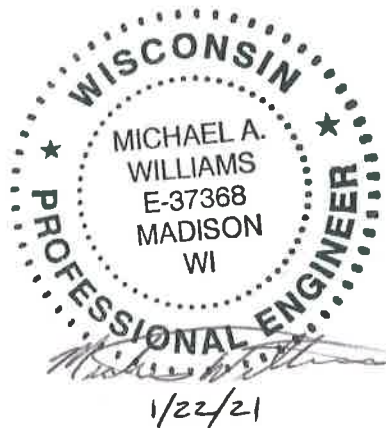


Report for City of Madison, Wisconsin

Lower Badger Mill Creek Watershed Study



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INTRODUCTION

A. Project Background and Purpose

This report summarizes the methodology and results of a study done by Strand Associates, Inc.[®] (Strand) to develop a 2D stormwater model of existing conditions for the Lower Badger Mill Creek (LBMC) watershed for the City of Madison (City). The eastern portion of the watershed is located primarily within the City municipal limits and is predominantly suburban residential land use with typical urban stormwater conveyance features such as curb and gutter and storm sewers. The portions of the watershed outside of the City of Madison are within the Town of Middleton (Middleton) and are primarily rural residential developed areas. There are also lands within both the City and Middleton that are currently undeveloped or agricultural lands, but are eventually planned to be developed. This stormwater model will help inform and guide stormwater management practices to address flooding issues for existing and future development within the watershed.

B. Scope of Study

A storm sewer system map was developed for the LBMC watershed based on City-provided geographic information system (GIS) data. Strand reviewed this data and updated features with elevation data, which were then used to develop the watershed model.

A field survey was completed to provide vertical elevation and horizontal location of various portions of major drainage structures within the 2D model extents that were not included in the City's GIS data or construction drawings. Items surveyed were primarily road crossing culverts and detention basin outfall structures.

The existing stormwater drainage system was analyzed with the PCSWMM 2D (v7.3.3095) computer modeling software package. This model was developed to estimate the peak ponding depths within the City during various design storm events under existing and future land use conditions. Peak runoff volumes are provided from the defined subbasins using both Stormwater Management Model (SWMM) and soil conservation services (SCS) hydrology methods at 25 locations throughout the LBMC watershed.

Inlet capacity analysis was not included in this study.

C. Historic Flooding in Watershed

1. Flood Reports

A stormwater management plan was completed for the watershed in 2003 to guide future land use development by the City within the LBMC watershed. For this study, XPSWMM was used to model peak runoff and common pollutants carried by stormwater. This study used land use data provided by the Dane County Regional Planning Commission, City of Madison Planning Department, Dane County Land Information Office, and aerial photography to determine existing and future land use conditions. Existing and future "goal" peak flow volumes were computed at key locations within the watershed to be used in development planning.

2. Areas Reported by City Staff

City staff have reported several areas with persistent flooding concerns within the watershed.

The intersection of Hidden Hill Drive and Shady Point Drive in the Hawk's Landing neighborhood experienced significant flooding in August 2018. The City is working to provide flood mitigation alternatives in this area.

Properties to the east of Pioneer Road and Meadow Road have been reported to experience frequent flooding. The City is considering the viability of a series of three stormwater detention ponds along this corridor to relieve flood hazards in the area.

D. Summary of Past Studies

As residential developments within the City and Middleton have been constructed, local stormwater studies have been conducted to comply with Wisconsin Administrative Code (WAC) NR 151.

The 2003 watershed study provided a recommendation for potential locations and sizes of local and regional detention basins required to achieve required peak flow and pollutant control, along with recommendations for future peak flow target values at key locations within the watershed. Proposed local basin locations were based off the City's neighborhood master plan. Local basins were designed to retain the 10 percent annual chance storms, while proposed regional basins were identified at key areas along the primary overland flow path and were designed to retain the 1 percent annual chance design storm. An alternative was provided that explored the potential of including two regional ponds as local ponds and the modifications that would be required within the watershed that would be required in order to accommodate this alternative sizing.

A 2020 study was completed for the western portion of Hawk's Landing within the watershed to address storm sewer capacity limitations within the neighborhood. Goals for this study were to increase storm sewer capacity to the 10 percent annual chance design storm event and to provide safe passage of the 1 percent annual chance design storm event. To achieve these goals, it was recommended an additional stormwater detention pond be constructed within the Hawk's Landing Golf Course north of Shadow Wood Drive and to replace existing storm sewer mainline with a high-capacity box.

ABBREVIATIONS

ARM	Alternative Runoff Method
City	City of Madison
DCIA	directly connected impervious area
DEM	Digital Elevation Model
HSG	Hydrologic Soils Groups
GIS	Geographic Information System
in/hr	inches per hour
LBMC	Lower Badger Mill Creek
NRCS	National Resource Conservation Service
RCN	runoff curve number
SCS	Soil Conservation Service
Strand	Strand Associates, Inc.®
SWMM	Storm Water Management Model
T _c	time of concentration
WAC	Wisconsin Administrative Code
WDNR	Wisconsin Department of Natural Resources
XML	Extensible Markup Language

WATER RESOURCE INVENTORY

A. Study Setting

The LBMC watershed drains approximately 5,000 acres and includes lands in the City and Town of Middleton. It is part of the uplands of the Upper Sugar River watershed and defines a portion of its northern border with the Black Earth Creek and Pheasant Branch Creek watersheds.

The Ice Age Trail passes through the southwestern portion of the watershed and is in close proximity to the terminal moraine that marks the extent of glaciation within Wisconsin during the most recent ice age. Also located in the southern portion of the watershed is Richardson's Cave. While not incorporated into this study, previous studies have noted that, during large rain events, ponding within the southern portion of the watershed can cause stormwater runoff to overtop a constructed berm and flow into the cave and enter groundwater.

B. Watershed

Approximately 40 percent of the watershed is within the City, while the remaining 60 percent is within Middleton. The majority of lands within the watershed have been developed for residential use, but there are also open and undeveloped areas within both the City and Middleton. New development is currently occurring primarily within City-regulated portions of the watershed. Figure 1 shows the existing land use within the watershed and the differences in land use between the City and Town. The LBMC watershed does not contain any permanent streams recognized by the Wisconsin Department of Natural Resources (WDNR). There are several small ponds, although most have been constructed for stormwater detention purposes.

Subbasins for this model were defined based on the locations of stormwater detention facilities within the watershed. Where storm sewer has been included, subbasins were also defined at select confluences of storm sewer networks and upstream nodes to better account for the variability that can result from urbanization.

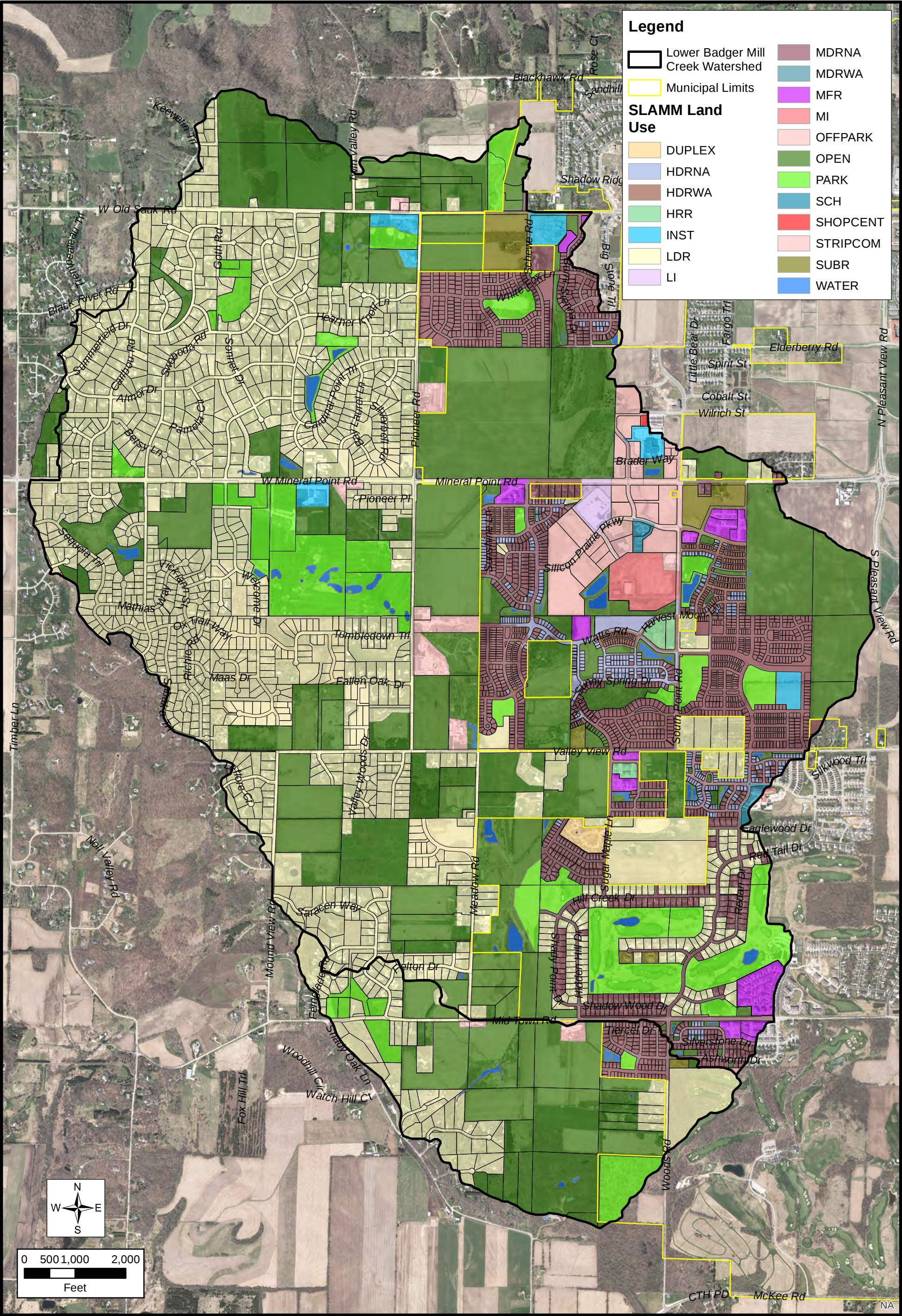
C. Topography

The watershed topography follows an elongated bowl shape, where overland flow from the northern, eastern, and western portions of the watershed drain to a central drainageway that directs flow south and out of the watershed. The elevation change in the watershed is approximately 300 feet, with a maximum and minimum elevation of 1,236.1 and 932.6 feet, respectively. Figure 2 shows the topography within the LBMC watershed.

D. Drainage Systems

1. Natural

There are no defined permanent streams within the watershed. Overland flow routes form the major drainageways of the watershed. This main drainageway flows south through the parcels to the east of Pioneer Road and Meadow Road. Culvert crossings have been installed at multiple



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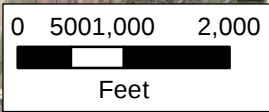
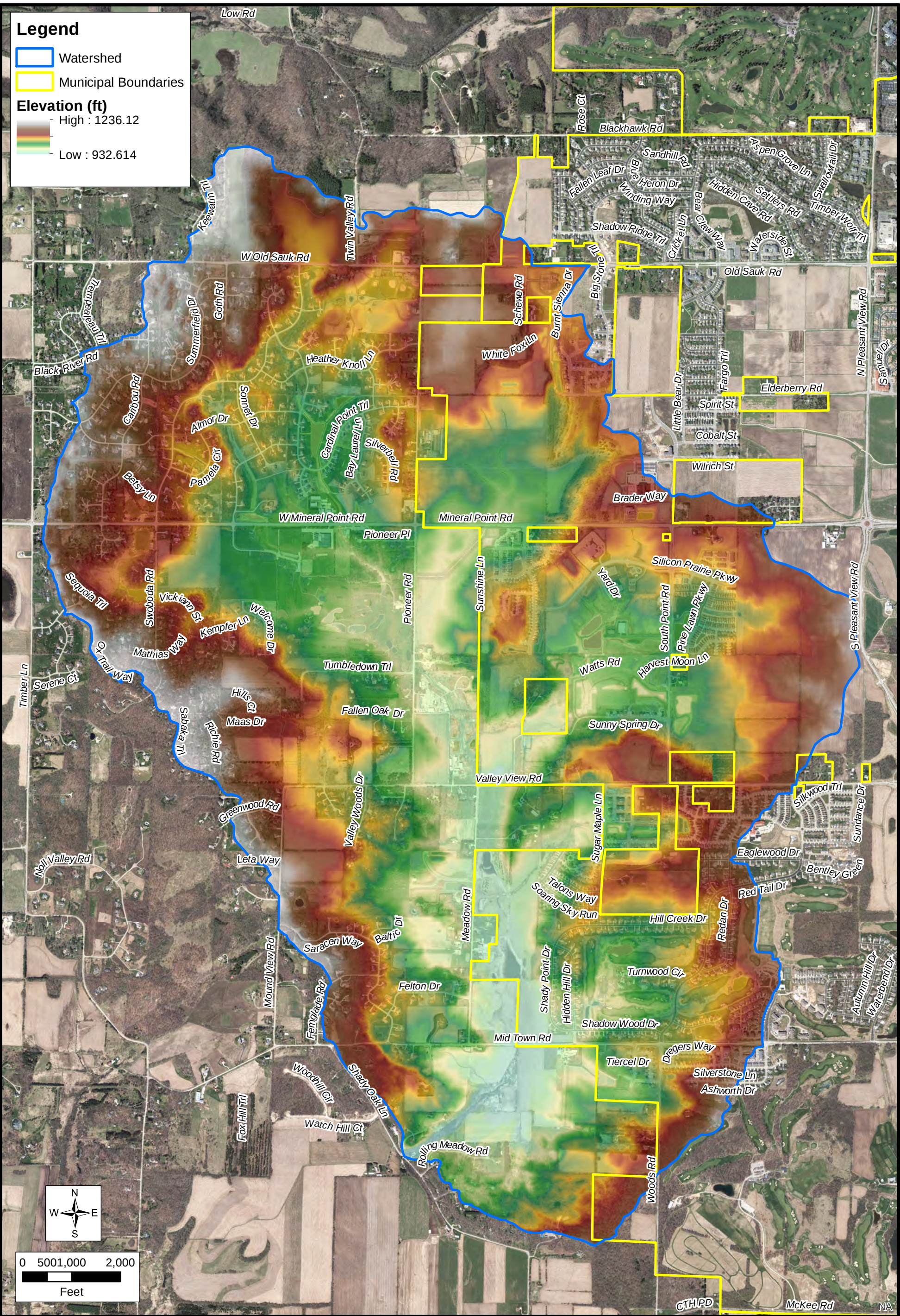
Watershed

Municipal Boundaries

Elevation (ft)

High : 1236.12

Low : 932.614



LOWER BADGER MILL CREEK WATERSHED TOPOGRAPHY

LOWER BADGER MILL CREEK WATERSHED
CITY OF MADISON
DANE COUNTY, WISCONSIN

locations along these roads and others to allow drainage from the west. Additionally, major culvert crossings are located along Mineral Point Road, Valley View Road, and Midtown Road to allow passage for this main drainageway.

2. Constructed

Developed areas within the City have curb and gutter drained by storm sewers to local and regional detention ponds. Rural developments within Middleton have also created a network of detention ponds and greenways that provide overland engineered flow routes for stormwater. The locations of detention ponds in both the City and Middleton can be found in Figure 3.

E. Runoff Conditions

1. Land Use

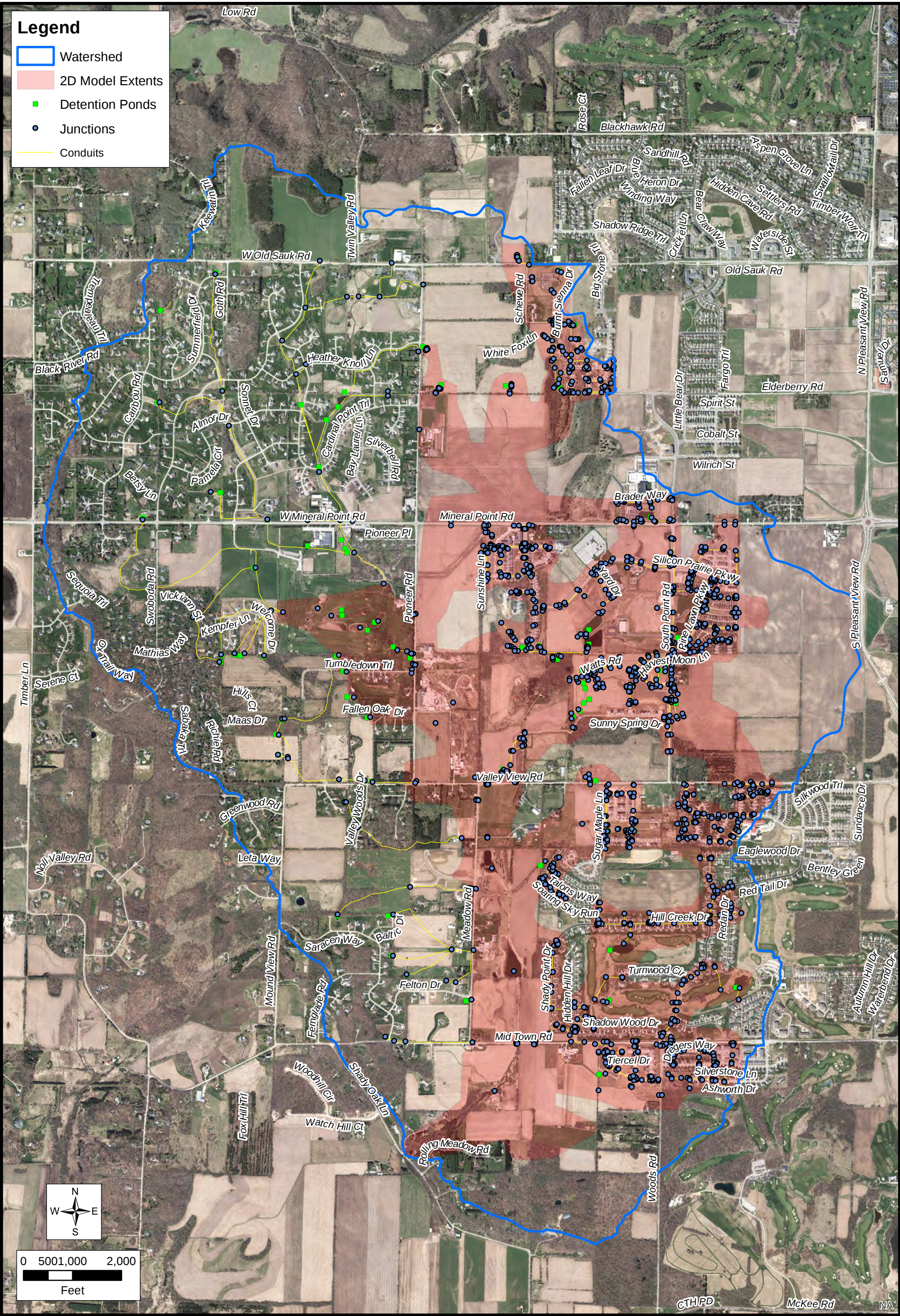
Land use is an important factor that affects the amount of stormwater runoff that will be produced by a rainstorm. Urbanization and development reduce the ability of the ground to absorb stormwater, typically causing peak discharges and runoff volumes to increase. The time from the beginning of the storm event to the occurrence of the peak runoff may also be significantly shortened.

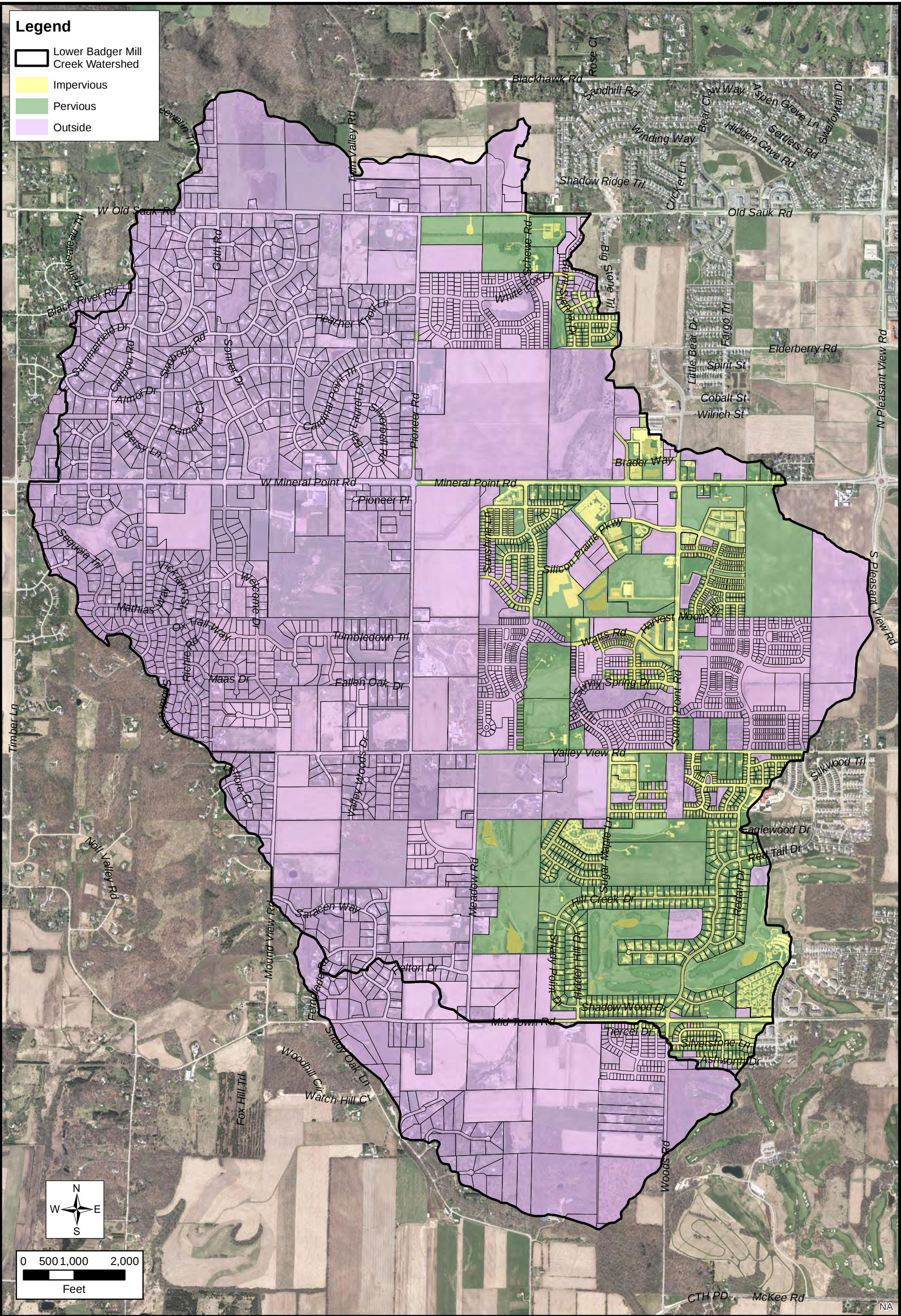
The various land uses present in the LBMC watershed are shown in Figure 1. Existing land use is first based on the City-provided GIS WinSLAMM layer and then supplemented with Dane County Zoning Maps, which was then converted to standard WinSLAMM land use. A notable divide in land use can be observed geographically within the watershed. The western portion within Middleton is predominantly low-density residential, while the eastern portion within the City of Madison is predominantly medium-density residential and multifamily residential. Open spaces and parks comprise the majority of land uses that are not residential and tend to follow the major overland flow routes defined within the watershed. Continued residential development would be expected to contribute to higher runoff volumes and rates because of a reduction in infiltration.

2. Impervious Area

The amount of impervious area within a watershed is another important factor that affects stormwater runoff. Impervious surfaces effectively eliminate infiltration during a storm event and typically provide less resistance to overland flow than pervious surfaces, which typically results in increased peak discharges and runoff volumes.

The City provided a GIS shapefile indicating the extents of impervious areas within the City limits as of September 2020. This investigation used aerial imagery to determine the extents of impervious surfaces such as roads, sidewalks, driveways, and roofs within the limits of the City. For this study, this data was used to define the percentage of impervious areas within model subbasins. Beyond the extent of this shapefile, the percent imperviousness was defined using the typical percent imperviousness defined by WinSLAMM standard land use files. Please refer to Figure 4 for the extents of the City's impervious area shapefile.





IMPERVIOUS AREA MAP

LOWER BADGER MILL CREEK WATERSHED STUDY
CITY OF MADISON
DANE COUNTY, WISCONSIN

As further residential development occurs, the percent of impervious areas within the watershed is expected to increase.

3. Soil Types

The amount of stormwater runoff produced by a storm event is impacted by the types of soil underlying the watershed. Soils having a high percentage of sand and gravel will absorb a higher percentage of stormwater runoff than will soils having high clay content. This means that sandy soil generally produces less runoff than clayey soil.

The Natural Resource Conservation Service (NRCS) classifies soil types in categories known as Hydrologic Soil Groups (HSG). Group A soils tend to consist of sandy soils having high infiltration rates and low runoff potential. Group B soils have moderately fine to moderately coarse textures and moderate runoff potential. Group C soils are typically sandy clay loam soils having moderately fine to fine textures and a low infiltration capacity. Group D soils are often clayey, soils with a permanent high water table, or shallow soils over nearly impervious material. Group D soils have a very low infiltration capacity and have high runoff potential.

NRCS HSG ratings within the LBMC watershed are identified in Figure 5. The majority of soils within the watershed are HSG B. It would be expected that soils provide moderate stormwater infiltration potential and runoff reduction. The southern portion of the watershed has a noticeably higher presence of HSG C and B/D soils. In these areas, soils would tend to have a lower infiltration potential and would be expected to generate more stormwater runoff.

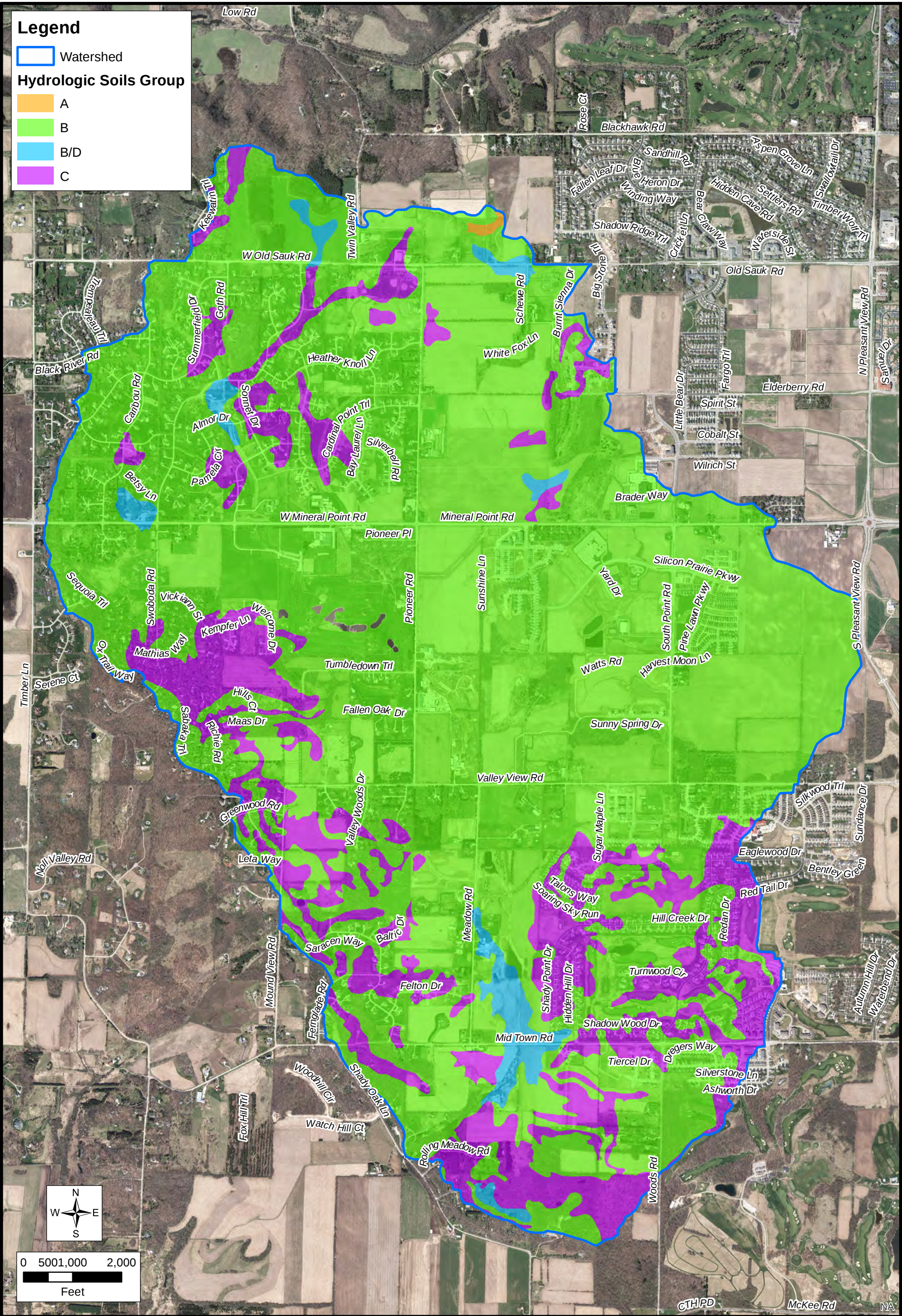
HSG	Acres	Percent of Total
A	3.98	0.08
B	4,051.47	80.89
B/D	105.97	2.12
C	840.74	16.79
Total	5,008.36	100.00

Table 1 LBMC Percent Soil Composition

4. Wetlands

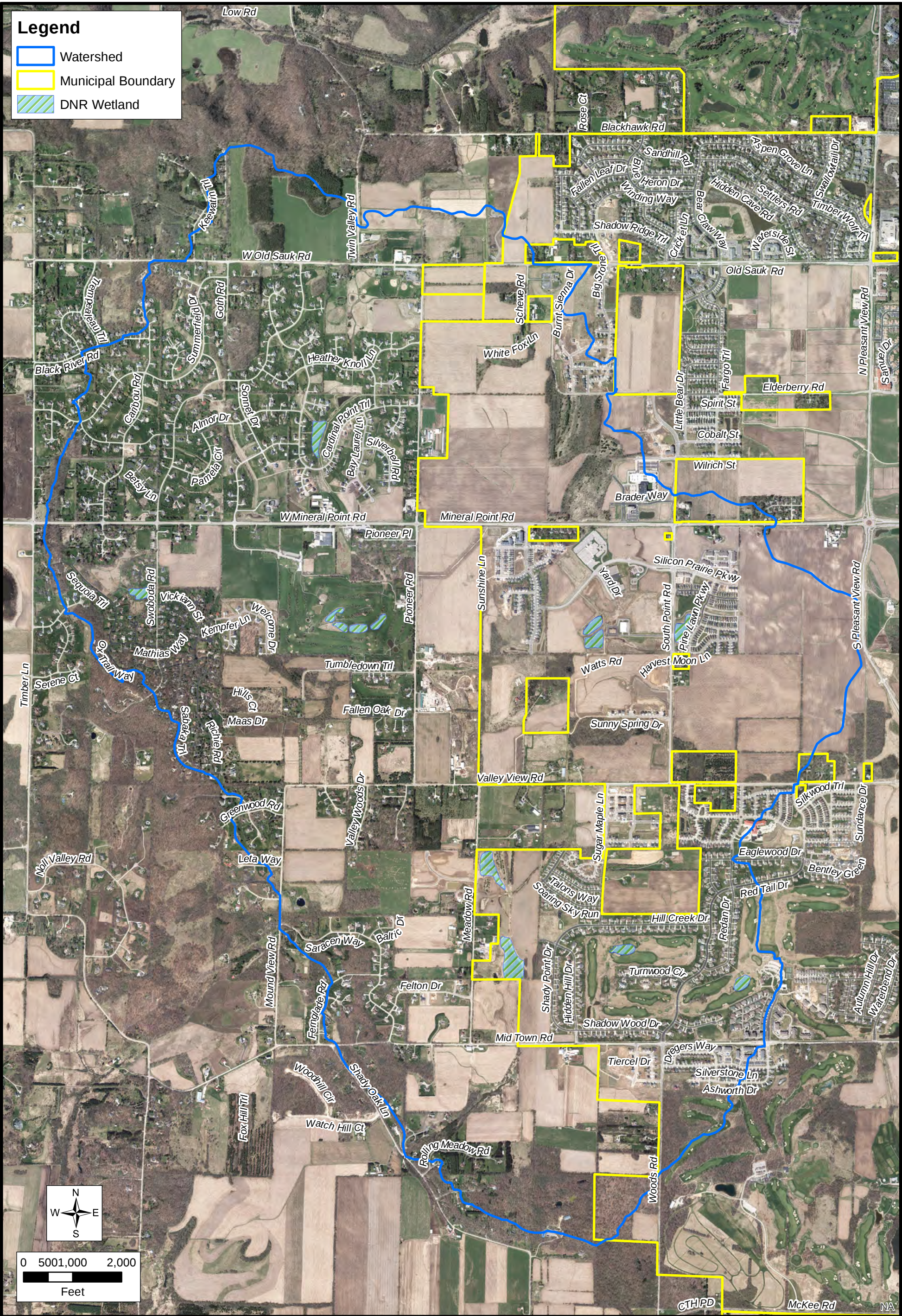
Wetlands are an important hydrologic feature of watersheds. While the soils found within wetlands are generally saturated and provide minimal infiltration potential, vegetation and topography associated with them can effectively reduce peak discharges and runoff volumes.

WDNR-recognized wetlands are shown in Figure 6. With the exception of the two areas east of Meadow Road, these areas are all associated with constructed stormwater detention ponds.



HYDROLOGIC SOILS GROUP MAP

LOWER BADGER MILL CREEK WATERSHED
CITY OF MADISON
DANE COUNTY, WISCONSIN



GUIDANCE AND DATA SOURCES

A. Reference Model Guidance Document

The City's reference Model Guidance Document version used for this study was version 2020_07_14.

B. List of Data Sources

Data sources referenced in the development of the LBMC watershed model are listed in the following:

1. Dane County 2017 digital elevation model (DEM)
2. Field survey of select culverts and detention pond outlet structures
3. City storm sewer GIS files
4. Record drawings and stormwater reports for developments within Middleton
5. Record drawings, plans, and stormwater reports for developments within the City
6. Land Extensible Markup Language (XML) and DEM data from City developments
7. City-developed impervious area shapefile
8. City-developed WinSLAMM land use map
9. Dane County zoning map

MODEL DEVELOPMENT

A. Modeling Software

PCSWMM 2D v7.3 was used to develop the 1D and 2D portions of the LBMC watershed.

B. Rainfall Files

The 100 percent (1-year), 50 percent (2-year), 20 percent (5-year), 10 percent (10-year), 4 percent (25-year), 1 percent (100-year), and 0.2 percent (500-year) annual chance 24-hour design storms were evaluated, along with a 0.023 percent (4,270-year) annual chance 36-hour rain event. Rainfall amounts were obtained from the City's model guidance document, based on MSE Zone 4, 24-hour distributions using National Oceanic and Atmospheric Administration (NOAA) Atlas 14 rainfall depths. The 100 percent and 0.023 percent annual chance storms were not in the City's model guidance standard rainfall depth chart, so rain depths were provided by the City. A summary of design rainfall depths and storm durations is shown in Table 2.

Annual Percent Chance	Total Rainfall Depth (inches)	Design Storm Duration (hours)
100% (1-year)	2.49	24
50% (2-year)	2.8	24
20% (5-year)	3.5	25
10% (10-year)	4.1	24
4% (25-year)	5.0	24
1% (100-year)	6.6	24
0.2% (500-year)	8.8	24
0.023% (4,270-year)	13.2	36

Table 2 Design Storm Event Rainfall Depths and Durations

C. Hydrologic Model Development

1. Runoff Description

Hydrology was computed in PCSWMM using SWMM and SCS hydrology. While SWMM methodology is standard for PCSWMM modeling efforts, submittals provided to the City from developers include stormwater models that use SCS hydrology. PCSWMM is developing a preliminary Alternative Runoff Methodology (ARM) hydrology that uses SCS hydrology. The City desired the LBMC watershed study to be completed using both hydrologic methodologies to provide suitable results for comparison in both instances. Each method uses differing input parameters that are discussed in the following.

2. Subwatershed Input Data

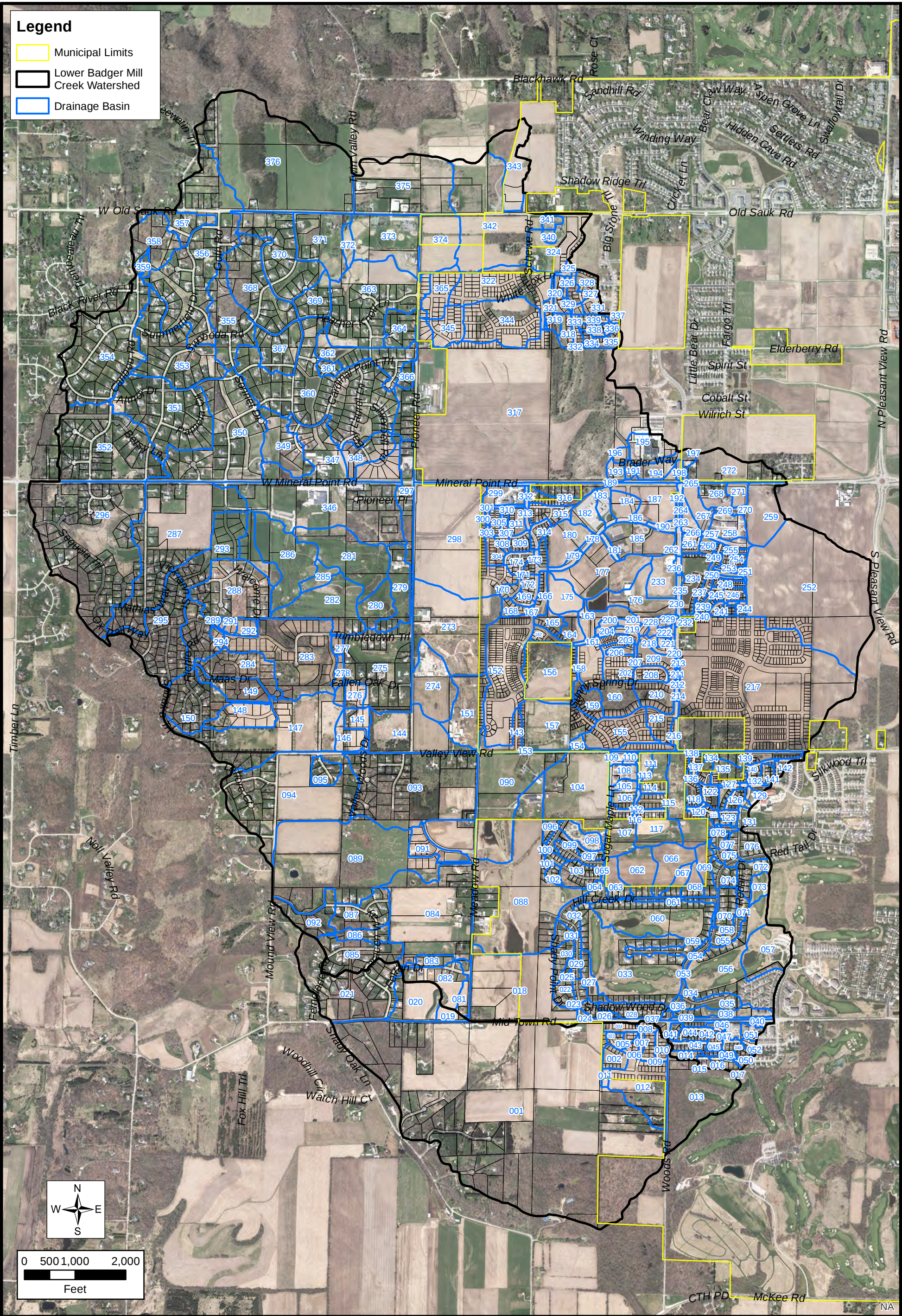
Subbasin input data is summarized in the following. Refer to Tables B1 (SWMM Hydrology) and B2 (SCS Hydrology) in Appendix B for a complete detail of subbasin input data. Figure 7 shows the delineated subbasins within the watershed.

a. Area

Subbasin areas ranged from 384.61 acres (Basin 001) to 0.109 acres (Basin 247), with a mean area of 13.316 acres and a median basin size of 3.18 acres.

Subbasins without modeled storm sewer were delineated to determine detention pond source areas and thus, tended to be larger than those served by storm sewer. This also indicates that the subbasins within the western portion of the watershed (without modeled storm sewer) tended to be larger than those in the eastern portion (with modeled storm sewer).

Subbasin extents were not changed between the SCS and SWMM methodologies.



b. Impervious Area (Directly Connected and Disconnected)

The City provided a directly connected impervious area (DCIA) spreadsheet that outlined percentages of impervious areas that should be considered directly connected or disconnected. For the areas within the extents of the City's impervious area shapefile, the DCIA spreadsheet was used to determine the percentages of impervious areas that should be considered directly connected or indirectly connected. For areas not included in the impervious area shapefile, WinSLAMM standard land use was used to calculate the impervious areas within those subbasins. These areas were then evaluated using the DCIA spreadsheet to compute the directly connected and disconnected impervious areas. This information was used in the SWMM hydrologic method model runs.

c. Basin Width

Subbasin width is a parameter used in SWMM hydrologic method to determine runoff volumes from each given subbasin. Width is difficult to measure directly from subbasin geometry, especially in a non-uniformly shaped subbasin, and so it is computed by dividing the subbasin area by its representative flow path. For this study, the representative flow path was taken as the longest flow path.

The largest subbasin width in the LBMC watershed is 3,020 feet (Basin 317) and the smallest is 33 feet (Basin 153). The mean subbasin width is 360.0 feet and the median is 236.8 feet. Similar to subbasin area, the subbasin widths within the 2D model extents tend to be smaller than those outside of the extents because of the smaller model areas and shorter representative flow paths.

This information was used in the SWMM hydrologic method model runs and was also used to calculate the time of concentration (T_c) in the SCS hydrologic method model runs.

d. Slope

Subbasin slopes were calculated using each subbasin's longest flow path, using the distance between the 85th and 15th percentile elevations.

The minimum slope was 0.3 percent (Basin 312) and the maximum was 13.8 percent (Basin 319). The mean subbasin slope is 3.6 percent and the median slope is 3.4 percent. There was no discernable difference in basin slope depending on location within the LBMC watershed.

Subbasin slopes were not modified between the SCS and SWMM methodologies.

e. Soils

Soils data is not directly input into subbasin data for the different hydrologic methodologies. Instead, it is reflected in the basin infiltration parameters. For the SWMM runoff method the City's model guidance specifies the following infiltration, decay, and the

number of required drying days for all hydrologic soils groups and water as shown in Table 3.

HSG Group	Maximum Infiltration Rate (in/hr)	Minimum Infiltration Rate (in/hr)	Decay Rate (1/hour)	Dry Days
A	4.0	1.0	4.0	3.1
B	2.0	0.5	4.0	4.4
C	1.0	0.2	4.0	7.0
D	0.5	0.1	4.0	9.9

in/hr=inches per hour

Table 3 City-Defined HSG Data

For the SCS runoff method, the soils information was used along with the land use mapping to develop runoff curve numbers (RCNs) for each subbasin. To determine a representative set of parameters by subbasin, an area-weighted average was used for all areas within the subcatchment not covered by impervious surfaces.

f. Infiltration Parameters

The ARM and SWMM hydrologic methods account for infiltration using differing equations and parameters.

The SWMM methodology uses Horton infiltration, which requires maximum and minimum possible infiltration rates, Horton infiltration curve decay constant, and number of days needed for a saturated soil to dry completely.

The ARM used the SCS curve number method to calculate the infiltration for each subbasin. Curve numbers are assigned based on land use types and HSG. A composite curve number is then computed for each subbasin using an area weighted average.

g. Antecedent Runoff Condition

Antecedent runoff conditions describe the soil moisture content within the subbasins at the start of the model run and the subbasin's potential for producing runoff. Condition I indicates dry conditions with an increased infiltration capacity that tends to decrease runoff, and Condition III indicates wet conditions with decreased infiltration capacity that tends to increase runoff, and Condition II indicates a "middle ground" between these two conditions and is considered the standard average condition. Antecedent runoff Condition II was used in this study.

h. Depressional Storage

SWMM methodology basins were assumed to have a constant depth of depressional storage defined by land use in the City's model guidance document. Impervious areas were assumed to provide 0.05 inch of storage, and pervious areas were assumed to provide 0.15 inch of storage.

ARM methodology basins used the SCS curve number loss method to calculate the initial abstraction from each subbasin.

i. Internally Drained Areas

There are two subbasins within the LBMC watershed that are internally drained. Located in the northwest corner of the watershed, Subbasin 358 is a natural kettle with no discernable outfall; Subbasin 359 drains into this basin. Subbasin 358 was modelled as a 1D storage node during all model runs and was shown not to overtop during any of the modeled storm events when using either the SWMM or SCS runoff methods.

j. Runoff Routing

Within the 1D area, runoff was routed to storage nodes. The outlets of these nodes were routed downstream using representative 1D open channel conduits until encountering the 2D model mesh.

Where possible within the 2D area, subbasin runoff was routed directly to the most downstream storm sewer node within the subbasin. If a subbasin did not have storm sewer, a proxy node was created with a depth of 0.1 foot connected to the 2D network.

D. 1D Hydraulic Model Development

For the purposes of this study, the portions of the LBMC watershed within Middleton were modeled using 1D hydraulics. These areas hydraulically contribute to the 2D study area but did not merit the investigation required to develop 2D hydraulics.

Prefixes were added to 1D junctions and conduits that were modified by Strand to provide additional detail about the nature of the modifications. A summary of these prefixes is shown in Table 4.

Prefix	Meaning
**	Location and Invert surveyed by Strand
SAI	Added by Strand, is within the City
TSAI	Added by Strand, is within Middleton
Pond	Relating to a Stormwater Pond

Table 4 1D Hydraulic Feature Abbreviation Key

For 1D junctions and conduits added by Strand that pertained to a particular subdevelopment or feature within the City or Middleton, an additional abbreviation was included. A summary of these abbreviations is shown in Table 5.

Abbreviation	Development	Location	Abbreviation	Development	Location
BPS	Birchwood Point South	City	AM	Aspen Meadow Estates	Town
CV	Chapel View	City	BGV	Blue Glacier Valley	Town
ET	Eagle Trace	City	CA	Cherrywood Acres	Town
HL	Hawks Landing	City	CP	Cardinal Prairie	Town
MCC	Middleton Community Church	City	CR	Cherrywood Ridge	Town
PF	Pope Farm Estates	City	FR	Fawn Ridge	Town
PHF	Pine Hill Farm	City	GE	Glacier's End	Town
SPBP	Silicon Prairie Business Park	City	GW	Glacier's Woods	Town
TO	Thousand Oaks	City	ME	Meadowood Estates	Town
TOW	Thousand Oaks West	City	PP	Pheasant Point	Town
TVA	Timber Valley Apartments	City	SH	Spruce Hollow	Town
TW	The Willows	City	SPE	Sauk Point Estates	Town
			SPrE	Sauk Prairie Estates	Town
			SV	Spruce Valley	Town
			TF	Tumbledown Farm	Town
			VP	Vinnie's Point	Town
			WH	Welcome Home	Town

Table 5 Sub-Development Abbreviation Key

1. Conveyance Systems

The 1D conveyance systems within the model are described in the following. Please refer to Figure 3 for the locations of modeled 1D conveyance systems within the LBMC watershed.

a. Open Channel

Open channel conduits were used to convey stormwater within portions of the watershed outside of the 2D mesh extents, predominantly within the western portion of the watershed within the Town of Middleton. These conduits provided conveyance between 1D storage ponds and to the 2D mesh extents. Open channel geometries were assigned from representative sections taken from the 2017 Dane County DEM, with depths assigned to prevent overtopping of open channel banks.

b. Closed Conduit

The City provided a shapefile of storm sewer conveyance structures owned and maintained by the City. These included storm sewer mainlines, manhole structures, pond outlet structures, and various culverts. These were incorporated into PCSWMM as 1D closed conduit systems. The City's model guidance document indicated loss coefficients should be assigned to conduits at manhole structures where two or more conduits converge.

Nodes that have only one conduit connection indicate the beginning or termination of a storm sewer network. For these nodes, loss coefficients were assigned based on the type of system entry or exit. If the node was determined to be an inlet entry, no entry loss coefficient was assigned. For nodes determined to be a culvert entry, the culvert inlet type was assigned from the HEC-RAS Hydraulic Reference Manual. Storm sewer and culvert outfalls were assigned a loss coefficient of either 0.5 (discharge to open channel) or 1.0 (discharge to lake or pond), as described by the guidance document.

The City-provided storm sewer shapefile was investigated for missing data required to run the model. Strand reviewed City-provided drawings to update the City-provided storm sewer shapefile. Strand also identified 23 locations within the City and Middleton where GIS data lacked sufficient detail for inclusion in the modeling. These locations were composed of culverts, storm sewer, and pond outfall structures. A field survey was completed to provide location, invert, and geometry data for these structures to be included in the PCSWMM modeling.

2. Detention Pond Analysis

Detention ponds were defined using storage nodes and storage curves using record drawings and stormwater plans provided by Middleton. Detention ponds composed of a directly connected wet detention pond and dry infiltration basin were defined as one storage node using one composite storage curve.

Invert elevations and geometries of outfall structures were taken from stormwater plans. Field survey was used to supplement these data for pond record drawings and stormwater plans that contained insufficient or outdated information.

The depth of overflow weirs used in wet ponds was determined iteratively. Weir geometry was defined from record drawings, and depth was modified so that the weir was able to convey incident flow without resulting in flooding of the storage node.

E. 2D Hydraulic Model Development

1. Description of Areas Modeled in 2D

The 2D model extents can be seen in Figure 3. Areas modeled include overland flow routes relevant to City-owned storm sewer, detention ponds serving developments within the City's

municipal limits, and select areas within Middleton included to provide adequate lateral extents for flooding.

The area around Tumbledown Farms Golf Course (being redeveloped into Tumbledown Farm Estates) was also included in 2D to more accurately model the flow of stormwater through this area and to allow the City to evaluate stormwater plans submitted by developers working in this area.

Upland areas not modeled in 2D were defined using an iterative process. Using the central four hours of the 0.2 percent annual chance design storm, the model was run, and ponding extents evaluated. Upland locations that did not exhibit flooding were removed from the 2D extents. However, upland areas that did not exhibit flooding but were served by storm sewer were not removed from the 2D extents to allow for potential overland flow routes should storm sewer surcharge, regardless of whether surcharging was observed.

2. Topographic Data

Within the City, base topographic data were taken from the Dane County DEM flown in 2017. In locations where development is more recent than the date of the DEM or where proposed developments have been approved but not yet constructed, terrain surfaces submitted by developers were merged with the DEM to provide a terrain surface of existing topography and development.

3. 2D Grid

PCSWMM simulates 2D overland flow areas by generating a mesh of 1D nodes, connected with open channel conduits. The extents of these areas are defined by polygons in which the user specifies 2D grid resolution and Manning's roughness coefficients. The user may specify rectangular, hexagonal, directional, or adaptive mesh geometries. For this study, a uniform hexagonal mesh was incorporated throughout the watershed. A mesh resolution of 40 feet was selected for the overall 2D extents. Along major drainage ways and within stormwater ponds a more refined mesh resolution of 10 feet was used to better capture the details in topography within these features. Along the roads provided within the City's impervious area shapefile, a 2D mesh resolution of 12 feet was selected.

The mesh resolution plays a significant role in determining the computational duration of a PCSWMM model run. The PCSWMM manual recommends keeping the 2D cell count below 100,000 to reduce excessive computation times. However, that was found to be unsatisfactory for the scope of this study as limiting the cell count in this way did not sufficiently capture the topography within the 2D study area. The 2D mesh generated for this study resulted in a 2D cell count of 167,642 cells. The mesh resolutions indicated above were selected to capture sufficient detail within the watershed while eliminating excess nodes as much as practicable.

4. 2D Land Use and Roughness Values

Roughness values within the 2D model extents were taken from the City's modeling guidance document.

Manning's roughness values for impervious areas were set equal to 0.1. Roughness values for all other areas were set equal to 0.15, which is for prairie.

5. Inactive Areas

The City-provided shapefile of impervious surfaces was copied and modified to contain only the building structures within the 2D extents. This shapefile was then used to define obstructed areas in the 2D model extents and prohibit flow through these structures.

6 1D and 2D Interface

The 1D drainage structures were linked to the nearest 2D mesh node using bottom orifices at all junction nodes, storm sewer outfalls, and culvert inlets and outlets. The elevation of this orifice was set to the rim elevation at storm sewer junctions, while it was set to the invert elevation at storm sewer outfalls and culverts inlets and outlets. This allowed for the accurate representation of storm sewer surcharging at manholes and catch basins while allowing for free drainage from storm sewer outfalls and culverts.

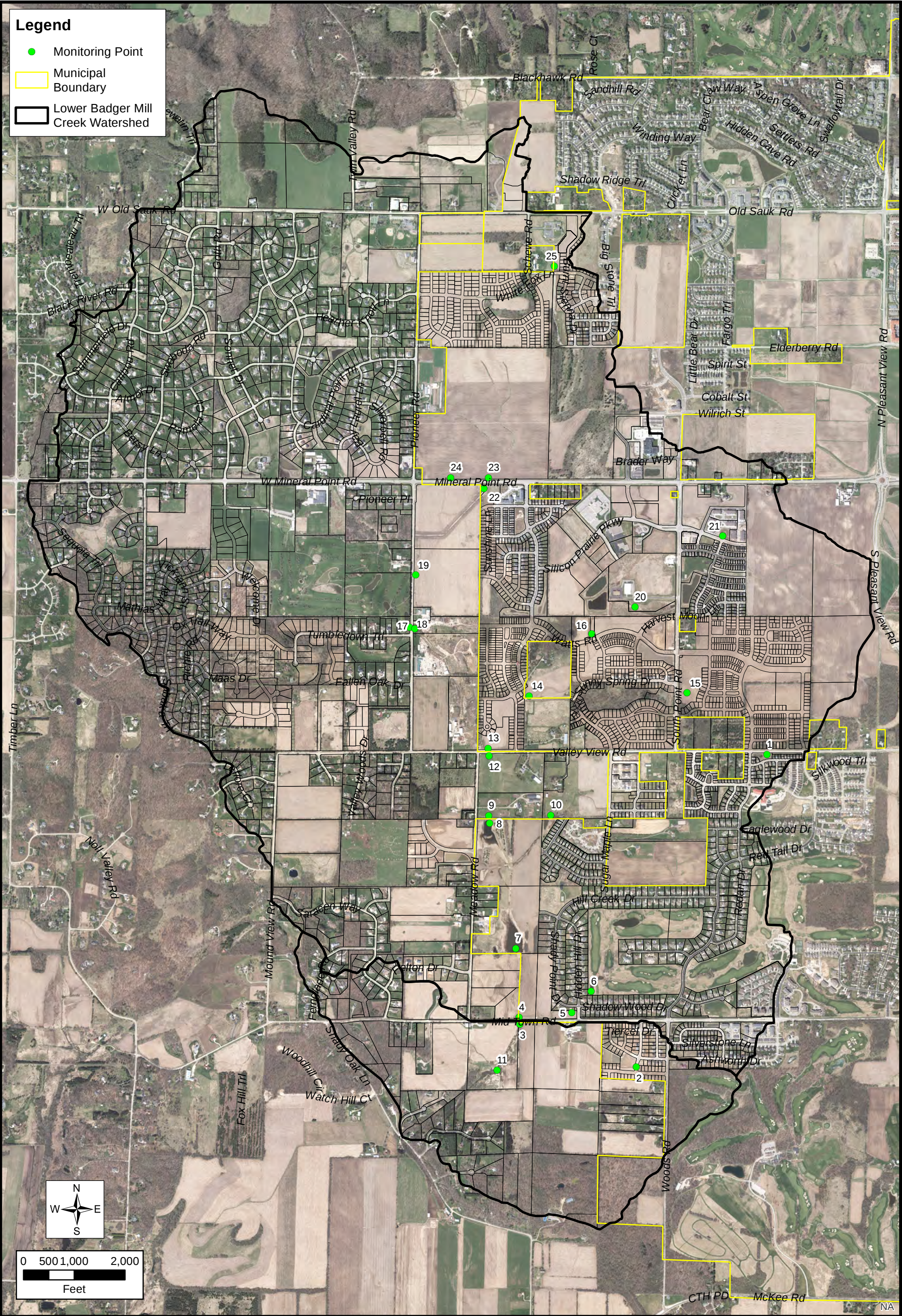
Additionally, the 1D/2D interface was investigated at culvert inlets and outlets to verify the orifice was connected to a node with a reasonable invert elevation that would not inhibit the passage of water through the culvert. A common example of this was that a culvert inlet would be linked to the closest 2D node, which represented the road surface, instead of the upstream channel.

7. 2D Boundary Conditions

The Request for Proposal document provided by the City indicated that the 2D extents must extend down to Midtown Road. In order to allow for the development of possible backwater conditions that might develop downstream of the primary drainage culvert beneath Midtown Road, our 2D model limits extended south to the crossing of Shady Oak Lane, where the model uses a free outfall. Thus, Strand is confident that any ponding that develops south of Midtown Road that may impact drainage of the existing culvert is uniquely and accurately represented in each design storm.

F. Existing Conditions Non-Calibrated Model Results

To provide a basis for comparison between the various model runs, 25 locations were identified within the LBMC watershed. These locations can be found on Figure 8.



MONITORING POINTS

LOWER BADGER MILL CREEK WATERSHED STUDY
CITY OF MADISON
DANE COUNTY, WISCONSIN

RESULTS EVALUATION

A. Model Limitations

The primary limitation of this model is the 2D cell resolution. Higher resolution cells more accurately portray the watershed topography, but also result in longer model run times. This model used 167,642 cells, which resulted in computational times of 14 to 16 hours.

Cell resolution also determines the model's ability to capture detail within small drainage features of the watershed, such as roadside ditches. During large storm events, this is generally less of a concern as the geometry of the larger overland flow routes governs overland flow routing, but during smaller events, failure to capture these details can dramatically alter the way the model routes overland flow through a particular feature of the watershed.

Within PCSWMM, the cell resolution also determines the locations connections between the 1D and 2D hydraulic networks are created. When connecting the 1D and 2D systems, PCSWMM automatically links each specified 1D node with the nearest 2D node. Occasionally this method can result in hydraulically illogical connections within the model. This was most notable with culverts, where the closest 2D node was often within the roadway or outside of the drainageway entirely, which effectively reduced or prevented flow within those structures. Where possible, these connections were manually corrected to be at hydraulically logical locations.

B. Areas Reported by City Staff

1. Hawk's Landing

Incorporation of the Hawk's Landing improvements show negligible flooding at the 10 percent annual chance event and keeps flooding away from residential structures around the Hidden Hill and Shady Point Drive intersection during the 1 percent annual chance storm. Maximum ponding depths at the intersection of Hidden Hill and Shady Point Drive are shown in Table 6 for each design storm.

Percent Annual Chance	Maximum Ponding Depth
100	No ponding
50	No ponding
20	No ponding
10	< 0.1 foot
4	< 0.25 foot
1	1.25 feet
0.2	> 2 feet
0.023	> 2 feet

Table 6 Maximum Observed Ponding Depth at City's Hawk's Landing Project

2. Properties East of Pioneer Road and Meadow Road

The drainageway through the properties east of Pioneer Road and Meadow Road provides the primary overland flow route for drainage from the LBMC watershed. Therefore, ponding in excess of 1 foot was observed even during the 100 percent annual chance design storm.

Between Pioneer Road and Valley View Road, the drainageway appears to have a more defined channel that tends to limit the ponding extents to the immediate overbank areas. However, between Valley View Road and Midtown Road, channelization did not appear to be present to the same degree, which tended to result in greater ponding extents than that observed upstream of Valley View Road.

Both Pioneer Road and Meadow Road were shown to experience overtopping during even high annual percentage chance storms, although this could be the result of the model failing to accurately capture the geometry of the roadside ditches as describe in the model limitations section.

C. Existing Conditions Mapping

Brief summaries of the model results for each design storm are listed in the following. Typically, the watershed ponding extents were similar between the SCS and SWMM methodologies. During smaller design storms, the SWMM methodology tended to compute higher subbasin runoff peak flow rates and volumes than the SCS methodology. However, during the larger design storms, the opposite tended to be true. Please refer to the maximum ponding extent figures within Appendix E for the detailed ponding extents.

1. 100 Percent Annual Chance (1-year)

Detention ponds effectively detain stormwater; outflows occur from the primary outlet structures. Many ponds detain all incident stormwater with no outflow of any kind. Ponding occurs only within primary overland flow routes. Negligible ponding occurring within the City right-of-way and no residential structures are shown to be inundated.

2. 50 Percent Annual Chance (2-year)

Detention ponds effectively detain stormwater; most ponds have outflow from the primary outlet structures. Few ponds detain all incident stormwater without outflows. Ponding occurs only within primary overland flow routes. Some ponding occurs within the City right-of-way and no residential structures are shown to be inundated.

3. 20 Percent Annual Chance (5-year)

Detention ponds effectively detain stormwater; most ponds have outflow from the primary outlet structures. Several ponds show overtopping from the wet basin into the dry infiltration basin, but do not show overtopping of the emergency spillway. Ponding less than 0.1 foot is shown along residential structures between Cozy Nest Drive and South Point Road, and along multifamily

residential structures at 9328 Silverstone Lane and 9404 Dregers Way. Between 0.5 and 1 foot of ponding occurs along Hill Creek Drive. Less than 0.25 foot of ponding occurs on Hidden Hill Drive but this is captured at its intersection with Shady Point Drive by the improvements made by the City.

4. 10 Percent Annual Chance (10-year)

Detention ponds effectively detain stormwater; most ponds have outflow from the primary outlet structures. Several ponds show overtopping from the wet basin into the dry infiltration basin, but do not show overtopping of the emergency spillway. Ponding less than 0.1 foot is shown along residential structures between Cozy Nest Drive and South Point Road, and along multifamily residential structures at 9328 Silverstone Lane and 9404 Dregers Way. Between 0.5 and 1 foot of ponding occurs along Hill Creek Drive. Less than 0.25 foot of ponding occurs on Hidden Hill Drive but this is captured at its intersection with Shady Point Drive by the improvements made by the City.

5. 4 Percent Annual Chance (25-year)

Detention ponds effectively detain stormwater; the majority of ponds have outflow from the primary outlet structures. Several ponds show overtopping from the wet basin into the dry infiltration basin, but do not show overtopping of the emergency spillway. Ponding less than 0.1 foot within City right-of-way is prevalent throughout the watershed. Various streets within residential neighborhoods experience 0.25 to 0.5 foot of ponding. Ponding in excess of 1 foot is shown along Hill Creek Drive, with inundation approaching residential structures. Ponding on Hidden Hill Drive behaves similarly to the 10 percent annual chance storm.

6. 1 Percent Annual Chance (100-year)

Emergency spillways are utilized at multiple detention basins, especially those within the southern portion of the watershed. Ponding of at least 0.25 foot is prevalent within City right-of-way. Various streets within residential neighborhoods experience ponding in an excess of 0.5 ft, with inundation approaching residential structures along the primary flow path. Results indicate major drainage crossings at Valley View Road and Midtown Road are overtopped. Alternative overland flow paths have developed for select areas where ponding has caused water to overtop local high points.

