

Introduction

This Nine Minimum Controls Plan has been developed in relation to operation of the existing combined sewer portion of the Alton Illinois Wastewater System (the Wastewater System) following acquisition of the Wastewater System by the Illinois-American Water Company (IAWC). The Wastewater System currently serves the City of Alton, IL providing conveyance and treatment of wastewater. The Wastewater System also receives wastewater flows from the Village of Bethalto and the Village of Godfrey and provides treatment of those flows under bulk service agreements. The Wastewater System was originally developed and operated by the City of Alton, Illinois. Pursuant to an Asset Purchase Agreement dated April 18, 2018, IAWC has agreed to purchase the Wastewater System subject to the satisfaction of certain conditions, including receipt of necessary regulatory approvals and permits. Upon closing of the acquisition transaction, IAWC will become the owner and operator of the Wastewater System. This Nine Minimum Controls Plan will be implemented Effective on and after the closing date.

Currently, substantial portions of the Wastewater System are comprised of combined sewer systems. Combined sewer systems (CSSs) are waste water collection systems designed to carry sanitary sewage (consisting of domestic, commercial, and industrial waste water) and storm water in same sewer pipe to a treatment facility. In periods of rainfall or snowmelt, total flows in the combined sewer pipe exceeds the capacity of the CSS and/or the treatment facilities. When flows exceed capacities, the CSS is designed to overflow into surface water bodies. These overflows are called combined sewer overflows (CSOs). Because the CSOs contain untreated domestic, commercial, and industrial wastes, as well as surface runoff, many different types of contaminants can be present. In 1994, the United States Environmental Protection Agency (USEPA) established the CSO Control Policy to control discharges into the nation's water from combined sewer systems. Among the requirements of the CSO Control Policy is the establishment and implementation of a program for the CSS that comprises "nine minimum controls." The CSO Control Policy identified nine minimum controls as minimum technology-based controls that can be used to address CSO problems without extensive engineering studies of significant construction costs, prior to implementation of long-term control measures. Following the issuance of the CSO Control Policy, USEPA published the *Combined Sewer Overflows – Guidance for Nine Minimum Controls* to facilitate implementation by CSS owners.

The nine minimum controls are comprised of the following:

1. Proper Operation and Regular Maintenance Programs
2. Maximum Use of Collection System for Storage
3. Review and Modification of Pretreatment Requirements
4. Maximization of Flows to the Waste Water Treatment Plant
5. Elimination of CSOs During Dry Weather
6. Control of Solids and Floatable Material in CSO's
7. Pollution Prevention Programs to Reduce Contaminants in CSOs
8. Public Notification
9. Monitoring to Characterize CSO Impacts and Efficacy of CSO Controls

History

The City of Alton, Illinois is located on the Mississippi River in southwest central Illinois. Settlers were known to have lived in the Alton area as early as 1783. It was not until 1815, however, that Colonel Rufus Easton of St. Louis laid out the original townsite and named it Alton, in honor of a son. Alton was incorporated as a City in 1837 with a population of 4,000. After its incorporation in 1837, the City grew rapidly due to its location on the Mississippi River and its railroad facilities. By 1850 the City of Alton had become the Southern terminus of the Alton and Sangamon Railroad. The western expansion of industry in the late 1800's resulted in the development of an industrial area in the broad plain known as the American Bottoms lying adjacent and southwest of Alton. This growth continued through 1960 when the population peaked at 43,047 following the annexation of the Milton and North Rodgers areas into the City of Alton. New urban centers grew with the establishment of new industries. Today Alton is the largest and heart of a district comprising interlocking cities, villages and communities, with contiguous corporate limits and boundaries, i.e., Godfrey, East Alton, Wood River, Roxana, South Roxana, Hartford, Bethalto, Moro, Meadowbrook, Cottage Hills and Rosewood Heights.

