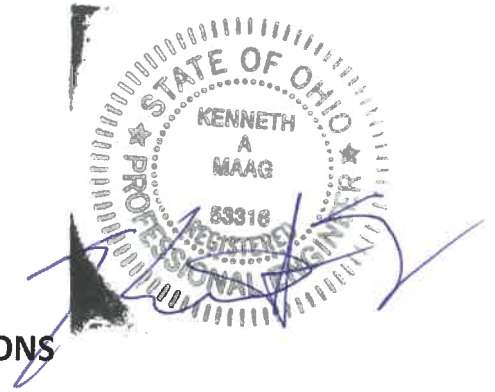


McDonald – Team Shank
 Freedom Drive, Napoleon, Ohio
 PDG Project No. 703400 00021



STORM WATER DETENTION CALCULATIONS

Total Site = 12.7 Acres – Predominately Agricultural

Critical Storm:

Q = CIA

Pre-developed

C = .2 ✓

i = 2.6" ✓

A = 12.7" ✓

Q = 6.604

Post-developed

C = Proposed site will have 3.3 acres of impervious surface. ✓

It is assumed that future expansion will double that to 6.6 acres. ✓

To allow for changes in expansion the calculations used 7 acres. ✓

7 x .9 = 6.3

5.7 x .2 = 1.14

~~7.14~~ / 12.7 = .585 = .59 ✓

7.44

Q = CIA

= .59 (2.60") 12.7 Acres

= 19.4818 ✓

$$\text{Critical Storm} = \frac{19.4818 - 6.604}{6.604} = 195\%$$

$$\therefore \text{Critical Storm} = 25 \text{ Years}$$

Because the topography is relatively flat and the out lots are shallow, the detention is broken up into the West side (approximately 1/2 of proposed building to West property line) and the East 1/2.

For purposes of determining allowable outflow:

$$L_2 \text{ Fe} = 1.25$$

$$C = .2$$

$$A = 12.7$$

$$Q = (.2)(1.25)(12.7) = 3.175 \text{ cfs total.}$$

$$\text{West side} = 4.14 \text{ Acres} = 33\% = 1.04 \text{ cfs}$$

$$\text{East side} = 8.55 \text{ Acres} = .67\% = 2.14 \text{ cfs}$$

The NOAA Atlas was utilized to provide rainfall frequencies (see attached). The attached spreadsheet calculated detention volumes.



NOAA Atlas 14, Volume 2, Version 3
Location name: Napoleon, Ohio, USA*
Latitude: 41.4143°, Longitude: -84.1167°
Elevation: 680.37 ft**
 * source: ESRI Maps
 ** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

G.M. Bonnin, D. Martin, B. Lin, T. Parzybok, M. Yekta, and D. Riley

NOAA, National Weather Service, Silver Spring, Maryland

[PF tabular](#) | [PF graphical](#) | [Maps & aerials](#)

