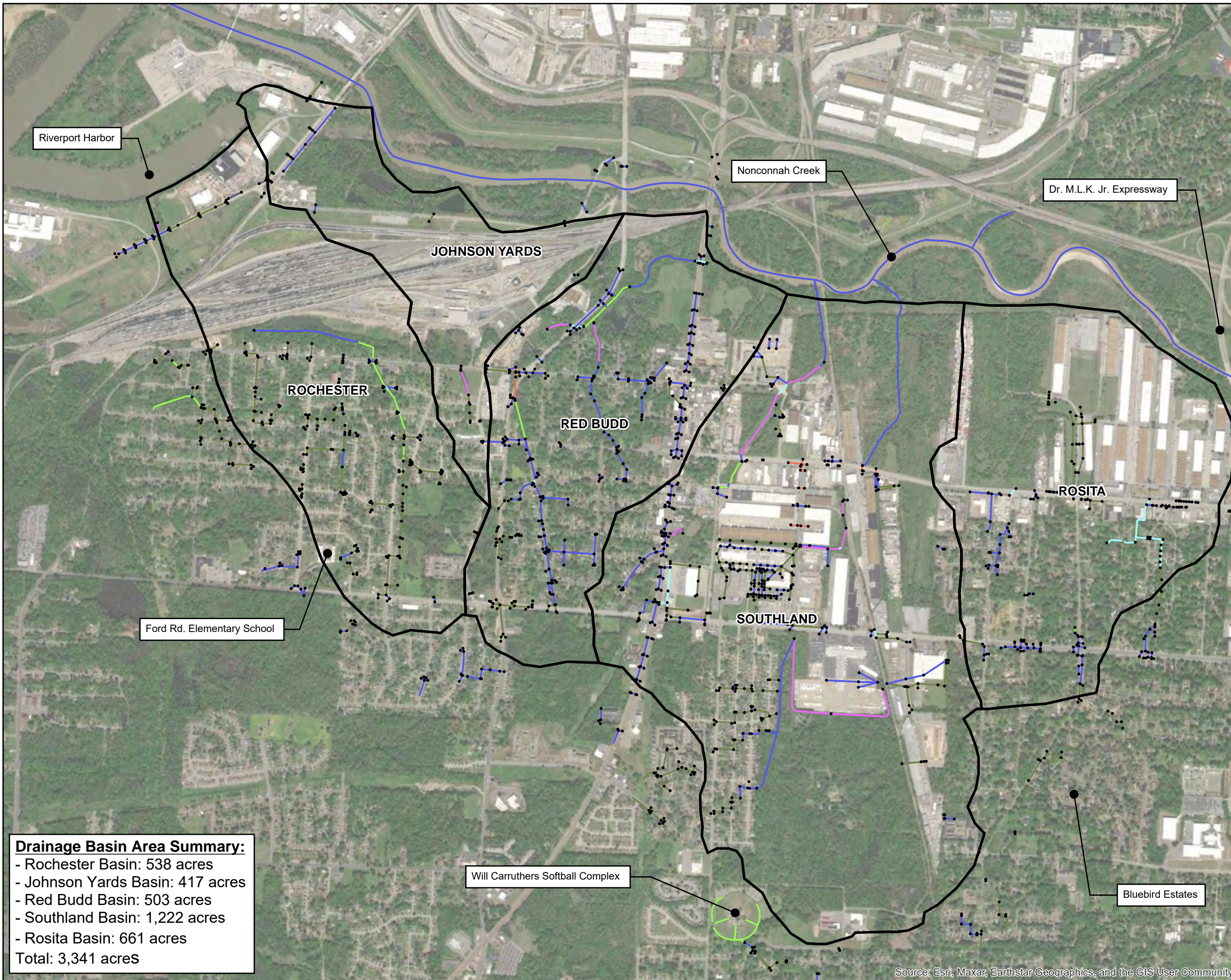

APPENDIX A
MAP EXHIBITS



- Legend:**
- ▭ City GIS Drainage Basin Boundary
 - City GIS Storm Structures
- City GIS Storm Conveyances MATERIAL**
- CMP
 - CONCRETE_SC
 - CONCRETE_UG
 - CONC_CULVERT
 - GRASS_SC
 - RCP
 - STRUCT_COMM

