



# Infiltration and Inflow Control Program Question and Answer Session

February 2, 2016

February 4, 2016



# History

- |               |                                                      |
|---------------|------------------------------------------------------|
| 1985          | MWRD adopts Sewer Summit Agreement, establishes ICAP |
| 2012-2014     | Planning for new I/I control program                 |
| July 2014     | MWRD adopts IICP in WMO Article 8                    |
| March 1, 2016 | First submittal under IICP due to MWRD               |



# Who needs to submit reports to the MWRD?

All Satellite Entities:

Parties who own a public sanitary sewer system that discharges directly or indirectly into the MWRD's system

- ICAP communities
- Systems added to MWRD through annexations
- New system owners



# What needs to be submitted by March 1, 2016?

Forms

Sewer System Map

Supporting documentation (if applicable)



# High Priority Deficiencies

Defects that have a low cost of removal to I/I flow ratio or that have high likelihood of causing sewer collapse or blockages if not rehabilitated.

Must be addressed as quickly as possible.

Examples:

- Direct and indirect cross connections
- Directly connected or poorly disconnected downspouts
- Missing or damaged cleanout covers
- Defects with NASSCO Grade of 4 or 5



## Forms due March 1, 2016

1. Sanitary Sewer System Description & Inventory Form\*
2. Short Term Requirements Annual Summary Report
3. Condition Assessment Prioritization Form
4. Status of High Priority Deficiencies Form, *only* if HPDs have been identified but not corrected in 2015
5. Capital Improvement Plan, *only* if HPDs have been identified but not corrected in 2015, *and* the means of correcting these HPDs is a capital improvement.



# Sewer System Map

Show full extent of satellite system's service area.

Identify the high risk sewers.

Show the extent of areas served by high risk sewers.

Identify the sewers that have been inspected in reporting year.



# Sewer System Map

Identify the sewers that have been inspected between July 10, 2009 and July 10, 2014, *if you seek credit for such work.*

Identify the sewers that have been CIPP lined for which an equivalent length of sewer will be inspected instead.\*

Identify the equivalent length of non-high-risk sewer to be inspected in lieu of CIPP-lined high-risk sewer.\*

\* *If you pursue this option*





# MWRD Mapping Examples

## SEWER ATLAS EXHIBITS

# Overview of Sewer Maps

## Separate Sewer Systems

- **Merrionette Park**  
Small System (23,256')
- **South Lyons Township Sanitary District**  
Medium System (104,842')
- **Alisp**  
Large System (345,457')

## Combined Sewer Systems

- **Dolton**  
Sanitary Only (47,237')

# Map Attributes

## Five Map Set

- Tributary basins
- High priority area
- Pipe size distribution
- Pipe material distribution
- Pipe age distribution

## Map Elements

- Village Limits
- Manholes
- Lift Stations
- Flow arrows for basins and pipes
- Open land identified

