCHARGED
60 minute summer	238	37	5.395	2.734	2658.0	5.8457	0.0000	SURCHARGED
15 minute summer	Spur 18	10	5.425	0.550	95.5	1.7031	0.0000	SURCHARGED
60 minute summer	239	38	5.296	2.769	2712.6	5.9200	0.0000	SURCHARGED
60 minute summer	Spur 19	38	5.410	0.860	42.8	1.7362	0.0000	SURCHARGED
10080 minute winter	240	8940	5.247	2.820	54.5	6.0290	0.0000	SURCHARGED
10080 minute winter	241	8940	5.247	2.851	54.3	6.0957	0.0000	SURCHARGED
10080 minute winter	242	8940	5.247	2.879	54.2	6.1557	0.0000	SURCHARGED
10080 minute winter	243	9120	5.247	2.944	54.0	6.2948	0.0000	SURCHARGED
10080 minute winter	244	9120	5.247	3.025	54.1	6.4671	0.0000	SURCHARGED
10080 minute winter	245	9120	5.246	3.059	54.2	6.5412	0.0000	OK
10080 minute winter	246	9300	5.246	0.957	13.5	1.0821	0.0000	OK
10080 minute winter	247	9240	5.246	1.024	13.8	1.1579	0.0000	OK
10080 minute winter	248	9120	5.246	1.046	23.3	0.0000	0.0000	OK
15 minute summer	Spur 5	11	4.970	0.480	105.0	1.0056	0.0000	SURCHARGED
15 minute summer	249	11	4.806	0.611	119.4	1.2483	0.0000	SURCHARGED
15 minute summer	Spur 4	11	5.386	1.216	238.6	5.3176	0.0000	SURCHARGED
15 minute summer	250	11	4.750	0.848	342.7	1.7263	0.0000	SURCHARGED
15 minute summer	251	13	4.522	0.724	353.4	1.4701	0.0000	SURCHARGED
15 minute summer	Spur 3	11	5.115	0.945	238.6	5.1458	0.0000	SURCHARGED
15 minute summer	252	13	4.377	1.062	583.7	2.9933	0.0000	SURCHARGED
15 minute summer	253	13	4.319	1.107	534.5	3.1218	0.0000	SURCHARGED
15 minute summer	Spur 1	11	5.099	1.169	334.1	8.1994	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute summer	237	8.012	238	1630.0	0.850	0.412	110.4863	
15 minute summer	Spur 17	15.000	238	611.8	5.547	2.175	0.6049	
60 minute summer	238	1.022	239	2672.5	1.255	0.676	171.3435	
15 minute summer	Spur 18	16.000	239	93.4	2.348	2.337	0.3840	
60 minute summer	239	1.023_1	240	2723.6	1.279	0.689	127.8281	
60 minute summer	Spur 19	17.000	240	38.8	2.824	0.817	0.1540	
10080 minute winter	240	1.024_1	241	54.3	0.401	0.013	40.6716	
10080 minute winter	241	1.025_1	242	54.2	0.395	0.015	40.0815	
10080 minute winter	242	1.026_2	243	54.0	0.395	0.013	75.8260	
10080 minute winter	243	1.023	244	54.1	0.299	0.014	103.9317	
10080 minute winter	244	1.024	245	54.2	0.191	0.014	44.1097	
10080 minute winter	245	1.025	246	13.5	0.088	0.011	25.9804	
10080 minute winter	245	1.026_1	289	43.1	0.108	0.011	21.6853	
10080 minute winter	246	1.026	247	13.8	0.050	0.011	33.6411	
10080 minute winter	247	1.027	248	13.1	0.039	0.011	11.1956	
10080 minute winter	248	Flow through pond	288	-18.9	-0.006	0.000	6052.0010	
15 minute summer	Spur 5	18.000	249	104.1	1.493	1.467	1.1980	
15 minute summer	249	18.001	250	108.9	0.628	0.331	13.6554	
15 minute summer	Spur 4	19.000	250	223.3	3.171	3.133	0.8824	
15 minute summer	250	18.002	251	338.8	1.568	1.559	11.0371	
15 minute summer	251	18.003	252	352.0	1.647	1.620	11.4564	
15 minute summer	Spur 3	20.000	252	231.4	3.286	1.736	1.2513	
15 minute summer	252	18.004	253	519.9	1.222	0.643	39.2521	
15 minute summer	253	18.005	256	478.8	0.846	0.589	38.7261	
15 minute summer	Spur 1	21.000	254	323.4	2.932	2.926	3.3970	

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Results for 30 year Critical Storm Duration. Lowest mass balance: 93.45%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	254	13	4.434	0.824	338.0	1.6666	0.0000	SURCHARGED
15 minute summer	255	13	4.370	0.844	350.0	1.7176	0.0000	SURCHARGED
15 minute summer	Spur 2	12	6.910	2.960	358.0	22.3189	0.0000	SURCHARGED
15 minute summer	256	13	4.288	1.329	1081.4	1.8256	0.0000	SURCHARGED
15 minute summer	Spur 43	11	6.146	1.296	105.0	3.6220	0.0000	SURCHARGED
15 minute summer	257	13	4.262	1.333	1185.7	1.7889	0.0000	SURCHARGED
15 minute summer	Spur 24	13	4.243	0.315	43.0	0.2640	0.0000	SURCHARGED
30 minute summer	258	20	4.265	1.364	1099.2	1.5426	0.0000	SURCHARGED
15 minute summer	Spur 42	10	4.987	0.757	105.0	1.6470	0.0000	SURCHARGED
15 minute summer	Spur 20	10	5.534	0.694	114.5	2.0309	0.0000	SURCHARGED
15 minute summer	259	13	4.129	1.294	1335.6	1.7028	0.0000	SURCHARGED
15 minute summer	Spur 41	10	4.568	0.218	62.0	0.3033	0.0000	OK
30 minute summer	260	20	4.131	1.378	1212.7	1.8120	0.0000	SURCHARGED
30 minute summer	Spur 25	20	4.125	0.457	56.6	0.5099	0.0000	SURCHARGED
30 minute summer	261	20	4.093	1.363	1233.1	1.5420	0.0000	SURCHARGED
15 minute summer	Spur 21	11	5.645	1.125	138.4	3.6428	0.0000	SURCHARGED
15 minute summer	262	13	3.990	1.336	1342.5	1.7482	0.0000	SURCHARGED
15 minute summer	Spur 40	13	4.046	0.320	40.1	0.2435	0.0000	SURCHARGED
30 minute summer	263	20	3.940	1.338	1344.9	1.5129	0.0000	SURCHARGED
15 minute summer	Spur 26	10	5.151	0.181	38.2	0.2127	0.0000	OK
30 minute summer	264	20	3.901	1.315	1376.6	1.7370	0.0000	SURCHARGED
15 minute summer	Spur 22	11	5.215	0.775	114.5	2.8105	0.0000	SURCHARGED
30 minute summer	265	20	3.802	1.309	1453.6	1.7571	0.0000	SURCHARGED
15 minute summer	Spur 23	11	5.379	1.409	128.9	5.6162	0.0000	SURCHARGED
30 minute summer	266	20	3.714	1.247	1548.1	1.6791	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	254	21.001	255	335.4	1.291	1.183	13.7388	
15 minute summer	255	21.002	256	329.8	1.341	1.166	20.7278	
15 minute summer	Spur 2	22.000	256	308.0	4.374	2.914	2.4657	
15 minute summer	256	18.006	257	1081.6	1.254	0.897	15.6776	
15 minute summer	Spur 43	23.000	257	99.3	2.498	2.495	1.2940	
15 minute summer	257	18.007	258	1166.3	1.169	0.681	19.0380	
15 minute summer	Spur 24	24.000	258	44.1	1.210	1.102	0.3470	
30 minute summer	258	18.008	259	1041.5	1.075	0.606	44.6301	
15 minute summer	Spur 42	25.000	259	102.6	2.581	2.577	0.5331	
15 minute summer	Spur 20	26.000	259	111.7	2.809	2.798	0.3582	
15 minute summer	259	18.009	260	1222.8	1.221	0.712	55.4893	
15 minute summer	Spur 41	27.000	260	61.4	1.196	0.869	0.6788	
30 minute summer	260	18.010	261	1199.6	1.139	0.698	15.6691	
30 minute summer	Spur 25	28.000	261	56.6	1.428	1.424	0.3145	
30 minute summer	261	18.011	262	1233.4	1.118	0.717	51.2540	
15 minute summer	Spur 21	29.000	262	133.8	3.364	3.358	0.4928	
15 minute summer	262	18.012	263	1348.5	1.198	0.782	34.9584	
15 minute summer	Spur 40	30.000	263	39.7	1.412	0.764	0.6011	
30 minute summer	263	18.013	264	1350.6	1.199	0.763	10.2057	
15 minute summer	Spur 26	31.000	264	37.9	1.162	0.945	0.3159	
30 minute summer	264	18.014	265	1382.0	1.227	0.804	63.1599	
15 minute summer	Spur 22	32.000	265	111.1	2.794	2.778	0.4494	
30 minute summer	265	18.015	266	1452.6	1.289	0.845	17.5924	
15 minute summer	Spur 23	33.000	266	115.0	2.893	1.747	1.3133	
30 minute summer	266	18.016	267	1547.1	1.373	0.897	49.0344	