7. 0.2 Percent Annual Chance (500-year)

Emergency spillways are used in detention basins throughout the watershed. Ponding of at least 0.25 foot is prevalent within City right-of-way. Various residential neighborhoods experience ponding in an excess of 0.5 foot of ponding, with inundation approaching residential structures along the primary flow path. Results indicate major drainage crossings at Mineral Point Road, Valley View Road, and Midtown Road are overtopped. Alternative overland flow paths have developed in multiple locations where ponding has caused water to overtop local high points.

8. 0.023 Percent Annual Chance (4,270-year)

Emergency spillways are used in detention basins throughout the watershed. Ponding of at least 0.25 foot is prevalent within City right-of-way. Various residential neighborhoods experience ponding in an excess of 1 foot of ponding, with inundation approaching residential structures. Results indicate major drainage crossings at Mineral Point Road, Valley View Road, and Midtown Road are overtopped. Alternative overland flow paths have developed in multiple locations where ponding has caused water to overtop local high points.

Please note that when evaluating the model using SWMM hydrology, the 0.023 percent annual chance storm results in lower maximum ponding depths than the 0.2 percent annual chance storm at multiple locations throughout the watershed. This appears to be the result of the hydraulic system's ability to convey the stormwater runoff to the downstream systems and the timing between the two peaks during the extended duration storm.

MODELING GUIDANCE

Version 2020_07_14 (DRAFT)

Round 3 Study Consultants

The City recognizes that an important aspect of modeling is professional judgement; and it will be up to the Consultant to appropriately define parameters, variables, and methodology. However, it is in the City's best interest to have relative uniformity amongst City models. This guidance document was developed to provide uniformity. Where inputs and assumptions differ from those outlined in this document, the Consultant will be expected to justify and document the differences and reasons for the differences.

The purpose of the watershed modeling is to construct planning-level models of the watershed to identify locations with significant conveyance system deficiencies. The identified solutions will be conceptual solutions, not design-level solutions. Characterization of localized street flooding is not a focus.

City of Madison Flooding Level of Service Goals

1. 10-year design storm event:
 - a. No surcharging onto the street for up to the 10-year design storm; water shall be contained within the pipes and structures.
 - b. There are locations within the City where low points exist that pond water; these low points are excluded from this goal and will be addressed as streets are redesigned.
 - c. For locations limited by known inlet capacity, allow no more than 0.5 feet of water above storm sewer inlet rim.
2. 25-year design storm event:
 - a. Centerline of street to remain passable during 25-year design storm with no more than 0.2 feet of water at the centerline.
 - b. Note that the Watershed Study modeling approach will not explicitly account for cross flow conditions where more gutter flow on one side of the street can overtop the crown.
3. 100-year design storm event:
 - a. No home or business will be flooded during the 100-year design storm.
 - b. Enclosed depressions to be served to the 100-year design storm (which can include safe overland flow within street, easements, greenways or other public lands).
 - c. Greenway crossings at streets to be served to the 100-year design storm.
4. 500-year design storm event:
 - a. Safely convey stormwater; i.e. limited impact on private property
5. Provide flooding solutions that do not negatively impact downstream properties.

Due to the inherent variability and complexity of stormwater conveyance systems, it is understood it may not be practical to meet the above level of service goals in all areas of the City.

Guidance for Solutions

1. For the purpose of the watershed studies "deficiencies" in the system shall be defined as existing infrastructure, drainage capacity, or system limitations that fail to meet the goals stated in 1-5 above.
2. Watershed deficiencies will be reviewed, and solutions will be provided up to, the 100-yr design storm.
3. In areas where flooding occurs in events exceeding the 100-year storm, those areas will not be prioritized for engineering solutions, but will be identified in existing conditions model for 500-year event storms.
4. Proposed solutions will be identified for only the publicly owned drainage system.
5. Drainage issues that are private (water from the public infrastructure such as streets, greenways, ponds and/or easements is not the cause of the drainage issue) will not require modeling solutions but should be noted, where possible, in the existing conditions analysis so staff may

work with property owners if necessary. (See Also Hydraulics section of Modeling Guidance for discussion on private system existing conditions modeling.)

Emergency Vehicle Allowable Flood Depths (email from Fleet on 5/12/2020)

1. SUVs – up to 6-inches
2. Large Trucks – up to 3-feet
3. Ambulances, vans, and pick-up trucks – between 6-inches and 3-feet

MODELING PARAMETERS:

Initial model parameters are the following items:

1. Include storm sewers and culvert segments for the trunk line drainage system and major conveyance to that system. Additional conveyance components may be included if felt necessary by the modeler to understand the conveyance system drainage.
2. Inlet capacity will not be included in the model. It is assumed that sufficient inlets are present accommodate stormwater. In areas where there is known chronic flooding that has been reported to Engineering, additional detail may be requested.
3. Incorporate significant existing storm water management facilities (public and private) into the model.
4. Subdivide provided outfall basins into smaller watersheds as needed in order to properly execute the model.
5. Coordinate System and Vertical Datum
 - a. Horizontal Coordinate System: Wisconsin County Coordinate System – Dane Zone NAD83 (HARN).
 - b. Vertical Datum: NAVD88 (pre 2007 adjustment) ft (City of Madison Datum + 845.6)
 - c. Various data sources have different horizontal and vertical datums, check datum for each data source prior to use.
6. Monitoring Data Time Zone: Different sources of monitoring data use different time zones. Also, some adjust for daylight savings time whereas others do not. When using the monitoring data, check both the time zone and if the data is adjusted for daylight savings time.
7. Monitoring Data Review: Familiarize yourself with the location of the monitoring gage at each site. Also, visit the monitoring site following a rain event to review the site conditions for things that would impact the measurements. For example, is there debris clogging anything?
8. Naming convention
 - a. Names are limited to 20 characters where possible. Both PC-SWMM and XP-SWMM can take lengthy names but both indicate shorter is better for avoiding truncating names.
 - b. Subcatchments:
 - i. Begin with Subcatchments naming convention provided by the City in the Outfall Basin feature class.
 1. Add a three-digit designator to the end of the name, beginning with 000
 2. As subcatchments are subdivided, increase the added designator by 1.
 3. Example: ME04-A-0014-H (*Provided by City*) → ME04-A-0014-H-MAD-C-000 (*For the original basin*) → ME04-A-0014-H-001 (*For first subdivision*)
 - ii. Final outfall basin feature class file, including supporting files used to compute runoff timing and volume parameters shall be part of the deliverables provided to the City of Madison.
 - c. Structures and Junctions:
 - i. Node (Junction/Storage/Outfall) names for existing structures shall retain the asset identification provided by the City.
 - ii. Proposed Structure names are to be determined by the Consultant but shall be given a “logical” name that reflects general location, function, or other.
 - iii. For junctions that need to be added that are storm sewer tees as constructed, use the downstream manhole / structure with “_01” added in increasing order moving from downstream to upstream. For example, the first junction added for a tee upstream of MI3350-001 would be MI3350-001_01

- d. Pipes:
 - i. Conduit names for existing pipes shall retain the asset identification provided by the City, except that:
 - 1. The first two letters (i.e AE, IN, etc) can be removed
 - 2. Leads with an asset ID that takes up all 20 characters can be shortened to the corresponding assigned ID. For example, IN3350-032_AS3350-007_3350-001 can be changed to 3350-032_3350-001_001
 - ii. Proposed Pipe names are to be determined by the Consultant but shall be named in a manner similar to the City pipe naming convention, which includes the upstream and downstream structure names.
- e. Channel/Street Flow Segments:
 - i. Conduit names for drainage-ways shall be named in a manner that identifies the greenway segment it represents by Greenway Node Number and the distance from the upstream end. Example: GR7541-062_125 would represent a channel segment that begins 125 feet into the North Door Creek Greenway – Sprecher Road Section.
 - ii. Conduit names for streets shall be named with "Rd_"[US_Node_Name]_[DS_Node_Name] and remove the first two letters in the node name similar to how pipes are named.
- f. Natural Channels:
 - i. Natural channel transects shall be named with the same ID as the conduit name.
 - ii. Street models as natural channels shall be named in a manner that is easily identifiable for the street or street type it represents.
 - iii. A shapefile shall be created documenting where natural channel transects are cut.
- g. Other SWMM Features (Weirs, orifices, etc)
 - i. Other SWMM features shall have readily identifiable names corresponding to the type of feature they are trying to model. For example, an orifice for a detention pond should have an ID that is "<Detention Pond ID>_ORIF_01", keeping within a 20 character limit.
- h. Ponds
 - i. Use the pond name identifier from GT-Viewer combined with a common name. For example, the ponds at Odana Hills Golf Course would be "PD3461-001_OdanaHills"
 - ii. Use abbreviation of name if unofficial full name creates a model name longer than 20 characters.
- i. Non-City owned infrastructure
 - i. Consultant may choose name if consistent naming convention is not created by entity that owns infrastructure
 - ii. If Consultant chooses name, all infrastructure owned by another entity shall start with the same few characters. For example, DOT infrastructure could all start with "DOT-" or Fitchburg owned infrastructure could start with "Fit-"

9. Rainfall

- a. MSE4 24-hour Distribution and NOAA Atlas 14 Depths

Recurrence Interval (years)	Rainfall Depth (inches)
2	2.8
5	3.5
10	4.1
25	5.0
50	5.7
100	6.6
500	8.8

- b. Long-Duration Storm – Two 24-hour, 100-year MSE4 storm events with the time between

peak rainfalls shorted from 24 hours to 12 hours.

10. Hydrology (SWMM Method with Horton Infiltration) (References: A, B, C, J)

- Parameters listed are default parameters and may need to be adjusted based on calibration data.
- a. Subcatchment Detail for Street Drainage
 - i. Contributing area to the existing storm sewer system that is to be modeled (Determined on a watershed by watershed basis)
- b. SWMM Routing Parameters (if calibration is not available to adjust parameters)
 - i. Percent Impervious - Follow Step 1 (pages 1-3) of the "HowTo_CalculateCN" document.
 - ii. DCIA – Reference WinSLAMM Standard Land Use DCIA Spreadsheet
 - iii. Width – Estimated based on subcatchment shape. Estimation methodology shall be documented.
A single width shall be calculated for the entire subcatchment and used for all three sub-areas.
It is expected Width is one of the first calibration parameters for peak flow.
 - iv. Slope – Computed manually or estimated based on LiDAR. Computation or estimation methodology shall be documented.
 - v. In XP-SWMM, each subcatchment is to be split into area of (1) DCIA, (2) non-DCIA, and (3) pervious area. Within the model, the non-DCIA shall be routed to the pervious area.
 - vi. In PC-SWMM, indicate the percent being routed to pervious in the subcatchment attribute.

c. Horton Infiltration

- i. For typical urban pervious area (Based on range of values for different soil types, moisture conditions, and vegetation conditions found in Reference A):

HSG Group ^a	Max Infil. Rate (in/hr)	Min Infil. Rate (in/hr)	Decay Rate (1/hr)	Dry Days ^b	Maximum Infiltration Volume (in)
A	4.0	1.0	4.0	3.1	
B	2.0	0.5	4.0	4.4	
C	1.0	0.2	4.0	7.0	
D	0.5	0.1	4.0	9.9	
Water	0	0	0	0	

^aFor HSG listed as A/D, B/D, C/D, the default approach will be to assume the HSG associated with the lower infiltration rate (HSG D).

^bUse equation 4-12, pg 99, SWMM Reference Manual Volume 1 – Hydrology (Revised), January 2016

- ii. Impervious Manning's n – 0.016
- iii. Pervious Manning's n – 0.20
- iv. Depression Storage for Impervious – 0.05 inches
- v. Depression Storage for Pervious – 0.15 inches
- vi. Zero Depression Storage – 25 percent
- vii. Factors for adjusting
 - 1. Forest – Multiply max and min infiltration rates by 2.
 - 2. Farmland (row crops) – Multiply max and min infiltration rates by 1.2.
 - 3. Farmland (close crops) - Multiply max and min infiltration rates by 1.8.
 - 4. Other land uses – discuss with City staff
- viii. Area-weight the Horton Infiltration parameters for each subcatchment based on the area of each soil type within a subcatchment. Remove impervious area from area-weighting.
- ix. It is understood the NRCS/SCS updates the soil mapping at various times. The project teams will identify a date the soils data will be downloaded and that will be the data used for the duration of the project.

- d. Evaporation: Turn off evaporation from calibration and design storm event runs.

11. 1D Hydraulics (References: A, B, D, E, F, G)

- Dynamic mode with constant / variable timestep sufficient to model system accurately.
- Conduit lengthening shall not be used unless prior approval from City on reason.
- Parameters are default parameters and may need to be adjusted based on calibration data.
- This list is not intended to be exhaustive.
- a. System to be Modeled
 - i. Public
 - 1. Standard: Trunk line and major conveyance components to trunk line.
 - 2. Process for Exceptions: Provide justification for conveyance components not included.
 - 3. Use engineering judgement for inclusion of additional detail beyond this standard.
 - ii. Private
 - 1. Standard: Not included
 - 2. Process for requiring inclusion of private pipes:
 - a. Stormwater management detention facilities providing significant detention
 - b. When necessary to understand the functioning of the public system. For example, the West Towne Mall parking lot drainage system.
 - iii. Greenways and major surface drainages
 - iv. Significant stormwater detention facilities (public and private).
 - 1. Private systems may be simplified if serving a single site.
 - 2. Provide justification for detention facilities not included.
- b. Loss Coefficients (see drawing at end of document)
 - i. Entry
 - 1. Culverts – Select Inlet Type based on the Help File or HEC-RAS Hydraulic Reference Manual
 - 2. Storm Sewer (internal at MHs) = 0.05
 - 3. Storm Drainage Structures (MH) at 45 degree bend = 0.25
 - 4. Storm Drainage Structures (MH) at 90 degree bend = 0.5
 - 5. For culverts and entrances to storm sewer from an open channel or pond, both the energy loss coefficient and the inlet control (culvert code) shall be used.
 - ii. Exit
 - 1. Culverts –
 - a. Exit closed conduit to open channel = 0.5
 - b. Exit closed conduit to lake or pond = 1.0
 - 2. Storm Sewer (internal at MHs) = 0.05
 - 3. Storm Drainage Structures (MH) at 45 degree bend = 0.25
 - 4. Storm Drainage Structures (MH) at 90 degree bend = 0.5
- c. Coefficient of Discharge
 - i. Weirs
 - 1. Sharp Crested – 3.0
 - 2. Roadway embankment – 2.6
 - 3. Flatter overflow – Use engineering judgment
 - ii. Orifices
 - 1. 0.6
- d. Manning's n
 - i. Pipes
 - 1. Concrete Pipe: 0.013
 - 2. Other n values shall be chosen within generally acceptable ranges.
 - ii. Channels
 - 1. Use Chow's Open Channel Hydraulics, Reference E

- iii. Bank Flow, including developed urban areas
 - 1. Use Chow's Open Channel Hydraulics, Reference E
 - e. Transect Placement and Modifiers
 - i. Splitting long open channels
 - 1. Changes in cross section
 - 2. Significant changes in slope and roughness
 - 3. Overflow points
 - ii. Segment Lengths
 - iii. Channel Geometry
 - iv. Provide shapefile where natural channel transects are selected along with XS Identifier
 - f. Tailwater Conditions:
 - i. Lake Mendota: one foot over Summer Maximum – 851.10
 - ii. Lake Monona: TBD
 - iii. Lake Wingra (100-year WSE): 848.0
 - iv. Yahara River between Lakes Mendota and Monona: TBD
 - g. Inlet Clogging Factors
 - i. Continuous Slopes
 - 1. Street slope < 1% - 25% Clogging
 - 2. Street slope >= 1% - No Clogging
 - ii. Sags – 50% Clogging

12. 2D Data (References: A, G, H, I)

- a. Surface Roughness – The average Manning's n may vary by land cover / land use. Referencing TR-55, the following roughness can be used for sheet flow conditions. Choose based on professional judgement and document in the report.
 - i. Impervious areas - 0.1
 - ii. Turf grass areas - 0.24
 - iii. Wooded – 0.4
 - iv. Prairie – 0.15
 - v. Other – reference TR-55
- b. Channel Roughness: Where the 2D surface experiences channel flow, rather than sheet flow, utilize the Manning's n values for open channels
- c. There is not currently a city-wide impervious area layer. The consultant may choose to delineate the impervious area for the watershed. Or, the existing data may be utilized. The following assumptions can be made using the existing land use data:
 - i. For non-residential parcels, impervious and pervious area is available, therefore, that shall be used.
 - ii. A percent impervious is available for residential parcels. Calculate a composite roughness using the percent impervious area. Remove roofs from the composite roughness calculation – reference the Dane County land use for residential roofs. (roofs will be entered as blocked obstructions)
 - iii. Average the roughness within the ROW based impervious and pervious area.
- d. Blocked Obstructions – enter roofs as Inactive Areas in XP-SWMM and Obstructions in PC-SWMM
 - i. Non-residential – use City impervious area data for roofs
 - ii. Residential – use Dane County roof layer
- e. Grid cell/mesh size: Use size that balances model run time and sufficient 2D overland flow detail.
- f. Grid/mesh orientation: Where possible, align grid/mesh with major channel flow direction. If not practical, then use orientation that minimizes run time.

13. Non-Modeling Data

- a. When utilizing XP-SWMM, provide attributed describing the source of data in the representative GIS feature classes

- b. When utilizing PC-SWMM, also add attributes to the entities describing their data sources.

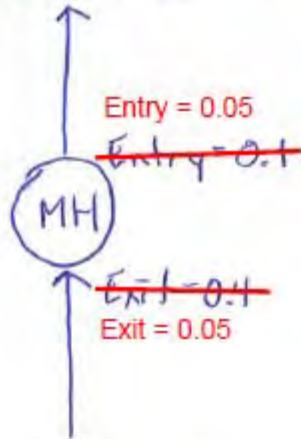
14. Solutions

- a. Analysis – what are the underlying causes of flooding in:
 - i. Areas reported in the “Flood Download” from City staff
 - ii. Other flooded areas in the modeling not identified in the “Flood Download”
 - 1. If more than 10 total areas, work with City staff to prioritize locations to evaluate
 - iii. City to identify suggested solutions and provide to Consultant for consideration
 - iv. Consultant to identify solutions independently and take lead on overall solutions for watershed
- b. Prioritize Solutions
 - i. Property Damage
 - ii. Major arterials where emergency vehicles cannot get through
 - iii. More criteria - TBD
- c. Displaying solutions/Order of solutions
 - i. Show each solution independently and then combined
 - ii. Order
 - 1. Property/pipe owned by Stormwater Utility
 - 2. Pipe size needed to solve remainder of issues
 - 3. Other public properties
 - a. Janet will provide areas where there are non-starters in Parks
 - 4. Private properties
- d. Overlay TIP map with inundation mapping to understand where immediate future project opportunities are
- e. Freeboard – City does not have a minimum freeboard requirement
- f. Properties adjacent to greenway and new greenway crossings – Current ordinance states property low building opening must be 4' above invert of downstream greenway street structure crossing. Therefore, may need to make structures wider, instead of deeper, to not flood upstream properties

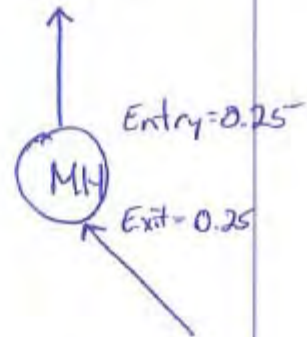
REFERENCES

- A. Model Help Files and User Forums
- B. Storm Water Management Model version 5.1 User's Manual. (Available at: <https://www.epa.gov/water-research/storm-water-management-model-swmm-version-51-users-manual>)
- C. SWMM reference manual volume I – hydrology (Available at: <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100NYRA.txt>)
- D. SWMM reference manual volume volume II – hydraulics (Available at: <https://nepis.epa.gov/Exe/ZyPDF.cgi/P100S9AS.PDF?Dockey=P100S9AS.PDF>)
- E. Chow, Open Channel Hydraulics, 1959
- F. HEC-RAS Hydraulic Reference Manual. (Available at: <https://www.hec.usace.army.mil/software/hec-ras/documentation/HEC-RAS%205.0%20Reference%20Manual.pdf>)
- G. ASCE Two-Dimensional Modeling Using HEC-RAS, Lecture 8 – Troubleshooting and Reviewing, Page 31; 2017.
- H. Australian Rainfall & Runoff Revision Projects, Project 15: Two Dimensional Modeling in Urban and Rural Floodplains, November 2012.
- I. FLO-2D Reference Manual, FLO-2D Software, 2012.
- J. ASCE Manual of Engineering Practice No 28.

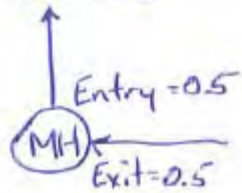
Straight-Through Manhole



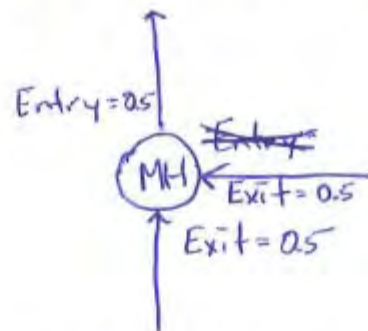
45° Bend Manhole



90° Bend Manhole



TEE Manhole



TEE (No Manhole)

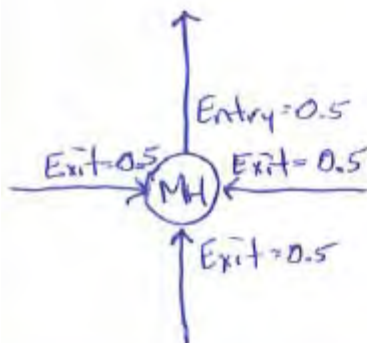
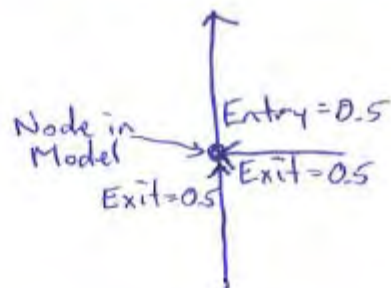


TABLE B1–SUBBASIN HYDROLOGY INPUT PARAMETERS: SWMM

Subbasin		Area	Width	Flow Length	Slope	Percent Impervious	Impervious Manning's	Pervious Manning's	Impervious Storage Depth	Pervious Storage Depth	Percent Zero Impervious	Percent Routed	Infiltration	Max. Infiltration Rate	Min. Infiltration Rate	Decay Constant	Drying Time	Max. Volume
ID	Outlet	(ac)	(ft)	(ft)	(%)	(%)	(-)	(-)	(in)	(in)	(%)	(%)	Method	(in/hr)	(in/hr)	(1/hr)	(days)	(in)
1	BSAI_001	384.61	2429.3	6896.6	1.96	10.66	0.016	0.2	0.05	0.05	25	80	HORTON	2	0.5	4	5.8	0
2	AE1668-005	4.44	380.1	508.7	3.04	43.84	0.016	0.2	0.05	0.05	25	86.53	HORTON	2.2	0.6	4	4.4	0
3	IN1668-039	2.17	285	331.6	4.81	37.7	0.016	0.2	0.05	0.05	25	64.19	HORTON	2	0.5	4	4.5	0
4	IN1668-048	2.93	255.7	499.4	4.18	35.93	0.016	0.2	0.05	0.05	25	65	HORTON	1.4	0.3	4	5.9	0
5	IN1668-036	1.52	158.6	417.6	6.26	37.69	0.016	0.2	0.05	0.05	25	64.19	HORTON	1.5	0.4	4	5.6	0
6	IN1668-029	1.82	126.7	626.5	4.42	37.17	0.016	0.2	0.05	0.05	25	64.26	HORTON	2	0.5	4	4.5	0
7	IN1668-034	1.07	96.6	481.8	5.1	37	0.016	0.2	0.05	0.05	25	64.19	HORTON	1.8	0.4	4	4.8	0
8	IN1668-017	1.58	234.2	293.0	1.6	47.29	0.016	0.2	0.05	0.05	25	64.19	HORTON	1	0.2	4	7	0
9	IN1668-023	3.18	219.8	630.9	4.9	35.35	0.016	0.2	0.05	0.05	25	64.19	HORTON	1.9	0.5	4	4.8	0
10	IN1668-013	3.03	244.2	540.3	3.38	37.97	0.016	0.2	0.05	0.05	25	64.67	HORTON	1.7	0.4	4	5.2	0
11	BSAI_011	1.23	137.9	387.1	5.03	24.49	0.016	0.2	0.05	0.05	25	67.06	HORTON	1.6	0.3	4	6.2	0
12	IN1668-026	24.18	770.6	1366.8	5.29	22.37	0.016	0.2	0.05	0.05	25	65.9	HORTON	2.1	0.5	4	4.8	0
13	DT1769-003	37.73	1134.3	1448.7	6.65	19.96	0.016	0.2	0.05	0.05	25	61.87	HORTON	1.9	0.5	4	4.8	0
14	RD1768-001	2.26	141.2	696.5	6.34	20.09	0.016	0.2	0.05	0.05	25	78.88	HORTON	2.8	0.7	4	4.4	0
15	IN1768-068	1.60	194.7	358.7	4.02	36.04	0.016	0.2	0.05	0.05	25	64.23	HORTON	2	0.5	4	4.4	0
16	IN1768-070	1.22	140.1	378.5	5.66	45.79	0.016	0.2	0.05	0.05	25	64.19	HORTON	2	0.5	4	4.5	0
17	IN1768-072	1.74	153.5	493.8	6.37	45.05	0.016	0.2	0.05	0.05	25	79.53	HORTON	1.4	0.3	4	6.3	0
18	SAI_051	57.58	1428.4	1756.0	2.58	10	0.016	0.2	0.05	0.05	25	81.15	HORTON	1.7	0.4	4	7.2	0
19	TSAI_GW_Ol1_Out	3.21	380.2	368.3	4.75	10.05	0.016	0.2	0.05	0.05	25	75.18	HORTON	2.7	0.7	4	4.4	0
20	TSAI_014	16.34	636.7	1117.8	2.32	9.86	0.016	0.2	0.05	0.05	25	74.42	HORTON	2.7	0.7	4	4.5	0
21	Pond_GW_Ol1	45.12	696.5	2821.9	4.22	18.85	0.016	0.2	0.05	0.05	25	63.59	HORTON	1.7	0.4	4	5.1	0
22	IN1567-024	5.41	441.1	533.9	1.61	27.49	0.016	0.2	0.05	0.05	25	62.99	HORTON	1.4	0.3	4	5.8	0
23	IN1567-021	0.68	119.9	248.7	2.26	44.75	0.016	0.2	0.05	0.05	25	63.99	HORTON	1.7	0.4	4	5.7	0
24	IN1567-016	0.89	107.5	360.6	5.92	37.48	0.016	0.2	0.05	0.05	25	64.19	HORTON	1.2	0.3	4	6.6	0
25	SAI_HL_Box003	2.93	164.3	778.1	2.63	37.33	0.016	0.2	0.05	0.05	25	62.62	HORTON	1.8	0.4	4	5	0
26	IN1567-008	3.30	166.6	862.9	5.38	36.46	0.016	0.2	0.05	0.05	25	64.08	HORTON	1.3	0.3	4	6.2	0
27	SAI_HL_Box001	5.51	255.8	938.4	5.04	24.68	0.016	0.2	0.05	0.05	25	71.85	HORTON	1.6	0.4	4	5.5	0
28	IN1567-004	7.94	244.5	1415.1	2.62	40.86	0.016	0.2	0.05	0.05	25	64.18	HORTON	1.3	0.3	4	6.1	0
29	IN1567-033	3.14	162.3	842.0	5.91	43.62	0.016	0.2	0.05	0.05	25	63.01	HORTON	1.4	0.3	4	6	0
30	IN1567-029	5.01	207.4	1053.1	4.54	33.1	0.016	0.2	0.05	0.05	25	63.67	HORTON	1	0.2	4	7	0
31	IN1566-003	3.18	169.2	819.7	2.78	32.58	0.016	0.2	0.05	0.05	25	63.48	HORTON	1	0.2	4	6.9	0
32	IN1565-002	4.59	359.1	557.0	3.54	42.18	0.016	0.2	0.05	0.05	25	63.45	HORTON	1	0.2	4	7	0
33	AE1566-005	57.14	1370.4	1816.2	2.75	9.88	0.016	0.2	0.05	0.05	25	63.06	HORTON	1.6	0.4	4	5.4	0
34	IN1767-013	0.88	199.5	192.9	6.12	45.67	0.016	0.2	0.05	0.05	25	63.85	HORTON	1.2	0.3	4	6.4	0
35	IN1767-009	7.00	247	1234.3	3.3	29.12	0.016	0.2	0.05	0.05	25	66.12	HORTON	1.6	0.4	4	5.4	0
36	IN1767-006	1.28	165.4	337.3	2.42	47.02	0.016	0.2	0.05	0.05	25	63.07	HORTON	1	0.2	4	6.9	0
37	IN1767-004	1.10	94.5	505.5	1.49	55.59	0.016	0.2	0.05	0.05	25	64.09	HORTON	1.8	0.5	4	4.8	0
38	AS1767-003	7.47	172.7	1884.0	3.63	21.99	0.016	0.2	0.05	0.05	25	82.42	HORTON	1.6	0.4	4	5.8	0
39	**AE1767-001	2.79	65.6	1849.6	3.69	41.08	0.016	0.2	0.05	0.05	25	64.13	HORTON	1.6	0.4	4	5.5	0
40	IN1768-026	8.40	200.8	1821.2	3.69	49.54	0.016	0.2	0.05	0.05	25	75.24	HORTON	1.7	0.4	4	5.6	0
41	PD1768-023	1.45	436.1	145.1	5.88	25.35	0.016	0.2	0.05	0.05	25	81.6	HORTON	2.5	0.6	4	4.6	0
42	IN1768-008	2.26	155.2	635.0	2.78	39.91	0.016	0.2	0.05	0.05	25	68.67	HORTON	2.2	0.5	4	4.4	0
43	IN1768-013	4.17	184.9	982.6	4.6	46.72	0.016	0.2	0.05	0.05	25	64.4	HORTON	2.1	0.5	4	4.5	0
44	IN1768-016	1.59	155	447.7	1.39	63.39	0.016	0.2	0.05	0.05	25	68.28	HORTON	2.1	0.5	4	4.4	0
45	IN1768-049	2.32	291.2	346.4	4.59	45.75	0.016	0.2	0.05	0.05	25	64.19	HORTON	2	0.5	4	4.4	0
46	IN1768-029	1.22	213.8	248.8	6.75	49.12	0.016	0.2	0.05	0.05	25	83.04	HORTON	2.6	0.6	4	4.4	0
47	IN1768-035	0.55	93.8	254.8	6.93	53.33	0.016	0.2	0.05	0.05	25	75.44	HORTON	2	0.5	4	4.4	0
48	IN1768-042	3.34	221	657.6	6.81	38.92	0.016	0.2	0.05	0.05	25	64.96	HORTON	1.8	0.4	4	5	0
49	IN1768-062	0.64	97.3	285.7	8.95	55.27	0.016	0.2	0.05	0.05	25	64.19	HORTON	2	0.5	4	4.5	0
50	IN1868-008	1.11	164.4	294.8	4.01	52.04	0.016	0.2	0.05	0.05	25	64.19	HORTON	1	0.2	4	7	0
51	PD1868-036	2.44	247.6	429.1	5.7	57.45	0.016	0.2	0.05	0.05	25	88.27	HORTON	1.2	0.2	4	6.6	0
52	IN1868-003	1.33	137.9	418.7	5.05	57.82	0.016	0.2	0.05	0.05	25	70.31	HORTON	1.1	0.2	4	6.7	0
53	IN1767-014	0.94	92.6	440.7	3.06	53.15	0.016	0.2	0.05	0.05	25	64.19	HORTON	1.1	0.2	4	6.7	0
54	IN1766-006	1.58	139.3	494.3	3.23	45.4	0.016	0.2	0.05	0.05	25	63.55	HORTON	1	0.2	4	7	0
55	IN1766-002	2.22	253.8	381.1	3.91	42.16	0.016	0.2	0.05	0.05	25	63.05	HORTON	1.7	0.4	4	5.3	0
56	AE1767-017	40.69	654.8	2707.0	3.36	22.23	0.016	0.2	0.05	0.05	25	82.05	HORTON	1.5	0.3	4	5.8	0
57	AE1866-006	17.99	717.6	1091.8	4.9	33.04	0.016	0.2	0.05	0.05	25	82.09	HORTON	1.2	0.3	4	6.5	0
58	IN1766-013	3.09	183.7	733.0	5.37	34.41	0.016	0.2	0.05	0.05	25	63.68	HORTON	1.6	0.4	4	5.4	0
59	IN1666-001	5.65	158.2	1554.9	3.01	40.44	0.016	0.2	0.05	0.05	25	62.6	HORTON	1.2	0.3	4	6.4	0
60	AE1665-013	34.66	732.9	2060.2	1.41	16.75	0.016	0.2	0.05	0.05	25	75.71	HORTON	1.8	0.4	4	5	0
61	IN1665-017	4.37	86.6	2199.5	1.96	42.62	0.016	0.2	0.05	0.05	25	63.97	HORTON	1.8	0.4	4	5	0
62	IN1665-016	13.62	512.4	1157.5	4.02	5.01	0.016	0.2	0.05	0.05	25	62.29	HORTON	1.7	0.4	4	5.2	0
63	IN1665-004	6.27	275	993.3	3.92	11.04	0.016	0.2	0.05	0.05	25	62.2	HORTON	1.8	0.4	4	4.9	0
64	IN1565-013	3.21	377.1	371.2	2.03	38.54	0.016	0.2	0.05	0.05	25	63.34	HORTON	1.5	0.3	4	5.7	0
65	IN1564-003	0.65	89.1	317.8	3.4	47.6	0.016	0.2	0.05	0.05	25	64.19	HORTON	2	0.5	4	4.4	0
66	IN1665-008	12.36	465.7	1155.8	4.91	2.62	0.016	0.2	0.05	0.05	25	63.33	HORTON	1.4	0.3	4	6	0
67	IN1665-001	4.27	180.2	1032.7	4.37	11.06	0.016	0.2	0.05	0.05	25	62.61	HORTON	1.4	0.3	4	5.9	0
68	IN1765-001	4.48	225.6	864.3	4.76	15.08	0.016	0.2	0.05	0.05	25	63.69	HORTON	1.9	0.5	4	4.8	0
69	IN1765-002	6.60	232.6	1236.2	4.29	9.38	0.016	0.2	0.05	0.05	25	62.9	HORTON	1.7	0.4	4	5.2	0
70	IN1765-004	6.75	319.5	920.8	4.1	28.77	0.016	0.2	0.05	0.05	25	63.6	HORTON	1.7	0.4	4	5.3	0
71	IN1765-006	2.27	171.5	576.6	5.19	41.09	0.016	0.2	0.05	0.05	25	64.18	HORTON	1	0.2	4	7	0
72	IN1764-002	6.82	342.7	866.3	4.94	25.29	0.016	0.2	0.05	0.05	25	64.72	HORTON	1.1	0.2	4	6.8	0

131	IN1763-019	2.09	181.3	502.1	2.07	32.2	0.016	0.2	0.05	0.05	25	84.28	HORTON	1	0.2	4	7	0
132	IN1862-022	1.27	219	252.7	1.71	52.29	0.016	0.2	0.05	0.05	25	85.77	HORTON	1.8	0.4	4	4.9	0
133	IN1862-023	0.28	58.3	208.2	1.61	72.75	0.016	0.2	0.05	0.05	25	68.66	HORTON	2	0.5	4	4.4	0
134	IN1762-013	2.95	232.6	552.0	5.77	30.27	0.016	0.2	0.05	0.05	25	68.27	HORTON	2.1	0.5	4	4.4	0
135	IN1762-009	6.46	375.8	748.2	3.7	19.24	0.016	0.2	0.05	0.05	25	71.02	HORTON	2	0.5	4	4.4	0
136	IN1762-017	0.54	80.8	288.5	3.22	55.88	0.016	0.2	0.05	0.05	25	68.69	HORTON	2.5	0.6	4	4.4	0
137	IN1762-021	0.63	125.3	219.4	5.54	64.78	0.016	0.2	0.05	0.05	25	69	HORTON	2.2	0.5	4	4.4	0
138	IN1762-025	1.79	285	273.4	5.64	55.89	0.016	0.2	0.05	0.05	25	67.79	HORTON	2.2	0.5	4	4.4	0
139	PD1862-061	8.18	303	1176.5	2.41	37.94	0.016	0.2	0.05	0.05	25	70.39	HORTON	2.1	0.5	4	4.4	0
140	IN1862-044	3.11	235.6	575.5	2.01	51.69	0.016	0.2	0.05	0.05	25	67.26	HORTON	2	0.5	4	4.4	0
141	IN1862-058	2.02	204.8	430.0	2.98	44.75	0.016	0.2	0.05	0.05	25	66.92	HORTON	2	0.5	4	4.4	0
142	IN1862-064	2.42	180.3	583.5	1.73	55.88	0.016	0.2	0.05	0.05	25	68.36	HORTON	2	0.5	4	4.4	0
143	SAI_ValleyView4_US	6.27	242.2	1128.1	0.9	23.26	0.016	0.2	0.05	0.05	25	63.33	HORTON	2	0.5	4	4.4	0
144	BSAI_144	29.59	540.8	2383.2	2.26	11.32	0.016	0.2	0.05	0.05	25	86.8	HORTON	2.8	0.7	4	4.4	0
145	Pond_SV_B1	5.55	259.7	931.1	4.43	20.37	0.016	0.2	0.05	0.05	25	61.53	HORTON	2	0.5	4	4.4	0
146	Pond_SV_B2	6.77	294.2	1002.5	4.21	14.62	0.016	0.2	0.05	0.05	25	66.29	HORTON	2.4	0.6	4	4.4	0
147	TSAI_Conf002	55.80	638.7	3805.3	3.25	10.36	0.016	0.2	0.05	0.05	25	73.22	HORTON	2.4	0.6	4	5	0
148	Pond_CP_West	12.88	349.9	1603.6	4.54	20.29	0.016	0.2	0.05	0.05	25	61.58	HORTON	1.8	0.4	4	5	0
149	Pond_CR_WetPond	11.02	245.8	1953.1	3.41	20.4	0.016	0.2	0.05	0.05	25	61.52	HORTON	1.7	0.4	4	5.1	0
150	Pond_CR_WetPond_DS	23.59	436.7	2353.3	3.9	20.4	0.016	0.2	0.05	0.05	25	61.52	HORTON	1.7	0.4	4	5.3	0
151	BSAI_151	20.59	479.4	1870.8	1.76	26.93	0.016	0.2	0.05	0.05	25	91.38	HORTON	2.8	0.7	4	4.4	0
152	SAI_BPS012	41.83	530.8	3432.7	1.71	34.58	0.016	0.2	0.05	0.05	25	66.41	HORTON	2	0.5	4	4.4	0
153	**DT1461-002	0.63	33.4	821.9	4.64	41.13	0.016	0.2	0.05	0.05	25	64.3	HORTON	2.1	0.5	4	4.4	0
154	SAI_TO006	6.41	184.8	1510.6	4.47	28.23	0.016	0.2	0.05	0.05	25	63.8	HORTON	2	0.5	4	4.4	0
155	SAI_TO003	17.16	374.9	1994.0	2.79	31.07	0.016	0.2	0.05	0.05	25	65.23	HORTON	2.3	0.6	4	4.4	0
156	DT1460-002	26.80	503.5	2318.3	1.84	8.46	0.016	0.2	0.05	0.05	25	76.3	HORTON	2.9	0.7	4	4.4	0
157	SAI_TOW001	25.93	842.6	1340.3	4.58	9.28	0.016	0.2	0.05	0.05	25	77.01	HORTON	2.8	0.7	4	4.4	0
158	BSAI_158	1.39	127.2	474.8	2.64	52.99	0.016	0.2	0.05	0.05	25	75.28	HORTON	2	0.5	4	4.4	0
159	DT1560-002	6.00	368.6	709.2	7.02	19.8	0.016	0.2	0.05	0.05	25	69.1	HORTON	2.6	0.7	4	4.4	0
160	SAI_TO001	20.31	640.5	1381.6	5.35	21.32	0.016	0.2	0.05	0.05	25	73.96	HORTON	2.7	0.7	4	4.4	0
161	IN1559-005	0.86	201	186.6	1.27	75.64	0.016	0.2	0.05	0.05	25	74.95	HORTON	2	0.5	4	4.4	0
162	IN1559-007	3.36	164.5	888.5	2.98	45.72	0.016	0.2	0.05	0.05	25	72.64	HORTON	2.1	0.5	4	4.4	0
163	HD1559-012	8.13	308.9	1146.4	0.81	14.34	0.016	0.2	0.05	0.05	25	81.29	HORTON	2.6	0.7	4	4.4	0
164	IN1559-006	5.35	403.1	578.0	3.4	19.91	0.016	0.2	0.05	0.05	25	87.57	HORTON	2.4	0.6	4	4.4	0
165	SAI_BPS017	4.19	249.1	731.9	3.66	15.18	0.016	0.2	0.05	0.05	25	71.98	HORTON	2.6	0.7	4	4.4	0
166	AE1458-018	4.00	232.2	750.3	2.48	27.54	0.016	0.2	0.05	0.05	25	83.91	HORTON	2.7	0.7	4	4.4	0
167	IN1458-005	0.23	77.8	128.3	0.83	70.81	0.016	0.2	0.05	0.05	25	64.19	HORTON	2	0.5	4	4.4	0
168	AE1458-017	3.29	220.6	650.6	4.48	26.08	0.016	0.2	0.05	0.05	25	80.5	HORTON	2.7	0.7	4	4.4	0
169	IN1458-008	1.91	241.1	345.8	4.9	49.08	0.016	0.2	0.05	0.05	25	64.83	HORTON	2	0.5	4	4.4	0
170	IN1458-023	2.64	242.5	473.7	2.17	49.25	0.016	0.2	0.05	0.05	25	65.25	HORTON	2	0.5	4	4.4	0
171	IN1457-010	4.16	290.3	624.3	2.32	33.79	0.016	0.2	0.05	0.05	25	64.43	HORTON	2	0.5	4	4.4	0
172	IN1458-011	3.57	221.7	702.4	3.37	44.2	0.016	0.2	0.05	0.05	25	65.09	HORTON	2	0.5	4	4.4	0
173	IN1457-002	0.65	119	237.9	2.01	70.92	0.016	0.2	0.05	0.05	25	64.23	HORTON	2	0.5	4	4.4	0
174	IN1457-014	4.23	231.9	794.7	2.35	48.27	0.016	0.2	0.05	0.05	25	64.37	HORTON	2	0.5	4	4.4	0
175	SAI_SPBP001	9.04	347.9	1131.7	1.86	41.98	0.016	0.2	0.05	0.05	25	99.23	HORTON	2	0.5	4	4.4	0
176	SAI-067	18.17	441.3	1793.1	1.5	24.86	0.016	0.2	0.05	0.05	25	86.18	HORTON	2.3	0.6	4	4.4	0
177	SAI-075	26.54	1593.2	725.7	2.11	50.08	0.016	0.2	0.05	0.05	25	97.57	HORTON	2.1	0.5	4	4.4	0
178	IN1557-011	1.21	114.8	457.4	3.79	69.88	0.016	0.2	0.05	0.05	25	99.02	HORTON	2	0.5	4	4.4	0
179	IN1557-014	2.17	189.3	500.1	3.65	69.51	0.016	0.2	0.05	0.05	25	99.19	HORTON	2	0.5	4	4.4	0
180	IN1557-018	12.66	634.8	868.5	3.77	71.46	0.016	0.2	0.05	0.05	25	99.23	HORTON	2	0.5	4	4.4	0
181	IN1657-002	1.60	112.1	619.8	3.79	57.88	0.016	0.2	0.05	0.05	25	99.23	HORTON	2	0.5	4	4.4	0
182	IN1557-002	7.84	311.1	1098.4	2.22	67.33	0.016	0.2	0.05	0.05	25	90.75	HORTON	2	0.5	4	4.4	0
183	IN1557-009	4.48	222.3	878.5	3.87	54.59	0.016	0.2	0.05	0.05	25	90.53	HORTON	2	0.5	4	4.4	0
184	IN1656-006	6.50	441.1	641.5	5.3	72.7	0.016	0.2	0.05	0.05	25	99.22	HORTON	2	0.5	4	4.4	0
185	AE1657-003	16.49	592	1213.5	3.53	51.91	0.016	0.2	0.05	0.05	25	98.94	HORTON	2	0.5	4	4.4	0
186	IN1656-002	0.40	195.7	88.5	5.52	80.07	0.016	0.2	0.05	0.05	25	98.78	HORTON	2	0.5	4	4.4	0
187	IN1656-005	16.24	435.9	1622.7	2.13	67.21	0.016	0.2	0.05	0.05	25	99.19	HORTON	2	0.5	4	4.4	0
188	IN1656-009	0.65	89.5	318.4	4.08	82.04	0.016	0.2	0.05	0.05	25	98.86	HORTON	2	0.5	4	4.4	0
189	AE1655-028	3.35	202.4	719.9	3.34	57.92	0.016	0.2	0.05	0.05	25	94.69	HORTON	2	0.5	4	4.4	0
190	IN1656-004	1.45	162.3	389.4	3.87	68.69	0.016	0.2	0.05	0.05	25	99.23	HORTON	2	0.5	4	4.4	0
191	IN1655-021	1.54	187.1	358.7	3.56	74.57	0.016	0.2	0.05	0.05	25	99.23	HORTON	2	0.5	4	4.4	0
192	IN1656-012	0.80	71.7	485.1	2.74	61.85	0.016	0.2	0.05	0.05	25	99.23	HORTON	2	0.5	4	4.4	0
193	AE1655-018	3.02	229.6	572.6	3.31	43.36	0.016	0.2	0.05	0.05	25	99.26	HORTON	2.6	0.7	4	4.4	0
194	PD1655-026	5.10	414.9	535.0	5.56	51.67	0.016	0.2	0.05	0.05	25	99.51	HORTON	2.8	0.7	4	4.4	0
195	IN1655-008	9.99	653.3	665.9	2.71	68	0.016	0.2	0.05	0.05	25	95.83	HORTON	2	0.5	4	4.4	0
196	IN1655-015	2.04	314.8	282.8	3.01	69.77	0.016	0.2	0.05	0.05	25	99.23	HORTON	2.1	0.5	4	4.4	0
197	IN1655-003	3.29	161.8	886.2	3.25	34.59	0.016	0.2	0.05	0.05	25	91.81	HORTON	2.6	0.7	4	4.4	0
198	AS1655-034	1.35	140.5	418.4	4.83	36.97	0.016	0.2	0.05	0.05	25	96.16	HORTON	2	0.5	4	4.4	0
199	BSAI_199	0.36	131.3	119.5	5.14	53	0.016	0.2	0.05	0.05	25	75.28	HORTON	2	0.5	4	4.4	0
200	BSAI_200	1.33	308.7	187.7	2.63	53	0.016	0.2	0.05	0.05	25	75.28	HORTON	2	0.5	4	4.4	0
201	BSAI_201	1.71	356.3	209.4	2.65	53	0.016	0.2	0.05	0.05	25	75.28	HORTON	2	0.5	4	4.4	0
202	IN1559-027	8.51	382.4	969.2	2.07	49.27	0.016	0.2	0.05	0.05	25	74.8	HORTON	2	0.5	4	4.4	0
203	IN1559-021	2.62	211.9	539.6	1.07	54.97	0.016	0.2	0.05	0.05	25	73.44	HORTON	2	0.5	4	4.4	0
204	IN1559-017	0.97	106.5	395.1	1.41	65.53	0.016	0.2	0.05	0.05	25	74						

267	IN1757-067	6.55	290.7	981.6	4.1	12.53	0.016	0.2	0.05	0.05	25	74.16	HORTON	2	0.5	4	4.4	0
268	IN1756-013	6.63	347.3	831.1	3.43	14.21	0.016	0.2	0.05	0.05	25	60.1	HORTON	2	0.5	4	4.4	0
269	IN1756-011	0.78	76.1	449.0	1.86	63.96	0.016	0.2	0.05	0.05	25	73.35	HORTON	2	0.5	4	4.4	0
270	IN1756-014	0.93	140.6	288.3	2.73	58.55	0.016	0.2	0.05	0.05	25	77.47	HORTON	2	0.5	4	4.4	0
271	IN1756-016	3.94	257	668.3	2.79	5.25	0.016	0.2	0.05	0.05	25	59.08	HORTON	2	0.5	4	4.4	0
272	SAI-033	19.58	848.6	1005.3	3.13	10.87	0.016	0.2	0.05	0.05	25	72.07	HORTON	2.6	0.7	4	4.4	0
273	BSAI 273	52.27	852.3	2671.7	3.02	26.03	0.016	0.2	0.05	0.05	25	96.31	HORTON	2.8	0.7	4	4.4	0
274	BSAI 274	22.01	1055.2	908.7	3.18	28.21	0.016	0.2	0.05	0.05	25	98.68	HORTON	2.9	0.7	4	4.4	0
275	SAI-012	46.53	868.3	2334.4	2.45	19.75	0.016	0.2	0.05	0.05	25	62.16	HORTON	2	0.5	4	4.4	0
276	Pond_SV_Pond_A	4.53	372.5	530.2	6.04	20.4	0.016	0.2	0.05	0.05	25	61.52	HORTON	2	0.5	4	4.4	0
277	Pond_TF_E	1.84	246.3	325.7	6.9	20.4	0.016	0.2	0.05	0.05	25	61.52	HORTON	2	0.5	4	4.4	0
278	Pond_TF_SE	2.44	227.1	467.5	3.72	19.13	0.016	0.2	0.05	0.05	25	62.32	HORTON	2.1	0.5	4	4.4	0
279	SAI-009	14.81	366.9	1758.1	1.26	19.08	0.016	0.2	0.05	0.05	25	70.84	HORTON	2	0.5	4	4.4	0
280	SAI-007	10.08	395.3	1110.9	2.69	20.18	0.016	0.2	0.05	0.05	25	78.97	HORTON	2	0.5	4	4.4	0
281	BSAI 281	30.87	742.1	1812.0	1.46	15.29	0.016	0.2	0.05	0.05	25	79.43	HORTON	2.2	0.5	4	4.4	0
282	BSAI 282	26.63	586.9	1976.2	3.62	21.14	0.016	0.2	0.05	0.05	25	79.21	HORTON	1.9	0.5	4	4.6	0
283	Pond_TF_OL1	50.52	850.5	2587.7	4.52	19.33	0.016	0.2	0.05	0.05	25	62.19	HORTON	1.7	0.4	4	5.3	0
284	Pond_CR_WetPond	18.22	431.3	1840.6	3.55	20.4	0.016	0.2	0.05	0.05	25	61.52	HORTON	1.6	0.4	4	5.4	0
285	BSAI 285	5.01	261.3	835.7	3.65	32.92	0.016	0.2	0.05	0.05	25	90.87	HORTON	2	0.5	4	4.5	0
286	BSAI 286	29.57	665.8	1934.9	1.13	15.76	0.016	0.2	0.05	0.05	25	76.03	HORTON	1.9	0.5	4	4.5	0
287	TSAI_Conf011	87.28	624	6092.5	2.21	15.01	0.016	0.2	0.05	0.05	25	68.97	HORTON	2.3	0.6	4	4.7	0
288	Pond_WelHomeDr	33.89	785.8	1878.6	4.33	21.33	0.016	0.2	0.05	0.05	25	64.59	HORTON	1.2	0.3	4	6.4	0
289	Pond_TF_NW	0.81	176.3	200.4	6.68	20.4	0.016	0.2	0.05	0.05	25	61.52	HORTON	1	0.2	4	7	0
290	Pond_TF_NA	0.61	120.8	219.8	8.92	20.4	0.016	0.2	0.05	0.05	25	61.52	HORTON	1	0.2	4	7	0
291	Pond_TF_NB	1.53	225.9	294.3	8.3	20.4	0.016	0.2	0.05	0.05	25	61.52	HORTON	1	0.2	4	7	0
292	Pond_TF_NC_A&B	3.22	189.5	739.5	4.34	20.4	0.016	0.2	0.05	0.05	25	61.52	HORTON	1	0.2	4	7	0
293	Pond_WH_Wet	35.29	387.8	3963.6	2.82	20.36	0.016	0.2	0.05	0.05	25	61.55	HORTON	1.6	0.4	4	5.6	0
294	Pond_TF_W	1.97	213.1	402.8	6.04	20.4	0.016	0.2	0.05	0.05	25	61.52	HORTON	1	0.2	4	7	0
295	TSAI_005	35.84	711.6	2193.9	4.72	20.4	0.016	0.2	0.05	0.05	25	61.52	HORTON	1.5	0.3	4	5.7	0
296	Pond_Swaboda	107.97	1702.6	2762.3	2.84	17.65	0.016	0.2	0.05	0.05	25	67.92	HORTON	2.3	0.6	4	4.5	0
297	SAI-036	14.68	304.5	2100.4	2.31	18.02	0.016	0.2	0.05	0.05	25	62.93	HORTON	2.1	0.5	4	4.4	0
298	SAI-037	83.32	1878.8	1931.7	0.76	11.54	0.016	0.2	0.05	0.05	25	78.15	HORTON	2.8	0.7	4	4.4	0
299	AE1456-034	6.97	451.5	672.6	2.2	47.03	0.016	0.2	0.05	0.05	25	90.53	HORTON	2.4	0.6	4	4.4	0
300	AE1356-001	1.20	117.1	447.0	5.4	35.8	0.016	0.2	0.05	0.05	25	71.18	HORTON	2	0.5	4	4.4	0
301	IN1456-004	0.47	100.7	201.2	0.56	83.4	0.016	0.2	0.05	0.05	25	64.19	HORTON	2	0.5	4	4.4	0
302	IN1456-076	0.58	102.5	246.4	5.36	54.24	0.016	0.2	0.05	0.05	25	64.2	HORTON	2	0.5	4	4.4	0
303	IN1456-078	0.38	81.3	204.7	5.05	60.08	0.016	0.2	0.05	0.05	25	64.32	HORTON	2	0.5	4	4.4	0
304	IN1457-045	4.05	230	767.8	3.28	40.03	0.016	0.2	0.05	0.05	25	64.32	HORTON	2	0.5	4	4.4	0
305	IN1456-066	2.62	197	580.2	4.05	54.47	0.016	0.2	0.05	0.05	25	71.68	HORTON	2	0.5	4	4.4	0
306	IN1456-009	0.61	81.2	328.2	4.37	59.29	0.016	0.2	0.05	0.05	25	70.98	HORTON	2	0.5	4	4.4	0
307	IN1456-063	1.28	132.6	421.8	5.05	60.03	0.016	0.2	0.05	0.05	25	67.99	HORTON	2	0.5	4	4.4	0
308	IN1457-040	1.56	212.8	318.7	6.71	37.68	0.016	0.2	0.05	0.05	25	67.9	HORTON	2	0.5	4	4.4	0
309	IN1457-028	3.38	240.1	612.7	2.28	34.34	0.016	0.2	0.05	0.05	25	65.26	HORTON	2	0.5	4	4.4	0
310	IN1456-011	0.55	59.8	403.6	1.01	64.07	0.016	0.2	0.05	0.05	25	65.59	HORTON	2	0.5	4	4.4	0
311	IN1456-058	4.14	305.1	591.5	4.26	28.86	0.016	0.2	0.05	0.05	25	70.03	HORTON	2	0.5	4	4.4	0
312	IN1456-019	0.82	100.3	356.3	0.12	78.2	0.016	0.2	0.05	0.05	25	64.6	HORTON	2	0.5	4	4.4	0
313	IN1456-046	0.96	127.7	328.8	6.01	60.06	0.016	0.2	0.05	0.05	25	65.17	HORTON	2	0.5	4	4.4	0
314	AS1457-020	3.49	308.6	492.1	2.68	47.67	0.016	0.2	0.05	0.05	25	66.35	HORTON	2	0.5	4	4.4	0
315	IN1456-040	6.44	278.9	1005.9	6.35	46.25	0.016	0.2	0.05	0.05	25	71.37	HORTON	2	0.5	4	4.4	0
316	IN1456-025	4.62	166.7	1207.5	4.85	20.13	0.016	0.2	0.05	0.05	25	67.64	HORTON	2	0.5	4	4.4	0
317	SAI_DT1455-001	270.75	3019.8	3905.5	1.43	12.59	0.016	0.2	0.05	0.05	25	91.79	HORTON	2.8	0.7	4	4.7	0
318	PD1552-020	3.88	249.9	676.7	5.19	25.08	0.016	0.2	0.05	0.05	25	72.14	HORTON	2.5	0.6	4	4.7	0
319	AE1552-021	2.00	277.2	314.7	13.77	9.71	0.016	0.2	0.05	0.05	25	64.34	HORTON	2.4	0.6	4	5.1	0
320	SAI_TW005	2.10	198.1	461.0	5.91	35.7	0.016	0.2	0.05	0.05	25	69.13	HORTON	2.5	0.6	4	4.7	0
321	SAI-013	2.36	276.8	371.4	6.91	33.96	0.016	0.2	0.05	0.05	25	66.62	HORTON	2.2	0.6	4	4.4	0
322	SAI_ET020	29.36	619.2	2065.7	2.4	32.57	0.016	0.2	0.05	0.05	25	64.4	HORTON	2	0.5	4	4.4	0
323	SAI_TW001	1.41	164.1	373.4	7.27	28.23	0.016	0.2	0.05	0.05	25	70.18	HORTON	2.5	0.6	4	4.4	0
324	AE1551-049	20.20	547.6	1607.2	1.06	20.5	0.016	0.2	0.05	0.05	25	78.27	HORTON	2.2	0.5	4	4.4	0
325	IN1551-053	1.22	103.7	514.0	0.51	55.67	0.016	0.2	0.05	0.05	25	64.19	HORTON	2	0.5	4	4.4	0
326	IN1551-055	1.01	88.4	497.9	1.9	58.86	0.016	0.2	0.05	0.05	25	64.19	HORTON	1.3	0.3	4	6.1	0
327	IN1551-043	3.95	273.7	628.0	1.96	39.32	0.016	0.2	0.05	0.05	25	64.19	HORTON	1.6	0.4	4	5.5	0
328	SAI_CV001	3.45	306.9	490.4	2.61	37.36	0.016	0.2	0.05	0.05	25	64.19	HORTON	1.7	0.4	4	5.2	0
329	IN1551-033	0.78	135.7	250.3	4.29	56.12	0.016	0.2	0.05	0.05	25	64.19	HORTON	1.8	0.4	4	5	0
330	IN1552-062	0.99	125.5	343.0	0.87	46.38	0.016	0.2	0.05	0.05	25	64.19	HORTON	2	0.5	4	4.5	0
331	IN1552-066	2.49	202.1	535.9	0.95	41.73	0.016	0.2	0.05	0.05	25	64.19	HORTON	1.2	0.2	4	6.6	0
332	IN1552-025	1.78	158.7	489.3	2.07	53.21	0.016	0.2	0.05	0.05	25	64.19	HORTON	1.7	0.4	4	5.3	0
333	IN1552-033	0.48	129.9	162.1	2.82	59.41	0.016	0.2	0.05	0.05	25	64.19	HORTON	1.8	0.4	4	4.9	0
334	IN1552-008	1.31	130.3	436.7	1.74	46.65	0.016	0.2	0.05	0.05	25	68.32	HORTON	1.4	0.3	4	6.1	0
335	PD1552-015	3.77	201.5	816.0	1.86	39.91	0.016	0.2	0.05	0.05	25	88.39	HORTON	2.5	0.6	4	4.4	0
336	IN1552-038	0.87	139.7	270.5	2.11	53.99	0.016	0.2	0.05	0.05	25	65.6	HORTON	1.4	0.3	4	6	0
337	AS1552-052	1.12	188.5	258.5	3.22	45.25	0.016	0.2	0.05	0.05	25	65.81	HORTON	1.7	0.4	4	5.3	0
338	IN1552-042	2.40	169.9	614.7	0.81	43.69	0.016	0.2	0.05	0.05	25	67.59	HORTON	1.7	0.4	4	5.2	0
339	IN1552-043	2.56	440.8	253.1	3.1	53.81	0.016	0.2	0.05	0.05	25	64.98	HORTON	1.1	0.2	4	6.8	0
340	SAI_MCC003	1.36	167.4	354.8	2.68	53.97	0.016	0.2	0.05	0.05	25	94.33	HORTON					