# SMALL SYSTEMS

## Merrionette Park

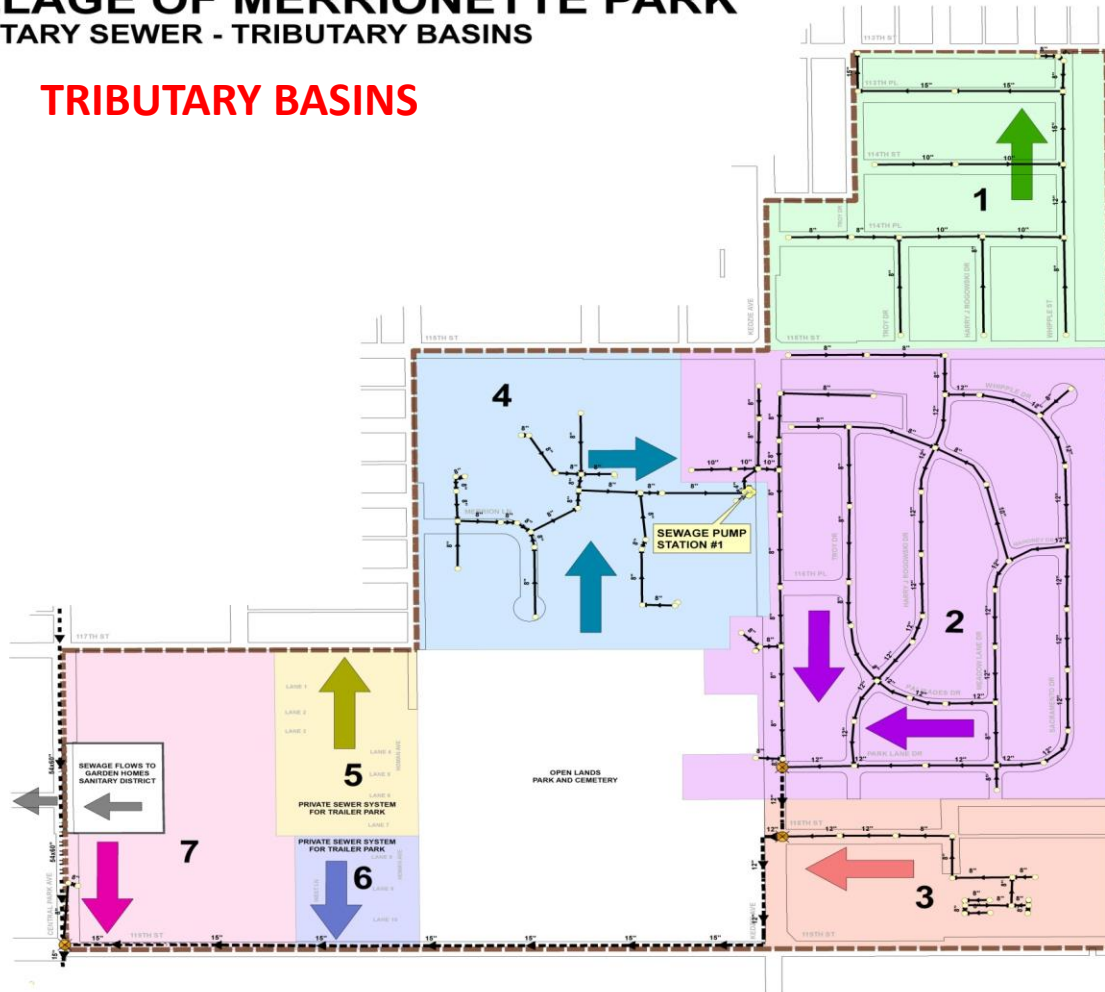
- 23,256' of sewer ranging in 4" to 15"
- Three MWRD connection points
  - North tributary basin
  - South tributary basin



# VILLAGE OF MERRIONETTE PARK

## SANITARY SEWER - TRIBUTARY BASINS

### TRIBUTARY BASINS



#### LEGEND

- VILLAGE LIMITS
- SEWAGE PUMP STATION
- MANHOLE
- MWRD SEWER
- SANITARY SEWER
- CONNECTIONS TO MWRD
- SEWER BASIN WITH LABEL
- BASIN FLOW DIRECTION