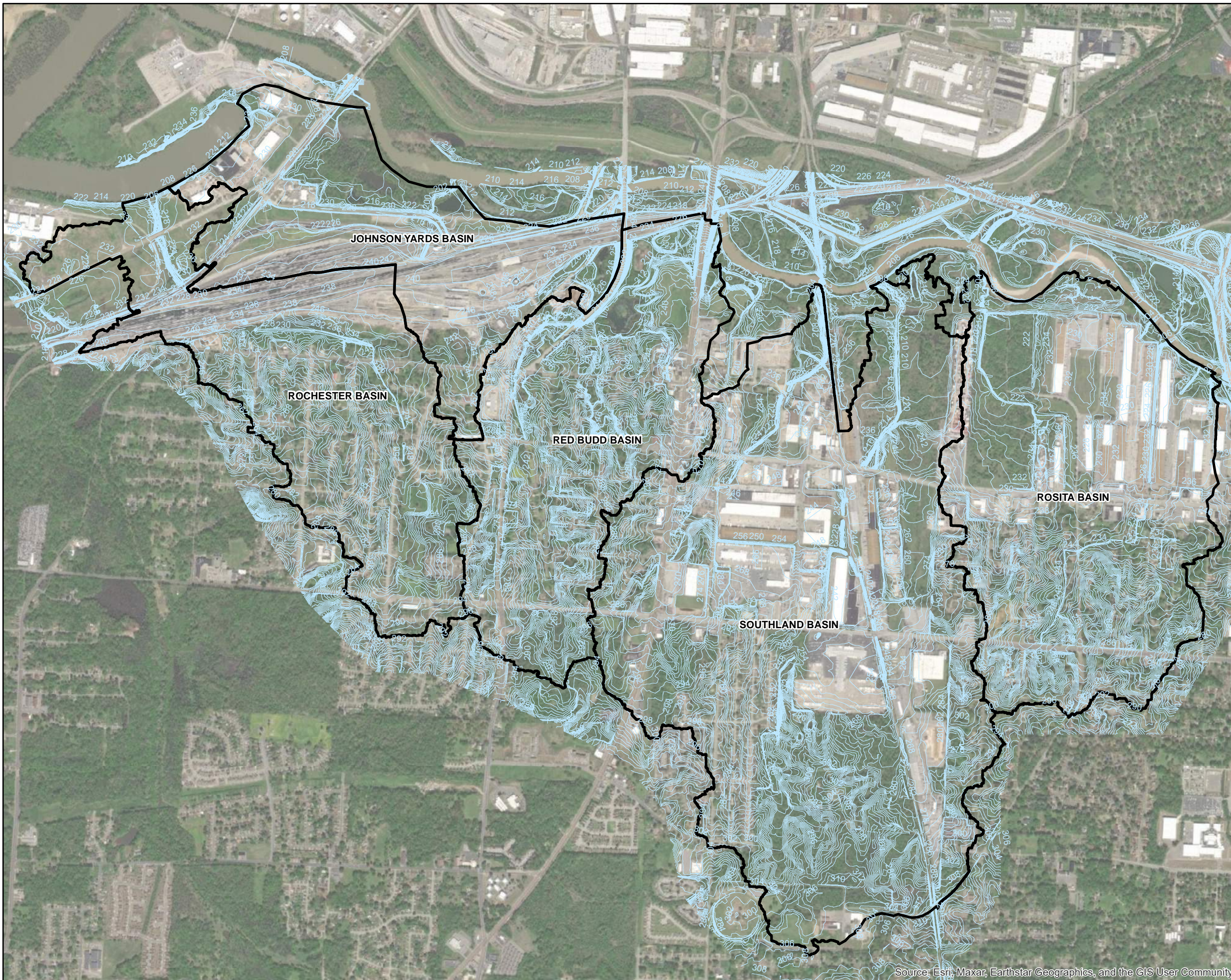
Drainage Basin Area Summary:

- Rochester Basin: 538 acres
- Johnson Yards Basin: 417 acres
- Red Budd Basin: 503 acres
- Southland Basin: 1,222 acres
- Rosita Basin: 661 acres
Total: 3,341 acres



	1 inch = 1,600 feet	
	Provided Preliminary GIS Data	
Exhibit 1	15640750 <small>Project No.</small>	June 2023 <small>Date</small>

