FLOOD RESPONSE PLAN

City of Aurora



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Operations Plan



Section I

Site-Specific Plans for Orange Priority Assets



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Section II

APPENDICES

City of Aurora



Prioritized List of Trouble Spots



Trouble Spots Maps

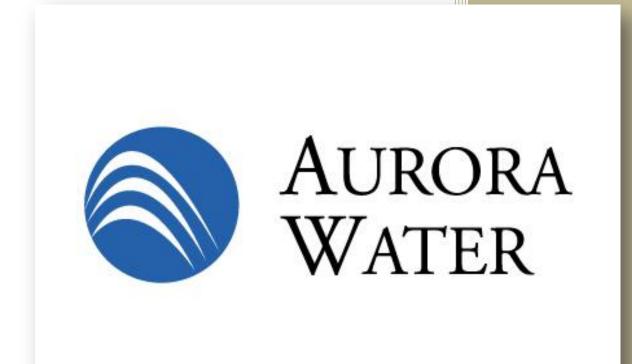


Reference Photos for Orange Priority Assets



F2P2:

Urban Drainage Flood Control District Message Alert System



CONTENT:

-	UDFCD	Alert Message	Definitions		1
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- Flash Flood Emergency Flowchart...... 2
- Emergency Contact List 3

Lists of Trucks & Equipment



Appendix 5A

Materials & Resources by Location



CONTENT:

- (Central Facility	1 - 3
	South Satellite	
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-]	Nome Facility	8
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Appendix 5B

Stormwater Employee Flowchart



Appendix 5C

INTRODUCTION

This document includes the Stormwater Division's response to flooding within Aurora. This Flood Response Plan may be implemented at any Stormwater facility or location in the city in situations from routine Rain Watch to the higher levels of flash flood warnings. This plan will guide responders through the proper actions and appropriate chain of command associated with a localized emergency flood response. The Flood Response Plan is initiated by the on-call Rain Watch supervisor.

Roles and Responsibilities

The core function of the City of Aurora's Division of Stormwater is to provide a scheduled maintenance program for the conveyance of storm water with the purpose to minimize the impact of any weather event from becoming a hazard to the general public. City of Aurora Stormwater employees are trained to maintain and monitor the conveyance system and are knowledgeable with its characteristics and design features. However, the system has its limits and the effort for control can, under any number of circumstances, overwhelm what the department can accomplish on their own. In these instances, Wastewater, a division in relation with Stormwater, can be called in to provide additional assistance. Furthermore, in true weather emergencies, Aurora Water relinquishes command to emergency personnel and any Federal agencies that may be called in for relief under the hierarchy of emergency operations, but Stormwater will still serve in an advisory capacity to provide resources, backup support, and real-time field monitoring.

Refer to the rest of this plan for additional information on Stormwater's role to the City of Aurora or for contact information and an employee diagram.

Response Criteria Tools

The Stormwater Division uses a number of tools to assess rain events and to determine an appropriate response. Field experience, rainfall monitors, stream flow gauges, and real-time notification systems are the most notable methods used to determine the necessity of deploying crews and to develop the best response to an event.

Stormwater crews monitor rainfall and flood hazards with tools on the Urban Drainage and Flood Control District website. The *Urban Drainage Flood Control District* (UDFCD) provides real-time information on amount of rainfall in the district. Depending on the amount of rain a particular storm releases, UDFCD, via a message alert system, notifies an on-call supervisor in City of Aurora's Stormwater division and a procedural response is enabled. Flood threat levels are determined by The Urban Drainage and Flood Control District Flash Flood Prediction Program (F2P2) which issues Flood Mode Messages of "Potential" and "Imminent" Threats. The F2P2 message definitions are as follows:

- MESSAGE 1 (Internal Alert) ~ This is an advisory message which is meant to inform key people that weather conditions are such that flood producing storms could develop later in the day. It will be issued by PMS after consultations with NWS. If PMS feels this weather advisory requires priority handling by the communications dispatcher, the message will be preceded with the statement: "THIS IS A RED FLAG MESSAGE."
- MESSAGE 2 (Flash Flood Watch) ~ This message indicates that a Flash Flood Watch has been issued by NWS and/or PMS feels the risk is high that a life-threatening flood may occur later in the day. PMS will add any additional information that is available. If PMS feels this watch requires priority handling by the communications dispatcher, it will be identified as a RED FLAG message.
- MESSAGE 3 (FLash FLood Warning) ~ This message indicates that a Flash Flood Warning has been issued by NWS and/or PMS feels that a lifethreatening flood is imminent. Again, PMS will add any additional information that is available. This warning message requires priority handling by the communications dispatcher (i.e. AUTOMATIC RED FLAG)
- MESSAGE UPDATE ~ This message will be used by PMS to update any of the previous messages, particularly in the event of a disagreement between PMS and NWS. For example, this message can be used to narrow a watch or warning area as more information becomes available or to provide more site-specific data and direction during an event. If PMS feels this update requires priority handling by the communications dispatcher, it will be identified as a RED FLAG message.
- MESSAGE 4 (All Clear) ~ This message cancels the flood potential status. This message is issued by PMS after consultation with NWS and other entities involved with direct PMS communications.