TABLE B2–SUBBASIN HYDROLOGY INPUT PARAMETERS: SCS

Subbasin				Flow		Percent	Impervious	Depression	Pervious		Time of			Initial	SCS Curve	
ID	Runoff Method	Outlet	Area (ac)	Length (ft)	Slope (%)	Impervious (%)	Storage (in)	Storage (in)	TC Method	Concentration (min)	Loss Method	Initial Method	Abstraction (in)	Number	Peak Rate Factor	
1	SCS Dimensionless UH	BSAI_001	384.6	6896.5	1.96	0	0.05	0.15	SCS	138.2	SCS CN	0.2 S	0.817	71	Standard (483.4)	
2	SCS Dimensionless UH	AE1668-005	4.4	508.7	3.04	0	0.05	0.15	SCS	11.6	SCS CN	0.2 S	0.597	77	Standard (483.4)	
3	SCS Dimensionless UH	IN1668-039	2.2	331.6	4.81	0	0.05	0.15	SCS	7.0	SCS CN	0.2 S	0.667	75	Standard (483.4)	
4	SCS Dimensionless UH	IN1668-048	2.9	499.4	4.18	0	0.05	0.15	SCS	9.2	SCS CN	0.2 S	0.532	79	Standard (483.4)	
5	SCS Dimensionless UH	IN1668-036	1.5	417.6	6.26	0	0.05	0.15	SCS	6.5	SCS CN	0.2 S	0.532	79	Standard (483.4)	
6	SCS Dimensionless UH	IN1668-029	1.8	626.6	4.42	0	0.05	0.15	SCS	12.1	SCS CN	0.2 S	0.667	75	Standard (483.4)	
7	SCS Dimensionless UH	IN1668-034	1.1	482.0	5.1	0	0.05	0.15	SCS	8.9	SCS CN	0.2 S	0.632	76	Standard (483.4)	
8	SCS Dimensionless UH	IN1668-017	1.6	293.0	1.6	0	0.05	0.15	SCS	8.0	SCS CN	0.2 S	0.353	85	Standard (483.4)	
9	SCS Dimensionless UH	IN1668-023	3.2	630.8	4.9	0	0.05	0.15	SCS	11.5	SCS CN	0.2 S	0.667	75	Standard (483.4)	
10	SCS Dimensionless UH	IN1668-013	3.0	540.3	3.38	0	0.05	0.15	SCS	11.6	SCS CN	0.2 S	0.597	77	Standard (483.4)	
11	SCS Dimensionless UH	BSAI_011	1.2	387.0	5.03	0	0.05	0.15	SCS	7.3	SCS CN	0.2 S	0.597	77	Standard (483.4)	
12	SCS Dimensionless UH	IN1668-026	24.2	1366.7	5.29	0	0.05	0.15	SCS	23.0	SCS CN	0.2 S	0.817	71	Standard (483.4)	
13	SCS Dimensionless UH	DT1769-003	37.7	1448.7	6.65	0	0.05	0.15	SCS	22.1	SCS CN	0.2 S	0.857	70	Standard (483.4)	
14	SCS Dimensionless UH	RD1768-001	2.3	696.7	6.34	0	0.05	0.15	SCS	13.3	SCS CN	0.2 S	0.941	68	Standard (483.4)	
15	SCS Dimensionless UH	IN1768-068	1.6	358.8	4.02	0	0.05	0.15	SCS	8.3	SCS CN	0.2 S	0.703	74	Standard (483.4)	
16	SCS Dimensionless UH	IN1768-070	1.2	378.5	5.66	0	0.05	0.15	SCS	6.5	SCS CN	0.2 S	0.564	78	Standard (483.4)	
17	SCS Dimensionless UH	IN1768-072	1.7	493.6	6.37	0	0.05	0.15	SCS	6.5	SCS CN	0.2 S	0.41	83	Standard (483.4)	
18	SCS Dimensionless UH	SAI-051	57.6	1755.9	2.58	0	0.05	0.15	SCS	37.1	SCS CN	0.2 S	0.703	74	Standard (483.4)	
19	SCS Dimensionless UH	TSAI_GW_OL1_Out	3.2	368.3	4.75	0	0.05	0.15	SCS	10.0	SCS CN	0.2 S	1.077	65	Standard (483.4)	
20	SCS Dimensionless UH	TSAI_014	16.3	1117.8	2.32	0	0.05	0.15	SCS	34.7	SCS CN	0.2 S	1.077	65	Standard (483.4)	
21	SCS Dimensionless UH	Pond_GW_OI1	45.1	2821.8	4.22	0	0.05	0.15	SCS	46.1	SCS CN	0.2 S	0.817	71	Standard (483.4)	
22	SCS Dimensionless UH	IN1567-024	5.4	534.0	1.61	0	0.05	0.15	SCS	17.1	SCS CN	0.2 S	0.632	76	Standard (483.4)	
23	SCS Dimensionless UH	IN1567-021	0.7	248.7	2.26	0	0.05	0.15	SCS	6.9	SCS CN	0.2 S	0.5	80	Standard (483.4)	
24	SCS Dimensionless UH	IN1567-016	0.9	360.7	5.92	0	0.05	0.15	SCS	5.4	SCS CN	0.2 S	0.439	82	Standard (483.4)	
25	SCS Dimensionless UH	SAI_HL_Box003	2.9	778.1	2.63	0	0.05	0.15	SCS	17.6	SCS CN	0.2 S	0.597	77	Standard (483.4)	
26	SCS Dimensionless UH	IN1567-008	3.3	862.9	5.38	0	0.05	0.15	SCS	12.2	SCS CN	0.2 S	0.5	80	Standard (483.4)	
27	SCS Dimensionless UH	SAI_HL_Box001	5.5	938.3	5.04	0	0.05	0.15	SCS	16.1	SCS CN	0.2 S	0.703	74	Standard (483.4)	
28	SCS Dimensionless UH	IN1567-004	7.9	1415.3	2.62	0	0.05	0.15	SCS	25.1	SCS CN	0.2 S	0.469	81	Standard (483.4)	
29	SCS Dimensionless UH	IN1567-033	3.1	842.0	5.91	0	0.05	0.15	SCS	10.7	SCS CN	0.2 S	0.439	82	Standard (483.4)	
30	SCS Dimensionless UH	IN1567-029	5.0	1053.0	4.54	0	0.05	0.15	SCS	14.6	SCS CN	0.2 S	0.439	82	Standard (483.4)	
31	SCS Dimensionless UH	IN1566-003	3.2	819.5	2.78	0	0.05	0.15	SCS	15.2	SCS CN	0.2 S	0.439	82	Standard (483.4)	
32	SCS Dimensionless UH	IN1565-002	4.6	557.0	3.54	0	0.05	0.15	SCS	9.3	SCS CN	0.2 S	0.381	84	Standard (483.4)	
33	SCS Dimensionless UH	AE1566-005	57.1	1816.2	2.75	0	0.05	0.15	SCS	42.3	SCS CN	0.2 S	0.899	69	Standard (483.4)	
34	SCS Dimensionless UH	IN1767-013	0.9	192.9	6.12	0	0.05	0.15	SCS	3.1	SCS CN	0.2 S	0.41	83	Standard (483.4)	
35	SCS Dimensionless UH	IN1767-009	7.0	1234.3	3.3	0	0.05	0.15	SCS	24.0	SCS CN	0.2 S	0.667	75	Standard (483.4)	
36	SCS Dimensionless UH	IN1767-006	1.3	337.2	2.42	0	0.05	0.15	SCS	7.3	SCS CN	0.2 S	0.353	85	Standard (483.4)	
37	SCS Dimensionless UH	IN1767-004	1.1	505.4	1.49	0	0.05	0.15	SCS	14.1	SCS CN	0.2 S	0.439	82	Standard (483.4)	
38	SCS Dimensionless UH	AS1767-003	7.5	1884.4	3.63	0	0.05	0.15	SCS	32.2	SCS CN	0.2 S	0.667	75	Standard (483.4)	
39	SCS Dimensionless UH	**AE1767-001	2.8	1848.6	3.69	0	0.05	0.15	SCS	27.9	SCS CN	0.2 S	0.532	79	Standard (483.4)	
40	SCS Dimensionless UH	IN1768-026	8.4	1821.1	3.69	0	0.05	0.15	SCS	25.1	SCS CN	0.2 S	0.439	82	Standard (483.4)	
41	SCS Dimensionless UH	PD1768-023	1.5	145.1	5.88	0	0.05	0.15	SCS	3.6	SCS CN	0.2 S	0.817	71	Standard (483.4)	
42	SCS Dimensionless UH	IN1768-008	2.3	634.8	2.78	0	0.05	0.15	SCS	14.9	SCS CN	0.2 S	0.632	76	Standard (483.4)	
43	SCS Dimensionless UH	IN1768-013	4.2	982.7	4.6	0	0.05	0.15	SCS	15.1	SCS CN	0.2 S	0.532	79	Standard (483.4)	
44	SCS Dimensionless UH	IN1768-016	1.6	447.6	1.39	0	0.05	0.15	SCS	12.4	SCS CN	0.2 S	0.381	84	Standard (483.4)	
45	SCS Dimensionless UH	IN1768-049	2.3	346.3	4.59	0	0.05	0.15	SCS	6.8	SCS CN	0.2 S	0.564	78	Standard (483.4)	
46	SCS Dimensionless UH	IN1768-029	1.2	248.7	6.75	0	0.05	0.15	SCS	4.1	SCS CN	0.2 S	0.532	79	Standard (483.4)	
47	SCS Dimensionless UH	IN1768-035	0.5	254.7	6.93	0	0.05	0.15	SCS	3.9	SCS CN	0.2 S	0.469	81	Standard (483.4)	
48	SCS Dimensionless UH	IN1768-042	3.3	657.7	6.81	0	0.05	0.15	SCS	9.5	SCS CN	0.2 S	0.597	77	Standard (483.4)	
49	SCS Dimensionless UH	IN1768-062	0.6	285.6	8.95	0	0.05	0.15	SCS	3.7	SCS CN	0.2 S	0.439	82	Standard (483.4)	
50	SCS Dimensionless UH	IN1868-008	1.1	294.8	4.01	0	0.05	0.15	SCS	4.9	SCS CN	0.2 S	0.326	86	Standard (483.4)	
51	SCS Dimensionless UH	PD1868-036	2.4	429.1	5.7	0	0.05	0.15	SCS	5.3	SCS CN	0.2 S	0.299	87	Standard (483.4)	
52	SCS Dimensionless UH	IN1868-003	1.3	418.8	5.05	0	0.05	0.15	SCS	5.6	SCS CN	0.2 S	0.299	87	Standard (483.4)	
53	SCS Dimensionless UH	IN1767-014	0.9	440.9	3.06	0	0.05	0.15	SCS	7.7	SCS CN	0.2 S	0.326	86	Standard (483.4)	
54	SCS Dimensionless UH	IN1766-006	1.6	494.4	3.23	0	0.05	0.15	SCS	8.5	SCS CN	0.2 S	0.353	85	Standard (483.4)	
55	SCS Dimensionless UH	IN1766-002	2.2	381.1	3.91	0	0.05	0.15	SCS	7.7	SCS CN	0.2 S	0.532	79	Standard (483.4)	
56	SCS Dimensionless UH	AE1767-017	40.7	2707.1	3.36	0	0.05	0.15	SCS	44.7	SCS CN	0.2 S	0.667	75	Standard (483.4)	
57	SCS Dimensionless UH	AE1866-006	18.0	1091.8	4.9	0	0.05	0.15	SCS	15.4	SCS CN	0.2 S	0.5	80	Standard (483.4)	
58	SCS Dimensionless UH	IN1766-013	3.1	732.9	5.37	0	0.05	0.15	SCS	11.7	SCS CN	0.2 S	0.597	77	Standard (483.4)	
59	SCS Dimensionless UH	IN1666-001	5.6	1555.0	3.01	0	0.05	0.15	SCS	24.5	SCS CN	0.2 S	0.439	82	Standard (483.4)	
60	SCS Dimensionless UH	AE1665-013	34.7	2060.1	1.41	0	0.05	0.15	SCS	63.7	SCS CN	0.2 S	0.857	70	Standard (483.4)	
61	SCS Dimensionless UH	IN1665-017	4.4	2198.3	1.96	0	0.05	0.15	SCS	45.3	SCS CN	0.2 S	0.564	78	Standard (483.4)	
62	SCS Dimensionless UH	IN1665-016	13.6	1157.5	4.02	0	0.05	0.15	SCS	25.8	SCS CN	0.2 S	0.985	67	Standard (483.4)	
63	SCS Dimensionless UH	IN1665-004	6.3	993.3	3.92	0	0.05	0.15	SCS	22.5	SCS CN	0.2 S	0.941	68	Standard (483.4)	
64	SCS Dimensionless UH	IN1565-013	3.2	371.2	2.03	0	0.05	0.15	SCS	10.4	SCS CN	0.2 S	0.532	79	Standard (483.4)	
65	SCS Dimensionless UH	IN1564-003	0.7	317.7	3.4	0	0.05	0.15	SCS	7.1	SCS CN	0.2 S	0.532	79	Standard (483.4)	
66	SCS Dimensionless UH	IN1665-008	12.4	1155.8	4.91	0	0.05	0.15	SCS	21.5	SCS CN	0.2 S	0.857	70	Standard (483.4)	
67	SCS Dimensionless UH	IN1665-001	4.3	1032.7	4.37	0	0.05	0.15	SCS	19.7	SCS CN	0.2 S	0.778	72	Standard (483.4)	
68	SCS Dimensionless UH	IN1765-001	4.5	864.4	4.76	0	0.05	0.15	SCS	18.2	SCS CN	0.2 S	0.941	68	Standard (483.4)	
69	SCS Dimensionless UH	IN1765-002	6.6	1236.4	4.29	0	0.05	0.15	SCS	25.6	SCS CN	0.2 S	0.941	68	Standard (483.4)	
70	SCS Dimensionless UH	IN1765-004	6.8	920.7	4.1	0	0.05	0.15	SCS	17.1	SCS CN	0.2 S	0.667	75	Standard (483.4)	
71	SCS Dimensionless UH	IN1765-006	2.3	576.5	5.19	0	0.05	0.15	SCS	7.9	SCS CN	0.2 S	0.381	84	Standard (483.4)	
72	SCS Dimensionless UH	IN1764-002	6.8	866.1	4.94	0	0.05	0.15	SCS	13.1	SCS CN	0.2 S	0.532	79	Standard (483.4)	
73	SCS Dimensionless UH	IN1865-002	4.1	486.6	7.07	0	0.05	0.15	SCS	7.6	SCS CN	0.2 S	0.632	76	Standard (483.4)	
74	SCS Dimensionless UH	IN1765-008	5.1	709.5	4.36	0	0.05	0.15	SCS	14.2	SCS CN	0.2 S	0.74	73	Standard (483.4)	
75	SCS Dimensionless UH	IN1764-010	1.9	424.6	7.48	0	0.05	0.15	SCS	6.8	SCS CN	0.2 S	0.667	75	Standard (483.4)	
76	SCS Dimensionless UH	IN1764-005	7.5	542.2	6.31	0	0.05	0.15	SCS	7.3	SCS CN	0.2 S	0.439	82	Standard (483.4)	
77	SCS Dimensionless UH	IN1764-011	2.3	643.9	6.9	0	0.05	0.15	SCS	8.8	SCS CN	0.2 S	0.532	79	Standard (483.4)	
78	SCS Dimensionless UH	IN1764-017	1.8	398.8	4.58	0	0.05	0.15	SCS	6.2	SCS CN	0.2 S	0.381	84	Standard (483.4)	
79	SCS Dimensionless UH	IN1763-002	0.6	277.4	5.86	0	0.05	0.15	SCS	4.1	SCS CN	0.2 S	0.381	84	Standard (483.4)	
80	SCS Dimensionless UH	IN1763-006	1.0	344.0	3.61	0	0.05	0.15	SCS	6.0	SCS CN	0.2 S	0.353	85	Standard (483.4)	
81	SCS Dimensionless UH	Pond_ME_SPond_DS	4.7	751.3	4.72	0	0.05	0.15	SCS	16.8	SCS CN	0.2 S	0.985	67	Standard (483.4)	
82	SCS Dimensionless UH	Pond_ME_SPond	13.5	1242.3	3.45	0	0.05	0.15	SCS	27.2						

140	SCS Dimensionless UH	IN1862-044	3.1	575.4	2.01	0	0.05	0.15	SCS	14.4	SCS CN	0.2 S	0.5	80	Standard (483.4)
141	SCS Dimensionless UH	IN1862-058	2.0	430.1	2.98	0	0.05	0.15	SCS	10.0	SCS CN	0.2 S	0.564	78	Standard (483.4)
142	SCS Dimensionless UH	IN1862-064	2.4	583.4	1.73	0	0.05	0.15	SCS	14.7	SCS CN	0.2 S	0.439	82	Standard (483.4)
143	SCS Dimensionless UH	SAI_ValleyView4_US	6.3	1128.1	0.9	0	0.05	0.15	SCS	49.2	SCS CN	0.2 S	0.857	70	Standard (483.4)
144	SCS Dimensionless UH	BSAI_144	29.6	2383.4	2.26	0	0.05	0.15	SCS	64.5	SCS CN	0.2 S	1.077	65	Standard (483.4)
145	SCS Dimensionless UH	Pond_SV_B1	5.6	931.1	4.43	0	0.05	0.15	SCS	19.5	SCS CN	0.2 S	0.899	69	Standard (483.4)
146	SCS Dimensionless UH	Pond_SV_B2	6.8	1002.4	4.21	0	0.05	0.15	SCS	23.0	SCS CN	0.2 S	1.03	66	Standard (483.4)
147	SCS Dimensionless UH	TSAI_Conf002	55.8	3805.2	3.25	0	0.05	0.15	SCS	72.3	SCS CN	0.2 S	0.941	68	Standard (483.4)
148	SCS Dimensionless UH	Pond_CP_West	12.9	1603.4	4.54	0	0.05	0.15	SCS	28.3	SCS CN	0.2 S	0.817	71	Standard (483.4)
149	SCS Dimensionless UH	Pond_CR_WetPond	11.0	1952.9	3.41	0	0.05	0.15	SCS	38.2	SCS CN	0.2 S	0.817	71	Standard (483.4)
150	SCS Dimensionless UH	Pond_CR_WetPond_DS	23.6	2353.1	3.9	0	0.05	0.15	SCS	40.3	SCS CN	0.2 S	0.778	72	Standard (483.4)
151	SCS Dimensionless UH	BSAI_151	20.6	1870.7	1.76	0	0.05	0.15	SCS	51.3	SCS CN	0.2 S	0.817	71	Standard (483.4)
152	SCS Dimensionless UH	SAI_BPS012	41.8	3432.7	1.71	0	0.05	0.15	SCS	77.9	SCS CN	0.2 S	0.703	74	Standard (483.4)
153	SCS Dimensionless UH	**DT1461-002	0.6	822.5	4.64	0	0.05	0.15	SCS	14.2	SCS CN	0.2 S	0.632	76	Standard (483.4)
154	SCS Dimensionless UH	SAI_T0006	6.4	1510.8	4.47	0	0.05	0.15	SCS	27.2	SCS CN	0.2 S	0.817	71	Standard (483.4)
155	SCS Dimensionless UH	SAI_T0003	17.2	1994.0	2.79	0	0.05	0.15	SCS	41.8	SCS CN	0.2 S	0.778	72	Standard (483.4)
156	SCS Dimensionless UH	DT1460-002	26.8	2318.1	1.84	0	0.05	0.15	SCS	71.7	SCS CN	0.2 S	1.125	64	Standard (483.4)
157	SCS Dimensionless UH	SAI_TOW001	25.9	1340.3	4.58	0	0.05	0.15	SCS	29.3	SCS CN	0.2 S	1.125	64	Standard (483.4)
158	SCS Dimensionless UH	BSAI_158	1.4	474.9	2.64	0	0.05	0.15	SCS	10.4	SCS CN	0.2 S	0.469	81	Standard (483.4)
159	SCS Dimensionless UH	DT1560-002	6.0	709.1	7.02	0	0.05	0.15	SCS	12.8	SCS CN	0.2 S	0.941	68	Standard (483.4)
160	SCS Dimensionless UH	SAI_T0001	20.3	1381.6	5.35	0	0.05	0.15	SCS	24.4	SCS CN	0.2 S	0.899	69	Standard (483.4)
161	SCS Dimensionless UH	IN1559-005	0.9	186.6	1.27	0	0.05	0.15	SCS	5.4	SCS CN	0.2 S	0.247	89	Standard (483.4)
162	SCS Dimensionless UH	IN1559-007	3.4	888.3	2.98	0	0.05	0.15	SCS	17.8	SCS CN	0.2 S	0.564	78	Standard (483.4)
163	SCS Dimensionless UH	HD1559-012	8.1	1146.3	0.81	0	0.05	0.15	SCS	58.4	SCS CN	0.2 S	1.03	66	Standard (483.4)
164	SCS Dimensionless UH	IN1559-006	5.3	577.9	3.4	0	0.05	0.15	SCS	15.6	SCS CN	0.2 S	0.941	68	Standard (483.4)
165	SCS Dimensionless UH	SAI_BPS017	4.2	731.7	3.66	0	0.05	0.15	SCS	18.7	SCS CN	0.2 S	0.985	67	Standard (483.4)
166	SCS Dimensionless UH	AE1458-018	4.0	750.3	2.48	0	0.05	0.15	SCS	20.8	SCS CN	0.2 S	0.817	71	Standard (483.4)
167	SCS Dimensionless UH	IN1458-005	0.2	128.4	0.83	0	0.05	0.15	SCS	5.3	SCS CN	0.2 S	0.299	87	Standard (483.4)
168	SCS Dimensionless UH	AE1458-017	3.3	650.7	4.48	0	0.05	0.15	SCS	13.8	SCS CN	0.2 S	0.817	71	Standard (483.4)
169	SCS Dimensionless UH	IN1458-008	1.9	345.8	4.9	0	0.05	0.15	SCS	6.3	SCS CN	0.2 S	0.532	79	Standard (483.4)
170	SCS Dimensionless UH	IN1458-023	2.6	473.6	2.17	0	0.05	0.15	SCS	12.2	SCS CN	0.2 S	0.532	79	Standard (483.4)
171	SCS Dimensionless UH	IN1457-010	4.2	624.3	2.32	0	0.05	0.15	SCS	17.1	SCS CN	0.2 S	0.703	74	Standard (483.4)
172	SCS Dimensionless UH	IN1458-011	3.6	702.3	3.37	0	0.05	0.15	SCS	14.3	SCS CN	0.2 S	0.597	77	Standard (483.4)
173	SCS Dimensionless UH	IN1457-002	0.7	237.9	2.01	0	0.05	0.15	SCS	5.6	SCS CN	0.2 S	0.299	87	Standard (483.4)
174	SCS Dimensionless UH	IN1457-014	4.2	794.6	2.35	0	0.05	0.15	SCS	17.8	SCS CN	0.2 S	0.532	79	Standard (483.4)
175	SCS Dimensionless UH	SAI_SPBP001	9.0	1131.8	1.86	0	0.05	0.15	SCS	28.2	SCS CN	0.2 S	0.597	77	Standard (483.4)
176	SCS Dimensionless UH	SAI-067	18.2	1793.0	1.5	0	0.05	0.15	SCS	55.2	SCS CN	0.2 S	0.857	70	Standard (483.4)
177	SCS Dimensionless UH	SAI-075	26.5	725.7	2.11	0	0.05	0.15	SCS	16.9	SCS CN	0.2 S	0.5	80	Standard (483.4)
178	SCS Dimensionless UH	IN1557-011	1.2	457.3	3.79	0	0.05	0.15	SCS	6.9	SCS CN	0.2 S	0.299	87	Standard (483.4)
179	SCS Dimensionless UH	IN1557-014	2.2	499.9	3.65	0	0.05	0.15	SCS	7.5	SCS CN	0.2 S	0.299	87	Standard (483.4)
180	SCS Dimensionless UH	IN1557-018	12.7	868.6	3.77	0	0.05	0.15	SCS	11.5	SCS CN	0.2 S	0.299	87	Standard (483.4)
181	SCS Dimensionless UH	IN1657-002	1.6	619.9	3.79	0	0.05	0.15	SCS	10.4	SCS CN	0.2 S	0.439	82	Standard (483.4)
182	SCS Dimensionless UH	IN1557-002	7.8	1098.2	2.22	0	0.05	0.15	SCS	18.8	SCS CN	0.2 S	0.326	86	Standard (483.4)
183	SCS Dimensionless UH	IN1557-009	4.5	878.5	3.87	0	0.05	0.15	SCS	14.1	SCS CN	0.2 S	0.469	81	Standard (483.4)
184	SCS Dimensionless UH	IN1656-006	6.5	641.6	5.3	0	0.05	0.15	SCS	7.4	SCS CN	0.2 S	0.273	88	Standard (483.4)
185	SCS Dimensionless UH	AE1657-003	16.5	1213.6	3.53	0	0.05	0.15	SCS	19.7	SCS CN	0.2 S	0.5	80	Standard (483.4)
186	SCS Dimensionless UH	IN1656-002	0.4	88.6	5.52	0	0.05	0.15	SCS	1.3	SCS CN	0.2 S	0.198	91	Standard (483.4)
187	SCS Dimensionless UH	IN1656-005	16.2	1622.8	2.13	0	0.05	0.15	SCS	26.2	SCS CN	0.2 S	0.326	86	Standard (483.4)
188	SCS Dimensionless UH	IN1656-009	0.7	318.3	4.08	0	0.05	0.15	SCS	4.2	SCS CN	0.2 S	0.198	91	Standard (483.4)
189	SCS Dimensionless UH	AE1655-028	3.3	719.8	3.34	0	0.05	0.15	SCS	12.5	SCS CN	0.2 S	0.439	82	Standard (483.4)
190	SCS Dimensionless UH	IN1656-004	1.5	389.4	3.87	0	0.05	0.15	SCS	6.2	SCS CN	0.2 S	0.326	86	Standard (483.4)
191	SCS Dimensionless UH	IN1655-021	1.5	358.7	3.56	0	0.05	0.15	SCS	5.4	SCS CN	0.2 S	0.247	89	Standard (483.4)
192	SCS Dimensionless UH	IN1656-012	0.8	485.4	2.74	0	0.05	0.15	SCS	9.5	SCS CN	0.2 S	0.381	84	Standard (483.4)
193	SCS Dimensionless UH	AE1655-018	3.0	572.6	3.31	0	0.05	0.15	SCS	12.2	SCS CN	0.2 S	0.597	77	Standard (483.4)
194	SCS Dimensionless UH	PD1655-026	5.1	535.0	5.56	0	0.05	0.15	SCS	8.2	SCS CN	0.2 S	0.5	80	Standard (483.4)
195	SCS Dimensionless UH	IN1655-008	10.0	665.9	2.71	0	0.05	0.15	SCS	11.4	SCS CN	0.2 S	0.326	86	Standard (483.4)
196	SCS Dimensionless UH	IN1655-015	2.0	282.7	3.01	0	0.05	0.15	SCS	5.3	SCS CN	0.2 S	0.299	87	Standard (483.4)
197	SCS Dimensionless UH	IN1655-003	3.3	886.3	3.25	0	0.05	0.15	SCS	19.1	SCS CN	0.2 S	0.703	74	Standard (483.4)
198	SCS Dimensionless UH	AS1655-034	1.4	418.4	4.83	0	0.05	0.15	SCS	8.4	SCS CN	0.2 S	0.667	75	Standard (483.4)
199	SCS Dimensionless UH	BSAI_199	0.4	119.5	5.14	0	0.05	0.15	SCS	2.5	SCS CN	0.2 S	0.469	81	Standard (483.4)
200	SCS Dimensionless UH	BSAI_200	1.3	187.7	2.63	0	0.05	0.15	SCS	5.0	SCS CN	0.2 S	0.469	81	Standard (483.4)
201	SCS Dimensionless UH	BSAI_201	1.7	209.4	2.65	0	0.05	0.15	SCS	5.4	SCS CN	0.2 S	0.469	81	Standard (483.4)
202	SCS Dimensionless UH	IN1559-027	8.5	969.2	2.07	0	0.05	0.15	SCS	22.2	SCS CN	0.2 S	0.532	79	Standard (483.4)
203	SCS Dimensionless UH	IN1559-021	2.6	539.6	1.07	0	0.05	0.15	SCS	18.2	SCS CN	0.2 S	0.469	81	Standard (483.4)
204	SCS Dimensionless UH	IN1559-017	1.0	395.1	1.41	0	0.05	0.15	SCS	10.8	SCS CN	0.2 S	0.353	85	Standard (483.4)
205	SCS Dimensionless UH	IN1659-020	0.9	292.7	1.37	0	0.05	0.15	SCS	8.9	SCS CN	0.2 S	0.381	84	Standard (483.4)
206	SCS Dimensionless UH	AE1559-032	1.9	564.2	2.32	0	0.05	0.15	SCS	19.1	SCS CN	0.2 S	0.985	67	Standard (483.4)
207	SCS Dimensionless UH	AE1659-015_01	0.8	298.3	1.53	0	0.05	0.15	SCS	8.0	SCS CN	0.2 S	0.326	86	Standard (483.4)
208	SCS Dimensionless UH	IN1660-031	4.6	465.7	1.44	0	0.05	0.15	SCS	13.9	SCS CN	0.2 S	0.469	81	Standard (483.4)
209	SCS Dimensionless UH	AE1659-014	6.5	1110.6	1.33	0	0.05	0.15	SCS	33.8	SCS CN	0.2 S	0.632	76	Standard (483.4)
210	SCS Dimensionless UH	IN1660-021	9.8	908.9	6.52	0	0.05	0.15	SCS	14.6	SCS CN	0.2 S	0.778	72	Standard (483.4)
211	SCS Dimensionless UH	IN1660-037	0.5	301.7	0.83	0	0.05	0.15	SCS	9.8	SCS CN	0.2 S	0.247	89	Standard (483.4)
212	SCS Dimensionless UH	AE1760-005	0.5	423.5	1.84	0	0.05	0.15	SCS	18.9	SCS CN	0.2 S	1.175	63	Standard (483.4)
213	SCS Dimensionless UH	AE1760-002	0.3	313.1	0.72	0	0.05	0.15	SCS	18.7	SCS CN	0.2 S	0.778	72	Standard (483.4)
214	SCS Dimensionless UH	IN1760-012	0.6	261.7	5.89	0	0.05	0.15	SCS	5.4	SCS CN	0.2 S	0.703	74	Standard (483.4)
215	SCS Dimensionless UH	IN1660-015	7.2	985.8	5.78	0	0.05	0.15	SCS	15.2	SCS CN	0.2 S	0.667	75	Standard (483.4)
216	SCS Dimensionless UH	IN1661-002	1.8	545.2	5.72	0	0.05	0.15	SCS	9.5	SCS CN	0.2 S	0.667	75	Standard (483.4)
217	SCS Dimensionless UH	SAI-002	172.8	3414.7	3.11	0	0.05	0.15	SCS	60.8	SCS CN	0.2 S	0.778	72	Standard (483.4)
218	SCS Dimensionless UH	IN1659-031	0.9	247.9	0.92	0	0.05	0.15	SCS	9.2	SCS CN	0.2 S	0.353	85	Standard (483.4)
219	SCS Dimensionless UH	IN1659-024	1.2	202.1	1.59	0	0.05	0.15	SCS	6.2	SCS CN	0.2 S	0.381	84	Standard (483.4)
220	SCS Dimensionless UH	IN1659-037	1.6	425.0	1.71	0	0.05	0.15	SCS	11.1	SCS CN	0.2 S	0.41	83	Standard (483.4)
221	SCS Dimensionless UH	SAI_TVA005	1.0	145.6	3.05	0	0.05	0.15	SCS	4.5	SCS CN	0.2 S	0.667	75	Standard (483.4)
222	SCS Dimensionless UH	SAI_TVA004	1.3	182.6	2.86	0	0.05	0.15	SCS	6.4	SCS CN	0.2 S	0.857		

283	SCS Dimensionless UH	Pond_TF_OL1	50.5	2587.7	4.52	0	0.05	0.15	SCS	40.4	SCS CN	0.2 S	0.778	72	Standard (483.4)
284	SCS Dimensionless UH	Pond_CR_WetPond	18.2	1840.6	3.55	0	0.05	0.15	SCS	33.8	SCS CN	0.2 S	0.74	73	Standard (483.4)
285	SCS Dimensionless UH	BSAI_285	5.0	835.7	3.65	0	0.05	0.15	SCS	17.2	SCS CN	0.2 S	0.703	74	Standard (483.4)
286	SCS Dimensionless UH	BSAI_286	29.6	1934.9	1.13	0	0.05	0.15	SCS	73.3	SCS CN	0.2 S	0.985	67	Standard (483.4)
287	SCS Dimensionless UH	TSAI_Conf011	87.3	6092.8	2.21	0	0.05	0.15	SCS	127.7	SCS CN	0.2 S	0.941	68	Standard (483.4)
288	SCS Dimensionless UH	Pond_WelHomeDr	33.9	1878.6	4.33	0	0.05	0.15	SCS	27.7	SCS CN	0.2 S	0.597	77	Standard (483.4)
289	SCS Dimensionless UH	Pond_TF_NW	0.8	200.4	6.68	0	0.05	0.15	SCS	3.5	SCS CN	0.2 S	0.532	79	Standard (483.4)
290	SCS Dimensionless UH	Pond_TF_NA	0.6	219.8	8.92	0	0.05	0.15	SCS	3.3	SCS CN	0.2 S	0.532	79	Standard (483.4)
291	SCS Dimensionless UH	Pond_TF_NB	1.5	294.3	8.3	0	0.05	0.15	SCS	4.3	SCS CN	0.2 S	0.532	79	Standard (483.4)
292	SCS Dimensionless UH	Pond_TF_NC_A&B	3.2	739.6	4.34	0	0.05	0.15	SCS	12.4	SCS CN	0.2 S	0.532	79	Standard (483.4)
293	SCS Dimensionless UH	Pond_WH_Wet	35.3	3963.3	2.82	0	0.05	0.15	SCS	70.0	SCS CN	0.2 S	0.74	73	Standard (483.4)
294	SCS Dimensionless UH	Pond_TF_W	2.0	402.8	6.04	0	0.05	0.15	SCS	6.4	SCS CN	0.2 S	0.532	79	Standard (483.4)
295	SCS Dimensionless UH	TSAI_005	35.8	2193.8	4.72	0	0.05	0.15	SCS	32.8	SCS CN	0.2 S	0.703	74	Standard (483.4)
296	SCS Dimensionless UH	Pond_Swaboda	108.0	2762.0	2.84	0	0.05	0.15	SCS	59.8	SCS CN	0.2 S	0.941	68	Standard (483.4)
297	SCS Dimensionless UH	SAI-036	14.7	2100.3	2.31	0	0.05	0.15	SCS	53.3	SCS CN	0.2 S	0.941	68	Standard (483.4)
298	SCS Dimensionless UH	SAI-037	83.3	1931.6	0.76	0	0.05	0.15	SCS	94.0	SCS CN	0.2 S	1.077	65	Standard (483.4)
299	SCS Dimensionless UH	AE1456-034	7.0	672.6	2.2	0	0.05	0.15	SCS	16.6	SCS CN	0.2 S	0.564	78	Standard (483.4)
300	SCS Dimensionless UH	AE1356-001	1.2	446.9	5.4	0	0.05	0.15	SCS	8.6	SCS CN	0.2 S	0.703	74	Standard (483.4)
301	SCS Dimensionless UH	IN1456-004	0.5	201.2	0.56	0	0.05	0.15	SCS	7.6	SCS CN	0.2 S	0.174	92	Standard (483.4)
302	SCS Dimensionless UH	IN1456-076	0.6	246.4	5.36	0	0.05	0.15	SCS	4.3	SCS CN	0.2 S	0.469	81	Standard (483.4)
303	SCS Dimensionless UH	IN1456-078	0.4	204.6	5.05	0	0.05	0.15	SCS	3.6	SCS CN	0.2 S	0.41	83	Standard (483.4)
304	SCS Dimensionless UH	IN1457-045	4.1	767.8	3.28	0	0.05	0.15	SCS	16.0	SCS CN	0.2 S	0.632	76	Standard (483.4)
305	SCS Dimensionless UH	IN1456-066	2.6	580.1	4.05	0	0.05	0.15	SCS	9.9	SCS CN	0.2 S	0.469	81	Standard (483.4)
306	SCS Dimensionless UH	IN1456-009	0.6	328.1	4.37	0	0.05	0.15	SCS	5.7	SCS CN	0.2 S	0.41	83	Standard (483.4)
307	SCS Dimensionless UH	IN1456-063	1.3	421.7	5.05	0	0.05	0.15	SCS	6.4	SCS CN	0.2 S	0.41	83	Standard (483.4)
308	SCS Dimensionless UH	IN1457-040	1.6	318.7	6.71	0	0.05	0.15	SCS	5.7	SCS CN	0.2 S	0.667	75	Standard (483.4)
309	SCS Dimensionless UH	IN1457-028	3.4	612.6	2.28	0	0.05	0.15	SCS	17.0	SCS CN	0.2 S	0.703	74	Standard (483.4)
310	SCS Dimensionless UH	IN1456-011	0.6	403.3	1.01	0	0.05	0.15	SCS	13.0	SCS CN	0.2 S	0.353	85	Standard (483.4)
311	SCS Dimensionless UH	IN1456-058	4.1	591.5	4.26	0	0.05	0.15	SCS	12.8	SCS CN	0.2 S	0.778	72	Standard (483.4)
312	SCS Dimensionless UH	IN1456-019	0.8	356.1	0.28	0	0.05	0.15	SCS	18.5	SCS CN	0.2 S	0.222	90	Standard (483.4)
313	SCS Dimensionless UH	IN1456-046	1.0	328.9	6.01	0	0.05	0.15	SCS	4.8	SCS CN	0.2 S	0.41	83	Standard (483.4)
314	SCS Dimensionless UH	AS1457-020	3.5	492.2	2.68	0	0.05	0.15	SCS	11.4	SCS CN	0.2 S	0.532	79	Standard (483.4)
315	SCS Dimensionless UH	IN1456-040	6.4	1005.9	6.35	0	0.05	0.15	SCS	13.5	SCS CN	0.2 S	0.564	78	Standard (483.4)
316	SCS Dimensionless UH	IN1456-025	4.6	1207.8	4.85	0	0.05	0.15	SCS	23.6	SCS CN	0.2 S	0.941	68	Standard (483.4)
317	SCS Dimensionless UH	SAI_DT1455-001	270.8	3905.5	1.43	0	0.05	0.15	SCS	114.2	SCS CN	0.2 S	0.985	67	Standard (483.4)
318	SCS Dimensionless UH	PD1552-020	3.9	676.8	5.19	0	0.05	0.15	SCS	13.3	SCS CN	0.2 S	0.817	71	Standard (483.4)
319	SCS Dimensionless UH	AE1552-021	2.0	314.7	13.77	0	0.05	0.15	SCS	4.8	SCS CN	0.2 S	0.941	68	Standard (483.4)
320	SCS Dimensionless UH	SAI_TW005	2.1	460.9	5.91	0	0.05	0.15	SCS	8.2	SCS CN	0.2 S	0.667	75	Standard (483.4)
321	SCS Dimensionless UH	SAI-013	2.4	371.4	6.91	0	0.05	0.15	SCS	6.5	SCS CN	0.2 S	0.703	74	Standard (483.4)
322	SCS Dimensionless UH	SAI_ET020	29.4	2065.6	2.4	0	0.05	0.15	SCS	45.0	SCS CN	0.2 S	0.74	73	Standard (483.4)
323	SCS Dimensionless UH	SAI_TW001	1.4	373.3	7.27	0	0.05	0.15	SCS	7.0	SCS CN	0.2 S	0.817	71	Standard (483.4)
324	SCS Dimensionless UH	AE1551-049	20.2	1607.3	1.06	0	0.05	0.15	SCS	61.8	SCS CN	0.2 S	0.899	69	Standard (483.4)
325	SCS Dimensionless UH	IN1551-053	1.2	514.0	0.51	0	0.05	0.15	SCS	24.5	SCS CN	0.2 S	0.439	82	Standard (483.4)
326	SCS Dimensionless UH	IN1551-055	1.0	497.8	1.9	0	0.05	0.15	SCS	10.8	SCS CN	0.2 S	0.326	86	Standard (483.4)
327	SCS Dimensionless UH	IN1551-043	3.9	628.1	1.96	0	0.05	0.15	SCS	16.1	SCS CN	0.2 S	0.532	79	Standard (483.4)
328	SCS Dimensionless UH	SAI_CV001	3.5	490.3	2.61	0	0.05	0.15	SCS	12.2	SCS CN	0.2 S	0.597	77	Standard (483.4)
329	SCS Dimensionless UH	IN1551-033	0.8	250.3	4.29	0	0.05	0.15	SCS	4.6	SCS CN	0.2 S	0.41	83	Standard (483.4)
330	SCS Dimensionless UH	IN1552-062	1.0	342.9	0.87	0	0.05	0.15	SCS	15.4	SCS CN	0.2 S	0.564	78	Standard (483.4)
331	SCS Dimensionless UH	IN1552-066	2.5	536.0	0.95	0	0.05	0.15	SCS	18.0	SCS CN	0.2 S	0.41	83	Standard (483.4)
332	SCS Dimensionless UH	IN1552-025	1.8	489.2	2.07	0	0.05	0.15	SCS	11.3	SCS CN	0.2 S	0.41	83	Standard (483.4)
333	SCS Dimensionless UH	IN1552-033	0.5	162.1	2.82	0	0.05	0.15	SCS	3.9	SCS CN	0.2 S	0.381	84	Standard (483.4)
334	SCS Dimensionless UH	IN1552-008	1.3	436.7	1.74	0	0.05	0.15	SCS	11.3	SCS CN	0.2 S	0.41	83	Standard (483.4)
335	SCS Dimensionless UH	PD1552-015	3.8	816.1	1.86	0	0.05	0.15	SCS	22.3	SCS CN	0.2 S	0.632	76	Standard (483.4)
336	SCS Dimensionless UH	IN1552-038	0.9	270.5	2.11	0	0.05	0.15	SCS	6.5	SCS CN	0.2 S	0.353	85	Standard (483.4)
337	SCS Dimensionless UH	AS1552-052	1.1	258.4	3.22	0	0.05	0.15	SCS	6.0	SCS CN	0.2 S	0.5	80	Standard (483.4)
338	SCS Dimensionless UH	IN1552-042	2.4	614.6	0.81	0	0.05	0.15	SCS	24.7	SCS CN	0.2 S	0.532	79	Standard (483.4)
339	SCS Dimensionless UH	IN1552-043	2.6	253.1	3.1	0	0.05	0.15	SCS	4.7	SCS CN	0.2 S	0.299	87	Standard (483.4)
340	SCS Dimensionless UH	SAI_MCC003	1.4	354.8	2.68	0	0.05	0.15	SCS	8.2	SCS CN	0.2 S	0.469	81	Standard (483.4)
341	SCS Dimensionless UH	SAI_MCC001	2.2	469.5	1.62	0	0.05	0.15	SCS	18.7	SCS CN	0.2 S	0.899	69	Standard (483.4)
342	SCS Dimensionless UH	SAI-027	62.1	2351.8	3.32	0	0.05	0.15	SCS	52.6	SCS CN	0.2 S	1.077	65	Standard (483.4)
343	SCS Dimensionless UH	SAI_PFO01	18.6	1871.6	3.29	0	0.05	0.15	SCS	51.4	SCS CN	0.2 S	1.39	59	Standard (483.4)
344	SCS Dimensionless UH	SAI_ET014	28.6	1529.6	4.18	0	0.05	0.15	SCS	28.4	SCS CN	0.2 S	0.817	71	Standard (483.4)
345	SCS Dimensionless UH	SAI_ET008	9.8	1315.2	3.44	0	0.05	0.15	SCS	24.8	SCS CN	0.2 S	0.667	75	Standard (483.4)
346	SCS Dimensionless UH	TSAI_Conf012	68.0	3001.2	0.68	0	0.05	0.15	SCS	127.3	SCS CN	0.2 S	0.899	69	Standard (483.4)
347	SCS Dimensionless UH	TSAI_MPUS	35.4	1540.1	0.88	0	0.05	0.15	SCS	65.6	SCS CN	0.2 S	0.899	69	Standard (483.4)
348	SCS Dimensionless UH	Pond_SH_OL6	11.3	1535.1	2.3	0	0.05	0.15	SCS	40.5	SCS CN	0.2 S	0.899	69	Standard (483.4)
349	SCS Dimensionless UH	Pond_SH_OL4	18.1	1583.1	1.8	0	0.05	0.15	SCS	46.9	SCS CN	0.2 S	0.899	69	Standard (483.4)
350	SCS Dimensionless UH	Pond_SPoE	61.1	2479.4	1.91	0	0.05	0.15	SCS	61.7	SCS CN	0.2 S	0.817	71	Standard (483.4)
351	SCS Dimensionless UH	Detention_Pond_B	49.2	2827.4	2.61	0	0.05	0.15	SCS	60.3	SCS CN	0.2 S	0.857	70	Standard (483.4)
352	SCS Dimensionless UH	Detention_Pond_A	59.4	2509.1	2.57	0	0.05	0.15	SCS	53.7	SCS CN	0.2 S	0.817	71	Standard (483.4)
353	SCS Dimensionless UH	Pond_SPE_Alm	40.5	3583.0	2.23	0	0.05	0.15	SCS	76.7	SCS CN	0.2 S	0.817	71	Standard (483.4)
354	SCS Dimensionless UH	Pond_PP_East	57.3	2371.3	2.83	0	0.05	0.15	SCS	51.7	SCS CN	0.2 S	0.899	69	Standard (483.4)
355	SCS Dimensionless UH	Pond_SPE_Alm	25.0	2029.7	3.87	0	0.05	0.15	SCS	36.0	SCS CN	0.2 S	0.778	72	Standard (483.4)
356	SCS Dimensionless UH	Pond_SPE_Swa	76.6	4534.4	2.96	0	0.05	0.15	SCS	82.6	SCS CN	0.2 S	0.857	70	Standard (483.4)
357	SCS Dimensionless UH	Pond_FR_OL1	9.7	1803.8	3.4	0	0.05	0.15	SCS	37.9	SCS CN	0.2 S	0.899	69	Standard (483.4)
358	SCS Dimensionless UH	BSAI_358	16.9	1458.2	1.14	0	0.05	0.15	SCS	56.7	SCS CN	0.2 S	0.941	68	Standard (483.4)
359	SCS Dimensionless UH	BSAI_359	2.3	378.1	3.67	0	0.05	0.15	SCS	10.4	SCS CN	0.2 S	0.899	69	Standard (483.4)
360	SCS Dimensionless UH	Pond_SH_OL2	87.6	2475.1	2.25	0	0.05	0.15	SCS	53.8	SCS CN	0.2 S	0.74	73	Standard (483.4)
361	SCS Dimensionless UH	Pond_SH_OL2T	2.8	371.9	4.19	0	0.05	0.15	SCS	9.6	SCS CN	0.2 S	0.899	69	Standard (483.4)
362	SCS Dimensionless UH	Pond_SH_OL2N	19.3	2159.6	2.53	0	0.05	0.15	SCS	50.7	SCS CN	0.2 S	0.899	69	Standard (483.4)
363	SCS Dimensionless UH	Pond_SPrE_Sed	55.8	2754.6	2.46	0	0.05	0.15	SCS	64.2	SCS CN	0.2 S	0.941	68	Standard (483.4)
364	SCS Dimensionless UH	Pond_VP_DryPond	10.2	1143.9	4.64	0	0.05	0.15	SCS	22.5	SCS CN	0.2 S	0.899	69	Standard (483.4)
365	SCS Dimensionless UH	SAI_ET001	10.9	932.5	2.29	0	0.05	0.15	SCS	22.4	SCS CN	0.2 S	0.632	76	Standard (483.4)
366	SCS Dimensionless UH	TSAI_009	3.1												

APPENDIX C
HYDRAULIC INPUT PARAMETERS (LINKS AND NODES)

TABLE C1–HYDRAULIC INPUT PARAMETERS: LINKS

Conduit	Inlet Node	Outlet Node	Length (ft)	Roughness (-)	Inlet Offset (ft)	Outlet Offset (ft)	Entry Loss Coeff. (-)	Exit Loss Coeff. (-)	Cross-Section	Geom1 (ft)	Geom2 (ft)	Geom3 (varies)	Geom4 (varies)	Barrels	Transect	Culvert Code	Control Rules	Slope (ft/ft)
**AS1758-057 IN1858-001	**AS1758-057	IN1858-001	35.004	0.013	0	0	0.05	0.5	HORIZ ELLIPSE	3.167	5	0	0	1			NO	-0.1452
**AS1768-027 IN1767-002	**AS1768-027	**IN1767-002	58.283	0.013	0	0	0	0.5	CIRCULAR	3	0	0	0	1			NO	-0.02557
**IN1456-019 IN1456-016	IN1456-019	IN1456-016	20.457	0.013	0	0	0.05	0.5	CIRCULAR	1	0	0	0	1			NO	0.02445
**IN1456-020 IN1456-019	IN1456-020	IN1456-019	10.978	0.013	0	0	0.05	0.05	CIRCULAR	1	0	0	0	1			NO	0.08502
**IN1456-021 IN1456-020	IN1456-021	IN1456-020	20.617	0.013	0	0	0	0.05	CIRCULAR	1	0	0	0	1			NO	0.01455
**IN1658-005 IN1658-004	**IN1658-005	**IN1658-004	9.871	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1			NO	-0.02533
**IN1658-011 PD1758-001 HD1658-001	IN1658-011	IN1658-012	28.134	0.013	0	0	0.05	0.5	RECT CLOSED	4	8	0	0	1			NO	0.00508
**IN1658-012 HD1658-001	IN1658-012	HD1658-001	31.154	0.013	0	0	0.5	0.5	RECT CLOSED	4	8	0	0	1			NO	0.00507
**IN1659-020 IN1659-018	IN1659-020	IN1559-018	203.603	0.013	0	0	0	0.5	CIRCULAR	1.75	0	0	0	1			NO	-0.00831
**IN1756-004 IN1756-003	IN1756-004	**IN1756-003	14.503	0.013	0	0	0.25	0.25	CIRCULAR	1.5	0	0	0	1			NO	-0.03173
**IN1758-091 PD1758-001 HD1658-001	PD1758-001	IN1758-091	40.548	0.013	0	0	0	0.5	RECT CLOSED	4	8	0	0	1	11		NO	0.00523
**MI1564-002 IN1565-015	IN1564-003	IN1565-015	201.6	0.013	0	0	0.5	0.25	CIRCULAR	2	0	0	0	1			NO	0.04155
**PL1564-004 IN1564-003	**PL1564-004	IN1564-003	22.003	0.013	0.093	0.2	0	0.5	CIRCULAR	1.5	0	0	0	1			NO	0.18039
**PL1564-006 IN1564-005	**PL1564-006	IN1564-005	23.002	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1			NO	0.15328
**PL1664-001 IN1665-008	**PL1664-001	IN1665-008	182.02	0.013	0.04	0	0	0.5	CIRCULAR	1.5	0	0	0	1			NO	0.07074
**PL1863-011 IN1863-010	**PL1863-011	IN1863-010	25.002	0.013	0	0	0	0.05	CIRCULAR	1	0	0	0	1			NO	0.18583
**PL1863-012 IN1863-009	**PL1863-012	IN1863-009	41.004	0.013	0.383	0	0	0.05	CIRCULAR	1	0	0	0	1			NO	0.17561
**Pond Swaboda	Pond Swaboda US	**Pond Swaboda DS	76.029	0.013	0	0	0.5	0.5	CIRCULAR	5	0	0	0	1			NO	0.0441
**SAI DT1455-001-1456-026	SAI DT1455-001	MI1456-026	74	0.024	0.484	1.46	0	0.5	ARCH	4.58	6.08	0	0	1		38	NO	0.02118
**SAI DT1455-022-1456-027	SAI DT1455-002	MI1456-027	74	0.024	1.009	0.87	0	0.5	ARCH	4.58	6.08	0	0	1		38	NO	0.01638
**SAI PF001-012	SAI PF011	SAI PF012	250.154	0.013	0	0	0	0.5	CIRCULAR	2	0	0	0	1		3	NO	0.01399
**SAI TO SURVEY005-006	**SAI TO SURVEY005	**SAI TO SURVEY006	69.056	0.024	0	0	0	0.5	CIRCULAR	2	0	0	0	1		6	NO	0.01544
**SAI TO SURVEY011-012	SAI-031	SAI-032	91.715	0.024	0.358	0	0	0.5	CIRCULAR	2	0	0	0	1		3	NO	0.02924
AE1259-001 AE1359-004	AE1259-001	AE1359-004	48.002	0.013	0	0	0	0.5	CIRCULAR	4	0	0	0	1		6	NO	0.01167
AE1259-002 AE1359-005	AE1259-002	AE1359-005	48.002	0.013	0	0	0	0.5	CIRCULAR	48	0	0	0	1		6	NO	0.01458
AE1356-001 AE1456-080	AE1356-001	AE1456-080	155.777	0.013	0	0.727	0	1	CIRCULAR	1	0	0	0	1		1	NO	0.0244
AE1456-030 MI1456-026	AE1456-030	MI1456-026	31.999	0.013	0	1.46	0	0.5	CIRCULAR	1	0	0	0	1		1	NO	0.01625
AE1456-031 MI1456-027	AE1456-031	MI1456-027	44.671	0.013	0	0.87	0	0.5	CIRCULAR	2	0	0	0	1		1	NO	0.03472
AE1456-032 AE1456-033	AE1456-032	AE1456-033	37.437	0.013	0.363	0	0	0.5	CIRCULAR	2.5	0	0	0	1		1	NO	0.01149
AE1456-034 AE1456-035	AE1456-034	AE1456-035	37.587	0.013	0.992	0	0	0.5	CIRCULAR	2.5	0	0	0	1		1	NO	0.01144
AE1456-039 IN1456-038	AE1456-039	IN1456-038	65.002	0.013	0	0	0	0.05	HORIZ ELLIPSE	1.583	2.5	0	0	1		30	NO	0.03078
AE1458-017 AS1458-016	AE1458-017	AS1458-016	489.019	0.013	0.741	0	0.5	0.5	CIRCULAR	2	0	0	0	1		1	NO	0.05324
AE1458-018 AS1458-016	AE1458-018	AS1458-016	17.966	0.013	0.139	0	0.5	0.5	CIRCULAR	2.5	0	0	0	1		1	NO	0.49731
AE1551-040 IN1551-038	AE1551-040	IN1551-038	28.194	0.013	0	0	0	0.05	CIRCULAR	1.5	0	0	0	1		1	NO	0.07219
AE1551-049 AS1551-048	AE1551-049	AS1551-048	71.003	0.013	0	0	0	0.5	HORIZ ELLIPSE	3.167	5	0	0	1		1	NO	0.00606
AE1551-051 AS1551-048	AE1551-051	AS1551-048	44.32	0.013	0	0	0	0.5	CIRCULAR	1.25	0	0	0	1		1	NO	0.04676
AE1552-021 AS1552-019	AE1552-021	AS1552-019	347.014	0.013	0.496	0	0	0.5	CIRCULAR	4	0	0	0	1		1	NO	0.00576
AE1559-032 AE1559-034	AE1559-032	AE1559-034	154.016	0.013	0.643	0.372	0	1	HORIZ ELLIPSE	3.583	5.667	0	0	1		30	NO	0.0026
AE1559-033 AE1559-035	AE1559-033	AE1559-035	154.016	0.013	0	0.009	0	1	HORIZ ELLIPSE	3.583	5.667	0	0	1		30	NO	0.0024
AE1567-001 AE1567-002	AE1567-001	AE1567-002	272.028	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1		1	NO	0.06373
AE1655-017 IN1655-016	AE1655-017	IN1655-016	96.011	0.013	0	0	0	0.5	CIRCULAR	1.5	0	0	0	1		1	NO	0.03251
AE1655-018 IN1655-016	AE1655-018	IN1655-016	44.005	0.013	0	0	0	0.5	CIRCULAR	1.25	0	0	0	1		1	NO	0.05051
AE1655-028 AS1655-027	AE1655-028	AS1655-027	22.002	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1		1	NO	0.33612
AE1655-033 AS1655-031	AE1655-033	AS1655-031	29.003	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1		1	NO	0.34995
AE1657-003 IN1657-002	AE1657-003	IN1657-002	31.528	0.013	0	0	0	0.05	CIRCULAR	4	0	0	0	1		1	NO	0.04445
AE1659-005 AE1659-006	AE1659-005	AE1659-006	31.754	0.013	0	0	0.5	0.5	CIRCULAR	1.5	0	0	0	1		1	NO	0.04097
AE1659-009 AE1659-010	AE1659-009	AE1659-010	35.097	0.013	0	0	0	0.05	CIRCULAR	1.5	0	0	0	1		1	NO	0.01425
AE1659-012 AE1659-013	AE1659-012	AE1659-013	132.005	0.013	0	0	0	1	CIRCULAR	1	0	0	0	1		1	NO	0
AE1659-014 AE1659-015	AE1659-014	AE1659-015	52.697	0.013	0.518	0	0	0.5	HORIZ ELLIPSE	2.417	3.75	0	0	1		30	NO	0.01898
AE1659-015 01-AE1659-015	AE1659-015 01	AE1659-015	69.302	0.013	1	0.717	0.5	1	HORIZ ELLIPSE	2.417	3.75	0	0	1		1	NO	0.01443
AE1659-016 AE1659-017	AE1659-016	AE1659-017	122.005	0.013	1.013	0.217	0	1	HORIZ ELLIPSE	2.417	3.75	0	0	1		30	NO	0.0082
AE1659-018 TP1659-056	AE1659-018	TP1659-056	52.874	0.013	0.952	0.37	0	0.5	HORIZ ELLIPSE	2.417	3.75	0	0	1		30	NO	0.01267
AE1663-005 AE1663-003	AE1663-005	AS1663-003	126.005	0.013	0	0	0	0.5	CIRCULAR	2	0	0	0	1		1	NO	0.015
AE1663-019 AE1663-020	AE1663-019	AE1663-020	182.867	0.013	0	0	0	1	CIRCULAR	2	0	0	0	1		1	NO	0
AE1663-022 IN1663-021	AE1663-022	IN1663-021	119.187	0.013	0	3.25	0	0.5	CIRCULAR	1	0	0	0	1		1	NO	0.05883
AE1663-030 AE1663-029	AE1663-030	AS1663-029	14.598	0.013	0	0	0	0.5	CIRCULAR	3	0	0	0	1		1	NO	0.12987
AE1667-004 AE1667-005	AE1667-004	**AE1667-005	21.001	0.013	0	0.467	0	0.5	CIRCULAR	1	0	0	0	1		3	NO	-0.02043
AE1667-006 AE1667-007	AE1667-006	AE1667-007	17.001	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1		1	NO	0.00706
AE1667-008 AE1667-009	AE1667-008	AE1667-009	18.001	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1		1	NO	0.00667
AE1668-003 AS1768-079	AE1668-003	AS1768-079	129.065	0.013	0	0	0	0.5	HORIZ ELLIPSE	1.167	1.917	0	0	1		30	NO	0.02697
AE1668-053 AE1568-002	AE1668-053	AE1568-002	333.013	0.013	0	0.533	0	0.5	CIRCULAR	1	0	0	0	1		1	NO	0.02743
AE1759-003 IN1759-002	AE1759-003	IN1759-002	71.504	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1		1	NO	0.05097
AE1759-005 AE1759-006	AE1759-005	AE1759-006	27.001	0.013	0	0	0	0.5	CIRCULAR	1.5	0	0	0	1		1	NO	0.00222
AE1759-007 AE1659-004	AE1759-007	AE1659-004	53.389	0.013	0.002	0	0.5	0.5	CIRCULAR	1.5	0	0	0	1		1	NO	0.00375
AE1759-012 IN1659-059	AE1759-012	IN1659-059	18.979	0.013	0	0.1	0.5	0.5	CIRCULAR	18	0	0	0	1		1	NO	0.0058
AE1759-021 IN1759-019	IN1759-019	**AE1759-021	100	0.013	0	0	0.5	0.5	CIRCULAR	24	0	0	0	1			NO	0.0075
AE1760-002 AE1659-010	AE1659-010	AE1760-002	126.361	0.013	0	0	0.05	0.05	CIRCULAR	18	0	0	0	1		1	NO	0.01425
AE1760-002 AS1760-004	AE1760-002	AS1760-004	46.724	0.013	0	0.68	0.05	0.5	CIRCULAR	1.5	0	0	0	1		1	NO	0.06262
AE1760-005 AS1760-005	AE1760-005	AS1760-005	44.177	0.013	0	0.025	0	0.5	CIRCULAR	2	0	0	0	1		1	NO	0.07765
AE1760-009 CB1760-006	AE1760-009	CB1760-006	45.935	0.013	0	0.5	0	0.5	CIRCULAR	36	0	0	0	1		1	NO	0.03965
AE1760-010 CB1760-007	AE1760-010	CB1760-007	47.422	0.013	0	0	0	0.05	CIRCULAR	36	0	0	0	1		1	NO	0.03841
AE1760-011 CB1760-008	AE1760-011	CB1760-008	48.38															

