



September 24, 2026

El Paso County Engineering Division
Department of Public Works
3275 Akers Drive
Colorado Springs, Colorado 80922

Re: Professional Engineer's Certification of Permanent Control Measure
Flying Horse North Filing No. 4, Pond B

The yellow text box on PDF page 3 below states that the as-built survey was in Sept 2026, not 2025.

This letter serves as a Pond Certification for the constructed Full Spectrum Detention Facility "Pond B" located in Flying Horse North Filing No. 4. The permanent control measure is located at the north central area of the subdivision and the northwestern part of the filing, adjacent and north of Old Stagecoach Road.

The detention facility was designed by a Colorado Licensed Professional Engineer of HR Green Development, LLC. and the design is within the County approved Construction Drawings dated February 20, 2025 and is referred to as "Pond B" within Tract B of the development. A Colorado Licensed Professional Surveyor conducted an as-built survey of the facility in September of 2025 to verify the basin and infrastructure dimensions, elevations, materials, inverts, and slopes as required for determination of inflow and outflow hydraulics.

A Stormwater Preliminary Acceptance Punchlist was issued by El Paso County Stormwater Engineering staff and inspections dated 6/11/2026 for a 1st Walkthrough dated 6/11/2026 for ESQCP No. ESQ258 with the related PCD File Nos. SF2422, CON258, and ASB2616.

The as-built conditions of the basin and its infrastructure were assessed and compared to the approved Construction Drawings and design worksheets within the approved Final Drainage Report. As-built conditions were assessed and redlined plans and reports were issued for field adjustments and verification of as-built conditions for the pond and its infrastructure, per the ASB documentation.

Preliminary Acceptance Punchlist items included the following and were directly addressed as described:

- Forebay
 - Remove sediment from forebay. **Sediment removed.**
- Trickle Channel
 - Remove sediment from trickle channel. **Sediment removed.**
- Outlet Structure
 - "Ladder" steps are missing from micro pool. Install per approved plans. **Ladder steps installed to match Construction Drawings.**
- Outfall Riprap
 - Outfall riprap is not installed per the approved plans. Plans show buried riprap and in the field it is installed as exposed riprap. Install per approved plans or consult the Engineer of Record. See Note 1. **Outfall/spillway rip-rap is exposed rip-rap and is now reflected on the as-builts, as approved by the Engineer of Record.**
 - Undermining observed at downstream end of outlet pipe. Repair such that this doesn't get worse or continue to happen. **A more defined conveyance swale shape is constructed to contain flows and minimize undermining. Exposed rip-rap allowed by Engineer of Record, as-built redlines address the change.**

remove n/a items from here per my comment on the Pond A letter



- Maintenance access road installed with crushed concrete, which per direction from CDPHE is not an acceptable means of Final Stabilization, nor was that material on the approved plans, so please remove and install access road material per plans. ***As-built plans and redlines now call out crushed concrete as approved by the Engineer of Record. This was discussed with Stormwater staff in July 2026 and is to be allowable for this filing.***

With the field adjustments and verification of as-built conditions as of July 22, 2026, the facility was found to be in general compliance with the design, and it is anticipated that the facility will function as intended with no negative impacts to surrounding and downstream developments, property, or infrastructure. General compliance allows for construction tolerances and is based on the information provided by the as-built survey.

The facility is in a stabilized condition and there are no proposed modifications required at this time.

The site and adjacent properties (as affected by work performed under the County permit) are stable with respect to settlement and subsidence, sloughing of cut and fill slopes, revegetation or other ground cover, and that the improvements (public improvements, common development improvements, site grading and paving) meet or exceed the minimum design requirements. The PCM(s) provide the required storage volume and meet the required release rates, stage areas, elevations, and outlet dimensions, as documented by the attached revised MHFD-Detention spreadsheet that shows the as-built conditions.

Sincerely,

Richard D. Lyon

Richard D. Lyon, PE (No. 53921)
Senior Project Manager, Civil Engineer
HR Green Development, LLC.



