MSD
Metropolitan Sewer District

Louisville and Jefferson County Metropolitan Sewer District
700 West Liberty Street
Louisville Kentucky 40203-1911
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www.msdlouky.org

April 17, 2012

[redacted]
[redacted]Hepburn Avenue
Louisville, KY 40204

Subject: Integrated Overflow Abatement Plan
Public Input Meeting, January 24, 2012
Response to comments

Dear [redacted]

Thank you for taking the time to attend the Integrated Overflow Abatement Plan public meeting on January 24, 2012. A transcript of the comments you provided at the meeting are attached to this letter, along with the responses provided at the meeting. A copy of the letter posted to the Bad Water Journal website and addressed to MSD regarding this meeting is also attached.

Letter addressed to MSD dated January 26, 2012

The following are summaries of your comments and MSD's responses to the numbered comments in the posted letter:

Comment 1 – MSD has been very responsive and conducted a robust public consultation process on the I-64 and Grinstead Basin project

Response to Comment 1 – MSD appreciates the support for the process we have developed.

Comment 2 – We have requested, but not received a list of MSD pretreatment and quality charge customers and the CSOs or SSOs that may contain effluent in wet weather overflows.

Response to Comment 2 – A list of Significant Industrial Users is attached. Some are required to suspend discharge during wet weather and others have voluntarily agreed to do so when MSD notifies them that overflows are likely. This suspension of discharge is primarily targeted at discharges with high concentrations of pollutants as the impact of the industrial discharges on overflow volume is minor compared to stormwater contributions to the system during wet weather. MSD's Industrial Waste Department manages the permits related to the discharges and permit requirements.

Comment 3 – During the presentation of the I-64 and Grinstead Basin project, the size of the necessary basin increased significantly based on new flow monitoring information.

Response to Comment 3 – One of the basic principles of the Integrated Overflow Abatement Plan (IOAP) implementation approach is the use of adaptive management- refining our past decisions through continuous improvement of the physical and hydraulic information available to the analytical tools. The intent of adaptive management is to "right-size" projects as additional information is developed through expanded flow monitoring etc. Adjusting the project sizes to successfully achieve overflow reduction and regulatory objectives is MSD's charge. Continuous measurement and increased understanding of the sewer system under various wet weather conditions will enable the district to do so.

Project identification and sizing for the preparation of the IOAP was based on a sewer system model developed and calibrated over the time period of 2006 – 2007. The mathematical representation of the physical sewer system was based on sewer maps and construction drawings that date back as far as the early 1900's. While MSD surveyors field-verified some of the information from the old maps and drawings, the size and complexity of the system precluded resurveying every pipe and manhole during the planning process.

After building the mathematical model of the combined sewer system, the hydraulic calculations were calibrated using flow measurements taken from 29 locations in the combined system over the course of 3- 4 months in the spring of 2007. This time period included several significant rain events. The purpose of the initial hydraulic modeling was to provide estimates of flows at various locations in the sewer system to allow identification, evaluation, and prioritization of projects to reduce sewer overflows.

In 2009, MSD began an aggressive program of enhanced flow monitoring to continue improving the quality of the sewer flow predictions. This second round of calibration employed 57 flow monitors measuring flows for 6 months in the spring of 2010. The expanded flow monitoring system included sites specifically selected to improve our information relative to sizing our most significant proposed projects.

The most recent calibration showed good agreement on overall hydrology as that performed in 2007 (total volumes of sewer overflow from the entire combined system within 10% of the original calibration), but incorporating enhanced flow measurements and corrections in the physical representation of older parts of the sewer system resulted in a redistribution of the flow in individual pipes. It is this redistribution that caused the I-64 and Grinstead Basin to grow, and other basins to shrink.

MSD believes this first round of recalibration has identified the major issues with sewer system modeling and calibration flow monitoring. MSD intends to continue installing

additional equipment and refining the hydraulic model accuracy over the coming years, which will likely result in additional project revisions. This 'adaptive' approach was described in detail in Volume 1, Section 6.5 of the IOAP, which can be accessed here: http://www.msdlouky.org/projectwin/pdfs/IOAP/IOAP_2009-09_30_Volume1/MSD_IOAP_Vol_1_Exec_Sum20090930.pdf.