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



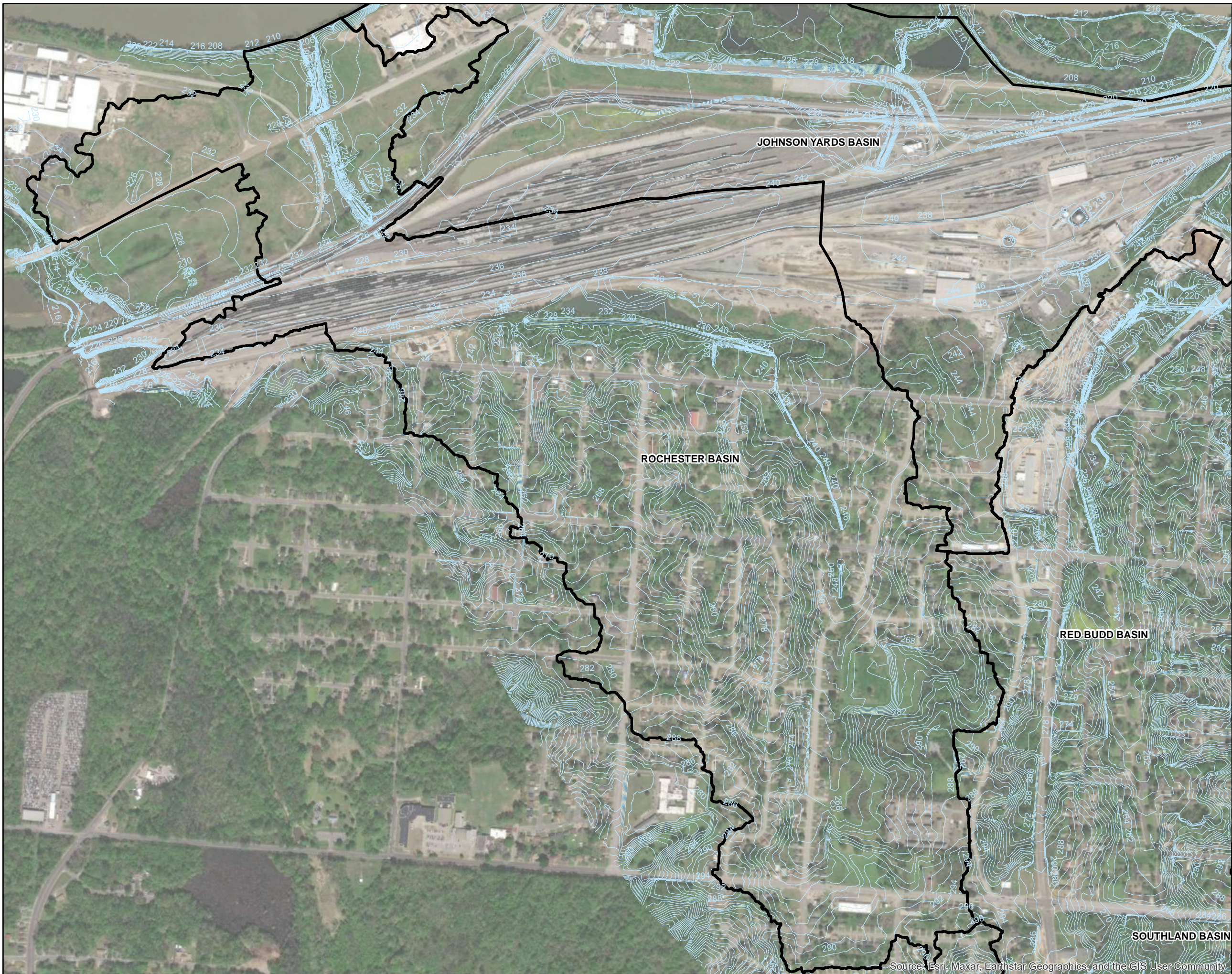
Legend:
 [Thick black line] Drainage Basin Boundary
 [Thin blue line] 2ft_Contours





N 1 inch = 1,600 feet
 2-Foot Contours

Exhibit 2	15640750 Project No.	June 2023 Date
-----------	-------------------------	-------------------

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



Legend:

-  Drainage Basin Boundary
-  2ft_Contours

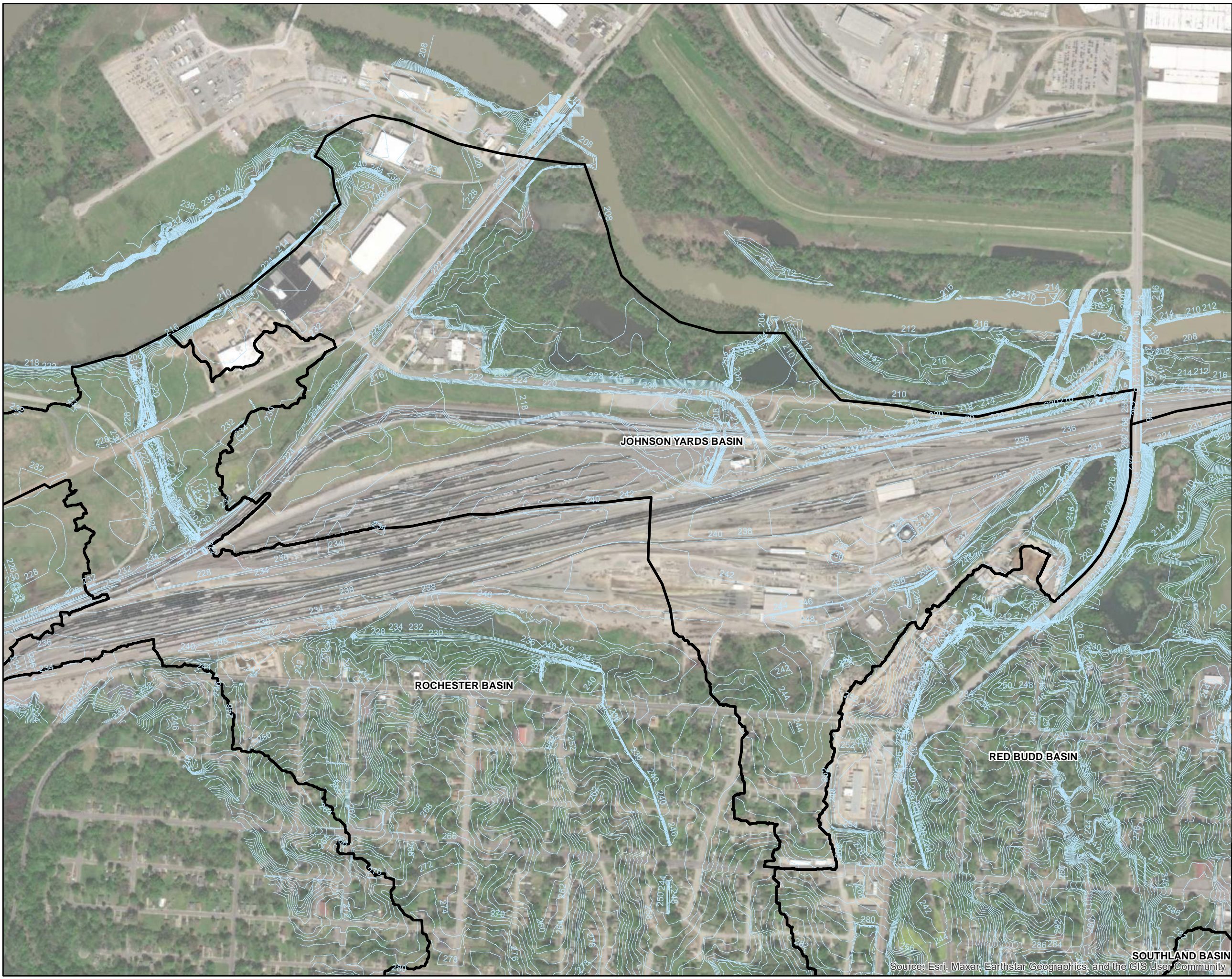


N 1 inch = 750 feet



Rochester Basin Contours

Exhibit 3	15640750 Project No.	June 2023 Date
-----------	-------------------------	-------------------

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



Legend:

-  Drainage Basin Boundary
-  2ft_Contours



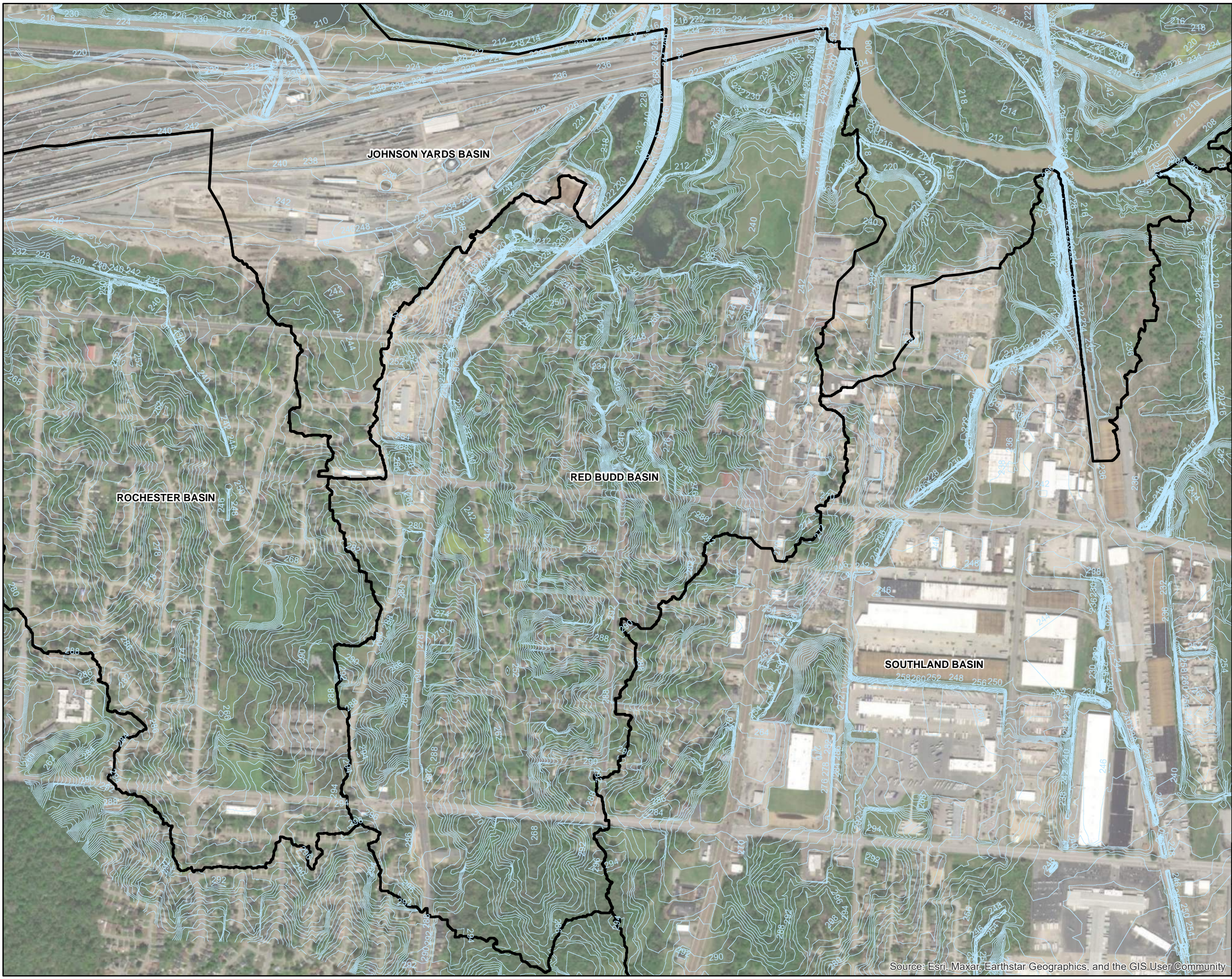
N 1 inch = 750 feet

Johnson Yards Basin Contours

Exhibit 4	15640750 Project No.	June 2023 Date
-----------	-------------------------	-------------------