#### BASIN

#### ACRES

1	34
2	67
3	20
4	36
5	10
6	5
7	22

#### TOTAL

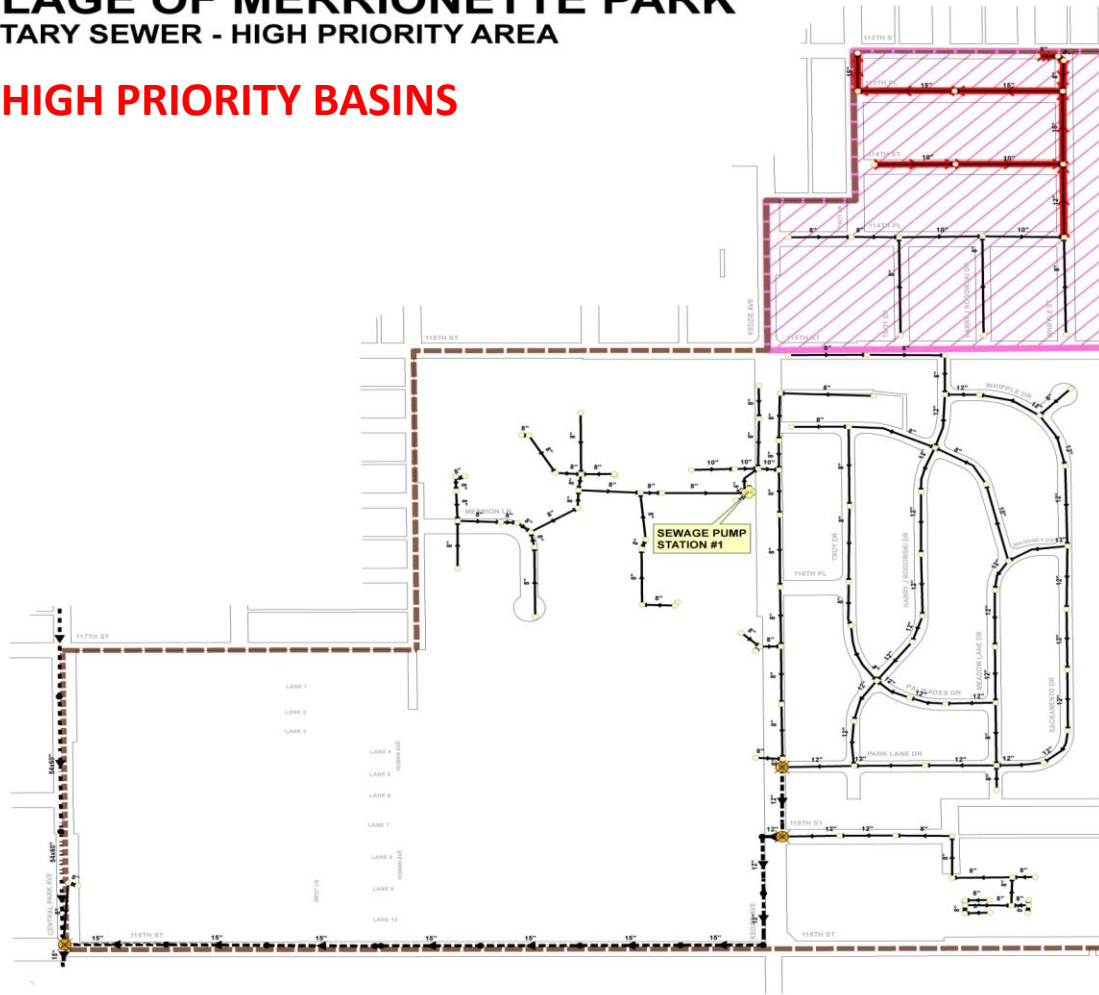
194 AC



# VILLAGE OF MERRIONETTE PARK

## SANITARY SEWER - HIGH PRIORITY AREA

### HIGH PRIORITY BASINS



#### LEGEND

- VILLAGE LIMITS
- SEWAGE PUMP STATION
- MANHOLE
- MWRD SEWER
- SANITARY SEWER
- CONNECTIONS TO MWRD
- AREA TRIBUTARY TO HIGH PRIORITY SEWER
- HIGH PRIORITY ASSESSMENT
- SSO (SANITARY SEWER OVERFLOW LOCATIONS)
- BASEMENT BACKUP AREAS

Total length of public sanitary sewers (feet)	23,406
Total length of High Priority sanitary sewer (feet)	2,535
Total length of High Priority sanitary sewer (percentage)	10.8%

