

# STORMWATER CALCULATIONS

For

**John Fifis**  
**57 Cunningham Lane**

Block 524.05, Lots 3  
Cherry Hill Twp., Camden County  
New Jersey

January 2025

By

**Williams H. Nicholson Associates, P.A.**  
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NJ. LICENSE NO. 27887

## STORMWATER NARRATIVE

The proposed improvements on the 41,838 s.f. site include a dwelling with a footprint of 3,587 s.f., pool and paved driveway. The site disturbance will exceed not one acre and there will not be over a ¼ acre of vehicle travel surface added. Therefore, it is not considered a “Major Development” per N.J.A.C. 7-8, and stormwater management is not required to meet the State standard. Due to the increase of impervious surfaces from the previously existing dwelling, pool and driveway, the Township requires that the Applicant provide Onsite detention or retention for the 10 year storm.

The site’s soil classifications per the BC Soil Survey is Westphalia loamy fine sand. The site generally slopes away from Cunningham Lane toward the rear of the site. Since the property cannot be drained to an existing storm sewer and drains to the rear of the property and towards the adjoining lots there, the storm water detention/retention is required.

For the existing condition, we utilized a survey of the prior dwelling from which we were able to quantify the existing impervious areas and thus generate a 10 year flow from the site which became the target as the allowable outflow from the site in the proposed condition.

The 10-year storm routing shows that the proposed rate of discharge from the site (1.50 c.f.s, see page 10) is 1.50 c.f.s. which is less than the allowable rate (1.56 cfs, see page 10).

## 1541 Existing condition

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### Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.742	61	>75% Grass cover, Good, HSG B (8S)
0.022	98	Paved parking, HSG B (driveway) (8S)
0.018	1	Pool (8S)
0.031	98	Unconnected pavement, HSG B(pool conc.) (8S)
0.057	98	Unconnected roofs, HSG B (Bldg. , deck & porch) (8S)
<b>0.869</b>	<b>64</b>	<b>TOTAL AREA</b>

**1541 Existing condition**

**Soil Listing (all nodes)**

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.851	HSG B	8S
0.000	HSG C	
0.000	HSG D	
0.018	Other	8S
<b>0.869</b>		<b>TOTAL AREA</b>

**1541 Existing condition**

**Ground Covers (all nodes)**

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.742	0.000	0.000	0.000	0.742	>75% Grass cover, Good	8S
0.000	0.022	0.000	0.000	0.000	0.022	Paved parking	8S
0.000	0.000	0.000	0.000	0.018	0.018	Pool	8S
0.000	0.031	0.000	0.000	0.000	0.031	Unconnected pavement	8S
0.000	0.057	0.000	0.000	0.000	0.057	Unconnected roofs	8S
<b>0.000</b>	<b>0.851</b>	<b>0.000</b>	<b>0.000</b>	<b>0.018</b>	<b>0.869</b>	<b>TOTAL AREA</b>	