AS1767-007	IN1767-013	AS1767-007	IN1767-013	186.811	0.013	0	0	0.5	0.5	CIRCULAR	3	0	0	0	1	NO	0.02206	
AS1768-079	IN1768-078	AS1768-079	IN1768-078	64.818	0.013	0	0	0.5	0.25	HORIZ ELLIPSE	1.167	1.917	0	0	1	NO	0.00478	
AS1862-039	IN1762-041	AS1862-039	IN1762-041	51.341	0.013	0	0	0.25	0.5	CIRCULAR	2.25	0	0	0	1	NO	0.01948	
AS1867-001	AE1866-006	AS1867-001	AE1866-006	254.029	0.013	0	0	0	0	1	CIRCULAR	2.25	0	0	0	1	NO	0.0059
C1	IN1758-030	IN1758-029		10	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.03202	
C107782	J73169	OF18		4.883	0.014	0	0	0	0	RECT_OPEN	30	5.666	2	0	1	NO	0.05312	
C108667	J73146	OF19		4.577	0.014	0	0	0	0	RECT_OPEN	30	5.132	2	0	1	NO	-0.17866	
C109009	J72972	OF20		4.705	0.014	0	0	0	0	RECT_OPEN	30	5.272	2	0	1	NO	-0.01828	
C109759	J72934	OF21		4.417	0.014	0	0	0	0	RECT_OPEN	30	5.159	2	0	1	NO	-0.0401	
C114959	J72893	OF22		4.371	0.014	0	0	0	0	RECT_OPEN	30	5.862	2	0	1	NO	0.07018	
C116284	J72850	OF23		6.443	0.014	0	0	0	0	RECT_OPEN	30	7.06	2	0	1	NO	0.03914	
C117784	J47674	OF24		9.999	0.014	0	0	0	0	RECT_OPEN	30	9.442	2	0	1	NO	0.0137	
C121548	J47619	OF25		18.125	0.014	0	0	0	0	RECT_OPEN	30	17.486	2	0	1	NO	0.02539	
C125175	J1310	OF26		10.982	0.014	0	0	0	0	RECT_OPEN	30	10.279	2	0	1	NO	0.02842	
C126888	J1339	OF27		18.654	0.014	0	0	0	0	RECT_OPEN	30	18.22	2	0	1	NO	0.05196	
C132578	J1309	OF28		16.528	0.014	0	0	0	0	RECT_OPEN	30	13.279	2	0	1	NO	-0.19274	
C133515	J85015	OF29		8.205	0.014	0	0	0	0	RECT_OPEN	30	7.95	2	0	1	NO	-0.03561	
C137175	J85006	OF30		4.86	0.014	0	0	0	0	RECT_OPEN	30	6.152	2	0	1	NO	0	
C144032	J85005	OF31		6.423	0.014	0	0	0	0	RECT_OPEN	30	6.425	2	0	1	NO	-0.02071	
C150123	J84994	OF32		5.329	0.014	0	0	0	0	RECT_OPEN	30	6.206	2	0	1	NO	-0.00507	
C160985	SAI-045	SAI-046		20.273	0.024	0	0	0	0.5	CIRCULAR	1.5	0	0	0	1	6	NO	0.00355
C160987	SAI-043	SAI-044		20.114	0.024	0	0	0	0.5	CIRCULAR	1.5	0	0	0	1	6	NO	-0.00214
C163420	J84981	OF33		5.415	0.014	0	0	0	0	RECT_OPEN	30	6.056	2	0	1	NO	-0.00702	
C169468	J84967	OF34		4.911	0.014	0	0	0	0	RECT_OPEN	30	5.69	2	0	1	NO	-0.00305	
C172079	J84951	OF35		4.077	0.014	0	0	0	0	RECT_OPEN	30	5.19	2	0	1	NO	0.00123	
C173544	J84933	OF36		4.949	0.014	0	0	0	0	RECT_OPEN	30	5.104	2	0	1	NO	0.0281	
C174303	J84916	OF37		4.393	0.014	0	0	0	0	RECT_OPEN	30	5.306	2	0	1	NO	0.00205	
C175027	J84897	OF38		5.209	0.014	0	0	0	0	RECT_OPEN	30	5.38	2	0	1	NO	0.00192	
C175737	J84879	OF39		4.721	0.014	0	0	0	0	RECT_OPEN	30	5.695	2	0	1	NO	0.03243	
C176368	J84823	OF40		5.407	0.014	0	0	0	0	RECT_OPEN	30	5.586	2	0	1	NO	0.04035	
C177657	J84805	OF41		4.892	0.014	0	0	0	0	RECT_OPEN	30	5.894	2	0	1	NO	0.03764	
C178991	J84786	OF42		5.461	0.014	0	0	0	0	RECT_OPEN	30	5.647	2	0	1	NO	0.07566	
C180876	J84768	OF43		4.977	0.014	0	0	0	0	RECT_OPEN	30	5.998	2	0	1	NO	0.04646	
C192305	J84749	OF44		5.516	0.014	0	0	0	0	RECT_OPEN	30	5.71	2	0	1	NO	0.05137	
C195572	J84731	OF45		5.076	0.014	0	0	0	0	RECT_OPEN	30	6.118	2	0	1	NO	0.05723	
C204994	J84712	OF46		5.62	0.014	0	0	0	0	RECT_OPEN	30	5.824	2	0	1	NO	0.08446	
C213416	J84694	OF47		5.303	0.014	0	0	0	0	RECT_OPEN	30	6.387	2	0	1	NO	0.11965	
C21547	J73249	OF1		5.734	0.014	0	0	0	0	RECT_OPEN	30	7.237	2	0	1	NO	-0.00331	
C225942	J84675	OF48		5.601	0.014	0	0	0	0	RECT_OPEN	30	5.892	2	0	1	NO	0.23436	
C270271	J84639	OF49		5.704	0.014	0	0	0	0	RECT_OPEN	30	6.065	2	0	1	NO	0.21989	
C27614	J73250	OF2		6.113	0.014	0	0	0	0	RECT_OPEN	30	7.127	2	0	1	NO	0.02569	
C283221	J84623	OF50		4.692	0.014	0	0	0	0	RECT_OPEN	30	5.853	2	0	1	NO	0	
C289371	J84609	OF51		5.991	0.014	0	0	0	0	RECT_OPEN	30	6.242	2	0	1	NO	-0.10507	
C291254	J84608	OF52		6.114	0.014	0	0	0	0	RECT_OPEN	30	7.36	2	0	1	NO	0.02029	
C293091	J84595	OF53		5.467	0.014	0	0	0	0	RECT_OPEN	30	6.578	2	0	1	NO	-0.07521	
C294862	J84596	OF54		5.602	0.014	0	0	0	0	RECT_OPEN	30	5.816	2	0	1	NO	-0.19685	
C306427	J84584	OF55		5.339	0.014	0	0	0	0	RECT_OPEN	30	6.736	2	0	1	NO	0	
C309774	J139122	OF56		6.396	0.014	0	0	0	0	RECT_OPEN	30	7.808	2	0	1	NO	0	
C313407	J139039	OF57		9.11	0.014	0	0	0	0	RECT_OPEN	30	9.122	2	0	1	NO	-0.01603	
C316592	J139040	OF58		13.197	0.014	0	0	0	0	RECT_OPEN	30	14.246	2	0	1	NO	0	
C35983	J73251	OF3		6.79	0.014	0	0	0	0	RECT_OPEN	30	7.646	2	0	1	NO	0.0193	
C35993	J73253	OF4		9.52	0.014	0	0	0	0	RECT_OPEN	30	10.134	2	0	1	NO	-0.0409	
C359960	J2147	OF59		18.49	0.014	0	0	0	0	RECT_OPEN	30	18.006	2	0	1	NO	0.0119	
C373126	J2058	OF60		20.448	0.014	0	0	0	0	RECT_OPEN	30	15.231	2	0	1	NO	0.00655	
C376395	J2018	OF61		20.94	0.014	0	0	0	0	RECT_OPEN	30	20.515	2	0	1	NO	-0.00201	
C379906	J11970	OF62		18.144	0.014	0	0	0	0	RECT_OPEN	30	21.711	2	0	1	NO	0.00033	
C388855	J11923	OF63		20.828	0.014	0	0	0	0	RECT_OPEN	30	19.351	2	0	1	NO	0.00931	
C388897	J11829	OF64		20.582	0.014	0	0	0	0	RECT_OPEN	30	20.286	2	0	1	NO	-0.00204	
C397115	J1785	OF65		15.476	0.014	0	0	0	0	RECT_OPEN	30	13.644	2	0	1	NO	-0.0115	
C46090	SAI-055	SAI-056		43.882	0.013	0	0	0	0.5	HORIZ ELLIPSE	6	0	0	0	1	32	NO	0.01181
C46095	SAI-057	SAI-058		44.306	0.013	0	0	0	0.5	HORIZ ELLIPSE	6	0	0	0	1	32	NO	0.01372
C46367	SAI-073	SAI-074		49.526	0.013	0	0	1	0	CIRCULAR	3	0	0	0	1	1	NO	0.00295
C46373	SAI-075	SAI-076		49.444	0.013	0	0	1	0	CIRCULAR	3	0	0	0	1	1	NO	0.00332
C46376	SAI-077	SAI-078		49.135	0.013	0	0.083	0	1	CIRCULAR	3	0	0	0	1	1	NO	0.00311
C49132	J47843	OF5		15.699	0.014	0	0	0	0	RECT_OPEN	30	13.838	2	0	1	NO	0.00828	
C493058	BSAI 359	BSAI 358		305.425	0.027	0	0	0	0	TRIANGULAR	5	60	0	0	1	NO	0.04903	
C52711	J73240	OF6		5.068	0.014	0	0	0	0	RECT_OPEN	30	5.791	2	0	1	NO	-0.02447	
C52738	J73242	OF7		6.198	0.014	0	0	0	0	RECT_OPEN	30	6.737	2	0	1	NO	0.0121	
C52885	J73243	OF8		6.132	0.014	0	0	0	0	RECT_OPEN	30	6.23	2	0	1	NO	0.05996	
C54021	J73241	OF9		4.801	0.014	0	0	0	0	RECT_OPEN	30	5.976	2	0	1	NO	0	
C55505	J73227	OF10		5.416	0.014	0	0	0	0	RECT_OPEN	30	6.035	2	0	1	NO	0.03843	
C61087	J73229	OF11		6.081	0.014	0	0	0	0	RECT_OPEN	30	6.185	2	0	1	NO	0.03686	
C71821	J73228	OF12		5.112	0.014	0	0	0	0	RECT_OPEN	30	6.409	2	0	1	NO	0	
C74131	J73212	OF13		6.116	0.014	0	0	0	0	RECT_OPEN	30	6.215	2	0	1	NO	-0.01292	
C78886	J73211	OF14		5.41	0.014	0	0	0	0	RECT_OPEN	30	6.814	2	0	1	NO	0.01165	
C80572	J73191	OF15		5.94	0.014	0	0	0	0	RECT_OPEN	30	6.683	2	0	1	NO	0.17854	
C80591	J73192	OF16		6.095	0.014	0	0	0	0	RECT_OPEN	30	6.187	2	0	1	NO	-0.03004	
CB2480	J73190	OF17		5.098	0.014	0	0	0	0	RECT_OPEN	30	6.718	2	0	1	NO	0	
CB1760-006	AS1760-004	CB1760-006	AS1760-004	38.499	0.013	0	0	0.05	0.5	CIRCULAR	42	0	0	0	1	NO	0.02806	
CB1760-007	AS1760-005	CB1760-007	AS1760-005	38.631	0.013	3.91	0	0.05	0.5	CIRCULAR	42	0	0	0	1	NO	0.12615	
CB1760-008	IN1660-037	CB1760-008	IN1660-037	80.133	0.013	0	0	0.5	0.5	CIRCULAR	42	0	0	0	1	NO	0.01011	
DT1460-002	DT1460-003	DT1460-002	DT1460-003	24.43	0.013	0	0	0	1	CIRCULAR	1.5	0	0	0	1	1	NO	0.0045
DT1461-002	DT1461-003	**DT1461-002	**DT1461-003	26.446	0.013	0.135	1.815	0.5	0.5	CIRCULAR	1	0	0	0	1	NO	0.01717	
DT1560-002	DT1560-003	DT1560-002	DT1560-003	40.466	0.013	0	0	0.5	0.5	CIRCULAR	1.75	0	0	0	1	NO	0.05867	
DT1769-003	DT1669-002	DT1769-003	DT1669-002	63.383	0.013	0	0	0	0.5	CIRCULAR	24	0	0	0	1	6	NO	0.02383
HD1559-012	HD1559-011	HD1559-012	HD1559-011	179.294	0.013	0												

IN1457-012	IN1457-011	IN1457-012	IN1457-011	10.177	0.013	0	0	0	0.05	CIRCULAR	1	0	0	0	1	NO	0.00599
IN1457-013	IN1457-004	IN1457-013	IN1457-004	81.337	0.013	0	0	0.05	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.00516
IN1457-014	IN1457-013	IN1457-014	IN1457-013	159.255	0.013	0	0	0.25	0.05	CIRCULAR	1.25	0	0	0	1	NO	0.02802
IN1457-015	IN1457-014	IN1457-015	IN1457-014	31.144	0.013	0	0	0.25	0.25	CIRCULAR	1.25	0	0	0	1	NO	0.00867
IN1457-016	IN1457-015	IN1457-016	IN1457-015	23.018	0.013	0	0.25	0.25	0.25	CIRCULAR	1	0	0	0	1	NO	0.00782
IN1457-017	IN1457-016	IN1457-017	IN1457-016	33.526	0.013	0	0	0.5	0.25	CIRCULAR	1	0	0	0	1	NO	0.017
IN1457-018	IN1457-017	IN1457-018	IN1457-017	23.086	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.01906
IN1457-019	IN1457-017	IN1457-019	IN1457-017	105.898	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.00992
IN1457-021	AS1457-020	IN1457-021	AS1457-020	68.698	0.013	0	0.25	0.5	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.00757
IN1457-022	AS1457-020	IN1457-022	AS1457-020	77.813	0.013	0	0.25	0.5	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.0063
IN1457-023	IN1457-022	IN1457-023	IN1457-022	12.603	0.013	0	0.17	0.05	0.5	CIRCULAR	1	0	0	0	1	NO	0.03334
IN1457-024	IN1457-023	IN1457-024	IN1457-023	11.808	0.013	0	0	0.05	0.05	CIRCULAR	1	0	0	0	1	NO	0.00254
IN1457-025	IN1457-024	IN1457-025	IN1457-024	12.558	0.013	0	0	0	0.05	CIRCULAR	1	0	0	0	1	NO	0.00637
IN1457-026	IN1457-022	IN1457-026	IN1457-026	67.979	0.013	0	0.17	0.5	0.5	CIRCULAR	1	0	0	0	1	NO	0.02619
IN1457-027	IN1457-026	IN1457-027	IN1457-026	48.856	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.01126
IN1457-028	MI1457-037	IN1457-028	MI1457-037	51.002	0.013	0	0	0.5	0.05	CIRCULAR	1.5	0	0	0	1	NO	0.00471
IN1457-030	IN1457-028	IN1457-030	IN1457-028	26.62	0.013	0	0.5	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.00526
IN1457-031	IN1457-028	IN1457-031	IN1457-028	200.436	0.013	0	0.25	0.25	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.00908
IN1457-032	IN1457-031	IN1457-032	IN1457-031	154.845	0.013	0	0	0.5	0.25	CIRCULAR	1.25	0	0	0	1	NO	0.01266
IN1457-033	IN1457-032	IN1457-033	IN1457-032	8.815	0.013	0	0.25	0.05	0.5	CIRCULAR	1	0	0	0	1	NO	0.00681
IN1457-034	IN1457-033	IN1457-034	IN1457-033	12.207	0.013	0	0	0.05	0.05	CIRCULAR	1	0	0	0	1	NO	0.00164
IN1457-035	IN1457-034	IN1457-035	IN1457-034	11.643	0.013	0	0	0	0.05	CIRCULAR	1	0	0	0	1	NO	0.00601
IN1457-036	MI1456-070	IN1457-036	MI1456-070	195.68	0.013	0	0	0.25	0.05	CIRCULAR	1.5	0	0	0	1	NO	0.04804
IN1457-038	IN1457-039	IN1457-038	IN1457-039	35.316	0.013	0	0	0.25	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.02776
IN1457-039	IN1457-036	IN1457-039	IN1457-036	47.531	0.013	0	0	0.5	0.25	CIRCULAR	1.5	0	0	0	1	NO	0.0301
IN1457-040	IN1457-039	IN1457-040	IN1457-039	52.676	0.013	0	0	0.5	0.5	CIRCULAR	1	0	0	0	1	NO	0.02697
IN1457-041	IN1456-078	IN1457-041	IN1456-078	193.219	0.013	2.083	6.985	0.5	0.5	CIRCULAR	2	0	0	0	1	NO	0.0444
IN1457-042	IN1457-041	IN1457-042	IN1457-041	26.983	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.13599
IN1457-043	IN1457-041	IN1457-043	IN1457-043	65.83	0.013	4.054	3.083	0.5	0.5	CIRCULAR	1	0	0	0	1	NO	0.00441
IN1457-044	IN1457-043	IN1457-044	IN1457-043	27.068	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.09845
IN1457-045	IN1457-041	IN1457-045	IN1457-041	91.108	0.013	0.595	2.333	0.5	0.5	CIRCULAR	1.75	0	0	0	1	NO	0.01405
IN1457-046	IN1457-045	IN1457-046	IN1457-045	26.938	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.07269
IN1458-003	AE1458-004	IN1458-003	AE1458-004	65.302	0.013	0	0	0.5	1	CIRCULAR	2.5	0	0	0	1	NO	0.01378
IN1458-005	IN1458-003	IN1458-005	IN1458-003	53.098	0.013	0	0.5	0	0.5	CIRCULAR	2	0	0	0	1	NO	0.00414
IN1458-006	IN1458-003	IN1458-006	IN1458-003	76.866	0.013	0	1	0.25	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.00416
IN1458-007	IN1458-006	IN1458-007	IN1458-006	51.363	0.013	0	0	0.25	0.25	CIRCULAR	1.5	0	0	0	1	NO	0.0037
IN1458-008	IN1458-007	IN1458-008	IN1458-007	27.029	0.013	0	0	0.25	0.25	CIRCULAR	1.5	0	0	0	1	NO	0.00444
IN1458-009	IN1458-008	IN1458-009	IN1458-008	51.305	0.013	0	0.5	0.25	0.25	CIRCULAR	1	0	0	0	1	NO	0.0039
IN1458-010	IN1458-009	IN1458-010	IN1458-009	43.168	0.013	0	0	0	0.25	CIRCULAR	1	0	0	0	1	NO	0.0044
IN1458-011	AS1457-006	IN1458-011	AS1457-006	102.498	0.013	0	0.75	0.5	0.5	CIRCULAR	1.75	0	0	0	1	NO	0.00449
IN1458-012	IN1458-011	IN1458-012	IN1458-011	54.002	0.013	0	0.25	0	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.005
IN1458-013	IN1458-011	IN1458-013	IN1458-011	247.206	0.013	0	0.75	0.25	0.5	CIRCULAR	1	0	0	0	1	NO	0.00627
IN1458-014	IN1458-013	IN1458-014	IN1458-013	47.332	0.013	0	0	0	0.25	CIRCULAR	1	0	0	0	1	NO	0.00634
IN1458-019	AE1458-020	IN1458-019	AE1458-020	149.006	0.013	0	0.692	0.25	1	CIRCULAR	1.75	0	0	0	1	NO	0.02014
IN1458-021	IN1458-019	IN1458-021	IN1458-019	70.94	0.013	0	0	0.05	0.25	CIRCULAR	1.75	0	0	0	1	NO	0.02115
IN1458-022	IN1458-021	IN1458-022	IN1458-021	69.631	0.013	0	1	0.5	0.05	CIRCULAR	1.75	0	0	0	1	NO	0.03608
IN1458-023	IN1458-022	IN1458-023	IN1458-022	38.569	0.013	1.151	0	0.25	0.5	CIRCULAR	1	0	0	0	1	NO	0.26025
IN1458-024	IN1458-023	IN1458-024	IN1458-023	23.275	0.013	5.446	1.151	0.5	0.25	CIRCULAR	1	0	0	0	1	NO	0.17136
IN1458-025	IN1458-022	IN1458-025	IN1458-022	72.831	0.013	0	0	0.05	0.5	CIRCULAR	1.5	0	0	0	1	NO	-0.02158
IN1551-033	AS1551-031	IN1551-033	AS1551-031	25.293	0.013	0	0	0.5	0.25	CIRCULAR	1.5	0	0	0	1	NO	0.01938
IN1551-034	IN1551-033	IN1551-034	IN1551-033	24.55	0.013	0	0.5	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.05303
IN1551-035	IN1552-066	IN1551-035	IN1552-066	26.801	0.013	0	0.5	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.01642
IN1551-036	IN1552-066	IN1551-036	IN1552-066	99.968	0.013	0	0.25	0.5	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.0072
IN1551-037	IN1551-036	IN1551-037	IN1551-036	36.95	0.013	0	0.25	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.00487
IN1551-038	IN1551-039	IN1551-038	IN1551-039	32.874	0.013	0	0	0.05	0.05	CIRCULAR	1.5	0	0	0	1	NO	0.00761
IN1551-039	AS1551-041	IN1551-039	AS1551-041	90.003	0.013	0	0	0.05	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.01445
IN1551-042	IN1551-043	IN1551-042	IN1551-043	40.876	0.013	0	0.129	0.05	0.5	CIRCULAR	2	0	0	0	1	NO	0.00416
IN1551-043	IN1551-044	IN1551-043	IN1551-044	45.146	0.013	0.129	1.64	0.5	0.5	CIRCULAR	2	0	0	0	1	NO	0.00509
IN1551-044	IN1551-045	IN1551-044	IN1551-045	142.006	0.013	1.64	1.41	0.5	0.5	CIRCULAR	2	0	0	0	1	NO	0.00535
IN1551-045	IN1551-046	IN1551-045	IN1551-046	112.004	0.013	1.41	0	0.5	0.5	CIRCULAR	2	0	0	0	1	NO	0.00804
IN1551-046	AE1551-047	IN1551-046	AE1551-047	37.002	0.013	0	0	0.5	1	CIRCULAR	2	0	0	0	1	NO	0.00649
IN1551-052	IN1551-053	IN1551-052	IN1551-053	41.143	0.013	0	0	0	0.05	CIRCULAR	1	0	0	0	1	NO	-0.00853
IN1551-053	AE1551-054	IN1551-053	**AE1551-054	30.001	0.013	0	0.57	0.05	1	CIRCULAR	1	0	0	0	1	NO	0.02601
IN1551-055	IN1551-045	IN1551-055	IN1551-045	46.451	0.013	0	0	0.25	0.5	CIRCULAR	1	0	0	0	1	NO	0.06439
IN1551-056	IN1551-055	IN1551-056	IN1551-055	27.113	0.013	0	0	0	0.25	CIRCULAR	1	0	0	0	1	NO	0.0211
IN1551-057	IN1551-044	IN1551-057	IN1551-044	37.723	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.0653
IN1552-004	AE1552-005	IN1552-004	AE1552-005	38.001	0.013	0	0	0.5	1	HORIZ ELLIPSE	1.583	2.5	0	0	1	NO	0.005
IN1552-006	IN1552-004	IN1552-006	IN1552-004	148.083	0.013	0	0	0.05	0.5	HORIZ ELLIPSE	1.583	2.5	0	0	1	NO	0.00392
IN1552-007	IN1552-006	IN1552-007	IN1552-006	263.104	0.013	0	0	0.25	0.05	HORIZ ELLIPSE	1.583	2.5	0	0	1	NO	0.00395
IN1552-008	IN1552-007	IN1552-008	IN1552-007	36.274	0.013	0	0	0.25	0.25	HORIZ ELLIPSE	1.583	2.5	0	0	1	NO	0.00386
IN1552-009	IN1552-008	IN1552-009	IN1552-008	36.91	0.013	0	0	0.25	0.25	HORIZ ELLIPSE	1.167	1.917	0	0	1	NO	0.00406
IN1552-010	IN1552-009	IN1552-010	IN1552-009	36.291	0.013	0	0.25	0	0.25	CIRCULAR	1	0	0	0	1	NO	0.01378
IN1552-022	AS1552-023	IN1552-022	AS1552-023	112.706	0.013	0	1.5	0.5	0.25	CIRCULAR	2	0	0	0	1	NO	0.02983
IN1552-025	IN1552-022	IN1552-025	IN1552-022	36.558	0.013	0	0	0.5	0.5	CIRCULAR	2	0	0	0	1	NO	0.00492

	IN1559-030	IN1559-029	IN1559-030	IN1559-029	46.443	0.013	0	0	0.05	0.25	CIRCULAR	1	0	0	0	1	NO	0.00495
	IN1559-031	IN1559-030	IN1559-031	IN1559-030	39.298	0.013	0	6.47	0	0.05	CIRCULAR	1	0	0	0	1	NO	0.00509
	IN1563-001	AS1563-002	IN1563-001	AS1563-002	65.225	0.013	0	0	0.5	0.5	CIRCULAR	2.5	0	0	0	1	NO	0.00399
	IN1563-004	IN1563-011	IN1563-004	IN1563-011	36.243	0.013	0	0	0.5	0.05	CIRCULAR	1.5	0	0	0	1	NO	0.02042
	IN1563-005	IN1563-004	IN1563-005	IN1563-004	11.665	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.01458
	IN1563-006	AS1563-002	IN1563-006	AS1563-002	67.781	0.013	0	0	0.05	0.5	CIRCULAR	2	0	0	0	1	NO	0.00664
	IN1563-007	IN1563-006	IN1563-007	IN1563-006	128.799	0.013	0	0	0.25	0.05	CIRCULAR	2	0	0	0	1	NO	0.00675
	IN1563-008	IN1563-007	IN1563-008	IN1563-007	43.237	0.013	0	0	0	0.25	CIRCULAR	2	0	0	0	1	NO	0.00717
	IN1563-011	AS1563-002	IN1563-011	AS1563-002	9.96	0.013	0	0	0.05	0.5	CIRCULAR	2	0	0	0	1	NO	0.09378
	IN1564-005	IN1564-003	IN1564-005	IN1564-003	148.184	0.013	0	0.03	0.5	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.03261
	IN1564-007	IN1564-008	IN1564-007	IN1564-008	25.191	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.02541
	IN1564-008	IN1564-009	IN1564-008	IN1564-009	64.691	0.013	0	0	0.5	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.05636
	IN1564-009	IN1564-012	IN1564-009	IN1564-012	66.679	0.013	0	0	0.5	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.0252
	IN1564-010	IN1564-009	IN1564-010	IN1564-009	23.472	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.02728
	IN1564-011	IN1564-012	IN1564-011	IN1564-012	23.006	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.03262
	IN1564-012	IN1563-001	IN1564-012	IN1563-001	64.389	0.013	0	0	0.5	0.5	CIRCULAR	1.75	0	0	0	1	NO	0.01196
	IN1564-013	IN1563-001	IN1564-013	IN1563-001	192.572	0.013	0	0	0.05	0.5	CIRCULAR	2	0	0	0	1	NO	0.00301
	IN1564-015	IN1564-016	IN1564-015	IN1564-016	24.077	0.013	0	0	0	0.25	CIRCULAR	1	0	0	0	1	NO	0.01662
	IN1564-016	IN1564-017	IN1564-016	IN1564-017	75.484	0.013	0	0	0.25	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.0273
	IN1564-017	IN1564-025	IN1564-017	IN1564-025	94.601	0.013	0	0	0.5	0.05	CIRCULAR	1.75	0	0	0	1	NO	0.01956
	IN1564-020	AS1564-019	IN1564-020	AS1564-019	35.91	0.013	0	0	0.5	0.5	CIRCULAR	1	0	0	0	1	NO	0.01615
	IN1564-021	IN1564-020	IN1564-021	IN1564-020	23.089	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.01733
	IN1564-022	AS1564-019	IN1564-022	AS1564-019	52.532	0.013	0	0	0.5	0.5	CIRCULAR	1	0	0	0	1	NO	0.00876
	IN1564-023	IN1564-022	IN1564-023	IN1564-022	31.004	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.00774
	IN1564-024	AS1564-019	IN1564-024	AS1564-019	61.264	0.013	0	0	0.5	0.5	CIRCULAR	2	0	0	0	1	NO	0.00506
	IN1564-025	IN1564-024	IN1564-025	IN1564-024	77.426	0.013	0	0	0.05	0.5	CIRCULAR	1.75	0	0	0	1	NO	0.00491
	IN1564-026	IN1564-024	IN1564-026	IN1564-024	23.055	0.013	0	0	0.5	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.00564
	IN1564-027	IN1564-026	IN1564-027	IN1564-026	55.108	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.01343
	IN1564-028	IN1564-017	IN1564-028	IN1564-017	209.866	0.013	0	0	0.5	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.04001
	IN1564-029	IN1564-028	IN1564-029	IN1564-028	90.8	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.06678
	IN1564-030	IN1564-028	IN1564-030	IN1564-028	35.608	0.013	0	0	0.5	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.06049
	IN1564-031	IN1564-030	IN1564-031	IN1564-030	147.765	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.06776
	IN1564-032	IN1564-030	IN1564-032	IN1564-030	88.408	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.00769
	IN1565-001	IN1566-003	IN1565-001	IN1566-003	400.504	0.013	0	0	0.05	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.00722
	IN1565-002	IN1565-001	IN1565-002	IN1565-001	152.272	0.013	0	0	0.5	0.05	CIRCULAR	1.5	0	0	0	1	NO	0.01011
	IN1565-003	IN1565-002	IN1565-003	IN1565-002	62.295	0.013	0	0	0.25	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.00594
	IN1565-004	IN1565-003	IN1565-004	IN1565-003	21.001	0.013	0	0	0.5	0.25	CIRCULAR	1	0	0	0	1	NO	0.02715
	IN1565-005	IN1565-004	IN1565-005	IN1565-004	10.059	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.01392
	IN1565-006	IN1565-007	IN1565-006	IN1565-007	31.005	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.01097
	IN1565-007	IN1565-002	IN1565-007	IN1565-002	101.667	0.013	0	0	0.5	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.03031
	IN1565-008	IN1565-007	IN1565-008	IN1565-007	10.491	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.09479
	IN1565-009	IN1565-010	IN1565-009	IN1565-010	21.002	0.013	0	0	0	0.25	CIRCULAR	1	0	0	0	1	NO	0.01429
	IN1565-010	IN1565-012	IN1565-010	IN1565-012	43.054	0.013	0	0	0.25	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.03067
	IN1565-011	IN1565-012	IN1565-011	IN1565-012	17.125	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.01226
	IN1565-012	IN1565-013	IN1565-012	IN1565-013	11.002	0.013	0	0	0.5	0.05	CIRCULAR	1.25	0	0	0	1	NO	0.02273
	IN1565-013	IN1665-003	IN1565-013	IN1665-003	50.756	0.013	0	0	0.05	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.04754
	IN1565-014	IN1665-003	IN1565-014	IN1665-003	53.852	0.013	0	0	0.05	0.5	CIRCULAR	2	0	0	0	1	NO	0.03437
	IN1565-015	IN1565-014	IN1565-015	IN1565-014	61.138	0.013	0.1	0	0.25	0.05	CIRCULAR	2	0	0	0	1	NO	0.0383
	IN1566-001	IN1567-028	IN1566-001	IN1567-028	328.78	0.013	0	0	0	0.05	CIRCULAR	1.5	0	0	0	1	NO	0.01557
	IN1566-002	IN1566-001	IN1566-002	IN1566-001	125.129	0.013	0	0	0.05	0.05	CIRCULAR	1.5	0	0	0	1	NO	0.03631
	IN1566-003	IN1566-002	IN1566-003	IN1566-002	275.017	0.013	0	0	0.5	0.05	CIRCULAR	1.5	0	0	0	1	NO	0.0524
	IN1566-004	IN1566-003	IN1566-004	IN1566-003	22.19	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.05009
	IN1567-003	IN1567-004	IN1567-003	IN1567-004	9.865	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.0355
	IN1567-004	IN1567-006	IN1567-004	IN1567-006	21.005	0.013	0	0	0.5	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.02333
	IN1567-005	IN1567-006	IN1567-005	IN1567-006	10.359	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.05802
	IN1567-006	IN1567-036	IN1567-006	IN1567-036	200.022	0.013	0	0	0.5	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.04604
	IN1567-009	IN1567-008	IN1567-009	IN1567-008	21.07	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.02279
	IN1567-013	IN1567-010	IN1567-013	IN1567-010	7.966	0.013	0	0	0.05	0.05	CIRCULAR	1.25	0	0	0	1	NO	0.01883
	IN1567-014	IN1567-013	IN1567-014	IN1567-013	10.367	0.013	0	0	0	0.05	CIRCULAR	1	0	0	0	1	NO	0.04925
	IN1567-017	IN1567-018	IN1567-017	IN1567-018	45.673	0.013	0	0	0	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.06495
	IN1567-018	AS1567-019	IN1567-018	AS1567-019	203.667	0.013	0	0	0.5	0.5	HORIZ_ELLIPSE	3.583	5.667	0	0	1	NO	0.00255
	IN1567-020	IN1567-021	IN1567-020	IN1567-021	21.004	0.013	0	0	0	0.05	CIRCULAR	1	0	0	0	1	NO	0.01381
	IN1567-021	AS1567-019	IN1567-021	AS1567-019	7.456	0.013	0	0	0.05	0.5	CIRCULAR	1	0	0	0	1	NO	0.00268
	IN1567-023	AS1567-022	IN1567-023	AS1567-022	7.353	0.013	0	0	0.5	0.5	CIRCULAR	2.5	0	0	0	1	NO	0.09977
	IN1567-024	IN1567-023	IN1567-024	IN1567-023	21.006	0.013	0	0	0	0.5	CIRCULAR	2.5	0	0	0	1	NO	0.01428
	IN1567-027	IN1567-029	IN1567-027	IN1567-029	21.003	0.013	0	0	0.5	0.5	CIRCULAR	2	0	0	0	1	NO	0.01143
	IN1567-028	IN1567-027	IN1567-028	IN1567-027	9.87	0.013	0	0	0.05	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.01013
	IN1567-029	TE1567-034	IN1567-029	TE1567-034	488.182	0.013	0	0	0.5	0.5	CIRCULAR	2	0	0	0	1	NO	0.01004
	IN1567-030	IN1567-029	IN1567-030	IN1567-029	9.496	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.09521
	IN1567-031	IN1567-032	IN1567-031	IN1567-032	21.002	0.013	0	0	0	0.05	CIRCULAR	1	0	0	0	1	NO	0.03192
	IN1567-032	IN1567-033	IN1567-032	IN1567-033	12.767	0.013	0	0	0.05	0.5	CIRCULAR	1	0	0	0	1	NO	0.02194
	IN1567-033	TE1567-034	IN1567-033	TE1567-034	101.305	0.013	0	1	0.5	0.5	CIRCULAR	1	0	0	0	1	NO	0.02251
	IN1567-036	AE1567-037	IN1567-036	AE1567-037	97.01	0.013	0	0	0.5	1	CIRCULAR	1.5	0	0	0	1	NO	0.0542
	IN1567-040	AE1567-04																

	IN1659-031	IN1659-023	IN1659-023	IN1659-031	122.868	0.013	4.53	0	0.5	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.05322	
	IN1659-031	IN1659-032	IN1659-031	IN1659-032	24.795	0.013	0	0	0.5	0.05	CIRCULAR	3.5	0	0	0	1	NO	0.00726	
	IN1659-032	AE1659-033	IN1659-032	AE1659-033	95.21	0.013	0	0	0.05	1	CIRCULAR	3.5	0	0	0	1	NO	0.01187	
	IN1659-034	IN1659-031	IN1659-034	IN1659-031	22.754	0.013	0	1.25	0.5	0.5	CIRCULAR	2.25	0	0	0	1	NO	0.00527	
	IN1659-035	IN1659-034	IN1659-035	IN1659-034	145.641	0.013	1.479	0	0.5	0.5	CIRCULAR	2.25	0	0	0	1	NO	0.00577	
	IN1659-036	IN1659-035	IN1659-036	IN1659-035	167.901	0.013	0	1.479	0.05	0.5	CIRCULAR	2.25	0	0	0	1	NO	0.0059	
	IN1659-037	IN1659-036	IN1659-037	IN1659-036	51.745	0.013	0	0	0.5	0.05	CIRCULAR	2.25	0	0	0	1	NO	0.0058	
	IN1659-038	IN1659-037	IN1659-038	IN1659-037	42.481	0.013	2.377	1	0.5	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.03533	
	IN1659-039	IN1659-038	IN1659-039	IN1659-038	16.153	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.00904	
	IN1659-040	IN1659-037	IN1659-040	IN1659-037	79.466	0.013	0	0.25	0.05	0.5	CIRCULAR	2	0	0	0	1	NO	0.00566	
	IN1659-041	IN1659-040	IN1659-041	IN1659-040	92.193	0.013	2.85	0	0.5	0.05	CIRCULAR	2	0	0	0	1	NO	0.00586	
	IN1659-042	AE1759-008	IN1659-042	AE1759-008	11.584	0.013	0	0	0.5	0.5	CIRCULAR	1	0	0	0	1	NO	0.01554	
	IN1659-042	IN1659-060	IN1659-042	IN1659-060	46.114	0.013	0	0.6	0.5	0.5	CIRCULAR	1	0	0	0	1	NO	0.0039	
	IN1659-043	IN1659-031	IN1659-043	IN1659-031	61.005	0.013	0	1.25	0.25	0.5	CIRCULAR	2.25	0	0	0	1	NO	0.03346	
	IN1659-044	IN1659-043	IN1659-044	IN1659-043	73.589	0.013	1.058	0.5	0.5	0.25	CIRCULAR	1.75	0	0	0	1	NO	0.00584	
	IN1659-045	IN1659-044	IN1659-045	IN1659-044	19.59	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.08871	
	IN1659-046	IN1659-044	IN1659-046	IN1659-044	12.478	0.013	0	1.308	0.05	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.0016	
	IN1659-047	IN1659-046	IN1659-047	IN1659-046	15.479	0.013	0	0	0.5	0.05	CIRCULAR	1.5	0	0	0	1	NO	0.00711	
	IN1659-048	IN1659-047	IN1659-048	IN1659-047	205.772	0.013	29.75	0	0.5	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.00593	
	IN1659-049	IN1659-048	IN1659-049	IN1659-048	34.969	0.013	0.242	30	0.05	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.00629	
	IN1659-050	IN1659-048	IN1659-050	IN1659-048	163.184	0.013	4.349	0	0.5	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.19953	
	IN1659-051	IN1659-050	IN1659-051	IN1659-050	34.975	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.04359	
	IN1659-052	IN1658-014	IN1659-052	IN1658-014	35.307	0.013	0	0	0.05	0.5	CIRCULAR	1	0	0	0	1	NO	0.02978	
	IN1659-053	IN1759-004	IN1659-053	IN1759-004	14.417	0.013	1.43	0	0.05	0.25	CIRCULAR	1	0	0	0	1	NO	0.09968	
IN1659-055	AE1659-014	AE1659-015	IN1659-055	AE1659-015	01	0.013	0	1.27	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.0184	
	TP1659-056		IN1659-057	TP1659-056	96.004	0.013	0	0	0.5	0.5	CIRCULAR	1.75	0	0	0	1	NO	0.01323	
	IN1659-058	IN1659-057	IN1659-058	IN1659-057	23.384	0.013	0	0.75	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.00684	
	IN1659-059	IN1759-013	IN1659-059	IN1759-013	204.229	0.013	0	0.1	0.5	0.5	CIRCULAR	18	0	0	0	1	NO	0.01881	
	IN1659-060	IN1759-014	IN1659-060	IN1759-014	22.525	0.013	0	0.5	0.5	0.5	CIRCULAR	1	0	0	0	1	NO	0.02487	
	IN1660-003	MI1660-017	IN1660-003	MI1660-017	12.776	0.013	0	0.12	0.5	0.25	CIRCULAR	3.5	0	0	0	1	NO	-0.00783	
	IN1660-004	IN1660-003	IN1660-004	IN1660-003	13.001	0.013	0	4.09	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.00385	
	IN1660-006	AS1660-018	IN1660-006	AS1660-018	14.465	0.013	0	0	0.5	0.5	CIRCULAR	3.5	0	0	0	1	NO	0.00277	
	IN1660-007	IN1660-006	IN1660-007	IN1660-006	12.79	0.013	0	4.15	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.00391	
	IN1660-012	AE1660-013	IN1660-012	AE1660-013	42.884	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	1	NO	0.00513
	IN1660-012	IN1660-041	IN1660-012	IN1660-041	18.963	0.013	0	0.61	0.5	0.05	CIRCULAR	1	0	0	0	1	NO	0.0116	
	IN1660-014	AE1660-016	IN1660-014	AE1660-016	47.745	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	1	NO	0.00461
	IN1660-014	IN1660-042	IN1660-014	IN1660-042	31.406	0.013	0	2.12	0.5	0.5	CIRCULAR	1	0	0	0	1	NO	0.00605	
	IN1660-015	IN1660-014	IN1660-015	IN1660-014	10.154	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.01379	
	IN1660-020	AS1660-019	IN1660-020	AS1660-019	201.516	0.013	0	0	0	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.04829	
	IN1660-021	AS1660-019	IN1660-021	AS1660-019	67.788	0.013	0	0.5	0.5	0.5	CIRCULAR	1	0	0	0	1	NO	0.02228	
	IN1660-022	IN1660-021	IN1660-022	IN1660-021	16.684	0.013	0	0	0.05	0.5	CIRCULAR	1	0	0	0	1	NO	0.03899	
	IN1660-023	IN1660-022	IN1660-023	IN1660-022	9.815	0.013	0	0	0.05	0.05	CIRCULAR	1	0	0	0	1	NO	0.01325	
	IN1660-024	IN1660-023	IN1660-024	IN1660-023	23.821	0.013	0	0	0	0.05	CIRCULAR	1	0	0	0	1	NO	0.0063	
	IN1660-025	IN1660-003	IN1660-025	IN1660-003	24.254	0.013	0	0	0.05	0.5	CIRCULAR	42	0	0	0	1	NO	0.00165	
	IN1660-026	IN1660-025	IN1660-026	IN1660-025	12.052	0.013	0	0	0.05	0.05	CIRCULAR	42	0	0	0	1	NO	0.00166	
	IN1660-027	IN1659-057	IN1660-027	IN1659-057	183.086	0.013	0	0.25	0.25	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.00978	
	IN1660-028	IN1660-027	IN1660-028	IN1660-027	50.596	0.013	0	0	0.5	0.25	CIRCULAR	1.5	0	0	0	1	NO	0.0083	
	IN1660-029	IN1660-028	IN1660-029	IN1660-028	31.205	0.013	0	0.5	0.25	0.5	CIRCULAR	1	0	0	0	1	NO	0.05263	
	IN1660-030	IN1660-029	IN1660-030	IN1660-029	23.464	0.013	0	0	0	0.25	CIRCULAR	1	0	0	0	1	NO	0.04266	
	IN1660-031	IN1660-028	IN1660-031	IN1660-028	94.004	0.013	0	0	0.5	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.00596	
	IN1660-032	IN1660-031	IN1660-032	IN1660-031	22.61	0.013	0	0.5	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.00663	
	IN1660-037	AS1660-036	IN1660-037	AS1660-036	38.277	0.013	0	0.269	0.5	0.5	CIRCULAR	42	0	0	0	1	NO	0.01019	
	IN1660-038	IN1660-006	IN1660-038	IN1660-006	44.086	0.013	0	0	0.05	0.5	CIRCULAR	42	0	0	0	1	NO	0.00272	
	IN1660-040	AS1660-039	IN1660-040	AS1660-039	119.586	0.013	0	4.52	0.5	0.05	CIRCULAR	24	0	0	0	1	NO	-0.00084	
	IN1660-041	IN1660-040	IN1660-041	IN1660-040	15.057	0.013	0	2	0.05	0.5	CIRCULAR	1	0	0	0	1	NO	0.03788	
	IN1660-042	IN1660-040	IN1660-042	IN1660-040	264.804	0.013	0	0.1	0.5	0.5	CIRCULAR	24	0	0	0	1	NO	0.0548	
	IN1661-002	AS1661-004	IN1661-002	AS1661-004	31.894	0.013	0	2.49	0.5	0.5	CIRCULAR	1	0	0	0	1	NO	0.0047	
	IN1661-003	IN1661-002	IN1661-003	IN1661-002	9.897	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.01415	
	IN1662-002	IN1663-018	IN1662-002	IN1663-018	107.898	0.013	0	0	0.5	0.05	CIRCULAR	3	0	0	0	1	NO	0.03403	
	IN1662-003	IN1662-002	IN1662-003	IN1662-002	45.465	0.013	0	2	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.04999	
	IN1662-004	IN1662-002	IN1662-004	IN1662-002	47.182	0.013	0.363	0.5	0.5	0.5	CIRCULAR	2.5	0	0	0	1	NO	0.02629	
	IN1662-005	IN1662-004	IN1662-005	IN1662-004	13	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.09146	
	IN1662-006	IN1662-004	IN1662-006	IN1662-004	26.884	0.013	0	0	0.5	0.5	CIRCULAR	2.5	0	0	0	1	NO	0.0557	
	IN1662-007	IN1662-006	IN1662-007	IN1662-006	13.093	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.1133	
	IN1662-008	IN1662-006	IN1662-008	IN1662-006	49.208	0.013	0.33	0.268	0.5	0.5	CIRCULAR	2.5	0	0	0	1	NO	0.04761	
	IN1662-009	IN1662-008	IN1662-009	IN1662-008	28.469	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.08858	
	IN1662-010	IN1662-008	IN1662-010	IN1662-008	163.984	0.013	0	0.58	0	0.5	CIRCULAR	2.25	0	0	0	1	NO	0.06877	
	IN1662-011	AE1662-012	IN1662-011	AE1662-012	32.085	0.013	0	0	0.5	1	HORIZ ELLIPSE	2.833	4.417	0	0	1	NO	0.0159	
	IN1662-013	IN1662-011	IN1662-013	IN1662-011	179.999	0.013	0	0.58	0.5	0.5	CIRCULAR	2	0	0	0	1	NO	0.00489	
	IN1662-015	IN1662-025	IN1662-015	IN1662-025	38.285	0.013	0	0.25	0.25	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.01855	
	IN1662-016	IN1662-015	IN1662-016	IN1662-015	153.12	0.013	0	0	0.5	0.25	CIRCULAR	1.5	0	0	0	1	NO	0.01528	
	IN1662-017	IN1662-016	IN1662-017	IN1662-016	27.175	0.013	0	0.5	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.02024	
	IN1662-018	IN1662-016	IN1662-018	IN16															

	IN1668-035	IN1668-034	IN1668-035	IN1668-034	37.275	0.013	0	0.5	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.00537
	IN1668-036	IN1668-031	IN1668-036	IN1668-031	50.887	0.013	0	7.57	0.5	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.04899
	IN1668-037	IN1668-036	IN1668-037	IN1668-036	23.111	0.013	0	0	0	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.01212
	IN1668-038	IN1668-004	IN1668-038	IN1668-004	26.839	0.013	0	11.03	0	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.0343
	IN1668-039	IN1668-004	IN1668-039	IN1668-004	54.739	0.013	0	1.52	0.05	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.08858
	IN1668-040	IN1668-039	IN1668-040	IN1668-039	58.734	0.013	0	0	0.25	0.05	CIRCULAR	1.5	0	0	0	1	NO	0.09751
	IN1668-041	IN1668-040	IN1668-041	IN1668-040	114.933	0.013	0	0	0.05	0.25	CIRCULAR	1.5	0	0	0	1	NO	0.02707
	IN1668-042	IN1668-041	IN1668-042	IN1668-041	65.031	0.013	0	0	0.5	0.05	CIRCULAR	1.5	0	0	0	1	NO	0.01323
	IN1668-043	IN1668-042	IN1668-043	IN1668-042	68.954	0.013	0	0.5	0.5	0.5	CIRCULAR	1	0	0	0	1	NO	0.03613
	IN1668-044	IN1668-043	IN1668-044	IN1668-043	27.29	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.00586
	IN1668-045	IN1668-042	IN1668-045	IN1668-042	33.389	0.013	0	0.5	0.25	0.5	CIRCULAR	1	0	0	0	1	NO	0.00419
	IN1668-046	IN1668-045	IN1668-046	IN1668-045	104.976	0.013	0	0	0.5	0.25	CIRCULAR	1	0	0	0	1	NO	0.00486
	IN1668-047	IN1668-046	IN1668-047	IN1668-046	23.239	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.00645
	IN1668-048	IN1668-042	IN1668-048	IN1668-042	55.503	0.013	0	0.25	0.5	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.02433
	IN1668-049	IN1668-048	IN1668-049	IN1668-048	22.464	0.013	0	0.25	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.00712
	IN1668-050	IN1668-048	IN1668-050	IN1668-048	100.13	0.013	0	0	0.05	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.01498
	IN1668-051	IN1668-050	IN1668-051	IN1668-050	193.567	0.013	0	0.25	0.5	0.05	CIRCULAR	1	0	0	0	1	NO	0.05178
	IN1668-052	IN1668-051	IN1668-052	IN1668-051	23.319	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.01072
	IN1756-001	IN1757-084	IN1756-001	IN1757-084	435.571	0.013	0	0	0.5	0.05	CIRCULAR	1.5	0	0	0	1	NO	0.02933
	IN1756-003	IN1756-001	**IN1756-003	IN1756-001	136.087	0.013	0	0	0.25	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.04384
	IN1756-005	IN1756-004	IN1756-005	IN1756-004	382.55	0.013	0	0	0.25	0.25	CIRCULAR	1.5	0	0	0	1	NO	0.02272
	IN1756-006	IN1757-067	IN1756-006	IN1757-067	122.081	0.013	0	0	0	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.01974
	IN1756-007	IN1756-006	IN1756-007	IN1756-006	274.135	0.013	0	0	0.5	0	CIRCULAR	1.5	0	0	0	1	NO	0.02803
	IN1756-007	IN1756-008	IN1756-007	IN1756-008	31.251	0.013	0.17	0	0.5	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.00544
	IN1756-010	IN1756-007	IN1756-010	IN1756-007	70.532	0.013	0	0	0.25	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.01205
	IN1756-011	IN1756-010	IN1756-011	IN1756-010	32.953	0.013	0	0	0.5	0.25	CIRCULAR	1.5	0	0	0	1	NO	0.00516
	IN1756-012	IN1756-011	IN1756-012	IN1756-011	31.737	0.013	0	0	0.05	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.00504
	IN1756-013	IN1756-012	IN1756-013	IN1756-012	12.001	0.013	0	0	0	0.05	CIRCULAR	1.5	0	0	0	1	NO	0.005
	IN1756-014	IN1756-011	IN1756-014	IN1756-011	357.065	0.013	0	0	0.5	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.00669
	IN1756-015	IN1756-014	IN1756-015	IN1756-014	31.313	0.013	0	0	0.25	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.00543
	IN1756-016	IN1756-015	IN1756-016	IN1756-015	35.001	0.013	0	0	0	0.25	CIRCULAR	1.5	0	0	0	1	NO	0.00543
	IN1756-017	IN1757-089	IN1756-017	IN1757-089	464.018	0.013	0	0	0.05	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.00489
	IN1756-018	IN1756-017	IN1756-018	IN1756-017	187.007	0.013	0	0	0	0.05	CIRCULAR	1.5	0	0	0	1	NO	0.01669
	IN1757-003	AS1757-002	IN1757-003	AS1757-002	10	0.013	0	0	0.5	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.12087
	IN1757-004	IN1757-003	IN1757-004	IN1757-003	9.919	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.07685
	IN1757-005	AS1757-002	IN1757-005	AS1757-002	22.501	0.013	0	0	0.5	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.07398
	IN1757-006	IN1757-005	IN1757-006	IN1757-005	9.92	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.0444
	IN1757-008	AS1757-001	IN1757-008	AS1757-001	48.99	0.013	0	0	0.5	0.5	CIRCULAR	1.75	0	0	0	1	NO	0.04331
	IN1757-009	IN1757-008	IN1757-009	IN1757-008	26.983	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.07246
	IN1757-010	IN1757-008	IN1757-010	IN1757-008	78.291	0.013	0	0	0.5	0.5	CIRCULAR	1.75	0	0	0	1	NO	0.01277
	IN1757-011	IN1757-010	IN1757-011	IN1757-010	23.998	0.013	0	0	0.25	0.5	CIRCULAR	1	0	0	0	1	NO	0.10602
	IN1757-012	IN1757-011	IN1757-012	IN1757-011	10.206	0.013	0	0	0	0.25	CIRCULAR	1	0	0	0	1	NO	0.01666
	IN1757-014	IN1757-010	IN1757-014	IN1757-010	50.244	0.013	0	0	0.5	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.03625
	IN1757-015	IN1757-014	IN1757-015	IN1757-014	10.46	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.04786
	IN1757-019	IN1757-020	IN1757-019	IN1757-020	10.378	0.013	0	0	0.05	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.02313
	IN1757-020	AS1757-017	IN1757-020	AS1757-017	21.875	0.013	0	0	0.5	0.25	CIRCULAR	1.5	0	0	0	1	NO	0.06091
	IN1757-022	IN1757-010	IN1757-022	IN1757-010	124.413	0.013	0	0	0.5	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.02195
	IN1757-023	IN1757-022	IN1757-023	IN1757-022	33.989	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.06427
	IN1757-024	IN1757-022	IN1757-024	IN1757-022	180.169	0.013	0	0	0.05	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.02576
	IN1757-025	IN1757-024	IN1757-025	IN1757-024	136.068	0.013	0	0	0.5	0.05	CIRCULAR	1.5	0	0	0	1	NO	0.05587
	IN1757-026	IN1757-025	IN1757-026	IN1757-025	27.617	0.013	0	0	0.25	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.03442
	IN1757-027	IN1757-026	IN1757-027	IN1757-026	24.353	0.013	0	0	0.25	0.25	CIRCULAR	1.25	0	0	0	1	NO	0.06626
	IN1757-028	IN1757-027	IN1757-028	IN1757-027	9.97	0.013	0	0	0	0.25	CIRCULAR	1	0	0	0	1	NO	0.07443
	IN1757-029	AS1757-001	IN1757-029	AS1757-001	85.718	0.013	0	0	0.5	0.5	CIRCULAR	2	0	0	0	1	NO	0.01995
	IN1757-031	AS1757-030	IN1757-031	AS1757-030	118.606	0.013	0	0	0.5	0.25	CIRCULAR	2	0	0	0	1	NO	0.00801
	IN1757-033	AS1757-032	IN1757-033	AS1757-032	61.025	0.013	0	0	0.5	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.04725
	IN1757-037	IN1757-029	IN1757-037	IN1757-029	55.833	0.013	0	0	0.25	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.05219
	IN1757-038	IN1757-037	IN1757-038	IN1757-037	9.725	0.013	0	0	0	0.25	CIRCULAR	1	0	0	0	1	NO	0.0391
	IN1757-039	IN1757-031	IN1757-039	IN1757-031	52.511	0.013	0	0	0.5	0.5	HORIZ ELLIPSE	1.583	2.5	0	0	1	NO	0.00514
	IN1757-041	AS1757-040	IN1757-041	AS1757-040	51.371	0.013	0	0	0.5	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.05263
	IN1757-042	IN1757-041	IN1757-042	IN1757-041	9.998	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.03904
	IN1757-044	IN1757-039	IN1757-044	IN1757-039	33.043	0.013	0	0	0.25	0.5	CIRCULAR	1	0	0	0	1	NO	0.04696
	IN1757-045	IN1757-044	IN1757-045	IN1757-044	35.241	0.013	0	0	0	0.25	CIRCULAR	1	0	0	0	1	NO	0.05171
	IN1757-047	HD1758-021	IN1757-047	HD1758-021	192.908	0.013	0	0.777	0.5	1	RECT_CLOSED	3	6	0	0	1	NO	0.01566
	IN1757-048	IN1757-047	IN1757-048	IN1757-047	114.478	0.013	0	0	0.5	0.5	CIRCULAR	3.5	0	0	0	1	NO	0.00507
	IN1757-049	IN1757-048	IN1757-049	IN1757-048	64.655	0.013	0	0	0.5	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.03265
	IN1757-050	IN1757-049	IN1757-050	IN1757-049	24.444	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.01596
	IN1757-051	IN1757-048	IN1757-051	IN1757-048	72.069	0.013	0	0	0.05	0.5	CIRCULAR	3.5	0	0	0	1	NO	0.005
	IN1757-052	IN1757-051	IN1757-052	IN1757-051	12.707	0.013	0	0	0.5	0.05	CIRCULAR	3.5	0	0	0	1	NO	0.00393
	IN1757-053	IN1757-052	IN1757-053	IN1757-052	27.03	0.013	0	0	0.5	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.05186
	IN1757-054	IN1757-053	IN1757-054	IN1757-053	12.835	0.013	0	0	0	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.02494
	IN1757-060	AS1757-040	IN1757-060	AS1757-040	46.133	0.013	0	0	0.5	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.04187
	IN1757-062	IN1757-060	IN1757-062	IN1757-060	75.934	0.013	0	0	0.5	0.5	CIRCULAR	1.5	0					

	IN1758-084	IN1758-081	IN1758-084	IN1758-081	27.108	0.013	0	0.75	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.02399
	IN1758-085	IN1758-082	IN1758-085	IN1758-082	26.909	0.013	0	0.75	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.00595
	IN1758-086	IN1758-082	IN1758-086	IN1758-082	96.004	0.013	0	0.41	0.5	0.5	CIRCULAR	1.75	0	0	0	1	NO	0.04389
	IN1758-087	IN1758-086	IN1758-087	IN1758-086	68.242	0.013	0	0.5	0.5	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.05136
	IN1758-088	IN1758-087	IN1758-088	IN1758-087	27.481	0.013	0	0.25	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.00582
	IN1758-089	IN1758-090	IN1758-089	IN1758-090	24.589	0.013	0	0.5	0	0.05	CIRCULAR	1	0	0	0	1	NO	0.0297
	IN1758-090	IN1758-086	IN1758-090	IN1758-086	33.659	0.013	0	0.25	0.05	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.05027
IN1758-091	PD1758-001	HD1658-001	IN1758-091	IN1658-010	20.878	0.013	0	0	0.5	0.05	RECT_CLOSED	4	8	0	0	1	NO	0.00508
	IN1758-092	IN1758-091	IN1758-092	IN1758-091	13.448	0.013	0	4.226	0	0.5	CIRCULAR	1	0	0	0	1	NO	-0.16505
	IN1758-093	IN1758-040	IN1758-093	IN1758-040	9.204	0.013	0	1.31	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.00217
	IN1759-002	IN1758-040	IN1759-002	IN1758-040	94.905	0.013	0	0.81	0.5	0.5	CIRCULAR	1	0	0	0	1	NO	0.00485
	IN1759-004	IN1759-002	IN1759-004	IN1759-002	18.592	0.013	0	0	0.25	0.5	CIRCULAR	1	0	0	0	1	NO	0.04523
	IN1759-013	IN1759-014	IN1759-013	IN1759-014	87.961	0.013	0	0	0.5	0.5	CIRCULAR	18	0	0	0	1	NO	0.02388
	IN1759-014	IN1759-015	IN1759-014	IN1759-015	63.49	0.013	0	0.25	0.5	0.5	CIRCULAR	18	0	0	0	1	NO	0.01339
	IN1759-015	IN1759-016	IN1759-015	IN1759-016	36.047	0.013	0	0	0.5	0.5	CIRCULAR	21	0	0	0	1	NO	0.01748
	IN1759-016	IN1759-017	IN1759-016	IN1759-017	36	0.013	0	0	0.5	0.5	CIRCULAR	1.75	0	0	0	1	NO	0.0025
	IN1759-017	IN1759-018	IN1759-017	IN1759-018	11.173	0.013	0	0	0.5	0.5	CIRCULAR	21	0	0	0	1	NO	0.02238
	IN1759-018	IN1759-019	IN1759-018	IN1759-019	29.959	0.013	0	0	0.5	0.5	CIRCULAR	24	0	0	0	1	NO	0.00501
	IN1759-020	IN1759-019	IN1759-020	IN1759-019	17.887	0.013	0	1	0.5	0.5	CIRCULAR	1	0	0	0	1	NO	0.00503
	IN1760-012	IN1660-040	IN1760-012	IN1660-040	29.068	0.013	0	1	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.01617
	IN1760-013	IN1660-042	IN1760-013	IN1660-042	31.629	0.013	3.269	1	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.01265
	IN1761-002	AE1761-002	IN1761-002	AE1761-002	19.729	0.013	0	0.32	0.5	0.05	CIRCULAR	1	0	0	0	1	NO	0.01166
	IN1762-001	AE1762-002	IN1762-001	AE1762-002	155.017	0.013	0	0	0.5	1	CIRCULAR	3.5	0	0	0	1	NO	0.1272
	IN1762-003	IN1762-001	IN1762-003	IN1762-001	12.013	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.21722
	IN1762-004	IN1762-001	IN1762-004	IN1762-001	28.676	0.013	0	0	0.5	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.08399
	IN1762-005	IN1762-004	IN1762-005	IN1762-004	16.13	0.013	0.158	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.23365
	IN1762-006	IN1762-004	IN1762-006	IN1762-004	22.968	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.01916
	IN1762-007	IN1762-001	IN1762-007	IN1762-001	109.848	0.013	0	0	0.5	0.5	CIRCULAR	3	0	0	0	1	NO	0.01785
	IN1762-008	IN1762-007	IN1762-008	IN1762-007	53.585	0.013	0	0	0.5	0.5	CIRCULAR	2.25	0	0	0	1	NO	0.03137
	IN1762-009	IN1762-008	IN1762-009	IN1762-008	116.814	0.013	0	0	0.25	0.5	CIRCULAR	1	0	0	0	1	NO	0.03118
	IN1762-010	IN1762-009	IN1762-010	IN1762-009	21.823	0.013	0	0	0	0.25	CIRCULAR	1	0	0	0	1	NO	0.01375
	IN1762-011	IN1762-008	IN1762-011	IN1762-008	232.35	0.013	0	0	0.05	0.5	CIRCULAR	2	0	0	0	1	NO	0.03574
	IN1762-013	AS1762-012	IN1762-013	AS1762-012	29.472	0.013	0	0	0.5	0.5	CIRCULAR	1	0	0	0	1	NO	0.03667
	IN1762-014	IN1762-013	IN1762-014	IN1762-013	22.289	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.01346
	IN1762-015	AS1762-012	IN1762-015	AS1762-012	159.151	0.013	0	0	0.5	0.5	CIRCULAR	2.25	0	0	0	1	NO	0.01835
	IN1762-016	IN1762-015	IN1762-016	IN1762-015	20.773	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.12074
	IN1762-017	IN1762-015	IN1762-017	IN1762-015	77.608	0.013	0	0	0.5	0.5	CIRCULAR	2.25	0	0	0	1	NO	0.0049
	IN1762-018	IN1762-017	IN1762-018	IN1762-017	156.116	0.013	0.474	0	0.5	0.5	CIRCULAR	1	0	0	0	1	NO	0.00423
	IN1762-019	IN1762-018	IN1762-019	IN1762-018	32.42	0.013	0	0.474	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.00308
	IN1762-020	IN1762-018	IN1762-020	IN1762-018	31.996	0.013	0	0.474	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.00781
	IN1762-021	IN1762-017	IN1762-021	IN1762-017	33.356	0.013	0	0	0.25	0.5	CIRCULAR	2	0	0	0	1	NO	0.02129
	IN1762-022	IN1762-021	IN1762-022	IN1762-021	27.825	0.013	0	0	0.5	0.25	CIRCULAR	2	0	0	0	1	NO	-0.00036
	IN1762-023	IN1762-022	IN1762-023	IN1762-022	77.399	0.013	0	0	0.25	0.5	CIRCULAR	2	0	0	0	1	NO	0.02999
	IN1762-025	IN1762-023	IN1762-025	IN1762-023	99.823	0.013	0	0	0.25	0.25	CIRCULAR	2	0	0	0	1	NO	0.06193
	IN1762-026	IN1762-025	IN1762-026	IN1762-025	64.069	0.013	0	0	0.25	0.25	CIRCULAR	2	0	0	0	1	NO	0.03842
	IN1762-027	IN1762-026	IN1762-027	IN1762-026	24.728	0.013	0	0	0.5	0.25	CIRCULAR	2	0	0	0	1	NO	0.01982
	IN1762-028	IN1762-027	IN1762-028	IN1762-027	33.244	0.013	0	0	0.25	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.10771
	IN1762-031	AS1762-030	IN1762-031	AS1762-030	50.344	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.00437
	IN1762-033	IN1762-011	IN1762-033	IN1762-011	52.006	0.013	0	0	0.5	0.05	CIRCULAR	1.5	0	0	0	1	NO	0.01962
	IN1762-036	IN1862-034	IN1762-036	IN1862-034	202.741	0.013	0.185	0	0	0.05	CIRCULAR	1.5	0	0	0	1	NO	0.02072
	IN1762-037	IN1762-038	IN1762-037	IN1762-038	115.67	0.013	0	0	0.25	0.5	CIRCULAR	2.25	0	0	0	1	NO	0.04127
	IN1762-038	AE1762-039	IN1762-038	AE1762-039	41.005	0.013	0	0	0.5	1	CIRCULAR	2.25	0	0	0	1	NO	0.03001
	IN1762-040	IN1762-038	IN1762-040	IN1762-038	31.67	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.05978
	IN1762-041	IN1762-037	IN1762-041	IN1762-037	137.849	0.013	0	0	0.5	0.25	CIRCULAR	2.25	0	0	0	1	NO	0.03266
	IN1762-042	IN1762-041	IN1762-042	IN1762-041	32.745	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.04371
	IN1763-001	IN1763-002	IN1763-001	IN1763-002	21.003	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.00238
	IN1763-002	AS1763-007	IN1763-002	AS1763-007	191.133	0.013	0	0	0.5	0.5	CIRCULAR	1	0	0	0	1	NO	0.00204
	IN1763-003	IN1763-005	IN1763-003	IN1763-005	9.823	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.05506
	IN1763-004	IN1763-006	IN1763-004	IN1763-006	9.829	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.15021
	IN1763-005	IN1763-006	IN1763-005	IN1763-006	21.004	0.013	0	0	0.5	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.04384
	IN1763-006	AS1763-007	IN1763-006	AS1763-007	35.004	0.013	0	0	0.5	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.4191
	IN1763-010	IN1763-009	IN1763-010	AS1763-009	116.693	0.013	0	1.027	0.5	0.25	CIRCULAR	2	0	0	0	1	NO	0.09252
	IN1763-011	IN1763-010	IN1763-011	IN1763-010	52.557	0.013	0	0	0.5	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.01922
	IN1763-012	IN1763-011	IN1763-012	IN1763-011	27.523	0.013	0	0	0.1	0.5	CIRCULAR	1	0	0	0	1	NO	0.01453
	IN1763-013	IN1763-010	IN1763-013	IN1763-010	102.674	0.013	0	0	0.5	0.5	CIRCULAR	1.75	0	0	0	1	NO	0.03177
	IN1763-014	IN1763-013	IN1763-014	IN1763-013	30.885	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.03564
	IN1763-015	IN1763-013	IN1763-015	IN1763-013	77.733	0.013	0	0	0.05	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.01029
	IN1763-016	IN1763-015	IN1763-016	IN1763-015	87.035	0.013	0	0	0.25	0.05	CIRCULAR	1.5	0	0	0	1	NO	0.03184
	IN1763-017	IN1763-016	IN1763-017	IN1763-016	23.857	0.013	0	0	0	0.25	CIRCULAR	1.25	0	0	0	1	NO	0.02096
	IN1763-019	IN1863-007	IN1763-019	IN1863-007	163.479	0.013	0	0	0.5	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.0219
	IN1763-020	IN1763-019	IN1763-020	IN1763-019	154.865	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.0334
	IN1763-021	AE1763-022	IN1763-021	AE1763-022	50.006	0.013	0	0	0.5	1	CIRCULAR	1.5	0	0	0	1	NO	0.0122
	IN1763-023	IN1763-021	IN1763-023	IN1763-021	23.493	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1		