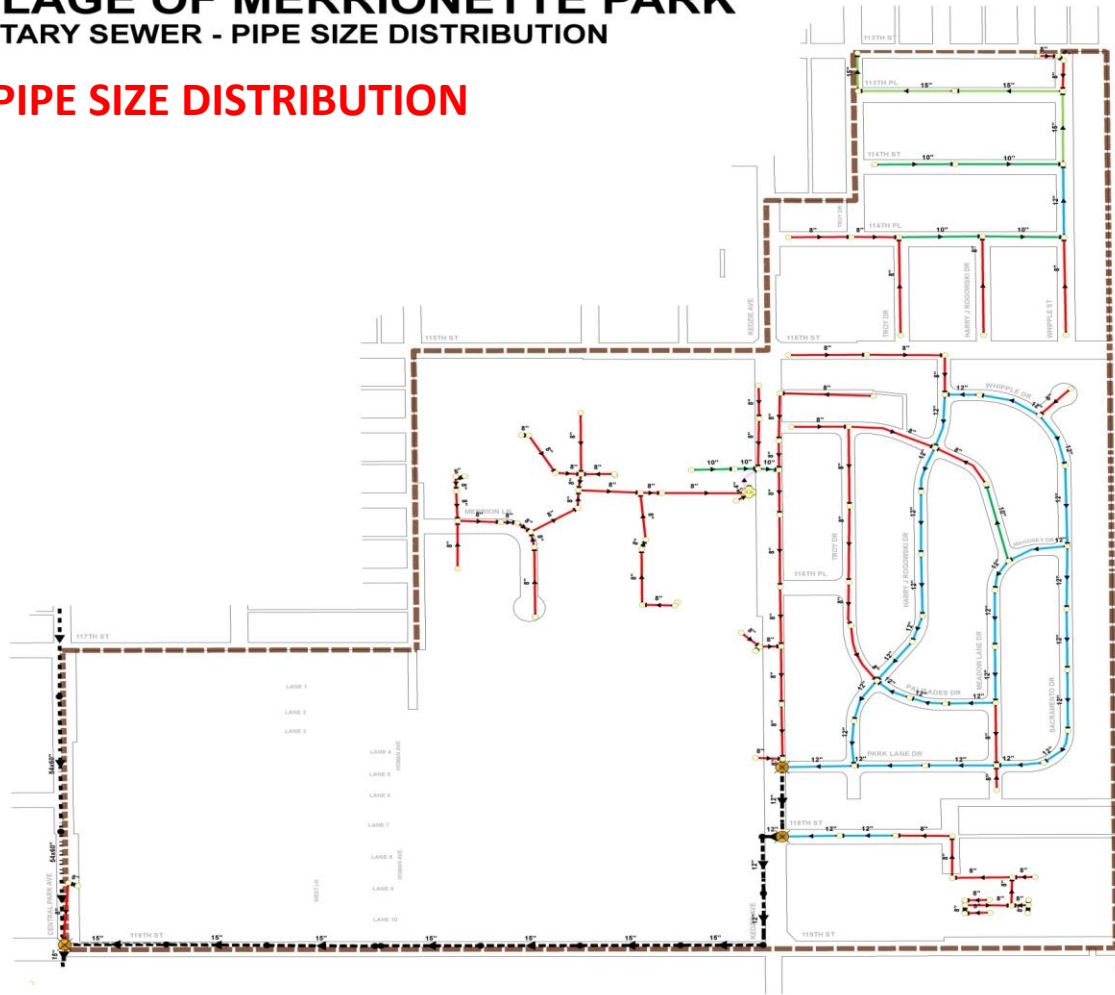




# VILLAGE OF MERRIONETTE PARK

## SANITARY SEWER - PIPE SIZE DISTRIBUTION

### PIPE SIZE DISTRIBUTION



**LEGEND**

- VILLAGE LIMITS
- SEWAGE PUMP STATION
- MANHOLE
- MWRD SEWER
- CONNECTIONS TO MWRD

**SIZE DISTRIBUTION**

- 4" (150')
- 8" (13,189')
- 10" (2,006')
- 12" (6,798')
- 15" (1,261')

