APPENDIX III-2A-1

HEC-HMS Input and Output

GOLDER ASSOCIATES INC.
Professional Engineering Firm
Registration Number F-2578

INTENDED FOR PERMITTING PURPOSES ONLY

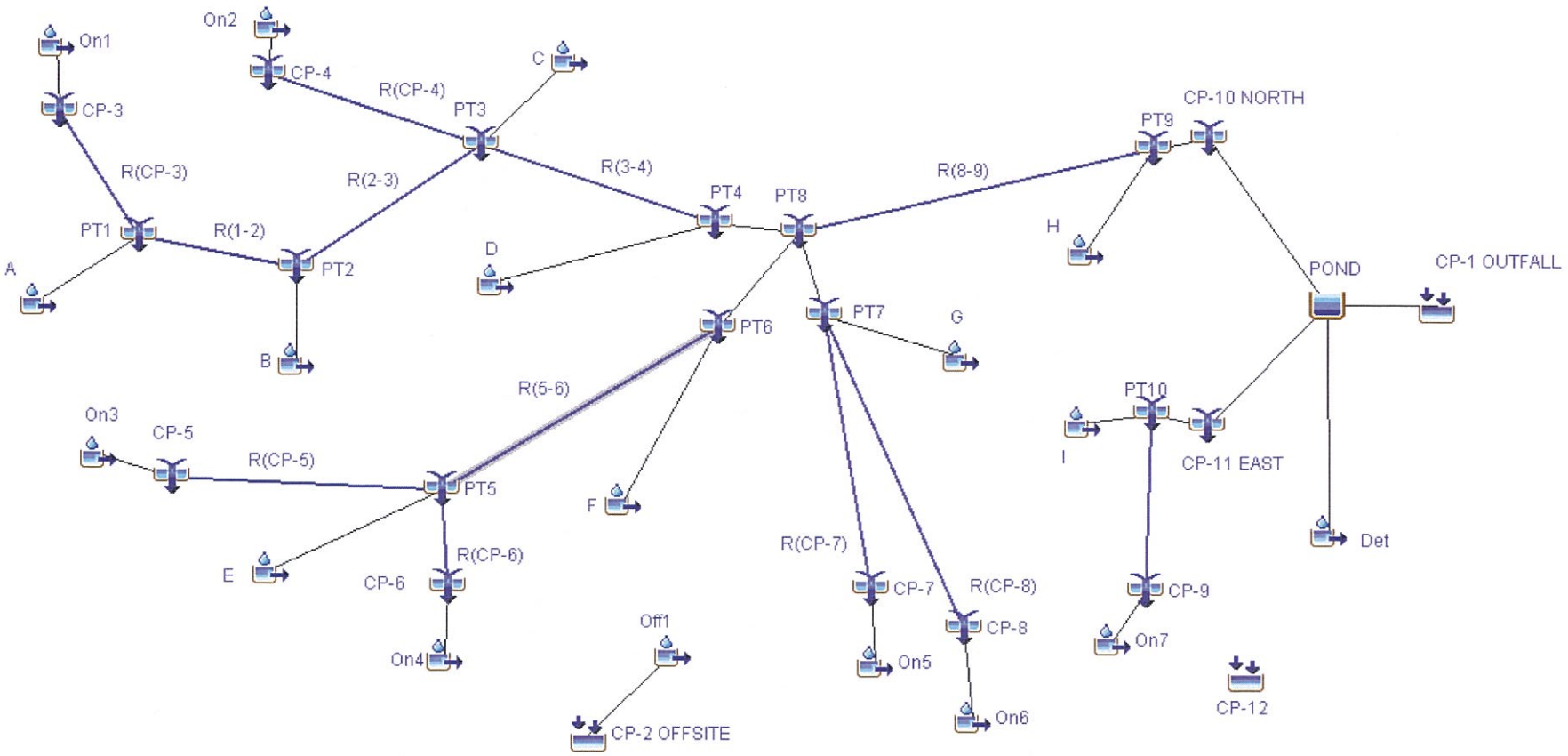
For Part III, Attachment 2, Appendix III-2A-1:
HEC HMS modeling, inputs, and outputs dated
September 2, 2020

HEC-HMS INPUTS

HAWTHORN PARK

PRE-DEVELOPMENT MODEL

HEC-HMS PRE-DEVELOPMENT MODEL SCHEMATIC



HEC-HMS
PRE-DEVELOPMENT MODEL – V 2020_0902
INPUTS
Detention Pond Input (25-yr and 100-yr)

Storage-Discharge:

Paired Data | Table | Graph

Storage (AC-FT)	Discharge (CFS)
0.0	0.0
3.7	31.0
18.3	90.3
40.2	119.3
63.7	136.1
90.3	149.1
119.6	161.1
150.3	172.2
183.0	182.6
218.1	192.5
254.5	201.9

Elevation-Storage:

Paired Data | Table | Graph

Elevation (FT)	Storage (AC-FT)
88.52	0.0
89.50	3.7
90.50	18.3
91.50	40.2
92.50	63.7
93.50	90.3
94.50	119.6
95.50	150.3
96.50	183.0
97.50	218.1
98.50	254.5

HEC-HMS
PRE-DEVELOPMENT MODEL – V 2020_0902
INPUTS

Basin Model Input (25-yr and 100-yr)

Subbasin Area:

Show Elements: All Elements

Subbasin	Area (MI2)
A	0.0142
B	0.0239
C	0.0216
D	0.0503
Det	0.0673
E	0.0397
F	0.0659
G	0.0316
H	0.0302
I	0.0428
Off1	0.0084
On1	0.0016
On2	0.0003
On3	0.0013
On4	0.0017
On5	0.0055
On6	0.0019
On7	0.0013

Curve Number Loss:

Show Elements: All Elements

Subbasin	Initial Abstraction (IN)	Curve Number	Impervious (%)
A	0.32	86.3	0.0
B	0.33	86.0	0.0
C	0.17	92.0	7
D	0.31	86.7	1
Det	0.04	98	100
E	0.30	87.0	7
F	0.28	87.8	2
G	0.32	86.1	5
H	0.32	86.1	2
I	0.33	86.0	1
Off1	0.17	92.0	0.0
On1	0.35	85.0	0.0
On2	0.17	92.0	0.0
On3	0.31	86.6	13
On4	0.10	95.1	73
On5	0.30	86.9	6
On6	0.17	92.0	0.0
On7	0.17	92.0	0.0

HEC-HMS
PRE-DEVELOPMENT MODEL – V 2020_0902
INPUTS

Clark Transform Input

25-yr:

Clark Transform[Pre-D 25]

Show Elements: All Elements

Subbasin	Time of Concentration (HR)	Storage Coefficient (HR)
A	0.51	1.645
B	0.57	1.48
C	0.17	0.329
D	0.80	2.067
Det	0.17	0.0167
E	0.69	1.665
F	0.79	1.737
G	0.63	2.01
H	0.55	1.705
I	0.44	1.95
Off1	0.17	0.323
On1	0.19	2.4
On2	0.17	0.35
On3	0.25	1.82
On4	0.28	0.3
On5	0.25	1.5
On6	0.17	0.34
On7	0.17	0.362