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Results for 30 year Critical Storm Duration. Lowest mass balance: 93.45%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	267	13	3.647	1.253	1620.9	0.0000	0.0000	SURCHARGED
120 minute winter	S278 Storage	118	4.428	0.394	29.1	68.0482	0.0000	SURCHARGED
15 minute summer	S278 S6	10	4.509	0.594	109.8	2.3094	0.0000	SURCHARGED
15 minute summer	S278 S7	10	4.508	0.660	9.3	0.7463	0.0000	SURCHARGED
15 minute summer	S278 S8	12	4.491	0.808	18.6	1.1503	0.0000	SURCHARGED
15 minute summer	268	12	4.482	1.081	47.1	1.4881	0.0000	SURCHARGED
15 minute summer	Spur 35	10	5.938	0.488	34.8	0.5653	0.0000	SURCHARGED
15 minute summer	Spur 27	12	4.750	1.261	95.5	2.1912	0.0000	SURCHARGED
15 minute summer	269	12	4.426	1.300	171.6	2.5176	0.0000	SURCHARGED
15 minute summer	270	12	4.417	1.359	185.3	2.6357	0.0000	SURCHARGED
15 minute summer	Spur 36	10	5.395	0.515	95.5	1.4162	0.0000	SURCHARGED
15 minute summer	Spur 28	10	5.650	0.690	119.3	2.5244	0.0000	SURCHARGED
15 minute summer	271	12	4.347	1.569	340.0	4.2542	0.0000	SURCHARGED
15 minute summer	Spur 29	11	5.831	0.581	38.2	0.7416	0.0000	SURCHARGED
15 minute summer	Spur 37	10	5.499	0.249	25.3	0.2150	0.0000	SURCHARGED
15 minute summer	272	12	4.313	1.623	411.7	4.3960	0.0000	SURCHARGED
15 minute summer	Spur 38	10	5.304	0.384	71.6	0.7640	0.0000	SURCHARGED
15 minute summer	273	12	4.268	1.621	482.5	4.3807	0.0000	SURCHARGED
15 minute summer	Spur 30	10	5.335	0.465	157.5	2.0041	0.0000	SURCHARGED
15 minute summer	274	12	4.219	1.597	618.6	4.3090	0.0000	SURCHARGED
15 minute summer	Spur 31	10	5.620	0.370	33.4	0.3877	0.0000	SURCHARGED
15 minute summer	275	12	4.081	1.522	653.3	4.1057	0.0000	SURCHARGED
15 minute summer	Spur 32	10	5.005	0.585	186.1	2.6292	0.0000	SURCHARGED
15 minute summer	276	12	3.930	1.433	813.2	3.8674	0.0000	SURCHARGED
15 minute summer	Spur 39	10	5.678	0.648	119.3	2.3488	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	267	18.017	280	1618.2	1.436	0.941	27.0297	
120 minute winter	S278 Storage	35.000	S278 S6	-29.1	-0.931	-0.696	0.2440	
15 minute summer	S278 S6	35.001	S278 S7	9.3	0.713	0.233	0.4545	
15 minute summer	S278 S7	Hydro-Brake®	S278 S8	4.0				
15 minute summer	S278 S8	35.003	268	22.5	1.134	0.452	0.8979	
15 minute summer	268	35.004	269	36.9	0.940	0.410	1.3307	
15 minute summer	Spur 35	35.000_1	269	33.8	1.920	1.908	0.1889	
15 minute summer	Spur 27	36.000	269	94.3	2.372	2.372	0.4254	
15 minute summer	269	35.005	270	149.7	1.096	0.623	5.9141	
15 minute summer	270	35.006	271	158.0	0.973	0.654	11.1957	
15 minute summer	Spur 36	37.000	271	93.9	2.362	2.352	0.3247	
15 minute summer	Spur 28	38.000	271	115.9	2.914	2.911	0.3203	
15 minute summer	271	35.007	272	349.9	0.810	0.568	15.4650	
15 minute summer	Spur 29	39.000	272	37.1	2.105	2.094	0.1913	
15 minute summer	Spur 37	40.000	272	24.9	1.417	1.403	0.1347	
15 minute summer	272	35.008	273	416.0	0.945	0.748	9.2610	
15 minute summer	Spur 38	41.000	273	70.9	1.782	1.771	0.3877	
15 minute summer	273	35.009	274	482.2	1.096	0.863	5.3211	
15 minute summer	Spur 30	42.000	274	156.1	2.217	2.190	0.4864	
15 minute summer	274	35.010	275	618.0	1.404	1.212	16.0935	
15 minute summer	Spur 31	43.000	275	32.9	1.870	1.859	0.1226	
15 minute summer	275	35.011	276	652.3	1.482	1.281	15.8716	
15 minute summer	Spur 32	44.000	276	183.8	2.610	2.581	0.6055	
15 minute summer	276	35.012	277	816.7	1.856	1.622	4.7163	
15 minute summer	Spur 39	45.000	277	116.1	2.919	2.904	0.2781	

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Results for 30 year Critical Storm Duration. Lowest mass balance: 93.45%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	277	20	3.809	1.330	914.3	3.5902	0.0000	SURCHARGED
30 minute summer	278	20	3.715	1.301	920.8	3.5235	0.0000	SURCHARGED
15 minute summer	Spur 33	10	4.598	0.488	171.8	2.2884	0.0000	SURCHARGED
30 minute summer	279	20	3.651	1.268	1056.8	3.2280	0.0000	SURCHARGED
30 minute summer	280	21	3.584	1.230	2454.3	1.7599	0.0000	OK
30 minute summer	281	21	3.519	1.199	2437.8	0.0000	0.0000	OK
30 minute summer	282	21	3.491	1.223	2368.6	0.0000	0.0000	OK
15 minute summer	Spur 34	10	3.526	0.410	128.9	1.9588	0.0000	SURCHARGED
30 minute summer	283	21	3.426	1.198	2442.4	2.1163	0.0000	OK
30 minute summer	284	21	3.307	1.188	2444.4	2.0995	0.0000	OK
30 minute summer	285	22	3.219	1.159	2384.5	2.0472	0.0000	OK
10080 minute summer	286	10140	3.218	1.296	59.8	2.2908	0.0000	OK
10080 minute summer	287	10140	3.224	1.324	112.4	0.0000	0.0000	OK
10080 minute winter	288	9240	5.246	1.146	35.4	0.0000	0.0000	SURCHARGED
10080 minute winter	289	9120	5.246	3.076	43.1	6.5772	0.0000	SURCHARGED
10080 minute winter	290	10020	3.217	1.277	10.0	1.8270	0.0000	SURCHARGED
10080 minute winter	291	10020	3.217	1.317	10.1	0.0000	0.0000	OK
10080 minute winter	292	9960	3.215	1.515	102.1	0.0000	0.0000	SURCHARGED
10080 minute winter	293	9120	3.227	1.547	50.3	3.9363	0.0000	SURCHARGED
240 minute summer	294	1632	2.093	0.683	13.3	0.7727	0.0000	SURCHARGED
8640 minute summer	Ex Outfall	9660	2.088	0.788	13.3	0.0000	0.0000	FLOOD RISK
15 minute summer	Ex Ditch	1	2.080	0.827	11.9	0.0000	0.0000	OK
60 minute summer	209a	36	5.810	1.194	105.9	2.1093	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute summer	277	35.013	278	912.9	1.441	1.132	24.8585	
30 minute summer	278	35.014	279	911.5	1.438	1.127	11.7901	
15 minute summer	Spur 33	46.000	279	170.2	2.417	2.398	0.4235	
30 minute summer	279	35.015	280	1049.2	1.656	1.287	10.8515	
30 minute summer	280	19.018	281	2437.8	1.836	1.041	27.5081	
30 minute summer	281	19.019	282	2368.6	1.811	1.016	42.3638	
30 minute summer	282	19.020	283	2378.7	1.796	1.014	32.1565	
15 minute summer	Spur 34	47.000	283	127.3	1.809	1.784	0.6759	
30 minute summer	283	19.021	284	2444.4	1.669	0.794	98.2766	
30 minute summer	284	19.022	285	2384.5	1.648	0.773	52.1983	
30 minute summer	285	19.023	286	2273.5	1.581	0.737	122.0284	
10080 minute summer	286	19.024	287	66.7	0.462	0.022	21.6884	
10080 minute summer	287	Flow through pond	292	78.8	0.099	0.000	8356.3994	
10080 minute winter	288	48.000	289	-35.4	-0.216	-0.021	17.8712	
10080 minute winter	289	Hydro-Brake®	290	10.0				
10080 minute winter	290	49.002	291	10.1	0.558	0.091	1.4199	
10080 minute winter	291	Flow through pond	292	86.7	0.045	0.000	8359.6582	
10080 minute winter	292	51.000	293	50.3	0.141	0.133	4.3173	
10080 minute winter	293	Hydro-Brake®	294	13.3				
240 minute summer	294	51.002	Ex Outfall	13.3	0.491	0.234	0.3660	
8640 minute summer	Ex Outfall	50.003	Ex Ditch	13.3	0.334	0.334	0.3179	6738.7
60 minute summer	209a	5.003	210	100.3	0.922	0.349	3.3407	

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Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
501	0.180	5.00	5.854		499310.650	102324.705	1.131
502	1.920	5.00	5.825		499313.670	102322.254	1.387
503			5.260	1800	499306.080	102311.172	1.241
504			5.350		499302.837	102285.099	1.590
505	0.140	5.00	6.398		499219.909	102403.350	1.520
506	1.170	5.00	6.465		499243.633	102397.048	1.878
507			5.834	1500	499236.013	102372.046	1.409
508			5.350		499235.169	102359.661	1.590
509	2.500	5.00	6.779		499132.478	102466.419	2.218
510	0.140	5.00	6.756		499128.745	102473.611	1.584
551			6.276	1800	499123.819	102465.340	1.938
512			5.675		499122.143	102453.373	1.420
513		5.00	5.675		499155.700	102401.446	1.500
514			5.581	1200	499161.538	102395.111	1.442
515			5.350		499173.206	102389.484	1.590
516	0.460	5.00	5.572		499361.162	102268.098	1.650
517			4.959	1350	499347.143	102268.039	1.127
518			5.350		499335.650	102262.480	1.590
519		5.00	5.250	1200	499318.338	102244.664	1.500
520			5.000	1200	499316.595	102231.583	1.425
521			5.128	1200	499321.905	102201.786	1.732
Ex_Mh			4.814	1350	499313.976	102189.063	1.724
Ex_Outfall			4.988	1350	499298.297	102176.392	1.918