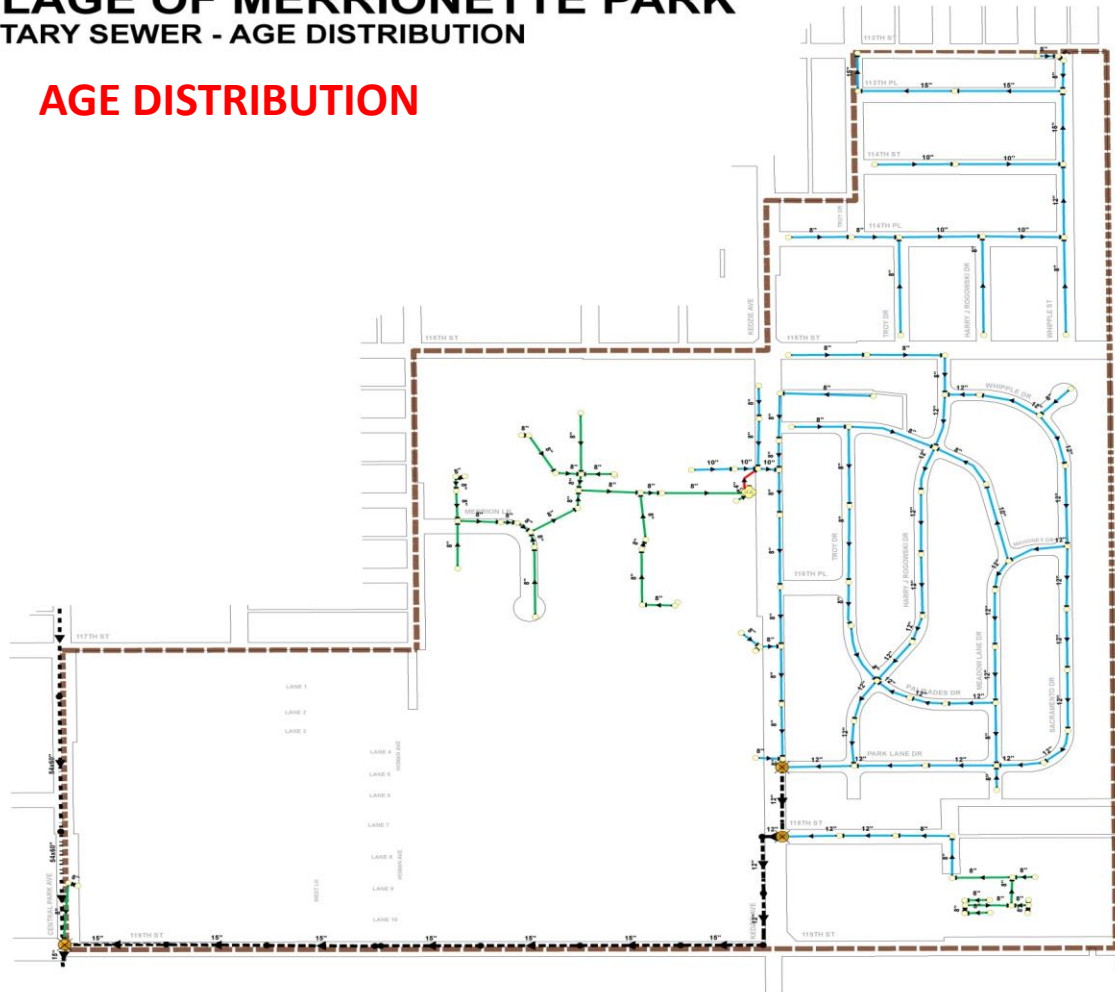




# VILLAGE OF MERRIONETTE PARK

## SANITARY SEWER - AGE DISTRIBUTION

### AGE DISTRIBUTION



### LEGEND

- VILLAGE LIMITS
- SEWAGE PUMP STATION
- MANHOLE
- MWRD SEWER
- CONNECTIONS TO MWRD

### AGE DISTRIBUTION

	0-25 YEARS	(150')
	26-50 YEARS	(4,860')
	> 51	(18,396')

# MEDIUM SYSTEMS

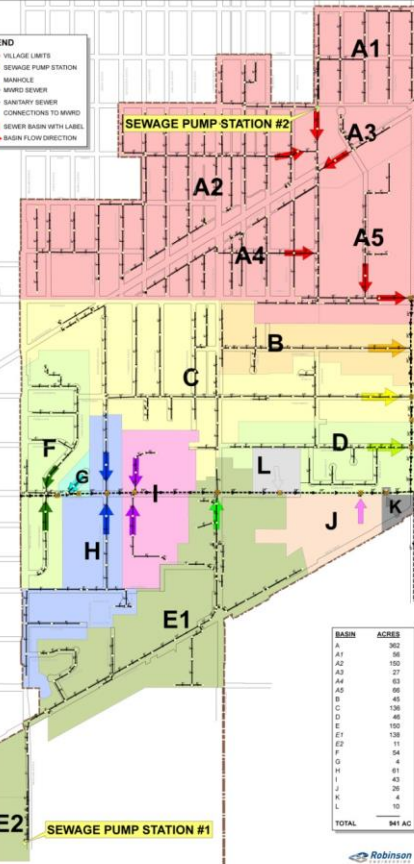
## South Lyons Township Sanitary District

- 104,842' of sewer ranging in 6" to 18"
- 12 MWRD connection points  
12 tributary basins