100-yr:

Clark Transform[Pre-D 100]

Show Elements: All Elements

Subbasin	Time of Concentration (HR)	Storage Coefficient (HR)
A	0.51	2.312
B	0.57	2.105
C	0.17	0.493
D	0.80	2.853
Det	0.17	0.1483
E	0.69	2.325
F	0.79	2.424
G	0.63	2.78
H	0.55	2.395
I	0.44	2.705
Off1	0.17	0.486
On1	0.19	3.06
On2	0.17	0.43
On3	0.25	2.35
On4	0.28	0.48
On5	0.25	2.07
On6	0.17	0.5
On7	0.17	0.53

Lag Routing Input

(25-yr and 100-yr)

Show Elements: All Elements

Reach	Lag Time (MIN)
R(1-2)	10.7
R(2-3)	9.5
R(3-4)	11.9
R(5-6)	22.5
R(8-9)	12.6
R(CP-3)	19.1
R(CP-4)	11.3
R(CP-5)	17.9
R(CP-6)	5
R(CP-7)	16.3
R(CP-8)	22.8
R(CP-9)	26.2

HEC-HMS
PRE-DEVELOPMENT MODEL – V 2020_0902
INPUTS

Meteorological Input

25-yr, 24hr:

Name: 25YR

Description:	
Precipitation:	SCS Storm
Evapotranspiration:	--None--
Snowmelt:	--None--
Unit System:	U.S. Customary

Name: 25YR

Method:	Type 3
Depth (IN)	11.30

100-yr, 24hr:

Name: 100YR

Description:	Atlas 14, Hawthorn Park site, Type 3.
Precipitation:	SCS Storm
Evapotranspiration:	--None--
Snowmelt:	--None--
Unit System:	U.S. Customary

Name: 100YR

Method:	Type 3
Depth (IN)	16.7

Control Specifications Input

(25-yr and 100-yr)

Name: 24HR

Description:	
Start Date (ddMMMYYYY)	02Sep2020
Start Time (HH:mm)	00:00
End Date (ddMMMYYYY)	03Sep2020
End Time (HH:mm)	00:05
Time Interval:	5 Minutes

HEC-HMS OUTPUTS

HAWTHORN PARK

PRE-DEVELOPMENT MODEL

Project: Hawthorn_Pre-Dev Simulation Run: Pre-25

Start of Run: 02Sep2020, 00:00 Basin Model: Pre-D 25
End of Run: 03Sep2020, 00:05 Meteorologic Model: 25YR
Compute Time: 02Sep2020, 16:19:11 Control Specifications: 24HR

Volume Units: AC-FT

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (AC-FT)
A	0.0142	20.6	02Sep2020, 12:40	7.1
B	0.0239	36.7	02Sep2020, 12:40	11.9
C	0.0216	78.4	02Sep2020, 12:15	11.9
CP-10 NORTH	0.2897	402.6	02Sep2020, 13:05	146.9
CP-11 EAST	0.0441	60.1	02Sep2020, 12:40	22.0
CP-12	0.0000	0.0	02Sep2020, 00:00	0.0
CP-1 Outfall	0.4011	151.2	02Sep2020, 16:45	159.4
CP-2 OFFSITE	0.0084	30.7	02Sep2020, 12:15	4.6
CP-3	0.0016	1.8	02Sep2020, 12:35	0.8
CP-4	0.0003	1.1	02Sep2020, 12:15	0.2
CP-5	0.0013	1.8	02Sep2020, 12:35	0.7
CP-6	0.0017	6.3	02Sep2020, 12:20	1.0
CP-7	0.0055	8.6	02Sep2020, 12:30	2.8
CP-8	0.0019	6.8	02Sep2020, 12:15	1.0
CP-9	0.0013	4.5	02Sep2020, 12:15	0.7
D	0.0503	62.3	02Sep2020, 12:55	25.1
Det	0.0673	384.9	02Sep2020, 12:10	40.5
E	0.0397	57.1	02Sep2020, 12:50	20.3
F	0.0659	92.0	02Sep2020, 12:55	33.7
G	0.0316	40.1	02Sep2020, 12:50	15.8
H	0.0302	42.6	02Sep2020, 12:45	15.1
I	0.0428	55.6	02Sep2020, 12:40	21.3
Off1	0.0084	30.7	02Sep2020, 12:15	4.6
On1	0.0016	1.8	02Sep2020, 12:35	0.8
On2	0.0003	1.1	02Sep2020, 12:15	0.2

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (AC-FT)
On3	0.0013	1.8	02Sep2020, 12:35	0.7
On4	0.0017	6.3	02Sep2020, 12:20	1.0
On5	0.0055	8.6	02Sep2020, 12:30	2.8
On6	0.0019	6.8	02Sep2020, 12:15	1.0
On7	0.0013	4.5	02Sep2020, 12:15	0.7
Pond	0.4011	151.2	02Sep2020, 16:45	159.4
PT1	0.0158	22.3	02Sep2020, 12:40	7.9
PT10	0.0441	60.1	02Sep2020, 12:40	22.0
PT2	0.0397	58.6	02Sep2020, 12:45	19.8
PT3	0.0616	104.3	02Sep2020, 12:20	31.9
PT4	0.1119	162.5	02Sep2020, 12:45	56.9
PT5	0.0427	62.8	02Sep2020, 12:45	22.0
PT6	0.1086	152.8	02Sep2020, 13:00	55.5
PT7	0.0390	54.8	02Sep2020, 12:45	19.7
PT8	0.2595	363.1	02Sep2020, 12:55	132.2
PT9	0.2897	402.6	02Sep2020, 13:05	146.9
R(1-2)	0.0158	22.3	02Sep2020, 12:50	7.9
R(2-3)	0.0397	58.6	02Sep2020, 12:55	19.8
R(3-4)	0.0616	104.3	02Sep2020, 12:35	31.8
R(5-6)	0.0427	62.6	02Sep2020, 13:05	21.9
R(8-9)	0.2595	363.0	02Sep2020, 13:05	131.8
R(CP-3)	0.0016	1.8	02Sep2020, 12:55	0.8
R(CP-4)	0.0003	1.1	02Sep2020, 12:25	0.2
R(CP-5)	0.0013	1.8	02Sep2020, 12:50	0.7
R(CP-6)	0.0017	6.3	02Sep2020, 12:25	1.0
R(CP-7)	0.0055	8.6	02Sep2020, 12:45	2.8
R(CP-8)	0.0019	6.7	02Sep2020, 12:35	1.0
R(CP-9)	0.0013	4.5	02Sep2020, 12:40	0.7