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
3.000	Ex_Mh	Ex_Outfall	20.159	0.600	3.090	3.070	0.020	1008.0	375	6.50	50.0
1.002	521	Ex_Mh	14.991	0.600	3.396	3.307	0.089	168.4	225	5.90	50.0
1.001	520	521	30.266	0.600	3.575	3.396	0.179	169.1	225	5.65	50.0
1.000	519	520	13.197	0.600	3.750	3.575	0.175	75.4	225	5.15	50.0
6.001	517	518	12.767	0.600	3.832	3.800	0.032	399.0	450	5.25	50.0
6.000	516	517	14.019	0.600	3.922	3.832	0.090	155.8	450	5.14	50.0
9.001	514	515	12.954	0.600	4.139	4.086	0.053	244.4	300	5.26	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
3.000	0.562	62.1	0.0	1.349	1.543	0.000	0.0	0	0.000
1.002	1.004	39.9	0.0	1.507	1.282	0.000	0.0	0	0.000
1.001	1.002	39.9	0.0	1.200	1.507	0.000	0.0	0	0.000
1.000	1.507	59.9	0.0	1.275	1.200	0.000	0.0	0	0.000
6.001	1.011	160.9	62.3	0.677	1.100	0.460	0.0	194	0.949
6.000	1.626	258.6	62.3	1.200	0.677	0.460	0.0	150	1.348
9.001	1.001	70.8	0.0	1.142	0.964	0.000	0.0	0	0.000

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ARUN DISTRICT COUNCIL F/15/24/RES

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
9.000	513	514	8.615	0.600	4.175	4.139	0.036	239.3	300	5.14	50.0
7.001	551	512	12.084	0.600	4.338	4.255	0.083	145.6	900	5.14	50.0
8.000	509	551	8.726	0.600	4.561	4.488	0.073	119.5	750	5.06	50.0
7.000	510	551	9.627	0.600	5.172	4.938	0.234	41.1	300	5.07	50.0
2.001	507	508	12.414	0.600	4.425	3.964	0.461	26.9	600	5.61	50.0
3.000	506	507	26.137	0.600	4.587	4.500	0.087	300.4	525	5.34	50.0
2.000	505	507	25.303	0.600	4.878	4.725	0.153	230.1	300	5.57	50.0
4.001	503	504	26.274	0.600	4.019	3.800	0.219	120.0	825	5.30	50.0
4.000	501	503	14.284	0.600	4.723	4.544	0.179	79.8	300	5.14	50.0
5.000	502	503	13.432	0.600	4.438	4.169	0.269	49.9	675	5.06	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
9.000	1.012	71.5	0.0	1.200	1.142	0.000	0.0	0	0.000
7.001	2.594	1650.5	357.8	1.038	0.520	2.640	0.0	283	2.096
8.000	2.558	1130.2	338.8	1.468	1.038	2.500	0.0	280	2.250
7.000	2.458	173.7	19.0	1.284	1.038	0.140	0.0	67	1.631
2.001	4.704	1330.1	177.5	0.809	0.786	1.310	0.0	146	3.318
3.000	1.287	278.6	158.6	1.353	0.800	1.170	0.0	284	1.327
2.000	1.032	72.9	19.0	1.220	0.809	0.140	0.0	104	0.871
4.001	2.709	1448.2	284.6	0.416	0.725	2.100	0.0	246	2.132
4.000	1.761	124.5	24.4	0.621	0.416	0.180	0.0	89	1.375
5.000	3.714	1329.0	260.2	0.712	0.416	1.920	0.0	201	2.915

Simulation Settings

Rainfall Methodology	FEH-22	Analysis Speed	Detailed	Additional Storage (m³/ha)	35.0
Summer CV	1.000	Skip Steady State	x	Check Discharge Rate(s)	x
Winter CV	1.000	Drain Down Time (mins)	2000	Check Discharge Volume	x

Storm Durations

15	60	180	360	600	960	2160	4320	7200	10080
30	120	240	480	720	1440	2880	5760	8640	

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
2	0	0	0

Node 520 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Downstream Link	1.001	Sump Available	✓
Replaces Downstream Link	✓	Product Number	CTL-SHE-0126-8400-1558-8400
Invert Level (m)	3.575	Min Outlet Diameter (m)	0.150
Design Depth (m)	1.558	Min Node Diameter (mm)	1200
Design Flow (l/s)	8.4		

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Node 504 Online Orifice Control

Flap Valve	x	Invert Level (m)	3.760	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.825		

Node 518 Online Orifice Control

Flap Valve	x	Invert Level (m)	3.760	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.450		

Node 508 Online Orifice Control

Flap Valve	x	Invert Level (m)	3.760	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.600		

Node 515 Online Orifice Control

Flap Valve	x	Invert Level (m)	3.760	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.300		

Node 512 Online Orifice Control

Flap Valve	x	Invert Level (m)	4.255	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	1.050		

Node 519 Flow through Pond Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Main Channel Length (m)	5.000
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	3.750	Main Channel Slope (1:X)	500.0
Safety Factor	2.0	Time to half empty (mins)	0	Main Channel n	0.030

Inlets

515 | 508 | 504 | 518

Depth (m)	Area (m^2)	Inf Area (m^2)	Depth (m)	Area (m^2)	Inf Area (m^2)	Depth (m)	Area (m^2)	Inf Area (m^2)	Depth (m)	Area (m^2)	Inf Area (m^2)
0.000	781.5	0.0	0.349	1195.1	0.0	0.350	5535.9	0.0	1.600	9559.0	0.0

Node 513 Flow through Pond Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Main Channel Length (m)	61.000
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	4.175	Main Channel Slope (1:X)	500.0
Safety Factor	2.0	Time to half empty (mins)	0	Main Channel n	0.030

Inlets

512

Depth (m)	Area (m^2)	Inf Area (m^2)	Depth (m)	Area (m^2)	Inf Area (m^2)	Depth (m)	Area (m^2)	Inf Area (m^2)	Depth (m)	Area (m^2)	Inf Area (m^2)
0.000	360.7	0.0	0.124	360.7	0.0	0.125	1519.2	0.0	1.500	2718.3	0.0

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ARUN DISTRICT COUNCIL F/15/24/RES

Results for 2 year Critical Storm Duration. Lowest mass balance: 95.09%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	501	10	4.833	0.110	33.9	0.6140	0.0000	OK
15 minute summer	502	10	4.701	0.263	361.0	12.7407	0.0000	OK
10080 minute summer	503	6960	4.375	0.356	10.6	0.9059	0.0000	OK
10080 minute summer	504	6600	4.374	0.614	10.6	0.0000	0.0000	OK
15 minute summer	505	10	5.002	0.124	26.3	0.3994	0.0000	OK
15 minute summer	506	10	4.934	0.347	219.9	7.5621	0.0000	OK
15 minute summer	507	11	4.610	0.185	241.0	0.3271	0.0000	OK
10080 minute summer	508	6600	4.375	0.615	27.4	0.0000	0.0000	OK
15 minute summer	509	10	4.932	0.371	470.0	14.6314	0.0000	OK
15 minute summer	510	10	5.254	0.082	26.3	0.2539	0.0000	OK
15 minute summer	551	10	4.789	0.451	488.2	1.1477	0.0000	OK
15 minute summer	512	11	4.752	0.497	486.0	0.0000	0.0000	OK
120 minute summer	513	80	4.487	0.312	177.9	0.0000	0.0000	SURCHARGED
180 minute summer	514	120	4.431	0.292	76.2	0.3306	0.0000	OK
10080 minute summer	515	6600	4.374	0.614	13.2	0.0000	0.0000	OK
10080 minute summer	516	6540	4.374	0.452	4.0	4.4124	0.0000	SURCHARGED
10080 minute summer	517	6540	4.374	0.542	4.2	0.7757	0.0000	SURCHARGED
10080 minute summer	518	6540	4.378	0.618	10.4	0.0000	0.0000	OK
10080 minute summer	519	6600	4.373	0.623	43.0	0.7050	0.0000	SURCHARGED
10080 minute summer	520	6600	4.369	0.794	11.8	0.8984	0.0000	SURCHARGED
180 minute winter	521	76	3.469	0.073	8.4	0.0821	0.0000	OK
15 minute winter	Ex_Mh	15	3.180	0.090	8.4	0.1292	0.0000	OK
240 minute winter	Ex_Outfall	96	3.135	0.065	8.4	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	501	4.000	503	33.4	1.471	0.269	0.3247	
15 minute summer	502	5.000	503	353.7	2.996	0.266	1.5914	
10080 minute summer	503	4.001	504	10.6	0.582	0.007	8.0523	
10080 minute summer	504	Flow through pond	519	43.0	0.002	0.000	1929.9957	
15 minute summer	505	2.000	507	25.7	0.952	0.353	0.9514	
15 minute summer	506	3.000	507	215.3	1.513	0.773	3.7211	
15 minute summer	507	2.001	508	241.4	3.014	0.181	1.1357	
10080 minute summer	508	Flow through pond	519	43.0	0.002	0.000	1929.9957	
15 minute summer	509	8.000	551	462.1	2.317	0.409	1.7410	
15 minute summer	510	7.000	551	26.1	1.733	0.150	0.1451	
15 minute summer	551	7.001	512	486.0	1.441	0.294	4.0824	
15 minute summer	512	Flow through pond	513	392.2	0.370	0.008	186.0806	
120 minute summer	513	9.000	514	78.8	1.163	1.102	0.6045	
180 minute summer	514	9.001	515	76.1	1.247	1.076	0.8981	
10080 minute summer	515	Flow through pond	519	43.0	0.002	0.000	1929.9957	
10080 minute summer	516	6.000	517	4.2	0.316	0.016	2.2207	
10080 minute summer	517	6.001	518	4.6	0.308	0.029	2.0228	
10080 minute summer	518	Flow through pond	519	43.0	0.002	0.000	1929.9957	
10080 minute summer	519	1.000	520	11.8	0.425	0.197	0.5249	
10080 minute summer	520	Hydro-Brake®	521	8.4				
180 minute winter	521	1.002	Ex_Mh	8.4	0.781	0.210	0.1607	
15 minute winter	Ex_Mh	3.003	Ex_Outfall	8.4	0.511	0.135	0.3325	528.6