While we continue improving our flow monitoring system and extent, the data we are now gathering shows us that flow routing and sewer flows now appear to be more accurate. However, future flow monitoring, overflow statistical analyses, system data gathering and advancements in modeling technologies will continue to improve our understanding of the sewer system behavior. We will also continue tracking the benefits of source control programs like green infrastructure storm water management and inflow and infiltration reduction which can affect projects. MSD has confidence in the on-going flow monitoring program, and is moving forward with the current flow estimates and project sizes with the understanding that future flow monitoring will result in additional incremental changes in sizes of some projects.

Modeling of large drainage systems is complex, especially those with extensive underground system interaction with the surface. Continual improvement of models as additional monitoring data becomes available is the best approach for ensuring that the projects ultimately constructed meet regulatory and environmental objectives.

Comment 4- Based on a review of LOJIC maps provided by MSD it appears that the potential to reduce the size of the I-64 and Grinstead Basin is very good. (Several specific ideas were presented).

Response to Comment 4 –MSD has begun the site evaluation process for the 2 square mile drainage area that flows toward the proposed I-64 & Grinstead Drive storage basin. MSD intends to have the first few green infrastructure projects in the area moving forward into design within 6 to 8 weeks. We have considered specific suggestions you provided previously. Your additional suggestions for possible projects will be taken into consideration. We plan to ask EPA Region 4 and KDEP for a schedule modification to allow us time to install and measure the benefits of green infrastructure in this basin. Your continued support through the IOAP modification process would help us achieve our goals of maximizing the cost-effective use of green infrastructure to reduce the size of CSO control storage basins

Comment 5 – Millions of dollars could be saved by requiring property owners to voluntary storm water management actions.

Response to Comment 5 – MSD agrees that disconnection of stormwater connections from private property to the sewer system can possibly provide significant reduction in overflows. In the next few months MSD will be rolling out a public education initiative titled "Know Where It Goes" to help people understand how they can participate in reducing sewer overflows and surface water pollution. In addition to voluntary measures possible ordinance revisions and discharge regulation revisions are currently under review.

Comment 6 – Consider separating the St. Matthews storm water pipes that discharge into the CSO 166 combined sewer system.

Response to Comment 6 – Separation of the stormwater system for CSO166 was considered in the original alternatives analysis for the IOAP. A partial separation of just the St. Matthews stormwater system was not previously evaluated. Since MSD does not manage stormwater in St. Matthews we do not have maps of the St. Matthews stormwater system. We will request storm sewer maps of the area and consider this alternative within the context of the benefit/cost process utilized for alternative analysis and comparison, considering both costs and environmental benefits of different approaches.

Note that case studies from other cities show that separation of storm water systems achieves regulatory compliance for CSO control, but in many cases has little if any pollution reduction benefits. This is due to the combined sewer system capturing and treating the most polluted "first flush" of storm water that occurs at the beginning of a storm. In many cases the overall pollutant load to the streams actually increases when large areas of combined sewers are separated and urban storm water allowed to flow directly to the stream. These factors will be taken into consideration when evaluating the partial separation of the St. Matthews stormwater system and its impacts on the size of a basin at I-64 and Grinstead.

Comment 7 – Specific green infrastructure opportunities should be considered without regard to whether the the property owner is public, private, or commercial, or any legal impediments.

Response to Comment 7 – Demonstration projects were identified and constructed as a part of the IOAP. In addition, more than 60 green infrastructure projects have been constructed to date – either by MSD or through public, private, and commercial partners that have utilized MSD's green incentives program. Identification of site ownership and legal impediments to implementation is a critical step in determining feasible project locations that can be implemented within the time constraints of the Amended Consent Decree. The location of the projects in regard to a targeted overflow, the legal authority of MSD or the property owner to install and maintain a green infrastructure practice, and the probability of finding partners willing to allow project construction and/or partially fund projects are some of the most important aspects that require consideration. MSD has developed an analytical process

for reviewing areas, modeling expected overflow reductions using green practices and moving toward implementation. MSD's incentives program has been very successful in identifying willing partners to work with us on green infrastructure practices. MSD does not intended to push green infrastructure practices on properties that require condemnation or other legal action to force participation by public, private, or commercial landowners.