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

SOUTHLAND BASIN



Legend:
 [Black Outline] Drainage Basin Boundary
 [Light Blue Line] 2ft_Contours

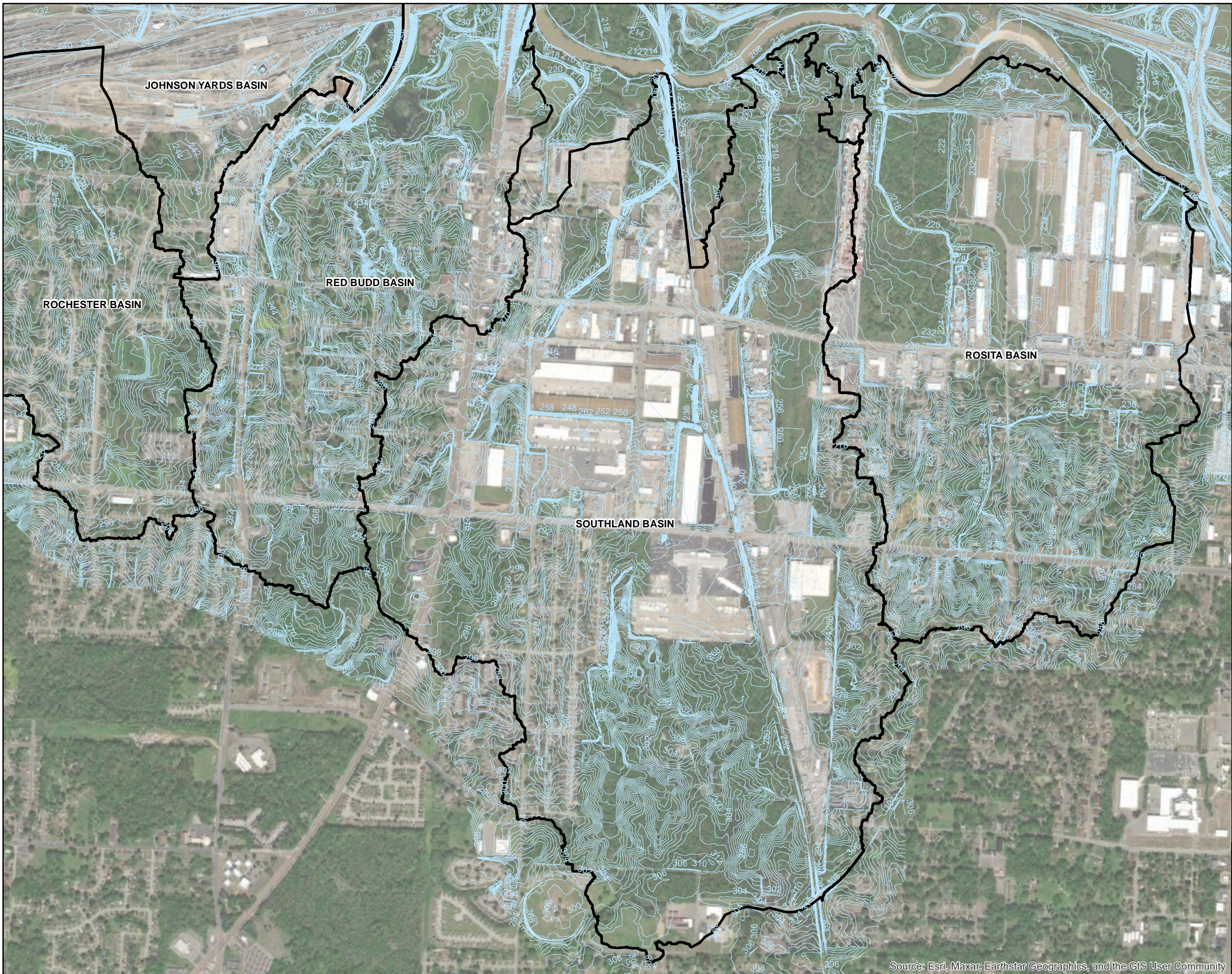


N 1 inch = 800 feet



Red Budd Basin Contours

Exhibit 5	15640750 Project No.	June 2023 Date
-----------	-------------------------	-------------------

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



Legend:

-  Drainage Basin Boundary
-  2ft_Contours

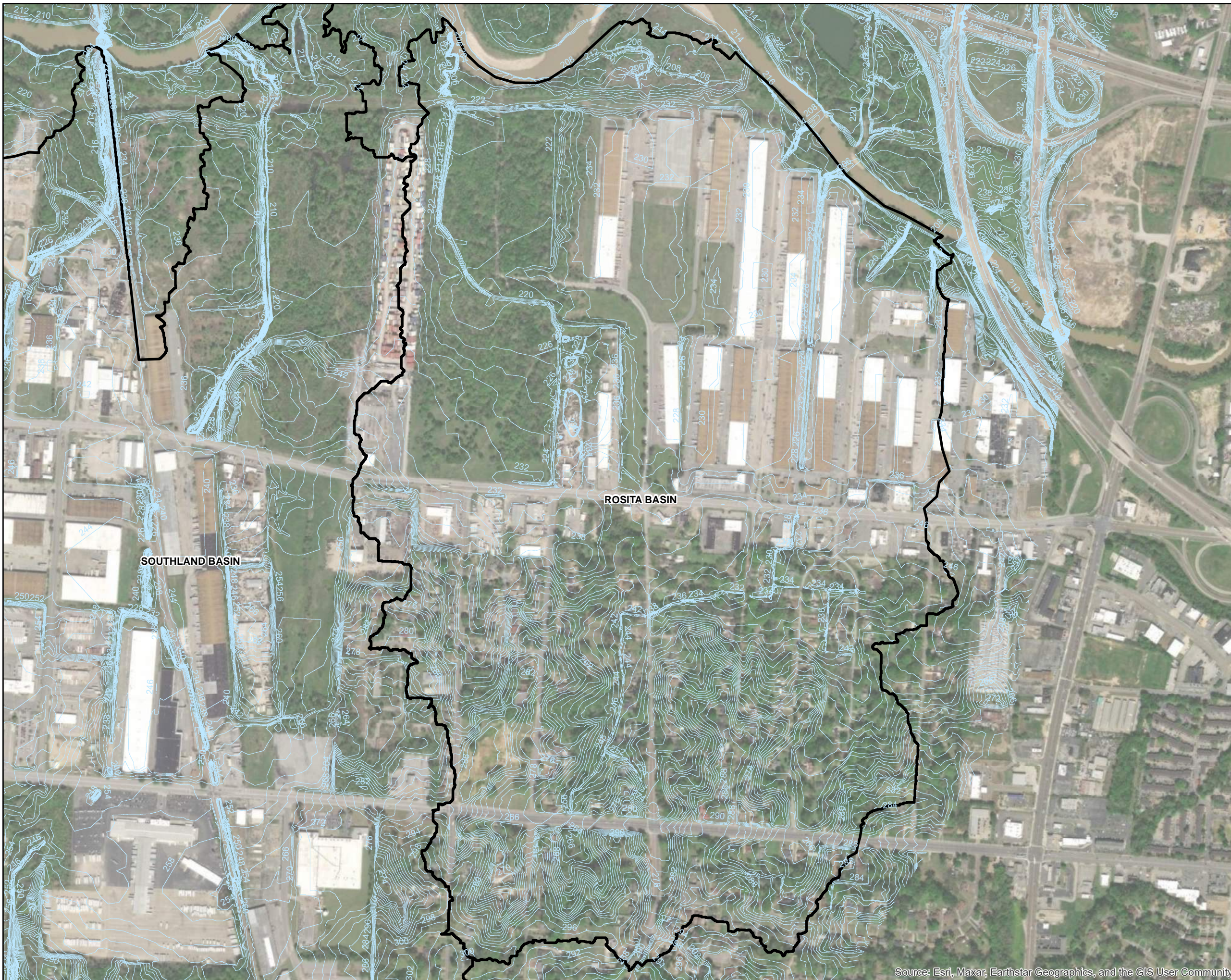


N 1 inch = 1,200 feet

Southland Basin Contours

Exhibit 6	15640750 Project No.	June 2023 Date
-----------	-------------------------	-------------------