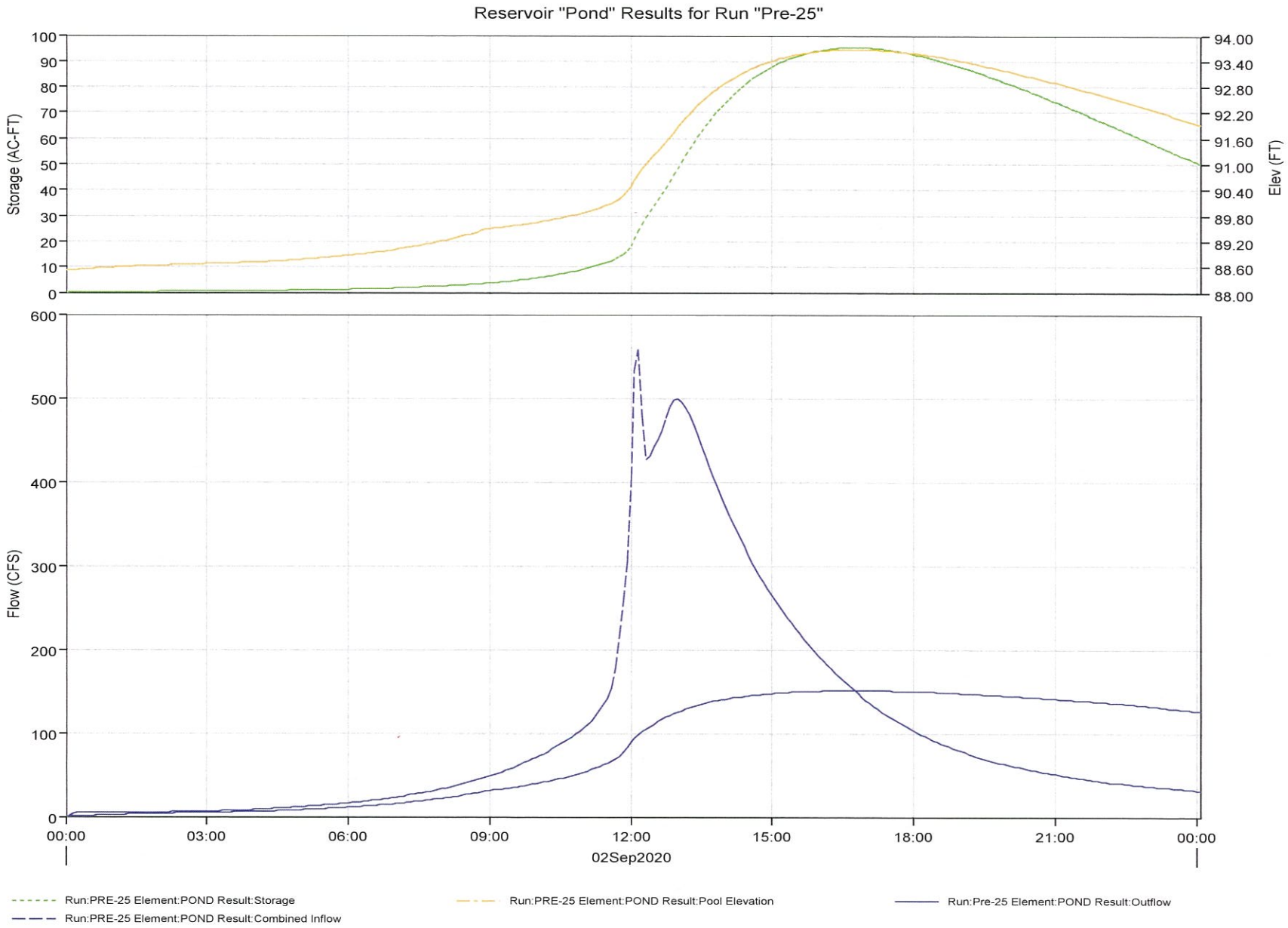
Project: Hawthorn_Pre-Dev
Simulation Run: Pre-25 Reservoir: Pond

Start of Run:	02Sep2020, 00:00	Basin Model:	Pre-D 25
End of Run:	03Sep2020, 00:05	Meteorologic Model:	25YR
Compute Time:	02Sep2020, 16:19:11	Control Specifications:	24HR

Volume Units: AC-FT

Computed Results

Peak Inflow :	558.1 (CFS)	Date/Time of Peak Inflow :	02Sep2020, 12:10
Peak Outflow :	151.2 (CFS)	Date/Time of Peak Outflow :	02Sep2020, 16:45
Total Inflow :	209.5 (AC-FT)	Peak Storage :	95.3 (AC-FT)
Total Outflow :	159.4 (AC-FT)	Peak Elevation :	93.7 (FT)


Reservoir "Pond" Results for Run "Pre-25"
Storage (AC-FT)
Elev (FT)
Flow (CFS)
100
90
80
70
60
50
40
30
20
10
0
94.00
93.40
92.80
92.20
91.60
91.00
90.40
89.80
89.20
88.60
88.00
600
500
400
300
200
100
0
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
02Sep2020
Run:PRE-25 Element:POND Result:Storage
Run:PRE-25 Element:POND Result:Pool Elevation
Run:Pre-25 Element:POND Result:Outflow
Run:PRE-25 Element:POND Result:Combined Inflow

Project: Hawthorn_Pre-Dev Simulation Run: PRE-100

Start of Run: 02Sep2020, 00:00 Basin Model: Pre-D 100
End of Run: 03Sep2020, 00:05 Meteorologic Model: 100YR
Compute Time: 02Sep2020, 16:19:07 Control Specifications: 24HR

Volume Units: AC-FT

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (AC-FT)
A	0.0142	25.4	02Sep2020, 12:45	11.0
B	0.0239	45.2	02Sep2020, 12:45	18.5
C	0.0216	97.7	02Sep2020, 12:15	18.1
CP-10 NORTH	0.2897	514.1	02Sep2020, 13:05	224.4
CP-11 EAST	0.0441	74.3	02Sep2020, 12:45	33.7
CP-12	0.0000	0.0	02Sep2020, 00:00	0.0
CP-1 OUTFALL	0.4011	174.9	02Sep2020, 18:15	192.5
CP-2 OFFSITE	0.0084	38.2	02Sep2020, 12:15	7.0
CP-3	0.0016	2.3	02Sep2020, 12:35	1.2
CP-4	0.0003	1.4	02Sep2020, 12:15	0.3
CP-5	0.0013	2.3	02Sep2020, 12:35	1.0
CP-6	0.0017	7.8	02Sep2020, 12:20	1.5
CP-7	0.0055	10.7	02Sep2020, 12:35	4.3
CP-8	0.0019	8.5	02Sep2020, 12:15	1.6
CP-9	0.0013	5.7	02Sep2020, 12:15	1.1
D	0.0503	77.3	02Sep2020, 13:00	38.3
Det	0.0673	483.2	02Sep2020, 12:10	59.9
E	0.0397	70.6	02Sep2020, 12:50	31.0
F	0.0659	113.8	02Sep2020, 12:55	51.4
G	0.0316	49.6	02Sep2020, 12:50	24.1
H	0.0302	52.5	02Sep2020, 12:45	23.3
I	0.0428	68.7	02Sep2020, 12:45	32.6
Off1	0.0084	38.2	02Sep2020, 12:15	7.0
On1	0.0016	2.3	02Sep2020, 12:35	1.2
On2	0.0003	1.4	02Sep2020, 12:15	0.3