Background

The Wastewater System involves a system of sewers to collect sewage and a waste water treatment plant which provides secondary treatment of waste water. The older southwest portion of the City is served by combined sewers which convey both storm water and sanitary sewage. There are separate sanitary sewers in the east and north portions of the City. The Wastewater System also receives wastewater flows from the Village of Bethalto and the Village of Godfrey and provides treatment of those flows under bulk service agreements. Wastewater flows from those communities are discharged into the East Side Interceptor of the Wastewater System and are conveyed to the Wastewater Treatment Plant (WWTP) for treatment.

There is currently one minor (Turner Tract) and three major combined sewer service areas (Piasa Valley, Shields Valley and Central Avenue) in the City, all of which utilize the Southside Interceptor of the Wastewater System to convey dry weather flow to the WWTP. Combined sewer overflows (CSO's) from two of the combined sewer service areas (Turner Tract and Piasa Valley) discharge directly to the Mississippi River. CSO's from the Shields Valley and Central Avenue combined sewer service areas discharge to the Mississippi River via the Wood River Drainage and Levee District Impoundment area. A map showing sewer service areas is attached as **Exhibit 1**.

The existing Alton Waste Water Treatment Plant has evolved from the addition of secondary treatment units to an originally constructed primary treatment plant. The original WWTP was constructed in 1964. The original WWTP construction included an offsite pumping station and force main to convey flows from the Southside Interceptor Sewer to the WWTP. The WWTP was designed for a population equivalent of 60,000 and to provide primary treatment for a design flow of 6.0 MGD. In 1977, the WWTP was enlarged and upgraded for the purpose of increasing the capacity and to meet more stringent effluent requirements.

The Alton WWTP currently operates under NPDES (National Pollutant Discharge Elimination System) Permit Number IL0027464 as issued and enforced by the Illinois Environmental Protection Agency

(IEPA). The design average flow (DAF) for the WWTP is 10.50 MGD and the design maximum flow (DMF) for the facility is 26.25 MGD. Treatment consists of screening, grit removal, primary settling, activated sludge and disinfection with chlorine. Sludge treatment includes anaerobic digestion, aerobic digestion, dissolved air thickening, belt filtration, sludge drying beds and landfill disposal of sludge. The previous NPDES Permit issued on November 2, 2011 is attached as **Exhibit 2**. Effective on closing of the system acquisition by IWAC, a new NPDES Permit issued to IWAC will become effective.

Under the EPA CSO Control Policy, the Wastewater System was required to implement a long term control plan (LTCP) to address overflows. The original LTCP for the Wastewater System was developed as required under Special Condition 15, Paragraph 10 of the City’s NPDES Permit #IL0027464 issued October 31, 2005, by the Illinois Environmental Protection Agency. The City completed and submitted the initial LTCP to IEPA on August 31, 2009. IEPA approved the initial LTCP on April 8, 2011 and subsequently incorporated the LTCP into the NPDES Permit issued to the City that became effective on December 1, 2011. The City of Alton completed the State Street Separation and Wetlands Site Evaluation Study as outlined in the LTCP. The other action items contained in the LTCP remain unfinished at present time. Upon closing of the acquisition transaction, IAWC will become the owner and operator of the Wastewater System and will proceed with implementing projects to address CSOs from the Turner Tract, Piasa Valley, Central Avenue and Shields Valley CSS areas. IAWC has submitted to IEPA a request for modification of the schedule and projects under separate cover. Any modifications to the LTCP will be reflected in the NPDES permit issued to IAWC upon transfer of ownership.

Combined Sewer Overflow Description

There are currently one minor (Turner Tract) and three major (Piasa Valley, Central Avenue, and Shields Valley) CSS areas in the City of Alton. All of the CSS areas utilize the Southside Interceptor Sewer to convey dry weather flow to the WWTP. CSOs from two of the CSS areas (Turner Tract and Piasa Valley) discharge directly to the Mississippi River. CSOs from the Central Avenue and Shields Valley areas discharge to the Mississippi River via the Wood River Drainage and Levee District Impoundment area.