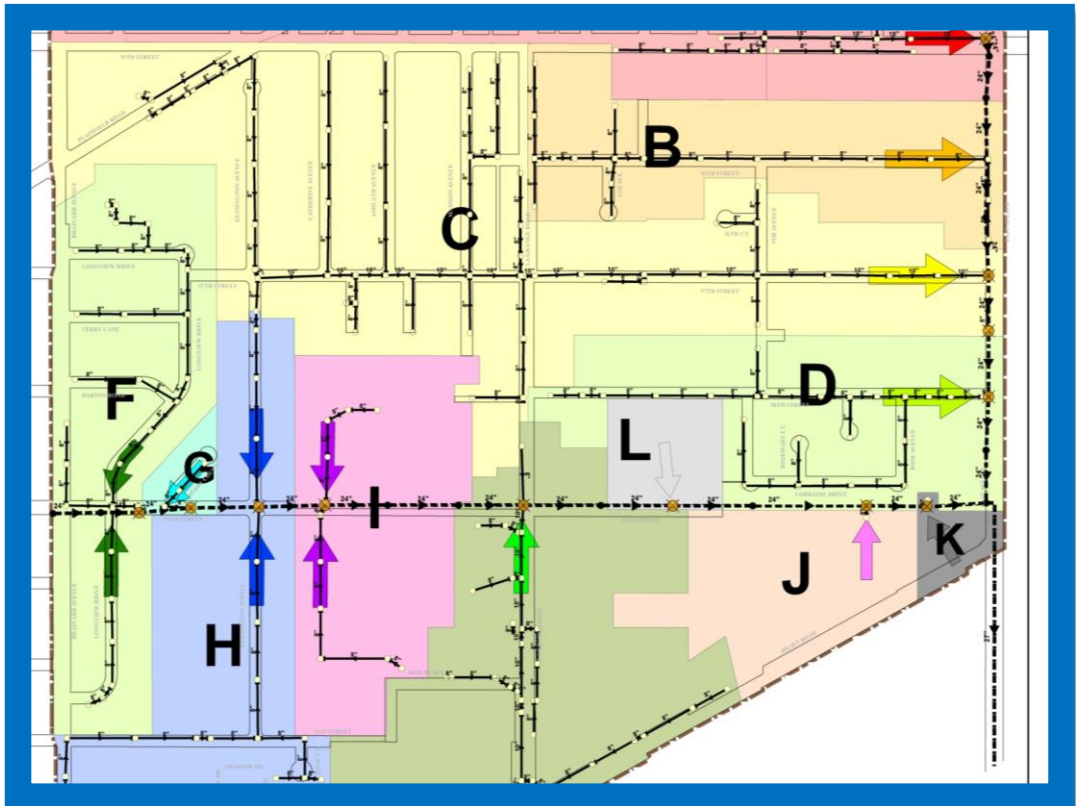


**SLTSD**  
**SOUTH LYONS TOWNSHIP SANITARY DISTRICT**  
**SANITARY SEWER - TRIBUTARY BASINS**

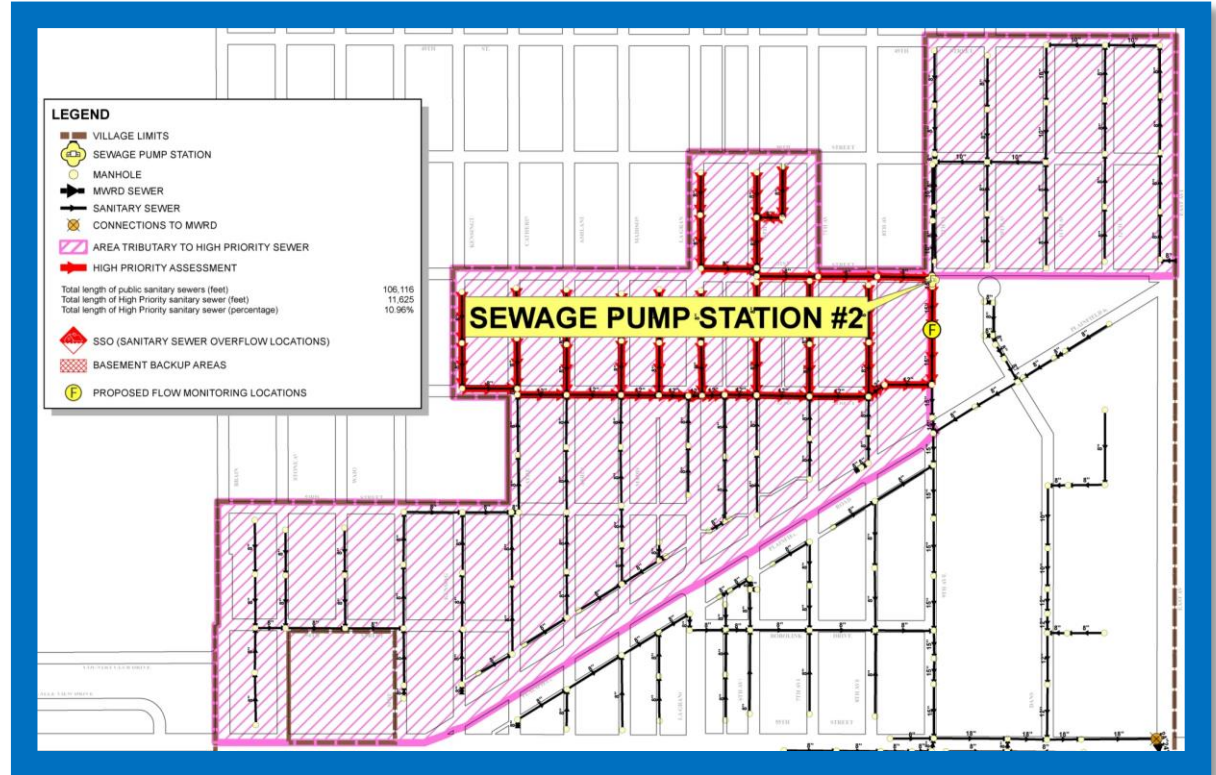
- LEGEND**
- VILLAGE LIMITS
  - SEWAGE PUMP STATION
  - MANHOLE
  - MAIN SEWER
  - SANITARY SEWER
  - CONNECTIONS TO MAJOR
  - SEWER BASIN WITH LABEL
  - BASIN FLOW DIRECTION