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (AC-FT)
On3	0.0013	2.3	02Sep2020, 12:35	1.0
On4	0.0017	7.8	02Sep2020, 12:20	1.5
On5	0.0055	10.7	02Sep2020, 12:35	4.3
On6	0.0019	8.5	02Sep2020, 12:15	1.6
On7	0.0013	5.7	02Sep2020, 12:15	1.1
POND	0.4011	174.9	02Sep2020, 18:15	192.5
PT1	0.0158	27.6	02Sep2020, 12:45	12.1
PT10	0.0441	74.3	02Sep2020, 12:45	33.7
PT2	0.0397	72.5	02Sep2020, 12:50	30.6
PT3	0.0616	138.5	02Sep2020, 12:30	48.8
PT4	0.1119	212.6	02Sep2020, 12:50	87.0
PT5	0.0427	78.4	02Sep2020, 12:50	33.5
PT6	0.1086	190.7	02Sep2020, 13:05	84.7
PT7	0.0390	68.1	02Sep2020, 12:45	30.0
PT8	0.2595	464.7	02Sep2020, 12:55	201.8
PT9	0.2897	514.1	02Sep2020, 13:05	224.4
R(1-2)	0.0158	27.6	02Sep2020, 12:55	12.1
R(2-3)	0.0397	72.5	02Sep2020, 13:00	30.5
R(3-4)	0.0616	138.2	02Sep2020, 12:40	48.7
R(5-6)	0.0427	78.4	02Sep2020, 13:10	33.3
R(8-9)	0.2595	464.0	02Sep2020, 13:10	201.1
R(CP-3)	0.0016	2.3	02Sep2020, 12:55	1.2
R(CP-4)	0.0003	1.4	02Sep2020, 12:25	0.2
R(CP-5)	0.0013	2.3	02Sep2020, 12:50	1.0
R(CP-6)	0.0017	7.8	02Sep2020, 12:25	1.5
R(CP-7)	0.0055	10.7	02Sep2020, 12:50	4.3
R(CP-8)	0.0019	8.5	02Sep2020, 12:40	1.6
R(CP-9)	0.0013	5.6	02Sep2020, 12:45	1.1

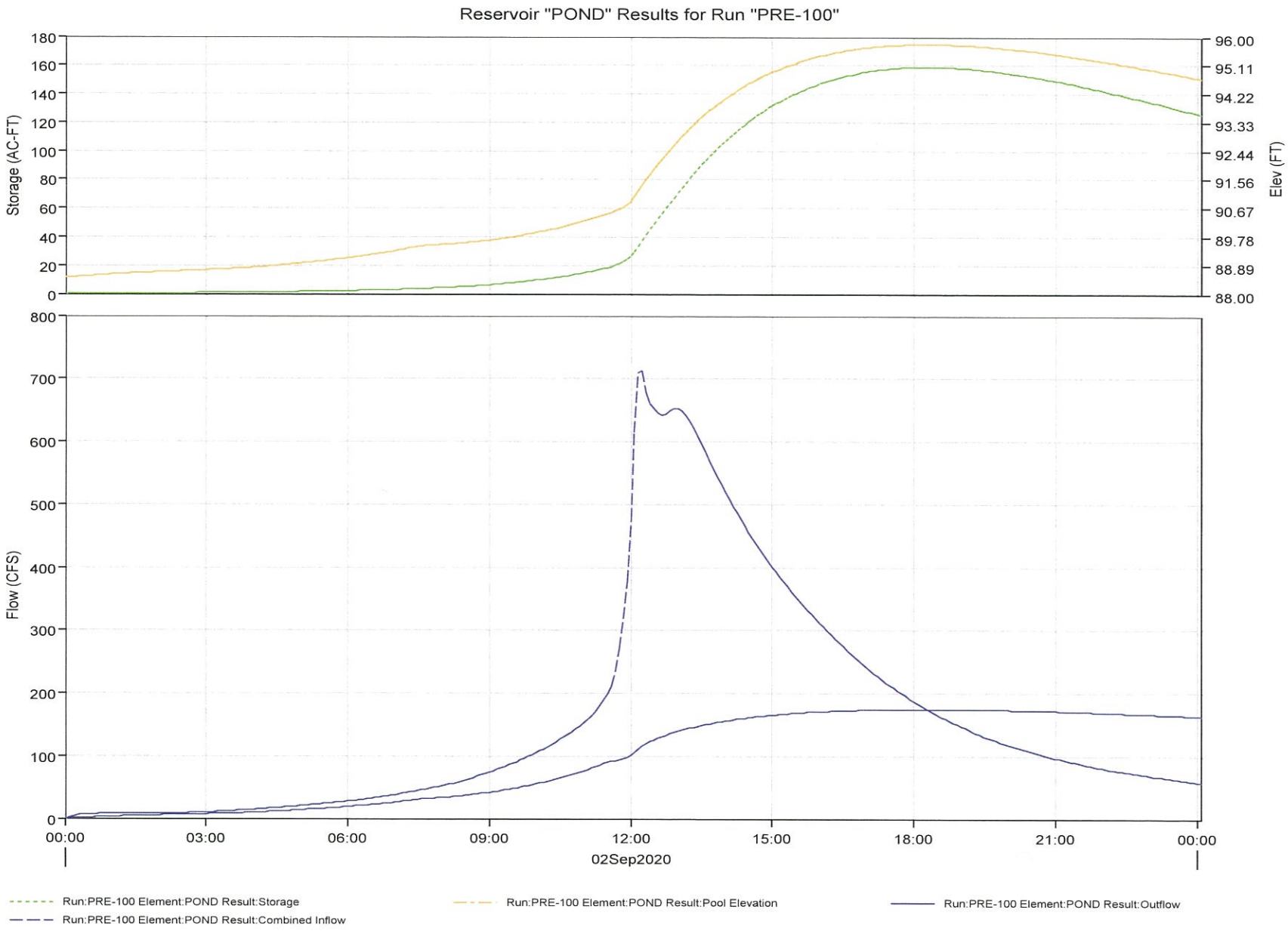
Project: Hawthorn_Pre-Dev
Simulation Run: PRE-100 Reservoir: POND

Start of Run:	02Sep2020, 00:00	Basin Model:	Pre-D 100
End of Run:	03Sep2020, 00:05	Meteorologic Model:	100YR
Compute Time:	02Sep2020, 16:19:07	Control Specifications:	24HR

Volume Units: AC-FT

Computed Results

Peak Inflow :	712.6 (CFS)	Date/Time of Peak Inflow :	02Sep2020, 12:15
Peak Outflow :	174.9 (CFS)	Date/Time of Peak Outflow :	02Sep2020, 18:15
Total Inflow :	317.9 (AC-FT)	Peak Storage :	158.8 (AC-FT)
Total Outflow :	192.5 (AC-FT)	Peak Elevation :	95.8 (FT)