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Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
400	0.140	5.00	7.634	1200	499208.080	102947.776	1.693
401	0.033	5.00	7.471	1200	499191.802	102960.775	1.425
402			7.527	1350	499192.485	102947.002	1.725
Spur 55	0.140	5.00	7.332		499209.717	102918.587	1.480
403			7.263	1350	499193.925	102918.013	1.626
404	0.015	5.00	7.475	1200	499185.199	102931.414	1.595
405			7.355	1350	499185.865	102917.675	1.766
406			7.305	1500	499186.378	102906.830	1.738
Spur 54b	0.214	5.00	7.300		499170.601	102897.526	1.650
407			7.276	1500	499186.629	102898.266	1.741
408	0.016	5.00	7.425	1500	499187.246	102889.638	1.890
409			7.625	1500	499188.947	102855.143	2.160
Spur 54		5.00	7.243		499175.204	102846.171	1.425
410			7.502	1500	499189.004	102846.834	2.053
411	0.017	5.00	7.485	1500	499189.567	102838.067	2.054
412			7.700		499189.483	102784.663	2.379
413	0.025	5.00	7.700	1200	499189.740	102779.830	2.389
414			7.700		499189.963	102774.983	2.403
415	0.012	5.00	7.445	1200	499202.748	102889.552	1.500
416			7.540	1350	499203.954	102865.243	1.650
Spur 56	0.210	5.00	7.500	1350	499215.973	102859.553	0.936
417	0.015	5.00	7.501	1350	499203.923	102859.096	1.650
418			7.575	1350	499204.586	102852.256	1.745
419			7.600		499207.005	102797.021	1.881
420	0.017	5.00	7.600	1200	499207.218	102792.160	1.891
421			7.600		499207.477	102787.339	1.901
Spur 57	0.360	5.00	7.399		499220.421	102780.923	1.677
422	0.028	5.00	7.750	1350	499208.237	102772.796	2.101
423			7.395	1500	499208.347	102727.370	1.873
Spur 58	0.560	5.00	7.450		499222.045	102720.154	1.817
424	0.012	5.00	7.322	1500	499208.915	102719.432	1.816
425			7.215	1500	499209.239	102709.419	1.729
426			7.445	1500	499211.112	102671.919	2.045
427	0.018	5.00	7.450	1500	499211.496	102663.947	2.066
428			7.355	1500	499207.632	102651.753	1.997
429			7.400	1500	499195.684	102655.324	2.343
430			6.950		499176.072	102624.540	1.958
431	0.016	5.00	6.950	1200	499171.304	102624.450	1.968
432			6.885		499168.313	102622.030	1.913
433			6.825		499158.673	102614.231	1.878
434	0.019	5.00	6.825	1200	499155.700	102611.826	1.888
435			6.850		499152.776	102609.436	1.923
436	0.028	5.00	7.000	1500	499133.952	102594.047	2.122
437		5.00	7.140	1200	499134.788	102576.053	1.296
Spur 53	0.270	5.00	7.042	1200	499116.358	102592.604	1.774
438			6.873	1500	499122.690	102584.839	2.024
439	0.029	5.00	7.325	1500	499115.299	102574.982	2.501
440			7.245	1500	499082.719	102548.490	2.505
441	0.030	5.00	7.195	1500	499077.579	102544.310	2.468
Spur 52	0.490	5.00	6.607		499037.251	102579.697	1.697
442			6.464	1500	499033.346	102569.484	2.098
443			5.991		499029.240	102562.270	1.641

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Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
S278 S1	0.050	5.00	5.850	1200	498971.669	102541.307	1.266
S278 S2	0.052	5.00	5.775	1200	498992.793	102524.316	1.377
S278 S3	0.048	5.00	5.700	1200	499023.758	102480.892	1.359
S278 S4	0.024	5.00	6.400	1200	499047.450	102497.266	2.252
444		5.00	5.991		499033.603	102530.906	1.641
445			6.679	1500	499041.226	102524.833	2.387
S278 S5	0.038	5.00	6.875	1800	499054.824	102514.000	2.686
S278 S6			6.041	1800	499067.416	102501.191	1.976
S278 Headwall 1			6.716		499075.016	102500.882	2.787
S278 Headwall 3	0.078	5.00	6.250		499074.544	102481.418	2.360
S278 S9			5.930	1200	499067.472	102474.023	2.099
Ex Mh			5.590	1500	499044.850	102453.205	1.940
Ex Headwall			5.590	1200	499037.436	102431.742	2.010
S278 S7	0.028	5.00	6.400	1200	499084.031	102437.314	2.015
S278 S8	0.027	5.00	6.074	1200	499072.722	102452.987	1.768
S278 Headwall 2			6.637		499078.902	102479.531	2.708
Spur 51	0.515	5.00	6.697		498967.207	102649.814	1.971
446			6.721	1350	498942.821	102649.164	2.088
Spur 50	0.480	5.00	6.902	1350	498936.193	102688.241	2.195
447			6.470	1350	498925.805	102683.628	1.791
448			6.500	1350	498923.023	102672.342	1.867
449	0.515	5.00	7.192	1350	498986.695	102628.445	2.097
450			6.638	1350	498977.749	102620.894	1.650
451			5.991		498971.152	102615.326	1.650
452		5.00	6.700	1350	498934.964	102633.659	2.125
453			6.236	1350	498939.418	102626.007	1.683
454			5.991		498946.690	102620.175	1.621

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.000	400	402	15.614	0.600	5.941	5.877	0.064	244.0	300	5.26	50.0
2.000	401	402	13.790	0.600	6.046	5.952	0.094	146.7	225	5.21	50.0
1.001	402	403	29.025	0.600	5.802	5.712	0.090	322.5	375	5.74	50.0
3.000	Spur 55	403	15.802	0.600	5.852	5.712	0.140	112.9	375	5.15	50.0
1.002	403	405	8.067	0.600	5.637	5.589	0.048	168.1	450	5.83	50.0
4.000	404	405	13.755	0.600	5.880	5.589	0.291	47.3	150	5.16	50.0
5.000	404	405	13.755	0.020	6.824	6.704	0.120	114.6	600	5.16	50.0
6.000	404	405	13.755	0.030	5.880	5.589	0.291	47.3	600	5.21	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.000	1.002	70.8	19.0	1.393	1.350	0.140	0.0	106	0.853
2.000	1.077	42.8	4.5	1.200	1.350	0.033	0.0	49	0.701
1.001	1.003	110.8	23.4	1.350	1.176	0.173	0.0	117	0.802
3.000	1.704	188.2	19.0	1.105	1.176	0.140	0.0	79	1.104
1.002	1.565	248.9	42.4	1.176	1.316	0.313	0.0	125	1.181
4.000	1.467	25.9	2.0	1.445	1.616	0.015	0.0	28	0.876
5.000	1.461	2015.6	0.0	0.051	0.051	0.000	0.0	0	0.000
6.000	1.106	113.5	0.0	1.424	1.595	0.000	0.0	0	0.000

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Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.002	405	406	10.857	0.600	5.589	5.567	0.022	493.5	150	6.23	50.0
7.000	405	406	10.857	0.030	6.680	6.630	0.050	217.1	600	5.17	50.0
8.000	405	406	10.857	0.030	5.589	5.567	0.022	493.5	600	5.53	50.0
1.004	406	407	8.568	0.600	5.567	5.551	0.016	535.5	600	6.27	50.0
7.000_1	Spur 54b	407	16.045	0.600	5.650	5.535	0.115	139.5	450	5.16	50.0
1.005	407	408	8.650	0.600	5.551	5.535	0.016	540.6	600	6.51	50.0
1.006	408	409	34.537	0.600	5.535	5.465	0.070	493.4	150	7.80	50.0
10.000	408	409	34.537	0.030	6.747	6.694	0.053	651.6	600	5.94	50.0
11.000	408	409	34.537	0.030	5.535	5.465	0.070	493.4	600	6.68	50.0
1.007	409	410	8.309	0.600	5.465	5.449	0.016	519.3	600	7.93	50.0
9.000	Spur 54	410	13.816	0.600	5.818	5.680	0.138	100.1	225	5.18	50.0
1.008	410	411	8.785	0.600	5.449	5.431	0.018	488.1	600	8.06	50.0
1.009	411	412	53.570	0.600	5.431	5.321	0.110	487.0	150	10.05	50.0
13.000	411	412	53.404	0.030	6.829	7.044	-0.215	-248.4	600	5.89	50.0
14.000_1	411	412	53.404	0.030	5.431	5.321	0.110	485.5	600	7.58	50.0
1.013	412	413	4.840	0.600	5.321	5.311	0.010	484.0	150	10.23	50.0
19.000_1	412	413	4.840	0.030	5.321	5.311	0.010	484.0	600	5.23	50.0
1.011	413	414	4.076	0.600	5.311	5.297	0.014	348.3	150	10.29	50.0
16.000	413	414	4.852	0.030	5.311	5.297	0.014	346.6	600	5.20	50.0
1.012	414	429	119.796	0.600	5.297	5.057	0.240	500.0	150	14.90	50.0
12.000	415	416	24.339	0.600	5.945	5.890	0.055	442.5	150	5.86	50.0
18.000_2	415	416	24.339	0.030	6.841	6.936	-0.095	-256.2	600	5.41	50.0
14.000	415	416	24.339	0.030	5.945	5.890	0.055	442.5	600	6.12	50.0
12.001	416	417	6.147	0.600	5.890	5.851	0.039	157.6	450	6.19	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.003	0.446	7.9	44.5	1.616	1.588	0.328	0.0	150	0.454
7.000	1.061	1464.5	0.0	0.075	0.075	0.000	0.0	0	0.000
8.000	0.342	35.1	0.0	1.595	1.567	0.000	0.0	0	0.000
1.004	1.045	295.5	44.5	1.128	1.126	0.328	0.0	156	0.761
7.000_1	1.719	273.4	29.0	1.200	1.291	0.214	0.0	98	1.133
1.005	1.040	294.1	73.5	1.125	1.290	0.542	0.0	204	0.871
1.006	0.446	7.9	75.6	1.740	2.010	0.558	0.0	150	0.454
10.000	0.613	845.4	0.0	0.078	0.331	0.000	0.0	0	0.000
11.000	0.342	35.1	0.0	1.719	1.989	0.000	0.0	0	0.000
1.007	1.061	300.1	75.6	1.560	1.453	0.558	0.0	204	0.890
9.000	1.306	51.9	0.0	1.200	1.597	0.000	0.0	0	0.000
1.008	1.095	309.7	75.6	1.453	1.454	0.558	0.0	201	0.911
1.009	0.449	7.9	77.9	1.904	2.229	0.575	0.0	150	0.457
13.000	1.000	1380.0	0.0	0.056	0.056	0.000	0.0	0	0.000
14.000_1	0.345	35.4	0.0	1.883	2.208	0.000	0.0	0	0.000
1.013	0.450	8.0	77.9	2.229	2.239	0.575	0.0	150	0.459
19.000_1	0.346	35.5	0.0	2.208	2.218	0.000	0.0	0	0.000
1.011	0.533	9.4	81.3	2.239	2.253	0.600	0.0	150	0.543
16.000	0.408	41.9	0.0	2.218	2.232	0.000	0.0	0	0.000
1.012	0.443	7.8	81.3	2.253	2.193	0.600	0.0	150	0.451
12.000	0.471	8.3	1.6	1.350	1.500	0.012	0.0	45	0.365
18.000_2	1.000	1380.0	0.0	0.004	0.004	0.000	0.0	0	0.000
14.000	0.361	37.1	0.0	1.329	1.479	0.000	0.0	0	0.000
12.001	1.617	257.1	1.6	1.200	1.200	0.012	0.0	25	0.456