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



Legend:
 [Thick black line] Drainage Basin Boundary
 [Thin blue line] 2ft_Contours

ROSITA BASIN

SOUTHLAND BASIN

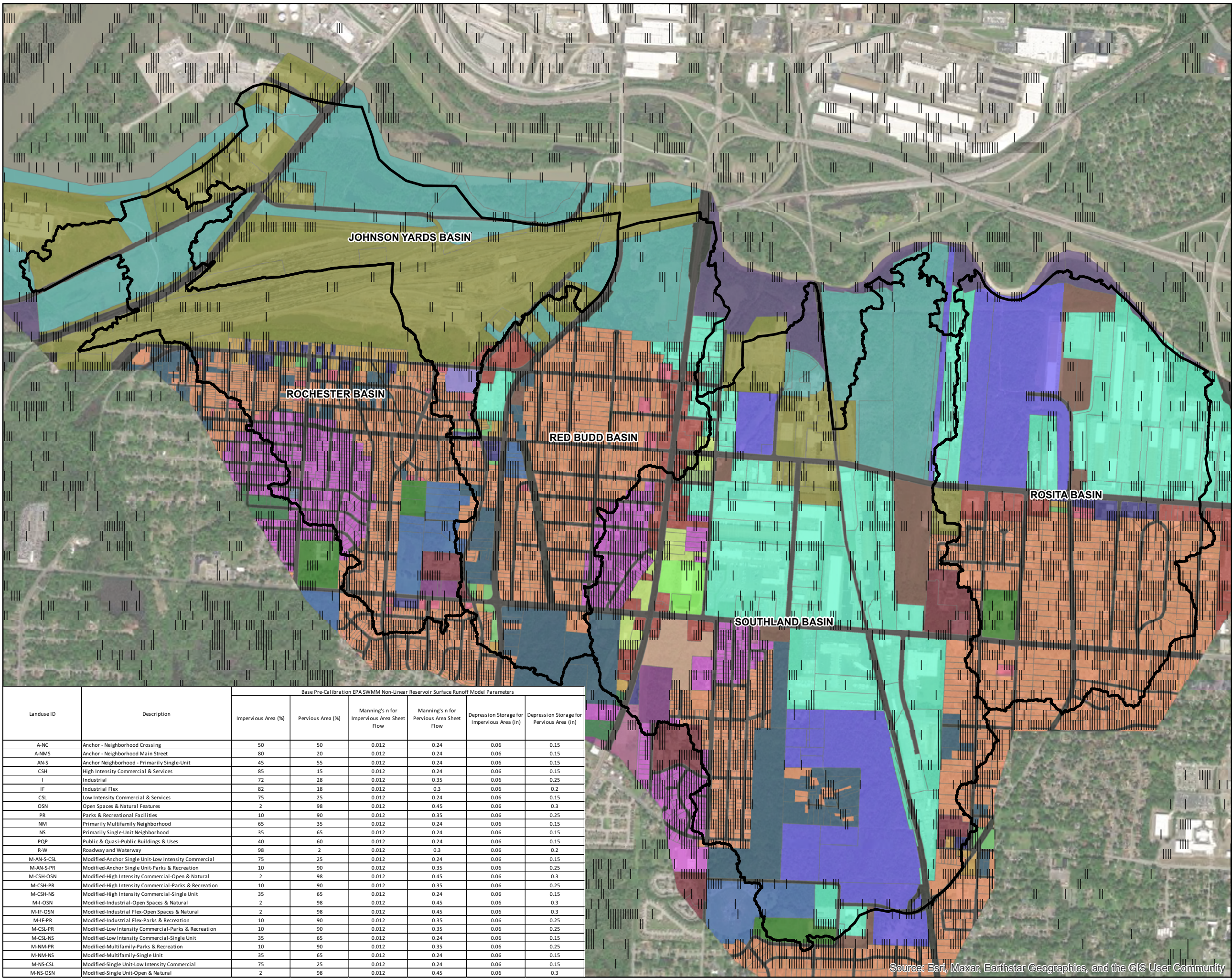


N 1 inch = 750 feet

Rosita Basin Contours

Exhibit 7	15640750 Project No.	June 2023 Date
-----------	-------------------------	-------------------