Comment 8 – the Louisville Water Company has a large discharge outlet leaving the facility and going to the sewer coming down Grinstead Avenue and overflowing through CSO 125 during wet weather.

Response to Comment 8 – The Crescent Hill Water Treatment Plant discharges filter backwash and other treatment by-products to a dedicated pipeline that routes this flow to solids storage basins located at the B.E.Payne Water Treatment Plant. This pipeline used to have a high-flow blow-off that did connect to MSD's system. Several years ago LWC added a flow equalization basin to the Crescent Hill plant that eliminates the need for the blow-off. The Crescent Hill plant no longer discharges backwash water or other treatment by-products to MSD's system.

Comment 9 – MSD should make a plain legal statement drafted by an attorney about whether it has the legal authority under ordinances, statutes, and adopted rules to require property owners to install stormwater management practices.

Response to Comment 9 – MSD's legal counsel has determined that MSD does not have the authority to require individual property owners to install stormwater management practices other than the stormwater retention and similar requirements of the Louisville Metro development standards governing new construction. Should you have evidence or can cite a regulation or ordinance that supports your position, please do so.

Comment 10 – I support the proposed extension of MSD's IOAP planning and construction schedule deadlines for the I-64 and Grinstead Basin and for other IOAP projects to determine the cost and size reductions that may be obtained by voluntary and mandatory local and regional stormwater and green infrastructure projects.

Response to Comment 10 – MSD appreciates your support of the proposed project deadline extension.

Comments given at the January 24, 2012, public meeting

As a supplement to the responses given by MSD staff to your statements and questions from the January meeting, MSD notes that the 11:1 ratio from green stormwater storage correlating to overflow reduction is one example of how a specific CSO drainage basin

functions (CSO130 in this case). Each CSO drainage area behaves differently during wet weather due to drainage area characteristic and overflow weir elevations. The faster the overflow occurs within a particular drainage area and the faster the infiltration rate of the solid under the green infrastructure practice, the lower the ratio of green storage to overflow reduction. As for placement of green practices, MSD attempts to maximize the impervious area routed into each individual practice.

Bad Water Journal Website

MSD reviewed your "Bad Water Journal" website when downloading the January 25 letter to MSD. We take exception to inaccuracies and misrepresentations contained on that site. Specifically, MSD requests that the modified photograph of MSD's overflow sign be removed or captioned as modified. The modified image contains MSD's logo, implying this is an actual MSD sign, which is erroneous. Other areas of the site incorrectly discuss MSD's programs such as the statement regarding MSD only building 19 green infrastructure projects. MSD requests that statements regarding MSD activities be reviewed and either updated for accuracy, or removed.

Rain Barrel Pilot Program

Finally, you have often encouraged MSD to adopt an aggressive rain barrel program as a potential solution to CSOs. Pursuant to that, MSD is attempting a pilot rain barrel project in a targeted neighborhood in the combined sewer area. This pilot is an effort to obtain objective, field data about the concentrated use of rain barrels and the related impact on sewer flows. Similar efforts are ongoing for other green practices in the Butchertown area in collaboration with the EPA Office of Research and Development. MSD is responsible for achieving the overflow reductions in the IOAP within a specified timeframe, and EPA Region 4 has made it clear that proof of each green infrastructure concept must be established through in-sewer flow monitoring for any technology that could play a significant role in this program. Without defensible flow monitoring information, MSD will be unable to commit to the use of any green infrastructure as a standard practice, other than for outreach and educational purposes about stormwater management. We would appreciate your support in encouraging property owners to participate in the rain barrel pilot program. If we can't get enough property owners to participate in the targeted program our conclusion will, by default, be that voluntary use of rain barrels cannot be depended on as part of a CSO control program.

Please feel free to contact us should you have any comments or questions. This letter will be posted on MSD's Project WIN web page at the link: www.msdlouky.org/projectwin.

Sincerely,

W. Brian Bingham
Regulatory Services Director

Attachment: Letter to MSD posted to the Bad Water Journal, Transcribed Comments

MSD IOAP Project Comments
Attention:
Angela Ackridge, P.E.
Project WIN Program Manager
700 West Liberty St.
Louisville, KY 40203

January 26,2012

Re: Comments to IOAP

General Comments:

1. MSD has been very responsive and conducted a robust public consultation process on the I-64 Grinstead Drive Basin project.