PF tabular

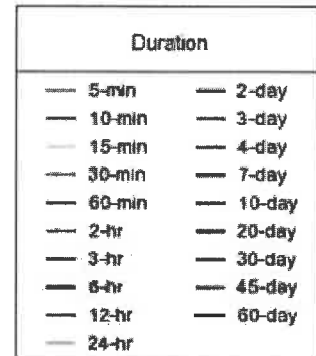
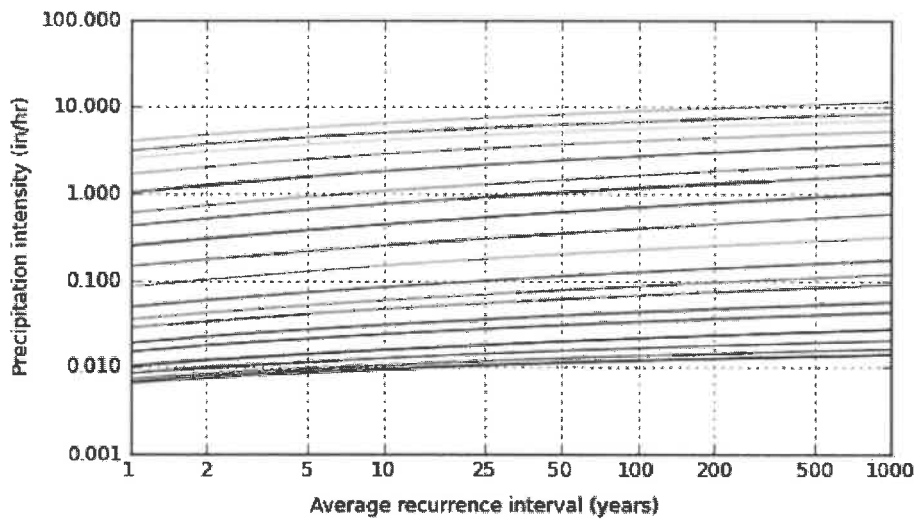
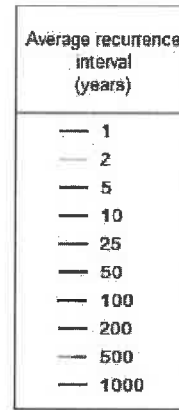
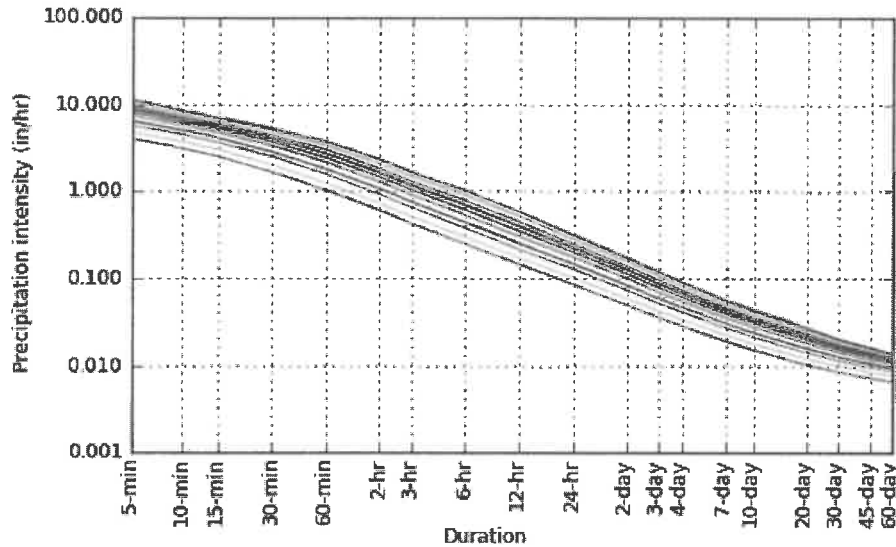
PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	4.00 (3.59-4.46)	4.76 (4.28-5.32)	5.74 (5.12-6.40)	6.49 (5.80-7.24)	7.46 (6.65-8.29)	8.21 (7.28-9.11)	8.96 (7.92-9.92)	9.72 (8.53-10.8)	10.7 (9.36-11.9)	11.5 (9.92-12.7)
10-min	3.10 (2.79-3.47)	3.72 (3.34-4.15)	4.45 (3.98-4.97)	5.01 (4.48-5.58)	5.71 (5.08-6.34)	6.22 (5.52-6.91)	6.74 (5.96-7.47)	7.25 (6.37-8.03)	7.90 (6.88-8.74)	8.36 (7.23-9.26)
15-min	2.54 (2.28-2.83)	3.03 (2.72-3.38)	3.64 (3.26-4.06)	4.11 (3.67-4.58)	4.70 (4.18-5.22)	5.14 (4.56-5.70)	5.58 (4.93-6.18)	6.01 (5.28-6.66)	6.57 (5.72-7.27)	6.97 (6.02-7.72)
30-min	1.68 (1.51-1.87)	2.03 (1.82-2.26)	2.50 (2.23-2.78)	2.85 (2.55-3.18)	3.32 (2.95-3.69)	3.67 (3.26-4.07)	4.03 (3.56-4.47)	4.39 (3.85-4.86)	4.87 (4.24-5.39)	5.22 (4.51-5.79)
60-min	1.02 (0.921-1.14)	1.25 (1.12-1.39)	1.57 (1.40-1.75)	1.82 (1.62-2.02)	2.15 (1.92-2.39)	2.42 (2.15-2.68)	2.70 (2.38-2.99)	2.98 (2.61-3.30)	3.37 (2.93-3.73)	3.67 (3.17-4.06)
2-hr	0.598 (0.536-0.678)	0.727 (0.648-0.822)	0.918 (0.816-1.04)	1.07 (0.951-1.21)	1.28 (1.13-1.44)	1.45 (1.28-1.63)	1.63 (1.43-1.84)	1.82 (1.58-2.05)	2.09 (1.79-2.35)	2.30 (1.96-2.58)
3-hr	0.426 (0.381-0.481)	0.514 (0.460-0.581)	0.649 (0.578-0.732)	0.758 (0.673-0.852)	0.909 (0.802-1.02)	1.03 (0.907-1.16)	1.16 (1.02-1.30)	1.30 (1.13-1.46)	1.50 (1.28-1.68)	1.66 (1.40-1.85)
6-hr	0.250 (0.225-0.282)	0.301 (0.271-0.338)	0.378 (0.339-0.425)	0.442 (0.394-0.495)	0.533 (0.473-0.595)	0.609 (0.537-0.678)	0.691 (0.605-0.768)	0.779 (0.676-0.865)	0.906 (0.775-1.01)	1.01 (0.853-1.12)
12-hr	0.145 (0.130-0.162)	0.174 (0.157-0.194)	0.217 (0.195-0.242)	0.253 (0.227-0.282)	0.306 (0.272-0.339)	0.349 (0.309-0.386)	0.396 (0.348-0.437)	0.446 (0.389-0.493)	0.520 (0.447-0.573)	0.580 (0.493-0.640)
24-hr	0.085 (0.080-0.092)	0.102 (0.096-0.110)	0.128 (0.119-0.137)	0.148 (0.138-0.159)	0.176 (0.164-0.189)	0.200 (0.185-0.214)	0.224 (0.207-0.239)	0.250 (0.230-0.267)	0.286 (0.261-0.304)	0.315 (0.286-0.335)