	IN1768-034	IN1768-033	IN1768-034	IN1768-033	47.754	0.013	0	0	0.25	0.05	CIRCULAR	2	0	0	0	1	NO	0.05873
	IN1768-035	IN1768-034	IN1768-035	IN1768-034	57.707	0.013	0	0	0.5	0.25	CIRCULAR	2	0	0	0	1	NO	0.06216
	IN1768-036	IN1768-035	IN1768-036	IN1768-035	24.135	0.013	0	0	0	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.0606
	IN1768-037	IN1768-035	IN1768-037	IN1768-035	46.076	0.013	0	0	0.25	0.5	CIRCULAR	2	0	0	0	1	NO	0.07881
	IN1768-038	IN1768-037	IN1768-038	IN1768-037	67.914	0.013	0	0	0.05	0.25	CIRCULAR	2	0	0	0	1	NO	0.03684
	IN1768-039	IN1768-038	IN1768-039	IN1768-038	51.811	0.013	0	0	0.5	0.05	CIRCULAR	2	0	0	0	1	NO	0.02896
	IN1768-040	IN1768-039	IN1768-040	IN1768-039	73.075	0.013	0	0	0.05	0.5	CIRCULAR	1.75	0	0	0	1	NO	0.01807
	IN1768-042	IN1768-039	IN1768-042	IN1768-039	52.218	0.013	0	0	0.5	0.5	CIRCULAR	1.75	0	0	0	1	NO	0.0391
	IN1768-043	IN1768-042	IN1768-043	IN1768-042	27.853	0.013	0	0	0.5	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.01508
	IN1768-044	IN1768-043	IN1768-044	IN1768-043	9.245	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.21694
	IN1768-045	IN1768-042	IN1768-045	IN1768-042	10.643	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.29485
	IN1768-046	IN1768-043	IN1768-046	IN1768-043	34.222	0.013	0	0	0.25	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.01432
	IN1768-047	IN1768-046	IN1768-047	IN1768-046	8.605	0.013	0	0	0	0.25	CIRCULAR	1	0	0	0	1	NO	0.08162
	IN1768-048	IN1768-053	IN1768-048	IN1768-053	128.94	0.013	0	0	0.5	0.05	CIRCULAR	1.25	0	0	0	1	NO	0.081
	IN1768-049	IN1768-048	IN1768-049	IN1768-048	27.016	0.013	0	0	0.5	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.00925
	IN1768-050	IN1768-048	IN1768-050	IN1768-048	10.244	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.0803
	IN1768-051	IN1768-049	IN1768-051	IN1768-049	10.233	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.05579
	IN1768-053	AE1768-054	IN1768-053	AE1768-054	174.081	0.013	0	0	0.05	1	CIRCULAR	1.25	0	0	0	1	NO	0.00626
	IN1768-055	IN1768-058	IN1768-055	**IN1768-058	43.004	0.013	0	1.149	0.5	0.05	HORIZ ELLIPSE	2	3.167	0	0	1	NO	-0.05123
	IN1768-058	AE1768-059	**IN1768-058	AE1768-059	16.002	0.013	1.149	0	0.05	1	CIRCULAR	1	0	0	0	1	NO	0.25816
	IN1768-062	IN1768-040	IN1768-062	IN1768-040	121.986	0.013	0	0.28	0.5	0.05	CIRCULAR	1.5	0	0	0	1	NO	0.04933
	IN1768-063	IN1768-062	IN1768-063	IN1768-062	25.538	0.013	0	1.5	0	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.02624
	IN1768-064	IN1768-065	IN1768-064	IN1768-065	127.005	0.013	0	0	0.05	0.05	CIRCULAR	2	0	0	0	1	NO	0.08002
	IN1768-066	AE1768-067	IN1768-066	AE1768-067	27.161	0.013	0	0	0.5	1	CIRCULAR	2	0	0	0	1	NO	0.10289
	IN1768-066	IN1768-065	IN1768-066	IN1768-065	192.007	0.013	0	0	0.05	0.5	CIRCULAR	2	0	0	0	1	NO	0.09121
	IN1768-068	IN1768-064	IN1768-068	IN1768-064	46.442	0.013	0.278	0	0.5	0.05	CIRCULAR	2	0	0	0	1	NO	0.00495
	IN1768-069	IN1768-068	IN1768-069	IN1768-068	23.958	0.013	0	0	0.05	0.5	CIRCULAR	1	0	0	0	1	NO	0.04337
	IN1768-070	IN1768-068	IN1768-070	IN1768-068	232.276	0.013	0.367	4.478	0.5	0.5	CIRCULAR	1.75	0	0	0	1	NO	0.02567
	IN1768-071	IN1768-070	IN1768-071	IN1768-070	38.204	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.04528
	IN1768-072	IN1768-070	IN1768-072	IN1768-070	233.702	0.013	0.417	0.617	0.5	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.02012
	IN1768-074	IN1768-072	IN1768-074	IN1768-072	25.786	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.04324
	IN1768-075	IN1768-072	IN1768-075	IN1768-072	67.676	0.013	0.415	0.667	0.5	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.03415
	IN1768-076	IN1768-075	IN1768-076	IN1768-075	23.423	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.02968
	IN1768-077	AS1768-027	IN1768-077	**AS1768-027	16.182	0.013	0	0.38	0.25	0.5	HORIZ ELLIPSE	1.167	1.917	0	0	1	NO	0.00433
	IN1768-078	IN1768-077	IN1768-078	IN1768-077	84.26	0.013	0	0	0.05	0.25	HORIZ ELLIPSE	1.167	1.917	0	0	1	NO	0.00475
	IN1768-080	AS1768-079	IN1768-080	AS1768-079	43.281	0.013	0	0	0.5	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.00508
	IN1768-081	IN1768-080	IN1768-081	IN1768-080	47.243	0.013	0	0.25	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.00529
	IN1769-002	IN1768-069	IN1769-002	IN1768-069	170.83	0.013	0	0.38	0	0.05	CIRCULAR	1	0	0	0	1	NO	0.00503
	IN1857-002	IN1757-085	IN1857-002	IN1757-085	9.712	0.013	0	0	0	0.25	CIRCULAR	1	0	0	0	1	NO	0.35881
	IN1858-001	AE1758-050	IN1858-001	AE1758-050	35.004	0.013	0	0	0.5	0.5	HORIZ ELLIPSE	3.167	5	0	0	1	NO	0.01772
	IN1862-022	IN1862-027	IN1862-022	IN1862-027	148.898	0.013	0	0	0.5	0.5	CIRCULAR	1.75	0	0	0	1	NO	0.00833
	IN1862-023	IN1862-022	IN1862-023	IN1862-022	167.098	0.013	0	0	0.25	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.01137
	IN1862-024	IN1862-023	IN1862-024	IN1862-023	31.833	0.013	0	0	0.25	0.25	CIRCULAR	1.25	0	0	0	1	NO	0.01257
	IN1862-025	IN1862-024	IN1862-025	IN1862-024	23.058	0.013	0	0	0	0.25	CIRCULAR	1	0	0	0	1	NO	0.01735
	IN1862-026	IN1862-022	IN1862-026	IN1862-022	44.159	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.01676
	IN1862-027	AS1862-039	IN1862-027	AS1862-039	61.369	0.013	0	0	0.5	0.25	CIRCULAR	2.25	0	0	0	1	NO	0.01597
	IN1862-029	IN1862-027	IN1862-029	IN1862-027	116.177	0.013	0	0	0.5	0.5	CIRCULAR	1.75	0	0	0	1	NO	0.00732
	IN1862-030	IN1862-029	IN1862-030	IN1862-029	43.937	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.02231
	IN1862-031	IN1862-029	IN1862-031	IN1862-029	56.257	0.013	0	0	0.25	0.5	CIRCULAR	1.75	0	0	0	1	NO	0.00498
	IN1862-033	IN1862-041	IN1862-033	IN1862-041	98.19	0.013	0	0	0.5	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.00998
	IN1862-034	IN1862-033	IN1862-034	IN1862-033	59.991	0.013	0	0	0.05	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.02284
	IN1862-035	AE1861-002	IN1862-035	AE1861-002	61.239	0.013	0	0	0.5	0.5	CIRCULAR	2.25	0	0	0	1	NO	0.00539
	IN1862-037	IN1862-035	IN1862-037	IN1862-035	193.565	0.013	0	0	0.05	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.02429
	IN1862-038	IN1862-037	IN1862-038	IN1862-037	199.958	0.013	0	0	0.5	0.05	CIRCULAR	1.25	0	0	0	1	NO	0.03919
	IN1862-041	IN1862-035	IN1862-041	IN1862-035	208.393	0.013	0	0	0.5	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.00945
	IN1862-042	IN1862-041	IN1862-042	IN1862-041	33.345	0.013	0	0	0.25	0.5	CIRCULAR	1	0	0	0	1	NO	0.04022
	IN1862-043	IN1862-042	IN1862-043	IN1862-042	32.459	0.013	0	0	0	0.25	CIRCULAR	1	0	0	0	1	NO	0.00555
	IN1862-044	AE1862-045	IN1862-044	AE1862-045	85.003	0.013	0	0	0.5	1	CIRCULAR	2.25	0	0	0	1	NO	0.16343
	IN1862-046	IN1862-044	IN1862-046	IN1862-044	166.705	0.013	0	0	0.25	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.00504
	IN1862-047	IN1862-046	IN1862-047	IN1862-046	34.923	0.013	0	0	0.5	0.25	CIRCULAR	1.25	0	0	0	1	NO	0.00515
	IN1862-048	IN1862-047	IN1862-048	IN1862-047	23.99	0.013	0	0.25	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.00584
	IN1862-049	IN1862-047	IN1862-049	IN1862-047	29.181	0.013	0	0.25	0.25	0.5	CIRCULAR	1	0	0	0	1	NO	0.07768
	IN1862-050	IN1862-049	IN1862-050	IN1862-049	32.069	0.013	0	0	0	0.25	CIRCULAR	1	0	0	0	1	NO	0.00655
	IN1862-051	IN1862-047	IN1862-051	IN1862-047	80.35	0.013	0	0	0.5	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.00498
	IN1862-052	IN1862-051	IN1862-052	IN1862-051	24.749	0.013	0	0.25	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.00566
	IN1862-054	IN1862-044	IN1862-054	IN1862-044	125.026	0.013	0	0.25	0.05	0.5	CIRCULAR	2	0	0	0	1	NO	0.00504
	IN1862-055	IN1862-054	IN1862-055	IN1862-054	69.635	0.013	0	0	0.5	0.05	CIRCULAR	2	0	0	0	1	NO	0.00488
	IN1862-057	IN1862-055	IN1862-057	IN1862-055	33.121	0.013	0	0.25	0	0.5	CIRCULAR	1.75	0	0	0	1	NO	0.00513
	IN1862-058	IN1862-044	IN1862-058	IN1862-044	51.169	0.013	0	1	0.5	0.5	CIRCULAR	1.25	0	0	0	1	NO	0.02365
	IN1862-059	IN1862-058	IN1862-059	IN1862-058	23.108	0.013	0	0.25	0	0.5	CIRCULAR	1	0	0	0	1	NO	0.00649
	IN1862-063	IN1862-055	IN1862-063	IN1862-055	34.762	0.013	0.3	0.5	0.05	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.00518
	IN1862-064	IN1862-063	IN1862-064	IN1862-063	48.002	0.013	0.255	0	0.5	0.05	CIRCULAR	1.5	0	0	0	1	NO	0.0369
	IN1862-065	IN1862-064	IN1862-065	IN1862-064														

Pond_ME_SPond	Pond_ME_SPond	Pond_ME_SPond_DS	40	0.013	1	3.205	0	0	CIRCULAR	2	0	0	0	1	NO	0.00563	
Pond_PP_East	Pond_PP_East	Pond_PP_East_DS	50	0.013	0	0	0	0	CIRCULAR	3	0	0	0	1	NO	0.03001	
Pond_SH_OL2	Pond_SH_OL2	Pond_SH_OL2_DS	52	0.013	5.25	0	0	0	RECT_CLOSED	3	6	0	0	3	NO	0	
Pond_SH_OL2N	Pond_SH_OL2N	Pond_SH_OL2T	70	0.013	1.25	0	0	0	CIRCULAR	2.25	0	0	0	2	NO	0	
Pond_SH_OL2T	Pond_SH_OL2T	Pond_SH_OL2	66	0.013	0	0	0	0	CIRCULAR	2.25	0	0	0	2	NO	0.0798	
Pond_SH_OL3_1	Pond_SH_OL3	Pond_SH_OL2	161.761	0.013	1	1	0	0	CIRCULAR	3	0	0	0	1	NO	0.04331	
Pond_SH_OL3_2	Pond_SH_OL3	Pond_SH_OL2	172.787	0.013	0	0	0	0	HORIZ_ELLIPSE	3.167	5	0	0	2	NO	0.04055	
Pond_SH_OL4	Pond_SH_OL4	Pond_SH_OL4_DS	7	0.013	1	0	0	0	CIRCULAR	0.667	0	0	0	1	NO	0.00571	
Pond_SH_OL6	Pond_SH_OL6	Pond_SH_OL6_DS	90	0.013	1	0	0	0	CIRCULAR	0.5	0	0	0	1	NO	0.004	
Pond_SPE_Alm	Pond_SPE_Alm	Pond_SPEAIm_DS	119.335	0.013	0	0	0	0	CIRCULAR	4	0	0	0	2	NO	-0.01676	
Pond_SV_B2	Pond_SV_B2_US	Pond_SV_B1	100	0.013	0	1.25	0	0	CIRCULAR	2	0	0	0	1	NO	0.0125	
Pond_SV_Pond_A1	Pond_SV_Pond_A	Pond_SV_Pond_A_DS	40	0.013	2	0	0	0	CIRCULAR	1	0	0	0	1	NO	0.02501	
Pond_TF_E	Pond_TF_E	Pond_TF_E_DS	50	0.013	1	0.286	0	0	CIRCULAR	0.833	0	0	0	1	NO	0.01	
Pond_TF_N	Pond_TF_NA	Pond_TF_N_DS	50	0.013	1	0	0	0	CIRCULAR	0.833	0	0	0	1	NO	0.01	
Pond_TF_NB-TFNB_DS	Pond_TF_NB	Pond_TF_NB_DS	50	0.013	0.5	0	0	0	CIRCULAR	0.5	0	0	0	1	NO	0	
Pond_TF_NC_A	Pond_TF_NC_A&B	Pond_TF_NC_A&B_DS	50	0.013	1	0	0	0	CIRCULAR	0.5	0	0	0	2	NO	0.01	
Pond_TF_NW	Pond_TF_NW	Pond_TF_NW_DS	50	0.013	1	0	0	0	CIRCULAR	0.833	0	0	0	1	NO	0	
Pond_TF_OL1_1	Pond_TF_OL1	Pond_TF_OL1_DS	59.796	0.013	0	0	0	0	CIRCULAR	0.833	0	0	0	1	NO	0	
Pond_TF_OL1_2	Pond_TF_OL1	Pond_TF_OL1_DS	57.231	0.013	2.86	2.86	0	0	CIRCULAR	2.5	0	0	0	3	NO	0	
Pond_TF_SE	Pond_TF_SE	Pond_TF_SE_DS	50	0.013	1	0	0	0	CIRCULAR	0.833	0	0	0	1	NO	0.28799	
Pond_TF_W	Pond_TF_W	Pond_TF_W_DS	50	0.013	1	0	0	0	CIRCULAR	0.833	0	0	0	1	NO	0.01	
Pond_VP_DryPond	Pond_VP_DryPond_US	Pond_VP_DryPond_DS	78	0.013	0	0	0	0	CIRCULAR	1	0	0	0	1	NO	0.015	
Pond_WellHome_Out	Pond_WellHomeDr	Pond_WellHome_DS	40.5	0.024	0.5	0	0	0.5	CIRCULAR	1	0	0	0	1	6	NO	0.02
Pond_WH_Inf	Pond_WH_Inf	Pond_WH_DS	50	0.013	1.5	1.5	0	0	CIRCULAR	0.5	0	0	0	1	NO	0	
Pond_WH_Wet	Pond_WH_Wet	Pond_WH_inf	30	0.013	0.75	2.25	0	0	CIRCULAR	1.5	0	0	0	1	NO	0	
Pond_WH_Wet2	Pond_WH_Wet	Pond_WH_Inf	20	0.013	0	1.25	0	0	CIRCULAR	0.5	0	0	0	1	NO	0.0125	
SAI_001-002	SAI-001	SAI-001	60.73	0.013	0	1	0	1	CIRCULAR	1.25	0	0	0	1	1	NO	0
SAI_003-004	SAI-003	SAI-004	46.58	0.013	0	0	0	0.05	CIRCULAR	1.5	0	0	0	1	1	NO	0.02147
SAI_004-1760-008	SAI-004	CB1760-008	327.4	0.013	0	0.27	0.05	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.00498	
SAI_006-1757-059	SAI-006	HD1757-059	69.814	0.013	0	0	0	0.5	RECT_CLOSED	3	6	0	0	1	9	NO	0.00587
SAI_007-008	SAI-007	SAI-008	192.047	0.013	0.298	0	0.5	0.5	CIRCULAR	1	0	0	0	1	6	NO	0.00536
SAI_009-010	SAI-009	SAI-010	32.64	0.024	0	0	0.5	0.5	CIRCULAR	1	0	0	0	1	6	NO	0.0095
SAI_012-011	SAI-012	SAI-011	76.83	0.024	0	0	0	0.5	CIRCULAR	1.5	0	0	0	1	6	NO	0.00495
SAI_013-014	SAI-013	SAI-014	40.919	0.024	0	0	0	0.5	CIRCULAR	2	0	0	0	1	6	NO	0.02689
SAI_015-016	SAI-015	SAI-016	30	0.01	0.414	0.986	0	1	CIRCULAR	0.667	0	0	0	1	6	NO	0
SAI_016-017	SAI_ET016	SAI_ET017	23.659	0.013	3.5	0	0.05	1	CIRCULAR	1.75	0	0	0	1	NO	0	
SAI_017-018	SAI-018	SAI-018	32	0.01	0	0	0	1	CIRCULAR	0.667	0	0	0	1	6	NO	0
SAI_019-020	SAI-019	SAI-020	32	0.01	0.32	1	0	1	CIRCULAR	0.667	0	0	0	1	6	NO	0
SAI_021-022	SAI-021	SAI-022	38	0.01	0.137	0.663	0	0	CIRCULAR	0.667	0	0	0	1	6	NO	0
SAI_023-024	SAI-023	SAI-024	25	0.013	0	1.57	0	1	CIRCULAR	1	0	0	0	1	1	NO	0.0212
SAI_025-026	SAI-025	SAI-026	83.901	0.013	0	0.066	0	0.5	CIRCULAR	2	0	0	0	1	3	NO	-0.0005
SAI_027-028	SAI-028	SAI-027	83.207	0.013	0	0	0	0.5	RECT_CLOSED	3	4	0	0	1	11	NO	0.00224
SAI_029-030	SAI-029	SAI-030	82.703	0.013	0	0	0	0.5	RECT_CLOSED	3	4	0	0	1	11	NO	0.00069
SAI_033-034	SAI-033	SAI-034	58.508	0.024	1.09	0.827	0	0.5	CIRCULAR	5	0	0	0	1	5	NO	-0.00602
SAI_035-036	SAI-035	SAI-036	38.43	0.013	0	0	0	0.5	CIRCULAR	3	0	0	0	1	3	NO	0.01187
SAI_037-038	SAI-038	SAI-037	38.635	0.013	0	0	0	0.5	CIRCULAR	3	0	0	0	1	3	NO	0.01191
SAI_039-040	SAI-039	SAI-040	40.985	0.024	0	0	0	0.5	ARCH	33	0	0	0	1	47	NO	-0.00076
SAI_041-042	SAI-041	SAI-042	40.928	0.024	0	0	0	0.5	ARCH	33	0	0	0	1	47	NO	-0.00921
SAI_047-048	SAI-048	SAI-048	61.98	0.013	0	0	0	0.5	RECT_CLOSED	3	6	0	0	1	28	NO	0.01438
SAI_049-050	SAI-049	SAI-050	32.69	0.013	0	0	0	0.5	RECT_CLOSED	5	12	0	0	1	9	NO	0.01306
SAI_051-052	SAI-051	SAI-052	32.73	0.013	0	0	0	0.5	RECT_CLOSED	5	12	0	0	1	9	NO	0.01045
SAI_053-054	SAI-053	SAI-054	32.946	0.01	0	0	0	0.5	RECT_CLOSED	5	12	0	0	1	9	NO	0.01214
SAI_059-060	SAI-059	SAI-060	18.303	0.024	0	0	0	0.5	CIRCULAR	2	0	0	0	1	6	NO	-0.0088
SAI_061-062	SAI-061	SAI-062	23.764	0.013	0	0	0	0.5	CIRCULAR	1	0	0	0	1	3	NO	0.00989
SAI_063-064	SAI-063	SAI-064	36.793	0.013	0	0	0	0.5	CIRCULAR	2.5	0	0	0	1	3	NO	0.00568
SAI_065-066	SAI-065	SAI-066	36.397	0.013	0	0	0	0.5	CIRCULAR	2.5	0	0	0	1	3	NO	0.00673
SAI_067-068	SAI-067	SAI-068	36.673	0.013	0	0	0	0.5	CIRCULAR	2.5	0	0	0	1	3	NO	0.00731
SAI_069-070	SAI-069	SAI-070	36.706	0.013	0	0	0	0.5	CIRCULAR	2.5	0	0	0	1	3	NO	0.0085
SAI_071-072	SAI-071	SAI-072	36.683	0.013	0	0	0	0.5	CIRCULAR	2.5	0	0	0	1	3	NO	0.00548
SAI_1862-061-1862-060	PD1862-061	PD1862-060	26.996	0.013	0	0	0	1	CIRCULAR	1	0	0	0	1	1	NO	0.06302
SAI_BPS001-002	SAI_BPS001	SAI_BPS002	294.431	0.013	0	0	0.25	1	CIRCULAR	1	0	0	0	1	NO	0.00149	
SAI_BPS006-005	SAI_BPS006	SAI_BPS005	26.096	0.013	2.5	0	0.05	1	CIRCULAR	2	0	0	0	1	NO	0	
SAI_BPS008-007	SAI_BPS008	SAI_BPS007	61.052	0.013	1.696	0	0	0.05	CIRCULAR	2	0	0	0	1	1	NO	0
SAI_BPS010-009	SAI_BPS010	SAI_BPS009	26.861	0.013	2.5	0	0.05	1	CIRCULAR	2	0	0	0	1	NO	0	
SAI_BPS012-011	SAI_BPS012	SAI_BPS011	33.517	0.013	0	0	0	0.05	CIRCULAR	2	0	0	0	1	1	NO	0
SAI_BPS013-014	SAI_BPS013	SAI_BPS014	60	0.013	0	0.112	0	0.5	CIRCULAR	1.25	0	0	0	1	1	NO	0.005
SAI_BPS015-016	SAI_BPS015	SAI_BPS016	60	0.013	0.169	0.233	0	0.5	CIRCULAR	1.25	0	0	0	1	1	NO	0.0045
SAI_BPS017-018	SAI_BPS017	SAI_BPS018	35.208	0.013	0	0	0	0.05	CIRCULAR	1.75	0	0	0	1	1	NO	0
SAI_BPS019-020	SAI_BPS019	SAI_BPS020	21.778	0.013	3.5	0.769	0.05	1	CIRCULAR	1.75	0	0	0	1	NO	0	
SAI_BPS021-022	SAI_BPS021	SAI_BPS022	45.802	0.013	0.481	0.005	0	0.5	CIRCULAR	1.75	0	0	0	1	1	NO	0
SAI_CV002-1551-043	SAI_CV002	IN1551-043	55	0.013	0	0	0	0.5	CIRCULAR	1.25	0	0	0	1	1	NO	0.00453
SAI_ET001-002	SAI_ET003	SAI_ET004	15.96	0.013	3.5	3.5	0.05	1	CIRCULAR	1.25	0	0	0	1	NO	0	
SAI_ET003-004	SAI_ET001	SAI_ET002	29.101	0.013	0	0	0	0.05	CIRCULAR	1.5	0	0	0	1	1	NO	0
SAI_ET005-006	SAI_ET005	SAI_ET006	19.207	0.013	1	0	0	0.05	CIRCULAR	1.5	0	0	0	1	1	NO	0.13128
SAI_ET006-007	SAI_ET006	SAI_ET007	184.686	0.013	0	0	0.05	0.5	CIRCULAR	1.5	0	0	0	1	NO	0.00514	
SAI_ET008-009	SAI_ET008	SAI_ET009	29.27	0.013	0.713	0	0	0.05	CIRCULAR	1.25	0	0	0	1	1	NO	0
SAI_ET010-011	SAI_ET010	SAI_ET011	15.176	0.013	3.5	1	0.05	1	CIRCULAR	1	0	0	0	1	NO	0	
SAI_ET012-013	SAI_ET012	SAI_ET013	40.272	0.013	0.217	4.031	0	0.5	CIRCULAR	2	0	0	0	1	1	NO	0.02484
SAI_ET014-015	SAI_ET014	SAI_ET015	32.262	0.013	3.993	0	0	0.5	CIRCULAR	2	0	0	0	1	1	NO	0
SAI_ET018-019	SAI_ET018	SAI_ET019	42.878	0.013	1	2.345	0	0.5	CIRCULAR	3	0	0	0	1	1	NO	0
SAI_ET020-021	SAI_ET020	SAI_ET021	32.724	0.013	0	0	0	0.05	CIRCULAR	1.75	0	0	0	1	NO	0	
SAI_ET022-023	SAI_ET022	SAI_ET023	20.859	0.013	3.5	0.946	0.5	0.5	CIRCULAR	1.5	0	0	0	1	NO	0	
SAI_ET024-1551-050	SAI_ET024	AS1551-050	144	0.013	2.56	0	0	0.5	CIRCULAR	2.5	0	0	0	1	1	NO	0.05472
SAI_HL_Box001-002	SAI_HL_Box001	SAI_HL_Box002	184.004	0.013	0	0	0	0	RECT_CLOSED	4	8	0	0	1	9	NO	0.0025
SAI_HL_Box002-003	SAI_HL_Box002	SAI_HL_Box003	186.513	0.013	0	0	0	0.5	RECT_CLOSED	4	8	0	0	1	NO	0.00225	
SAI_HL_Box003-003-01	SAI_HL_Box003	SAI_HL_Box003-01	45.167</														

TSAI_CA2-SPOE	Pond_CA2_DS	Pond_SPOE	1489.605	0.027	0	0	0.05	0.05	TRAPEZOIDAL	3	10	5	5	1	NO	0.01264	
TSAI_Conf002-SV_B2	TSAI_Conf002	Pond_SV_B2	490.084	0.027	0	0	0.05	0.05	TRAPEZOIDAL	10	0	25	12	1	NO	0.0362	
TSAI_Conf009-007	TSAI_Conf009	TSAI_007	427.429	0.027	0	0	0.05	0.05	TRIANGULAR	5	150	0	0	1	NO	0.00441	
TSAI_Conf1-PP_WP4	TSAI_Conf001	TSAI_Conf012	947.404	0.027	0	0.309	0.05	0.05	TRIANGULAR	5	200	0	0	1	NO	0.0129	
TSAI_Conf5-AM_OL1	TSAI_Conf005	Pond_AM_OL1_DS	1320.421	0.027	0	1.47	0.05	0.05	TRIANGULAR	3	30	0	0	1	NO	0.01301	
TSAI_Conf6-Conf8	TSAI_Conf006	TSAI_Conf008	451.07	0.027	0	0	0.05	0.05	TRAPEZOIDAL	3	100	30	30	1	NO	0.01246	
TSAI_CP_East-SV_B2	Pond_CP_East_DS	TSAI_Conf002	1275.971	0.027	0	0	0.05	0.05	TRAPEZOIDAL	10	0	25	12	1	NO	0.00531	
TSAI_CP_Ponda-*Pond	Pond_CP_Det_Ponda	Pond_Swaboda	2158.24	0.027	0	0	0.05	0.05	TRAPEZOIDAL	10	40	25	12	1	NO	0.00488	
TSAI_CR_WetPond-CP_East_DS	Pond_CR_WetPond_DS	Pond_CP_East_DS	582.607	0.027	0	0	0	0	TRIANGULAR	5	150	0	0	1	NO	0.04002	
TSAI_ET007-SPRE_Sed	SAI_ET007	Pond_SPRE_Sed	2154.715	0.027	0	0	0.05	0.05	TRIANGULAR	2	20	0	0	1	NO	0.02951	
TSAI_FR-SPE_Swa	Pond_FR_DS	Pond_SPE_Swa	2452.806	0.027	0	0	0.05	0.05	TRIANGULAR	3.5	40	0	0	1	NO	0.02896	
TSAI_GE_Ponda-Conf5	Pond_GE_Ponda_DS	TSAI_Conf005	1633.734	0.027	0	0	0.05	0.05	TRAPEZOIDAL	4	0	10	14	1	NO	0.03754	
TSAI_GE_PondB-Conf8	Pond_GE_PondB_DS	TSAI_Conf006	1568.781	0.027	0	0	0.05	0.05	TRAPEZOIDAL	10	0	20	40	1	NO	0.02173	
TSAI_GE_PondC-Conf6	Pond_GE_PondC_DS	TSAI_Conf006	1228.911	0.027	0	0	0.05	0.05	TRIANGULAR	5	250	0	0	1	NO	0.03916	
TSAI_GE_PondD-Conf6	Pond_GE_PondD_DS	TSAI_Conf006	1072.854	0.027	0	0	0.05	0.05	TRIANGULAR	5	250	0	0	1	NO	0.03365	
TSAI_GW_OL1_Out	Pond_GW_OL1_DS	TSAI_014	232.912	0.013	0	0	0.05	0.05	CIRCULAR	2	0	0	0	1	NO	0.0021	
TSAI_ME_NPond-Conf8	Pond_ME_NPond_DS	TSAI_Conf008	820.898	0.027	0	0	0.05	0.05	TRAPEZOIDAL	2.5	2	5	5	1	NO	0.03987	
TSAI_MPUS-Conf001	TSAI_MPUS	TSAI_Conf001	629.67	0.027	0	0	0.05	0.05	TRIANGULAR	4.5	125	0	0	1	NO	0.0066	
TSAI_Pond_SV_B1_DS-SV_B1_DS2	Pond_SV_B1_DS	Pond_SV_B1_DS2	867.478	0.027	0	0	0.05	0.05	TRIANGULAR	5	100	0	0	1	NO	0.02135	
TSAI_PP-SPE	Pond_PP_East_DS	Pond_SPE_Alm	1944.29	0.027	0	0	0.05	0.05	TRAPEZOIDAL	3	5	5	5	1	NO	0.02058	
TSAI_SH_OL2-MPUS	Pond_SH_OL2_DS	TSAI_MPUS	1117.029	0.027	0	0	0.05	0.05	TRAPEZOIDAL	4	20	7	7	1	NO	0.00265	
TSAI_SH_OL4-MPUS	Pond_SH_OL4_DS	TSAI_MPUS	664.394	0.027	0	0	0.05	0.05	TRIANGULAR	3	20	0	0	1	NO	0.00552	
TSAI_SHOL6-MPUS	Pond_SH_OL6_DS	TSAI_MPUS	253.258	0.027	0	0	0.05	0.05	TRIANGULAR	4	40	0	0	1	NO	0.01717	
TSAI_SPE_Swa-SPE_Alm	Pond_SPE_Swa_DS	Pond_SPE_Alm	554.091	0.027	0	0	0.05	0.05	TRIANGULAR	5	70	0	0	1	NO	0.01083	
TSAI_SPEAlm-SPOE	Pond_SPEAlm_DS	Pond_SPOE	2200.068	0.027	0	0	0.05	0.05	IRREGULAR	0	0	0	0	1	Transect1	NO	0.00773
TSAI_SPOE-Conf1	Pond_SPOE_DS	TSAI_Conf001	2232.92	0.027	0	0	0.05	0.05	TRIANGULAR	3.5	300	0	0	1	NO	0.00352	
TSAI_Swaboda-WH_DS	**Pond_Swaboda_DS	Pond_WH_DS	2795.38	0.027	0	0	0.05	0.05	TRAPEZOIDAL	10	50	33	33	1	NO	0.00841	
TSAI_TF_NB_DS-Conf004	Pond_TF_NB_DS	Pond_WelHomeDr	879.728	0.027	0	0	0.05	0.05	TRIANGULAR	3	30	0	0	1	NO	0.08442	
TSAI_TF_NC-Conf4	Pond_TF_NC_A&B_DS	Pond_WelHomeDr	845.802	0.027	0	0	0.05	0.05	TRIANGULAR	3	30	0	0	1	NO	0.07708	
TSAI_TF_N-Conf4	Pond_TF_N_DS	Pond_WelHomeDr	972.092	0.027	0	0	0.05	0.05	TRIANGULAR	3	30	0	0	1	NO	0.07946	
TSAI_TF_NW-Conf4	Pond_TF_NW_DS	Pond_WelHomeDr	1660.849	0.027	0	0	0.05	0.05	TRIANGULAR	3	30	0	0	1	NO	0.04868	
TSAI_TF_W-WH_Wet	Pond_TF_W_DS	TSAI_005	1344.466	0.027	0	0	0.05	0.05	TRAPEZOIDAL	3	2	10	10	1	NO	0.03541	
TSAI_VP-SH_OL2N	Pond_VP_DryPond_DS	Pond_SH_OL2N	1119.52	0.027	0	0	0.05	0.05	TRAPEZOIDAL	3	10	4	4	1	NO	0.02442	
TSAI_WelHomeDS-Conf011	Pond_WelHome_DS	TSAI_Conf011	244.454	0.027	0	0	0	0	TRIANGULAR	2	50	0	0	1	NO	0.01192	
TSAI_WH-Conf011	Pond_WH_DS	TSAI_Conf011	1091.057	0.027	0	0	0.05	0.05	TRIANGULAR	2	180	0	0	1	NO	0.00525	
TSAI-CR_BioBasin-TL_OL1	Pond_CR_BioBasin_DS	Pond_TF_OL1	2057.338	0.027	0	0	0.05	0.05	TRIANGULAR	10	150	0	0	1	NO	0.02555	

TABLE C2–HYDRAULIC INPUT PARAMETERS: NODES

Junction	X-Coordinate	Y-Coordinate	Tag	Invert Elevation (ft)	Rim Elevation (ft)	Depth (ft)	Initial Depth (ft)	Surcharge Depth (ft)	Ponded Area (ft²)
**AE1551-054	773863.75	481631.531	Connect2D	1103.77	1105.574	1.237	0	30	0
**AE1667-005	775483.8	467023.3	Connect2D	1091.54	1091.539	0	0	30	0
**AE1759-021	776400.7	474101.25	Connect2D	1066.00	1070.166	4.166	1	30	0
**AE1767-001	776294.5	467033.6	Connect2D	1086.27	1086.267	0	0	30	0
**AS1758-057	777587.438	475756.438	Connect2D	1081.42	1091.402	9.982	0	30	0
**AS1768-027	776260.1	466976.7	Connect2D	1084.36	1089.231	4.871	0	30	0
**DT1461-002	773099.938	472300.031	Connect2D	1053.04	1052.664	0	0	30	0
**DT1461-003	773073.5	472300.031	Connect2D	1050.90	1052.537	0	0	30	0
**DT1558-005	774778.7	475760.438	Connect2D	1063.33	1064.14	0	0	30	0
**IN1658-004	776233.938	475448.219	Connect2D	1070.36	1072.312	1.952	0	30	0
**IN1658-005	776234	475438.344	Connect2D	1070.11	1072.536	2.426	0	30	0
**IN1756-003	776325.1	476869.5	Connect2D	1113.18	1116.858	3.678	0	30	0
**IN1758-053	776295.9	475436.469	Connect2D	1068.98	1072.578	3.598	0	30	0
**IN1767-002	776262.75	467034.9	Connect2D	1085.85	1089.459	3.609	0	30	0
**IN1768-058	776853.7	466929.063	Connect2D	1094.85	1097.257	1.257	0	30	0
**PL1564-004	774809.2	469700.875	Connect2D	1104.11	1104.543	0.337	0	30	0
**PL1564-006	774816.25	469848.469	Connect2D	1108.45	1108.797	0.352	0	30	0
**PL1664-001	775816.8	469635.844	Connect2D	1086.55	1088.017	1.423	0	30	0
**PL1863-011	777536.9	471186.281	Connect2D	1150.17	1150.132	0	0	30	0
**PL1863-012	777642.2	471300.719	Connect2D	1148.31	1148.611	0	0	30	0
**Pond_GW_OL1_US	770436.5	467113.4		1075.75	1085	9.25	0	20	0
**Pond_Swaboda_DS	765701.2	476271.219		1093.50	1111	17.5	0	20	0
**SAI_TO_SURVEY005	777356.75	477614.156	Connect2D	1121.71	1121.709	0	0	30	0
**SAI_TO_SURVEY006	777354.2	477545.156	Connect2D	1120.64	1120.996	0	0	30	0
AE1259-001	771002.7	474716	Connect2D	1041.91	1045.978	4.068	0	30	0
AE1259-002	771000.563	474709.3	Connect2D	1042.29	1045.883	3.593	0	30	0
AE1356-001	772383.063	476976.875	Connect2D	1063.80	1065.046	1.246	0	30	0
AE1359-004	771048.5	474701.75	Connect2D	1041.35	1041.35	0	0	30	0
AE1359-005	771046.438	474695.063	Connect2D	1041.59	1041.59	0	0	30	0
AE1456-003	772582.8	477151.656	Connect2D	1059.00	1060.937	1.937	0	30	0
AE1456-028	772460.563	477495.281	Connect2D	1057.83	1061.974	4.144	0	30	0
AE1456-029	772468.5	477487.344	Connect2D	1057.83	1062.352	4.522	0	30	0
AE1456-030	772449.9	477539.438	Connect2D	1060.14	1060.822	0.682	0	30	0
AE1456-031	772535.6	477538.938	Connect2D	1061.10	1062.448	1.348	0	30	0
AE1456-032	772513.6	477403.9	Connect2D	1058.14	1058.881	0.381	0	30	0
AE1456-033	772476.25	477402.6	Connect2D	1058.07	1059.629	1.559	0	30	0
AE1456-034	772514.2	477397.969	Connect2D	1057.51	1058.781	0.281	0	30	0
AE1456-035	772476.6	477397	Connect2D	1058.07	1061.512	3.442	0	30	0
AE1456-037	773054.25	477533.5	Connect2D	1065.96	1066.618	0.368	0	30	0
AE1456-039	773430.2	477537.375	Connect2D	1070.50	1072.098	1.598	0	30	0
AE1456-080	772432.75	477124.5	Connect2D	1059.27	1060.384	0.384	0	30	0
AE1458-004	773304.1	474999.3	Connect2D	1091.00	1093.061	2.061	3	30	0
AE1458-015	773644.1	475795.344	Connect2D	1081.98	1083.806	1.806	0	30	0
AE1458-017	773138.75	474978.625	Connect2D	1093.26	1093.939	0	0	30	0
AE1458-018	773627.563	474985.2	Connect2D	1075.86	1075.861	0	0	30	0
AE1458-020	773008.2	475071.969	Connect2D	1093.31	1094.39	0.39	0.692	30	0
AE1551-040	774372.1	481334.7	Connect2D	1113.79	1117.197	3.407	0	30	0
AE1551-047	773909.6	481629.156	Connect2D	1102.50	1105.481	2.981	0	30	0
AE1551-049	773898.563	481750.969	Connect2D	1103.98	1106.978	2.998	0	30	0
AE1551-051	773800	481720.469	Connect2D	1105.62	1107.878	2.258	0	30	0
AE1552-005	774991	480286.375	Connect2D	1110.00	1111.84	1.84	1	30	0
AE1552-018	773873.438	480347.156	Connect2D	1093.00	1092.779	0	0	30	0
AE1552-021	773891.1	480751.156	Connect2D	1095.00	1095.911	0.411	0	30	0
AE1552-024	774029.25	480296.281	Connect2D	1099.03	1099.334	0.124	0	30	0
AE1552-032	773983.563	480522.969	Connect2D	1096.95	1098.69	0.912	2.05	30	0
AE1552-041	774951.3	480359.4	Connect2D	1109.22	1111.016	0.806	1.777	30	0
AE1552-054	775041.7	480435.75	Connect2D	1106.21	1110.5	1	4.791	30	0
AE1552-068	773830.1	480900.625	Connect2D	1100.00	1101.52	1.52	0	30	0
AE1557-012	774497.1	476097.531	Connect2D	1072.45	1075.275	2.825	0	30	0
AE1558-002	774834.4	475746.719	Connect2D	1059.60	1064.966	5.366	0	30	0
AE1558-008	774538.7	474955.6	Connect2D	1060.22	1060.294	0.004	0	30	0
AE1559-004	774370.25	474341.938	Connect2D	1050.00	1062.452	12.452	0	30	0
AE1559-028	774740.063	474210.844	Connect2D	1053.00	1059.071	6.071	0	30	0
AE1559-032	774882	474247.781	Connect2D	1056.13	1063.451	6.681	0	30	0
AE1559-033	774882.6	474237.969	Connect2D	1056.37	1063.74	7.37	0	30	0
AE1559-034	774730.563	474258.969	Connect2D	1056.00	1057.576	1.206	0	30	0
AE1559-035	774731.25	474250.344	Connect2D	1055.99	1057.465	1.465	0	30	0
AE1563-009	773699.75	470693.3	Connect2D	1042.45	1045.687	3.237	0	30	0
AE1566-005	774707.1	467877.125	Connect2D	1038.41	1039.953	0	0	30	0
AE1567-001	774495.8	467009.281	Connect2D	1055.90	1057.031	1.131	0	30	0
AE1567-002	774223.8	467009.6	Connect2D	1038.60	1045.751	7.151	0	30	0
AE1567-037	774585.2	467508.781	Connect2D	1037.10	1040.734	3.634	0	30	0
AE1567-038	773776.3	467181.656	Connect2D	1032.68	1033.256	0.076	0	30	0
AE1567-041	774528.4	467698.8	Connect2D	1037.10	1040.124	3.024	0	30	0

AE1568-002	774709.8	466965.938	Connect2D	1067.30	1067.83	0	0	30	0
AE1655-001	775865.75	477899.938	Connect2D	1111.21	1112.236	1.026	0	30	0
AE1655-005	775617	477905.563	Connect2D	1110.00	1111.171	1.171	0	30	0
AE1655-017	775149.5	477614.031	Connect2D	1111.60	1112.322	0.722	0	30	0
AE1655-018	775197.5	477661.8	Connect2D	1110.70	1113.114	2.414	0	30	0
AE1655-025	775594.3	477678.1	Connect2D	1106.50	1108.933	2.433	0.5	30	0
AE1655-028	775673.563	477615.219	Connect2D	1113.70	1115.579	1.879	0	30	0
AE1655-032	775868.2	477700	Connect2D	1106.50	1110.24	3.74	0.5	30	0
AE1655-033	775948.25	477615.2	Connect2D	1117.80	1121.128	3.328	0	30	0
AE1656-017	775504.1	477518.6	Connect2D	1104.50	1106.485	1.985	0	30	0
AE1657-003	775104.2	476099.2	Connect2D	1065.50	1069.784	4.284	0	30	0
AE1657-007	775366.2	476675	Connect2D	1087.60	1093.263	5.663	0	30	0
AE1659-004	776268.2	474470.5	Connect2D	1074.77	1077.563	2.793	0	30	0
AE1659-005	776270.75	474352.75	Connect2D	1073.80	1075.397	1.597	0	30	0
AE1659-006	776270	474321	Connect2D	1072.50	1073.971	1.471	0	30	0
AE1659-009	776272.1	474190.156	Connect2D	1069.50	1070.701	1.201	0	30	0
AE1659-010	776272.1	474155.063	Connect2D	1069.00	1070.508	1.508	0	30	0
AE1659-012	775485.063	474274.4	Connect2D	1060.00	1063.756	3.756	0	30	0
AE1659-013	775353.8	474260.219	Connect2D	1060.00	1061.756	1.756	0	30	0
AE1659-014	775479.3	474264.875	Connect2D	1062.98	1065.64	2.14	0	30	0
AE1659-015	775358.063	474251.75	Connect2D	1061.78	1062.5	0	0	30	0
AE1659-015_01	775426.9	474259.2	Connect2D	1062.50	1068.95	6.45	0	30	0
AE1659-016	775480	474256.9	Connect2D	1062.49	1063.889	0.389	0	30	0
AE1659-017	775358.7	474243.781	Connect2D	1062.28	1062.5	0	0	30	0
AE1659-018	775479.5	474248.8	Connect2D	1063.49	1065.479	1.039	0	30	0
AE1659-019	775358.2	474235.7	Connect2D	1062.37	1062.5	0	0	30	0
AE1659-033	775547.563	474377.125	Connect2D	1058.00	1059.585	1.585	2	30	0
AE1660-002	776162.1	474001.969	Connect2D	1062.50	1065.953	3.453	0	30	0
AE1660-005	776158.3	473995.875	Connect2D	1062.50	1065.18	2.68	0	30	0
AE1660-013	776244.25	473540.219	Connect2D	1075.50	1077.468	1.968	0	30	0
AE1660-016	776245.438	473276.125	Connect2D	1089.00	1090.43	1.43	0	30	0
AE1660-035	776153.9	473987.219	Connect2D	1062.50	1066.371	3.871	0	30	0
AE1662-012	774968.7	471430.781	Connect2D	1064.00	1066.07	2.07	1	30	0
AE1662-024	775499.8	472253.8	Connect2D	1111.20	1108.239	0	0	30	0
AE1663-004	775347.2	471293.3	Connect2D	1066.00	1068.239	2.239	0	30	0
AE1663-005	775491.7	471293.625	Connect2D	1068.00	1068.591	0.591	0	30	0
AE1663-016	775347.2	471315.063	Connect2D	1066.00	1068.552	2.552	0	30	0
AE1663-019	775509.2	471304.625	Connect2D	1065.00	1065.896	0.896	0	30	0
AE1663-020	775339.063	471321.656	Connect2D	1065.00	1066.717	1.717	0	30	0
AE1663-022	774921.8	470947.2	Connect2D	1075.00	1075.583	0.583	0	30	0
AE1663-030	774973.75	471300.531	Connect2D	1065.00	1067.496	2.496	0	30	0
AE1665-013	775297.4	469012.8	Connect2D	1062.60	1067.124	4.524	0	30	0
AE1667-004	775500.6	467023.4	Connect2D	1091.58	1092.13	0.553	0	30	0
AE1667-006	774969.5	467015.6	Connect2D	1077.07	1078.879	1.809	0	30	0
AE1667-007	774952.5	467015.4	Connect2D	1076.95	1077.785	0.835	0	30	0
AE1667-008	774907.9	467015.2	Connect2D	1073.97	1075.878	1.908	0	30	0
AE1667-009	774889.9	467015	Connect2D	1073.85	1075.177	1.327	0	30	0
AE1668-003	775968.3	466959.781	Connect2D	1089.00	1090.146	1.146	0	30	0
AE1668-005	774924.5	466362.563	Connect2D	1051.19	1052.87	1.68	0.81	30	0
AE1668-053	775042.75	466959.438	Connect2D	1076.96	1084.146	7.186	0	30	0
AE1758-010	776673.063	475614.7	Connect2D	1070.00	1073.368	3.368	0	30	0
AE1758-050	777517.438	475758.031	Connect2D	1085.83	1088.563	2.733	0	30	0
AE1758-054	776343.75	475420.75	Connect2D	1068.98	1071.846	2.866	0	30	0
AE1759-003	776280.938	474829.531	Connect2D	1076.07	1077.394	1.324	0	30	0
AE1759-005	776276.3	474694.281	Connect2D	1075.82	1077.414	1.594	0	30	0
AE1759-006	776275.938	474667.281	Connect2D	1075.76	1076.821	1.061	0	30	0
AE1759-007	776273.7	474523.6	Connect2D	1074.97	1076.249	1.279	0	30	0
AE1759-008	776267.2	474292.125	Connect2D	1070.63	1072.31	1.68	0	30	0
AE1759-012	776274.9	474611.375	Connect2D	1075.22	1075.816	0.596	0	30	0
AE1760-002	776273.438	474028.719	Connect2D	1067.20	1068.325	1.125	0	30	0
AE1760-005	776272.563	473930.7	Connect2D	1067.70	1068.629	0.929	0	30	0
AE1760-009	776356.6	473982.125	Connect2D	1067.00	1069.817	2.817	0	30	0
AE1760-010	776358.25	473974.938	Connect2D	1067.00	1069.966	2.966	0	30	0
AE1760-011	776359.3	473963.344	Connect2D	1067.00	1069.772	2.772	0	30	0
AE1761-002	776237.5	472935.844	Connect2D	1116.48	1117.975	1.495	0	30	0
AE1761-003	776256.75	472923.219	Connect2D	1119.45	1119.741	0.291	0	30	0
AE1762-002	776583.3	471452.1	Connect2D	1089.60	1095.508	5.908	5.9	30	0
AE1762-039	777220	471569.75	Connect2D	1127.10	1128.543	1.443	0	30	0
AE1763-008	776550.2	471329.25	Connect2D	1089.60	1096.124	6.524	5.9	30	0
AE1763-022	777053.1	471157.031	Connect2D	1127.10	1130.064	2.964	0	30	0
AE1763-028	777145.563	471394.25	Connect2D	1127.10	1130.13	3.03	0	30	0
AE1766-014	777274.938	468071.469	Connect2D	1099.10	1100.312	1.212	0	30	0
AE1767-016	776291	467809.5	Connect2D	1069.60	1071.354	1.754	0	30	0
AE1767-017	776425.25	467809.563	Connect2D	1071.60	1072.511	0.911	0	30	0
AE1767-020	776871	467036.25	Connect2D	1096.55	1097.143	0.593	0	30	0
AE1767-021	776839	467036.156	Connect2D	1095.09	1095.609	0.519	0	30	0
AE1768-005	776201.563	466823.344	Connect2D	1084.50	1087.683	3.183	0	30	0

AE1768-030	776922.8	466875.781	Connect2D	1093.50	1094.971	1.471	0	30	0
AE1768-054	776854.9	466861.938	Connect2D	1093.50	1098.78	5.28	0	30	0
AE1768-056	776905.5	466971.25	Connect2D	1096.55	1099.036	2.486	0	30	0
AE1768-057	776789.938	466973.063	Connect2D	1093.80	1094.38	0.58	0	30	0
AE1768-059	776855.75	466913.2	Connect2D	1092.00	1093.859	1.859	0	30	0
AE1768-067	776269.25	466285.4	Connect2D	1091.00	1092.026	1.026	0	30	0
AE1861-002	777892.75	472314.531	Connect2D	1115.07	1116.189	1.119	0	30	0
AE1862-045	777875.9	472151.156	Connect2D	1116.60	1118.771	2.171	0	30	0
AE1866-006	777663.5	468105.156	Connect2D	1102.60	1103.443	0.843	0	30	0
AE1868-002	777515.4	466736.656	Connect2D	1138.00	1139.225	1.225	0	30	0
AE1868-038	777545.4	466979.563	Connect2D	1129.60	1131.353	1.753	0	30	0
AE1868-039	777495.4	466979.9	Connect2D	1127.00	1128.378	1.378	0	30	0
AS1456-002	772584	477139.063	Connect2D	1059.09	1065.421	6.331	0	30	0
AS1456-045	773243.6	477052.344	Connect2D	1067.61	1073.883	6.273	0	30	0
AS1457-003	773451.2	476152.656	Connect2D	1097.04	1101.635	4.595	0	30	0
AS1457-006	773498.25	475858.344	Connect2D	1089.19	1094.645	5.455	0	30	0
AS1457-020	773348.25	476654.969	Connect2D	1089.39	1095.11	5.72	0	30	0
AS1458-016	773627.6	474967.219	Connect2D	1068.00	1079.298	11.298	0	30	0
AS1551-031	773988.7	481188.438	Connect2D	1108.58	1112.976	4.396	0	30	0
AS1551-032	773855.4	481167.3	Connect2D	1102.50	1105.557	3.057	0	30	0
AS1551-041	774221.9	481341.2	Connect2D	1110.21	1113.875	3.665	0	30	0
AS1551-048	773842.4	481707.563	Connect2D	1103.55	1108.242	4.692	0	30	0
AS1551-050	773840.063	481308.5	Connect2D	1101.69	1106.102	4.41	0	30	0
AS1552-012	774585.438	480270.75	Connect2D	1109.90	1115.62	5.72	0	30	0
AS1552-013	774560.438	480241.719	Connect2D	1109.90	1115.594	5.694	0	30	0
AS1552-014	774370.438	480240.719	Connect2D	1107.14	1115.579	8.439	0	30	0
AS1552-016	774084.438	480239.219	Connect2D	1098.46	1109.231	10.771	0	30	0
AS1552-017	773883.2	480364.625	Connect2D	1093.10	1099.241	6.141	0	30	0
AS1552-019	773932.438	480406.6	Connect2D	1093.50	1104.139	10.639	0	30	0
AS1552-023	774086.063	480250.469	Connect2D	1102.80	1108.408	5.608	0	30	0
AS1552-031	774010.563	480646.063	Connect2D	1106.00	1110.236	4.236	0	30	0
AS1552-039	774866.2	480354.3	Connect2D	1110.21	1114.221	4.011	0	30	0
AS1552-050	774549.4	480782.8	Connect2D	1116.75	1119.918	3.168	0	30	0
AS1552-052	775090.3	480710.875	Connect2D	1113.58	1119.064	5.484	0	30	0
AS1552-053	775083	480559.031	Connect2D	1111.00	1114.786	3.786	0	30	0
AS1552-067	773834.8	481092.563	Connect2D	1100.84	1105.683	4.843	0	30	0
AS1557-010	774877	475932.281	Connect2D	1061.24	1067.735	6.495	0	30	0
AS1558-001	774870.25	475784.156	Connect2D	1060.04	1067.699	7.659	0	30	0
AS1558-007	773678.75	474948.656	Connect2D	1064.59	1074.875	10.285	0	30	0
AS1563-002	773818.8	470606.7	Connect2D	1043.05	1048.949	5.899	0	30	0
AS1564-019	773633.4	470324.375	Connect2D	1044.17	1048.32	4.15	0	30	0
AS1567-019	774052.4	467267.2	Connect2D	1034.17	1041.277	7.107	0	30	0
AS1567-022	773914.7	467345.344	Connect2D	1033.77	1040.736	6.966	0	30	0
AS1655-022	775349.3	477617.469	Connect2D	1107.90	1114.423	6.523	0	30	0
AS1655-024	775565.563	477620.9	Connect2D	1106.82	1114.399	7.579	0	30	0
AS1655-027	775651.563	477615.656	Connect2D	1106.69	1116.039	9.349	0	30	0
AS1655-031	775921.25	477625.719	Connect2D	1108.22	1121.548	13.328	0	30	0
AS1655-034	776221.063	477624.375	Connect2D	1125.39	1131.39	6	0	30	0
AS1656-008	775641	476764.3	Connect2D	1093.35	1098.059	4.709	0	30	0
AS1656-011	776239.1	476706.125	Connect2D	1106.03	1110.431	4.401	0	30	0
AS1660-018	776192.8	473975.75	Connect2D	1063.38	1070.58	7.2	0	30	0
AS1660-019	776190.75	473636.1	Connect2D	1069.50	1074.619	5.119	0	30	0
AS1660-036	776192.563	473967.7	Connect2D	1062.63	1070.791	8.16	0	30	0
AS1660-039	776233.5	473660.531	Connect2D	1067.90	1074.174	6.274	0	30	0
AS1661-004	776225	472936.031	Connect2D	1114.39	1120.297	5.907	0	30	0
AS1662-022	775505.2	472078.875	Connect2D	1095.00	1099.12	4.12	0	30	0
AS1662-023	775503	472249.625	Connect2D	1096.07	1109.461	13.391	0	30	0
AS1663-003	775365.75	471293.25	Connect2D	1066.11	1075.314	9.204	0	30	0
AS1663-026	774927.5	471169.375	Connect2D	1066.61	1070.273	3.663	0	30	0
AS1663-029	774959.2	471300.875	Connect2D	1063.12	1070	6.88	1.88	30	0
AS1665-007	775808.75	469421.1	Connect2D	1073.33	1078.283	4.953	0	30	0
AS1665-012	775432.3	469189.125	Connect2D	1065.35	1069.384	4.034	0	30	0
AS1666-004	774939.2	468330.2	Connect2D	1054.57	1056.498	1.928	0	30	0
AS1756-009	776889.25	477102.438	Connect2D	1101.25	1107.814	6.564	0	30	0
AS1757-001	777008.063	476132.563	Connect2D	1076.32	1083.177	6.857	0	30	0
AS1757-002	777025.8	476182.5	Connect2D	1077.74	1082.903	5.163	0	30	0
AS1757-007	777074.4	476318.063	Connect2D	1082.92	1088.034	5.114	0	30	0
AS1757-017	777176.438	476207.531	Connect2D	1082.66	1086.888	4.228	0	30	0
AS1757-030	776782.938	476220.531	Connect2D	1079.28	1084.572	5.292	0	30	0
AS1757-032	776315.563	476213.625	Connect2D	1090.28	1096.267	5.987	0	30	0
AS1757-040	776659.75	476335.7	Connect2D	1081.27	1086.428	5.158	0	30	0
AS1760-004	776272.2	473982.031	Connect2D	1063.60	1070.343	6.743	0	30	0
AS1760-005	776272.25	473974.875	Connect2D	1064.26	1070.475	6.22	0	30	0
AS1762-012	776768.9	471647.969	Connect2D	1112.39	1117.097	4.707	0	30	0
AS1762-030	776568.3	472239.438	Connect2D	1142.09	1146.782	4.692	0	30	0
AS1763-007	777045.5	470749.875	Connect2D	1129.65	1144.805	15.155	0	30	0
AS1763-009	776482.8	471292	Connect2D	1093.82	1098.263	3.413	0	30	0

AS1767-003	776262.438	467106.3	Connect2D	1080.65	1087.748	7.098	0	30	0
AS1767-005	776106.1	467202.3	Connect2D	1079.69	1087.869	8.179	0	30	0
AS1767-007	776319.6	467469.469	Connect2D	1077.09	1082.728	5.638	0	30	0
AS1768-079	776096.7	466972.625	Connect2D	1085.52	1089.712	4.192	0	30	0
AS1862-039	777533.6	471645.156	Connect2D	1138.60	1143.817	5.217	0	30	0
AS1867-001	777642.438	467868.563	Connect2D	1104.10	1109.664	5.564	0	30	0
BSAI_001	772665.438	466009.969	Connect2D	1027.33	1020.21	0	0	30	0
BSAI_011	774784.2	466019.469	Connect2D	1067.61	1067.84	0.01	0	30	0
BSAI_088	773056.9	468452.469	Connect2D	1031.71	1031.722	0.01	0	30	0
BSAI_090	772611.25	470546.3	Connect2D	1033.12	1033.133	0.01	0	30	0
BSAI_104	774451.438	471456	Connect2D	1051.50	1052.34	0.01	0	30	0
BSAI_144	771070.25	472328.156	Connect2D	1053.79	1053.822	0.01	0	30	0
BSAI_151	772263.9	472403.3	Connect2D	1038.20	1038.212	0.01	0	30	0
BSAI_158	774234.563	473603.1	Connect2D	1051.70	1051.71	0.01	0	30	0
BSAI_199	774660.75	474641.25	Connect2D	1065.00	1065.037	0.01	0	30	0
BSAI_200	774842.25	474841.969	Connect2D	1064.00	1064.01	0.01	0	30	0
BSAI_201	775206.25	474858.844	Connect2D	1066.00	1066.01	0.01	0	30	0
BSAI_233	775979	475855.969	Connect2D	1080.78	1081.329	0.01	0	30	0
BSAI_273	771815.938	473925.031	Connect2D	1041.85	1042.637	0.01	0	30	0
BSAI_274	771459.4	473512.719	Connect2D	1044.82	1045.35	0.01	0	30	0
BSAI_281	770288.1	475586.281	Connect2D	1044.81	1044.823	0.01	0	30	0
BSAI_282	769918.8	475454.9	Connect2D	1046.77	1046.783	0.01	0	30	0
BSAI_285	769331.3	475698.156	Connect2D	1051.35	1051.355	0.01	0	30	0
BSAI_286	769055.75	475849.219	Connect2D	1056.17	1056.176	0.01	0	30	0
CB1760-006	776310.7	473981.438	Connect2D	1064.68	1069.282	4.602	0	30	0
CB1760-007	776310.9	473975.938	Connect2D	1065.18	1069.09	3.91	0	30	0
CB1760-008	776310.938	473964.156	Connect2D	1064.10	1069.116	5.016	0	30	0
DT1460-002	773274.8	473329.2	Connect2D	1043.09	1043.426	0.336	0	30	0
DT1460-003	773278.7	473305.063	Connect2D	1042.98	1043.683	0.703	0	30	0
DT1560-002	774297.8	473409.2	Connect2D	1057.02	1058.502	1.482	0	30	0
DT1560-003	774259.063	473420.719	Connect2D	1054.65	1054.782	0.132	0	30	0
DT1669-002	776016.25	465925.6	Connect2D	1072.66	1073.794	1.134	0	30	0
DT1769-003	776079.6	465925.969	Connect2D	1074.17	1075.543	1.373	0	30	0
HD1559-011	774571.438	474389.281	Connect2D	1056.00	1060.134	4.134	0	30	0
HD1559-012	774574.1	474565.9	Connect2D	1056.90	1060.384	3.484	0	30	0
HD1658-001	776196.3	475144.2	Connect2D	1066.94	1069.396	2.454	0	30	0
HD1757-059	776914.4	475825.6	Connect2D	1075.34	1081.819	6.479	0	30	0
HD1758-021	776693.3	475726.656	Connect2D	1069.72	1070.65	0.15	0	30	0
IN1456-004	772636.6	477116.3	Connect2D	1060.37	1066.044	5.674	0	30	0
IN1456-005	772750.938	477115.844	Connect2D	1061.44	1067.032	5.592	0	30	0
IN1456-006	772633.563	477083.4	Connect2D	1062.87	1066.583	3.713	0	30	0
IN1456-007	772750.8	477084.563	Connect2D	1062.85	1066.944	4.094	0	30	0
IN1456-008	772775.6	477063.625	Connect2D	1063.67	1066.95	3.28	0	30	0
IN1456-009	772804.25	477063.125	Connect2D	1063.93	1066.99	3.06	0	30	0
IN1456-010	772827.9	477083.719	Connect2D	1064.08	1067.323	3.243	0	30	0
IN1456-011	772828.938	477115.875	Connect2D	1061.81	1067.404	5.594	0	30	0
IN1456-012	772907.9	477083.719	Connect2D	1064.73	1067.901	3.171	0	30	0
IN1456-013	773215.8	477114.969	Connect2D	1064.80	1071.294	6.494	0	30	0
IN1456-015	773218.75	477083.656	Connect2D	1067.21	1071.421	4.211	0	30	0
IN1456-016	773246.9	477175.219	Connect2D	1066.12	1071.743	5.623	0	30	0
IN1456-017	773326.938	477110.531	Connect2D	1066.32	1072.003	5.683	0	30	0
IN1456-018	773326.8	477086.781	Connect2D	1069.14	1071.804	2.664	0	30	0
IN1456-019	773267.3	477175.469	Connect2D	1066.62	1071.945	5.325	0	30	0
IN1456-020	773278.3	477175.531	Connect2D	1067.55	1072.065	4.515	0	30	0
IN1456-021	773298.938	477175.344	Connect2D	1067.85	1071.488	3.638	0	30	0
IN1456-022	773247.1	477470.219	Connect2D	1067.97	1070.404	2.434	0	30	0
IN1456-023	773267.563	477470.1	Connect2D	1068.33	1070.81	2.48	0	30	0
IN1456-024	773278.938	477469.7	Connect2D	1068.36	1070.982	2.622	0	30	0
IN1456-025	773302.3	477469.531	Connect2D	1068.48	1070.484	2.004	0	30	0
IN1456-036	773161.25	477533.344	Connect2D	1066.80	1069.525	2.725	0	30	0
IN1456-038	773366.25	477549.3	Connect2D	1068.50	1074.015	5.515	0	30	0
IN1456-040	773382.938	477110.531	Connect2D	1069.19	1073.153	3.963	0	30	0
IN1456-042	773413.5	477087.063	Connect2D	1070.70	1074.429	3.73	0	30	0
IN1456-043	773426.6	477066.844	Connect2D	1071.68	1075.793	4.11	0	30	0
IN1456-044	773436.7	477066.75	Connect2D	1072.16	1076.238	4.08	0	30	0
IN1456-046	773247.1	477026.4	Connect2D	1070.66	1074.839	4.179	0	30	0
IN1456-047	773266.1	477026.125	Connect2D	1070.77	1075.306	4.536	0	30	0
IN1456-048	773279	477025.938	Connect2D	1070.80	1075.284	4.484	0	30	0
IN1456-049	773297.9	477025.656	Connect2D	1070.91	1074.945	4.035	0	30	0
IN1456-050	773297.4	476879.469	Connect2D	1080.33	1084.793	4.46	0	30	0
IN1456-051	773278.8	476879.469	Connect2D	1080.82	1085.161	4.34	0	30	0
IN1456-052	773265.8	476879.281	Connect2D	1080.81	1085.11	4.3	0	30	0
IN1456-053	773246.75	476879.156	Connect2D	1081.03	1084.753	3.72	0	30	0
IN1456-054	773312.25	476746.219	Connect2D	1088.17	1092.239	4.069	0	30	0
IN1456-055	773403.1	476693.938	Connect2D	1090.48	1093.569	3.089	0	30	0
IN1456-056	773396.7	476703.781	Connect2D	1090.51	1093.643	3.133	0	30	0
IN1456-057	773391.25	476712.563	Connect2D	1090.58	1093.415	2.835	0	30	0