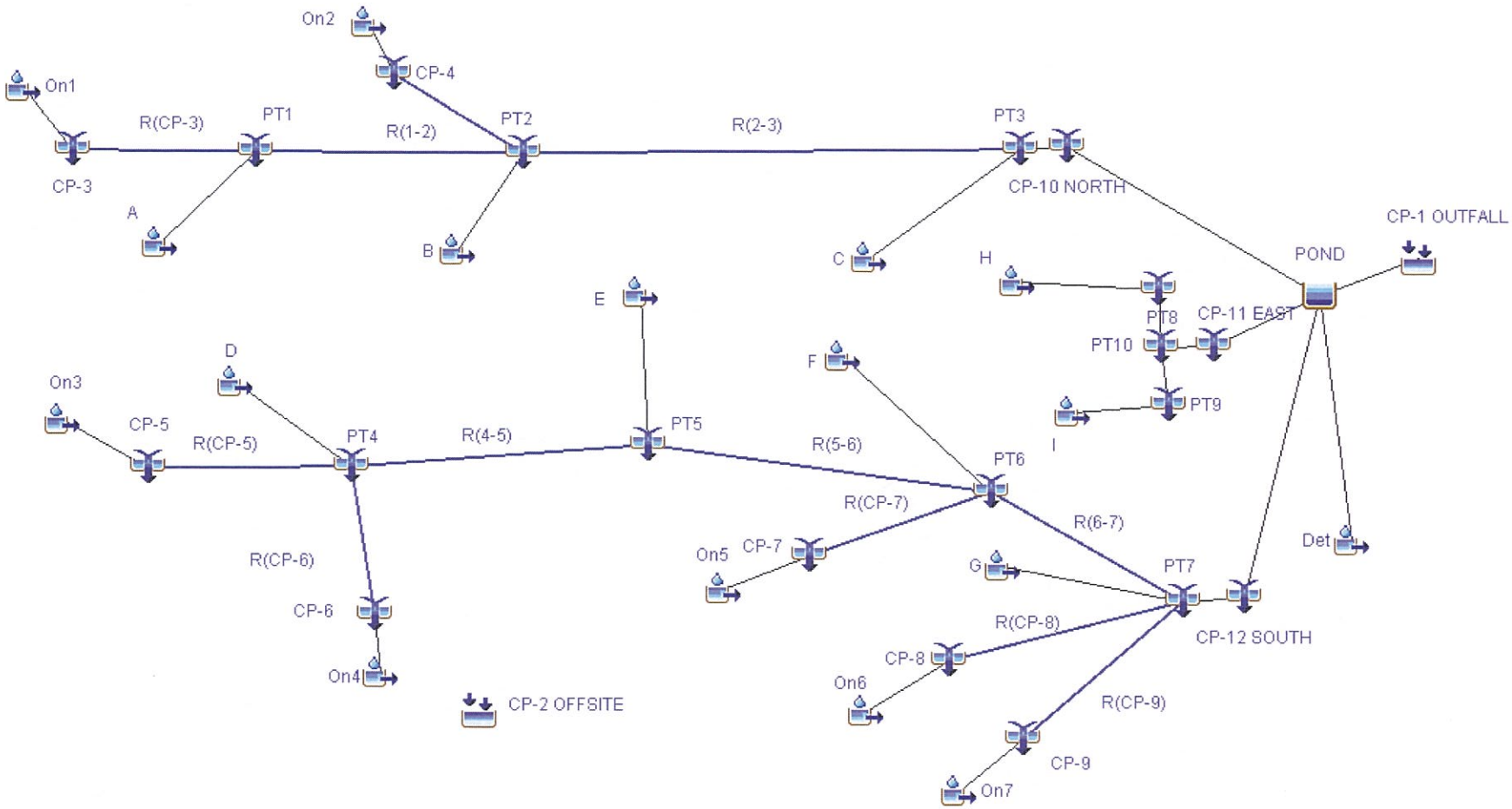

Reservoir "POND" Results for Run "PRE-100"
Storage (AC-FT)
Elev (FT)
180
160
140
120
100
80
60
40
20
0
96.00
95.11
94.22
93.33
92.44
91.56
90.67
89.78
88.89
88.00
800
700
600
500
400
300
200
100
0
Flow (CFS)
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
02Sep2020
Run:PRE-100 Element:POND Result:Storage
Run:PRE-100 Element:POND Result:Pool Elevation
Run:PRE-100 Element:POND Result:Outflow
Run:PRE-100 Element:POND Result:Combined Inflow

HEC-HMS INPUTS

HAWTHORN PARK

POST-DEVELOPMENT MODEL

HEC-HMS POST-DEVELOPMENT MODEL SCHEMATIC



HEC-HMS
POST-DEVELOPMENT MODEL – V 2020_0903
INPUTS
Detention Pond Input (25-yr and 100-yr)

Storage-Discharge:

Paired Data | Table | Graph

Storage (AC-FT)	Discharge (CFS)
0.0	0.0
21.1	31.0
50.4	90.3
80.6	119.3
111.4	136.1
142.8	149.1
174.9	161.1
207.9	172.2
241.4	182.6
275.4	192.5
310.0	201.9

Elevation-Storage:

Paired Data | Table | Graph

Elevation (FT)	Storage (AC-FT)
88.52	0.0
89.50	21.1
90.50	50.4
91.50	80.6
92.50	111.4
93.50	142.8
94.50	174.9
95.50	207.9
96.50	241.4
97.50	275.4
98.50	310.0

HEC-HMS
POST-DEVELOPMENT MODEL – V 2020_0903
INPUTS

Basin Model Input (25-yr and 100-yr)

Subbasin Area:

Subbasin	Area (MI2)
A	0.0509
B	0.0356
C	0.0605
D	0.0175
Det	0.0673
E	0.0531
F	0.0586
G	0.0094
H	0.0255
I	0.0175
On1	0.0016
On2	0.0003
On3	0.0013
On4	0.0017
On5	0.0055
On6	0.0019
On7	0.0013

Curve Number Loss:

Subbasin	Initial Abstraction (IN)	Curve Number	Impervious (%)
A	0.34	85.5	0.0
B	0.33	85.8	0.0
C	0.32	86.2	0.0
D	0.24	89.2	10
Det	0.04	98.0	100
E	0.31	86.7	0.0
F	0.34	85.5	0.0
G	0.22	90.0	12
H	0.34	85.5	0.0
I	0.33	85.8	0.0
On1	0.35	85.0	0.0
On2	0.17	92.0	0.0
On3	0.31	86.6	13
On4	0.10	95.1	73
On5	0.30	86.9	6
On6	0.17	92.0	0.0
On7	0.17	92.0	0.0

HEC-HMS
POST-DEVELOPMENT MODEL – V 2020_0903
INPUTS

Clark Transform Input

25-yr:

Clark Transform[Post-D 25]

Show Elements: All Elements

Subbasin	Time of Concentration (HR)	Storage Coefficient (HR)
A	0.64	1.082
B	0.45	0.942
C	0.61	0.971
D	0.55	0.934
Det	0.17	0.0167
E	0.60	0.855
F	0.47	0.866
G	0.26	0.54
H	0.24	0.374
I	0.34	0.594
On1	0.19	2.4
On2	0.18	0.35
On3	0.25	1.82
On4	0.28	0.3
On5	0.25	1.5
On6	0.17	0.34
On7	0.17	0.362