2-day	0.049 (0.046-0.053)	0.059 (0.055-0.063)	0.073 (0.068-0.078)	0.084 (0.078-0.089)	0.099 (0.092-0.105)	0.111 (0.103-0.118)	0.124 (0.115-0.132)	0.137 (0.127-0.146)	0.155 (0.142-0.165)	0.170 (0.155-0.181)
3-day	0.035 (0.033-0.038)	0.042 (0.040-0.045)	0.052 (0.049-0.055)	0.059 (0.056-0.063)	0.069 (0.065-0.074)	0.078 (0.073-0.082)	0.086 (0.080-0.091)	0.095 (0.088-0.101)	0.107 (0.099-0.114)	0.117 (0.107-0.124)
4-day	0.028 (0.027-0.030)	0.034 (0.032-0.036)	0.041 (0.039-0.043)	0.047 (0.044-0.050)	0.055 (0.052-0.058)	0.061 (0.057-0.064)	0.068 (0.063-0.071)	0.074 (0.069-0.078)	0.083 (0.077-0.088)	0.090 (0.083-0.095)
7-day	0.019 (0.018-0.020)	0.023 (0.021-0.024)	0.027 (0.026-0.028)	0.031 (0.029-0.032)	0.035 (0.034-0.037)	0.039 (0.037-0.041)	0.043 (0.041-0.045)	0.047 (0.044-0.049)	0.052 (0.049-0.055)	0.056 (0.052-0.059)
10-day	0.015 (0.014-0.016)	0.018 (0.017-0.019)	0.021 (0.020-0.022)	0.024 (0.023-0.025)	0.028 (0.026-0.029)	0.030 (0.029-0.032)	0.033 (0.031-0.035)	0.036 (0.034-0.038)	0.040 (0.037-0.042)	0.043 (0.040-0.045)
20-day	0.010 (0.010-0.011)	0.012 (0.012-0.013)	0.014 (0.013-0.015)	0.016 (0.015-0.017)	0.018 (0.017-0.019)	0.020 (0.019-0.021)	0.021 (0.020-0.022)	0.023 (0.022-0.024)	0.025 (0.024-0.027)	0.027 (0.025-0.029)
30-day	0.008 (0.008-0.009)	0.010 (0.010-0.010)	0.012 (0.011-0.012)	0.013 (0.012-0.013)	0.014 (0.014-0.015)	0.015 (0.015-0.016)	0.017 (0.016-0.017)	0.018 (0.017-0.019)	0.019 (0.018-0.020)	0.020 (0.019-0.021)
45-day	0.007 (0.007-0.008)	0.008 (0.008-0.009)	0.010 (0.009-0.010)	0.011 (0.010-0.011)	0.012 (0.011-0.012)	0.013 (0.012-0.013)	0.014 (0.013-0.014)	0.014 (0.014-0.015)	0.015 (0.015-0.016)	0.016 (0.015-0.017)
60-day	0.007 (0.006-0.007)	0.008 (0.007-0.008)	0.009 (0.008-0.009)	0.010 (0.009-0.010)	0.011 (0.010-0.011)	0.011 (0.011-0.012)	0.012 (0.011-0.012)	0.013 (0.012-0.013)	0.013 (0.013-0.014)	0.014 (0.013-0.015)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.