2. We have requested, but have not received information in the form of a list of MSD pretreatment and quality charge clients and the CSOs or SSOs that may contain their effluent in wet weather overflows. An example is the Monfort-Swift meat packing plant or the hospitals in DuPont Square. The public has seen NO lists of SIUs, their daily discharges or whether they are required under the terms of their pre-treatment agreements with MSD to interrupt discharge in wet weather when the flows do not reach the POTW. Public participation is thus not fully informed on the MSD IOAP alternatives.

3. During the presentation of the I-64 Grinstead Basin project, the size of the necessary basin increased significantly based on new flow monitor information. The supposedly highly competent agency suddenly discovered it was off by orders of magnitude on the actual wet weather discharges to the environment. This underestimation of CSO overflows had continued for decades and underestimated flows reported in required reports and public documents. The public and regulators have been seriously misled because the planning and engineering team was using garbage in garbage out computer modeling that was not validated by real measurements. I am very pleased that the faulty computer modeling has been tuned up and validated based on new flow monitoring data.

4. When the increase in basin size due to revised flow data was presented, it was then admitted that the multi-million dollar basin was sized without any green infrastructure reduction of storm flow into the system. Now MSD has indicated it will conduct a high quality survey of the sewersheds contributing to the I-64 Basin; CSO 127, 126, 125 and 166 sewersheds. MSD very capably provided LOJIC maps that delineated each of the contributing land areas to the CSOs. From an examination of the maps provided, the potential to reduce the size of the I-64 Grinstead Basin looks very good. That is because the stormwater management practices in the contributing land area are essentially 1950s era direct discharges of rooftops and paved areas to the combined system. Almost any degree of modernization will reap stormwater removal. I have attached here a rework of the CSO 127 land area identifying what look to be 3 major imperious areas that might be prioritized in a phased process of stormwater management modernization. There are 780 residences in the CSO 127 land area. The average overflow volume for 21 occurances per year is calculated to be 220,000 gallons. If we set a target of removing 440,000 gallons from the system by using storm water management practices, it cannot be accomplished by just rain barrels (8000 55 gal barrels required). Likely a stormwater detention pond at Willow and Cherokee that drains into the natural swale to Cherokee Lake would be one component. Other onsite rain gardens combined with pervious pavers and even drilling into the limestone caverns below the surface could provide storm water diversion with appropriate filtration, grit removal or other urban runoff treatment.

5. The entire IOAP program should be reviewed with the same storm water modernization process to identify major contributors to the Combined Sewers System. Millions of dollars could be saved by phasing in a program of requiring property owners to survey their property and take voluntary storm water management actions.

6. St. Matthews separate storm water pipes seem to discharge into the combined sewer trunk line just one block off of Lexington Road at Cannons Lane and Eline Avenue. Facility # 63744 in the area. It looks like a great deal of storm water from the separate storm system could be removed from CSO 166 by diverting the St. Matthews separate storm water flow into a treatment train before discharge to the creek down Cannons Lane. If a new storm water trunk line should be built to Beargrass Creek to relieve CSO 166, that alternative should be added to the IOAP.

7. Specific green infrastructure projects should be identified in the IOAP system to calculate possible facility size reductions and cost savings. The identification initially, should be non-political --just based on millions of gallons diverted without regard to whether the property owner is public, private or commercial or any legal impediments--what would get the job done?

8. The Louisville Water Company has a large discharge outlet leaving the facility and going into the sewer coming down Grinstead Avenue and overflowing in wet weather through CSO 125. Does the LWC interrupt its discharge in wet weather, which is thought to be backwash of filtrate and high in chloride and other chemicals?

9. MSD should make a plain legal statement drafted by an attorney about whether it has the legal authority under ordinances, statutes and adopted rules to require property owners to install storm water management practices. Engineers have improperly opined that MSD does not have the authority and needs Metro Council to enact laws to authorize such action. The proper role would be for an attorney for the agency to discuss the existing legal framework and render an opinion about the limits of MSDs stormwater authority. The context should be that inflows of rain water from roof tops and parking lots are preventing MSD from conveying effluents of SIUs to treatment plants and poisoning aquatic habitat.