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Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
20.000	Spur 56	417	12.059	0.600	6.564	6.526	0.038	317.3	375	5.20	50.0
12.002	417	418	6.872	0.600	5.851	5.830	0.021	327.2	450	6.29	50.0
12.003	418	419	55.288	0.600	5.830	5.719	0.111	498.1	150	8.37	50.0
21.000	418	419	55.288	0.030	6.931	6.425	0.506	109.3	600	5.62	50.0
17.000_2	418	419	55.288	0.030	5.830	5.719	0.111	498.1	600	7.71	50.0
12.004	419	420	4.866	0.600	5.719	5.709	0.010	486.6	150	8.55	50.0
23.000	419	420	4.866	0.030	5.719	5.709	0.010	486.6	600	5.24	50.0
17.005	420	421	4.828	0.600	5.709	5.699	0.010	482.8	150	8.72	50.0
24.000	420	421	4.828	0.030	5.709	5.699	0.010	482.8	600	5.23	50.0
21.006	421	422	14.563	0.600	5.699	5.649	0.050	291.3	150	9.14	50.0
25.000_1	Spur 57	422	14.646	0.600	5.722	5.649	0.073	200.6	450	5.17	50.0
26.000	421	422	14.563	0.030	6.903	7.053	-0.150	-97.1	600	5.24	50.0
19.000	421	422	14.563	0.030	5.699	5.649	0.050	291.3	600	5.54	50.0
12.009	422	423	45.426	0.600	5.649	5.522	0.127	357.7	150	10.58	50.0
28.000	422	423	45.426	0.030	7.150	6.779	0.371	122.4	600	5.54	50.0
22.000	422	423	45.426	0.030	5.649	5.522	0.127	357.7	600	6.88	50.0
12.010	423	424	7.958	0.600	5.522	5.506	0.016	497.4	600	10.70	50.0
30.000	Spur 58	424	13.150	0.600	5.633	5.581	0.052	252.9	525	5.16	50.0
12.011	424	425	10.018	0.600	5.506	5.486	0.020	500.9	600	10.86	50.0
12.012	425	426	37.547	0.600	5.486	5.400	0.086	436.6	150	12.18	50.0
31.000	425	426	37.547	0.030	6.600	6.585	0.015	2503.1	600	7.00	50.0
25.000	425	426	37.547	0.030	5.486	5.400	0.086	436.6	600	6.72	50.0
12.013	426	427	7.981	0.600	5.400	5.384	0.016	498.8	600	12.30	50.0
12.014	427	428	12.792	0.600	5.384	5.358	0.026	492.0	600	12.49	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
20.000	1.012	111.7	28.5	0.551	0.600	0.210	0.0	129	0.850
12.002	1.118	177.8	32.1	1.200	1.295	0.237	0.0	129	0.856
12.003	0.444	7.8	32.1	1.595	1.731	0.237	0.0	150	0.452
21.000	1.496	2064.5	0.0	0.044	0.575	0.000	0.0	0	0.000
17.000_2	0.341	34.9	0.0	1.574	1.710	0.000	0.0	0	0.000
12.004	0.449	7.9	32.1	1.731	1.741	0.237	0.0	150	0.457
23.000	0.345	35.4	0.0	1.710	1.720	0.000	0.0	0	0.000
17.005	0.451	8.0	34.4	1.741	1.751	0.254	0.0	150	0.459
24.000	0.346	35.5	0.0	1.720	1.730	0.000	0.0	0	0.000
21.006	0.604	10.3	34.4	1.751	1.951	0.254	0.0	150	0.595
25.000_1	1.431	227.7	48.8	1.227	1.651	0.360	0.0	141	1.150
26.000	1.000	1380.0	0.0	0.097	0.097	0.000	0.0	0	0.000
19.000	0.445	45.7	0.0	1.730	1.930	0.000	0.0	0	0.000
12.009	0.536	9.3	87.0	1.951	1.723	0.642	0.0	150	0.536
28.000	1.413	1950.2	0.0	0.000	0.018	0.000	0.0	0	0.000
22.000	0.402	41.2	0.0	1.930	1.702	0.000	0.0	0	0.000
12.010	1.085	306.7	87.0	1.273	1.216	0.642	0.0	218	0.939
30.000	1.404	303.9	75.9	1.292	1.216	0.560	0.0	178	1.176
12.011	1.081	305.6	164.5	1.216	1.129	1.214	0.0	314	1.100
12.012	0.475	8.4	164.5	1.579	1.895	1.214	0.0	150	0.484
31.000	0.313	431.3	0.0	0.015	0.280	0.000	0.0	0	0.000
25.000	0.364	37.3	0.0	1.558	1.874	0.000	0.0	0	0.000
12.013	1.083	306.3	164.5	1.445	1.466	1.214	0.0	313	1.102
12.014	1.091	308.4	167.0	1.466	1.397	1.232	0.0	315	1.112

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Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
12.015	428	429	12.470	0.600	5.358	5.057	0.301	41.4	600	12.55	50.0
33.000	414	429	119.796	0.030	7.200	6.800	0.400	299.5	600	7.21	50.0
34.000	414	429	119.796	0.030	5.297	5.057	0.240	500.0	600	10.87	50.0
1.013_1	429	430	36.962	0.600	5.057	4.992	0.065	568.7	150	16.33	50.0
35.000	429	430	36.500	0.030	6.722	6.272	0.450	81.1	600	5.35	50.0
36.000	429	430	36.500	0.030	5.057	4.992	0.065	561.5	600	6.90	50.0
1.017	430	431	4.769	0.600	4.992	4.982	0.010	476.9	150	16.56	50.0
39.000	430	431	4.769	0.030	4.992	4.982	0.010	476.9	600	5.22	50.0
1.018	431	432	3.847	0.600	4.982	4.972	0.010	384.7	150	16.68	50.0
40.000	431	432	3.847	0.030	4.982	4.972	0.010	384.7	600	5.17	50.0
1.019	432	433	12.400	0.600	4.972	4.947	0.025	496.0	150	17.15	50.0
39.000_1	432	433	12.400	0.030	6.288	6.309	-0.021	-590.5	600	5.21	50.0
42.000	432	433	12.400	0.030	4.972	4.947	0.025	496.0	600	5.61	50.0
1.020	433	434	3.824	0.600	4.947	4.937	0.010	382.4	150	17.27	50.0
43.000	433	434	3.824	0.030	4.947	4.937	0.010	382.4	600	5.16	50.0
1.021	434	435	3.776	0.600	4.937	4.927	0.010	377.6	150	17.40	50.0
44.000	434	435	3.776	0.030	4.937	4.927	0.010	377.6	600	5.16	50.0
1.022	435	436	24.314	0.600	4.927	4.878	0.049	496.2	150	18.31	50.0
43.000_1	435	436	24.314	0.030	6.297	6.176	0.121	200.9	600	5.37	50.0
46.000	435	436	24.314	0.030	4.927	4.878	0.049	496.2	600	6.19	50.0
1.023	436	438	14.547	0.600	4.878	4.849	0.029	501.6	600	18.53	50.0
45.000	437	438	14.952	0.600	5.844	5.374	0.470	31.8	150	5.14	50.0
46.000_1	Spur 53	438	10.019	0.600	5.268	5.224	0.044	227.7	300	5.16	50.0
1.024	438	439	12.342	0.600	4.849	4.824	0.025	493.7	675	18.71	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
12.015	3.790	1071.6	167.0	1.397	1.743	1.232	0.0	158	2.792
33.000	0.904	1247.0	0.0	-0.150	0.000	0.000	0.0	0	0.000
34.000	0.340	34.9	0.0	2.232	2.172	0.000	0.0	0	0.000
1.013_1	0.414	7.3	248.3	2.193	1.808	1.832	0.0	150	0.422
35.000	1.736	2396.1	3.4	0.078	0.078	0.025	0.0	22	0.268
36.000	0.321	32.9	0.0	2.172	1.787	0.000	0.0	0	0.000
1.017	0.454	8.0	251.7	1.808	1.818	1.857	0.0	150	0.462
39.000	0.348	35.7	0.0	1.787	1.797	0.000	0.0	0	0.000
1.018	0.506	8.9	253.8	1.818	1.763	1.873	0.0	150	0.516
40.000	0.388	39.8	0.0	1.797	1.742	0.000	0.0	0	0.000
1.019	0.445	7.9	253.8	1.763	1.728	1.873	0.0	150	0.453
39.000_1	1.000	1380.0	0.0	-0.003	-0.084	0.000	0.0	0	0.000
42.000	0.341	35.0	0.0	1.742	1.707	0.000	0.0	0	0.000
1.020	0.508	9.0	253.8	1.728	1.738	1.873	0.0	150	0.518
43.000	0.389	39.9	0.0	1.707	1.717	0.000	0.0	0	0.000
1.021	0.511	9.0	256.4	1.738	1.773	1.892	0.0	150	0.521
44.000	0.391	40.1	0.0	1.717	1.752	0.000	0.0	0	0.000
1.022	0.444	7.9	256.4	1.773	1.972	1.892	0.0	150	0.453
43.000_1	1.103	1522.4	0.0	-0.047	0.224	0.000	0.0	0	0.000
46.000	0.341	35.0	0.0	1.752	1.951	0.000	0.0	0	0.000
1.023	1.080	305.4	260.2	1.522	1.424	1.920	0.0	428	1.206
45.000	1.791	31.6	0.0	1.146	1.349	0.000	0.0	0	0.000
46.000_1	1.037	73.3	36.6	1.474	1.349	0.270	0.0	150	1.037
1.024	1.173	419.6	296.8	1.349	1.826	2.190	0.0	420	1.266

