==========
JOB TITLE
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JOB TITLE NOT SPECIFIED
Click Project Summary on the File Menu to enter title

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## MASTER DESIGN STORM SUMMARY

Default Network Design Storm File, ID SEDGWICK.RNQ Sedgwick24

| Return Event | Total Depth in | Rainfall Type | RNF File | RNF ID |
|---|---|---|---|---|
| 5y24h | 4.5000 | Synthetic Curve | SCSTYPES | TypeII 24hr |
| 25y24h | 6.1000 | Synthetic Curve | SCS | SCSII |
| 100y24 | 7.9000 | Synthetic Curve | SCSTYPES | TypeII 24hr |
| 2y24h | 3.5000 | Synthetic Curve | SCSTYPES | TypeII 24hr |

## MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

| Storage Node ID | Type | Return Event | HYG Vol ac-ft | Trun | Qpeak hrs | Qpeak cfs | Max WSEL ft | Max Pond ac-ft |
|---|---|---|---|---|---|---|---|---|
| DEVELOPED SITE | AREA | 5 | .826 | | 12.0500 | 11.70 | | |
| DEVELOPED SITE | AREA | 25 | 1.220 | | 12.0000 | 7.44 | | |
| DEVELOPED SITE | AREA | 100 | 1.672 | | 12.0500 | 22.78 | | |
| DEVELOPED SITE | AREA | 2 | .586 | | 12.0500 | 8.42 | | |
| DITCH | IN POND | 5 | 2.424 | | 12.1000 | 28.01 | | |
| DITCH | IN POND | 25 | 3.581 | | 12.0500 | 21.49 | | |
| DITCH | IN POND | 100 | 4.907 | | 12.1000 | 58.02 | | |
| DITCH | IN POND | 2 | 1.720 | | 12.1500 | 19.46 | | |
| DITCH | OUT POND | 5 | 2.424 | | 12.1500 | 27.99 | 1321.54 | .086 |
| DITCH | OUT POND | 25 | 3.581 | | 12.0500 | 21.47 | 1321.35 | .072 |
| DITCH | OUT POND | 100 | 4.907 | | 12.1500 | 57.21 | 1322.18 | .137 |
| DITCH | OUT POND | 2 | 1.720 | | 12.1500 | 19.25 | 1321.28 | .067 |
| EXISTING DEPRIN | POND | 5 | 2.470 | | 12.0500 | 35.30 | | |
| EXISTING DEPRIN | POND | 25 | 3.743 | | 12.0000 | 23.40 | | |
| EXISTING DEPRIN | POND | 100 | 5.221 | | 12.0500 | 72.39 | | |
| EXISTING DEPRIN | POND | 2 | 1.709 | | 12.0500 | 24.61 | | |
| EXISTING DEPROUT | POND | 5 | 2.470 | | 12.1000 | 32.24 | 1321.22 | .172 |
| EXISTING DEPROUT | POND | 25 | 3.743 | | 12.0500 | 23.11 | 1321.16 | .120 |
| EXISTING DEPROUT | POND | 100 | 5.221 | | 12.1000 | 66.50 | 1321.45 | .391 |

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

| Node ID | Type | Return Event | HYG Vol ac-ft | Trun | Qpeak hrs | Qpeak cfs | Max WSEL ft | Max Pond Storage ac-ft |
|---|---|---|---|---|---|---|---|---|
| EXISTING DEPROUT | POND | 2 | 1.709 | | 12.1000 | 22.39 | 1321.15 | .116 |
| EXISTING OFFSITE | AREA | 5 | 1.598 | | 12.0500 | 22.64 | | |
| EXISTING OFFSITE | AREA | 25 | 2.361 | | 12.0000 | 14.40 | | |
| EXISTING OFFSITE | AREA | 100 | 3.235 | | 12.0500 | 44.10 | | |
| EXISTING OFFSITE | AREA | 2 | 1.134 | | 12.0500 | 16.29 | | |
| EXISTING SITE | AREA | 5 | .871 | | 12.0500 | 12.67 | | |
| EXISTING SITE | AREA | 25 | 1.382 | | 12.0000 | 9.00 | | |
| EXISTING SITE | AREA | 100 | 1.985 | | 12.0500 | 28.30 | | |
| EXISTING SITE | AREA | 2 | .574 | | 12.0500 | 8.32 | | |
| *OUT 20 | JCT | 5 | 2.770 | | 12.1500 | 31.52 | | |
| *OUT 20 | JCT | 25 | 4.093 | | 12.0500 | 24.51 | | |
| *OUT 20 | JCT | 100 | 5.608 | | 12.1000 | 65.38 | | |
| *OUT 20 | JCT | 2 | 1.966 | | 12.1500 | 21.81 | | |
| *OUT 30 | JCT | 5 | 2.470 | | 12.1000 | 32.24 | | |
| *OUT 30 | JCT | 25 | 3.743 | | 12.0500 | 23.11 | | |
| *OUT 30 | JCT | 100 | 5.221 | | 12.1000 | 66.50 | | |
| *OUT 30 | JCT | 2 | 1.709 | | 12.1000 | 22.39 | | |
| POND IN | POND | 5 | 2.424 | | 12.0500 | 34.33 | | |
| POND IN | POND | 25 | 3.581 | | 12.0000 | 21.84 | | |
| POND IN | POND | 100 | 4.907 | | 12.0500 | 66.88 | | |
| POND IN | POND | 2 | 1.720 | | 12.0500 | 24.71 | | |
| POND OUT | POND | 5 | 2.424 | | 12.1000 | 28.01 | 1321.78 | .343 |
| POND OUT | POND | 25 | 3.581 | | 12.0500 | 21.49 | 1321.65 | .282 |
| POND OUT | POND | 100 | 4.907 | | 12.1000 | 58.02 | 1322.29 | .599 |
| POND OUT | POND | 2 | 1.720 | | 12.1500 | 19.46 | 1321.61 | .263 |
| STREET DRAINAGE | AREA | 5 | .346 | | 12.0500 | 4.90 | | |
| STREET DRAINAGE | AREA | 25 | .512 | | 12.0000 | 3.12 | | |
| STREET DRAINAGE | AREA | 100 | .701 | | 12.0500 | 9.55 | | |