10. I support the proposed extension of MSDs IOAP planning and construction schedule deadlines for the I-64 basin and for other IOAP projects to determine the cost and size reductions that may be obtained by voluntary and mandatory local and regional storm water management green infrastructure projects. Based on a brief overview I believe removal of the 220,000 gallon overflow of CSO 127 can be readily accomplished by focused green infrastructure practices and I believe the same is true for the other contributing CSO land areas.

Thank you for your attention,

[redacted]
[redacted] Hepburn Avenue
Louisville, KY 40204
[redacted]

January 24th IOAP Public Input Meeting
[redacted] Transcribed Comments (tape segment 1:15)

[redacted]- "I do want to thank MSD for this open house format. This is really a breath of fresh air from the kind of relationship that my group, the Friends of Beargrass Creek and other groups have had with MSD in the past few years. It's been more adversarial, less trust, less of a communication back and forth and so I'm really, really glad to see MSD embarking on this good communication path and I hope we continue.

I had a couple of specific comments on the I-64 & Grinstead basin. In looking at the contributing watersheds, which they briefly displayed broken in parts CSO 125, CSO 127, CSO 166, each of those could be examined and the opportunities for green infrastructure more thoroughly called out in those areas. For instance, in looking at the sewer map, there's a hundred and twenty eight inch diameter sewer coming to 166 and it's basically coming from St. Matthews and Beal's Branch area. And the neighbors in that area should get in and participate and really evaluate the opportunities to capture rainwater before it goes into the sewer system, before it has to be conveyed long distances to the treatment plant and before it has to be expensively treated at the treatment plant.

I'd like to hear MSD give a strong policy statement that capturing rainwater before it gets into the sewer system is the way to go in the future. That really would be good to hear from MSD. For instance, we talk about 11:1 breakdown. You have to capture 11 gallons of rainwater under these green infrastructure projects in order to get one gallon of basin reduction. I think we could use some more clarification on that because it seems to me that that is saying that you're inefficiently capturing with green infrastructure 10 gallons that you didn't really need to capture that weren't really going to go in to the basin and so it was an inefficient green infrastructure plan. And we need a better, more efficient green infrastructure plan. Thank you."

<u>Response by Justin Gray, MSD Engineering</u>- "Thank you for your comments, [redacted]. We've talked I think for a couple hours in the recent past about where we're headed. I do think we are going to embark on all four of those, it's 126, 125, 127, 166; all four of those drainage areas looking at how best to implement green effectively. We have produced a couple of things I didn't mention, that I probably should have during my presentation, is that we do have a detailed green design manual that developers can use both in retro fitting existing development and in new development. Coupled with that is a green incentives program that private, commercial and industrials entities and public entities can use where we'll incentivize the construction of green practices. If you're a public entity we'll basically incentivize up to $2.00 per square foot of an impervious area that you route into a drainage practice. There is the Churchill downs article. The article about the agreement that we have for incentivizing green infrastructure at Churchill Downs and how much impervious area they have there. So, we do have an incentives program to promote the use of green in private development and in public development. The University of Louisville is also one of the biggest partners we have so far. They're actually building green infrastructure practices to infiltrate 5 inches of rainfall into their practices because of the 22 million dollars in flooding that they had. The 11:1 that you mentioned in CSO 130; I did give an example. It's on the graph, but at the end of that, once you

put the cost of the green practices verses building that gray practice, the green still ended up being more cost effective. So, we're taking into account the treatment savings for not having to treat that water. That's part of the business case we're looking at. And we're also looking at the long term operations and maintenance of those practices, versus what we'd have to do with the basin. So, I think, by in large, we're really trying to address a lot of the things that you stated. Thank you."