IN1456-058	772922.9	477061.4	Connect2D	1064.99	1068.837	3.85	0	30	0
IN1456-059	772933	477061.375	Connect2D	1064.84	1068.867	4.03	0	30	0
IN1456-061	773506.563	477110.375	Connect2D	1076.78	1080.804	4.024	0	30	0
IN1456-063	772775.6	476977.7	Connect2D	1063.93	1067.809	3.879	0	30	0
IN1456-065	772802.4	476932.6	Connect2D	1066.43	1069.111	2.681	0	30	0
IN1456-066	772646.6	477063.719	Connect2D	1063.37	1067.468	4.1	0	30	0
IN1456-067	772656.8	477063.6	Connect2D	1063.55	1067.517	3.97	0	30	0
IN1456-068	772646.4	477051.25	Connect2D	1063.74	1067.351	3.61	0	30	0
IN1456-069	772656.563	477051.219	Connect2D	1063.99	1067.47	3.48	0	30	0
IN1456-071	772583.9	477121.469	Connect2D	1059.64	1067.002	7.362	0	30	0
IN1456-072	772583	477083.719	Connect2D	1060.84	1065.913	5.073	0	30	0
IN1456-073	772505.3	477078.3	Connect2D	1061.20	1066.11	4.91	0	30	0
IN1456-074	772497.563	477036.75	Connect2D	1061.66	1067.159	5.5	0	30	0
IN1456-075	772474	477024.3	Connect2D	1064.45	1067.813	3.36	0	30	0
IN1456-076	772496.438	476972.156	Connect2D	1060.97	1066.729	5.76	0	30	0
IN1456-077	772522.5	476977.438	Connect2D	1062.99	1066.324	3.33	0	30	0
IN1456-078	772497.75	476738.6	Connect2D	1068.05	1073.585	5.54	0	30	0
IN1456-079	772524.6	476723.75	Connect2D	1072.32	1075.653	3.33	0	30	0
IN1457-001	773498.438	475984.9	Connect2D	1091.72	1096.405	4.685	0	30	0
IN1457-002	773455.7	476024.719	Connect2D	1093.12	1097.714	4.594	0	30	0
IN1457-004	773412.563	476171.9	Connect2D	1097.25	1101.32	4.07	0	30	0
IN1457-005	773412.1	476195.031	Connect2D	1098.38	1101.277	2.897	0	30	0
IN1457-007	773644.4	475858.719	Connect2D	1084.06	1088.112	4.05	0	30	0
IN1457-008	773659.1	475858.719	Connect2D	1084.23	1087.246	3.02	0	30	0
IN1457-009	773674.1	475858.719	Connect2D	1082.48	1086.499	4.02	0	30	0
IN1457-010	773656	475897.875	Connect2D	1083.98	1087.595	3.62	0	30	0
IN1457-011	773666	475897.875	Connect2D	1084.18	1086.97	2.79	0	30	0
IN1457-012	773676	475897.875	Connect2D	1084.24	1086.491	2.25	0	30	0
IN1457-013	773331.2	476172.6	Connect2D	1097.67	1102.444	4.774	0	30	0
IN1457-014	773171.938	476173.375	Connect2D	1102.13	1105.385	3.255	0	30	0
IN1457-015	773152	476149.375	Connect2D	1102.40	1105.604	3.204	0	30	0
IN1457-016	773128.9	476149.469	Connect2D	1102.83	1105.728	2.898	0	30	0
IN1457-017	773106.438	476174.375	Connect2D	1103.40	1106.546	3.146	0	30	0
IN1457-018	773105.563	476197.438	Connect2D	1103.84	1106.61	2.77	0	30	0
IN1457-019	773000.4	476175.156	Connect2D	1104.45	1108.622	4.172	0	30	0
IN1457-021	773409.7	476685.781	Connect2D	1090.16	1093.533	3.373	0	30	0
IN1457-022	773390.6	476589.7	Connect2D	1090.13	1093.955	3.825	0	30	0
IN1457-023	773380.25	476582.531	Connect2D	1090.72	1093.921	3.201	0	30	0
IN1457-024	773370.6	476575.656	Connect2D	1090.75	1093.998	3.248	0	30	0
IN1457-025	773360.75	476567.9	Connect2D	1090.83	1093.636	2.806	0	30	0
IN1457-026	773430.9	476534.9	Connect2D	1092.08	1094.976	2.896	0	30	0
IN1457-027	773404.75	476493.625	Connect2D	1092.63	1095.718	3.088	0	30	0
IN1457-028	772940.6	476518.2	Connect2D	1085.93	1089.893	3.963	0	30	0
IN1457-030	772940.4	476491.438	Connect2D	1086.57	1089.924	3.354	0	30	0
IN1457-031	773140.9	476509.25	Connect2D	1088.00	1091.794	3.794	0	30	0
IN1457-032	773272	476591.563	Connect2D	1089.96	1093.447	3.487	0	30	0
IN1457-033	773267.1	476598.9	Connect2D	1090.27	1093.655	3.385	0	30	0
IN1457-034	773260.6	476609.25	Connect2D	1090.29	1093.421	3.131	0	30	0
IN1457-035	773254.7	476619.25	Connect2D	1090.36	1093.245	2.885	0	30	0
IN1457-036	772772.6	476585.969	Connect2D	1082.95	1086.988	4.038	0	30	0
IN1457-038	772822.6	476519.3	Connect2D	1085.36	1089.151	3.791	0	30	0
IN1457-039	772798.75	476545.375	Connect2D	1084.38	1088.129	3.749	0	30	0
IN1457-040	772796.6	476492.6	Connect2D	1086.30	1089.124	2.824	0	30	0
IN1457-041	772496.4	476545.4	Connect2D	1081.52	1087.067	5.55	0	30	0
IN1457-042	772523.4	476544.469	Connect2D	1085.15	1088.483	3.33	0	30	0
IN1457-043	772440	476522.625	Connect2D	1080.84	1084.006	3.17	0	30	0
IN1457-044	772439.8	476495.563	Connect2D	1083.49	1086.658	3.17	0	30	0
IN1457-045	772495.4	476454.281	Connect2D	1084.54	1088.855	4.32	0	30	0
IN1457-046	772522.2	476454.125	Connect2D	1086.49	1089.908	3.42	0	30	0
IN1458-003	773355.563	475039.531	Connect2D	1091.90	1097.186	5.286	0	30	0
IN1458-005	773408.8	475039.656	Connect2D	1092.62	1096.476	3.856	0	30	0
IN1458-006	773361.75	475115.969	Connect2D	1093.22	1097.131	3.911	0	30	0
IN1458-007	773330.9	475157	Connect2D	1093.41	1096.93	3.52	0	30	0
IN1458-008	773333	475183.969	Connect2D	1093.53	1096.9	3.37	0	30	0
IN1458-009	773375.938	475212	Connect2D	1094.23	1097.655	3.425	0	30	0
IN1458-010	773417.9	475201.563	Connect2D	1094.42	1097.58	3.16	0	30	0
IN1458-011	773501.9	475755.938	Connect2D	1090.40	1093.983	3.583	0	30	0
IN1458-012	773447.9	475755.969	Connect2D	1090.92	1094.434	3.514	0	30	0
IN1458-013	773494.75	475508.844	Connect2D	1092.70	1096.033	3.333	0	30	0
IN1458-014	773451.4	475489.844	Connect2D	1093.00	1096.162	3.162	0	30	0
IN1458-019	773079.2	475202.969	Connect2D	1097.00	1106.075	9.075	0	30	0
IN1458-021	773041.2	475262.844	Connect2D	1098.50	1108.413	9.913	0	30	0
IN1458-022	772995.25	475315.2	Connect2D	1102.01	1112.391	10.38	0	30	0
IN1458-023	772999.438	475353.531	Connect2D	1110.57	1115.175	3.45	0	30	0
IN1458-024	772985.063	475371.844	Connect2D	1110.21	1118.986	3.33	0	30	0
IN1458-025	772948.8	475371.3	Connect2D	1100.44	1120.864	20.424	0	30	0
IN1551-033	774011.438	481177.344	Connect2D	1109.07	1112.869	3.799	0	30	0

IN1551-034	774035.563	481181.7	Connect2D	1110.87	1113.471	2.601	0	30	0
IN1551-035	774342.3	481104.531	Connect2D	1116.41	1120.228	3.818	0	30	0
IN1551-036	774444.5	481121.375	Connect2D	1116.44	1119.997	3.557	0	30	0
IN1551-037	774427.563	481154.063	Connect2D	1116.87	1120.029	3.159	0	30	0
IN1551-038	774344.063	481332.063	Connect2D	1111.76	1115.16	3.4	0	30	0
IN1551-039	774311.9	481338.563	Connect2D	1111.51	1115.527	4.017	0	30	0
IN1551-042	774219.3	481623.063	Connect2D	1104.80	1108.327	3.527	0	30	0
IN1551-043	774218.7	481664.063	Connect2D	1104.50	1108.981	4.48	0	30	0
IN1551-044	774173.5	481664.875	Connect2D	1102.76	1108.93	6.17	0	30	0
IN1551-045	774031.5	481664.844	Connect2D	1102.23	1109.87	7.64	0	30	0
IN1551-046	773919.5	481664.8	Connect2D	1102.74	1109.112	6.372	0	30	0
IN1551-052	773860.8	481702.5	Connect2D	1104.77	1108.406	3.64	0	30	0
IN1551-053	773860.7	481661.375	Connect2D	1105.12	1108.597	3.48	0	30	0
IN1551-055	774066.5	481634.3	Connect2D	1105.22	1109.275	4.06	0	30	0
IN1551-056	774093.6	481633.969	Connect2D	1105.79	1109.557	3.77	0	30	0
IN1551-057	774173.563	481702.6	Connect2D	1105.22	1109.218	4	0	30	0
IN1552-004	774990.8	480248.375	Connect2D	1110.19	1113.358	3.168	0	30	0
IN1552-006	774842.75	480247.656	Connect2D	1110.77	1114.077	3.307	0	30	0
IN1552-007	774579.6	480246	Connect2D	1111.81	1115.429	3.619	0	30	0
IN1552-008	774558.7	480275.6	Connect2D	1111.95	1115.152	3.202	0	30	0
IN1552-009	774521.75	480275.875	Connect2D	1112.10	1115.368	3.268	0	30	0
IN1552-010	774501.4	480245.875	Connect2D	1112.85	1115.67	2.82	0	30	0
IN1552-022	774198.6	480244.281	Connect2D	1107.66	1112.261	4.601	0	30	0
IN1552-025	774217.7	480275.5	Connect2D	1107.84	1113.234	5.394	0	30	0
IN1552-026	774254.563	480275.469	Connect2D	1108.33	1113.054	4.724	0	30	0
IN1552-027	774273.25	480244.781	Connect2D	1111.41	1114.29	2.88	0	30	0
IN1552-028	774222.438	480417.125	Connect2D	1113.30	1117.108	3.808	0	30	0
IN1552-029	774248.25	480472.344	Connect2D	1116.27	1119.199	2.929	0	30	0
IN1552-030	774184.4	480657.25	Connect2D	1118.25	1122.438	4.188	0	30	0
IN1552-033	774184.25	480730.375	Connect2D	1118.97	1123.241	4.271	0	30	0
IN1552-034	774246.2	480734.438	Connect2D	1119.27	1122.692	3.422	0	30	0
IN1552-035	774245	480757.031	Connect2D	1119.39	1122.598	3.208	0	30	0
IN1552-036	774211.1	480784.8	Connect2D	1120.53	1123.661	3.131	0	30	0
IN1552-037	774825.7	480482.031	Connect2D	1111.10	1118.315	7.215	0	30	0
IN1552-038	774814.75	480517.344	Connect2D	1111.25	1118.479	7.229	0	30	0
IN1552-040	774913.1	480374.3	Connect2D	1110.21	1114.164	3.954	0	30	0
IN1552-042	774577.563	480506.5	Connect2D	1112.66	1117.866	5.206	0	30	0
IN1552-043	774577.4	480479.625	Connect2D	1114.75	1117.815	3.065	0	30	0
IN1552-044	774553.2	480532.3	Connect2D	1113.25	1118.407	5.157	0	30	0
IN1552-045	774526.938	480532.125	Connect2D	1115.37	1118.123	2.753	0	30	0
IN1552-046	774553.563	480716.3	Connect2D	1114.51	1119.295	4.785	0	30	0
IN1552-047	774500.5	480740.563	Connect2D	1117.08	1120.233	3.153	0	30	0
IN1552-048	774578	480740.844	Connect2D	1114.94	1119.854	4.914	0	30	0
IN1552-049	774538.5	480768.469	Connect2D	1115.56	1119.879	4.32	0	30	0
IN1552-051	775081.2	480732.844	Connect2D	1113.68	1119.135	5.455	0	30	0
IN1552-055	774963.063	480736.375	Connect2D	1119.90	1123.578	3.678	0	30	0
IN1552-056	774939.4	480785.25	Connect2D	1121.07	1124.746	3.676	0	30	0
IN1552-057	774912.563	480785.438	Connect2D	1121.68	1124.743	3.063	0	30	0
IN1552-058	775081.7	480755.281	Connect2D	1114.30	1119.352	5.052	0	30	0
IN1552-059	775092.063	480774.938	Connect2D	1114.40	1119.832	5.432	0	30	0
IN1552-061	774057.5	481089.3	Connect2D	1110.88	1117.261	6.381	0	30	0
IN1552-062	774118.5	481021.531	Connect2D	1113.37	1121.466	8.096	0	30	0
IN1552-063	774211.938	480898.2	Connect2D	1117.72	1124.263	6.543	0	30	0
IN1552-064	774549.063	480900.656	Connect2D	1119.40	1123.22	3.82	0	30	0
IN1552-065	774226.75	481014.281	Connect2D	1114.39	1122.732	8.342	0	30	0
IN1552-066	774353.4	481080.25	Connect2D	1115.47	1120.075	4.605	0	30	0
IN1556-001	774832.75	476761.5	Connect2D	1089.75	1093.438	3.688	0	30	0
IN1556-002	774928	476759.5	Connect2D	1089.90	1093.735	3.835	0	30	0
IN1556-003	773701.25	477109.7	Connect2D	1092.89	1095.206	2.316	0	30	0
IN1556-004	773750.438	477055.4	Connect2D	1096.20	1099.241	3.041	0	30	0
IN1556-005	773773.438	477055.2	Connect2D	1097.47	1099.631	2.161	0	30	0
IN1556-006	773794.9	477086.063	Connect2D	1099.27	1101.25	1.98	0	30	0
IN1557-001	774709.5	476647.938	Connect2D	1089.54	1092.56	3.02	0	30	0
IN1557-002	774747.7	476613.438	Connect2D	1088.71	1092.465	3.755	0	30	0
IN1557-003	774734.938	476529.656	Connect2D	1086.33	1090.835	4.505	0	30	0
IN1557-004	774678.8	476535.9	Connect2D	1088.10	1092.032	3.932	0	30	0
IN1557-005	774640.938	476570.125	Connect2D	1089.00	1092.002	3.002	0	30	0
IN1557-006	774827.438	476408.063	Connect2D	1079.92	1084.541	4.621	0	30	0
IN1557-007	774923.563	476231.9	Connect2D	1071.52	1076.162	4.642	0	30	0
IN1557-008	774991	476130.6	Connect2D	1066.72	1071.379	4.659	0	30	0
IN1557-009	774826.4	476692.3	Connect2D	1089.31	1093	3.69	0	30	0
IN1557-011	774385.7	476212.4	Connect2D	1073.25	1083.75	10.5	0	30	0
IN1557-013	774348.3	476228.438	Connect2D	1080.68	1083.516	2.836	0	30	0
IN1557-014	774109.25	475929.4	Connect2D	1075.18	1081.177	5.997	0	30	0
IN1557-015	774089.3	475962.969	Connect2D	1078.51	1081.451	2.941	0	30	0
IN1557-016	773994.25	475871.969	Connect2D	1075.86	1080.519	4.659	0	30	0
IN1557-017	773980.063	475914.156	Connect2D	1077.88	1080.626	2.746	0	30	0

IN1557-018	773919.4	475901.469	Connect2D	1077.91	1081.271	3.361	0	30	0
IN1559-003	774336.9	474395.375	Connect2D	1057.80	1065.075	7.275	0	30	0
IN1559-005	774330.438	474436.969	Connect2D	1058.09	1065.807	7.717	0	30	0
IN1559-006	774190.438	474418.1	Connect2D	1059.44	1058.037	0	0	30	0
IN1559-007	774190.7	474375.25	Connect2D	1060.22	1057.834	0	0	30	0
IN1559-008	774449.438	474457.656	Connect2D	1059.45	1057.433	0	0	30	0
IN1559-009	774532.5	474485.8	Connect2D	1059.98	1059.22	0	0	30	0
IN1559-010	774550.7	474446.969	Connect2D	1060.76	1060.134	0	0	30	0
IN1559-013	774646.6	474494.375	Connect2D	1061.26	1063.561	2.301	0	30	0
IN1559-014	774683.2	474478.438	Connect2D	1059.35	1063.459	4.109	0	30	0
IN1559-015	774702.563	474488.8	Connect2D	1059.49	1063.807	4.317	0	30	0
IN1559-016	774714.063	474529	Connect2D	1059.69	1064.641	4.951	0	30	0
IN1559-017	774693.438	474565.4	Connect2D	1059.95	1064.428	4.478	0	30	0
IN1559-018	774813.438	474621.344	Connect2D	1059.47	1064.738	5.27	0	30	0
IN1559-019	774828.563	474581.1	Connect2D	1062.60	1064.798	2.198	0	30	0
IN1559-021	774732.563	474379.6	Connect2D	1058.63	1057.378	0	0	30	0
IN1559-022	774768.75	474402.844	Connect2D	1060.49	1057.82	0	0	30	0
IN1559-023	774764.9	474412.1	Connect2D	1060.93	1058.372	0	0	30	0
IN1559-024	774770.3	474304.375	Connect2D	1053.63	1057.53	3.9	0	30	0
IN1559-025	774790.1	474314.531	Connect2D	1059.84	1057.738	0	0	30	0
IN1559-026	774793.5	474307.969	Connect2D	1060.02	1058.201	0	0	30	0
IN1559-027	774792.9	474241.344	Connect2D	1053.30	1060.483	7.183	0	30	0
IN1559-029	774815	474245.781	Connect2D	1054.43	1061.285	6.855	0	30	0
IN1559-030	774840.75	474284.4	Connect2D	1054.66	1060.77	6.11	0	30	0
IN1559-031	774863.4	474316.531	Connect2D	1061.33	1060.01	0	0	30	0
IN1563-001	773797	470545.219	Connect2D	1043.31	1048.296	4.986	0	30	0
IN1563-004	773859.1	470584.125	Connect2D	1044.72	1048.023	3.303	0	30	0
IN1563-005	773852.75	470574.344	Connect2D	1044.89	1048.001	3.111	0	30	0
IN1563-006	773867.4	470653.938	Connect2D	1043.50	1048.401	4.901	0	30	0
IN1563-007	773937.4	470762.031	Connect2D	1044.37	1048.969	4.599	0	30	0
IN1563-008	773979.8	470770.469	Connect2D	1044.68	1049.12	4.44	0	30	0
IN1563-011	773827.438	470601.719	Connect2D	1043.98	1048.369	4.389	0	30	0
IN1564-003	774787.2	469701.344	Connect2D	1100.10	1104.6	4.5	0	30	0
IN1564-005	774793.3	469849.375	Connect2D	1104.96	1108.648	3.688	0	30	0
IN1564-007	773953.9	470408.9	Connect2D	1050.04	1053.452	3.412	0	30	0
IN1564-008	773957.563	470433.8	Connect2D	1049.40	1052.731	3.331	0	30	0
IN1564-009	773903	470468.563	Connect2D	1045.76	1049.426	3.666	0	30	0
IN1564-010	773894.563	470446.656	Connect2D	1046.40	1049.518	3.118	0	30	0
IN1564-011	773834.6	470484.844	Connect2D	1044.83	1048.045	3.215	0	30	0
IN1564-012	773846.75	470504.375	Connect2D	1044.08	1048.151	4.071	0	30	0
IN1564-013	773690.063	470385.063	Connect2D	1043.89	1049.007	5.117	0	30	0
IN1564-015	773828.25	470067.938	Connect2D	1049.17	1052.809	3.639	0	30	0
IN1564-016	773812.7	470086.281	Connect2D	1048.77	1052.377	3.607	0	30	0
IN1564-017	773799.25	470160.563	Connect2D	1046.71	1050.857	4.147	0	30	0
IN1564-020	773609.25	470351	Connect2D	1044.75	1048.086	3.336	0	30	0
IN1564-021	773591.75	470335.9	Connect2D	1045.15	1048.271	3.121	0	30	0
IN1564-022	773591.75	470292.375	Connect2D	1044.63	1048.004	3.374	0	30	0
IN1564-023	773608.2	470266.1	Connect2D	1044.87	1048.118	3.248	0	30	0
IN1564-024	773675.938	470280.344	Connect2D	1044.48	1048.12	3.64	0	30	0
IN1564-025	773729.063	470224.031	Connect2D	1044.86	1048.923	4.063	0	30	0
IN1564-026	773660.3	470263.4	Connect2D	1044.61	1047.94	3.33	0	30	0
IN1564-027	773698.1	470223.344	Connect2D	1045.35	1048.685	3.335	0	30	0
IN1564-028	773976.25	470047.8	Connect2D	1055.10	1059.307	4.207	0	30	0
IN1564-029	774052.8	469999.031	Connect2D	1061.15	1064.665	3.515	0	30	0
IN1564-030	773986.8	470013.8	Connect2D	1057.25	1060.636	3.386	0	30	0
IN1564-031	774111.438	469934.469	Connect2D	1067.24	1070.393	3.153	0	30	0
IN1564-032	773938.8	469939.563	Connect2D	1057.93	1060.457	2.527	0	30	0
IN1565-001	773848.5	468823.9	Connect2D	1071.69	1075.459	3.769	0	30	0
IN1565-002	773879.5	468972.969	Connect2D	1073.23	1076.494	3.264	0	30	0
IN1565-003	773940.75	468984.063	Connect2D	1073.60	1077.001	3.401	0	30	0
IN1565-004	773948.938	469003.438	Connect2D	1074.17	1077.321	3.151	0	30	0
IN1565-005	773958.2	468999.563	Connect2D	1074.31	1077.158	2.848	0	30	0
IN1565-006	773942.4	469054.2	Connect2D	1076.65	1079.509	2.859	0	30	0
IN1565-007	773914.8	469068.3	Connect2D	1076.31	1079.498	3.188	0	30	0
IN1565-008	773919.75	469077.531	Connect2D	1077.30	1080.045	2.745	0	30	0
IN1565-009	774752.7	469389.031	Connect2D	1091.92	1094.825	2.905	0	30	0
IN1565-010	774752.25	469410	Connect2D	1091.62	1094.893	3.273	0	30	0
IN1565-011	774778.563	469434.969	Connect2D	1090.51	1093.381	2.871	0	30	0
IN1565-012	774792.563	469425.125	Connect2D	1090.30	1093.775	3.475	0	30	0
IN1565-013	774803.563	469424.844	Connect2D	1090.05	1093.537	3.487	0	30	0
IN1565-014	774816.75	469451.4	Connect2D	1089.49	1093.792	4.302	0	30	0
IN1565-015	774779.5	469499.875	Connect2D	1091.73	1095.73	4	0	30	0
IN1566-001	773816	468023.969	Connect2D	1049.87	1053.902	4.032	0	30	0
IN1566-002	773821	468149	Connect2D	1054.41	1058.204	3.794	0	30	0
IN1566-003	773831.938	468423.781	Connect2D	1068.80	1073.12	4.32	0	30	0
IN1566-004	773853.2	468430.1	Connect2D	1069.91	1073.218	3.308	0	30	0
IN1567-003	774691.25	467261.563	Connect2D	1052.39	1055.729	3.339	0	30	0

IN1567-004	774681.4	467261.5	Connect2D	1052.04	1055.072	3.032	0	30	0
IN1567-005	774691.2	467282.563	Connect2D	1052.15	1055.838	3.688	0	30	0
IN1567-006	774680.9	467282.5	Connect2D	1051.55	1055.232	3.682	0	30	0
IN1567-007	774323.25	467226.3	Connect2D	1038.35	1041.394	3.044	0	30	0
IN1567-008	774345.3	467259.438	Connect2D	1038.34	1041.958	3.618	0	30	0
IN1567-009	774343.438	467280.438	Connect2D	1038.82	1042.146	3.326	0	30	0
IN1567-010	774310.75	467312.656	Connect2D	1037.68	1041.443	3.763	0	30	0
IN1567-013	774302.8	467313.438	Connect2D	1037.83	1041.664	3.834	0	30	0
IN1567-014	774292.5	467312.531	Connect2D	1038.34	1041.415	3.075	0	30	0
IN1567-015	774310	467211.375	Connect2D	1038.15	1041.535	3.385	0	30	0
IN1567-016	774300.6	467211.2	Connect2D	1038.09	1041.68	3.59	0	30	0
IN1567-017	774288.2	467226.656	Connect2D	1037.65	1041.63	3.98	0	30	0
IN1567-018	774255.8	467258.875	Connect2D	1034.69	1041.488	6.798	0	30	0
IN1567-020	774061	467294.281	Connect2D	1034.48	1040.671	6.191	0	30	0
IN1567-021	774054.5	467274.3	Connect2D	1034.19	1040.642	6.452	0	30	0
IN1567-023	773919.75	467350.656	Connect2D	1034.50	1039.916	5.416	0	30	0
IN1567-024	773933.438	467366.563	Connect2D	1034.80	1040	5.2	0	30	0
IN1567-027	773802.563	467685.625	Connect2D	1044.65	1048.492	3.842	0	30	0
IN1567-028	773802.938	467695.5	Connect2D	1044.75	1048.556	3.806	0	30	0
IN1567-029	773823.563	467684.656	Connect2D	1044.41	1048.514	4.104	0	30	0
IN1567-030	773823.938	467694.156	Connect2D	1045.31	1048.598	3.288	0	30	0
IN1567-031	774263.4	467814.656	Connect2D	1043.74	1046.709	2.969	0	30	0
IN1567-032	774284.4	467814.7	Connect2D	1043.07	1046.61	3.54	0	30	0
IN1567-033	774297.1	467814.781	Connect2D	1042.79	1047.343	4.553	0	30	0
IN1567-036	774678.563	467482.469	Connect2D	1042.35	1052.886	10.536	0	30	0
IN1567-040	774491.2	467713.656	Connect2D	1037.60	1045.885	8.285	0	30	0
IN1652-002	775096.4	480895	Connect2D	1115.00	1118.952	3.952	0	30	0
IN1655-002	775842.5	477994.625	Connect2D	1111.21	1124.724	13.514	0	30	0
IN1655-003	775835.063	478024.3	Connect2D	1111.68	1124.773	13.093	0	30	0
IN1655-004	775993.938	478060.875	Connect2D	1125.06	1129.332	4.272	0	30	0
IN1655-006	775598.438	477978.719	Connect2D	1111.48	1123.303	11.823	0	30	0
IN1655-007	775587.938	477978.719	Connect2D	1119.73	1123.26	3.53	0	30	0
IN1655-008	775586.2	478011	Connect2D	1116.23	1123.105	6.875	0	30	0
IN1655-009	775598.4	478010.625	Connect2D	1119.68	1123.065	3.385	0	30	0
IN1655-010	775311.1	478011.656	Connect2D	1120.41	1125.809	5.399	0	30	0
IN1655-011	775181.9	478011.125	Connect2D	1121.34	1125.259	3.919	0	30	0
IN1655-012	775180.938	477978.563	Connect2D	1121.79	1125.207	3.417	0	30	0
IN1655-013	775147.938	478010.75	Connect2D	1121.77	1125.57	3.8	0	30	0
IN1655-014	775287.9	478033.344	Connect2D	1121.85	1127.382	5.532	0	30	0
IN1655-015	775247.7	478032.844	Connect2D	1122.73	1127.403	4.673	0	30	0
IN1655-016	775239.3	477648.031	Connect2D	1108.48	1113.881	5.401	0	30	0
IN1655-019	775239.438	477657.844	Connect2D	1109.61	1113.519	3.909	0	30	0
IN1655-020	775263.5	477647.875	Connect2D	1108.34	1113.667	5.327	0	30	0
IN1655-021	775280.8	477646.656	Connect2D	1108.28	1113.601	5.321	0	30	0
IN1655-023	775295.4	477652.625	Connect2D	1109.45	1113.355	3.905	0	30	0
IN1655-029	775501.6	477614.3	Connect2D	1105.85	1112.865	7.015	0	30	0
IN1655-035	776245	477658.469	Connect2D	1126.29	1131.03	4.74	0	30	0
IN1655-036	776244.8	477669.344	Connect2D	1126.76	1130.797	4.037	0	30	0
IN1655-037	776285	477640.563	Connect2D	1126.37	1131.66	5.29	0	30	0
IN1655-039	776229.563	478065.281	Connect2D	1133.36	1138.804	5.444	0	30	0
IN1655-042	776287.563	478093.344	Connect2D	1135.03	1140.085	5.055	0	30	0
IN1655-043	776261.75	478096.844	Connect2D	1134.45	1139.66	5.21	0	30	0
IN1655-044	776299.6	477640.25	Connect2D	1126.43	1134.085	7.655	0	30	0
IN1656-001	775404.6	476892.6	Connect2D	1092.65	1095.906	3.256	0	30	0
IN1656-002	775364.7	476897.656	Connect2D	1090.68	1095.275	4.595	0	30	0
IN1656-003	775366.6	476808	Connect2D	1090.22	1095.895	5.675	0	30	0
IN1656-004	775454	476798.063	Connect2D	1092.29	1096.459	4.169	0	30	0
IN1656-005	775459.75	476848.844	Connect2D	1093.14	1096.261	3.121	0	30	0
IN1656-006	775040.25	476803.438	Connect2D	1090.50	1094.397	3.897	0	30	0
IN1656-007	775074.1	476863.844	Connect2D	1090.88	1094.704	3.824	0	30	0
IN1656-009	775658.438	476798.2	Connect2D	1094.45	1097.633	3.183	0	30	0
IN1656-010	775938.563	476710	Connect2D	1100.46	1103.868	3.408	0	30	0
IN1656-012	776239.75	476777.063	Connect2D	1110.07	1113.385	3.315	0	30	0
IN1656-018	776293.1	476733.969	Connect2D	1109.50	1112.806	3.306	0	30	0
IN1656-019	776278.063	476734.1	Connect2D	1110.17	1112.731	2.561	0	30	0
IN1656-020	776246.5	476776	Connect2D	1110.63	1113.717	3.087	0	30	0
IN1656-021	776247.75	476974.4	Connect2D	1117.24	1119.765	2.525	0	30	0
IN1656-022	776253.4	476989.875	Connect2D	1117.60	1120.151	2.551	0	30	0
IN1656-023	776290.7	477273.156	Connect2D	1121.99	1126.24	4.25	0	30	0
IN1656-024	776280.5	477274.969	Connect2D	1123.32	1126.385	3.065	0	30	0
IN1656-025	776262.563	477276.031	Connect2D	1123.68	1126.205	2.525	0	30	0
IN1657-001	775044.8	476055.6	Connect2D	1062.90	1069.643	6.743	0	30	0
IN1657-002	775079.1	476080.031	Connect2D	1064.10	1069.683	5.583	0	30	0
IN1657-004	775925.5	476640.531	Connect2D	1099.85	1103.915	4.065	0	30	0
IN1657-005	775934.6	476662.531	Connect2D	1100.12	1104.505	4.385	0	30	0
IN1657-006	775939.8	476685.6	Connect2D	1100.27	1104.404	4.134	0	30	0
IN1657-008	776282.2	476143.875	Connect2D	1090.84	1094.767	3.927	0	30	0

IN1657-009	776260	476143.969	Connect2D	1091.62	1094.351	2.731	0	30	0
IN1657-010	776286.8	476274.719	Connect2D	1094.42	1098.509	4.089	0	30	0
IN1657-011	776272.25	476274.4	Connect2D	1094.54	1098.266	3.726	0	30	0
IN1657-012	776243.8	476274.75	Connect2D	1094.68	1097.887	3.207	0	30	0
IN1658-002	776275.5	475447.719	Connect2D	1069.79	1073.22	3.43	0	30	0
IN1658-003	776253.938	475448.3	Connect2D	1069.70	1073.013	3.313	0	30	0
IN1658-006	776250.4	475271.781	Connect2D	1070.84	1073.656	2.816	0	30	0
IN1658-007	776259.1	475273.719	Connect2D	1070.99	1073.715	2.725	0	30	0
IN1658-008	776237.9	475766.281	Connect2D	1073.95	1077.691	3.741	0	30	0
IN1658-009	776230.2	475766.656	Connect2D	1074.36	1078.432	4.072	0	30	0
IN1658-010	776270.9	475144.25	Connect2D	1067.32	1073.77	6.45	0	30	0
IN1658-011	776255.563	475144.219	Connect2D	1067.24	1073.686	6.443	0	30	0
IN1658-012	776227.438	475144.281	Connect2D	1067.10	1073.29	6.19	0	30	0
IN1658-013	776228.438	475158.1	Connect2D	1069.46	1073.116	3.66	0	30	0
IN1658-014	775960.2	474951	Connect2D	1061.03	1066.116	5.09	0	30	0
IN1659-002	776241.938	474883.375	Connect2D	1074.70	1078.323	3.623	0	30	0
IN1659-003	776219.563	474882.625	Connect2D	1074.82	1077.791	2.971	0	30	0
IN1659-020	775011.4	474669.063	Connect2D	1057.78	1062.576	4.8	0	30	0
IN1659-021	775034.2	474628.2	Connect2D	1064.05	1063.274	0	0	30	0
IN1659-022	775215.063	474665.375	Connect2D	1065.25	1065.087	0	0	30	0
IN1659-023	775466.1	474560.9	Connect2D	1061.31	1066.322	5.012	0	30	0
IN1659-024	775408.4	474582	Connect2D	1064.23	1066.071	1.841	0	30	0
IN1659-025	775413.1	474592.719	Connect2D	1064.75	1066.324	1.574	0	30	0
IN1659-026	775410.4	474611.25	Connect2D	1064.87	1066.373	1.503	0	30	0
IN1659-027	775410.938	474563.281	Connect2D	1064.85	1065.723	0.873	0	30	0
IN1659-028	775394	474571.25	Connect2D	1064.96	1065.677	0.717	0	30	0
IN1659-029	775447.75	474469.656	Connect2D	1065.92	1064.952	0	0	30	0
IN1659-030	775457.7	474465.063	Connect2D	1065.94	1065.09	0	0	30	0
IN1659-031	775569.8	474495.063	Connect2D	1059.31	1067.414	8.104	0	30	0
IN1659-032	775565.2	474470.656	Connect2D	1059.13	1067.509	8.379	0	30	0
IN1659-034	775589.938	474505.656	Connect2D	1060.68	1067.654	6.974	0	30	0
IN1659-035	775700.8	474411.2	Connect2D	1060.04	1067.651	7.61	0	30	0
IN1659-036	775828.9	474302.625	Connect2D	1062.51	1067.463	4.953	0	30	0
IN1659-037	775873.9	474277.1	Connect2D	1062.81	1067.724	4.914	0	30	0
IN1659-038	775857.3	474237.969	Connect2D	1062.93	1066.583	3.65	0	30	0
IN1659-039	775872.25	474231.8	Connect2D	1063.08	1066.479	3.4	0	30	0
IN1659-040	775950.25	474255.281	Connect2D	1063.51	1067.022	3.512	0	30	0
IN1659-041	776042.4	474251.625	Connect2D	1061.20	1067.03	5.83	0	30	0
IN1659-042	776209.5	474293.375	Connect2D	1070.81	1073.848	3.038	0	30	0
IN1659-043	775544.9	474550.719	Connect2D	1062.60	1067.297	4.697	0	30	0
IN1659-044	775542.75	474624.281	Connect2D	1062.47	1067.642	5.17	0	30	0
IN1659-045	775561.5	474618.625	Connect2D	1064.20	1067.803	3.6	0	30	0
IN1659-046	775532.1	474630.844	Connect2D	1063.80	1067.595	3.795	0	30	0
IN1659-047	775522.7	474643.1	Connect2D	1063.91	1067.764	3.854	0	30	0
IN1659-048	775657.4	474798.625	Connect2D	1035.38	1069.497	34.117	0	30	0
IN1659-049	775682	474773.8	Connect2D	1065.36	1069.878	4.52	0	30	0
IN1659-050	775792.063	474890.75	Connect2D	1062.96	1067.351	4.39	0	30	0
IN1659-051	775807.6	474859.4	Connect2D	1064.48	1067.884	3.4	0	30	0
IN1659-052	775968.25	474916.75	Connect2D	1062.08	1066.697	4.62	0	30	0
IN1659-053	776253.2	474889.531	Connect2D	1073.27	1079.218	5.948	0	30	0
IN1659-055	775428.2	474288.969	Connect2D	1064.44	1066.973	2.533	0	30	0
IN1659-057	775426.8	474147.125	Connect2D	1064.67	1067.91	3.24	0	30	0
IN1659-058	775403.7	474150.344	Connect2D	1065.58	1068.618	3.038	0	30	0
IN1659-059	776264.063	474595.781	Connect2D	1075.01	1077.278	2.268	0	30	0
IN1659-060	776255.563	474292.375	Connect2D	1070.03	1071.316	1.286	0	30	0
IN1660-003	776207.3	473982.219	Connect2D	1063.48	1070.622	7.142	0	30	0
IN1660-004	776207.563	473995.219	Connect2D	1067.62	1070.664	3.044	0	30	0
IN1660-006	776207.25	473975.625	Connect2D	1063.42	1070.643	7.223	0	30	0
IN1660-007	776207.2	473962.8	Connect2D	1067.62	1070.726	3.106	0	30	0
IN1660-012	776201.4	473540.625	Connect2D	1075.72	1078.977	3.257	0	30	0
IN1660-014	776197.7	473276.125	Connect2D	1089.22	1092.843	3.623	0	30	0
IN1660-015	776197.6	473265.969	Connect2D	1089.36	1093.736	4.376	0	30	0
IN1660-020	776186.6	473434.625	Connect2D	1079.22	1083.777	4.557	0	30	0
IN1660-021	776123	473638.469	Connect2D	1071.51	1074.892	3.382	0	30	0
IN1660-022	776122.6	473621.781	Connect2D	1072.16	1075.353	3.193	0	30	0
IN1660-023	776122.25	473612	Connect2D	1072.29	1075.723	3.433	0	30	0
IN1660-024	776122.063	473588.156	Connect2D	1072.44	1075.416	2.976	0	30	0
IN1660-025	776231.6	473982.2	Connect2D	1063.52	1071.026	7.506	0	30	0
IN1660-026	776243.6	473982.2	Connect2D	1063.54	1070.437	6.897	0	30	0
IN1660-027	775427	473964.031	Connect2D	1066.71	1073.085	6.375	0	30	0
IN1660-028	775449.75	473918.875	Connect2D	1067.13	1072.192	5.062	0	30	0
IN1660-029	775427.75	473896.781	Connect2D	1069.27	1072.534	3.264	0	30	0
IN1660-030	775404.438	473895.1	Connect2D	1070.27	1073.727	3.457	0	30	0
IN1660-031	775543.75	473918.875	Connect2D	1067.69	1070.782	3.092	0	30	0
IN1660-032	775543.75	473941.5	Connect2D	1068.34	1069.601	1.261	0	30	0
IN1660-037	776230.8	473966.8	Connect2D	1063.29	1071.02	7.73	0	30	0
IN1660-038	776251.3	473975.125	Connect2D	1063.54	1069.496	5.956	0	30	0

IN1660-040	776235.4	473540.969	Connect2D	1072.32	1078.965	6.645	0	30	0
IN1660-041	776220.3	473541	Connect2D	1074.89	1079.134	4.244	0	30	0
IN1660-042	776229.063	473276.25	Connect2D	1086.91	1092.914	6.004	0	30	0
IN1661-002	776193.1	472936.031	Connect2D	1117.03	1120.189	3.159	0	30	0
IN1661-003	776192.938	472926.125	Connect2D	1117.17	1121.002	3.832	0	30	0
IN1662-002	775493.9	471454.938	Connect2D	1075.43	1081.424	5.994	0	30	0
IN1662-003	775465.75	471490.7	Connect2D	1079.70	1082.987	3.287	0	30	0
IN1662-004	775526.2	471489.344	Connect2D	1076.81	1082.437	5.63	0	30	0
IN1662-005	775539.1	471489.344	Connect2D	1077.99	1082.541	4.55	0	30	0
IN1662-006	775526.1	471516.219	Connect2D	1078.30	1083.932	5.63	0	30	0
IN1662-007	775539	471516.375	Connect2D	1079.78	1083.926	4.15	0	30	0
IN1662-008	775494.438	471553.9	Connect2D	1080.58	1086.21	5.63	0	30	0
IN1662-009	775466	471553.8	Connect2D	1083.09	1086.422	3.33	0	30	0
IN1662-010	775494.8	471717.875	Connect2D	1092.41	1097.385	4.975	0	30	0
IN1662-011	774936.563	471430.719	Connect2D	1064.51	1068.974	4.464	0	30	0
IN1662-013	774935.9	471610.719	Connect2D	1065.97	1069.096	3.126	0	30	0
IN1662-015	775015.1	472074.6	Connect2D	1076.79	1081.639	4.849	0	30	0
IN1662-016	775168.25	472075.438	Connect2D	1079.13	1083.267	4.137	0	30	0
IN1662-017	775168	472048.25	Connect2D	1080.18	1083.205	3.025	0	30	0
IN1662-018	775257.25	472076.2	Connect2D	1082.56	1086.581	4.021	0	30	0
IN1662-019	775424.25	472076.25	Connect2D	1092.24	1096.082	3.842	0	30	0
IN1662-020	775468.563	472006.219	Connect2D	1095.57	1098.784	3.214	0	30	0
IN1662-021	775496.2	472006.125	Connect2D	1095.71	1098.894	3.184	0	30	0
IN1662-025	774987.25	472048.375	Connect2D	1075.83	1080.28	4.45	0	30	0
IN1662-026	774985.6	472075.125	Connect2D	1078.69	1081.43	2.74	0	30	0
IN1662-027	774946.438	472006.219	Connect2D	1073.00	1078.046	5.046	0	30	0
IN1662-028	774947.3	471930.563	Connect2D	1067.80	1073.398	5.598	0	30	0
IN1662-030	774912.2	472009.7	Connect2D	1073.84	1076.531	2.69	0	30	0
IN1662-031	774912.2	472023.7	Connect2D	1074.20	1077.533	3.33	0	30	0
IN1662-032	774949.6	472109.875	Connect2D	1081.15	1085.185	4.035	0	30	0
IN1662-033	774950.063	472121.438	Connect2D	1082.20	1086.124	3.924	0	30	0
IN1662-034	774958.938	472228.375	Connect2D	1091.29	1094.219	2.929	0	30	0
IN1662-035	774992.8	472261.344	Connect2D	1094.52	1097.638	3.118	0	30	0
IN1663-002	775392.3	471270.531	Connect2D	1072.09	1077.597	5.507	0	30	0
IN1663-006	775391.4	471186.3	Connect2D	1074.40	1079.516	5.116	0	30	0
IN1663-007	775419.1	471160.9	Connect2D	1075.77	1080.095	4.325	0	30	0
IN1663-008	775457.6	471131	Connect2D	1076.84	1080.557	3.72	0	30	0
IN1663-009	775470.7	471131.2	Connect2D	1077.18	1080.511	3.33	0	30	0
IN1663-010	775458.063	471103.2	Connect2D	1077.55	1080.484	2.934	0	30	0
IN1663-011	775470.7	471103.344	Connect2D	1077.63	1080.467	2.837	0	30	0
IN1663-012	775392.6	471068.3	Connect2D	1077.75	1082.137	4.387	0	30	0
IN1663-013	775420.1	471068.219	Connect2D	1079.21	1082.159	2.949	0	30	0
IN1663-014	775392.1	470977.2	Connect2D	1081.89	1085.928	4.038	0	30	0
IN1663-015	775401	471320.063	Connect2D	1070.33	1077.123	6.793	0	30	0
IN1663-017	775436.1	471304.344	Connect2D	1071.01	1076.681	5.671	0	30	0
IN1663-018	775462.1	471351.844	Connect2D	1071.76	1077.647	5.887	0	30	0
IN1663-021	774916.6	471066.1	Connect2D	1064.75	1070.392	5.642	0	30	0
IN1663-024	774962	471096.8	Connect2D	1064.59	1069.032	4.442	0	30	0
IN1663-025	774962.063	471133.6	Connect2D	1066.83	1069.079	2.249	0	30	0
IN1663-027	774925.7	471206.25	Connect2D	1066.19	1069.412	3.222	0	30	0
IN1663-036	775392	470988.656	Connect2D	1081.59	1085.448	3.858	0	30	0
IN1663-037	775420.3	470970.75	Connect2D	1082.30	1086.629	4.329	0	30	0
IN1664-002	775313.1	469623.844	Connect2D	1082.10	1085.178	3.078	0	30	0
IN1665-001	775877.438	469421.8	Connect2D	1074.22	1078.552	4.332	0	30	0
IN1665-002	776002.2	469423.125	Connect2D	1075.16	1079.628	4.468	0	30	0
IN1665-003	774852.438	469411.063	Connect2D	1087.64	1091.972	4.332	0	30	0
IN1665-004	775312.75	469415.75	Connect2D	1073.89	1078.362	4.472	0	30	0
IN1665-008	775810	469453.969	Connect2D	1073.75	1077.91	4.16	0	30	0
IN1665-009	775824	469453.844	Connect2D	1074.45	1078.217	3.767	0	30	0
IN1665-010	775834.438	469453.781	Connect2D	1074.56	1077.953	3.393	0	30	0
IN1665-011	775848.438	469453.781	Connect2D	1074.80	1077.785	2.985	0	30	0
IN1665-015	775313.1	469437.219	Connect2D	1075.73	1079.628	3.898	0	30	0
IN1665-016	775429.6	469422	Connect2D	1070.17	1076.842	6.672	0	30	0
IN1665-017	775429.938	469391.375	Connect2D	1070.44	1076.714	6.274	0	30	0
IN1666-001	775268.1	468333.031	Connect2D	1057.82	1061.044	3.224	0	30	0
IN1666-002	775271.25	468322.375	Connect2D	1058.37	1061.022	2.652	0	30	0
IN1666-003	775277	468313.9	Connect2D	1059.07	1061.164	2.094	0	30	0
IN1667-001	776068.3	467123.844	Connect2D	1085.78	1088.413	2.633	0	30	0
IN1667-002	776079.9	467123.438	Connect2D	1085.60	1088.152	2.552	0	30	0
IN1667-003	776054.9	467177.063	Connect2D	1084.52	1087.799	3.279	0	30	0
IN1668-004	775004.7	466504.375	Connect2D	1052.99	1064.92	11.93	0	30	0
IN1668-006	775837.063	466224	Connect2D	1074.72	1079.137	4.417	0	30	0
IN1668-007	775666.2	466230.719	Connect2D	1063.83	1068.036	4.206	0	30	0
IN1668-009	775886.5	466221.5	Connect2D	1077.50	1081.629	4.129	0	30	0
IN1668-010	776002.4	466217	Connect2D	1082.03	1085.626	3.596	0	30	0
IN1668-011	775886.7	466248.5	Connect2D	1078.17	1082.106	3.936	0	30	0
IN1668-012	776008.438	466243.656	Connect2D	1083.22	1086.748	3.528	0	30	0

IN1668-013	775838.938	466292.875	Connect2D	1077.03	1080.523	3.493	0	30	0
IN1668-014	775862.25	466292.781	Connect2D	1077.83	1081.271	3.441	0	30	0
IN1668-015	775838.938	466302.625	Connect2D	1077.42	1080.737	3.317	0	30	0
IN1668-016	775861.8	466302.781	Connect2D	1077.97	1081.253	3.283	0	30	0
IN1668-017	775542.438	466769.375	Connect2D	1088.02	1093.409	5.389	0	30	0
IN1668-019	775549.1	466917.969	Connect2D	1088.66	1092.775	4.12	0	30	0
IN1668-020	775515.9	466918.375	Connect2D	1089.08	1092.733	3.65	0	30	0
IN1668-021	775587.5	466791.9	Connect2D	1088.80	1093.006	4.21	0	30	0
IN1668-022	775587.563	466814.969	Connect2D	1089.24	1092.947	3.71	0	30	0
IN1668-023	775556.7	466236.75	Connect2D	1060.76	1065.099	4.339	0	30	0
IN1668-024	775560.5	466263.125	Connect2D	1062.55	1065.986	3.436	0	30	0
IN1668-025	775506.938	466224.1	Connect2D	1056.09	1064.016	7.926	0	30	0
IN1668-026	775462.438	466107.3	Connect2D	1056.48	1061.229	4.75	0	30	0
IN1668-028	775435.3	466113.281	Connect2D	1058.26	1061.255	3	0	30	0
IN1668-029	775435.063	466267.125	Connect2D	1055.64	1065.227	9.587	0	30	0
IN1668-030	775444.6	466292.219	Connect2D	1062.63	1065.969	3.339	0	30	0
IN1668-031	775145.438	466425.3	Connect2D	1053.85	1065.973	12.123	0	30	0
IN1668-032	775543.6	466629.344	Connect2D	1085.29	1089.207	3.917	0	30	0
IN1668-033	775539.9	466425.344	Connect2D	1072.73	1077.361	4.631	0	30	0
IN1668-034	775526.8	466301.5	Connect2D	1064.90	1068.608	3.708	0	30	0
IN1668-035	775490.8	466311.219	Connect2D	1065.60	1068.768	3.168	0	30	0
IN1668-036	775171.438	466469.063	Connect2D	1063.91	1071.964	8.054	0	30	0
IN1668-037	775191.6	466457.844	Connect2D	1064.19	1071.787	7.597	0	30	0
IN1668-038	775017.7	466527.875	Connect2D	1064.94	1067.108	2.168	0	30	0
IN1668-039	774960.75	466537.031	Connect2D	1059.34	1067.146	7.806	0	30	0
IN1668-040	774928.2	466585.9	Connect2D	1065.04	1069.096	4.056	0	30	0
IN1668-041	774915.3	466700.1	Connect2D	1068.15	1073.472	5.322	0	30	0
IN1668-042	774916.8	466765.1	Connect2D	1069.01	1075.212	6.202	0	30	0
IN1668-043	774917.563	466834.063	Connect2D	1072.00	1075.679	3.679	0	30	0
IN1668-044	774944.8	466834.9	Connect2D	1072.16	1075.843	3.683	0	30	0
IN1668-045	774891.8	466787.25	Connect2D	1069.65	1075.312	5.662	0	30	0
IN1668-046	774786.7	466786.531	Connect2D	1070.16	1072.808	2.648	0	30	0
IN1668-047	774783.7	466809.656	Connect2D	1070.31	1074.337	4.027	0	30	0
IN1668-048	774967.2	466788.469	Connect2D	1070.61	1077.156	6.546	0	30	0
IN1668-049	774968.6	466810.875	Connect2D	1071.02	1076.992	5.972	0	30	0
IN1668-050	775067.3	466788.281	Connect2D	1072.11	1082.378	10.268	0	30	0
IN1668-051	775260.8	466789.469	Connect2D	1082.37	1087.098	4.728	0	30	0
IN1668-052	775260.6	466812.781	Connect2D	1082.62	1087.797	5.177	0	30	0
IN1756-001	776317.938	476733.6	Connect2D	1107.22	1111.781	4.561	0	30	0
IN1756-004	776313.063	476877.6	Connect2D	1112.72	1117.14	4.42	0	30	0
IN1756-005	776317.3	477260.1	Connect2D	1121.41	1125.878	4.468	0	30	0
IN1756-006	776786.438	476738.563	Connect2D	1092.90	1097.666	4.766	0	30	0
IN1756-007	776895.25	476990.2	Connect2D	1100.58	1105.651	5.071	0	30	0
IN1756-008	776866.7	477002.969	Connect2D	1100.58	1105.732	5.152	0	30	0
IN1756-010	776935.3	477048.219	Connect2D	1101.43	1106.529	5.099	0	30	0
IN1756-011	776968.25	477047.781	Connect2D	1101.60	1106.84	5.24	0	30	0
IN1756-012	776968.4	477079.531	Connect2D	1101.76	1106.816	5.056	0	30	0
IN1756-013	776968.4	477091.531	Connect2D	1101.82	1107.178	5.358	0	30	0
IN1756-014	777325.25	477043.125	Connect2D	1103.99	1109.953	5.963	0	30	0
IN1756-015	777325.438	477074.438	Connect2D	1104.16	1109.917	5.757	0	30	0
IN1756-016	777347.4	477101.719	Connect2D	1104.35	1109.88	5.53	0	30	0
IN1756-017	777599.3	476833.2	Connect2D	1104.50	1110.426	5.926	0	30	0
IN1756-018	777586.25	477019.719	Connect2D	1107.62	1113.513	5.893	0	30	0
IN1757-003	777021.6	476184.156	Connect2D	1078.94	1082.821	3.881	0	30	0
IN1757-004	777025.25	476193.375	Connect2D	1079.70	1082.761	3.061	0	30	0
IN1757-005	777047.438	476176.2	Connect2D	1079.40	1082.793	3.393	0	30	0
IN1757-006	777051	476185.4	Connect2D	1079.84	1082.888	3.048	0	30	0
IN1757-008	777054.75	476117.656	Connect2D	1078.44	1083.372	4.932	0	30	0
IN1757-009	777062.063	476143.625	Connect2D	1080.39	1083.449	3.059	0	30	0
IN1757-010	777129.8	476095.438	Connect2D	1079.44	1084.24	4.8	0	30	0
IN1757-011	777137.25	476072.625	Connect2D	1081.97	1085.16	3.19	0	30	0
IN1757-012	777147.1	476070.031	Connect2D	1082.14	1085.38	3.24	0	30	0
IN1757-014	777146.063	476142.969	Connect2D	1081.26	1085.135	3.875	0	30	0
IN1757-015	777155.7	476138.844	Connect2D	1081.76	1085.219	3.459	0	30	0
IN1757-019	777197.4	476222.1	Connect2D	1084.23	1087.776	3.546	0	30	0
IN1757-020	777197.938	476211.75	Connect2D	1083.99	1086.972	2.982	0	30	0
IN1757-022	777251.5	476069.531	Connect2D	1082.17	1086.68	4.51	0	30	0
IN1757-023	777275.8	476093.281	Connect2D	1084.35	1087.571	3.221	0	30	0
IN1757-024	777431.2	476056.875	Connect2D	1086.81	1091.553	4.743	0	30	0
IN1757-025	777567.25	476055.344	Connect2D	1094.40	1098.927	4.527	0	30	0
IN1757-026	777567.75	476082.969	Connect2D	1095.35	1098.882	3.532	0	30	0
IN1757-027	777582.9	476102.063	Connect2D	1096.96	1100.65	3.69	0	30	0
IN1757-028	777592.8	476101.875	Connect2D	1097.70	1100.991	3.291	0	30	0
IN1757-029	776927.75	476162.5	Connect2D	1078.03	1083.646	5.616	0	30	0
IN1757-031	776664.563	476213.281	Connect2D	1080.23	1085.296	5.066	0	30	0
IN1757-033	776313.563	476274.6	Connect2D	1093.16	1097.888	4.728	0	30	0
IN1757-037	776922.75	476218.1	Connect2D	1080.94	1084.417	3.477	0	30	0

IN1757-038	776913.563	476221.281	Connect2D	1081.32	1084.576	3.256	0	30	0
IN1757-039	776663.5	476265.781	Connect2D	1080.50	1085.09	4.59	0	30	0
IN1757-041	776609.2	476344.75	Connect2D	1083.97	1087.35	3.38	0	30	0
IN1757-042	776609.063	476354.75	Connect2D	1084.36	1087.588	3.228	0	30	0
IN1757-044	776630.5	476267.375	Connect2D	1082.05	1084.986	2.936	0	30	0
IN1757-045	776608	476240.219	Connect2D	1083.87	1086.326	2.456	0	30	0
IN1757-047	776861.438	475821.344	Connect2D	1073.52	1081.251	7.731	0	30	0
IN1757-048	776901.6	475928.5	Connect2D	1074.10	1080.705	6.605	0	30	0
IN1757-049	776961.25	475903.469	Connect2D	1076.21	1080.321	4.111	0	30	0
IN1757-050	776942.438	475887.875	Connect2D	1076.60	1080.332	3.732	0	30	0
IN1757-051	776949.2	475982.656	Connect2D	1074.46	1080.324	5.864	0	30	0
IN1757-052	776955.1	475993.9	Connect2D	1074.51	1080.334	5.824	0	30	0
IN1757-053	776979.438	475982.1	Connect2D	1075.91	1080.311	4.401	0	30	0
IN1757-054	776983.75	475994.2	Connect2D	1076.23	1080.237	4.007	0	30	0
IN1757-060	776667.438	476381.156	Connect2D	1083.20	1088.012	4.812	0	30	0
IN1757-062	776685.1	476455	Connect2D	1086.24	1091.335	5.095	0	30	0
IN1757-064	776711.1	476528	Connect2D	1089.48	1094.302	4.822	0	30	0
IN1757-065	776680	476538	Connect2D	1090.66	1094.799	4.139	0	30	0
IN1757-066	776667.3	476567.8	Connect2D	1091.59	1096.301	4.711	0	30	0
IN1757-067	776745.1	476623.7	Connect2D	1090.49	1094.966	4.476	0	30	0
IN1757-069	776713.75	476634.2	Connect2D	1090.66	1095.106	4.446	0	30	0
IN1757-070	776674.2	476586.531	Connect2D	1092.21	1096.59	4.38	0	30	0
IN1757-071	776680.063	476602.063	Connect2D	1092.26	1096.579	4.319	0	30	0
IN1757-072	776681.25	476615.9	Connect2D	1092.35	1096.287	3.937	0	30	0
IN1757-073	777094.7	476388.219	Connect2D	1086.72	1091.683	4.963	0	30	0
IN1757-074	777078.7	476422.375	Connect2D	1088.09	1092.865	4.775	0	30	0
IN1757-075	777085.2	476440.656	Connect2D	1089.58	1093.079	3.499	0	30	0
IN1757-076	777091.563	476455.375	Connect2D	1089.91	1093.076	3.166	0	30	0
IN1757-077	777154.438	476395.469	Connect2D	1088.61	1092.795	4.185	0	30	0
IN1757-078	777160.7	476415.281	Connect2D	1089.65	1093.096	3.446	0	30	0
IN1757-079	777165.25	476430.875	Connect2D	1089.98	1093.047	3.067	0	30	0
IN1757-080	777124.563	476460.156	Connect2D	1087.85	1092.738	4.888	0	30	0
IN1757-081	777133.938	476456.875	Connect2D	1088.25	1092.659	4.409	0	30	0
IN1757-084	776313.1	476298.063	Connect2D	1094.45	1098.627	4.177	0	30	0
IN1757-085	777579.938	475844.1	Connect2D	1086.91	1093.496	6.586	0	30	0
IN1757-087	777269.5	476407.469	Connect2D	1090.42	1095.439	5.019	0	30	0
IN1757-088	777396.25	476378.625	Connect2D	1096.00	1100.591	4.591	0	30	0
IN1757-089	777592.9	476369.219	Connect2D	1102.23	1110.603	8.373	0	30	0
IN1758-007	776850	475544.563	Connect2D	1071.38	1076.386	5.006	0	30	0
IN1758-009	776793.4	475565.375	Connect2D	1071.08	1077.516	6.436	0	30	0
IN1758-012	776841.5	475522.4	Connect2D	1073.02	1076.511	3.491	0	30	0
IN1758-013	776927.6	475518.3	Connect2D	1072.04	1077.682	5.642	0	30	0
IN1758-014	776920.9	475496.469	Connect2D	1073.81	1077.575	3.765	0	30	0
IN1758-015	776923.438	475474.719	Connect2D	1074.16	1078.432	4.272	0	30	0
IN1758-016	776943.8	475536	Connect2D	1073.76	1078.634	4.874	0	30	0
IN1758-017	776953.25	475531.938	Connect2D	1073.89	1078.889	4.999	0	30	0
IN1758-019	776915.2	475806.75	Connect2D	1076.21	1080.791	4.581	0	30	0
IN1758-020	776914.938	475784.156	Connect2D	1077.33	1081	3.67	0	30	0
IN1758-024	776764.3	475483.281	Connect2D	1072.63	1077.273	4.643	0	30	0
IN1758-025	776787.7	475469.719	Connect2D	1073.94	1077.328	3.388	0	30	0
IN1758-026	776626.3	475244.219	Connect2D	1074.02	1078.702	4.682	0	30	0
IN1758-027	776644.8	475213.438	Connect2D	1075.39	1078.881	3.491	0	30	0
IN1758-028	776599.438	475056.156	Connect2D	1077.46	1082.847	5.387	0	30	0
IN1758-029	776649.6	475085.625	Connect2D	1078.67	1081.983	3.313	0	30	0
IN1758-030	776649.7	475093.219	Connect2D	1078.99	1081.855	2.865	0	30	0
IN1758-031	776771.4	475095.7	Connect2D	1080.14	1083.954	3.814	0	30	0
IN1758-032	776821.75	475164.063	Connect2D	1080.74	1084.138	3.398	0	30	0
IN1758-033	776929.938	475471.7	Connect2D	1074.43	1078.553	4.123	0	30	0
IN1758-034	776599.563	474990.1	Connect2D	1079.78	1084.436	4.656	0	30	0
IN1758-035	776650.75	474967.438	Connect2D	1080.63	1085.314	4.684	0	30	0
IN1758-036	776650.5	474943.938	Connect2D	1082.17	1085.565	3.395	0	30	0
IN1758-037	776738.563	474966.75	Connect2D	1081.07	1085.672	4.602	0	30	0
IN1758-038	776841.938	474960.75	Connect2D	1081.69	1086.4	4.71	0	30	0
IN1758-040	776298	474994.719	Connect2D	1071.16	1076.256	5.096	0	30	0
IN1758-042	776325.1	474966.719	Connect2D	1071.73	1076.296	4.566	0	30	0
IN1758-043	776325.063	474943.719	Connect2D	1072.38	1076.304	3.924	0	30	0
IN1758-044	776334.6	474943.656	Connect2D	1072.73	1076.316	3.586	0	30	0
IN1758-047	777577	475670.75	Connect2D	1086.91	1093.795	6.885	0	30	0
IN1758-049	777586.8	475670.531	Connect2D	1090.30	1093.77	3.47	0	30	0
IN1758-052	776296.1	475446.3	Connect2D	1069.47	1072.638	3.168	0	30	0
IN1758-056	776300.063	475765.156	Connect2D	1073.65	1077.859	4.209	0	30	0
IN1758-059	777158.438	475467.531	Connect2D	1076.70	1082.172	5.472	0	30	0
IN1758-061	777157.25	475443.031	Connect2D	1078.25	1082.04	3.79	0	30	0
IN1758-062	777176.3	475420.7	Connect2D	1078.40	1082.218	3.818	0	30	0
IN1758-063	777200.2	475412.125	Connect2D	1079.24	1082.437	3.197	0	30	0
IN1758-064	777176.25	475350.719	Connect2D	1080.40	1083.712	3.312	0	30	0
IN1758-065	777153.938	475336	Connect2D	1081.26	1084.902	3.642	0	30	0