The information in these messages can also be found in [Appendix 4].

For other tools, refer to:

- Normal Rainwatch Procedures & Operations, [RAINWATCH SOP SWG-14]
- A Flash Flood Emergency Flow Chart of responsibilities for persons in charge, refer to [Appendix 4, page 2]
- An Emergency Contact List and important numbers, refer to [Appendix 4, page 3]
- Real-Time Rain Monitoring Website can be viewed at: <u>http://alert.udfcd.org/rt_maps.html</u>

OPERATIONS

The Flood Response Plan is initiated when the Rain Watch Supervisor has deployed additional crew during an event that is determined to have exceeded or will *soon* exceed the limits of the on-call rain

watch staff. Crews are deployed based on real-time information at the time of the event and at the discretion of the supervisor. The crews work to remove blockages, berm breaches, and pump critical areas determined to be high flood risks within the storm conveyance system according to the response activity outline for that location. Six locations have been specifically identified as having unique features which require special equipment or detailed information related to response activity. Site Specific Plans have been developed for these locations, refer to [Section 2].

Risk Assessment

The City of Aurora's vast storm water conveyance system is highly defined with unique asset codes for inlets and outfalls to ponds and creeks. Each of these assets are routinely maintained and monitored for hazard potential. A small portion of these assets have been identified as "trouble spots" which require more attention or having unique features which increase the likelihood of blockage or flooding to the area. The trouble spot list in [**Appendix 1**] lists these locations by the assets code and an address that identifies a physical location for identification on map pages. In this list, an even smaller number of trouble spots have been further identified for special attention in flood events. The essence of the Flood Response Operations Plan is developed around these High Risk sites in Site-Specific Plans.

The Stormwater Division has assigned risk factors to all identified trouble spots in the city based on the potential for flooding in the likelihood of a structure failure. That potential is based on these characteristics: structure type, size, age, capacity, history, geographic location, and topography. Trouble spots with higher risk of inundation, or which may cause overflow and inundation in other areas, were given the highest risk factor.

Trouble spots are prioritized into one of three designated groups:

Green	Low Risk	Monitor
Yellow	Moderate Risk	Monitor Frequently for Change
Orange	High Risk	Follow Site Specific Plan

Again, The Prioritized Asset List [**Appendix 1**] also arranges the trouble spot list with the following kinds of information: an identifying asset code, map page, address, and description.

Response Activities:

The City of Aurora Stormwater Division's Flood Response Plan is essentially outlined in four stages of response activity. These response stages can reflect a real-time assessment of a storm's impact on the city as a whole or at a particular location based on the tools available to the supervisor and information that is passed on to crews in the field from UDFCD. The following tells of the maintenance actions taken

at each level as well as what crews are looking for and the alert action from the Supervisor on Rain Watch.

Response Level 1: Water enters low-flow grates and flows through pipe.

- <u>Maintenance</u>: Inspect, maintain, and clean grates and structures during light rains or as an afterstorm inspection.
- Monitor: Rising water elevation and debris accumulating against low-flow grates; four crews are generally working in quadrants and checking all trouble spots designated as green, yellow, & orange. Channels are also monitored along with these trouble spots.

<u>Alert:</u> Rain Watch Supervisor places additional staff on notice.

Response Level 2: Water elevation submerges low–flow grates and elevates to outflow grate.

- <u>Maintenance</u>: Progressively increased maintenance activity; crews should forgo the maintenance of low-flow grates that are unapproachable and focus efforts on maintaining the outflow grate.
- <u>Monitor</u>: Progressively increased vigilance; during heavier rains, crews are called to check only those trouble spots designated yellow & orange.
- <u>Alert:</u> Rain Watch Supervisor mobilizes additional staff. Minimize threat of overflow (secure life safety, protect structures and property).

<u>Response Level 3</u>: Water elevation inundates the overflow grates, however does not yet breech the system.

- <u>Maintenance</u>: Crews discontinue efforts to maintain grates and focus on potential system breach. It may be necessary to begin sandbags placing, birming, and begin pump operations to protect private property and prevent a public hazard.
- Monitor: Progressively increased vigilance; crews are called to direct efforts only to most serious assets designated as priority orange.