Brian Bingham, MSD Director of Regulatory Services- "Let me add one small thing to that. I think that MSD has very clearly stated that it is our preference to capture that water before it gets into the system. It's much more effective to keep it from getting in the system than it is to deal with it once it's in and it's trying to get back out. It's going to be somewhat of an evolutionary process with our policies and our procedures and our design features that we put in and communicating and educating the design community and the development community and the retro fit community and all those, but I think we've seen some pretty tremendous improvements in those areas over the last year and we hope that that continues. And not solely based on what MSD's doing. I think there's every bit as much or more credit goes out to the rest of the community for putting those things in place and for trying to educate people. There's numerous websites, there's numerous that try to do that, so we support those as much as we can. And we're very much all working towards the same thing. We may have slightly different ways of getting there, but I think it's absolutely our goal to keep water from getting into the system. We don't have to deal with it when it starts coming out.

SIGNIFICANT INDUSTRIAL USERS

	SIGNIFICANT INDUSTRIAL USERS PERMITTED IN JEFFERSON COUNTY, KY	ADDRESS	CSO BASIN	COMMENTS
1	AARHUS KARLSHAMN, USA	2520 7TH STREET RD	CSO015	
2	ADVANCED FILTRATION TECHNOLOGY INC.	3111 DIXIE HWY	CSO015	
3	AFFORDABLE WASTE MANAGEMENT	3848 TUCKER AVE	CSO015	
4	AST/ACME COATINGS & LININGS TECHNOLOGY PARK/	100 ROCHESTER DR	CSO015	
5	BAE SYSTEMS LAND & ARMAMENTS L.P.	163 ROCHESTER DR	CSO015	
6	BASF CORPORATION	3400 BANK ST	CSO019	
7	BENEKE WIRE COMPANY BENEKE SPECIALTY ALUMINUM WIRE	5540 NATIONAL TPKE	N/A	In SSS but discharges upstream of CSS TO CSO015
8	BROWN-FORMAN CORPORATION, BROWN-FORMAN DISTILLERY - EARLY TIMES	2921 DIXIE HWY	CSO015	
9	BROWN-FORMAN DISTILLERY CO. LOUISVILLE PRODUCTION OPERATIONS OLD FORRESTER DISTILLERY	850 DIXIE HWY	CSO105	
10	CARDINAL ALUMINUM EXTRUSIONS, LLC - PRESTON FACILITY (PLANT 1)	6910 PRESTON HWY	N/A	DRGWQTC FACILITY IS A ZERO DISCHARGER
11	CARDINAL ALUMINUM EXTRUSIONS, LLC, (2ND OF 2 OAKLAWN FACILITIES)	4005 OAKLAWN DR	N/A	DRGWQTC FACILITY IS A ZERO DISCHARGER
12	CARDINAL ALUMINUM FINISHING, LLC FORMERLY CARDINAL ALUMINUM COMPANY OAKLAWN FACILITY (PLANT 3)	4005 OAKLAWN DR	N/A	DRGWQTC
13	CHALLENGER LIFTS	200 CABEL ST	CSO062	
14	CINETIC INDUSTRIES	500 E BURNETT AVE	CSO 179, 117 & 149	THIS FACILITY IS NOT CURRENTLY DISCHARGING PROCESS WASTEWATER
15	CINTAS CORPORATION RENTAL UNIFORM SERVICE	3916 OAKLAWN DR	N/A	DRGWQTC
16	CONCO, INC.	4000 OAKLAWN DR	N/A	DRGWQTC
17	D. D. WILLIAMSON & COMPANY	1901 PAYNE ST	CSO140	
18	DANT CLAYTON	1550 BERNHEIM LN	CSO015	
19	DAWN FOOD PRODUCTS	6303 KENJOY DR	N/A	In SSS but discharges upstream of CSS TO CSO015
20	DEAN MILK	4420 BISHOP LN	N/A	In SSS but discharges upstream of CSS TO CSO015
21	DEPARTMENT OF VETERANS AFFAIRS MEDICAL CENTER VETERANS ADMINISTRATION HOSPITAL	800 ZORN AVE	CSO154	
22	DERBY CITY TANK WASH, INC.	3806 BELLS LN	CSO015	
23	E.I. DU PONT DE NEMOURS & CO., INC. DUPONT FLUOROPRODUCTS DUPONT LOUISVILLE WORKS	4200 CAMP GROUND RD	N/A	FACILITY DISCHARGES TO THE RUBBERTOWN FORCE MAIN