[Back to Top](#)

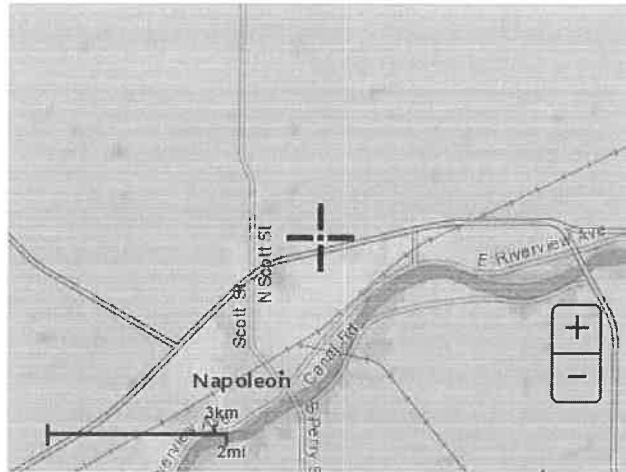
PF graphical

PDS-based intensity-duration-frequency (IDF) curves
 Latitude: 41.4143°, Longitude: -84.1167°



Maps & aerals

Small scale terrain



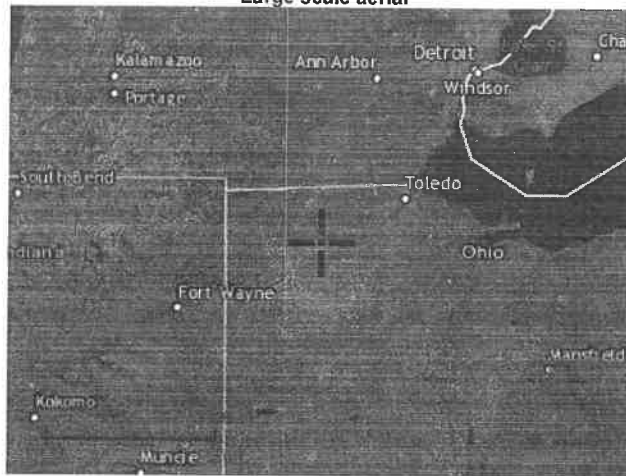
Large scale terrain



Large scale map



Large scale aerial



[Back to Top](#)

US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

[Disclaimer](#)

25 YEAR STORMWATER DETENTION CALCULATIONS

PROJECT: McDonalds -Team Shank West Basin

BY: KAM

DATE: 4/8/2019

Total Site Area (acre)	4.14
Weighted Runoff Cw	0.589

Time of Concentration (min)	Intensity I-25 (in/hr)	CwA	Qin (cfs)	Allowable Qout (cfs)	Qin - Qout (cfs)	Detention Volume (cu ft)
20	4.52	2.438	11.02	1.04	9.99	11,984
30	3.32	2.438	8.10	1.04	7.06	12,709
40	2.93	2.438	7.14	1.04	6.11	14,663
50	2.54	2.438	6.19	1.04	5.16	15,476
60	2.15	2.438	5.24	1.04	4.21	15,148
70	2.00	2.438	4.88	1.04	3.84	16,136
80	1.86	2.438	4.54	1.04	3.50	16,803
90	1.72	2.438	4.19	1.04	3.16	17,059 ✓
100	1.57	2.438	3.83	1.04	2.79	16,760
110	1.43	2.438	3.49	1.04	2.45	16,183
120	1.28	2.438	3.12	1.04	2.09	15,021
130	1.22	2.438	2.97	1.04	1.94	15,131
140	1.15	2.438	2.80	1.04	1.77	14,862
150	1.10	2.438	2.68	1.04	1.65	14,826
160	1.03	2.438	2.51	1.04	1.48	14,175
170	0.97	2.438	2.37	1.04	1.33	13,569
180	0.91	2.438	2.22	1.04	1.18	12,787
190	0.89	2.438	2.17	1.04	1.14	12,942
200	0.87	2.438	2.12	1.04	1.09	13,038
210	0.84	2.438	2.05	1.04	1.01	12,768
220	0.82	2.438	2.00	1.04	0.96	12,732
230	0.81	2.438	1.98	1.04	0.94	12,974
240	0.79	2.438	1.93	1.04	0.89	12,836
250	0.77	2.438	1.88	1.04	0.84	12,639
260	0.75	2.438	1.83	1.04	0.79	12,384
270	0.73	2.438	1.78	1.04	0.75	12,070