AS-BUILT CONDITION FOR SEPTEMBER 2026

MHFD-Detention, Version 4.06 (July 2022)

Basin ID: POND B



Total (all zones)	2.320
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Calculated Parameters for Underdrain		
Underdrain Orifice Area =	N/A	ft ²
Underdrain Orifice Centroid =	N/A	feet

Calculated Parameters for Plate

Centroid of Lowest Orifice =	0.00	ft (relative to basin bottom at Stage = 0 ft)
of Zone using Orifice Plate =	2.28	ft (relative to basin bottom at Stage = 0 ft)
Plate: Orifice Vertical Spacing =	9.20	inches
Plate: Orifice Area per Row =	1.65	sq. inches (diameter = 1-7/16 inches)

Stage of Orifice Centroid (ft)				Am not seeing a vertical orifice on			
Orifice Area (sq. inches)				the as-built CDs (note that there			

Calculated Parameters for Vertical Orif

	Zone 2 Circular	Not Selected	
Invert of Vertical Orifice =	2.28	N/A	ft (relative to basin)
Depth at top of Zone using Vertical Orifice =	2.84	N/A	ft (relative to basin)
Vertical Orifice Diameter =	1.00	N/A	inches

Im not seeing a vertical orifice on the as-built CDs (note that there was one on original design CDs though). Am I missing something? It's not on the orifice plate detail, so I don't know where else it would be.

Calculated Parameters for Overflow W

	Zone 3 Well	Not Selected			Zone 3 Well	Not Selected
Overflow Weir Front Edge Height, Ho =	2.85	N/A	ft (relative to basin bottom at Stage = 0 ft)	Height of Grate Upper Edge, Hg =	2.85	N/A
Overflow Weir Front Edge Length =	30.00	N/A	feet	Overflow Weir Slope Length =	5.00	N/A
Overflow Weir Grate Slope =	0.00	N/A	H:V	Grate Open Area / 100-yr Orifice Area =	5.89	N/A
Horiz. Length of Weir Sides =	5.00	N/A	feet	Overflow Grate Open Area w/o Debris =	104.40	N/A
Overflow Grate Type =	Type C Grate	N/A		Overflow Grate Open Area w/ Debris =	52.20	N/A
Debris Clogging % =	50%	N/A	%			

Calculated Parameters for Outlet Pipe w/ Flow Restriction Pl

	Zone 5 Restrictor	Not Selected		Zone 5 Restrictor	Not Selected
Depth to Invert of Outlet Pipe =	3.70	N/A	ft (distance below basin bottom at Stage = 0 ft)	17.71	N/A
Outlet Pipe Diameter =	60.00	N/A	inches	2.28	N/A
Restrictor Plate Height Above Pipe Invert =	50.75		inches	2.33	N/A
			Half-Central Angle of Restrictor Plate on Pipe =		

Calculated Parameters for Spillway

Spillway Invert Stage =	5.10	ft (relative to basin bottom at Stage = 6 ft)	Spillway Design Flow Depth =	6.00	feet
Spillway Crest Length =	100.00	feet	Stage at Top of Freeboard =	6.96	feet
Spillway End Slopes =	4.00	H:V	Basin Area at Top of Freeboard =	1.30	acres
Freeboard above Max Water Surface =	1.00	feet	Basin Volume at Top of Freeboard =	4.26	acre-ft

The user can override the default CUHP hydrographs and runoff volumes by entering new values in the Inflow Hydrographs table (Columns W through AA)