IN1758-066	777153.9	475325.656	Connect2D	1081.56	1085.162	3.602	0	30	0
IN1758-067	777427.3	475447.3	Connect2D	1079.76	1087.22	7.46	0	30	0
IN1758-068	777565.1	475445.7	Connect2D	1087.48	1092.882	5.402	0	30	0
IN1758-070	777573.6	475466.719	Connect2D	1090.44	1094.64	4.2	0	30	0
IN1758-071	777583.3	475466.938	Connect2D	1091.20	1094.547	3.347	0	30	0
IN1758-072	776890.75	475001.438	Connect2D	1082.01	1086.539	4.529	0	30	0
IN1758-073	776872	474952.75	Connect2D	1082.85	1086.245	3.395	0	30	0
IN1758-074	776892.063	474964.219	Connect2D	1082.99	1086.084	3.094	0	30	0
IN1758-075	776889	475042.8	Connect2D	1083.23	1086.936	3.706	0	30	0
IN1758-076	776973	475105.938	Connect2D	1082.68	1087.381	4.701	0	30	0
IN1758-077	777050.5	475175.3	Connect2D	1083.19	1087.975	4.785	0	30	0
IN1758-078	777147.563	475195.125	Connect2D	1083.69	1088.787	5.097	0	30	0
IN1758-079	777173	475171.125	Connect2D	1084.85	1089.216	4.366	0	30	0
IN1758-080	777196.063	475170.6	Connect2D	1086.19	1089.387	3.197	0	30	0
IN1758-081	777232.563	475193.938	Connect2D	1086.73	1090.993	4.263	0	30	0
IN1758-082	777305.438	475193.063	Connect2D	1090.29	1094.297	4.007	0	30	0
IN1758-084	777232.75	475220.9	Connect2D	1088.13	1090.961	2.831	0	30	0
IN1758-085	777305.4	475219.969	Connect2D	1091.20	1094.189	2.989	0	30	0
IN1758-086	777401.438	475192.219	Connect2D	1094.91	1099.62	4.71	0	30	0
IN1758-087	777469.6	475190.5	Connect2D	1098.91	1102.287	3.377	0	30	0
IN1758-088	777470.7	475217.938	Connect2D	1099.32	1102.321	3.001	0	30	0
IN1758-089	777448.25	475160.219	Connect2D	1098.08	1101.204	3.124	0	30	0
IN1758-090	777425	475168.2	Connect2D	1096.85	1101.189	4.339	0	30	0
IN1758-091	776291.75	475144.3	Connect2D	1067.43	1073.392	5.966	0	30	0
IN1758-092	776291.9	475157.75	Connect2D	1069.46	1073.332	3.87	0	30	0
IN1758-093	776288.8	474995.125	Connect2D	1072.49	1075.841	3.351	0	30	0
IN1759-002	776283.063	474901	Connect2D	1072.43	1078	5.57	0	30	0
IN1759-004	776264.7	474898.2	Connect2D	1073.27	1078.497	5.227	0	30	0
IN1759-013	776276	474391.9	Connect2D	1071.07	1076.428	5.358	0	30	0
IN1759-014	776274.938	474303.938	Connect2D	1068.97	1073.48	4.51	0	30	0
IN1759-015	776328.4	474269.75	Connect2D	1067.87	1069.772	1.902	0	30	0
IN1759-016	776328.1	474233.7	Connect2D	1067.24	1069.675	2.435	0	30	0
IN1759-017	776327.938	474222.531	Connect2D	1067.15	1069.585	2.435	0	30	0
IN1759-018	776328.1	474209.063	Connect2D	1066.90	1069.766	2.866	0	30	0
IN1759-019	776345.3	474184.531	Connect2D	1066.75	1069.384	2.634	0	30	0
IN1759-020	776327.438	474184.719	Connect2D	1067.84	1069.675	1.835	0	30	0
IN1760-012	776264.438	473540.063	Connect2D	1073.79	1074.852	1.062	0	30	0
IN1760-013	776260.75	473276.438	Connect2D	1085.04	1086.965	0	0	30	0
IN1761-002	776257.25	472935.063	Connect2D	1117.03	1118.774	1.744	0	30	0
IN1762-001	776732.3	471494.8	Connect2D	1109.16	1115.012	5.852	0	30	0
IN1762-003	776733.438	471482.844	Connect2D	1111.71	1115.224	3.514	0	30	0
IN1762-004	776761	471495.656	Connect2D	1111.56	1114.785	3.225	0	30	0
IN1762-005	776763.1	471479.656	Connect2D	1115.07	1114.997	0	0	30	0
IN1762-006	776782.063	471486.563	Connect2D	1112.00	1116.033	4.033	0	30	0
IN1762-007	776754.438	471602.4	Connect2D	1111.12	1116.351	5.231	0	30	0
IN1762-008	776807.2	471611.656	Connect2D	1112.80	1117	4.2	0	30	0
IN1762-009	776912.3	471662.563	Connect2D	1116.44	1119.432	2.992	0	30	0
IN1762-010	776934.1	471663.1	Connect2D	1116.74	1119.374	2.634	0	30	0
IN1762-011	777039.5	471607.719	Connect2D	1121.10	1124.996	3.896	0	30	0
IN1762-013	776779.7	471675.375	Connect2D	1113.47	1116.404	2.934	0	30	0
IN1762-014	776801.438	471670.375	Connect2D	1113.77	1116.635	2.865	0	30	0
IN1762-015	776632.3	471729.75	Connect2D	1115.31	1120.236	4.926	0	30	0
IN1762-016	776643	471747.6	Connect2D	1117.80	1121.835	4.035	0	30	0
IN1762-017	776566	471770.063	Connect2D	1115.69	1121.18	5.49	0	30	0
IN1762-018	776423.7	471834.219	Connect2D	1115.88	1118.526	2.176	0	30	0
IN1762-019	776414.938	471803.031	Connect2D	1116.45	1118.597	2.147	0	30	0
IN1762-020	776402.563	471858.219	Connect2D	1116.60	1118.622	2.022	0	30	0
IN1762-021	776562.3	471803.2	Connect2D	1116.40	1120.498	4.098	0	30	0
IN1762-022	776536.75	471814.25	Connect2D	1116.39	1120.627	4.237	0	30	0
IN1762-023	776548	471890.8	Connect2D	1118.71	1122.985	4.275	0	30	0
IN1762-025	776536.1	471989.938	Connect2D	1124.88	1128.363	3.483	0	30	0
IN1762-026	776588.563	472026.75	Connect2D	1127.34	1131.293	3.953	0	30	0
IN1762-027	776592.563	472051.156	Connect2D	1127.83	1132.987	5.157	0	30	0
IN1762-028	776572.2	472077.438	Connect2D	1131.39	1135.515	4.125	0	30	0
IN1762-031	776523.8	472262.9	Connect2D	1142.31	1147.724	5.414	0	30	0
IN1762-033	777091.5	471607.438	Connect2D	1122.12	1127.038	4.918	0	30	0
IN1762-036	777356.938	472269	Connect2D	1123.74	1127.865	4.13	0	30	0
IN1762-037	777347.938	471609.3	Connect2D	1133.10	1138.239	5.139	0	30	0
IN1762-038	777232.3	471608.875	Connect2D	1128.33	1132.974	4.644	0	30	0
IN1762-040	777232.5	471640.531	Connect2D	1130.22	1132.824	2.604	0	30	0
IN1762-041	777482.75	471638.1	Connect2D	1137.60	1142.707	5.107	0	30	0
IN1762-042	777481.438	471605.375	Connect2D	1139.03	1142.568	3.538	0	30	0
IN1763-001	776854.25	470770.4	Connect2D	1130.09	1133.135	3.045	0	30	0
IN1763-002	776854.4	470749.4	Connect2D	1130.04	1133.462	3.422	0	30	0
IN1763-003	777090.1	470771	Connect2D	1144.64	1147.706	3.066	0	30	0
IN1763-004	777090.4	470750	Connect2D	1144.64	1147.674	3.034	0	30	0
IN1763-005	777080.3	470770.969	Connect2D	1144.10	1146.87	2.77	0	30	0

IN1763-006	777080.5	470749.969	Connect2D	1143.18	1146.992	3.812	0	30	0
IN1763-010	776478.8	471175.375	Connect2D	1105.60	1111.542	5.942	0	30	0
IN1763-011	776426.3	471176.781	Connect2D	1106.61	1109.897	3.287	0	30	0
IN1763-012	776423	471149.438	Connect2D	1107.01	1109.58	2.57	0	30	0
IN1763-013	776581.438	471172.656	Connect2D	1108.86	1112.946	4.086	0	30	0
IN1763-014	776595.7	471145.219	Connect2D	1109.96	1112.931	2.971	0	30	0
IN1763-015	776658.8	471180.375	Connect2D	1109.66	1114.23	4.57	0	30	0
IN1763-016	776745.438	471172.281	Connect2D	1112.43	1115.766	3.336	0	30	0
IN1763-017	776763.5	471187.875	Connect2D	1112.93	1116.013	3.083	0	30	0
IN1763-019	777487.7	471213.063	Connect2D	1145.00	1149.269	4.269	0	30	0
IN1763-020	777456.75	471061.3	Connect2D	1150.17	1152.633	2.463	0	30	0
IN1763-021	777053.6	471107.031	Connect2D	1127.71	1131.496	3.786	0	30	0
IN1763-023	777053.5	471083.563	Connect2D	1128.35	1131.263	2.913	0	30	0
IN1763-024	777254.563	471107.25	Connect2D	1139.79	1142.876	3.086	0	30	0
IN1763-025	777279.1	471107.281	Connect2D	1141.07	1144.119	3.049	0	30	0
IN1763-026	777279.25	471084.125	Connect2D	1141.21	1144.251	3.041	0	30	0
IN1763-027	777253.563	471331.281	Connect2D	1127.77	1138.026	10.256	0	30	0
IN1763-029	777273.563	471319.875	Connect2D	1133.99	1138.017	4.027	0	30	0
IN1763-030	777259.7	471341.6	Connect2D	1134.40	1138.064	3.664	0	30	0
IN1763-031	777279.1	471329.656	Connect2D	1134.59	1138.006	3.416	0	30	0
IN1764-001	777463.3	469654.5	Connect2D	1106.62	1114.002	7.382	0	30	0
IN1764-002	777468.4	469713.281	Connect2D	1108.51	1113.44	4.93	0	30	0
IN1764-003	777478.8	470213.4	Connect2D	1120.28	1123.897	3.617	0	30	0
IN1764-004	777458.2	470209.2	Connect2D	1119.13	1123.343	4.213	0	30	0
IN1764-005	777428.4	470170.4	Connect2D	1117.38	1121.959	4.579	0	30	0
IN1764-006	777469.8	470258.5	Connect2D	1122.91	1124.463	1.553	0	30	0
IN1764-007	777059.4	469783	Connect2D	1096.72	1101.425	4.705	0	30	0
IN1764-008	777129.938	469960.7	Connect2D	1103.81	1108.582	4.772	0	30	0
IN1764-009	777190.6	470029.938	Connect2D	1107.18	1111.881	4.701	0	30	0
IN1764-010	777212.5	470048.563	Connect2D	1108.51	1112.958	4.448	0	30	0
IN1764-011	777175.75	470100.344	Connect2D	1107.89	1112.56	4.67	0	30	0
IN1764-012	777159.438	470087.125	Connect2D	1109.09	1112.318	3.228	0	30	0
IN1764-013	777213.75	470088.25	Connect2D	1110.69	1113.874	3.184	0	30	0
IN1764-014	777338.438	470117.25	Connect2D	1113.83	1118.354	4.524	0	30	0
IN1764-015	777111.063	470179.438	Connect2D	1110.74	1115.608	4.868	0	30	0
IN1764-016	777050.3	470313.156	Connect2D	1122.42	1127.363	4.943	0	30	0
IN1764-017	777044.438	470381.75	Connect2D	1127.82	1133.082	5.262	0	30	0
IN1764-018	777023.438	470381.938	Connect2D	1129.52	1132.588	3.068	0	30	0
IN1765-001	776327.3	469426.531	Connect2D	1081.78	1086.229	4.449	0	30	0
IN1765-002	776770.563	469431.156	Connect2D	1083.99	1088.485	4.495	0	30	0
IN1765-003	777002.3	469433.6	Connect2D	1090.42	1095.569	5.149	0	30	0
IN1765-004	777057.563	469460.938	Connect2D	1092.10	1096.807	4.707	0	30	0
IN1765-005	777058	469423.625	Connect2D	1093.46	1096.664	3.204	0	30	0
IN1765-006	777458.063	469594.344	Connect2D	1107.32	1115.692	8.372	0	30	0
IN1765-007	777056.25	469589.969	Connect2D	1092.74	1097.403	4.663	0	30	0
IN1765-008	777025.25	469589.5	Connect2D	1094.29	1097.257	2.967	0	30	0
IN1765-009	777260.7	469592.2	Connect2D	1098.35	1103.204	4.854	0	30	0
IN1766-001	776896.063	468590.8	Connect2D	1106.41	1109.23	2.82	0	30	0
IN1766-002	776923.7	468576.8	Connect2D	1105.39	1109.536	4.146	0	30	0
IN1766-003	776938.1	468537.75	Connect2D	1104.76	1107.948	3.188	0	30	0
IN1766-004	776928.3	468519.438	Connect2D	1104.21	1107.985	3.775	0	30	0
IN1766-005	776882.5	468510.938	Connect2D	1103.44	1107.09	3.65	0	30	0
IN1766-006	776548.8	468248.938	Connect2D	1091.14	1094.731	3.591	0	30	0
IN1766-007	776668.8	468332.469	Connect2D	1098.88	1102.276	3.396	0	30	0
IN1766-008	776795.4	468416.8	Connect2D	1101.41	1104.993	3.583	0	30	0
IN1766-009	776397.6	468003.438	Connect2D	1076.11	1080.955	4.845	0	30	0
IN1766-010	776482.9	468176.9	Connect2D	1084.17	1088.764	4.594	0	30	0
IN1766-011	776522.75	468267.344	Connect2D	1091.64	1094.383	2.743	0	30	0
IN1766-012	777149.063	468553.1	Connect2D	1105.74	1108.828	3.088	0	30	0
IN1766-013	777157.5	468533.844	Connect2D	1105.24	1108.933	3.693	0	30	0
IN1767-004	776105.8	467183.375	Connect2D	1079.79	1087.867	8.077	0	30	0
IN1767-006	776258.9	467376.844	Connect2D	1078.51	1086.125	7.615	0	30	0
IN1767-008	776287.938	467477.25	Connect2D	1079.77	1083.043	3.273	0	30	0
IN1767-009	776349.1	467450.469	Connect2D	1079.57	1082.836	3.266	0	30	0
IN1767-010	776392.75	467426.875	Connect2D	1080.76	1083.748	2.988	0	30	0
IN1767-011	776336.6	467433.375	Connect2D	1080.06	1082.831	2.771	0	30	0
IN1767-012	776343.5	467651.219	Connect2D	1075.07	1078.456	3.386	0	30	0
IN1767-013	776374.4	467648.063	Connect2D	1072.97	1078.455	5.485	0	30	0
IN1767-014	776348	467809.5	Connect2D	1070.49	1079.122	8.632	0	30	0
IN1767-015	776379	467809.25	Connect2D	1071.00	1079.127	8.127	0	30	0
IN1768-004	776320.75	466753.75	Connect2D	1087.36	1093.212	5.852	0	30	0
IN1768-006	776326.8	466763.281	Connect2D	1089.54	1093.085	3.545	0	30	0
IN1768-007	776315.5	466744.063	Connect2D	1089.54	1093.282	3.742	0	30	0
IN1768-008	776340.2	466741.469	Connect2D	1088.27	1093.101	4.831	0	30	0
IN1768-009	776323.25	466694.156	Connect2D	1089.05	1093.564	4.514	0	30	0
IN1768-010	776321.7	466583.625	Connect2D	1090.81	1094.93	4.12	0	30	0
IN1768-011	776271.2	466560.5	Connect2D	1092.17	1095.652	3.482	0	30	0

IN1768-012	776344.9	466561	Connect2D	1091.94	1095.842	3.902	0	30	0
IN1768-013	776321.2	466533.719	Connect2D	1090.81	1095.636	4.826	0	30	0
IN1768-014	776308.9	466533.5	Connect2D	1092.07	1095.478	3.408	0	30	0
IN1768-015	776346.938	466751.938	Connect2D	1088.86	1093.229	4.369	0	30	0
IN1768-016	776405	466823.7	Connect2D	1089.60	1093.673	4.073	0	30	0
IN1768-017	776460.938	466810.3	Connect2D	1090.15	1094.168	4.018	0	30	0
IN1768-018	776525.563	466833.625	Connect2D	1090.02	1094.464	3.694	0	30	0
IN1768-026	776295	466968.531	Connect2D	1084.53	1088.335	3.805	0	30	0
IN1768-029	776946.1	466836.125	Connect2D	1098.25	1102.446	4.196	0	30	0
IN1768-031	776946.1	466813.125	Connect2D	1099.70	1102.379	2.679	0	30	0
IN1768-032	776957.7	466836.219	Connect2D	1100.26	1102.973	2.713	0	30	0
IN1768-033	777026.4	466811.4	Connect2D	1102.50	1107.082	4.582	0	30	0
IN1768-034	777071.25	466795.063	Connect2D	1105.30	1110.098	4.798	0	30	0
IN1768-035	777114.3	466756.7	Connect2D	1108.88	1114.008	5.128	0	30	0
IN1768-036	777127.3	466777.031	Connect2D	1110.34	1113.252	2.912	0	30	0
IN1768-037	777134.6	466715.3	Connect2D	1112.50	1117.156	4.656	0	30	0
IN1768-038	777140.6	466647.7	Connect2D	1115.00	1120.383	5.383	0	30	0
IN1768-039	777140.7	466595.875	Connect2D	1116.50	1121.602	5.102	0	30	0
IN1768-040	777142.75	466522.844	Connect2D	1117.82	1121.767	3.947	0	30	0
IN1768-042	777191.3	466583	Connect2D	1118.54	1123.772	5.232	0	30	0
IN1768-043	777189.5	466555.219	Connect2D	1118.96	1123.853	4.893	0	30	0
IN1768-044	777198.7	466556.469	Connect2D	1120.92	1124.352	3.432	0	30	0
IN1768-045	777201.8	466584.438	Connect2D	1121.55	1124.413	2.863	0	30	0
IN1768-046	777167.6	466528.938	Connect2D	1119.45	1122.893	3.443	0	30	0
IN1768-047	777167.6	466520.3	Connect2D	1120.15	1122.937	2.787	0	30	0
IN1768-048	776832.9	466563.281	Connect2D	1105.00	1108.689	3.689	0	30	0
IN1768-049	776832.2	466536.281	Connect2D	1105.25	1108.753	3.503	0	30	0
IN1768-050	776843.1	466563.531	Connect2D	1105.82	1108.727	2.907	0	30	0
IN1768-051	776842.4	466536.344	Connect2D	1105.82	1108.795	2.975	0	30	0
IN1768-053	776833.3	466692.2	Connect2D	1094.59	1099.412	4.822	0	30	0
IN1768-055	776854.25	466972.063	Connect2D	1093.80	1097.299	3.499	0	30	0
IN1768-062	777144.7	466400.875	Connect2D	1124.11	1130.144	6.034	0	30	0
IN1768-063	777167.9	466390.25	Connect2D	1126.28	1131.203	4.923	0	30	0
IN1768-064	776595.8	466272.531	Connect2D	1121.35	1127.941	6.591	0	30	0
IN1768-065	776468.8	466273.656	Connect2D	1111.22	1135.177	23.957	0	30	0
IN1768-066	776277.3	466259.469	Connect2D	1093.78	1099.528	5.748	0	30	0
IN1768-068	776640.2	466258.938	Connect2D	1121.30	1129.502	8.2	0	30	0
IN1768-069	776644.563	466235.375	Connect2D	1122.34	1129.84	7.5	0	30	0
IN1768-070	776872.4	466254.5	Connect2D	1131.37	1135.973	4.6	0	30	0
IN1768-071	776902.4	466230.9	Connect2D	1133.10	1136.501	3.4	0	30	0
IN1768-072	777106	466247.875	Connect2D	1136.27	1140.073	3.8	0	30	0
IN1768-074	777114.5	466223.563	Connect2D	1137.39	1140.557	3.17	0	30	0
IN1768-075	777172.6	466235.938	Connect2D	1138.84	1142.635	3.8	0	30	0
IN1768-076	777171.75	466212.469	Connect2D	1139.53	1143.04	3.51	0	30	0
IN1768-077	776245.6	466969.469	Connect2D	1084.81	1087.446	2.636	0	30	0
IN1768-078	776161.4	466968.719	Connect2D	1085.21	1089.195	3.985	0	30	0
IN1768-080	776090.5	466929.8	Connect2D	1085.74	1089.021	3.281	0	30	0
IN1768-081	776043.25	466929.063	Connect2D	1086.24	1089.094	2.854	0	30	0
IN1769-002	776641.7	466064.4	Connect2D	1123.58	1125.837	2.257	0	30	0
IN1857-002	777589.6	475843.75	Connect2D	1090.19	1093.653	3.463	0	30	0
IN1858-001	777552.438	475757.219	Connect2D	1086.45	1091.872	5.422	0	30	0
IN1862-022	777743.75	471638.7	Connect2D	1140.82	1144.588	3.768	0	30	0
IN1862-023	777910.7	471632.063	Connect2D	1142.72	1146.396	3.676	0	30	0
IN1862-024	777934.4	471653.344	Connect2D	1143.12	1146.46	3.34	0	30	0
IN1862-025	777957.438	471653.781	Connect2D	1143.52	1146.476	2.956	0	30	0
IN1862-026	777742.938	471594.531	Connect2D	1141.56	1144.626	3.066	0	30	0
IN1862-027	777594.9	471642.156	Connect2D	1139.58	1144.665	5.085	0	30	0
IN1862-029	777633	471532.4	Connect2D	1140.43	1144.713	4.283	0	30	0
IN1862-030	777676.9	471534.156	Connect2D	1141.41	1144.728	3.318	0	30	0
IN1862-031	777632.438	471476.156	Connect2D	1140.71	1145.119	4.409	0	30	0
IN1862-033	777619.563	472262.5	Connect2D	1118.35	1123.826	5.476	0	30	0
IN1862-034	777559.6	472262.656	Connect2D	1119.72	1124.892	5.172	0	30	0
IN1862-035	777926.1	472263.219	Connect2D	1115.40	1120.124	4.724	0	30	0
IN1862-037	778119.7	472264	Connect2D	1120.10	1123.617	3.517	0	30	0
IN1862-038	778319.6	472264.5	Connect2D	1127.93	1132.468	4.538	0	30	0
IN1862-041	777717.75	472262.75	Connect2D	1117.37	1122.061	4.691	0	30	0
IN1862-042	777693.2	472240.219	Connect2D	1118.71	1122.343	3.633	0	30	0
IN1862-043	777660.9	472236.719	Connect2D	1118.89	1122.539	3.649	0	30	0
IN1862-044	777894.938	472068.3	Connect2D	1130.31	1136.399	6.089	0	30	0
IN1862-046	777743.3	471999.031	Connect2D	1131.15	1134.959	3.809	0	30	0
IN1862-047	777708.5	471996.625	Connect2D	1131.33	1135.24	3.91	0	30	0
IN1862-048	777711.1	472020.3	Connect2D	1131.72	1134.35	2.63	0	30	0
IN1862-049	777684.938	471979.375	Connect2D	1133.84	1137.319	3.479	0	30	0
IN1862-050	777653.3	471974.219	Connect2D	1134.05	1137.531	3.481	0	30	0
IN1862-051	777628.2	471999.625	Connect2D	1131.73	1135.3	3.57	0	30	0
IN1862-052	777635.438	472023.281	Connect2D	1132.12	1134.198	2.078	0	30	0
IN1862-054	778018.438	472087.656	Connect2D	1131.19	1136.767	5.577	0	30	0

IN1862-055	778088.063	472089.8	Connect2D	1131.53	1136.437	4.907	0	30	0
IN1862-057	778087.4	472122.8	Connect2D	1131.95	1136.497	4.547	0	30	0
IN1862-058	777923.6	472025.969	Connect2D	1132.52	1136.221	3.701	0	30	0
IN1862-059	777943.8	472037.2	Connect2D	1132.92	1136.181	3.261	0	30	0
IN1862-063	778122.438	472095.063	Connect2D	1131.91	1136.901	4.991	0	30	0
IN1862-064	778170.438	472095.1	Connect2D	1133.43	1137.925	4.5	0	30	0
IN1862-065	778189.438	472077.344	Connect2D	1134.59	1138.531	3.94	0	30	0
IN1862-066	778213.5	472067.438	Connect2D	1135.55	1138.949	3.4	0	30	0
IN1862-067	778237.438	472095.1	Connect2D	1128.57	1140.524	3.8	0	30	0
IN1862-068	778237.3	472117.563	Connect2D	1137.24	1140.638	3.4	0	30	0
IN1863-006	777613.7	471403.2	Connect2D	1141.09	1145.447	4.357	0	30	0
IN1863-007	777585	471344.375	Connect2D	1141.42	1146.07	4.65	0	30	0
IN1863-009	777605.938	471319.875	Connect2D	1141.60	1146.23	4.63	0	30	0
IN1863-010	777514.9	471198.219	Connect2D	1145.60	1149.408	3.808	0	30	0
IN1864-002	777489.3	469711.5	Connect2D	1109.76	1113.445	3.685	0	30	0
IN1864-003	777493.3	469760.281	Connect2D	1110.08	1113.593	3.513	0	30	0
IN1864-004	777478.8	469833.719	Connect2D	1110.37	1114.201	3.831	0	30	0
IN1864-005	777518	470156.7	Connect2D	1122.97	1125.598	2.628	0	30	0
IN1864-006	777512.7	470187	Connect2D	1122.67	1125.453	2.783	0	30	0
IN1865-001	777474.438	469539.9	Connect2D	1113.92	1117.544	3.624	0	30	0
IN1865-002	777696.2	469634.438	Connect2D	1122.60	1129.657	7.057	0	30	0
IN1868-001	777500	466594.469	Connect2D	1138.72	1143.683	4.963	0	30	0
IN1868-003	777499.8	466567.438	Connect2D	1138.87	1143.799	4.929	0	30	0
IN1868-005	777496.563	466396.719	Connect2D	1139.95	1148.567	8.617	0	30	0
IN1868-006	777350.563	466396.7	Connect2D	1140.93	1144.188	3.258	0	30	0
IN1868-007	777349.75	466211.25	Connect2D	1150.33	1155.699	5.369	0	30	0
IN1868-008	777349.938	466188.2	Connect2D	1150.87	1155.672	4.802	0	30	0
IN1868-009	777348.6	466044.438	Connect2D	1158.22	1163.583	5.363	0	30	0
IN1868-037	777520.4	466979.656	Connect2D	1127.13	1130.687	3.557	0	30	0
MI1456-026	772481.7	477536.281	Connect2D	1058.16	1063.813	5.653	0	30	0
MI1456-027	772491	477537.844	Connect2D	1058.68	1064.024	5.344	0	30	0
MI1456-062	772775.7	477031.625	Connect2D	1063.67	1067.558	3.888	0	30	0
MI1456-070	772774.3	476780.7	Connect2D	1073.56	1077.625	4.065	0	30	0
MI1457-037	772889.6	476518.563	Connect2D	1085.69	1089.464	3.774	0	30	0
MI1564-018	773650.3	470340.125	Connect2D	1044.14	1048.805	4.665	0	30	0
MI1656-014	775503.5	477538.563	Connect2D	1104.50	1112.263	7.763	0	30	0
MI1660-017	776194.563	473982.531	Connect2D	1063.46	1070.608	7.148	0	30	0
MI1663-032	774886.2	471302.2	Connect2D	1062.26	1067.983	5.723	0	30	0
MI1757-055	776959.2	476005.2	Connect2D	1075.10	1080.514	5.414	0	30	0
MI1758-023	776773.5	475513	Connect2D	1072.40	1077.255	4.855	0	30	0
MI1758-058	776966.063	475510.844	Connect2D	1072.72	1078.776	6.056	0	30	0
PD1552-011	774595.2	480283.781	Connect2D	1110.00	1112.708	2.708	0	30	0
PD1552-015	774962.938	480277.844	Connect2D	1111.00	1113.794	2.794	0	30	0
PD1552-020	773962.8	480433.156	Connect2D	1099.00	1101.883	2.883	0	30	0
PD1655-026	775650.2	477661.063	Connect2D	1107.00	1113.465	6.465	0	30	0
PD1758-001	776332.3	475144.344	Connect2D	1067.64	1067.638	0	0	30	0
PD1762-034	777096.25	471571.781	Connect2D	1122.30	1129.162	6.862	0	30	0
PD1768-023	776238.6	466917.156	Connect2D	1086.00	1086.547	0.547	0	30	0
PD1858-003	777645.438	475755.438	Connect2D	1081.42	1082.247	0.827	0	30	0
PD1862-060	777956.1	472203.656	Connect2D	1117.00	1117.519	0	0	30	0
PD1862-061	777931.75	472192.031	Connect2D	1118.70	1118.7	0	0	30	0
PD1862-062	777939.2	472238.8	Connect2D	1115.83	1120.406	4.576	0	30	0
PD1868-036	777526.7	466933.063	Connect2D	1128.00	1131.057	3.057	0	30	0
PL1457-047	772495.2	476402.531	Connect2D	1085.77	1086.973	1.203	0	30	0
PL1458-026	772800.4	475552.2	Connect2D	1101.85	1118.308	16.458	0	30	0
PL1562-003	774904.9	471610.656	Connect2D	1067.11	1068.721	1.611	0	30	0
PL1563-012	774881.7	471176.25	Connect2D	1061.63	1066.794	5.164	0	30	0
PL1655-040	776288.7	478050.156	Connect2D	1133.97	1140.296	6.326	0	30	0
PL1663-023	774891.5	471066.219	Connect2D	1068.12	1070.297	2.177	0	30	0
PL1663-028	774894.7	471206.7	Connect2D	1067.34	1069.316	1.976	0	30	0
PL1668-027	775460.8	466090.1	Connect2D	1056.81	1059.641	2.831	0	30	0
PL1757-021	777198.25	476234.063	Connect2D	1084.35	1088.52	4.17	0	30	0
PL1757-061	776604.563	476377	Connect2D	1084.33	1091.2	6.87	0	30	0
PL1757-063	776626.1	476470.4	Connect2D	1087.71	1092.228	4.518	0	30	0
PL1757-082	777128.9	476474.5	Connect2D	1088.02	1093.704	5.684	0	30	0
PL1758-069	777590.1	475445.375	Connect2D	1088.67	1094.317	5.647	0	30	0
PL1762-029	776722.563	472051.438	Connect2D	1131.57	1137.319	5.749	0	30	0
PL1857-001	777602.25	476054.969	Connect2D	1095.91	1101.355	5.445	0	30	0
PL1861-001	777620.1	472299.219	Connect2D	1119.07	1123.563	4.493	0	30	0
PL1861-003	778319.938	472298.5	Connect2D	1128.47	1132.33	3.86	0	30	0
PL1862-053	777571.25	472001.469	Connect2D	1132.27	1136.352	4.082	0	30	0
Pond_AM_OL1_DS	772193.3	470138.656	Connect2D	1035.57	1037.04	0	0	30	0
Pond_AM_OL1_US	772142.75	470150.438		1037.50	1039	1.5	0	20	0
Pond_BGV_Sed_DS	769635.5	471896.875		1090.90	1094.5	3.6	0	20	0
Pond_BGV_Sed_US	769599.1	471894.656		1091.00	1094.5	3.5	0	20	0
Pond_CA2_DS	766873.75	478224.1		1086.83	1091.83	5	0	20	0
Pond_CP_Det_PondA	765481.7	477658.5		1115.54	1120.54	5	0	20	0

Pond_CP_East_DS	768450.75	472786.75		1101.50	1110	8.5	0	20	0
Pond_CP_Inf_US	768446.9	472818.281		1102.25	1108	5.75	0	20	0
Pond_CP_West_US	768243.438	472864.1		1104.58	1110	5.42	0	20	0
Pond_CR_BioBasin_DS	768379.4	473597.6		1119.80	1128	8.2	0	20	0
Pond_CR_BioBasin_US	768331.563	473593.1		1121.00	1126	5	0	20	0
Pond_CR_WetPond_DS	768257.4	473265.563		1124.80	1129.8	5	0	20	0
Pond_FR_DS	766966.1	482662.7		1159.00	1163	4	0	20	0
Pond_GE_PondA_DS	769461.438	469603.719		1115.50	1121	5.5	0	20	0
Pond_GE_PondB_DS	770594.938	469606.531		1077.00	1083	6	0	20	0
Pond_GE_PondC_DS	770592.2	468767.75		1091.00	1098	7	0	20	0
Pond_GE_PondD_DS	770871.5	468382		1079.00	1085	6	0	20	0
Pond_GW_OL1_DS	770614.5	467033		1075.99	1089.55	13.56	0	30	0
Pond_ME_NPond_DS	771872.5	468227.469		1070.00	1075	5	0	20	0
Pond_ME_NPond_US	771675.9	468259.781		1071.00	1074.5	3.5	0	20	0
Pond_ME_SPond_DS	772190.6	467873.156	Connect2D	1049.57	1052.5	0	0	30	0
Pond_PP_East_DS	765825.4	480051.7		1123.00	1129.5	6.5	0	20	0
Pond_SH_OL2_DS	769082.938	478632.156		1067.25	1072	4.75	0	20	0
Pond_SH_OL4_DS	768847.7	477643.563		1067.96	1071	3.04	0	20	0
Pond_SH_OL6_DS	769764.9	477628.125		1068.64	1074	5.36	0	20	0
Pond_SPEAlm_DS	767240.563	479574.875		1085.00	1091	6	0	20	0
Pond_SPEswa_DS	767111.563	480280.2		1089.00	1094	5	0	20	0
Pond_SPoE_DS	768026.1	477659.281		1068.00	1074	6	0	20	0
Pond_SV_B1_DS	770174.438	472308.469		1072.89	1082	9.109	0	20	0
Pond_SV_B1_DS2	771041	472289.844	Connect2D	1054.38	1056.378	2	0	30	0
Pond_SV_B2_US	770018.563	472337.063		1076.50	1082	5.5	0	20	0
Pond_SV_Pond_A_DS	770122.438	473632.1	Connect2D	1081.50	1081.5	0	0	30	0
Pond_Swaboda_US	765627.75	476275.3		1096.85	1107.4	10.55	0	20	0
Pond_TF_E_DS	769642.8	474558.5	Connect2D	1072.41	1072.7	0	0	30	0
Pond_TF_N_DS	767354.438	474927.625		1144.50	1147.5	3	0	20	0
Pond_TF_NB_DS	767561.75	474927.5		1141.50	1144.5	3	0	20	0
Pond_TF_NC_A&B_DS	767964.2	474889.25		1132.50	1135.5	3	0	20	0
Pond_TF_NW_DS	767083.063	474903.844		1148.25	1151.25	3	0	20	0
Pond_TF_OL1_DS	769482.4	474892.219	Connect2D	1067.25	1067.25	0	0	30	0
Pond_TF_SE_DS	769790.5	474033.9	Connect2D	1081.16	1095	0	0	30	0
Pond_TF_W_DS	767048.9	474757.969		1155.50	1158.5	3	0	20	0
Pond_VP_DryPond_DS	770490.563	480181.2		1093.33	1102	8.67	0	20	0
Pond_VP_DryPond_US	770487.3	480275.6		1094.50	1102	7.5	0	20	0
Pond_WelHome_DS	768106.1	475809		1067.19	1072.5	5.31	0	20	0
Pond_WH_DS	767787.7	476677.2		1070.00	1074.4	4.4	0	20	0
RD1768-001	776205.563	466348.75	Connect2D	1092.06	1094.087	0.7	0	30	0
SAI_BPS001	773003.438	472943.875	Connect2D	1037.44	1043.8	6.36	0	30	0
SAI_BPS002	772985.3	472649.969	Connect2D	1037.00	1037	0	0	30	0
SAI_BPS003	773036.7	472943	Connect2D	1039.80	1039.8	0	0	30	0
SAI_BPS004	773044.563	472943.125	Connect2D	1039.27	1039.8	0	0	30	0
SAI_BPS005	772936.3	472525.375	Connect2D	1037.00	1037	0	0	30	0
SAI_BPS006	772910.563	472529.844		1034.50	1041.5	7	0	20	0
SAI_BPS007	772906.7	472531.281	Connect2D	1034.50	1041.5	7	3.5	30	0
SAI_BPS008	772849.9	472553.6	Connect2D	1032.80	1042.804	10	5.196	30	0
SAI_BPS009	772836.9	472457.1	Connect2D	1037.00	1037	0	0	30	0
SAI_BPS010	772817.4	472475.6		1034.50	1041.5	7	0	20	0
SAI_BPS011	772814.938	472478.844	Connect2D	1034.50	1041.5	7	3.5	30	0
SAI_BPS012	772800.8	472509.25	Connect2D	1034.50	1044.5	10	3.5	30	0
SAI_BPS013	772786.25	472430.219	Connect2D	1038.00	1038	0	0	30	0
SAI_BPS014	772739	472392.5	Connect2D	1037.59	1037.7	0	0	30	0
SAI_BPS015	772788.438	472427.781	Connect2D	1037.83	1038	0	0	30	0
SAI_BPS016	772741.25	472390.438	Connect2D	1037.50	1037.7	0	0	30	0
SAI_BPS017	773857.2	474804.8	Connect2D	1059.50	1069.5	10	3.5	30	0
SAI_BPS018	773851	474839.469	Connect2D	1059.50	1067.5	8	3.5	30	0
SAI_BPS019	773849.75	474845.344		1059.50	1067.5	8	3.5	20	0
SAI_BPS020	773845.5	474866.719	Connect2D	1062.23	1063	0	0	30	0
SAI_BPS021	773976.5	474885.6	Connect2D	1062.52	1063	0	0	30	0
SAI_BPS022	774019.3	474869.438	Connect2D	1063.00	1063	0	0	30	0
SAI_CV001	774272.6	481614.2	Connect2D	1104.75	1104.75	0	0	30	0
SAI_CV002	774263.75	481622.719		1104.75	1109.5	4.75	0	20	0
SAI_DT1455-001	772479.5	477614.9	Connect2D	1060.70	1061.187	0	0	30	0
SAI_DT1455-002	772491	477615.156	Connect2D	1059.75	1060.762	0	0	30	0
SAI_ET001	771254.8	481108.469	Connect2D	1141.50	1145	3.5	3.5	30	0
SAI_ET002	771280.063	481122.9	Connect2D	1141.50	1148.15	6.65	3.5	30	0
SAI_ET003	771283.438	481124.844		1141.50	1148.15	6.65	3.5	20	0
SAI_ET004	771297.438	481132.563	Connect2D	1141.50	1141.5	0	0	30	0
SAI_ET005	771283.6	481156.2	Connect2D	1144.00	1145	0	0	30	0
SAI_ET006	771267.6	481145.6	Connect2D	1142.50	1148.15	5.65	0	30	0
SAI_ET007	771113	481080.938		1141.55	1146.55	5	0	20	0
SAI_ET008	771566	480323.781	Connect2D	1119.79	1129.787	10	4.213	30	0
SAI_ET009	771538.75	480334.438	Connect2D	1120.50	1127.3	6.8	3.5	30	0
SAI_ET010	771534.2	480336.531		1120.50	1127.3	6.8	3.5	20	0
SAI_ET011	771520.938	480343.938	Connect2D	1123.00	1124	0	0	30	0

SAI_ET012	771479.9	480269.656	Connect2D	1123.78	1124	0	0	30	0
SAI_ET013	771458.563	480235.5	Connect2D	1118.97	1123	0	0	30	0
SAI_ET014	773005.438	480423.8	Connect2D	1093.51	1097.5	0	7.493	30	0
SAI_ET015	773006.5	480391.563	Connect2D	1097.50	1105.3	7.8	3.5	30	0
SAI_ET016	773006.9	480387.438		1097.50	1105.3	7.8	3.5	20	0
SAI_ET017	773007.3	480363.781	Connect2D	1101.00	1101	0	0	30	0
SAI_ET018	772972.9	480267.781	Connect2D	1100.00	1101	1	0	30	0
SAI_ET019	772971.9	480224.9	Connect2D	1098.66	1101	1	0	30	0
SAI_ET020	773654.7	481419.531	Connect2D	1104.50	1106.25	1.75	3.5	30	0
SAI_ET021	773679.6	481398.375	Connect2D	1104.50	1112.7	8.2	3.5	30	0
SAI_ET022	773683.438	481395.2		1104.50	1112.7	8.2	3.5	20	0
SAI_ET023	773699.5	481381.844	Connect2D	1107.05	1108	0	0	30	0
SAI_ET024	773739.25	481350.969	Connect2D	1107.00	1108	0	0	30	0
SAI_HL_Box001	774518.7	467524.031	Connect2D	1036.15	1040.721	4.571	0	30	0
SAI_HL_Box002	774350.5	467470.7	Connect2D	1035.69	1043.15	7.46	0	30	0
SAI_HL_Box003	774322.563	467313.344	Connect2D	1035.27	1041.539	6.269	0	30	0
SAI_HL_Box003-01	774323.9	467268.531		1035.16	1041.8	6.643	0	20	0
SAI_HL_Box004	774303.563	467237.25	Connect2D	1035.06	1041.59	6.535	0	30	0
SAI_HL_Box005	774198.7	467145.4	Connect2D	1034.61	0	0	0	30	0
SAI_HL_Box005-01	774305.3	467211.4		1034.99	1038.99	4	0	20	0
SAI_HL_Box005-02	774304.2	467225.75		1035.04	1039.04	4	0	20	0
SAI_MCC001	773960.063	482726.375	Connect2D	1108.02	1108.2	0	0	30	0
SAI_MCC002	774025.25	482700.563	Connect2D	1107.67	1108.09	0	0	30	0
SAI_MCC003	773825.5	482335	Connect2D	1108.22	1108.224	0	0	30	0
SAI_MCC004	773874.438	482279.281	Connect2D	1106.68	1106.977	0	0	30	0
SAI_PF001	773115.563	483050.6	Connect2D	1114.10	1128	13.9	6.9	30	0
SAI_PF002	773118.938	483017.531	Connect2D	1118.00	1125.5	7.5	3	30	0
SAI_PF003	773119.5	483013		1118.00	1125.5	7.5	3	20	0
SAI_PF004	773121.3	482993.6	Connect2D	1121.00	1121	0	0	30	0
SAI_PF005	773125.438	483051.8	Connect2D	1116.25	1128	11.752	4.752	30	0
SAI_PF006	773128.938	483018.375	Connect2D	1118.00	1125.5	7.5	3	30	0
SAI_PF007	773129.4	483013.969		1118.00	1125.5	7.5	3	20	0
SAI_PF008	773131.25	482994.531	Connect2D	1121.00	1121	0	0	30	0
SAI_PF009	773147.6	482953.8	Connect2D	1120.00	1121	0	0	30	0
SAI_PF010	773157.563	482935.969	Connect2D	1119.00	1125	6	0	30	0
SAI_PF011	773159.563	482932.1		1119.00	1125	6	0	20	0
SAI_PF012	773364.5	482854.4	Connect2D	1115.50	1115.5	0	0	30	0
SAI_PHF001	776535.9	471345.969		1095.60	1106.6	11	0	20	0
SAI_PHF002	776501.3	471346	Connect2D	1093.46	1095.39	0	0	30	0
SAI_PHF003	776539.2	471546.938		1095.60	1106.6	11	0	20	0
SAI_PHF004	776505.4	471547.719	Connect2D	1093.63	1095.39	0	0	30	0
SAI_PHF005	776541.9	471345.6	Connect2D	1095.60	1095.6	0	0	30	0
SAI_PHF006	776546.438	471546.75	Connect2D	1095.52	1095.6	0	0	30	0
SAI_PHF007	776435.8	471459.625	Connect2D	1094.06	1095.15	0	0	30	0
SAI_PHF008	776388.25	471453.531	Connect2D	1093.56	1094.101	0	0	30	0
SAI_SPBP001	774356.438	475271.219	Connect2D	1061.60	1061.6	0	0	30	0
SAI_SPBP002	774420.5	475322.5	Connect2D	1060.50	1060.5	0	0	30	0
SAI_TO001	774372	473786.063	Connect2D	1051.90	1051.9	0	0	30	0
SAI_TO002	774228.938	473708.719	Connect2D	1051.20	1051.2	0	0	30	0
SAI_TO003	774588.2	472462.563	Connect2D	1075.70	1081.7	0	5.999	30	0
SAI_TO004	774518.6	472409.063	Connect2D	1081.60	1081.6	0	0	30	0
SAI_TO005	774602.3	472363.781	Connect2D	1081.60	1081.6	0	0	30	0
SAI_TO005_Or	774600.063	472375.031	Connect2D	1081.60	1081.6	0	0	30	0
SAI_TO006	774611.4	472317.531	Connect2D	1081.30	1081.3	0	0	30	0
SAI_TO007	774615.6	472261.3	Connect2D	1080.19	1080.32	0	0	30	0
SAI_TOW001	773275.7	473152.469	Connect2D	1036.96	1038	0	5.045	30	0
SAI_TOW002	773253.25	473187.9	Connect2D	1038.00	1047	9	4	30	0
SAI_TOW003	773251	473191.219		1038.00	1047	9	4	20	0
SAI_TOW004	773238.938	473210	Connect2D	1042.00	1042	0	0	30	0
SAI_TOW005	773268.4	473058.25	Connect2D	1033.00	1038	0	9	30	0
SAI_TOW006	773234.3	473041.656	Connect2D	1038.00	1047	9	4	30	0
SAI_TOW007	773230.3	473039.844		1038.00	1047	9	0	20	0
SAI_TOW008	773184.4	473201.6	Connect2D	1040.50	1040.5	0	0	30	0
SAI_TOW009	773188.938	473194.938	Connect2D	1040.50	1040.5	0	0	30	0
SAI_TVA001	775977.25	474874.219	Connect2D	1069.50	1073	3.5	0	30	0
SAI_TVA002	776147.3	474627	Connect2D	1071.50	1075	3.5	0	30	0
SAI_TVA003	776147.2	474562.344	Connect2D	1070.00	1073.5	3.5	0	30	0
SAI_TVA004	775987	474591.969	Connect2D	1068.50	1072	3.5	0	30	0
SAI_TVA005	775956.063	474394.438	Connect2D	1068.00	1071.5	3.5	0	30	0
SAI_TVA006	775712.9	474750.375	Connect2D	1066.50	1070	3.5	0	30	0
SAI_TVA007	775731.7	474452.438	Connect2D	1065.00	1069.2	4.2	0	30	0
SAI_TVA008	775971.75	474295.063	Connect2D	1066.00	1066	0	0	30	0
SAI_TW001	773869.4	481433.969	Connect2D	1101.00	1102.5	1.5	1	30	0
SAI_TW002	773858.5	481149.219	Connect2D	1101.53	1102.5	0	0	30	0
SAI_TW003	773863.563	480930.75		1100.00	1105	5	0	20	0
SAI_TW004	773838.7	480896.125	Connect2D	1100.00	1100	0	0	30	0
SAI_TW005	773867.4	480936.7	Connect2D	1100.00	1104.65	4.65	0	30	0

SAI_ValleyView1_DS	772492.7	472258.1	Connect2D	1036.46	0	0	0	30	0
SAI_ValleyView1_US	772492.1	472296.6	Connect2D	1036.90	1036.904	0	0	30	0
SAI_ValleyView2_DS	772500.2	472258	Connect2D	1036.38	1036.384	0	0	30	0
SAI_ValleyView2_US	772500.1	472296.7	Connect2D	1036.86	0	0	0	30	0
SAI_ValleyView3_DS	772509.6	472257.8	Connect2D	1036.58	0	0	0	30	0
SAI_ValleyView3_US	772509.1	472296.8	Connect2D	1036.80	1036.803	0	0	30	0
SAI_ValleyView4_DS	772517.7	472258.1	Connect2D	1036.50	1036.501	0	0	30	0
SAI_ValleyView4_US	772517.3	472296.8	Connect2D	1036.81	1036.813	0	0	30	0
SAI_ValleyView5_DS	772526.6	472258.2	Connect2D	1036.59	0	0	0	30	0
SAI_ValleyView5_US	772526.1	472297	Connect2D	1036.82	1036.824	0	0	30	0
SAI_ValleyView6_DS	772534.6	472258.3	Connect2D	1036.55	1036.546	0	0	30	0
SAI_ValleyView6_US	772534.1	472296.9	Connect2D	1036.90	0	0	0	30	0
SAI-001	776517.7	473643.8	Connect2D	1066.00	1071.678	5.678	0	30	0
SAI-002	776497.5	473701.1	Connect2D	1067.00	1070.539	3.539	0	30	0
SAI-003	776398	473601.844	Connect2D	1067.00	1071.99	4.99	0	30	0
SAI-004	776377.2	473643.5	Connect2D	1066.00	1070.093	4.093	0	30	0
SAI-006	776984.1	475828.563	Connect2D	1075.75	1075.991	0.241	0	30	0
SAI-007	770683.6	474994.4	Connect2D	1045.02	1045.32	0	0	30	0
SAI-008	770874.25	474971.031	Connect2D	1044.29	1044.99	0.7	0	30	0
SAI-009	770968.4	474926.781	Connect2D	1044.02	1044.668	0.648	0	30	0
SAI-010	771001	474926.438	Connect2D	1043.71	1044.29	0.58	0	30	0
SAI-011	770976.063	474595.781	Connect2D	1043.81	1043.81	0	0	30	0
SAI-012	770974.438	474524.281	Connect2D	1044.19	1044.19	0	0	30	0
SAI-013	773789.25	481102.4	Connect2D	1103.74	1103.74	0	0	30	0
SAI-014	773830.1	481101.938	Connect2D	1102.64	1102.64	0	0	30	0
SAI-015	772607.438	477314.25	Connect2D	1058.09	1058.5	0	0.414	30	0
SAI-016	772608.8	477347.1	Connect2D	1057.51	1058.5	0	0	30	0
SAI-017	772963.438	475078.531	Connect2D	1094.00	1094	0	0	30	0
SAI-018	772930.5	475078.531	Connect2D	1094.00	1094	0	0	30	0
SAI-019	773076.7	475020.7	Connect2D	1093.68	1094	0	0.32	30	0
SAI-020	773077.5	474980.531	Connect2D	1093.00	1094	0	0	30	0
SAI-021	773558	475064.438	Connect2D	1075.86	1076	0	0.137	30	0
SAI-022	773596.75	475056.031	Connect2D	1075.34	1076	0	0	30	0
SAI-023	775192.438	471353.6	Connect2D	1065.10	1065.1	0	0	30	0
SAI-024	775171.063	471345.625	Connect2D	1063.00	1064.57	0	0	30	0
SAI-025	773434.2	482600.7	Connect2D	1109.00	1109.002	0	0	30	0
SAI-026	773435	482516.8	Connect2D	1108.98	1109.044	0	0	30	0
SAI-027	773429	482600.3	Connect2D	1108.92	1108.922	0	0	30	0
SAI-028	773430.3	482517.1	Connect2D	1108.74	1108.736	0	0	30	0
SAI-029	773424.4	482599.8	Connect2D	1108.91	1108.911	0	0	30	0
SAI-030	773425.4	482517.1	Connect2D	1108.85	1108.854	0	0	30	0
SAI-031	771775.9	477627.1	Connect2D	1059.95	1059.952	0	0	30	0
SAI-032	771774.1	477535.4	Connect2D	1057.63	1057.629	0	0	30	0
SAI-033	777575.1	477612.4	Connect2D	1122.10	1122.103	0	0	30	0
SAI-034	777574	477553.9	Connect2D	1122.72	1122.718	0	0	30	0
SAI-035	771052.8	475738.5	Connect2D	1047.82	1047.818	0	0	30	0
SAI-036	771015.938	475727.5	Connect2D	1047.36	1047.362	0	0	30	0
SAI-037	771054.938	475731.438	Connect2D	1047.80	1047.804	0	0	30	0
SAI-038	771017.9	475720.563	Connect2D	1047.34	1047.344	0	0	30	0
SAI-039	772290	471949.25	Connect2D	1036.17	1036.167	0	0	30	0
SAI-040	772330.938	471947.469	Connect2D	1036.20	1036.198	0	0	30	0
SAI-041	772289.7	471937.8	Connect2D	1036.10	1036.103	0	0	30	0
SAI-042	772330.5	471934.625	Connect2D	1036.48	1036.48	0	0	30	0
SAI-043	772515.1	471190.156	Connect2D	1035.81	1035.813	0	0	30	0
SAI-044	772514	471170.063	Connect2D	1035.86	1035.856	0	0	30	0
SAI-045	772520.938	471189.625	Connect2D	1035.32	1035.319	0	0	30	0
SAI-046	772518.6	471169.5	Connect2D	1035.25	1035.247	0	0	30	0
SAI-047	772221.3	470133.031	Connect2D	1034.85	1034.845	0	0	30	0
SAI-048	772283.25	470131.031	Connect2D	1033.95	1033.954	0	0	30	0
SAI-049	773102.9	467001.844	Connect2D	1028.37	1028.37	0	0	30	0
SAI-050	773102.6	466969.156	Connect2D	1027.94	1027.943	0	0	30	0
SAI-051	773116	467001.8	Connect2D	1028.29	1028.287	0	0	30	0
SAI-052	773115.8	466969.063	Connect2D	1027.95	1027.945	0	0	30	0
SAI-053	773129.75	467002.063	Connect2D	1028.30	1028.301	0	0	30	0
SAI-054	773129.5	466969.1	Connect2D	1027.90	1027.901	0	0	30	0
SAI-055	773499.7	467024.656	Connect2D	1029.99	1029.992	0	0	30	0
SAI-056	773455.8	467024.6	Connect2D	1029.47	1029.474	0	0	30	0
SAI-057	773499.7	467018.063	Connect2D	1029.92	1029.918	0	0	30	0
SAI-058	773455.4	467018.938	Connect2D	1029.31	1029.31	0	0	30	0
SAI-059	773486.5	466958.438	Connect2D	1029.45	1029.448	0	0	30	0
SAI-060	773468.2	466959.031	Connect2D	1029.61	1029.609	0	0	30	0
SAI-061	775573.063	467023.563	Connect2D	1091.82	1091.822	0	0	30	0
SAI-062	775549.3	467023.6	Connect2D	1091.59	1091.587	0	0	30	0
SAI-063	774543.063	475069.156	Connect2D	1060.84	0	0	0	30	0
SAI-064	774542.6	475032.344	Connect2D	1060.63	0	0	0	30	0
SAI-065	774548.75	475068.781	Connect2D	1060.93	0	0	0	30	0
SAI-066	774549.063	475032.375	Connect2D	1060.68	0	0	0	30	0

SAI-067	774554.8	475069.063	Connect2D	1060.95	0	0	0	30	0
SAI-068	774555	475032.375	Connect2D	1060.68	0	0	0	30	0
SAI-069	774560.5	475068.969	Connect2D	1060.95	0	0	0	30	0
SAI-070	774561	475032.281	Connect2D	1060.64	0	0	0	30	0
SAI-071	774566.4	475068.875	Connect2D	1060.88	0	0	0	30	0
SAI-072	774567.563	475032.219	Connect2D	1060.68	0	0	0	30	0
SAI-073	774523.6	475321.156	Connect2D	1061.00	0	0	0	30	0
SAI-074	774523.6	475271.625	Connect2D	1060.86	0	0	0	30	0
SAI-075	774527.8	475321.1	Connect2D	1061.01	0	0	0	30	0
SAI-076	774528	475271.625	Connect2D	1060.85	0	0	0	30	0
SAI-077	774533	475320.969	Connect2D	1060.98	0	0	0	30	0
SAI-078	774532.4	475271.8	Connect2D	1060.74	0	0	0	30	0
SAI-079	774956.25	467814.8	Connect2D	1050.50	0	0	0	30	0
SAI-080	774878.938	467835.1	Connect2D	1048.00	0	0	0	30	0
TE1567-034	774297.2	467713.5	Connect2D	1039.51	1044.534	5.024	0	30	0
TP1659-056	775426.938	474243.125	Connect2D	1063.40	1069.062	5.662	0	30	0
TSAI_001	769098.5	482934.469		1104.54	1107.537	3	0	20	0
TSAI_002	768801.938	481975.719		1096.56	1101.559	5	0	20	0
TSAI_003	768328.938	481307		1088.78	1093.784	5	0	20	0
TSAI_004	768613.6	480621.781		1081.36	1086.359	5	0	20	0
TSAI_005	766509.8	475668.625		1107.93	1112.926	5	0	20	0
TSAI_006	770564.563	482888.1		1106.66	1111.662	5	0	20	0
TSAI_007	769892.2	482209.125		1098.13	1103.127	5	0	20	0
TSAI_008	769655.25	482201.2		1098.00	1103	5	0	20	0
TSAI_009	771125.7	479490.938	Connect2D	1093.13	1093.915	0	0	30	0
TSAI_010	769876.75	471388.1		1088.20	1093.2	5	0	20	0
TSAI_011	768811.063	480822.2		1085.47	1090.472	5	0	20	0
TSAI_012	771206.438	482451.656		1120.50	1125.501	5	0	0	0
TSAI_014	770847	467019.3		1075.50	1085	9.5	0	20	0
TSAI_Conf001	769796.4	476983		1060.14	1065.138	5	0	20	0
TSAI_Conf002	769490.75	472361.875		1094.73	1099.73	5	0	20	0
TSAI_Conf003	771995.6	471163.469	Connect2D	1044.70	1044.8	0.1	0	30	0
TSAI_Conf005	770939.4	470165.875		1054.21	1059.214	5	0	20	0
TSAI_Conf006	771787	468893.3		1042.92	1047.918	5	0	20	0
TSAI_Conf008	772234.563	468879.156	Connect2D	1037.30	1040.3	3	0	30	0
TSAI_Conf009	770319.438	482203.563		1100.01	1105.012	5	0	20	0
TSAI_Conf011	768347.2	475768.438	Connect2D	1064.28	1064.277	0	0	30	0
TSAI_Conf012	770403.938	476349.375	Connect2D	1047.61	1047.916	0	0	30	0
TSAI_GW_OL1_Out	772211.5	467003	Connect2D	1067.25	1070.745	3.5	0	30	0
TSAI_MPUS	769512.1	477643.563		1064.29	1069.291	5	0	20	0

APPENDIX D
FLOODING DEPTHS FOR 25 WATERSHED LOCATIONS

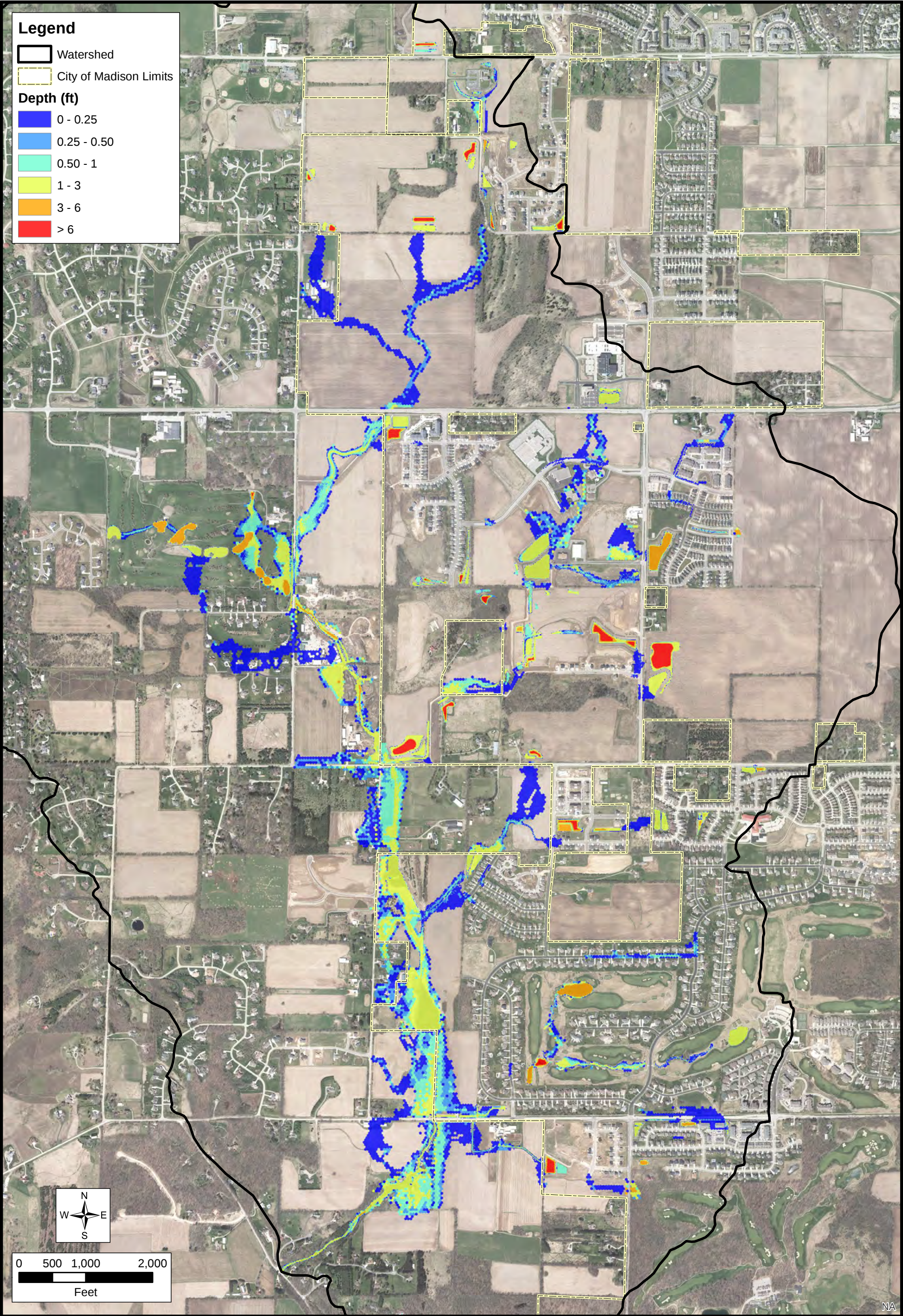
TABLE D1–FLOODING DEPTHS OF 25 WATERSHED LOCATIONS: SWMM