The Turner Tract CSS area and Piasa Valley CSS area are planned to be separated to eliminate CSOs. The east part of the Shields Valley that has separated sewers and is tributary to the Shields Valley CSS area are to be rerouted and connected to the Shields Valley Branch of the Southside Interceptor Sewer. The CSOs from the Central Avenue and Shields Valley CSS areas are planned to be impounded in the Wood River Drainage and Levee District Impoundment Area and conveyed to the WWTP for treatment.

Each CSS area has an overflow as shown on **Exhibit 1**. The location of each outfall is as follows:

CSS Area	NPDES Permit Outfall Number	Latitude	Longitude
Shields Valley	002	38°-53’-05”	90°-09’-34”
Central Avenue	003	38°-53’-08”	90°-10’-13”
Piasa Valley	004	38°-53’-20”	90°-11’-13”
Turner Tract	007	38°-54’-09”	90°-11’-58”

All CSS areas are tributary to the Southside Interceptor Sewer. Flows from both the combined sewers and separate sewers in the Turner Tract area empty into an intercepting structure. When the sewers at the intercepting structure have reached hydraulic capacity, flow spills over into a storm sewer system consisting of culverts and open ditches that flow to the Mississippi River. For each of the remaining CSS areas, flow is diverted into a regulating chamber before entering the interceptor. At each chamber, flow passes through an opening in the chamber wall and on to the interceptor sewer. The opening in the chamber wall is controlled by a manually operated sluice gate. The Piasa Valley CSS area regulating chamber is located at the intersection of Third and Piasa Streets. A low dam across the Piasa arch sewer diverts the dry weather flow into the regulating chamber and the Southside Interceptor. The next interceptor connection is located at the discharge point of the Central Avenue CSS area. The combined sewer discharges into an open ditch where a low water dam diverts flow into the regulating chamber. Flow from the Shields Valley CSS area is intercepted at the downstream end of the Shields Valley brick arch sewer by means of a diversion dam and regulating chamber as well.

Summary of Implementation

The Wastewater System and WWTP serving Alton, Illinois was publicly owned and operated by the City of Alton since its inception. In April 2018, City of Alton agreed to transfer ownership and operation of the Wastewater System and WWTP to IAWC. Upon completion of the transfer, IAWC will own those facilities and be responsible for the operation.

This Nine Minimum Controls document provides the procedures to demonstrate that IAWC is complying with the nine minimum controls of the USEPA CSO Control Policy, prior to implementation of long-term control measures.

1. Proper Operation and Regular Maintenance Programs

The first minimum control, proper operation and regular maintenance of the CSS areas and CSOs outfalls, should consist of a program that clearly establishes operation, maintenance, and inspection procedures to ensure the facilities function in a way to maximize treatment of combined sewage. Implementation should reduce magnitude, frequency, and duration of CSOs by enabling existing facilities to perform as effectively as possible.

Organizational Structure

Two divisions of Illinois American Operations are directly involved with the O&M program. These are Sewer Maintenance and Wastewater Treatment. The City of Alton Street Division is also involved, because street sweeping is a part of the O&M Program.

Sewer Maintenance and Wastewater Treatment have 13 regular employees. The sewer department also has an operations supervisor, who is under the Superintendent of the Wastewater Treatment Plant which is the "Operator in Charge".

Budget

The regular meetings for planning and budgeting begin during the month of April and are finalized by the end of year to establish the O&M budget for the following calendar year, beginning January 1.

Critical Facilities

The critical elements of the Combined Sewer System are the following:

- A. Interception locations on the Southside Interceptor Sewer:
 - 1. Shields Valley
 - 2. Central Avenue
 - 3. Piasa Valley
 - 4. Turner Tract
- B. Inlets connected to Combined Sewer System:
 - 1. Grated Inlets
 - 2. Catch Basin Type Inlets (curb opening)

Procedures for Routine Maintenance

Combined Sewer Interception Points are checked after each significant precipitation event by Illinois American Water personnel. The inspections are documented in Illinois American's work order management system. The CSO outfall overflow points are checked twice a week, normally Monday and Friday. The structures with mechanical gates are exercised and provided with routine maintenance every six months. Visual inspection of weirs and structures are made during the bi-weekly checks. These are documented in Illinois American's work order management system.