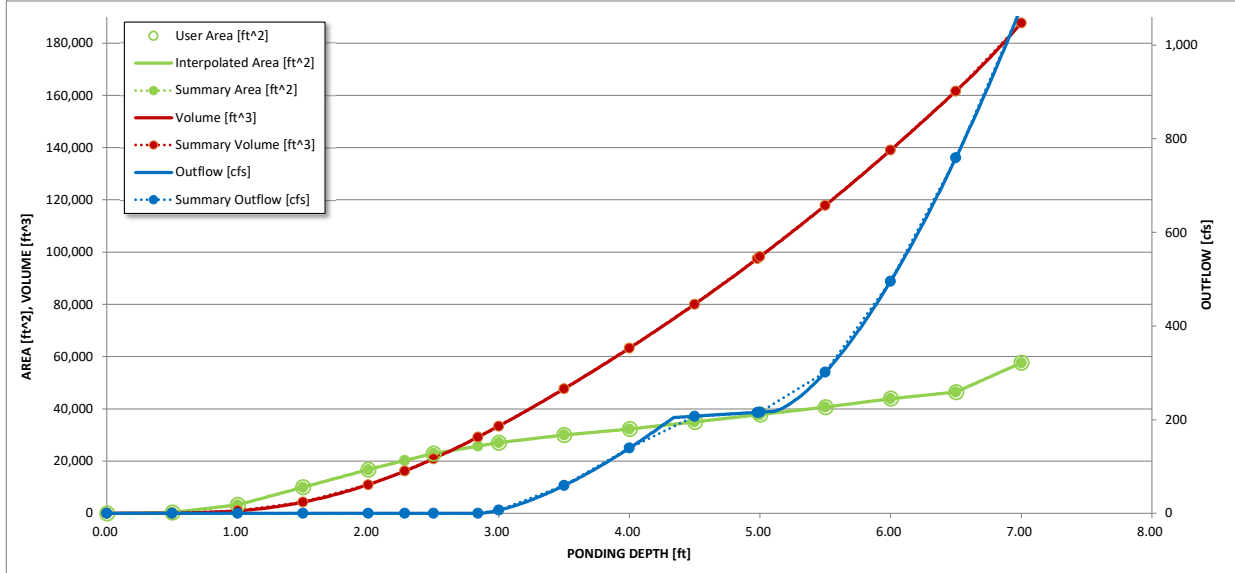
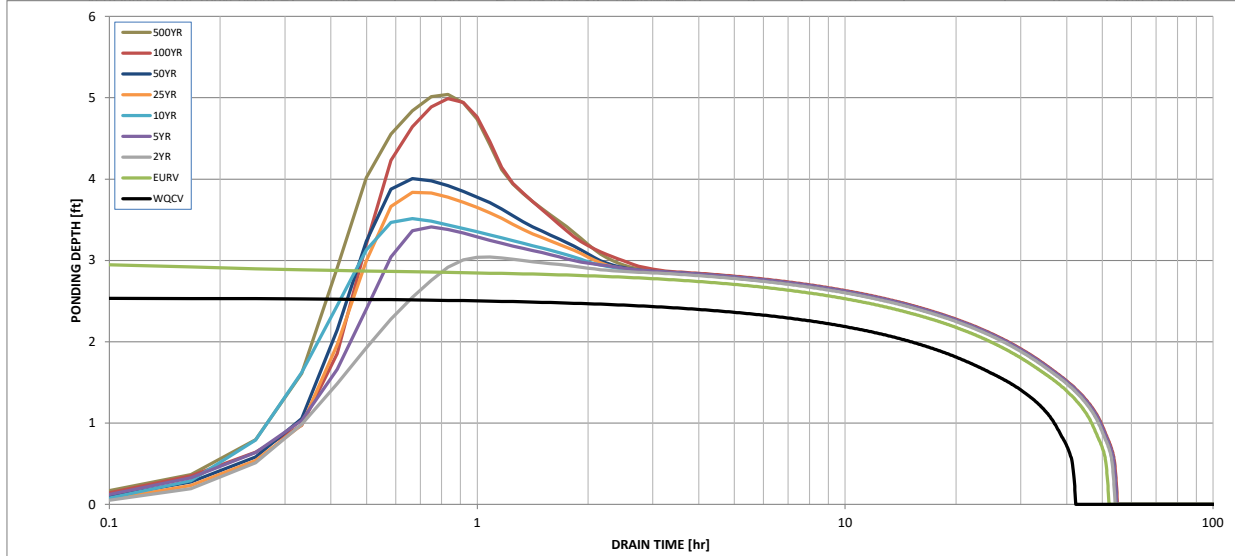
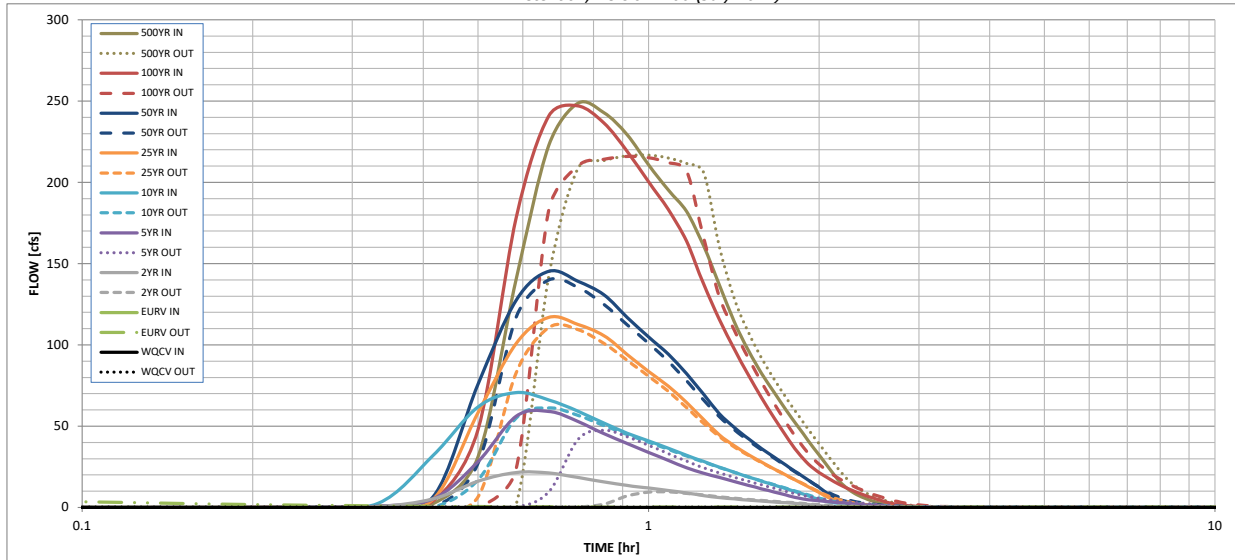
One-Hour Rainfall Depth (in) =	N/A	N/A	1.19	1.50	1.75	2.00	2.25	2.52
CUHP Runoff Volume (acre-ft) =	0.500	0.807	1.270	2.932	4.609	7.657	9.710	12.690
User Override Inflow Hydrograph Volume (acre-ft) =	N/A	N/A	1.270	3.472	4.609	7.657	9.710	17.082
CUHP Predevelopment Peak Q (cfs) =	N/A	N/A	14.9	41.7	63.1	109.6	138.0	172.8
OPTIONAL Override Predevelopment Peak Q (cfs) =	N/A	N/A						216.0
Predevelopment Unit Peak Flow, q (cfs/acre) =	N/A	N/A	0.14	0.39	0.60	1.04	1.31	2.04
Peak Inflow Q (cfs) =	N/A	N/A	21.5	59.1	70.7	116.9	145.3	247.1
Peak Outflow Q (cfs) =	0.2	8.1	9.5	47.5	61.2	110.6	139.9	215.9
Ratio Peak Outflow to Predevelopment Q =	N/A	N/A	N/A	1.1	1.0	1.0	1.0	1.0
Structure Controlling Flow =	Vertical Orifice 1	Overflow Weir 1	Overflow Weir 1	Overflow Weir 1	Overflow Weir 1	Overflow Weir 1	Overflow Weir 1	Outlet Plate 1
Max Velocity through Grate 1 (fps) =	N/A	0.11	0.09	0.5	0.6	1.1	1.3	2.1
Max Velocity through Grate 2 (fps) =	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Time to Drain 97% of Inflow Volume (hours) =	38	47	47	40	36	29	25	12
Time to Drain 99% of Inflow Volume (hours) =	41	50	51	48	46	43	40	34
Maximum Ponding Depth (ft) =	2.54	3.07	3.04	3.41	3.51	3.84	4.00	4.99
Area at Maximum Ponding Depth (acres) =	0.53	0.63	0.63	0.68	0.69	0.72	0.74	0.87
Maximum Volume Stored (acre-ft) =	0.50	0.81	0.79	1.03	1.10	1.33	1.45	2.24
Elevation (ft) =	7528.54	7529.07						7530.99
Pond Bottom (ft) =	7526.00							