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

| Node ID | Type | Return Event | HYG Vol ac-ft | Trun | Qpeak hrs | Qpeak cfs | Max WSEL ft | Max Pond Storage ac-ft |
|---|---|---|---|---|---|---|---|---|
| STREET DRAINAGE | AREA | 2 | .246 | | 12.0500 | 3.53 | | |
| WEST OFFSITE | AREA | 5 | 1.598 | | 12.0500 | 22.64 | | |
| WEST OFFSITE | AREA | 25 | 2.361 | | 12.0000 | 14.40 | | |
| WEST OFFSITE | AREA | 100 | 3.235 | | 12.0500 | 44.10 | | |
| WEST OFFSITE | AREA | 2 | 1.134 | | 12.0500 | 16.29 | | |

File.... C:\HAESTAD\PPKW\RAINFALL\SEDGWICK.RNQ
Title...

JOB TITLE NOT SPECIFIED
Click Project Summary on the File Menu to enter title

DESIGN STORMS SUMMARY

Design Storm File,ID = SEDGWICK.RNQ Sedgwick24

Storm Tag Name = 5y24h
Description: Sedgwick County 5-yr 24 hour Duration
---
Data Type, File, ID = Synthetic Storm SCSTYPES.RNF TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 4.5000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name = 25y24h
Description: Sedgwick County - 25 year - 24hour
---
Data Type, File, ID = Synthetic Storm SCS.RNF SCSII
Storm Frequency = 25 yr
Total Rainfall Depth= 6.1000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= 1.0000 hrs End= 24.0000 hrs

Storm Tag Name = 100y24
Description: Sedgwick County 100-yr 24 hour Duration
---
Data Type, File, ID = Synthetic Storm SCSTYPES.RNF TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 7.9000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name = 2y24h
Description: Sedgwick County 2-yr 24 hour Duration
---
Data Type, File, ID = Synthetic Storm SCSTYPES.RNF TypeII 24hr
Storm Frequency = 2 yr
Total Rainfall Depth= 3.5000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

DESIGN STORMS SUMMARY

Design Storm File,ID = SEDGWICK.RNQ Sedgwick24

Storm Tag Name = 5y24h
Description: Sedgwick County 5-yr 24 hour Duration
---
Data Type, File, ID = Synthetic Storm SCSTYPES.RNF TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 4.5000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name = 25y24h
Description: Sedgwick County - 25 year - 24hour
---
Data Type, File, ID = Synthetic Storm SCS.RNF SCSII
Storm Frequency = 25 yr
Total Rainfall Depth= 6.1000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= 1.0000 hrs End= 24.0000 hrs

Storm Tag Name = 100y24
Description: Sedgwick County 100-yr 24 hour Duration
---
Data Type, File, ID = Synthetic Storm SCSTYPES.RNF TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 7.9000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name = 2y24h
Description: Sedgwick County 2-yr 24 hour Duration
---
Data Type, File, ID = Synthetic Storm SCSTYPES.RNF TypeII 24hr
Storm Frequency = 2 yr
Total Rainfall Depth= 3.5000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 1321.00 ft
Increment = .50 ft
Max. Elev.= 1324.00 ft