	SIGNIFICANT INDUSTRIAL USERS PERMITTED IN JEFFERSON COUNTY, KY	ADDRESS	CSO BASIN	COMMENTS
24	FABRICATED METALS CORPORATION	6300 KENJOY DR	N/A	In SSS but discharges upstream of CSS TO CSO015
25	FORD MOTOR COMPANY KENTUCKY TRUCK PLANT	3001 CHAMBERLAIN LN	N/A	HCWQTC
26	FORD MOTOR COMPANY LOUISVILLE ASSEMBLY PLANT	2000 FERN VALLEY RD	N/A	In SSS but discharges upstream of CSS TO CSO015
27	FORTH TECHNOLOGIES, INC. BERGMAN FACILITY	600 BERGMAN ST	CSO 179, 117 & 149	
28	G & K SERVICES, INC.	1200 MAPLE ST	CSO105	
29	GENERAL ELECTRIC CONSUMER PRODUCTS APPLIANCE PARK	4000 BUECHEL BANK RD	N/A	In SSS but discharges upstream of CSS TO CSO015
30	GK-L ACQUISTION CORP.	7601 PORT RD	N/A	DRGWQTC
31	GREENLEE TEXTRON, INC.	4601 E INDIAN TRL	N/A	In SSS but discharges upstream of CSS TO CSO015
32	INDUSTRIAL CONTAINER SERVICES	405 INDUSTRY RD	CSO211	
33	INTERPOLYMER CORPORATION	7501 DISTRIBUTION DR	N/A	DRGWQTC
34	JBS USA LLC FORMERLY SWIFT & COMPANY	1200 STORY AVE	CSO020	
35	JONES PLASTIC & ENGINEERING CORP.	2410 PLANTSIDE DR	N/A	JTWQTC
36	KELLY FABRICATORS CORPORATION	3314 GILMORE INDUSTRIAL BLVD	N/A	In SSS but discharges upstream of CSS TO CSO015
37	KENTUCKIANA TANK WASH, INC.	1611 WATHEN LN	N/A	In SSS but discharges upstream of CSS TO CSO015
38	KENTUCKY ASSOCIATION OF ELECTRIC COOPERATIVES, INC. 4515 BISHOP LN.	4515 BISHOP LN	N/A	In SSS but discharges upstream of CSS TO CSO015
39	KENTUCKY FLAGSHIP SERVICES	4107 BELLS LN	CSO191	
40	LANTECH, INC.	11000 BLUEGRASS PKY	N/A	JTWQTC
41	LIQUID TRANSPORTERS , INC. TRIMAC TRANSPORTATION, INC.	3710 CANE RUN RD	CSO015	
42	LUBRIZOL ADVANCE MATERIALS,INC FORMERLY NOVEON, INC. PMG GROUP, & B.F.GOODRICH CO.	4200 BELLS LN	N/A	FACILITY DISCHARGES TO THE RUBBERTOWN FORCE MAIN
43	LUVATA ELECTROFIN	1423 W ORMSBY AVE	CSO105	
44	MARATHON PETROLEUM CO. LLC BULK TERMINAL	4510 ALGONQUIN PKY	N/A	FACILITY DISCHARGES TO A GRAVITY SEWER THAT FLOWS TO MFWQTC