SWMM volume	103,808
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Note to self: I will need to check the output table above again once the Vertical Orifice discrepancy is taken care of.

DETENTION BASIN OUTLET STRUCTURE DESIGN

MHFD-Detention, Version 4.06 (July 2022)



DETENTION BASIN OUTLET STRUCTURE DESIGN

Outflow Hydrograph Workbook Filename: _____

Inflow Hydrographs

The user can override the calculated inflow hydrographs from this workbook with inflow hydrographs developed in a separate program.

	SOURCE	CUHP	CUHP	CUHP	USER	CUHP	CUHP	CUHP	USER	CUHP
Time Interval	TIME	WQCV [cfs]	EURV [cfs]	2 Year [cfs]	5 Year [cfs]	10 Year [cfs]	25 Year [cfs]	50 Year [cfs]	100 Year [cfs]	500 Year [cfs]
5.00 min	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0:05:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0:10:00	0.00	0.00	0.00	0.02	0.00	0.00	0.01	0.03	0.05
	0:15:00	0.00	0.00	0.13	0.29	0.25	0.17	0.22	0.32	0.32
	0:20:00	0.00	0.00	0.50	0.84	2.56	0.51	0.61	0.81	2.42
	0:25:00	0.00	0.00	5.28	5.28	32.00	5.01	6.58	4.04	31.16
	0:30:00	0.00	0.00	16.15	28.18	61.85	58.31	75.74	47.72	140.12
	0:35:00	0.00	0.00	21.48	55.99	70.65	100.78	127.30	177.86	222.60
	0:40:00	0.00	0.00	21.19	59.11	66.12	116.93	145.33	240.83	248.61
	0:45:00	0.00	0.00	18.41	52.91	59.32	112.63	139.24	247.06	242.92
	0:50:00	0.00	0.00	15.77	45.39	51.88	105.76	130.83	236.61	229.34
	0:55:00	0.00	0.00	13.51	39.31	45.74	94.10	116.93	219.08	210.73
	1:00:00	0.00	0.00	11.89	33.91	40.89	83.71	104.89	200.33	195.31
	1:05:00	0.00	0.00	10.45	28.93	36.47	74.57	94.22	183.22	182.16
	1:10:00	0.00	0.00	8.87	24.45	32.13	64.62	82.26	163.76	160.97
	1:15:00	0.00	0.00	7.27	21.11	28.23	54.18	69.62	137.51	137.05
	1:20:00	0.00	0.00	6.00	18.47	24.80	44.69	57.74	115.66	114.12
	1:25:00	0.00	0.00	5.21	15.99	21.68	37.99	49.23	97.45	96.67
	1:30:00	0.00	0.00	4.56	13.64	18.77	32.53	42.20	81.53	82.47
	1:35:00	0.00	0.00	3.98	11.47	16.17	27.90	36.24	67.41	70.56
	1:40:00	0.00	0.00	3.40	9.51	13.77	23.69	30.82	54.87	59.85
	1:45:00	0.00	0.00	2.83	7.57	11.49	19.86	25.89	43.86	50.04
	1:50:00	0.00	0.00	2.28	5.83	9.29	16.17	21.17	33.94	40.82
	1:55:00	0.00	0.00	1.71	4.79	7.07	12.63	16.64	26.61	32.21
	2:00:00	0.00	0.00	1.15	4.12	4.87	9.19	12.28	21.52	24.12
	2:05:00	0.00	0.00	0.67	3.56	3.31	5.81	7.96	17.61	16.50
	2:10:00	0.00	0.00	0.42	3.01	2.45	3.59	5.15	14.31	11.29
	2:15:00	0.00	0.00	0.30	2.51	1.89	2.28	3.44	11.60	7.89
	2:20:00	0.00	0.00	0.23	2.04	1.47	1.48	2.35	9.28	5.46
	2:25:00	0.00	0.00	0.18	1.60	1.14	0.95	1.58	7.30	3.68
	2:30:00	0.00	0.00	0.13	1.18	0.86	0.62	1.08	5.61	2.39
	2:35:00	0.00	0.00	0.10	0.81	0.63	0.40	0.71	4.07	1.45
	2:40:00	0.00	0.00	0.07	0.55	0.45	0.25	0.46	2.75	0.84
	2:45:00	0.00	0.00	0.06	0.40	0.31	0.17	0.31	1.87	0.55
	2:50:00	0.00	0.00	0.05	0.31	0.21	0.12	0.22	1.28	0.38
	2:55:00	0.00	0.00	0.04	0.24	0.15	0.09	0.17	0.88	0.30
	3:00:00	0.00	0.00	0.03	0.19	0.11	0.06	0.13	0.58	0.24
	3:05:00	0.00	0.00	0.02	0.15	0.08	0.05	0.09	0.37	0.18
	3:10:00	0.00	0.00	0.01	0.12	0.06	0.03	0.07	0.23	0.13
	3:15:00	0.00	0.00	0.01	0.09	0.03	0.02	0.05	0.15	0.09
	3:20:00	0.00	0.00	0.01	0.07	0.02	0.01	0.03	0.11	0.05
	3:25:00	0.00	0.00	0.00	0.05	0.01	0.01	0.02	0.08	0.03
	3:30:00	0.00	0.00	0.00	0.04	0.00	0.00	0.01	0.07	0.01
	3:35:00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.05	0.00
	3:40:00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.04	0.00
	3:45:00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.03	0.00
	3:50:00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.02	0.00
	3:55:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
	4:00:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
	4:05:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:10:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:15:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:20:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:25:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:30:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:35:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:40:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:45:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:50:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:55:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:00:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:05:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:10:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:15:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:20:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:25:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:30:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:35:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:40:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:45:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:50:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:55:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

DETENTION BASIN OUTLET STRUCTURE DESIGN

MHFD-Detention, Version 4.06 (July 2022)

Summary Stage-Area-Volume-Discharge Relationships

The user can create a summary S-A-V-D by entering the desired stage increments and the remainder of the table will populate automatically.

The user should graphically compare the summary S-A-V-D table to the full S-A-V-D table in the chart to confirm it captures all key transition points.

[illegible]