Monitoring Point	Depth (ft) at Monitoring Point for Given Annual Chance Design Storm							
	100% (1-year)	50% (2-year)	20% (5-year)	10% (10-year)	4% (25-year)	1% (100-year)	0.20% (500-year)	0.023% (4,270-year)
1	0.959	1.051	1.245	1.377	1.441	1.605	1.831	1.813
2	0.098	0.158	0.302	0.573	1.237	1.600	1.679	1.795
3	0.070	0.120	0.237	0.371	0.679	1.243	1.575	1.844
4	0.141	0.228	0.438	0.670	0.875	1.176	1.484	1.749
5	0.513	0.635	0.726	0.818	0.897	0.982	1.031	1.195
6	1.058	1.213	1.372	1.629	2.147	2.786	2.943	3.165
7	0.570	0.610	0.698	0.789	1.006	1.298	1.545	1.789
8	0.771	0.866	1.067	1.228	1.487	1.862	2.021	2.280
9	0.572	0.654	0.807	0.923	1.139	1.419	1.547	1.782
10	0.420	0.618	0.771	0.804	0.841	0.896	0.945	0.963
11	0.765	0.878	1.164	1.402	1.792	2.380	2.716	2.990
12	0.336	0.415	0.579	0.704	0.936	1.247	1.387	1.643
13	0.704	0.805	1.039	1.208	1.414	1.637	1.757	1.979
14	0.537	0.574	0.665	0.741	0.924	1.110	1.349	1.462
15	0.698	0.722	0.786	0.826	0.875	1.018	1.140	1.283
16	0.409	0.496	0.744	0.955	1.232	1.936	2.373	2.477
17	0.805	0.972	1.231	1.417	1.701	2.036	2.121	2.362
18	1.221	1.399	1.649	1.823	2.105	2.442	2.531	2.777
19	0.222	0.271	0.352	0.406	0.489	0.636	0.724	0.962
20	0.237	0.252	0.285	0.398	0.572	0.743	0.818	0.901
21	0.043	0.344	0.671	0.936	1.116	1.210	1.268	1.301
22	0.629	0.656	0.696	0.717	0.772	0.822	0.830	0.889
23	0.306	0.342	0.427	0.501	0.563	0.883	0.998	1.229
24	0.000	0.000	0.000	0.024	0.066	0.696	0.900	1.147
25	0.664	0.716	0.823	0.902	0.985	1.088	1.198	1.387

TABLE D2–FLOODING DEPTHS OF 25 WATERSHED LOCATIONS: SCS

Monitoring Point	Depth (ft) at Monitoring Point for Given Annual Chance Design Storm							
	100%	50%	20%	10%	4%	1%	0.20%	0.023%
	(1-year)	(2-year)	(5-year)	(10-year)	(25-year)	(100-year)	(500-year)	(4,270-year)
1	0.712	0.819	1.054	1.239	1.395	1.505	1.748	1.867
2	0.000	0.043	0.122	0.195	0.604	1.497	1.765	1.820
3	0.011	0.069	0.204	0.353	0.682	1.278	1.930	2.417
4	0.000	0.135	0.367	0.619	0.856	1.204	1.833	2.317
5	0.293	0.419	0.632	0.705	0.836	0.964	1.198	1.324
6	0.849	0.962	1.211	1.324	1.717	2.684	3.179	3.229
7	0.479	0.570	0.664	0.753	0.978	1.305	1.868	2.335
8	0.649	0.753	0.978	1.158	1.433	1.853	2.307	2.576
9	0.465	0.551	0.734	0.865	1.090	1.410	1.807	2.041
10	0.372	0.472	0.753	0.779	0.820	0.887	0.957	1.033
11	0.613	0.707	1.125	1.390	1.798	2.417	3.075	3.563
12	0.241	0.311	0.494	0.637	0.878	1.238	1.668	1.902
13	0.610	0.677	0.903	1.119	1.358	1.628	2.000	2.180
14	0.400	0.442	0.562	0.644	0.812	1.061	1.424	1.630
15	0.600	0.649	0.750	0.774	0.789	0.802	1.177	1.521
16	0.133	0.220	0.423	0.647	0.973	1.636	2.422	2.588
17	0.579	0.747	1.094	1.320	1.652	2.036	2.411	2.536
18	0.979	1.158	1.526	1.731	2.054	2.442	2.826	2.952
19	0.126	0.191	0.303	0.368	0.467	0.663	1.023	1.165
20	0.149	0.173	0.218	0.310	0.505	0.709	0.861	0.910
21	0.000	0.000	0.000	0.482	0.978	1.161	1.283	1.326
22	0.534	0.577	0.650	0.678	0.736	0.806	0.901	0.928
23	0.069	0.157	0.302	0.507	0.644	1.034	1.346	1.461
24	0.000	0.000	0.000	0.030	0.175	0.943	1.242	1.303
25	0.674	0.704	0.792	0.875	0.978	1.109	1.420	1.490

APPENDIX E
EXISTING CONDITIONS INUNDATION MAPPING

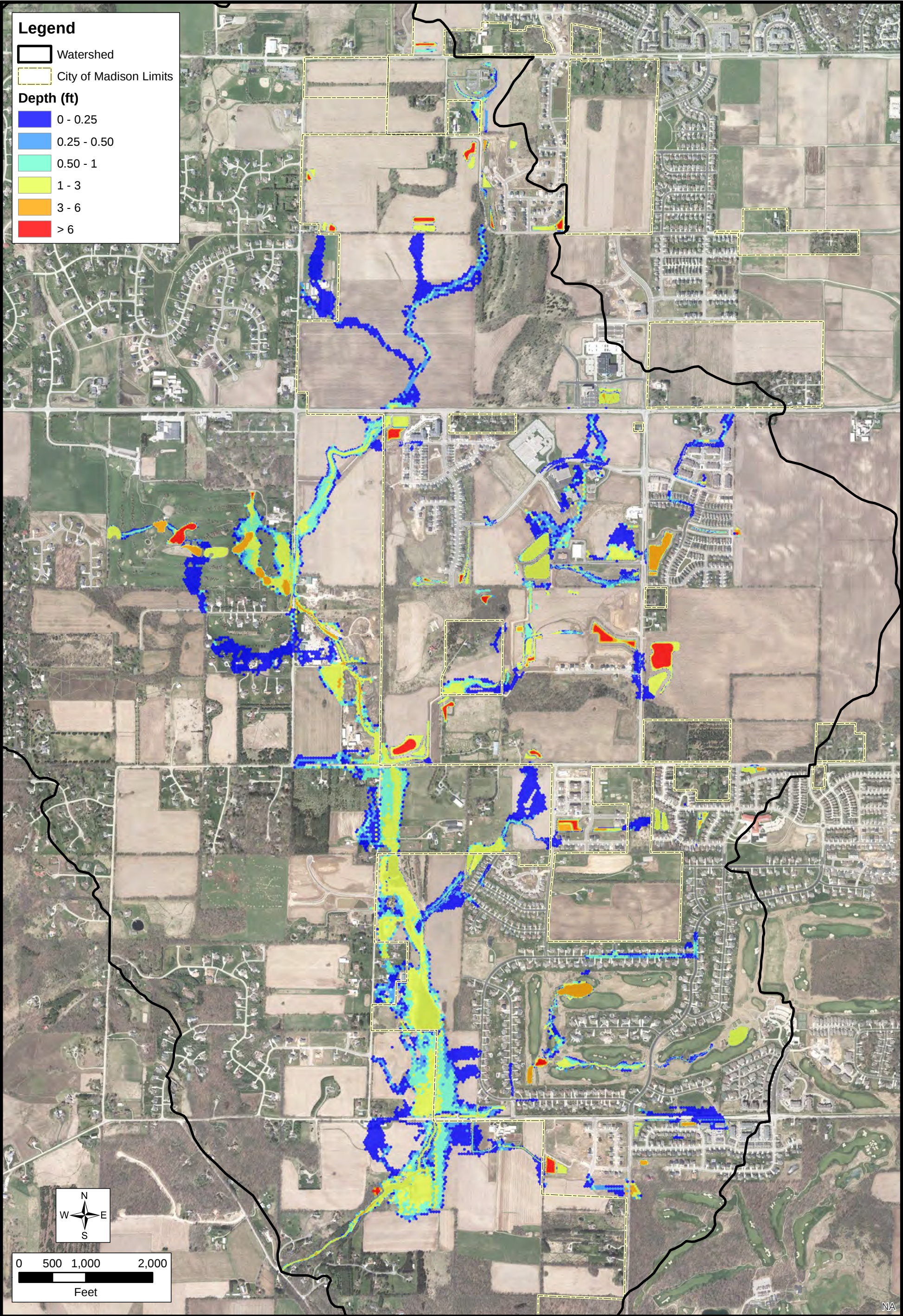


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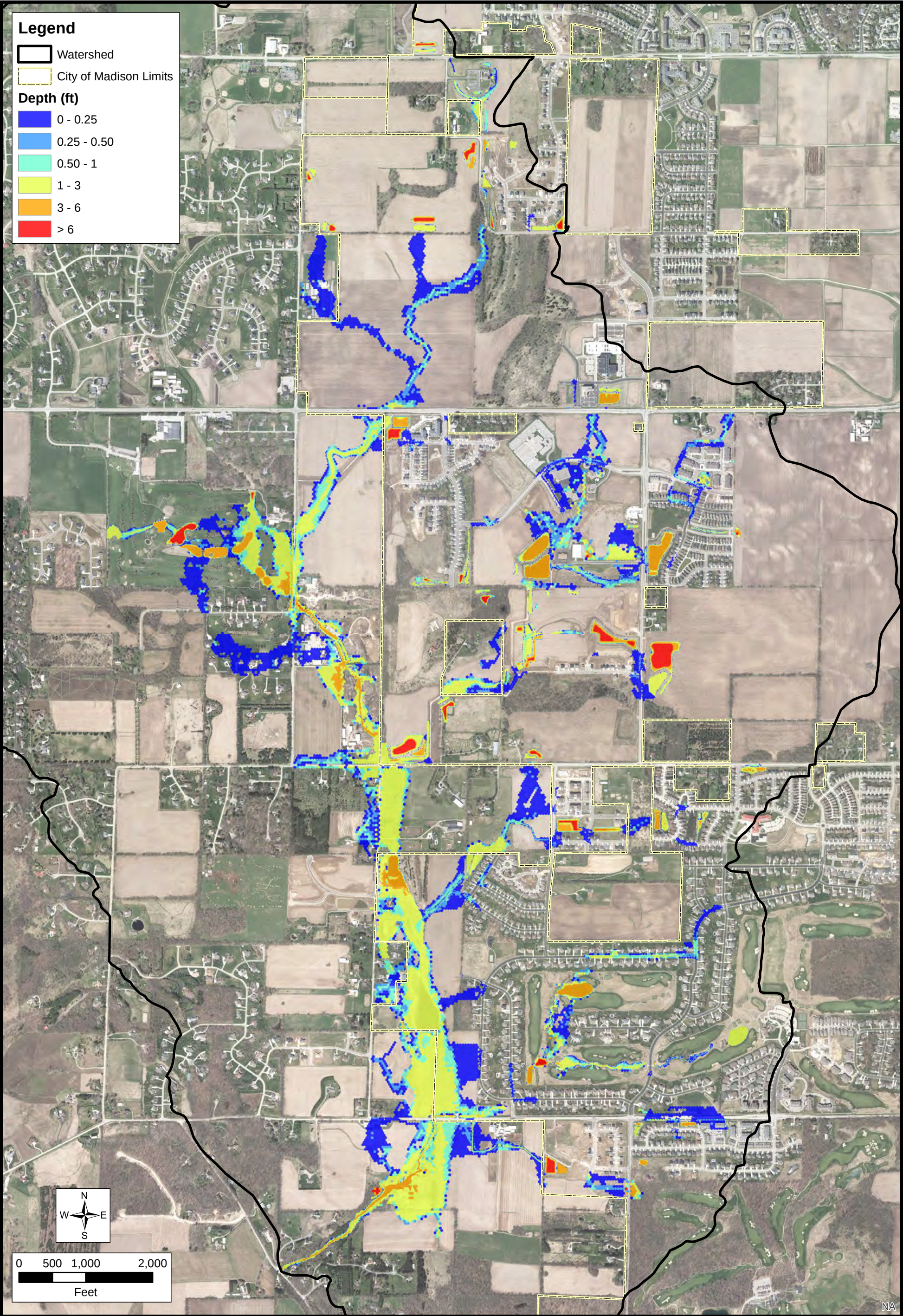
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50% CHANCE STORM EVENT WITH SWMM HYDROLOGY
FLOOD INUNDATION MAPPING
EXISTING CONDITIONS
LOWER BADGER MILL CREEK WATERSHED
CITY OF MADISON
DANE COUNTY, WISCONSIN



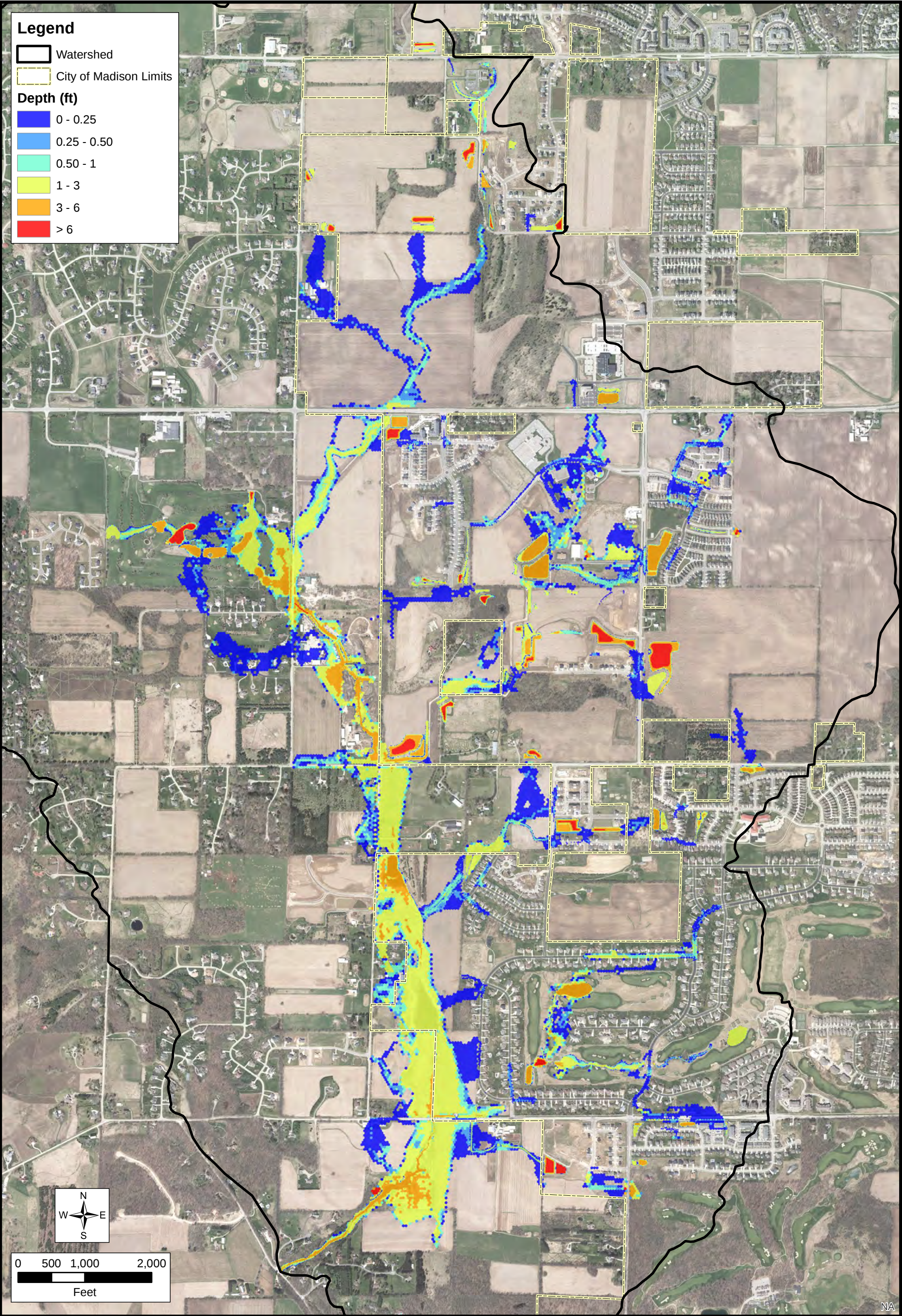
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EXISTING CONDITIONS
LOWER BADGER MILL CREEK WATERSHED
CITY OF MADISON
DANE COUNTY, WISCONSIN

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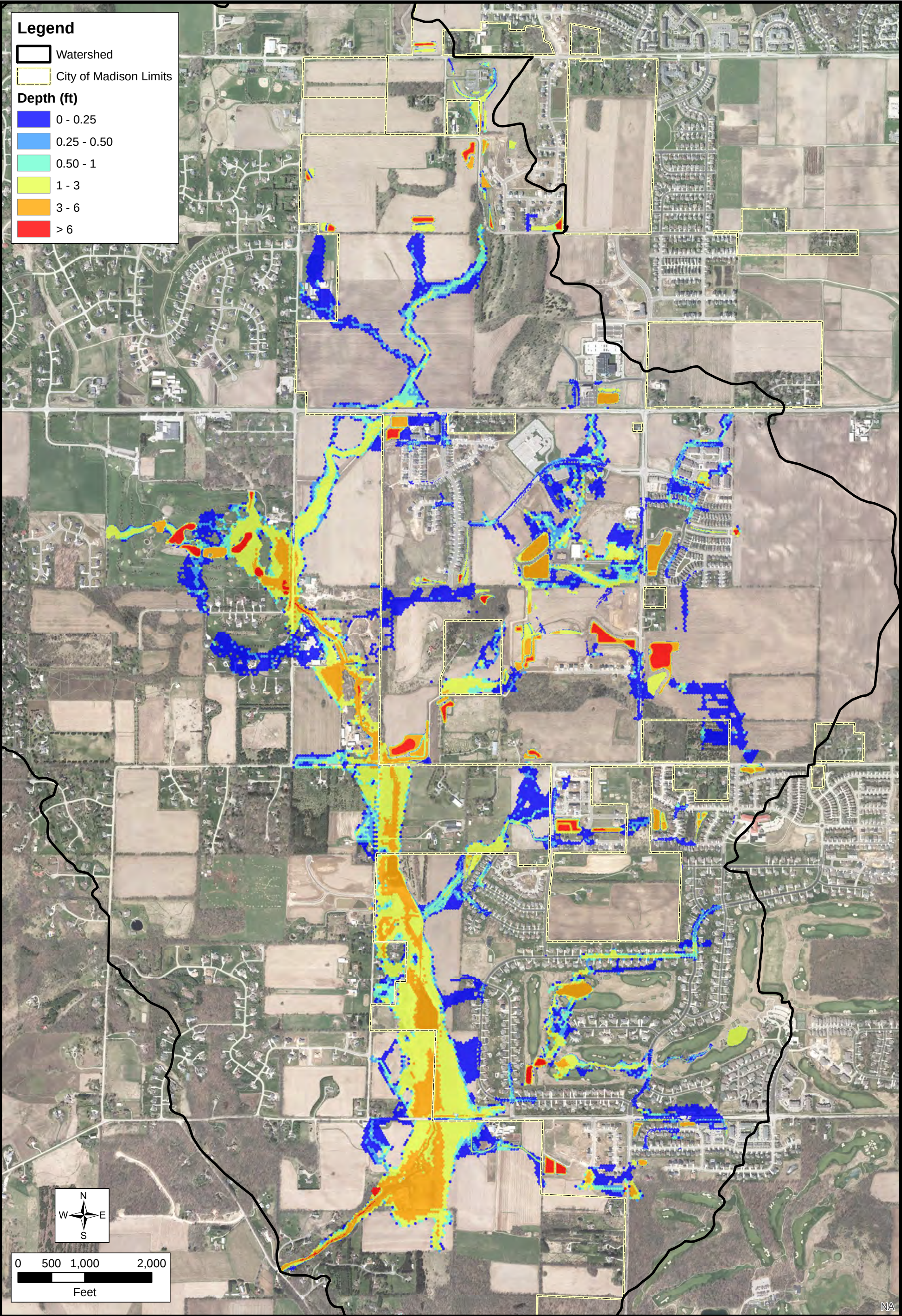
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10% CHANCE STORM EVENT WITH SWMM HYDROLOGY
FLOOD INUNDATION MAPPING
EXISTING CONDITIONS
LOWER BADGER MILL CREEK WATERSHED
CITY OF MADISON
DANE COUNTY, WISCONSIN



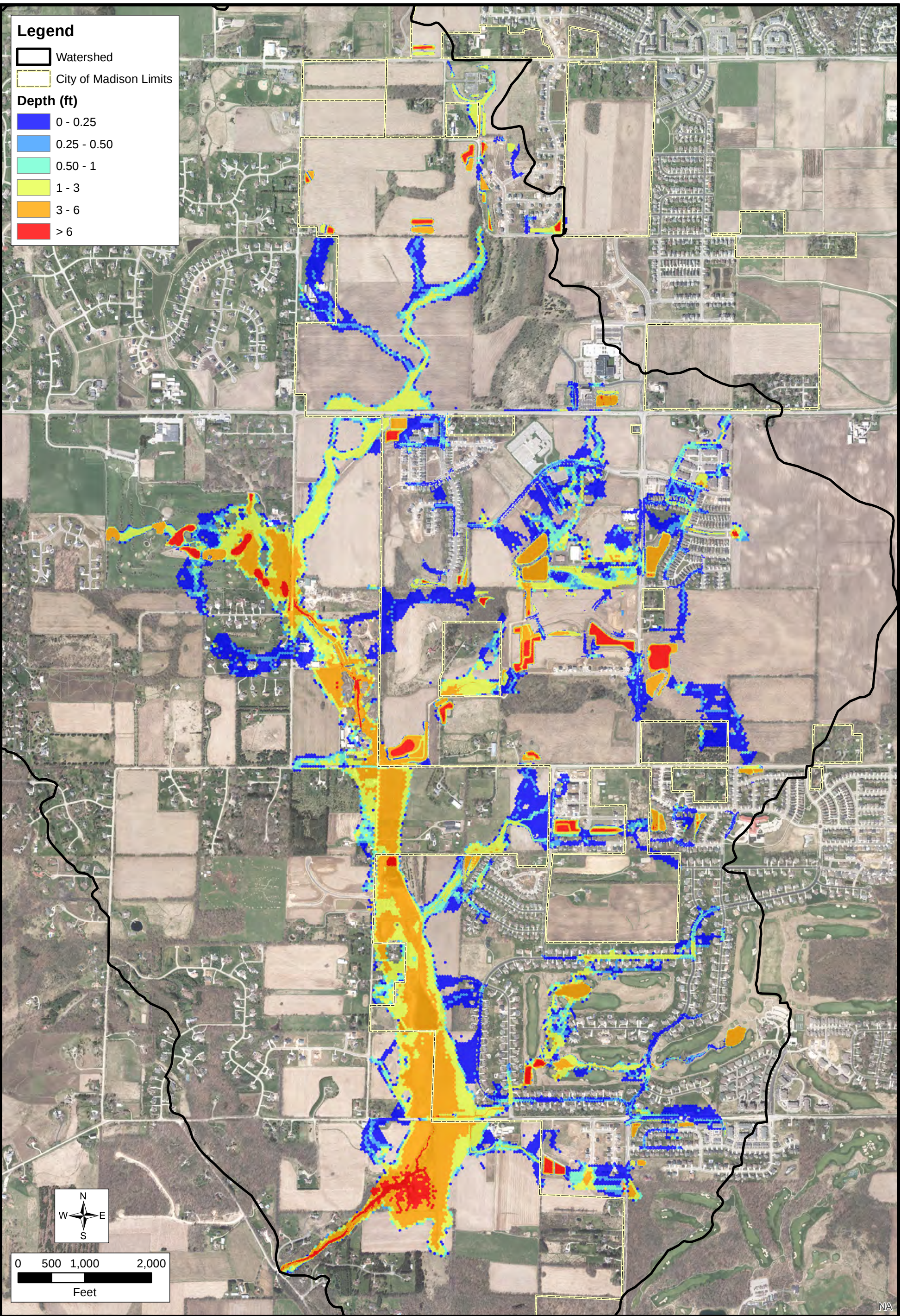
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EXISTING CONDITIONS
LOWER BADGER MILL CREEK WATERSHED
CITY OF MADISON
DANE COUNTY, WISCONSIN

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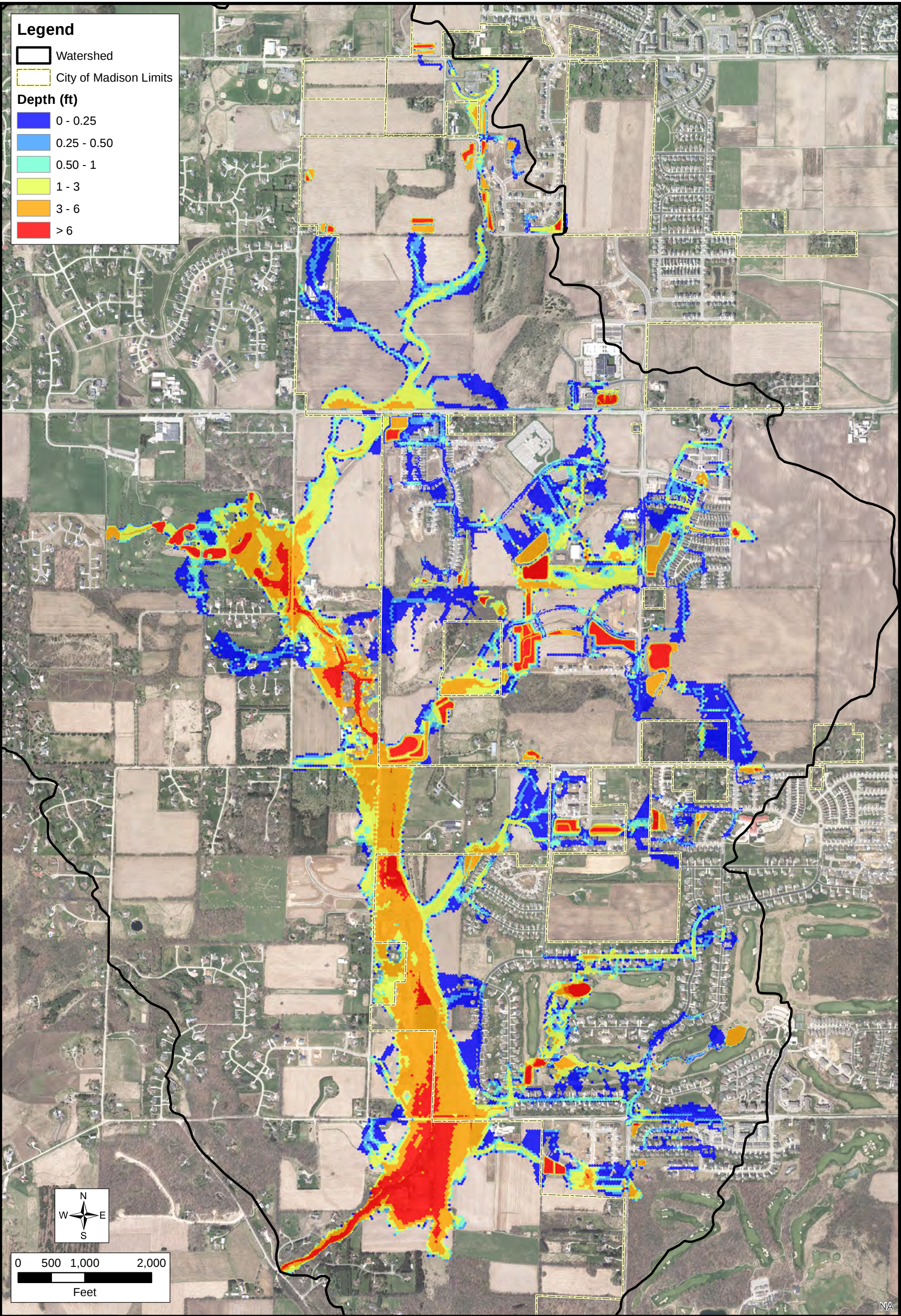
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1% CHANCE STORM EVENT WITH SWMM HYDROLOGY
FLOOD INUNDATION MAPPING
EXISTING CONDITIONS
LOWER BADGER MILL CREEK WATERSHED
CITY OF MADISON
DANE COUNTY, WISCONSIN



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FIGURE E6
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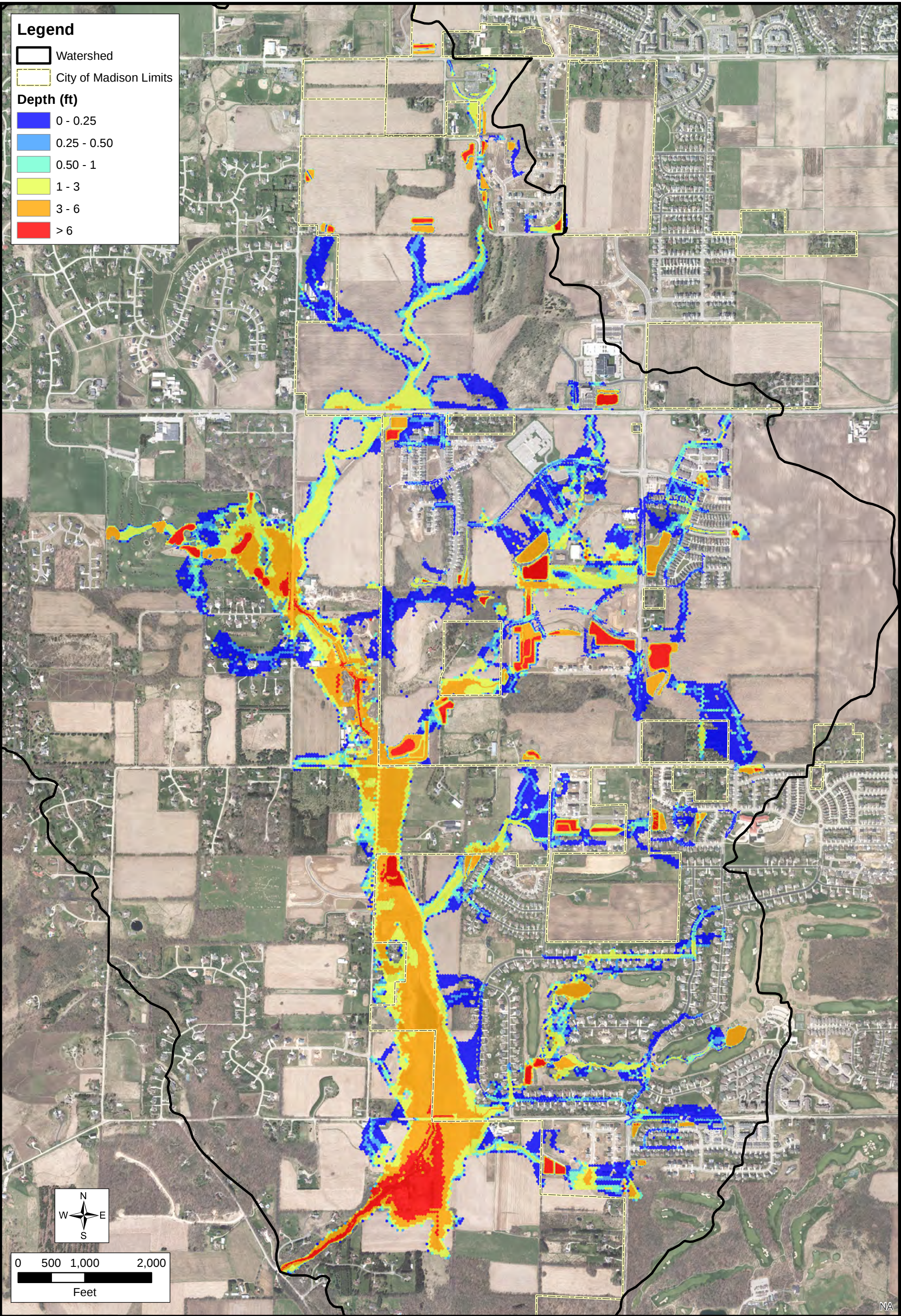
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EXISTING CONDITIONS
LOWER BADGER MILL CREEK WATERSHED
CITY OF MADISON
DANE COUNTY, WISCONSIN

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0.023% CHANCE STORM EVENT WITH SWMM HYDROLOGY
FLOOD INUNDATION MAPPING
EXISTING CONDITIONS
LOWER BADGER MILL CREEK WATERSHED
CITY OF MADISON
DANE COUNTY, WISCONSIN

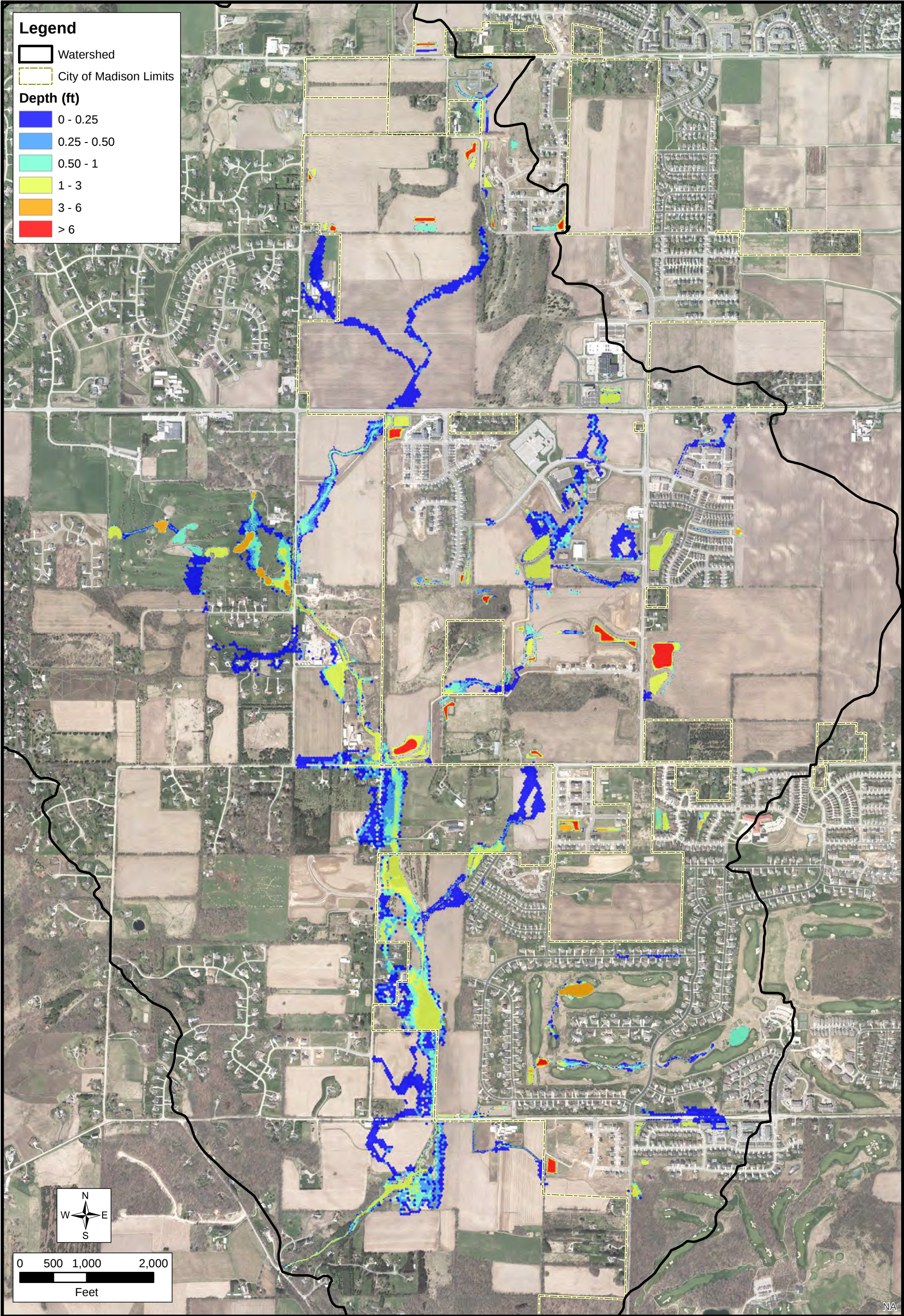
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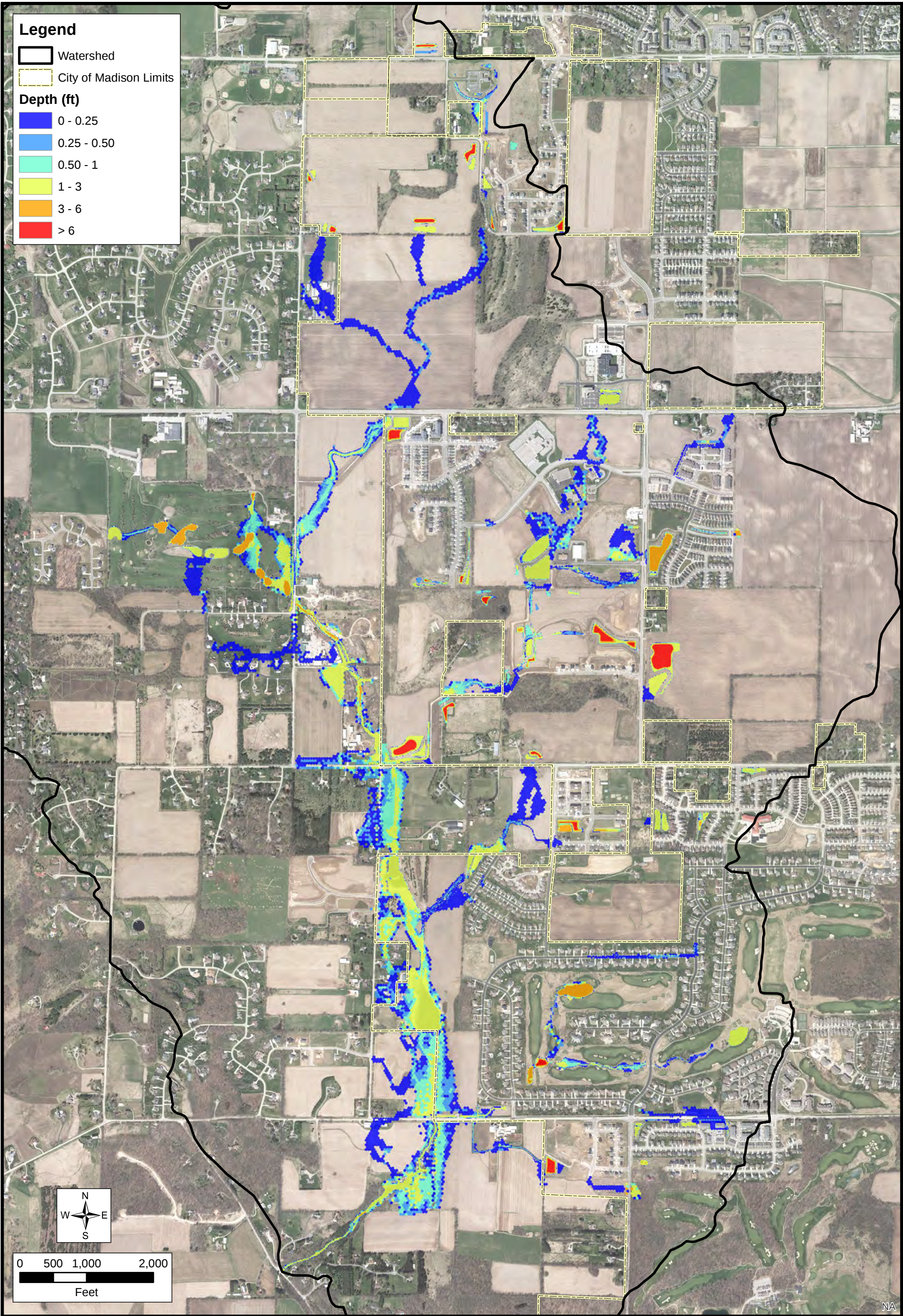
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FLOOD INUNDATION MAPPING
EXISTING CONDITIONS
LOWER BADGER MILL CREEK WATERSHED
CITY OF MADISON
DANE COUNTY, WISCONSIN

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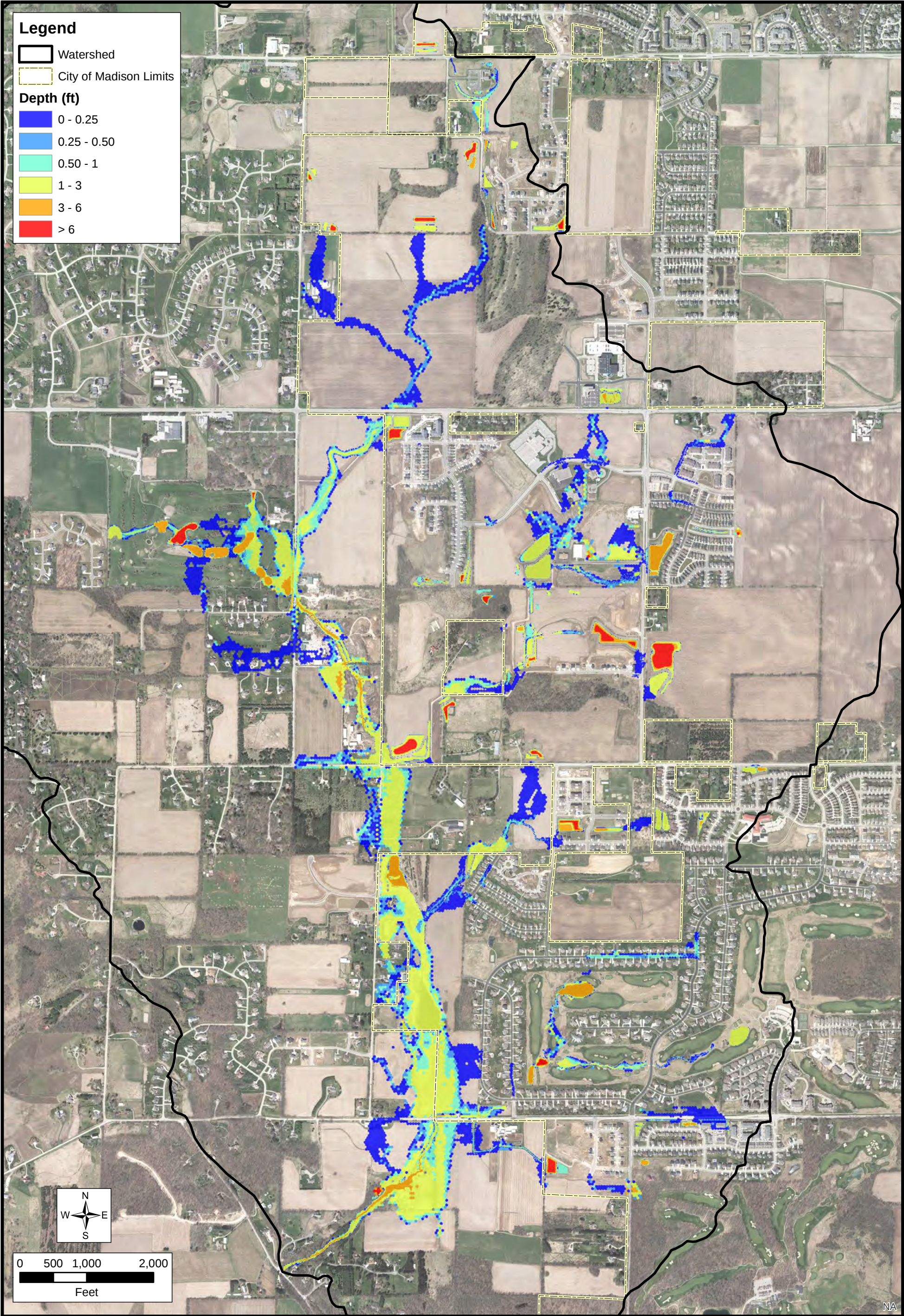
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50% CHANCE STORM EVENT WITH SCS HYDROLOGY
FLOOD INUNDATION MAPPING
EXISTING CONDITIONS
LOWER BADGER MILL CREEK WATERSHED
CITY OF MADISON
DANE COUNTY, WISCONSIN



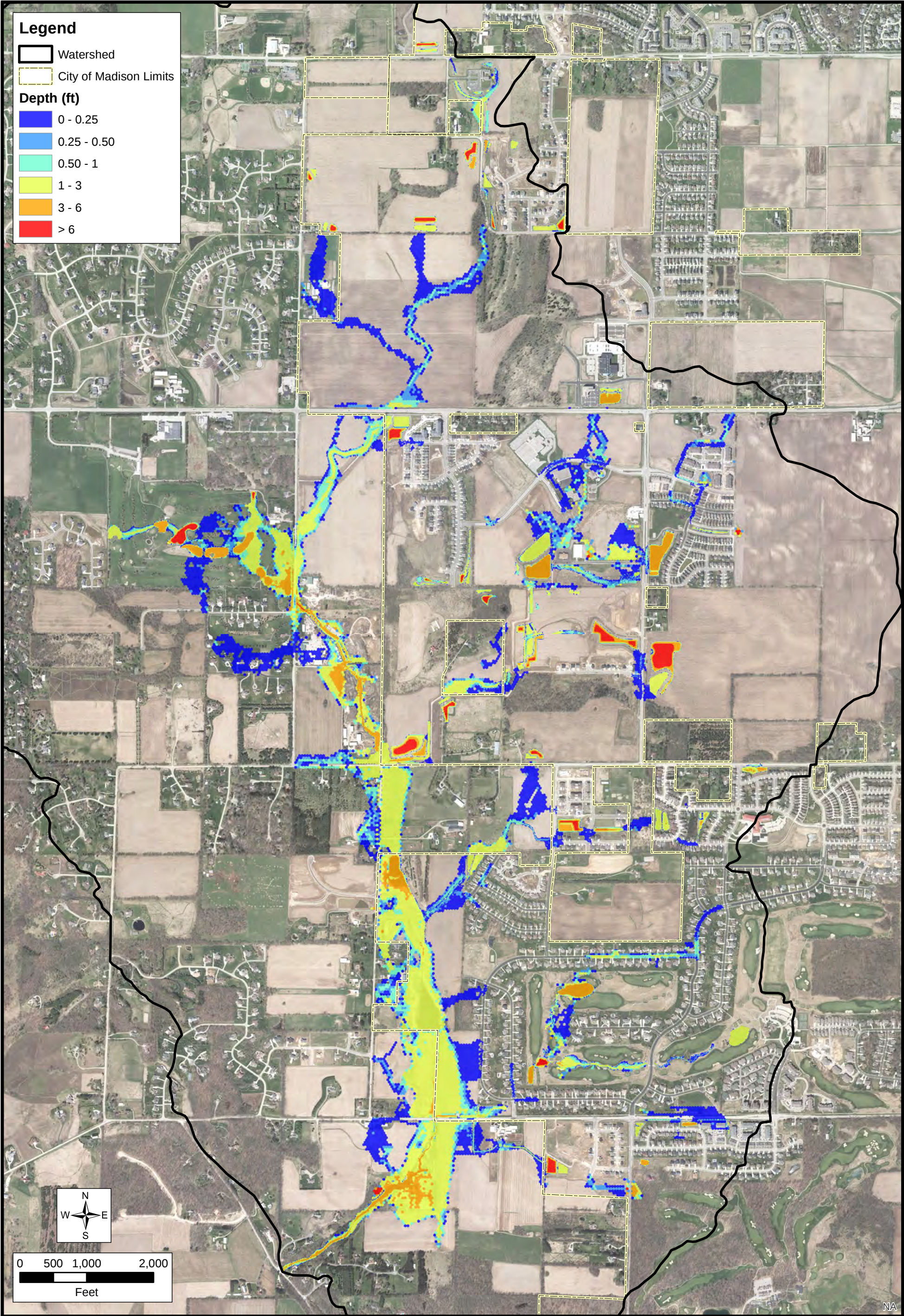
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FLOOD INUNDATION MAPPING
EXISTING CONDITIONS
LOWER BADGER MILL CREEK WATERSHED
CITY OF MADISON
DANE COUNTY, WISCONSIN

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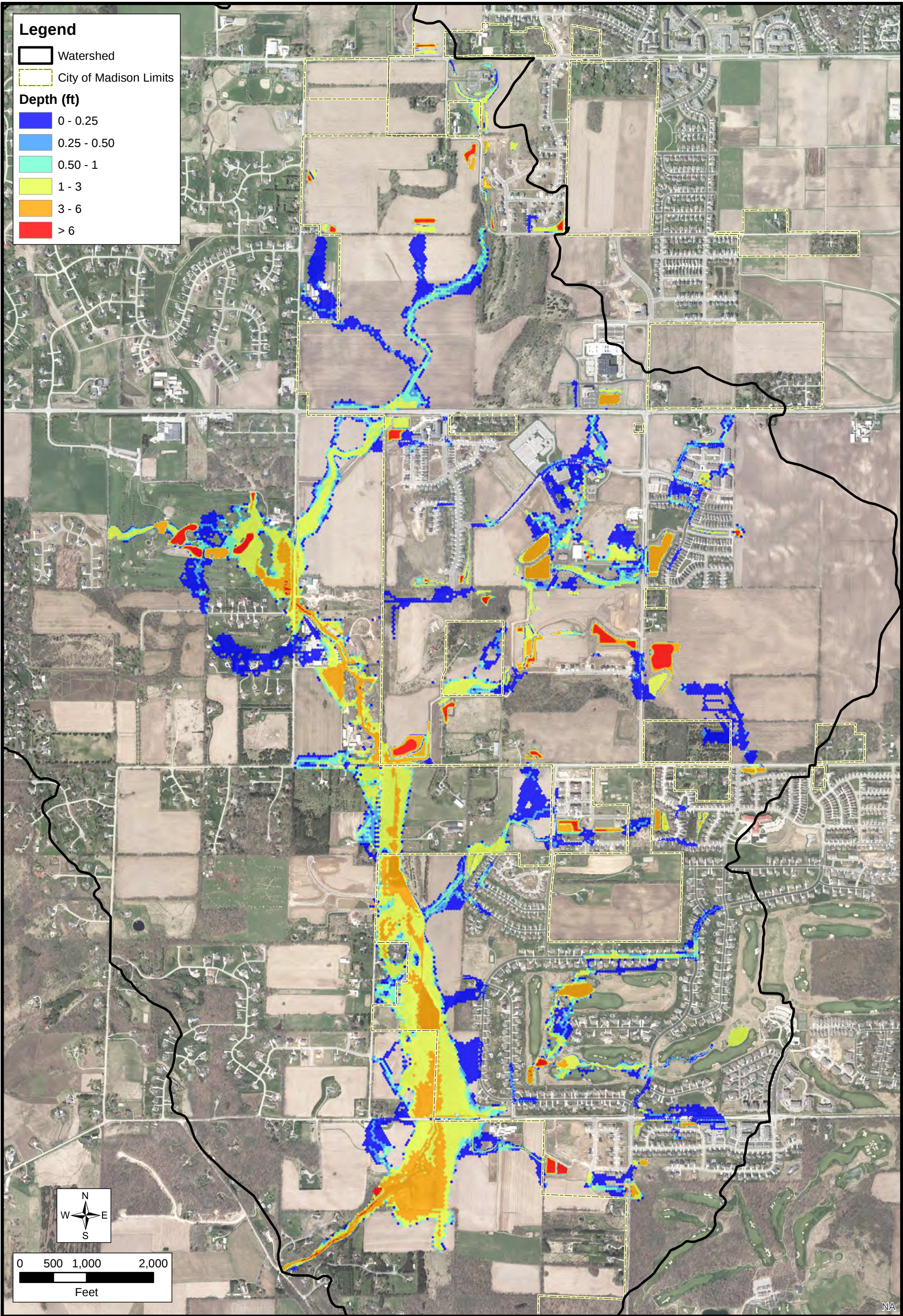
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EXISTING CONDITIONS
LOWER BADGER MILL CREEK WATERSHED
CITY OF MADISON
DANE COUNTY, WISCONSIN

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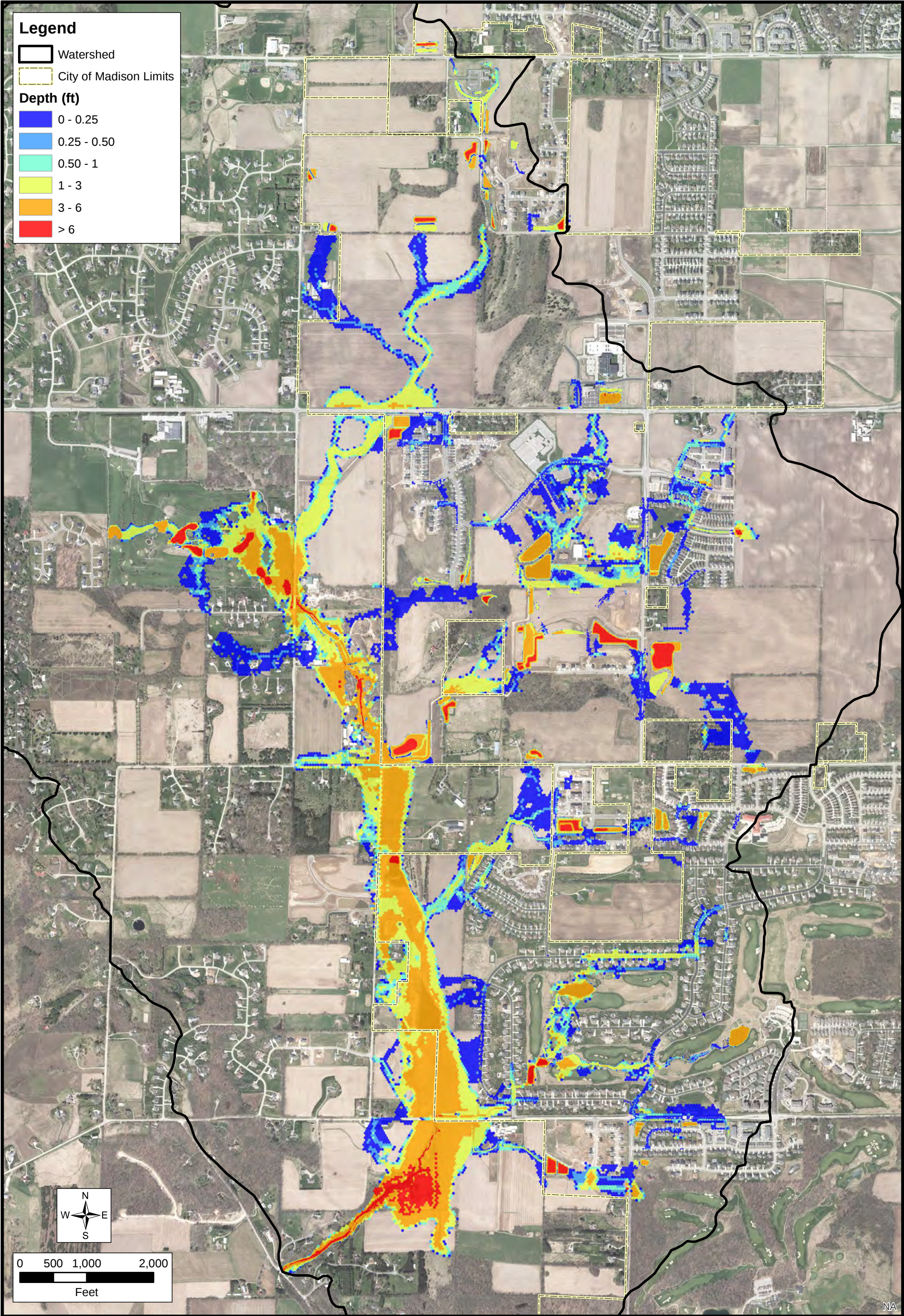
4% CHANCE STORM EVENT WITH SCS HYDROLOGY
FLOOD INUNDATION MAPPING
EXISTING CONDITIONS
LOWER BADGER MILL CREEK WATERSHED
CITY OF MADISON
DANE COUNTY, WISCONSIN

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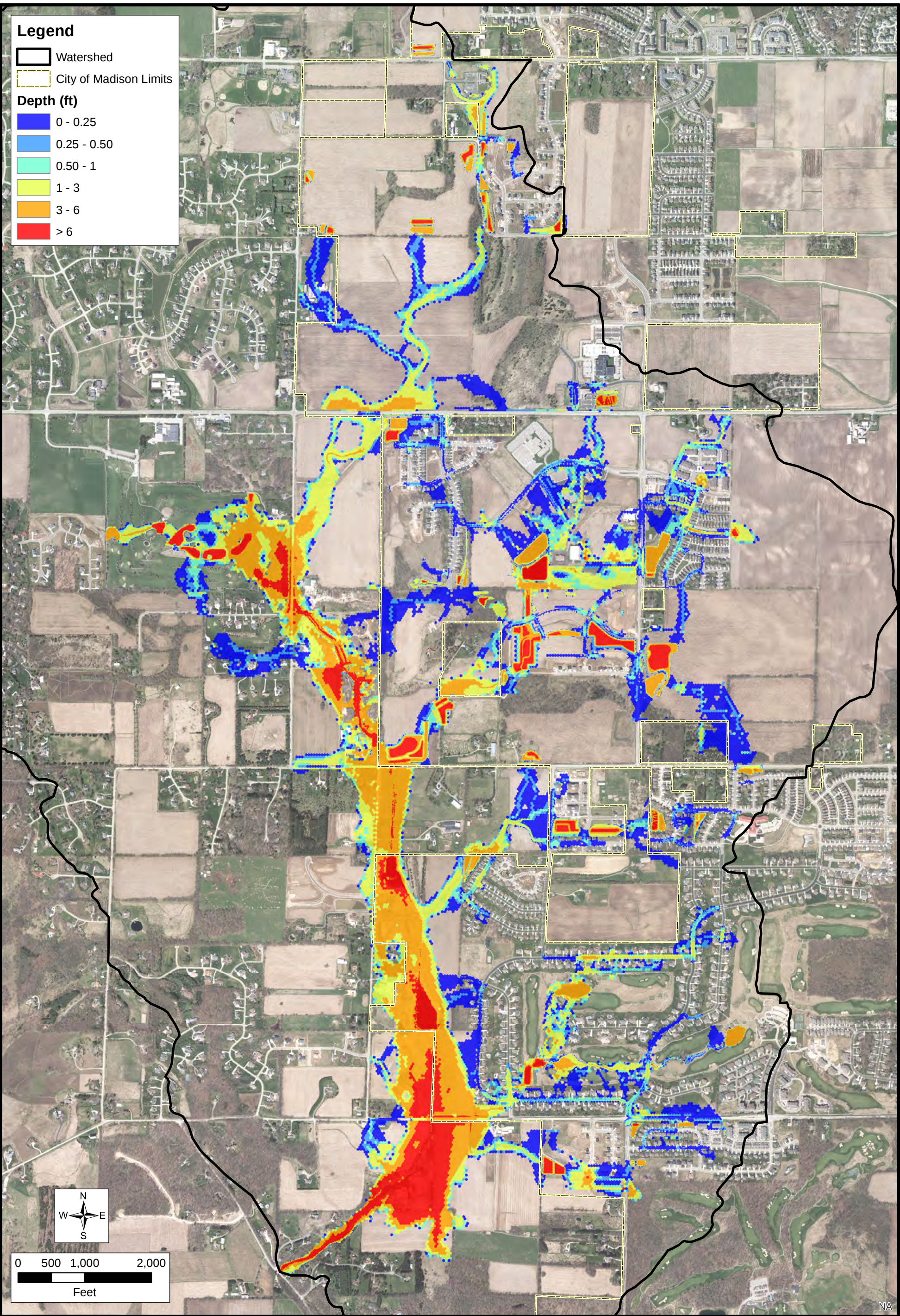
1% CHANCE STORM EVENT WITH SCS HYDROLOGY
FLOOD INUNDATION MAPPING
EXISTING CONDITIONS
LOWER BADGER MILL CREEK WATERSHED
CITY OF MADISON
DANE COUNTY, WISCONSIN

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FIGURE E15

1020.121

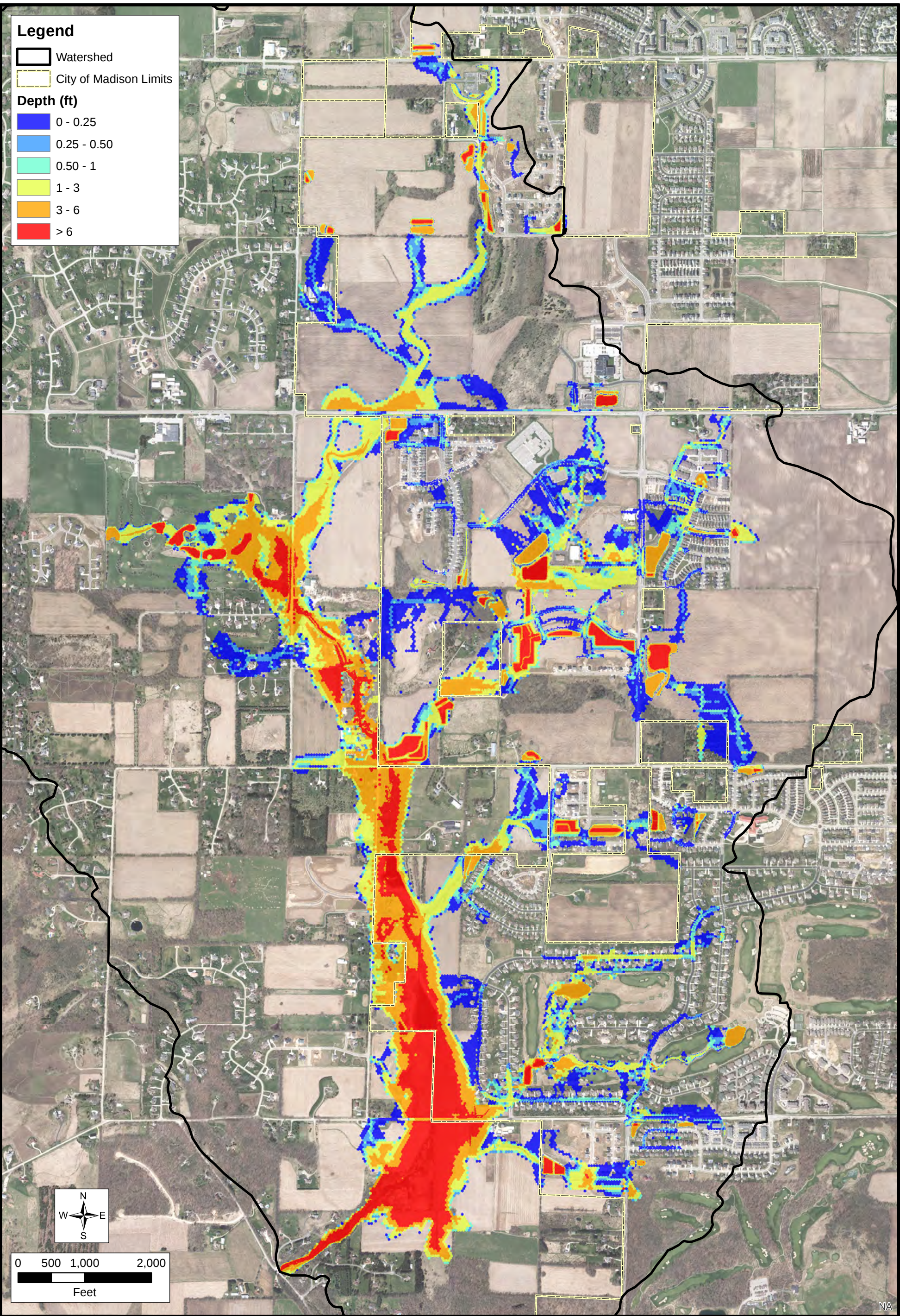
0.2% CHANCE STORM EVENT WITH SCS HYDROLOGY
FLOOD INUNDATION MAPPING
EXISTING CONDITIONS
LOWER BADGER MILL CREEK WATERSHED
CITY OF MADISON
DANE COUNTY, WISCONSIN

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FIGURE E16
1020.121

0.023% CHANCE STORM EVENT WITH SCS HYDROLOGY
FLOOD INUNDATION MAPPING
EXISTING CONDITIONS
LOWER BADGER MILL CREEK WATERSHED
CITY OF MADISON
DANE COUNTY, WISCONSIN