	SIGNIFICANT INDUSTRIAL USERS PERMITTED IN JEFFERSON COUNTY, KY	ADDRESS	CSO BASIN	COMMENTS
45	MEDICAL CENTER LAUNDRY	1400 STORY AVE	CSO130	
46	MESA FOODS, INC	3701 W MAGNOLIA AVE	CSO211	
47	MULTI-METALS	715 E GRAY ST	CSO118	
48	NSS ENVIRONMENTAL INC	827 S 8TH ST	CSO029	
49	NTH WORKS - ALLMOND PLANT	4701 ALLMOND AVE	CSO015	
50	NTH WORKS - PRESTON PLANT	6903 PRESTON HWY	N/A	DRGWQTC
51	NUPLEX RESINS, LLC FORMERLY AKZO NOBEL RESINS/ LOUISVILLE RESINS/ RELIANCE UNIVERSAL	4730 CRITTENDEN DR	CSO015	ZERO PROCESS DISCHARGER
52	PARALLEL PRODUCTS OF KENTUCKY INC.	1620 BERNHEIM LN	CSO015	
53	PPG ARCHITECTURAL FINISHES, INC. PORTER PAINTS, PLANT #1 PORTER PAINT	400 S 13TH ST	CSO105	
54	QUALA SERVICES, LLC	2600 MILLERS LN	CSO015	
55	R.C. TWAY COMPANY,INC.- KENTUCKY TRAILER PLANT	7070 INTERNATIONAL DR	N/A	DRGWQTC
56	RALCORP FROZEN BAKERY PRODUCTS PLANT # 2	12650 WESTPORT RD	N/A	HCWQTC
57	RC/SEVEN-UP A DR. PEPPER SNAPPLE GROUP	6207 STRAWBERRY LN	CSO015	
58	REPUBLIC CONDUIT MANUFACTURING	7301 LOGISTICS DR	N/A	DRGWQTC
59	REYNOLDS PACKAGING GROUP	2827 HALE AVE	CSO211	
60	ROHM AND HAAS CHEMICALS, LLC	4300 CAMP GROUND RD	N/A	FACILITY DISCHARGES TO THE RUBBERTOWN FORCE MAIN
61	SAINT - GOBAIN QUARTZ USA QUARTZ PRODUCTS COMPANY	7201 DISTRIBUTION DR	N/A	DRGWQTC
62	SAPA HEAT EXCHANGER TUBES, INC.	4301 PRODUCE RD	CSO015	ZERO PROCESS DISCHARGER STORMWATER ONLY
63	SOLAE L.L.C. DUPONT SOY POLYMERS PTI, PREVIOUSLY RALSTON PURINA, PROTEIN TECHNOLOGIES	2441 S FLOYD ST	CSO211	
64	SOUTHERN CLAY PRODUCTS INC	1325 S 13TH ST	CSO211	
65	SUD-CHEMIE INC. SOUTH PLANT UNITED CATALYSTS INC.	4900 CRITTENDEN DR	CSO015	
66	SUD-CHEMIE INC. WEST PLANT WEST CATALYST PLANT UNITED CATALYSTS, INC.	1227 S 12TH ST	CSO211	
67	SUNOPTA INGREDIENTS - A SUNOPTA COMPANY (1/1/02), OPTA FOOD INGREDIENTS, INC. LOUISVILLE FIBER FACILITY WILLIAMSON FIBER	1401 LOCUST ST	CSO020	THIS FACILITY IS ONLY RUNNING 8 WEEKS IN 2012 - BEGINNING 04/03/2012
68	THE LYONS COMPANIES	11401 ELECTRON DR	N/A	JTWQTC
69	TRI-STATE PLATING, INC.	1125 S 12TH ST	CSO211	
70	UNITED PARCEL SERVICE GRADE LANE FACILITY	911 GRADE LN	N/A	In SSS but discharges upstream of CSS TO CSO015
71	UNIVERSAL LINEN SERVICE	1807 COMMERCE RD	CSO211	
72	UTILITY METALS DIV OF FABRICATED METALS	6210 STRAWBERRY LN	N/A	In SSS but discharges upstream of CSS TO CSO015
73	WASTE MANAGEMENT OF KENTUCKY, L.L.C. OUTER LOOP RECYCLING & DISPOSAL FACILITY	2673 OUTER LOOP	N/A	DRGWQTC
74	WHITE CASTLE DISTRIBUTING, INC. WHITE CASTLE DISTRIBUTING	2270 AMPERE DR	N/A	JTWQTC

	SIGNIFICANT INDUSTRIAL USERS PERMITTED IN JEFFERSON COUNTY, KY	ADDRESS	CSO BASIN	COMMENTS
75	WINSTON PRODUCTS COMPANY	2345 CARTON DR	N/A	JTWQTC
76	WYNN STARR FOODS OF KY	4820 ALLMOND AVE	N/A	In SSS but discharges upstream of CSS TO CSO015
77	YAMAMOTO FB ENGINEERING L.L.C.	7331 GLOBAL DR	N/A	DRGWQTC
78	ZEOCHEM	1314 S 12TH ST	CSO211	
79	ZOELLER PUMP COMPANY, LLC ZOELLER COMPANY	3649 CANE RUN RD	CSO015	