**1541 Existing condition**

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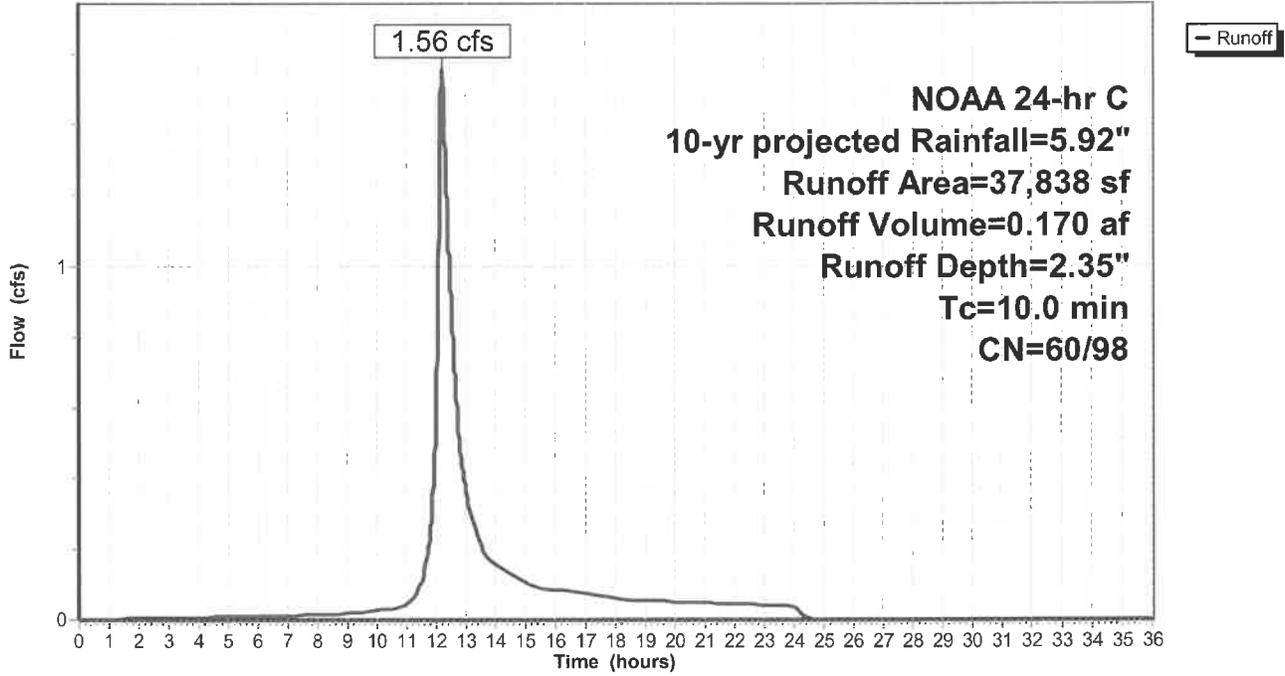
NOAA 24-hr C 10-yr projected Rainfall=5.92"

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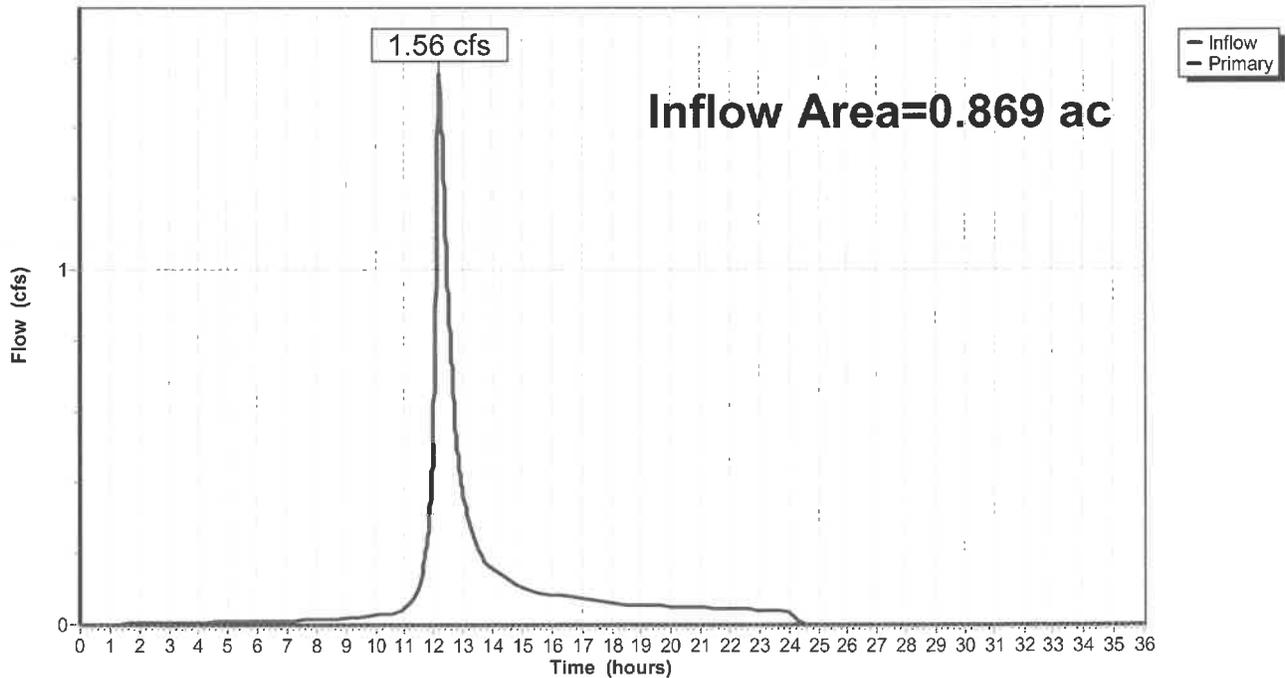
**Subcatchment 8S: existing**