DETENTION VOLUME REQUIRED (cu ft) 17,059 ✓

25 YEAR STORMWATER DETENTION CALCULATIONS

PROJECT: McDonalds -Team Shank East Basin

BY: KAM

DATE: 4/8/2019

Total Site Area (acre)	8.55
Weighted Runoff Cw	0.589

Time of Concentration (min)	Intensity I-25 (in/hr)	CwA	Qin (cfs)	Allowable Qout (cfs)	Qin - Qout (cfs)	Detention Volume (cu ft)
20	4.52	5.036	22.76	2.14	20.62	24,750
30	3.32	5.036	16.72	2.14	14.58	26,247
40	2.93	5.036	14.76	2.14	12.62	30,283
50	2.54	5.036	12.79	2.14	10.65	31,961
60	2.15	5.036	10.83	2.14	8.69	31,283
70	2.00	5.036	10.07	2.14	7.93	33,324
80	1.86	5.036	9.37	2.14	7.23	34,701
90	1.72	5.036	8.66	2.14	6.52	35,231 ✓
100	1.57	5.036	7.91	2.14	5.77	34,614
110	1.43	5.036	7.20	2.14	5.06	33,422
120	1.28	5.036	6.45	2.14	4.31	31,021
130	1.22	5.036	6.14	2.14	4.01	31,250
140	1.15	5.036	5.79	2.14	3.65	30,692
150	1.10	5.036	5.54	2.14	3.40	30,618
160	1.03	5.036	5.19	2.14	3.05	29,275
170	0.97	5.036	4.88	2.14	2.75	28,023
180	0.91	5.036	4.58	2.14	2.45	26,408
190	0.89	5.036	4.48	2.14	2.34	26,727
200	0.87	5.036	4.38	2.14	2.24	26,925
210	0.84	5.036	4.23	2.14	2.09	26,368
220	0.82	5.036	4.13	2.14	1.99	26,294
230	0.81	5.036	4.08	2.14	1.94	26,794
240	0.79	5.036	3.98	2.14	1.84	26,509
250	0.77	5.036	3.88	2.14	1.74	26,103
260	0.75	5.036	3.78	2.14	1.64	25,576
270	0.73	5.036	3.68	2.14	1.54	24,928

DETENTION VOLUME REQUIRED (cu ft) 35,231 ✓

Project and Watershed Information; WQv Calculation

version 3.1 2018-10-25

Project Details

Project Name:	Team Shank
Project Location:	Freedom Drive ,Naoplean West Pond
Project Latitude:	
Project Longitude:	
NPDES Permit Applicant:	Team Shank
Submitted by:	KAM
Date:	April 8,2019

Subwatershed Details

Subwatershed ID/Label:	Team Shank Site		
Subwatershed Drainage Area, A_{total} =	4.14 acres	=	180,338 ft ²
Subwatershed Impervious Area, A_{imp} =	2.45 acres	=	106,722 ft ²
Imperviousness fraction, i =	0.59	=	59 %
Volumetric Runoff Coefficient, R_v =	0.58		
Water Quality Volume, WQ_v =	7,880 ft ³		

Dry Extended Detention Basin WQv Compliance Tool

version 3.1 2018-10-25

Project Summary

Project Name: Team Shank
Subwatershed ID/Label: Team Shank Site
Submitted by: KAM
Date: April 8,2019

Subwatershed Drainage Area, A_{total} =	4.14	acres	=	180,338	ft ²
Subwatershed Impervious Area, A_{imp} =	2.45	acres	=	106,722	ft ²
Imperviousness fraction, i =	0.59			59	%
Water Quality Volume, WQv =	7,880	ft ³	=	0.18	ac-ft

Step 1 - Soil Suitability

Soil Series Lenawee (Lf)

HSG C

Step 2 - Dry ED Basin Volume Requirements

Extended Detention Volume, EDv =	7880	ft ³
Minimum Sediment Storage Volume, $V_{sediment}$ =	1576	ft ³
Minimum Forebay Volume, $V_{forebay}$ =	788	ft ³
Minimum Permanent Micropool Volume, $V_{micropool}$ =	788	ft ³