All collection system lift stations are inspected twice weekly for proper operation. The South Side Interceptor pump station is inspected daily for proper operation.

Preventative maintenance is completed annually (or as required if sooner) on all lift stations in the system, except for the South Side Interceptor pump station. Preventative maintenance on the South Side Interceptor pump station is completed on it daily, weekly, monthly, quarterly, semi-annually, and annually depending on which piece of equipment is being looked at.

Grated inlets are cleaned and inspected after any rain that causes water movement in street gutters. The inlets tributary to the stormwater collection system are maintained by the City of Alton. The inlets tributary to the combined system are maintained by Illinois American personnel. The inlets the City is responsible for are cleaned from checklists which list the addresses and number of inlets at each location. The inlets that Illinois American is responsible for are cleaned and documented in Illinois American's work order management system.

Catch Basin inlets are cleaned and inspected at a minimum of twice a year. The inlets tributary to the stormwater collection system are maintained by the City of Alton. The inlets tributary to the combined system are maintained by Illinois American personnel. The inlets the City is responsible for are cleaned from checklists which list the addresses and number of inlets at each location. The inlets that Illinois American is responsible for are cleaned and documented in Illinois American's work order management system. The areas that have high loading of leaves in the fall are swept with the Street Sweeper by the City of Alton on a regular basis.

Non-Routine Maintenance and Emergency Situations

During non-working hours, Customers and residents can contact the American Water Call Center for assistance. The Call Center can create work orders to dispatch both the Sewer Maintenance and Wastewater Treatment Plant employees.

Inspections

All of the CSOs are weir type which require little maintenance on the weir itself. The work order management system maintains a history of maintenance performed on each weir. The evidence of overflow discharge or any problem is noted and tracked in this system. Any problem at a CSO or combined sewer structure is investigated immediately to determine if immediate action is needed.

Training

All Illinois American employees of the sewer maintenance and waste water treatment plant are trained on the following areas with the noted frequency. All employees are given the opportunity to operate and familiarize themselves with equipment involved in their jobs. All employees go through a period of training where they are with a trained person who instructs the employee on proper procedures. The Supervisor checks progress regularly during this time.

All ILAW Employees (Frequency of Recurring Training)	Audience	Length	Frequency
Bloodborne Pathogens	All ILAW	1 hour	Annually
Emergency Response Plan	All ILAW	1 hour	Annually
Fire Extinguisher Use	All ILAW	1 hour	Annually
Hazard Communication	All ILAW	1 hour	Annually
HAZWOPER (Hazardous Waste Operations Response)	As specified	8 hour refresh	Annually
Hearing Conservation	All ILAW	1 hour	Annually
Lockout-Tag out	All ILAW	1 hour	Annually
Pipe Saw Safety	Supv & Operations	1 hour	Annually
Confined Space (Permit-Non Permit Required)	Supv & Operations	2 hours	Biennial
Excavation and Shoring	Supv & Operations	2 hours	Biennial
First Aid-CPR-AED	All ILAW	4 hours	Biennial
Arc Flash and PPE	Supv & Operations	4 hours	Triennial
Respiratory Protection	Supv & Operations	2 hour	Annually
Electrical Safety - Awareness Level	All ILAW	2 hours	Triennial
Ergonomics	All ILAW	1 hour	Triennial
Fall Protection	Supv & Operations	1 hour	Triennial
Flagging and Work Zone Safety	Supv & Operations	2 hours	Triennial
Hot Work (Compressed cylinders, welding, torches, etc.)	Supv & Operations	2 hours	Triennial
Near Misses (Hazard identification and submit report)	All ILAW	1 hour	Triennial
Power Industrial Trucks (Fork Lifts)	Licensed Operators	½ hour class ½ to 1 hour operating	Triennial
Power Industrial Trucks (Backhoe-Excavators)	Licensed Operators	3 hours	Triennial