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



- Legend:**
- Drainage Basin Boundary
 - Land Use**
 - Anchor - Neighborhood Crossing
 - Anchor - Neighborhood Main Street
 - Anchor Neighborhood - Primarily Single-Unit
 - High Intensity Commercial & Services
 - Industrial
 - Industrial Flex
 - Low Intensity Commercial & Services
 - Modified-Anchor Single Unit-Low Intensity Com.
 - Modified-Anchor Single Unit-Parks & Recreation
 - Modified-High Intensity Commercial-Open & Natural
 - Modified-High Intensity Commercial-Parks & Rec.
 - Modified-High Intensity Commercial-Single Unit
 - Modified-Industrial Flex-Open Spaces & Natural
 - Modified-Industrial Flex-Parks & Recreation
 - Modified-Industrial-Open Spaces & Natural
 - Modified-Low Intensity Commercial-Parks & Rec.
 - Modified-Low Intensity Commercial-Single Unit
 - Modified-Multifamily-Parks & Recreation
 - Modified-Multifamily-Single Unit
 - Modified-Single Unit-Low Intensity Com.
 - Modified-Single Unit-Open & Natural
 - Open Spaces & Natural Features
 - Parks & Recreational Facilities
 - Primarily Multifamily Neighborhood
 - Primarily Single-Unit Neighborhood
 - Public & Quasi-Public Buildings & Uses
 - Roadway and Waterway

Base Pre-Calibration EPASWMM Non-Linear Reservoir Surface Runoff Model Parameters

Landuse ID	Description	Impervious Area (%)	Pervious Area (%)	Manning's n for Impervious Area Sheet Flow	Manning's n for Pervious Area Sheet Flow	Depression Storage for Impervious Area (in)	Depression Storage for Pervious Area (in)
A-NC	Anchor - Neighborhood Crossing	50	50	0.012	0.24	0.06	0.15
A-NMS	Anchor - Neighborhood Main Street	80	20	0.012	0.24	0.06	0.15
AN-S	Anchor Neighborhood - Primarily Single-Unit	45	55	0.012	0.24	0.06	0.15
CSH	High Intensity Commercial & Services	85	15	0.012	0.24	0.06	0.15
I	Industrial	72	28	0.012	0.35	0.06	0.25
IF	Industrial Flex	82	18	0.012	0.3	0.06	0.2
CSL	Low Intensity Commercial & Services	75	25	0.012	0.24	0.06	0.15
OSN	Open Spaces & Natural Features	2	98	0.012	0.45	0.06	0.3
PR	Parks & Recreational Facilities	10	90	0.012	0.35	0.06	0.25
NM	Primarily Multifamily Neighborhood	65	35	0.012	0.24	0.06	0.15
NS	Primarily Single-Unit Neighborhood	35	65	0.012	0.24	0.06	0.15
PQP	Public & Quasi-Public Buildings & Uses	40	60	0.012	0.24	0.06	0.15
R-W	Roadway and Waterway	98	2	0.012	0.3	0.06	0.2
M-AN-S-CSL	Modified-Anchor Single Unit-Low Intensity Commercial	75	25	0.012	0.24	0.06	0.15
M-AN-S-PR	Modified-Anchor Single Unit-Parks & Recreation	10	90	0.012	0.35	0.06	0.25
M-CSH-OSN	Modified-High Intensity Commercial-Open & Natural	2	98	0.012	0.45	0.06	0.3
M-CSH-PR	Modified-High Intensity Commercial-Parks & Recreation	10	90	0.012	0.35	0.06	0.25
M-CSH-NS	Modified-High Intensity Commercial-Single Unit	35	65	0.012	0.24	0.06	0.15
M-I-OSN	Modified-Industrial-Open Spaces & Natural	2	98	0.012	0.45	0.06	0.3
M-IF-OSN	Modified-Industrial Flex-Open Spaces & Natural	2	98	0.012	0.45	0.06	0.3
M-IF-PR	Modified-Industrial Flex-Parks & Recreation	10	90	0.012	0.35	0.06	0.25
M-CSL-PR	Modified-Low Intensity Commercial-Parks & Recreation	10	90	0.012	0.35	0.06	0.25
M-CSL-NS	Modified-Low Intensity Commercial-Single Unit	35	65	0.012	0.24	0.06	0.15
M-NM-PR	Modified-Multifamily-Parks & Recreation	10	90	0.012	0.35	0.06	0.25
M-NM-NS	Modified-Multifamily-Single Unit	35	65	0.012	0.24	0.06	0.15
M-NS-CSL	Modified-Single Unit-Low Intensity Commercial	75	25	0.012	0.24	0.06	0.15
M-NS-OSN	Modified-Single Unit-Open & Natural	2	98	0.012	0.45	0.06	0.3



NORTH 1 inch = 1,600 feet

Land Use Classification

Exhibit 8	15640750 Project No.	June 2023 Date
-----------	-------------------------	-------------------

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community