Step 3 - Basin Stage-Storage Relationship

	Elevation ft	Area ft ²	Incremental Volume ft ³	Cumulative Volume ft ³
Bottom of Permanent Micropool = (include forebay area if below EDv)	674.00	25		
	675.00	291	134	134
	676.00	893	565	698
	677.00	1,753	1,299	1,997
	677.05	4,742	156	2,154
	678.00	5,983	5,083	7,237
	679.00	7,324	6,642	13,879
	680.00	8,766	8,034	21,913

Step 4 - Outlet Elevations and Storage Volumes

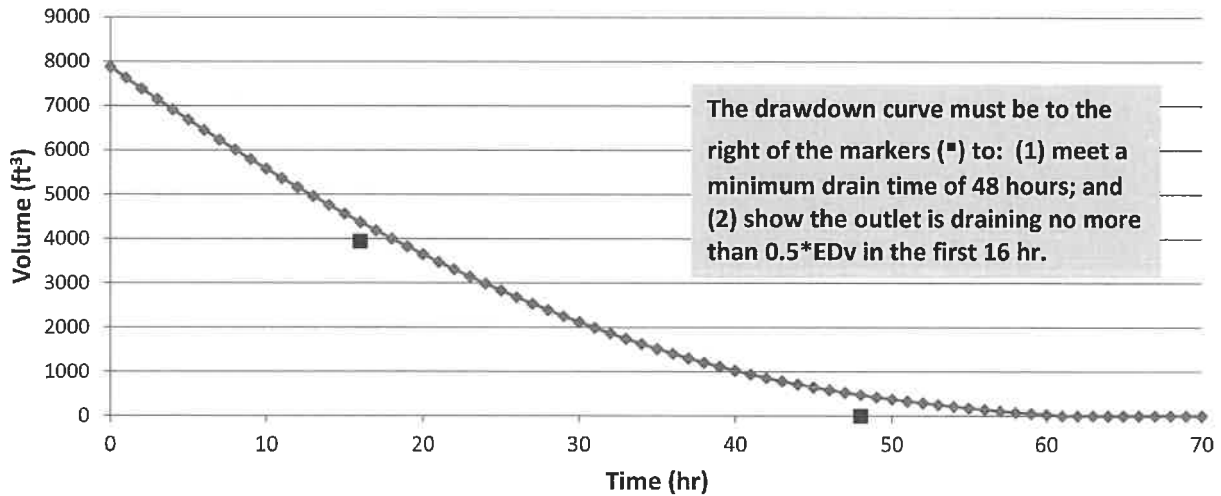
WQ Orifice Invert Elevation = 677.00

Elevation of Top of EDv =	678.43	
Secondary Outlet Invert Elevation =	678.43	OKAY
WQ Treatment Volume Provided, $V_{treatment}$ =	7,931 ft ³	
Treatment Vol Provided Relative to EDv, $V_{treatment}/EDv$ =	1.01	= 101% OKAY
Permanent Pool Volume Provided, PPv =	1,997 ft ³	
Forebay Volume Provided, $V_{forebay}$ =	975 ft ³	= 1.24
Is forebay volume below WQ outlet? (Yes or No)	Yes	= 124% OKAY
Permanent Micropool Volume Provided, $V_{micropool}$ =	1,022 ft ³	
Ratio $V_{micropool}$ Provided to $V_{micropool}$ Required =	1.30	= 130% OKAY
Sediment Storage Volume Provided, $V_{sediment}$ =	1,997 ft ³	
Ratio $V_{sediment}$ Provided to $V_{sediment}$ Required =	1.27	= 127% OKAY

Step 5 - Outlet (Orifice) Sizing

Maximum Hydraulic Head, H_{max} =	1.43 ft	
Orifice Coefficient, C =	0.6	
Target (Minimum) Draw-down Time, T_d =	48 hr	
Target Average Discharge, Q_{avg} =	0.05 cfs	
Average Hydraulic Head, H_{avg} =	0.71 ft	
Estimated Orifice Area, $A_{orifice}$ =	1.61 in ²	= 0.011 ft ²
Estimated Orifice Diameter, $D_{orifice}$ =	1.43 in	= 0.12 ft
Design Orifice Diameter, $D_{orifice}$ =	1.50 in	= 0.13 ft
Design Orifice Area, $A_{orifice}$ =	1.76 in ²	= 0.012 ft ²
Time to Completely Drain EDv, T_d =	61 hr	must be \geq 48 hr OKAY
Volume Drained in First 16 hr =	3,506 ft ³	
% of EDv =	44.5 %	must be \leq 50% OKAY