100-yr:

Clark Transform[Post-D 100]

Show Elements: All Elements

Subbasin	Time of Concentration (HR)	Storage Coefficient (HR)
A	0.64	1.58
B	0.45	1.379
C	0.61	1.418
D	0.55	1.337
Det	0.17	0.1483
E	0.60	1.267
F	0.47	1.281
G	0.26	0.789
H	0.24	0.597
I	0.34	0.888
On1	0.19	3.06
On2	0.18	0.43
On3	0.25	2.35
On4	0.28	0.48
On5	0.25	2.07
On6	0.17	0.50
On7	0.17	0.53

Lag Routing Input

(25-yr and 100-yr)

Reach	Lag Time (MIN)
R(1-2)	12.8
R(2-3)	16.5
R(4-5)	33.2
R(5-6)	6.4
R(6-7)	5.1
R(CP-3)	10.5
R(CP-4)	8.1
R(CP-5)	29.8
R(CP-6)	6.2
R(CP-7)	8.2
R(CP-8)	4.7
R(CP-9)	4.2

HEC-HMS
POST-DEVELOPMENT MODEL – V 2020_0903
INPUTS

Meteorological Input

25-yr, 24hr:

Name: 25YR

Description:	
Precipitation:	SCS Storm
Evapotranspiration:	--None--
Snowmelt:	--None--
Unit System:	U.S. Customary

Name: 25YR

Method:	Type 3
Depth (IN)	11.30

100-yr, 24hr:

Name: 100YR

Description:	Atlas 14, Hawthorn Park site, Type 3.
Precipitation:	SCS Storm
Evapotranspiration:	--None--
Snowmelt:	--None--
Unit System:	U.S. Customary

Name: 100YR

Method:	Type 3
Depth (IN)	16.7

Control Specifications Input

(25-yr and 100-yr)

Name: 24HR

Description:	
Start Date (ddMMMYYYY)	03Sep2020
Start Time (HH:mm)	00:00
End Date (ddMMMYYYY)	04Sep2020
End Time (HH:mm)	00:05
Time Interval:	5 Minutes

HEC-HMS OUTPUTS

HAWTHORN PARK

POST-DEVELOPMENT MODEL

Project: Hawthorn_Post_Dev Simulation Run: Post-D 25

Start of Run: 03Sep2020, 00:00 Basin Model: Post-D 25
End of Run: 04Sep2020, 00:05 Meteorologic Model: 25YR
Compute Time: 03Sep2020, 13:45:31 Control Specifications: 24HR

Volume Units: AC-FT

A	0.0509	92.7	03Sep2020, 12:40	25.4
B	0.0356	71.5	03Sep2020, 12:35	17.9
C	0.0605	118.3	03Sep2020, 12:40	30.5
CP-10 NORTH	0.1489	262.5	03Sep2020, 12:55	74.5
CP-11 EAST	0.0430	126.2	03Sep2020, 12:20	21.7
CP-12 SOUTH	0.1503	282.1	03Sep2020, 12:45	76.8
CP-1 OUTFALL	0.4095	141.8	03Sep2020, 15:55	138.9
CP-2 OFFSITE	0.0000	0.0	03Sep2020, 00:00	0.0
CP-3	0.0016	1.8	03Sep2020, 12:35	0.8
CP-4	0.0003	1.1	03Sep2020, 12:15	0.2
CP-5	0.0013	1.8	03Sep2020, 12:35	0.7
CP-6	0.0017	6.3	03Sep2020, 12:20	1.0
CP-7	0.0055	8.6	03Sep2020, 12:30	2.8
CP-8	0.0019	6.8	03Sep2020, 12:15	1.0
CP-9	0.0013	4.5	03Sep2020, 12:15	0.7
D	0.0175	36.3	03Sep2020, 12:35	9.3
Det	0.0673	384.9	03Sep2020, 12:10	40.5
E	0.0531	111.4	03Sep2020, 12:40	27.0
F	0.0586	122.6	03Sep2020, 12:35	29.3
G	0.0094	26.7	03Sep2020, 12:20	5.1
H	0.0255	81.8	03Sep2020, 12:20	12.9
I	0.0175	45.3	03Sep2020, 12:25	8.8
On1	0.0016	1.8	03Sep2020, 12:35	0.8
On2	0.0003	1.1	03Sep2020, 12:15	0.2
On3	0.0013	1.8	03Sep2020, 12:35	0.7

On4	0.0017	6.3	03Sep2020, 12:20	1.0
On5	0.0055	8.6	03Sep2020, 12:30	2.8
On6	0.0019	6.8	03Sep2020, 12:15	1.0
On7	0.0013	4.5	03Sep2020, 12:15	0.7
POND	0.4095	141.8	03Sep2020, 15:55	138.9
PT1	0.0525	94.5	03Sep2020, 12:40	26.2
PT10	0.0430	126.2	03Sep2020, 12:20	21.7
PT2	0.0884	159.1	03Sep2020, 12:50	44.2
PT3	0.1489	262.5	03Sep2020, 12:55	74.5
PT4	0.0205	42.8	03Sep2020, 12:35	11.0
PT5	0.0736	137.8	03Sep2020, 12:50	37.9
PT6	0.1377	256.6	03Sep2020, 12:45	70.0
PT7	0.1503	282.1	03Sep2020, 12:45	76.8
PT8	0.0255	81.8	03Sep2020, 12:20	12.9
PT9	0.0175	45.3	03Sep2020, 12:25	8.8
R(1-2)	0.0525	94.3	03Sep2020, 12:55	26.1
R(2-3)	0.0884	159.0	03Sep2020, 13:05	44.0
R(4-5)	0.0205	42.6	03Sep2020, 13:10	10.9
R(5-6)	0.0736	137.7	03Sep2020, 13:00	37.9
R(6-7)	0.1377	256.6	03Sep2020, 12:50	70.0
R(CP-3)	0.0016	1.8	03Sep2020, 12:45	0.8
R(CP-4)	0.0003	1.0	03Sep2020, 12:25	0.2
R(CP-5)	0.0013	1.8	03Sep2020, 13:00	0.7
R(CP-6)	0.0017	6.3	03Sep2020, 12:25	1.0
R(CP-7)	0.0055	8.6	03Sep2020, 12:40	2.8
R(CP-8)	0.0019	6.7	03Sep2020, 12:20	1.0
R(CP-9)	0.0013	4.5	03Sep2020, 12:20	0.7