**********
OUTLET CONNECTIVITY
**********

---> Forward Flow Only (UpStream to DnStream)
<--- Reverse Flow Only (DnStream to UpStream)
<---> Forward and Reverse Both Allowed

| Structure | No. | | Outfall | E1, ft | E2, ft |
|---|---|---|---|---|---|
| Weir-Rectangular | WR | ---> | TW | 1321.000 | 1324.000 |
| TW SETUP, DS Channel | | | | | |

OUTLET STRUCTURE INPUT DATA

Structure ID = WR
Structure Type = Weir-Rectangular
---
# of Openings = 1
Crest Elev. = 1321.00 ft
Weir Length = 15.00 ft
Weir Coeff. = 2.600000

Weir TW effects (Use adjustment equation)

Structure ID = TW
Structure Type = TW SETUP, DS Channel
---
FREE OUTFALL CONDITIONS SPECIFIED

CONVERGENCE TOLERANCES...
Maximum Iterations= 30
Min. TW tolerance = .01 ft
Max. TW tolerance = .01 ft
Min. HW tolerance = .01 ft
Max. HW tolerance = .01 ft
Min. Q tolerance = .10 cfs
Max. Q tolerance = .10 cfs

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 1321.00 ft
Increment = .50 ft
Max. Elev.= 1323.00 ft

**********
OUTLET CONNECTIVITY
**********

---> Forward Flow Only (UpStream to DnStream)
<--- Reverse Flow Only (DnStream to UpStream)
<---> Forward and Reverse Both Allowed

| Structure | No. | | Outfall | E1, ft | E2, ft |
|---|---|---|---|---|---|
| Weir-Rectangular | WR | ---> | TW | 1321.000 | 1323.000 |
| TW SETUP, DS Channel | | | | | |

OUTLET STRUCTURE INPUT DATA

Structure ID = WR
Structure Type = Weir-Rectangular
---
# of Openings = 1
Crest Elev. = 1321.00 ft
Weir Length = 80.00 ft
Weir Coeff. = 2.600000

Weir TW effects (Use adjustment equation)

Structure ID = TW
Structure Type = TW SETUP, DS Channel
---
FREE OUTFALL CONDITIONS SPECIFIED

CONVERGENCE TOLERANCES...
Maximum Iterations= 30
Min. TW tolerance = .01 ft
Max. TW tolerance = .01 ft
Min. HW tolerance = .01 ft
Max. HW tolerance = .01 ft
Min. Q tolerance = .10 cfs
Max. Q tolerance = .10 cfs

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 1320.10 ft
Increment = .50 ft
Max. Elev.= 1323.00 ft

**********
OUTLET CONNECTIVITY
**********

---> Forward Flow Only (UpStream to DnStream)
<--- Reverse Flow Only (DnStream to UpStream)
<---> Forward and Reverse Both Allowed

| Structure | No. | | Outfall | E1, ft | E2, ft |
|---|---|---|---|---|---|
| Culvert-Circular | CV | ---> | TW | 1320.100 | 1323.000 |
| TW SETUP, DS Channel | | | | | |

OUTLET STRUCTURE INPUT DATA

Structure ID = CV
Structure Type = Culvert-Circular
---
No. Barrels = 1
Barrel Diameter = 24.0000 ft
Upstream Invert = 1320.10 ft
Dnstream Invert = 1320.00 ft
Horiz. Length = 30.00 ft
Barrel Length = 30.00 ft
Barrel Slope = .00333 ft/ft

OUTLET CONTROL DATA...
Mannings n = .0130
Ke = .5000 (forward entrance loss)
Kb = .000452 (per ft of full flow)
Kr = .5000 (reverse entrance loss)
HW Convergence = .001 +/- ft

INLET CONTROL DATA...
Equation form = 1
Inlet Control K = .0078
Inlet Control M = 2.0000
Inlet Control c = .02920
Inlet Control Y = .7400
T1 ratio (HW/D) = 1.134
T2 ratio (HW/D) = 1.206
Slope Factor = -.500

Use unsubmerged inlet control Form 1 equ. below T1 elev.
Use submerged inlet control Form 1 equ. above T2 elev.

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...
At T1 Elev = 1347.32 ft ---> Flow = 7756.86 cfs
At T2 Elev = 1349.03 ft ---> Flow = 8864.98 cfs

Structure ID = TW
Structure Type = TW SETUP, DS Channel
---
FREE OUTFALL CONDITIONS SPECIFIED

CONVERGENCE TOLERANCES...
Maximum Iterations= 30
Min. TW tolerance = .01 ft
Max. TW tolerance = .01 ft
Min. HW tolerance = .01 ft
Max. HW tolerance = .01 ft
Min. Q tolerance = .10 cfs
Max. Q tolerance = .10 cfs

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