Dry Basin - EDv Drawdown vs Time



Project and Watershed Information; WQv Calculation

version 3.1 2018-10-25

Project Details

Project Name:	Team Shank
Project Location:	Freedom Drive ,Naoplean East Pond
Project Latitude:	
Project Longitude:	
NPDES Permit Applicant:	Team Shank
Submitted by:	KAM
Date:	April 8,2019

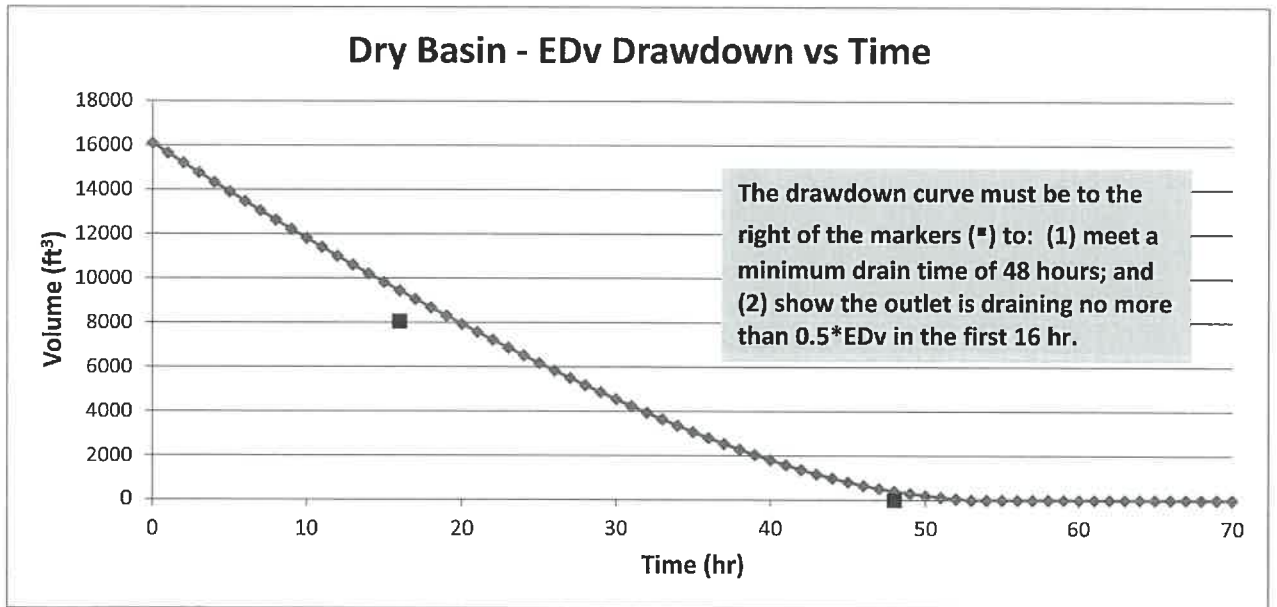
Subwatershed Details

Subwatershed ID/Label:	Team Shank Site		
Subwatershed Drainage Area, A_{total} =	8.55 acres	=	372,438 ft ²
Subwatershed Impervious Area, A_{imp} =	5.00 acres	=	217,800 ft ²
Imperviousness fraction, i =	0.58	=	58 %
Volumetric Runoff Coefficient, R_v =	0.58		
Water Quality Volume, WQ_v =	16,098 ft ³		

Elevation of Top of EDv =	678.51		
Secondary Outlet Invert Elevation =	678.51		OKAY
WQ Treatment Volume Provided, $V_{treatment}$ =	16,281	ft ³	
Treatment Vol Provided Relative to EDv, $V_{treatment}/EDv$ =	1.01		= 101% OKAY
Permanent Pool Volume Provided, PPv =	1,143	ft ³	
Forebay Volume Provided, $V_{forebay}$ =	1,610	ft ³	= 1.00
Is forebay volume below WQ outlet? (Yes or No)	Yes		= 100% OKAY
Permanent Micropool Volume Provided, $V_{micropool}$ =	-467	ft ³	
Ratio $V_{micropool}$ Provided to $V_{micropool}$ Required =	-0.29		= -29% NOT MET *
Sediment Storage Volume Provided, $V_{sediment}$ =	1,143	ft ³	
Ratio $V_{sediment}$ Provided to $V_{sediment}$ Required =	0.35		= 35% NOT MET *