O&M Equipment

The following equipment is utilized by the sewer maintenance and wastewater treatment personnel for the O&M program:

- Jet/Vacuum Truck - Routine and emergency cleaning of sewers and catch basins.
- Jet Rodder Truck - Routine and emergency cleaning of sewers.
- Catch Basin Cleaning Truck - Routine and emergency cleaning of catch basins and inlets, ditches, and culverts
- One Ton Crew Truck - Used by cleaning crews for both routine and emergency investigation, cleaning and repair work.
- Two F250 Pick-Up Trucks, one with snow plow and salt spreader.
- One F450 Crane Truck
- Skid Steer Loader - Channel cleaning and small repair work associated with sewers.
- Utility Trailer - For equipment mobilization.
- Inflatable Plugs - Up to 30" diameter for bypass pumping between manholes.
- Emergency 4" Diesel Trailer Mounted Pump - For bypass pumping around manhole.

- Emergency Generator – Capable of providing power for City pumping stations.
- Safety Equipment - Manlift, gas monitors, harnesses, traffic control devices, ventilators used in underground repair and confined space entry.
- Emergency 8" Diesel Trailer Mounted Pump

Periodic Review of O&M Plans

O&M procedures are to be evaluated and modified as necessary during routine cleaning and before Spring and Fall rainy seasons. These practices will be modified if necessary.

2. Maximization of Storage in the Collection System

The second minimum control, maximum use of the collection system, enables the system itself to store wet weather flows until downstream sewers and treatment facilities can handle them.

There are currently one minor (Turner Tract) and three major (Piasa Valley, Central Avenue, and Shields Valley) CSS areas in the Wastewater System. All of the CSS areas utilize the Southside Interceptor Sewer to convey dry weather flow to the WWTP. CSOs from two of the CSS areas (Turner Tract and Piasa Valley) discharge directly to the Mississippi River. CSOs from the Central Avenue and Shields Valley areas discharge to the Mississippi River via the Wood River Drainage and Levee District Impoundment area.

Turner Tract - As mentioned, Turner Tract is small CSS area and consequently so is the outlet sewer size at the point of overflow. This outlet is at the west end of the CSS which is adjacent to the Mississippi River bluffs. The topography in this area is very steep and cut with deep valleys away from the bluff face.

In this area, the use of the sewer system itself for storage of excess combined sewage for later treatment is not practical due to the limited volume available in the small pipe sizes. Localized, upstream, off sewer detention is also not practical due to the steep topography in the area. The investigations into the use of the sewer system for storage in this area have concluded that the maximum benefits of storage can be derived from a more intensified program of sewer cleaning and maintenance in the areas adjacent to combined sewer intercepting structures.

Piasa Valley Area - This CSS area has the largest watershed at 1,455 acres and is the first major watershed east of the end of the Mississippi River bluffs at Alton. The outfall sewer at the point of interception is a 9.5-foot wide concrete reinforced stone arch which is located under Piasa Street in the heart of the Central Business District and is one of the oldest sewers in the CSS. A 15-inch high concrete weir dam constructed across the floor of this sewer diverts up to 2.5 times the average dry weather flow from the sewer into the intercepting sewer system. In its present configurations the Piasa Valley Sewer capacity is limited to an approximate ten-year frequency storm upstream of its outlet. There is a history of flooding of this sewer with resultant property damage. On two occasions in the past the sewer failed under surcharged conditions and had to be rebuilt.

Other than the storage already provided by the existing diversion dam, the use of the Piasa Valley outlet sewer to store CSOs is not considered practical due to the age of the sewer and its vulnerability to flooding. The more intensive program of sewer cleaning and maintenance of the portion of the sewer system adjacent to the intercepting structures to be instituted by IAWC is the best means of maximizing storage of CSOs in the Piasa outfall sewer.