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Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.025	439	440	41.991	0.600	4.824	4.740	0.084	499.9	150	20.29	50.0
47.000	439	440	41.991	0.030	6.725	6.644	0.081	518.4	600	6.02	50.0
50.000	439	440	41.991	0.030	4.824	4.740	0.084	499.9	600	7.06	50.0
1.026	440	441	6.625	0.600	4.740	4.727	0.013	509.6	675	20.28	50.0
1.027	441	442	50.895	0.600	4.727	4.366	0.361	141.0	675	20.77	50.0
49.000	Spur 52	442	10.934	0.600	4.910	4.591	0.319	34.3	450	5.05	50.0
1.028	442	443	8.301	0.600	4.366	4.350	0.016	518.8	675	20.89	50.0
17.000_1	S278 S1	S278 S2	27.109	0.600	4.584	4.473	0.111	244.2	225	5.54	50.0
17.001_1	S278 S2	S278 S4	60.984	0.600	4.398	4.148	0.250	243.9	300	6.56	50.0
18.000_1	S278 S3	S278 S4	28.800	0.600	4.341	4.223	0.118	244.1	225	5.58	50.0
17.002	S278 S4	S278 S6	20.348	0.600	4.148	4.065	0.083	245.2	300	6.90	50.0
52.000	444	445	9.746	0.600	4.350	4.292	0.058	168.0	225	5.16	50.0
52.001	445	S278 S5	17.386	0.600	4.292	4.189	0.103	168.8	225	5.45	50.0
1.031	S278 S5	S278 S6	17.062	0.600	4.189	4.140	0.049	366.6	225	5.89	50.0
1.032	S278 S6	S278 Headwall 1	7.606	0.600	4.065	4.040	0.025	304.2	300	7.04	50.0
17.000	S278 Headwall 3	S278 S9	10.232	0.600	3.890	3.831	0.059	173.4	225	5.17	50.0
17.001	S278 S9	Ex Mh	30.743	0.600	3.831	3.650	0.181	169.9	225	5.68	50.0
1.036	Ex Mh	Ex Headwall	22.707	0.600	3.650	3.580	0.070	324.4	225	6.21	50.0
18.000	S278 S7	S278 S8	19.327	0.600	4.385	4.306	0.079	244.6	225	5.39	50.0
54.001	S278 S8	S278 Headwall 2	27.254	0.600	4.306	4.040	0.266	102.5	225	5.74	50.0
55.000	Spur 51	446	24.395	0.600	4.726	4.666	0.060	406.6	450	5.41	50.0
56.000	Spur 50	447	11.366	0.600	4.707	4.679	0.028	405.9	450	5.19	50.0
56.001	447	448	11.624	0.600	4.679	4.650	0.029	400.8	450	5.38	50.0
57.000	449	450	11.707	0.600	5.095	4.988	0.107	109.4	450	5.10	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.025	0.443	7.8	300.7	2.351	2.355	2.219	0.0	150	0.451
47.000	0.687	947.8	3.3	0.000	0.001	0.024	0.0	37	0.144
50.000	0.340	34.9	0.0	2.330	2.334	0.000	0.0	0	0.000
1.026	1.154	412.9	304.0	1.830	1.793	2.243	0.0	432	1.256
1.027	2.205	789.1	308.0	1.793	1.423	2.273	0.0	292	2.076
49.000	3.481	553.7	66.4	1.247	1.423	0.490	0.0	104	2.379
1.028	1.143	409.2	374.5	1.423	0.966	2.763	0.0	511	1.287
17.000_1	0.832	33.1	6.8	1.041	1.077	0.050	0.0	69	0.657
17.001_1	1.002	70.8	13.8	1.077	1.952	0.102	0.0	89	0.781
18.000_1	0.832	33.1	6.5	1.134	1.952	0.048	0.0	67	0.648
17.002	0.693	70.6	23.6	1.952	1.676	0.174	0.0	119	0.902
52.000	1.006	40.0	0.0	1.416	2.162	0.000	0.0	0	0.000
52.001	1.003	39.9	0.0	2.162	2.461	0.000	0.0	0	0.000
1.031	0.677	26.9	5.1	2.461	1.676	0.038	0.0	66	0.523
1.032	0.896	63.3	28.7	1.676	2.376	0.212	0.0	142	0.874
17.000	0.890	39.3	10.6	2.135	1.874	0.078	0.0	80	0.842
17.001	1.000	39.8	10.6	1.874	1.715	0.078	0.0	79	0.846
1.036	0.720	28.6	10.6	1.715	1.785	0.078	0.0	94	0.667
18.000	0.831	33.1	3.8	1.790	1.543	0.028	0.0	51	0.557
54.001	1.291	51.3	7.5	1.543	2.372	0.055	0.0	58	0.924
55.000	1.002	159.3	69.8	1.521	1.605	0.515	0.0	208	0.969
56.000	1.003	159.5	65.1	1.745	1.341	0.480	0.0	200	0.954
56.001	1.009	160.5	65.1	1.341	1.400	0.480	0.0	199	0.958
57.000	1.943	309.0	69.8	1.647	1.200	0.515	0.0	145	1.582

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Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
57.001	450	451	8.623	0.600	4.988	4.341	0.647	13.3	450	5.13	50.0
58.000	452	453	8.854	0.600	4.575	4.553	0.022	402.4	450	5.15	50.0
58.001	453	454	9.322	0.600	4.553	4.530	0.023	405.3	450	5.30	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
57.001	5.598	888.7	69.8	1.200	1.200	0.515	0.0	84	3.381
58.000	1.007	160.2	0.0	1.675	1.233	0.000	0.0	0	0.000
58.001	1.003	159.6	0.0	1.233	1.011	0.000	0.0	0	0.000

Simulation Settings

Rainfall Methodology	FEH-22	Analysis Speed	Detailed	Additional Storage (m³/ha)	35.0
Summer CV	1.000	Skip Steady State	x	Check Discharge Rate(s)	x
Winter CV	1.000	Drain Down Time (mins)	2000	Check Discharge Volume	x

Storm Durations

15	60	180	360	600	960	2160	4320	7200	10080
30	120	240	480	720	1440	2880	5760	8640	

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
2	0	0	0

Node S278 S9 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Downstream Link	17.001	Sump Available	✓
Replaces Downstream Link	✓	Product Number	CTL-SHE-0115-6800-1500-6800
Invert Level (m)	3.831	Min Outlet Diameter (m)	0.150
Design Depth (m)	1.500	Min Node Diameter (mm)	1200
Design Flow (l/s)	6.8		

Node 445 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Downstream Link	52.001	Sump Available	✓
Replaces Downstream Link	✓	Product Number	CTL-SHE-0098-5400-1758-5400
Invert Level (m)	4.292	Min Outlet Diameter (m)	0.150
Design Depth (m)	1.758	Min Node Diameter (mm)	1200
Design Flow (l/s)	5.4		

Node 443 Online Orifice Control

Flap Valve	x	Invert Level (m)	4.350	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.675		

Node 444 Online Orifice Control

Flap Valve	x	Replaces Downstream Link	x	Diameter (m)	0.225
Downstream Link	52.000	Invert Level (m)	4.350	Discharge Coefficient	0.600

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Node 451 Online Orifice Control

Flap Valve	x	Invert Level (m)	4.341	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.450		

Node 454 Online Orifice Control

Flap Valve	x	Invert Level (m)	4.370	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.450		

Node 446 Online Orifice Control

Flap Valve	x	Invert Level (m)	4.633	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.450		

Node 452 Online Orifice Control

Flap Valve	x	Replaces Downstream Link	x	Diameter (m)	0.450
Downstream Link	58.000	Invert Level (m)	4.575	Discharge Coefficient	0.600

Node 448 Online Orifice Control

Flap Valve	x	Invert Level (m)	4.633	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.450		

Node S278 Headwall 1 Online Orifice Control

Flap Valve	x	Invert Level (m)	3.929	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.300		