BASIN	ACRES
A	902
A1	98
A2	100
A3	27
A4	62
A5	66
B	46
C	138
D	46
E	100
E1	138
E2	11
F	54
G	4
H	61
I	42
J	26
K	10
L	10
<b>TOTAL</b>	<b>941 AC</b>



**SLTSD**  
**SOUTH LYONS TOWNSHIP SANITARY DISTRICT**  
**SANITARY SEWER - AREA TRIBUTARY TO HIGH PRIORITY SEWER**



# LARGE SYSTEMS

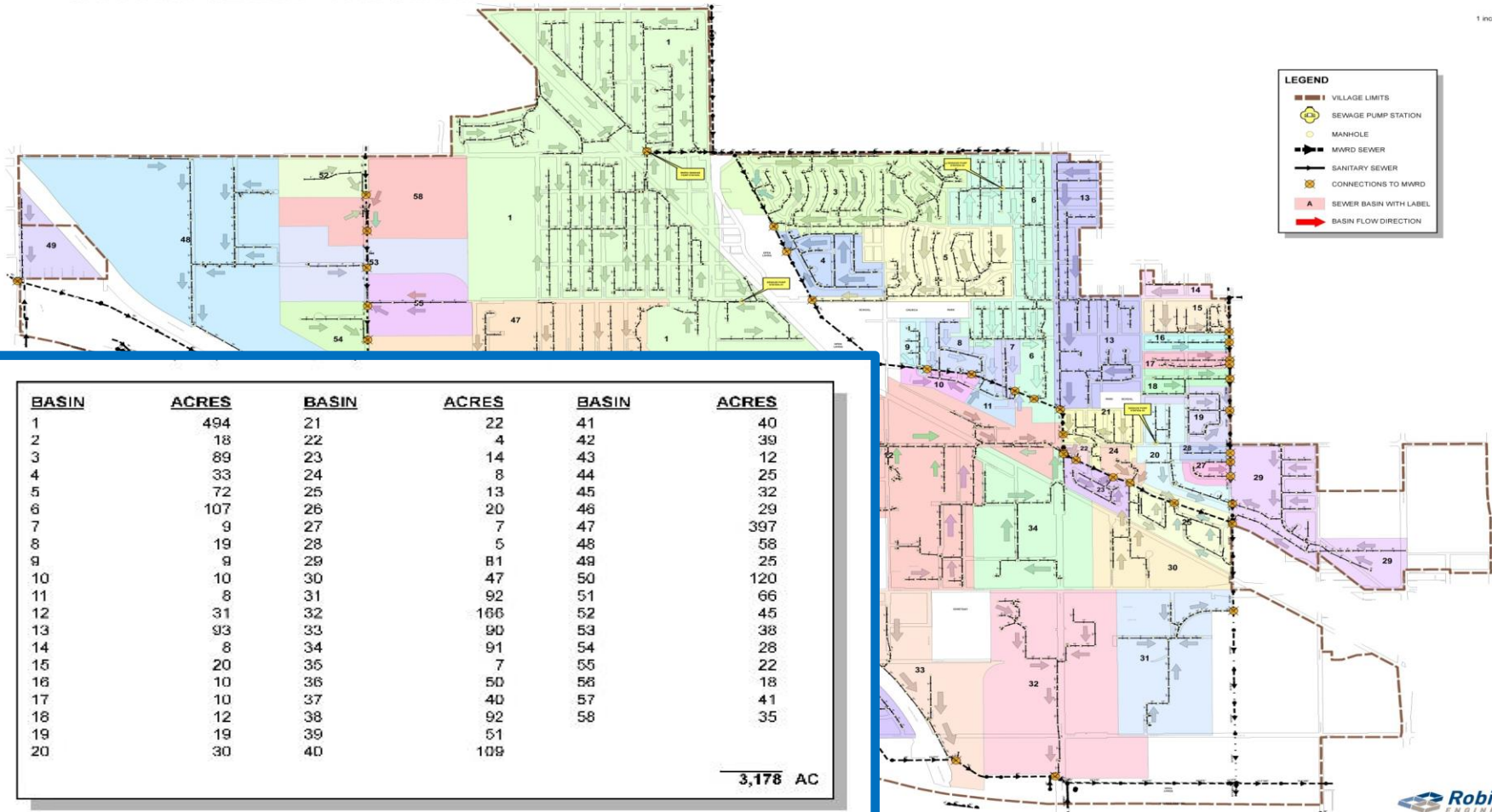
## Village of Alsip

- 312,457' of sewer ranging in 4" to 30"
- 52 MWRD connections points
  - 58 total basins
  - Large difference in basin sizes