Central Avenue Area - This CSS has a watershed of 470 acres which is fully developed into residential and commercial properties. The watershed consists of side hill drainage above the floodplain of the Mississippi River where the Central Avenue combined sewer outfall is located. While the outfall is located in the floodplain, it is within the flood protection levee of the Wood River Drainage and Levee District. The Central Avenue CSO consists of three branch sewers (84", 72", and 60" in diameter) at the outfall. An 18-inch high concrete weir dam constructed across the floor of the outfall headwall, which receives the flow from the three branch sewers, diverts up to 2.5 times the dry weather flow from the

CSS into the interceptor sewer. Thus it provides storage of a portion of the CSOs in the CSS sewer system.

The portions of the three branch sewers that are located within the aforesaid floodplain are on flat grades and are relatively shallow in depth. Most of the commercial properties are also located within the flood plain area. The combination of the flat grades and shallow depth of the branch sewers and commercial properties with basements connected to the sewer causes flooding to occur during intense rain events. Attempts to increase storage of CSOs in this CSS sewer system beyond that already provided by the concrete weir dam would only further aggravate the flooding problem. The current IAWC program of intensified cleaning and maintenance of sewers in the areas adjacent to the intercepting structures serves to maximizing the storage available in this CSS.

Due to the full development of the area and the side hill nature of the watershed, localized upstream detention of storm water is not practical for this combined sewer area.

Shields Valley Area - The 1,400-acre watershed of the Shield Valley CSS area is nearly as large as that of the Piasa Valley watershed. However, the sewer at the outfall consists of a 16-foot wide arch giving it considerably more capacity than the Piasa Valley outfall. A 15-inch high concrete weir dam constructed across the paved concrete outlet channel adjacent to the downstream end of the arch sewer, coupled with another diversion dam further downstream, divert in excess of 2.5 times the dry weather flow from the Shield Valley CSS into the interceptor sewer system.

The storage provided by the concrete weir dams and the program of increased sewer maintenance and cleaning previously described is presently the means of maximizing the use of the collection system for storage in this CSS.

3. Review and Modification of Pretreatment Requirements

The third minimum control should be the determination of whether non-domestic sources are contributing to CSO impacts and, if so, investigate ways to control them. The objective is to minimize impacts of discharges into the CSS areas from non-domestic sources (i.e. industrial and commercial sources, such as restaurants and gas stations) during wet weather events.

The major industrial facilities within and adjacent to the Wastewater System have historically provided their own sewage treatment. Their treated wastewater is discharged directly to the Mississippi River. Site sampling and testing of non-domestic wastewater that reaches the sewer system was previously conducted by the City and determined that there are currently no significant non-domestic discharges to the Alton sewer system. The City had previously concluded that a pre-treatment program for the City was not required, and the Illinois EPA has not required that the City establish and administer a pre-treatment program.

IWAC has developed and has adopted an Industrial Pretreatment Program (IPP) as part of its tariff approved by the Illinois Commerce Commission (which regulates public utilities). That IPP, which is attached as **Exhibit 3** to this NMCP, provides regulations and pre-treatment standards for industrial and commercial discharges into the Wastewater System, including a permit system for any significant industrial discharges who may be identified in the future.

4. Maximization of Flow to the WWTP for Treatment

The fourth minimum control, maximizing flow to the WWTP, entails modifications to the CSS and WWTP to enable as much wet weather flow as possible to reach the WWTP reducing the magnitude, frequency, and duration of CSOs.