Node S278 Headwall 3 Flow through Pond Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Main Channel Length (m)	19.524
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	3.890	Main Channel Slope (1:X)	500.0
Safety Factor	2.0	Time to half empty (mins)	0	Main Channel n	0.030

Inlets

S278 Headwall 1			S278 Headwall 2		
Depth (m)	**Area (m^2)**	**Inf Area (m^2)**	**Depth (m)**	**Area (m^2)**	**Inf Area (m^2)**
0.000	245.2	0.0	2.360	786.0	0.0

Node 452 Flow through Pond Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Main Channel Length (m)	29.115
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	4.575	Main Channel Slope (1:X)	500.0
Safety Factor	2.0	Time to half empty (mins)	0	Main Channel n	0.030

Inlets

448			446								
Depth (m)	**Area (m^2)**	**Inf Area (m^2)**	**Depth (m)**	**Area (m^2)**	**Inf Area (m^2)**	**Depth (m)**	**Area (m^2)**	**Inf Area (m^2)**	**Depth (m)**	**Area (m^2)**	**Inf Area (m^2)**
0.000	104.5	0.0	0.055	1324.3	0.0	0.925	1747.5	0.0	1.700	2171.8	0.0
0.054	134.6	0.0	0.425	1497.3	0.0	1.425	2016.0	0.0			

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Node 444 Flow through Pond Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Main Channel Length (m)	10.000
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	4.350	Main Channel Slope (1:X)	500.0
Safety Factor	2.0	Time to half empty (mins)	0	Main Channel n	0.030

Inlets

454 | 451 | 443

Depth (m)	Area (m^2)	Inf Area (m^2)	Depth (m)	Area (m^2)	Inf Area (m^2)	Depth (m)	Area (m^2)	Inf Area (m^2)
0.000	746.0	0.0	0.140	2757.0	0.0	1.150	3907.9	0.0
0.139	787.0	0.0	0.650	3325.4	0.0	1.650	4515.4	0.0

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Results for 2 year Critical Storm Duration. Lowest mass balance: 98.15%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	400	10	6.074	0.133	26.3	0.5357	0.0000	OK
15 minute summer	401	10	6.105	0.059	6.2	0.1152	0.0000	OK
15 minute summer	402	11	5.944	0.142	31.8	0.2039	0.0000	OK
15 minute summer	Spur 55	10	5.949	0.097	26.3	0.3196	0.0000	OK
15 minute summer	403	12	5.860	0.223	57.5	0.3190	0.0000	OK
15 minute summer	404	10	5.894	0.014	2.8	0.0205	0.0000	OK
15 minute summer	405	12	5.853	0.264	58.6	0.3772	0.0000	SURCHARGED
15 minute summer	406	12	5.838	0.271	54.7	0.4791	0.0000	OK
15 minute summer	Spur 54b	12	5.832	0.182	40.2	0.8260	0.0000	OK
15 minute summer	407	12	5.832	0.297	89.9	0.5247	0.0000	OK
15 minute summer	408	12	5.816	0.281	87.9	0.5794	0.0000	SURCHARGED
15 minute summer	409	13	5.731	0.266	83.6	0.4694	0.0000	OK
15 minute summer	Spur 54	1	5.818	0.000	0.0	0.0000	0.0000	OK
15 minute summer	410	13	5.713	0.264	80.0	0.4672	0.0000	OK
15 minute summer	411	13	5.697	0.266	80.5	0.5462	0.0000	SURCHARGED
30 minute summer	412	24	5.613	0.292	74.9	0.0000	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	400	1.000	402	25.8	0.904	0.364	0.4468	
15 minute summer	401	2.000	402	6.1	0.750	0.142	0.1117	
15 minute summer	402	1.001	403	31.9	0.877	0.288	1.0996	
15 minute summer	Spur 55	3.000	403	26.0	1.146	0.138	0.4650	
15 minute summer	403	1.002	405	55.9	0.861	0.225	0.7048	
15 minute summer	404	4.000	405	0.5	0.200	0.018	0.1267	
15 minute summer	404	5.000	405	0.0	0.000	0.000	0.0002	
15 minute summer	404	6.000	405	2.3	0.102	0.020	1.1405	
15 minute summer	405	1.003	406	6.2	0.353	0.789	0.1911	
15 minute summer	405	7.000	406	0.0	0.000	0.000	0.0002	
15 minute summer	405	8.000	406	49.0	0.316	1.394	1.7418	
15 minute summer	406	1.004	407	54.5	0.440	0.184	1.0842	
15 minute summer	Spur 54b	7.000_1	407	38.8	0.755	0.142	1.3720	
15 minute summer	407	1.005	408	85.0	0.801	0.289	1.1196	
15 minute summer	408	1.006	409	9.7	0.567	1.227	0.6080	
15 minute summer	408	10.000	409	0.0	0.000	0.000	0.0005	
15 minute summer	408	11.000	409	74.7	0.472	2.126	5.6421	
15 minute summer	409	1.007	410	80.0	0.822	0.266	0.9969	
15 minute summer	Spur 54	9.000	410	0.0	0.000	0.000	0.0253	
15 minute summer	410	1.008	411	79.0	1.046	0.255	1.0537	
15 minute summer	411	1.009	412	11.3	0.663	1.429	0.9431	
15 minute summer	411	13.000	412	0.0	0.000	0.000	0.0008	
15 minute summer	411	14.000_1	412	67.7	0.489	1.912	7.9369	
30 minute summer	412	1.013	413	10.9	0.622	1.369	0.0852	
30 minute summer	412	19.000_1	413	56.3	0.458	1.588	0.8545	

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Results for 2 year Critical Storm Duration. Lowest mass balance: 98.15%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	413	24	5.608	0.297	66.3	0.4441	0.0000	SURCHARGED
30 minute summer	414	24	5.603	0.306	63.4	0.0000	0.0000	SURCHARGED
15 minute summer	415	13	6.016	0.071	4.9	0.1001	0.0000	OK
15 minute summer	416	12	6.014	0.124	6.8	0.1781	0.0000	OK
15 minute summer	Spur 56	10	6.724	0.160	39.5	1.4882	0.0000	OK
15 minute summer	417	12	6.014	0.163	41.2	0.2849	0.0000	OK
15 minute summer	418	13	6.002	0.172	37.8	0.2455	0.0000	SURCHARGED
15 minute summer	419	13	5.966	0.247	30.9	0.0000	0.0000	SURCHARGED
15 minute summer	420	13	5.963	0.254	36.0	0.3678	0.0000	SURCHARGED
15 minute summer	421	13	5.960	0.261	37.2	0.0000	0.0000	SURCHARGED
15 minute summer	Spur 57	13	5.949	0.227	67.7	1.7020	0.0000	OK
15 minute summer	422	13	5.952	0.303	75.7	0.5758	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute summer	413	1.011	414	12.7	1.060	1.352	0.0858	
30 minute summer	413	16.000	414	56.1	0.501	1.338	0.8770	
30 minute summer	414	1.012	429	5.6	0.348	0.717	2.1090	
30 minute summer	414	33.000	429	0.0	0.000	0.000	0.0018	
30 minute summer	414	34.000	429	50.8	0.214	1.457	28.8720	
15 minute summer	415	12.000	416	0.9	0.129	0.105	0.2896	
15 minute summer	415	18.000_2	416	0.0	0.000	0.000	0.0004	
15 minute summer	415	14.000	416	2.6	0.070	0.071	1.4256	
15 minute summer	416	12.001	417	7.2	0.315	0.028	0.2684	
15 minute summer	Spur 56	20.000	417	38.5	0.932	0.345	0.4985	
15 minute summer	417	12.002	418	37.8	0.945	0.212	0.3673	
15 minute summer	418	12.003	419	7.7	0.610	0.986	0.9733	
15 minute summer	418	21.000	419	0.0	0.000	0.000	0.0008	
15 minute summer	418	17.000_2	419	26.6	0.265	0.762	6.9499	
15 minute summer	419	12.004	420	5.2	0.366	0.654	0.0857	
15 minute summer	419	23.000	420	30.9	0.235	0.875	0.7326	
15 minute summer	420	17.005	421	5.6	0.395	0.700	0.0850	
15 minute summer	420	24.000	421	33.0	0.246	0.929	0.7468	
15 minute summer	421	21.006	422	5.8	0.422	0.565	0.2564	
15 minute summer	421	26.000	422	0.0	0.000	0.000	0.0002	
15 minute summer	421	19.000	422	35.2	0.245	0.771	2.4666	
15 minute summer	Spur 57	25.000_1	422	65.4	1.289	0.287	1.4178	
15 minute summer	422	12.009	423	6.9	0.446	0.743	0.7997	
15 minute summer	422	28.000	423	0.0	0.000	0.000	0.0007	
15 minute summer	422	22.000	423	67.8	0.352	1.644	9.2630	