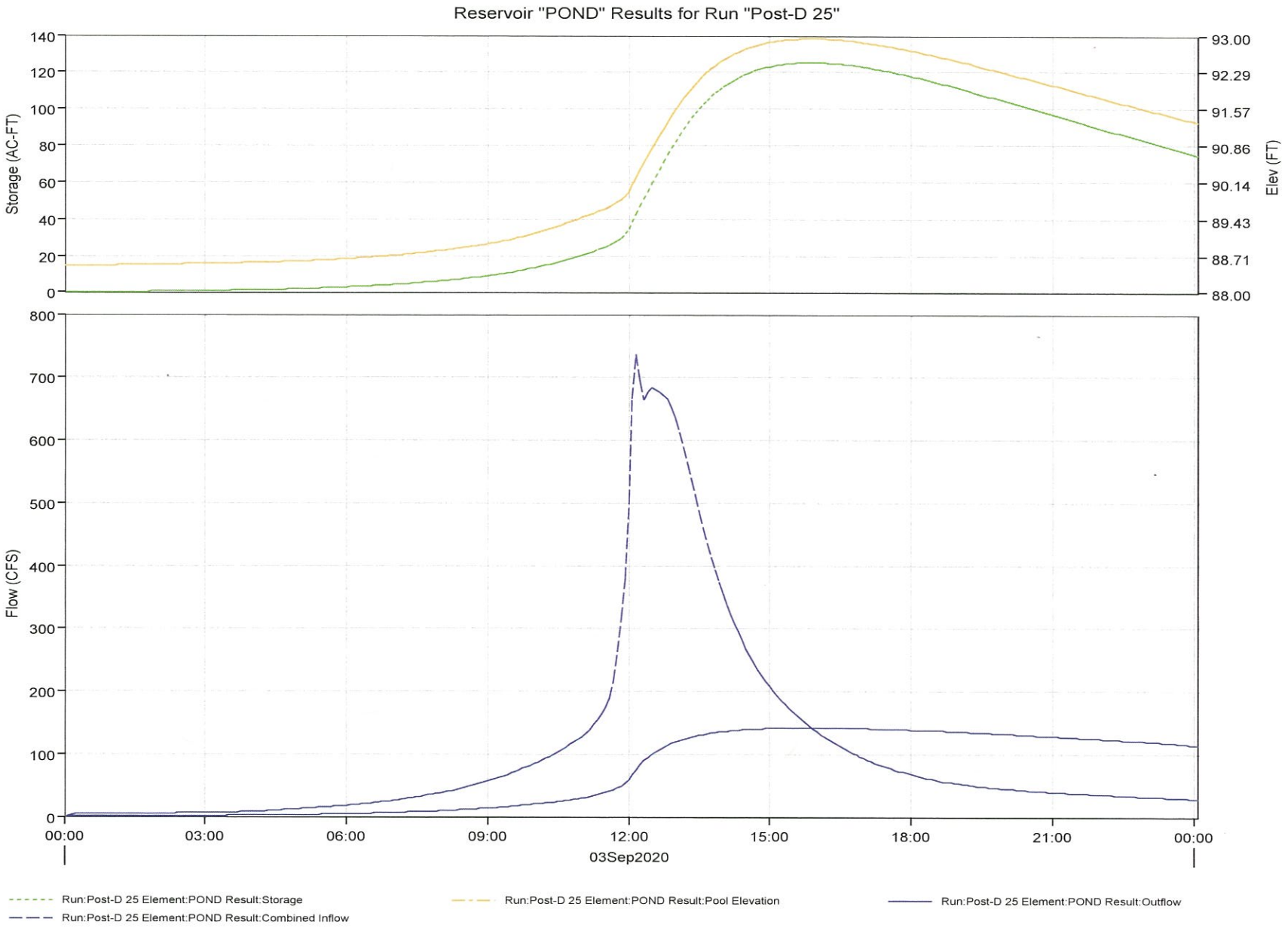
Project: Hawthorn_Post_Dev
Simulation Run: Post-D 25 Reservoir: POND

Start of Run:	03Sep2020, 00:00	Basin Model:	Post-D 25
End of Run:	04Sep2020, 00:05	Meteorologic Model:	25YR
Compute Time:	03Sep2020, 12:25:16	Control Specifications:	24HR

Volume Units: AC-FT

Computed Results

Peak Inflow :	736.3 (CFS)	Date/Time of Peak Inflow :	03Sep2020, 12:10
Peak Outflow :	141.8 (CFS)	Date/Time of Peak Outflow :	03Sep2020, 15:55
Total Inflow :	213.6 (AC-FT)	Peak Storage :	125.2 (AC-FT)
Total Outflow :	138.9 (AC-FT)	Peak Elevation :	92.9 (FT)


Reservoir "POND" Results for Run "Post-D 25"
Storage (AC-FT)
Elev (FT)
140
120
100
80
60
40
20
0
93.00
92.29
91.57
90.86
90.14
89.43
88.71
88.00
Flow (CFS)
800
700
600
500
400
300
200
100
0
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
03Sep2020
Run:Post-D 25 Element:POND Result:Storage
Run:Post-D 25 Element:POND Result:Combined Inflow
Run:Post-D 25 Element:POND Result:Pool Elevation
Run:Post-D 25 Element:POND Result:Outflow

Project: Hawthorn_Post_Dev Simulation Run: Post-D 100

Start of Run: 03Sep2020, 00:00 Basin Model: Post-D 100
End of Run: 04Sep2020, 00:05 Meteorologic Model: 100YR
Compute Time: 03Sep2020, 13:45:18 Control Specifications: 24HR

Volume Units: AC-FT

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (AC-FT)
A	0.0509	114.5	03Sep2020, 12:45	39.4
B	0.0356	88.2	03Sep2020, 12:35	27.8
C	0.0605	145.9	03Sep2020, 12:45	47.3
CP-10 NORTH	0.1489	333.0	03Sep2020, 13:00	115.6
CP-11 EAST	0.0430	156.1	03Sep2020, 12:25	33.8
CP-12 SOUTH	0.1503	357.3	03Sep2020, 12:50	118.6
CP-1 OUTFALL	0.4095	169.8	03Sep2020, 17:05	174.7
CP-2 OFFSITE	0.0000	0.0	03Sep2020, 00:00	0.0
CP-3	0.0016	2.3	03Sep2020, 12:35	1.2
CP-4	0.0003	1.4	03Sep2020, 12:15	0.3
CP-5	0.0013	2.3	03Sep2020, 12:35	1.0
CP-6	0.0017	7.8	03Sep2020, 12:20	1.5
CP-7	0.0055	10.7	03Sep2020, 12:35	4.3
CP-8	0.0019	8.5	03Sep2020, 12:15	1.6
CP-9	0.0013	5.7	03Sep2020, 12:15	1.1
D	0.0175	44.8	03Sep2020, 12:40	14.2
Det	0.0673	483.2	03Sep2020, 12:10	59.9
E	0.0531	137.5	03Sep2020, 12:40	41.8
F	0.0586	151.2	03Sep2020, 12:35	45.6
G	0.0094	33.1	03Sep2020, 12:25	7.8
H	0.0255	101.5	03Sep2020, 12:20	20.0
I	0.0175	56.1	03Sep2020, 12:30	13.7
On1	0.0016	2.3	03Sep2020, 12:35	1.2
On2	0.0003	1.4	03Sep2020, 12:15	0.3
On3	0.0013	2.3	03Sep2020, 12:35	1.0