Prior studies conducted for the City focused in part on the City's CSOs and the alternative methods of filling the primary need to provide additional facilities to comply with Illinois Pollution Control Board rules and regulations. Those studies concluded that a cost-effective method of handling the City's CSOs was to provide the facilities that would fully utilize the capacity of the Southside Interceptor Sewer which intercepts the flow from all of the CSS areas. Concurrence with this conclusion was obtained from the Illinois EPA and the Illinois Pollution Control Board. The improvements need to provide these facilities were as follows:

1. Increase the intercepting capacity of the Shields Valley intercepting structures to 4.4 MGD which, when coupled with the intercepting capacity of the City's other intercepting structures would equal 13.7 MGD, the capacity of the Southside Interceptor Sewer.
2. Upgrade the Southside interceptor sewage pumping station which conveys the flow from the Southside Interceptor sewer to the City's wastewater treatment plant from a capacity of 8.7 MGD to 13.7 MGD.

The City of Alton completed those projects and the facilities are in place and will continue to be operated and maintained to function properly.

Because all the CSS areas utilize the Southside Interceptor Sewer to convey dry weather flow to the WWTP, ongoing sewer maintenance and cleaning of the Southside Interceptor Sewer and Southside Interceptor Pumping Station will keep the facilities operating at full capacity.

5. Elimination of CSOs During Dry Weather

The fifth minimum control, elimination of CSOs during dry weather, includes measures to ensure that CSOs do not occur during dry weather flow conditions.

The four locations at which CSOs may occur in the Alton sewer system during wet weather periods are the CSO discharge points (#002 – Shields Valley, #003 – Central Avenue, #004 – Piasa Street, #007 – Turner Tract). Likewise, those locations are where dry weather overflows (DWOs) could also occur.

Bi-weekly inspections of the overflow locations performed by IAWC personnel and scheduled maintenance of intercepting structures as described in Section 2 of this plan are the major elements in eliminating DWO's. Also, these bi-weekly checks will also alert sewer maintenance personnel as to when sewer and interceptor structure cleaning is needed to insure proper operation of intercepting facilities. All locations are checked after any rain of 0.5 inches or more.

Any DWO should be documented and summary reports submitted to IEPA per requirements of the current NPDES permit.

6. Control of Solid and Floatable Materials in CSOs

The sixth minimum control, control of solid and floatable materials in CSOs, is intended to reduce visible floatables and solids. IAWC's approach to this will be two-fold. IAWC will do routine cleaning of the combined sewers, particularly at and near the overflow outfall, as well as cleaning inlet grates within their service areas. Grated inlets collect a large amount of floatable debris before it enters the system, and routinely cleaning these grated inlets will eliminate a large majority of floatable material in the CSO's. Experience has shown that these are the most practical and effective means of controlling solids and floatables in the CSO's.

The Piasa Valley outfall sewer is equipped with a closure sluice gate at its point of discharge into the Mississippi River. During normal river conditions, the gate is positioned to act as a baffle to control floatables in the Piasa Valley CSO's. During the bi-weekly checks of the overflow locations as indicated in Section 2 of this plan, the Piasa Valley outfall gatewell structure is also checked for any floating material that is trapped behind the gate. Collected floatables are removed on an as needed basis.

Inlet and catch basin modifications to install individual trash capture devices as a means of control have been ruled out due to the resulting increased maintenance requirements and unacceptable increased incidences of street flooding.

7. Pollution Prevention Programs to Reduce Contaminants in CSOs

The seventh minimum control, pollution prevention, is intended to keep contaminants from entering the CSS areas and thus receiving waters via CSOs.

This control is a partnership by everyone in the community to help keep the community free of trash and contaminants. Routine street sweeping by the City of Alton's Street Department and enforcement of the City's anti-littering and illegal dumping ordinances by the Public Affairs Department have helped the effectiveness of reducing contaminants in the City's CSO's. IAWC and the City of Alton have entered into an agreement as terms of the acquisition that the City will continue street sweeping and enforcement of anti-littering and illegal dumping ordinances in accordance with past practices. Also, periodic clean-up/pick up campaigns by Pride Incorporated, an area civic group, and by an organization of local high school students have been effective.