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Results for 2 year Critical Storm Duration. Lowest mass balance: 98.15%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	423	12	5.900	0.378	73.7	0.6676	0.0000	OK
15 minute summer	Spur 58	12	5.897	0.264	105.3	2.8425	0.0000	OK
15 minute summer	424	12	5.895	0.389	146.3	0.7777	0.0000	OK
15 minute summer	425	12	5.874	0.388	144.5	0.6854	0.0000	SURCHARGED
15 minute summer	426	13	5.694	0.294	141.8	0.5199	0.0000	OK
15 minute summer	427	13	5.636	0.252	144.9	0.5220	0.0000	OK
60 minute summer	428	42	5.545	0.187	122.2	0.3302	0.0000	OK
30 minute summer	429	25	5.555	0.498	178.1	0.8797	0.0000	SURCHARGED
15 minute summer	35.000:50%	11	6.526	0.029	4.7	0.0000	0.0000	OK
30 minute summer	430	25	5.470	0.478	162.2	0.0000	0.0000	SURCHARGED
30 minute summer	431	25	5.455	0.473	159.6	0.6693	0.0000	SURCHARGED
30 minute summer	432	25	5.442	0.470	159.2	0.0000	0.0000	SURCHARGED
30 minute summer	433	25	5.411	0.464	158.6	0.0000	0.0000	SURCHARGED
30 minute summer	434	25	5.397	0.460	158.9	0.6825	0.0000	SURCHARGED
30 minute summer	435	25	5.383	0.456	158.9	0.0000	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	423	12.010	424	80.6	0.515	0.263	1.5133	
15 minute summer	Spur 58	30.000	424	100.2	1.213	0.330	1.5996	
15 minute summer	424	12.011	425	144.5	0.940	0.473	1.9339	
15 minute summer	425	12.012	426	11.6	0.660	1.385	0.6610	
15 minute summer	425	31.000	426	0.0	0.000	0.000	0.0006	
15 minute summer	425	25.000	426	130.2	0.640	3.488	7.6752	
15 minute summer	426	12.013	427	143.3	1.160	0.468	0.9961	
15 minute summer	427	12.014	428	145.8	1.791	0.473	1.1381	
60 minute summer	428	12.015	429	122.3	1.682	0.114	1.9353	
30 minute summer	429	1.013_1	430	9.4	0.558	1.281	0.6507	
30 minute summer	429	36.000	430	151.8	0.536	4.612	10.6831	
30 minute summer	429	35.000	35.000:50%	0.0	0.000	0.000	0.1488	
30 minute summer	429	35.000	430	3.9	0.305	0.002	0.2376	
30 minute summer	430	1.017	431	9.4	0.533	1.171	0.0840	
30 minute summer	430	39.000	431	150.3	0.542	4.208	1.3598	
30 minute summer	431	1.018	432	9.6	0.553	1.075	0.0677	
30 minute summer	431	40.000	432	150.4	0.545	3.781	1.0877	
30 minute summer	432	1.019	433	9.8	0.572	1.245	0.2183	
30 minute summer	432	39.000_1	433	0.0	0.000	0.000	0.0002	
30 minute summer	432	42.000	433	149.9	0.546	4.279	3.4729	
30 minute summer	433	1.020	434	9.1	0.519	1.019	0.0673	
30 minute summer	433	43.000	434	149.3	0.546	3.744	1.0602	
30 minute summer	434	1.021	435	9.2	0.524	1.020	0.0665	
30 minute summer	434	44.000	435	149.8	0.550	3.733	1.0386	
30 minute summer	435	1.022	436	9.3	0.529	1.186	0.4280	

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Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	436	26	5.310	0.432	159.8	0.9639	0.0000	OK
15 minute summer	437	1	5.844	0.000	0.0	0.0000	0.0000	OK
15 minute summer	Spur 53	10	5.467	0.199	50.8	1.2832	0.0000	OK
30 minute summer	438	26	5.289	0.440	169.1	0.7770	0.0000	OK
30 minute summer	439	26	5.272	0.448	169.5	0.9735	0.0000	SURCHARGED
30 minute summer	47.000:50%	20	6.729	0.044	4.0	0.0815	0.0000	OK
30 minute summer	440	26	5.008	0.268	170.5	0.4731	0.0000	OK
30 minute summer	441	26	4.935	0.208	171.3	0.4566	0.0000	OK
15 minute summer	Spur 52	10	5.042	0.132	92.2	1.3325	0.0000	OK
10080 minute summer	442	6540	4.840	0.474	14.1	0.8371	0.0000	OK
10080 minute summer	443	6660	4.841	0.491	14.0	0.0000	0.0000	OK
15 minute summer	S278 S1	11	4.667	0.083	9.4	0.2080	0.0000	OK
15 minute summer	S278 S2	11	4.501	0.103	18.7	0.2532	0.0000	OK
15 minute summer	S278 S3	11	4.422	0.081	9.0	0.1909	0.0000	OK
15 minute summer	S278 S4	11	4.297	0.149	31.5	0.2241	0.0000	OK
10080 minute summer	444	6600	4.838	0.488	21.2	0.0000	0.0000	SURCHARGED
10080 minute summer	445	6600	4.835	0.543	4.9	0.9594	0.0000	SURCHARGED
30 minute summer	S278 S5	19	4.288	0.099	10.3	0.3001	0.0000	OK
15 minute summer	S278 S6	12	4.236	0.171	39.8	0.4340	0.0000	OK
480 minute summer	S278 Headwall 1	368	4.157	0.228	12.8	0.0000	0.0000	OK
480 minute summer	S278 Headwall 3	368	4.157	0.267	22.8	0.3086	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute summer	435	43.000_1	436	0.0	0.000	0.000	0.0004	
30 minute summer	435	46.000	436	149.6	0.562	4.272	6.4823	
30 minute summer	436	1.023	438	159.5	0.727	0.522	3.1916	
15 minute summer	437	45.000	438	0.0	0.000	0.000	0.0000	
15 minute summer	Spur 53	46.000_1	438	49.8	1.086	0.679	0.4589	
30 minute summer	438	1.024	439	168.5	0.746	0.402	3.0707	
30 minute summer	439	1.025	440	13.2	0.751	1.689	0.7392	
30 minute summer	439	50.000	440	155.8	0.725	4.465	9.0178	
30 minute summer	439	47.000	47.000:50%	-0.3	-0.020	0.000	0.3091	
30 minute summer	439	47.000	440	2.8	0.161	0.003	0.3732	
30 minute summer	440	1.026	441	170.4	1.518	0.413	0.7457	
30 minute summer	441	1.027	442	171.3	1.179	0.217	7.4424	
15 minute summer	Spur 52	49.000	442	91.4	2.496	0.165	0.4005	
10080 minute summer	442	1.028	443	14.0	0.279	0.034	2.2640	
10080 minute summer	443	Flow through pond	444	21.2	0.003	0.000	1089.9803	
15 minute summer	S278 S1	17.000_1	S278 S2	9.2	0.720	0.277	0.3452	
15 minute summer	S278 S2	17.001_1	S278 S4	18.5	0.668	0.261	1.7187	
15 minute summer	S278 S3	18.000_1	S278 S4	8.8	0.712	0.265	0.3543	
15 minute summer	S278 S4	17.002	S278 S6	30.5	0.814	0.431	0.7716	
10080 minute summer	444	52.000	445	4.9	0.302	0.123	0.3876	
10080 minute summer	445	Hydro-Brake®	S278 S5	4.9				
30 minute summer	S278 S5	1.031	S278 S6	10.0	0.651	0.373	0.2852	
15 minute summer	S278 S6	1.032	S278 Headwall 1	40.0	1.028	0.632	0.2960	
480 minute summer	S278 Headwall 1	Flow through pond	S278 Headwall 3	19.7	0.019	0.000	67.8171	
480 minute summer	S278 Headwall 3	17.000	S278 S9	12.1	0.503	0.308	0.4069	

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Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute summer	S278 S9	368	4.155	0.324	12.1	0.3660	0.0000	SURCHARGED
480 minute summer	Ex Mh	368	3.726	0.076	6.7	0.1344	0.0000	OK
480 minute summer	Ex Headwall	368	3.646	0.066	6.7	0.0000	0.0000	OK
15 minute summer	S278 S7	10	4.446	0.061	5.3	0.0987	0.0000	OK
15 minute summer	S278 S8	11	4.374	0.068	10.3	0.1134	0.0000	OK
480 minute summer	S278 Headwall 2	368	4.157	0.228	2.1	0.0000	0.0000	OK
15 minute summer	Spur 51	10	4.983	0.257	96.9	2.3542	0.0000	OK
15 minute summer	446	11	4.918	0.284	94.8	0.4069	0.0000	OK
15 minute summer	Spur 50	11	4.986	0.279	90.3	2.5321	0.0000	OK
15 minute summer	447	11	4.949	0.270	87.5	0.3857	0.0000	OK
15 minute summer	448	11	4.905	0.271	87.2	0.3883	0.0000	OK
15 minute summer	449	10	5.286	0.191	96.9	1.9198	0.0000	OK
15 minute summer	450	10	5.086	0.098	95.9	0.1407	0.0000	OK
10080 minute summer	451	6540	4.839	0.498	6.5	0.0000	0.0000	OK
10080 minute summer	452	6600	4.838	0.263	4.8	0.3767	0.0000	OK
10080 minute summer	453	6600	4.838	0.285	3.4	0.4080	0.0000	OK
10080 minute summer	454	6660	4.839	0.469	5.2	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
480 minute summer	S278 S9	Hydro-Brake®	Ex Mh	6.7				
480 minute summer	Ex Mh	1.036	Ex Headwall	6.7	0.621	0.233	0.2446	789.1
15 minute summer	S278 S7	18.000	S278 S8	5.2	0.558	0.158	0.1805	
15 minute summer	S278 S8	54.001	S278 Headwall 2	10.1	1.008	0.197	0.2735	
480 minute summer	S278 Headwall 2	Flow through pond	S278 Headwall 3	19.7	0.019	0.000	67.8171	
15 minute summer	Spur 51	55.000	446	94.8	1.037	0.595	2.2467	
15 minute summer	446	Flow through pond	452	151.6	0.431	0.001	39.6989	
15 minute summer	Spur 50	56.000	447	87.5	0.885	0.549	1.1490	
15 minute summer	447	56.001	448	87.2	0.922	0.544	1.1127	
15 minute summer	448	Flow through pond	452	151.6	0.431	0.001	39.6989	
15 minute summer	449	57.000	450	95.9	2.176	0.310	0.5256	
15 minute summer	450	57.001	451	95.7	1.504	0.108	0.5618	
10080 minute summer	451	Flow through pond	444	21.2	0.003	0.000	1089.9803	
10080 minute summer	452	58.000	453	3.4	0.389	0.021	0.8967	
10080 minute summer	453	58.001	454	3.3	0.444	0.021	1.0309	
10080 minute summer	454	Flow through pond	444	21.2	0.003	0.000	1089.9803	

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