Hydrograph



**Link 12L: (new Link)**

Hydrograph



**Area Listing (all nodes)**

Area (acres)	CN	Description (subcatchment-numbers)
0.567	61	>75% Grass cover, Good, HSG B (1S, 2S)
0.019	1	Pool (1S)
0.105	98	Roofs, HSG B(House) (1S)
0.104	98	Unconnected pavement, HSG B (1S)
0.056	98	Unconnected roofs, HSG B (1S)
<b>0.851</b>	<b>71</b>	<b>TOTAL AREA</b>

**1541 Proposed Condition 11-4-25 for Twp. submission**

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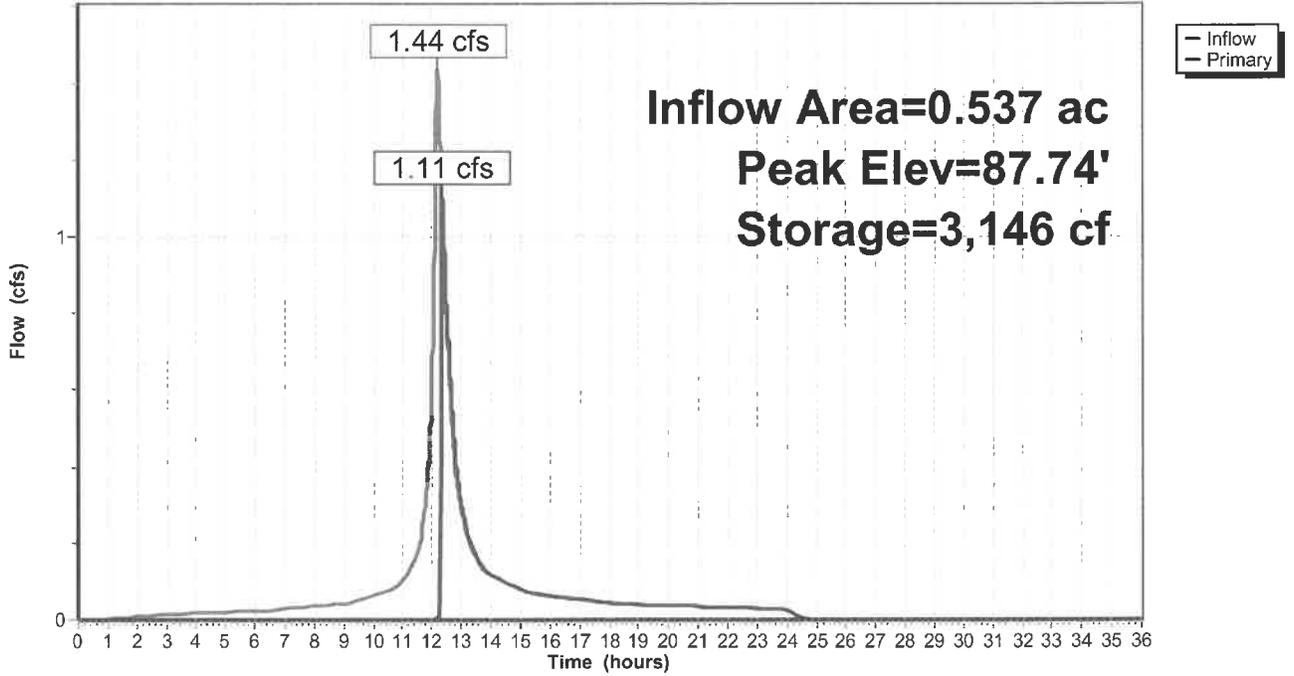
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**Ground Covers (all nodes)**

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.567	0.000	0.000	0.000	0.567	>75% Grass cover, Good	1S, 2S
0.000	0.000	0.000	0.000	0.019	0.019	Pool	1S
0.000	0.105	0.000	0.000	0.000	0.105	Roofs	1S
0.000	0.104	0.000	0.000	0.000	0.104	Unconnected pavement	1S
0.000	0.056	0.000	0.000	0.000	0.056	Unconnected roofs	1S
<b>0.000</b>	<b>0.832</b>	<b>0.000</b>	<b>0.000</b>	<b>0.019</b>	<b>0.851</b>	<b>TOTAL AREA</b>	

**Pond B1: Basin #1**

Hydrograph



**Link T: Total run-off**

Hydrograph