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (AC-FT)
On4	0.0017	7.8	03Sep2020, 12:20	1.5
On5	0.0055	10.7	03Sep2020, 12:35	4.3
On6	0.0019	8.5	03Sep2020, 12:15	1.6
On7	0.0013	5.7	03Sep2020, 12:15	1.1
POND	0.4095	169.8	03Sep2020, 17:05	174.7
PT1	0.0525	116.8	03Sep2020, 12:45	40.6
PT10	0.0430	156.1	03Sep2020, 12:25	33.8
PT2	0.0884	199.6	03Sep2020, 12:50	68.5
PT3	0.1489	333.0	03Sep2020, 13:00	115.6
PT4	0.0205	53.4	03Sep2020, 12:40	16.7
PT5	0.0736	176.3	03Sep2020, 12:55	58.4
PT6	0.1377	323.6	03Sep2020, 12:50	108.2
PT7	0.1503	357.3	03Sep2020, 12:50	118.6
PT8	0.0255	101.5	03Sep2020, 12:20	20.0
PT9	0.0175	56.1	03Sep2020, 12:30	13.7
R(1-2)	0.0525	116.4	03Sep2020, 12:55	40.5
R(2-3)	0.0884	199.1	03Sep2020, 13:10	68.3
R(4-5)	0.0205	53.3	03Sep2020, 13:10	16.6
R(5-6)	0.0736	176.3	03Sep2020, 13:05	58.3
R(6-7)	0.1377	323.6	03Sep2020, 12:55	108.1
R(CP-3)	0.0016	2.3	03Sep2020, 12:45	1.2
R(CP-4)	0.0003	1.4	03Sep2020, 12:25	0.2
R(CP-5)	0.0013	2.3	03Sep2020, 13:05	1.0
R(CP-6)	0.0017	7.7	03Sep2020, 12:25	1.5
R(CP-7)	0.0055	10.7	03Sep2020, 12:40	4.3
R(CP-8)	0.0019	8.5	03Sep2020, 12:20	1.6
R(CP-9)	0.0013	5.7	03Sep2020, 12:20	1.1

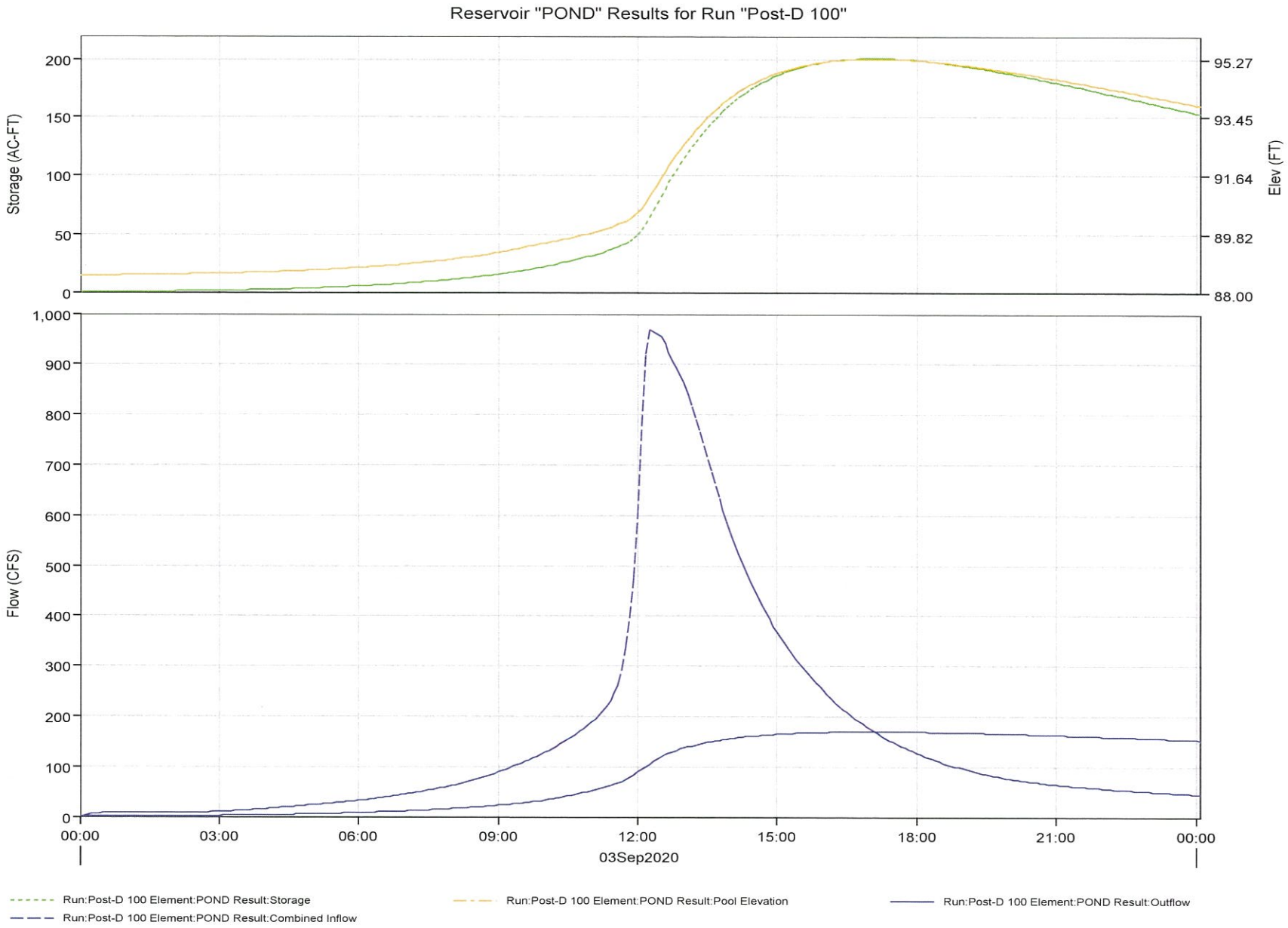
Project: Hawthorn_Post_Dev
Simulation Run: Post-D 100 Reservoir: POND

Start of Run:	03Sep2020, 00:00	Basin Model:	Post-D 100
End of Run:	04Sep2020, 00:05	Meteorologic Model:	100YR
Compute Time:	03Sep2020, 12:25:10	Control Specifications:	24HR

Volume Units: AC-FT

Computed Results

Peak Inflow :	968.9 (CFS)	Date/Time of Peak Inflow :	03Sep2020, 12:15
Peak Outflow :	169.8 (CFS)	Date/Time of Peak Outflow :	03Sep2020, 17:05
Total Inflow :	327.8 (AC-FT)	Peak Storage :	200.7 (AC-FT)
Total Outflow :	174.7 (AC-FT)	Peak Elevation :	95.3 (FT)


Reservoir "POND" Results for Run "Post-D 100"
Storage (AC-FT)
200
150
100
50
0
Elev (FT)
95.27
93.45
91.64
89.82
88.00
Flow (CFS)
1,000
900
800
700
600
500
400
300
200
100
0
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
03Sep2020
Run:Post-D 100 Element:POND Result:Storage
Run:Post-D 100 Element:POND Result:Combined Inflow
Run:Post-D 100 Element:POND Result:Pool Elevation
Run:Post-D 100 Element:POND Result:Outflow