In 2004, the Alton Beautification and Clean City Committee (ABCCC) was formed to help with beautifying and cleaning up the City of Alton. They perform a lot of the same tasks around town in helping to eliminate trash contaminates from entering the sewer systems. They host a variety of trash clean up events throughout the year that are very effective.

The City of Alton currently utilizes Republic Services as the trash collection company in town. Republic Services provides both enclosed trash bins as well as separate enclosed recyclable materials bins to homeowners. On top of the trash services, they also provide large item haul offs as requested. These services help in reducing littering around town.

The City of Alton utilizes a leaf collection truck which has allowed for a far greater capacity and efficiency in collecting leaves and preventing them from entering streets and ultimately grated inlets in the fall months. All new public areas developed by the City include trash receptacles to reduce litter in parks, parking lots, streets and adjacent to public buildings.

IWAC has developed and has adopted an Industrial Pretreatment Program (IPP) as part of its tariff approved by the Illinois Commerce Commission (which regulates public utilities). That IPP, which is attached as **Exhibit 3** to this NMCP, provides regulations and pre-treatment standards for industrial and commercial discharges into the Wastewater System, including a permit system for any significant industrial discharges who may be identified in the future.

Although the City does not have its own hazardous waste collection program, Madison County and Municipal agencies within the Alton area sponsor and advertises hazardous waste pick-up programs at various times each year. Items such as partially empty paint cans, solvents, and other hazardous wastes can be dropped off by individuals at advertised locations where they will be picked up and properly disposed of by the sponsoring agency.

8. Public Notification

The eighth minimum control, public notification, is intended to inform the public of the location of the CSO outfalls, the actual occurrences of CSOs, the possible health and environmental effects of CSOs, and the recreational or commercial activities curtailed as a result of CSOs.

As part of the LTCP efforts, it was determined that neither the Mississippi River nor the WRDLD impoundment area within the CSO area are designated as an Outstanding Natural Resource. Water in the immediate areas of the discharge points has not been found to contain either shellfish beds or endangered aquatic species or their habitat. No discharges are within the protection area for drinking water intake structures. The IEPA concurred with this finding as indicated in Special Condition 15 (7. Sensitive Area Considerations) of the Alton NPDES permit.

IAWC will install signage at each of the CSO outfall discharge points (#002 – Shields Valley, #003 – Central Avenue, #004 – Piasa Street, #007 – Turner Tract) upon transfer of ownership. The signage will alert the public of who to contact if they observe an overflow.

9. Monitoring to Characterize CSO Impacts and the Efficacy of CSO Controls

The ninth minimum control involves visual inspections and other simple methods to determine the occurrence and apparent impacts of CSOs.

Prior sewer studies have characterized the CSS areas and facilities. Maps showing location, size, and elevations of the CSS have been prepared which are periodically updated as additions are made to the system. .

An ongoing program of monitoring of the CSOs are carried out by the IAWC personnel. As indicated in Section 2 of this Plan the CSO interception points are visited after each rain event and a monitoring report is filled out giving the following information for each outfall:

Date

Estimated duration of rainfall

Estimated amount of rainfall

Estimated duration of CSO

The City has “tipping bucket” rainfall gauges located in the west, central and east part of the City in order to best determine the amount of rainfall that is contributed to each individual CSO outfall. IAWC will have access to this data.

At the Turner Tract, Central, Shields Valley, Piasa Valley CSS area overflow weir dams, there are ultrasonic water level recorders to determine the depth of flow over the weir dam and the duration of the overflow. A velocity meter is also installed at each location so that the volume of each CSO can be calculated.

The information developed from this ongoing program will become a part of the characterization, monitoring, and modeling of the CSS areas for the projects outlined in the LTCP. As part of the design of the LTCP projects, IAWC will utilize the collected information to build and calibrate system hydraulic models. CSO events and the hydraulic models will be reviewed by IAWC engineers annually prior to establishing the yearly budget to ensure the system is operating within the parameters outlined in the NPDES permit. Projects deemed necessary to improve system capacity will be budgeted and implemented as needed.