Step 5 - Outlet (Orifice) Sizing

Maximum Hydraulic Head, H_{max} =	1.51	ft	
Orifice Coefficient, C =	0.6		
Target (Minimum) Draw-down Time, T_d =	48	hr	
Target Average Discharge, Q_{avg} =	0.09	cfs	
Average Hydraulic Head, H_{avg} =	0.75	ft	
Estimated Orifice Area, $A_{orifice}$ =	3.21	in ²	= 0.022 ft ²
Estimated Orifice Diameter, $D_{orifice}$ =	2.02	in	= 0.17 ft
Design Orifice Diameter, $D_{orifice}$ =	2.00	in	= 0.17 ft
Design Orifice Area, $A_{orifice}$ =	3.12	in ²	= 0.022 ft ²
Time to Completely Drain EDv, T_d =	53	hr	must be \geq 48 hr OKAY
Volume Drained in First 16 hr =	6,664	ft ³	
% of EDv =	41.4	%	must be \leq 50% OKAY



* Because of Pond configuration & outlet location micropool could not be provided

POGGEMEYER DESIGN GROUP, INC.
ORIFICE DESIGN

Project: Team Shank-West Pond
Date: April 8,2019
By: KAM

Formula: $Q = CA * (\text{Sq.Rt. } 2GH)$

Q = CFS	=	1.04
C = Roughness Coefficient	=	0.62
A = Area of Opening in Sq.Ft.	=	A
G = Gravity	=	32.20
H = Head in Feet (to center of orifice)	=	1.00

AREA = 0.21 S.F.

Conversion of A to Radius in Feet

Formula: $A = \text{PI} * (R * R)$

R = 0.26 S.F. = 6.19 Inches (Diameter of Opening)

USE 6 INCH DIAMETER ORIFICE

POGGEMEYER DESIGN GROUP, INC.
ORIFICE DESIGN

Project: Team Shank-East Pond
Date: April 8, 2019
By: KAM

Formula: $Q = CA * (\text{Sq.Rt. } 2GH)$

Q = CFS	=	2.14
C = Roughness Coefficient	=	0.62
A = Area of Opening in Sq.Ft.	=	A
G = Gravity	=	32.20
H = Head in Feet (to center of orifice)	=	0.79

AREA = 0.48 S.F.

Conversion of A to Radius in Feet

Formula: $A = \text{PI} * (R * R)$

R = 0.39 S.F. = 9.42 Inches (Diameter of Opening)

USE 9 INCH DIAMETER ORIFICE

Use 3" x 2' Rect. Opening

FW: Shank Survey

Kevin McDonald <kevin@mcdonaldsdb.com>

Fri 4/5/2019 12:38 PM

To: Mark Spiess <mspiess@napoleonohio.com>;

📎 1 attachments (442 KB)

7034000021-Team Shank.pdf;

Mark this is not complete but shows the placement of the building they are placing 12' offset hubs tomorrow morning. The building will be 60 feet off the front and 19'6"+ on the east side. The retention pond has not been sized but the storm water will be taken to Freedom drive out of the retention structure. The calculation will be completed by PDG. The parking is shown and the existing parking on the existing building will remain the handicap parking will be on the existing lot (I think by habit there are some on the employee parking. The drainage tile from the parking lot will be at the rear of the new building the pipe will be schedule 40 pipe through the area where a addition may occur to the North. The balance of the tile will be double wall corrugated. The detention will be designed to accept Dons and Shanks properties and the property to the North owned by Ed.

The operation of the new facility is to attach crane bodies to Cab and Chassis. And flat beds to the rear of the crane. (these are utility type trucks and stinger crane type vehicles. Shanks are predicting 30 employees in the new facility the plan is to continue on 1 shift. The only persons there on a different shift would be maintenance and will be 3 to 5 people. The building will be used to store and warehouse the beds and cranes and the Chassis being worked on they may be some cab and Chassis parked on the exterior of the building in a possible 2nd lot not a for sure necessity. Just a full discloser issue and it would be on the north of the new building.

I will call later this afternoon to see if this answers all the questions.

Thanks Kevin McDonald

From: Marc Kerner <KernerM@poggemeyer.com>

Sent: Friday, April 5, 2019 12:13 PM

To: Kevin McDonald <kevin@mcdonaldsdb.com>

Subject: RE: Shank Survey

Marc E. Kerner

Senior Designer

Office: 419-782-3067



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