# VILLAGE OF ALSIP

## SANITARY SEWER - TRIBUTARY BASINS



**LEGEND**

- VILLAGE LIMITS
- SEWAGE PUMP STATION
- MANHOLE
- MWRD SEWER
- SANITARY SEWER
- CONNECTIONS TO MWRD
- SEWER BASIN WITH LABEL
- BASIN FLOW DIRECTION

<u>BASIN</u>	<u>ACRES</u>	<u>BASIN</u>	<u>ACRES</u>	<u>BASIN</u>	<u>ACRES</u>
1	494	21	22	41	40
2	18	22	4	42	39
3	89	23	14	43	12
4	33	24	8	44	25
5	72	25	13	45	32
6	107	26	20	46	29
7	9	27	7	47	397
8	19	28	5	48	58
9	9	29	81	49	25
10	10	30	47	50	120
11	8	31	92	51	66
12	31	32	166	52	45
13	93	33	90	53	38
14	8	34	91	54	28
15	20	35	7	55	22
16	10	36	50	56	18
17	10	37	40	57	41
18	12	38	92	58	35
19	19	39	51		
20	30	40	109		

**3,178 AC**

# COMBINATION SYSTEMS

## Village of Dolton

- 47,237' of sewer ranging in 8" to 18"
- Medium system
- Combination sewer displayed by area
- 7 MWRD connections points  
8 total basins



# VILLAGE OF DOLTON

## SANITARY SEWER - TRIBUTARY BASINS



### LEGEND

- VILLAGE LIMITS
- SANITARY MAN-HOLE
- COMBINATION MAN-HOLE
- MWRD SEWER
- SANITARY SEWER
- COMBINATION SEWER
- COMBINATION SEWER AREA
- SEWER BASIN WITH LABEL
- BASIN FLOW DIRECTION

### BASIN

### ACRES

1	41
2	9
3	186
4	15
5	31
6	18
7	38
8	12

### TOTAL

350 AC





# Supporting Documentation - Credit

To obtain credit for condition assessment performed between 2009 and 2014

- High risk sewers
- NASSCO standards
- Documentation must provide the date of work, name and certificate number of inspector, findings.
- Submit the assessment report
- Identify areas where credit is requested on sewer map



## Supporting Documentation - Waiver

If sewers have been rehabilitated by CIPP lining, but are still considered high-risk *and* if you seek a waiver for re-televising such sewers,

- Request the waiver in a letter to the MWRD
- Smoke testing, dyed water testing, and external property inspections in areas served by the lined high-risk sewers still required by end of 2019.
- An equivalent length of non-high-risk sewers and associated manholes must be inspected by end of 2019.
- Provide date of rehabilitation work



# Supporting Documentation - Waiver

## Sewer map must show

- Rehabilitated high risk sewers that must be smoke tested and dyed water tested
- Areas tributary to these sewers
- Non-high risk sewers to be televised/inspected only
- Un-rehabilitated high risk sewers to be televised/inspected, smoke tested, and dyed water tested



# Supporting Documentation – Alternate Inspection Standards

To keep an inspection program that does not use NASSCO standards, submit request letter to MWRD with

- Narrative description of existing program
- Standards for inspections
- Method for classification of defects by severity
- Training requirements
- Inspection forms



## Helpful Hints

Perform condition assessment of high priority sewers by end of 2019. At a minimum, assess condition of 10% of sanitary sewers.

Not required to submit records of sewer maintenance or condition assessment, unless credit for assessments in 2009-2014 is requested.

Certain high-priority deficiencies must be addressed within one year of identification, while remainder must be addressed within three years



# Submittal Format

Please submit:

- Paper and PDF versions of sewer map
- Paper or PDF version of report forms and supporting documents. PDF is preferred.
- Post to/email to link at: [ii.mwrd.org](http://ii.mwrd.org)



**QUESTIONS?**