<u>Alert:</u> Rain Watch Supervisor communicates field conditions to the Stormwater Superintendent. Pumps, sandbags, etc., are put into place and use.

Response Level 4: Water breaches the system and overflows all protection efforts.

<u>Alert:</u> The Rain Watch Supervisor relinquishes site control to the responding higher authority. All efforts are being made.

Site Specific Plans Overview

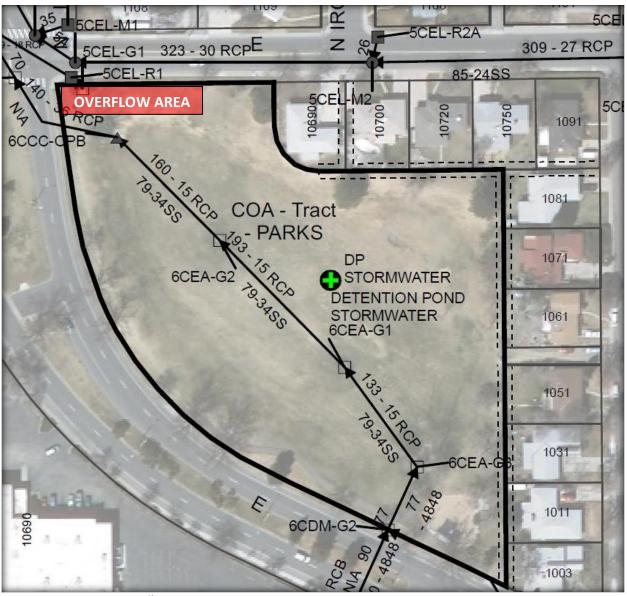
Site specific plans outline actions required at Orange rated trouble spots. These are high risk locations with unique potentials for public hazard and require specific information to maintain. For these locations, the general plan is to keep blockages from impeding the function of design and to control the conveyance of water in the event of a breach. These plans can be read in [Section 2]

A) CHARACTERISTICS:

- Collection of water from inlets and runoff from Del Mar Pkwy.
- Outfall drains into the pond from Southeast corner.
- Two (2) grates in the center of pond drain water to an underground low-flow pipe, which runs to the outlet grate.
- Outlet grate located at the Northwest corner handles normal draining in small events.
- Flat overflow grate can be found on the Southwest corner of pond in the landscaping above the outlet grate.
- B) POINT OF ACCESS:
 - Open to access on the North and West sides from the following streets: E Del-Mar Pkwy & E 11th Ave.
- C) DESIGNS & WATER LEVEL MONITORING DIAGRAMS:
 - See Reference Photos for projected water levels
- D) OPERATIONS PLAN, see Appendix 3: Referencing for Orange Priority Assets

E) CONTINGENCY PLAN:

- Haul materials by truck to build temporary dyke or sandbag embankments to divert water to prevent private property damages. Contact Emergency Personnel and Fire Department. In addition, pumping of pond to downstream inlet may be necessary (see *StormWater/WasteWater Emergency Pumping Plan*).



Aerial Photo and map of 11th and Del Mar Pkwy. Notice the locations of the inflow grate, the two low-flow grates and the outflow structure.



One of two low-flow grates (6CEA-G1 & G2)



Outflow Structure (6CCC-OPB)









CANTERBURRY PARK

- A) Characteristics:
 - Collection of water from inlets and runoff from surrounding neighborhood.
 - Three (3) inflow pipes drain into the pond on the South side, as well as two (2) additional pipes at the Southwest corner, and one (1) on the North side of the pond
 - A few grates drain to a low-flow pipe underground, which all lead to one (1) grate in the Northwest corner, which takes water out of the system.
- B) Point of Access:
 - Open on all sides to access from surrounding streets: S Kenton Way, E Arkansas Pl, S Lansing St, and E Idaho Pl
- C) Water Level Monitoring Diagrams:
 - See Reference Photos for projected water levels
- D) Operations Plan:
 - - program.

Maintenance: Continual monitoring of water level; refer to contingency plan.

F) CONTINGENCY PLAN:

- Haul materials by truck to build temporary dyke or sandbag embankments to divert water to prevent private property damages. Contact Emergency Personnel and Fire Department. In addition, pumping of pond to downstream inlet may be necessary (see *StormWater/WasteWater Emergency Pumping Plan*).



An aerial photo of Canterbury Park. Notice the location of all the points of inflow and the outflow grate.



Left: cones mark the levels of water. The closest cone shows the point at which the inflow assets are underwater at Level 2



Above: Top view of the outflow grate

Below: Outfalls on the South side of the pond empty StormWater from the street into the pond,

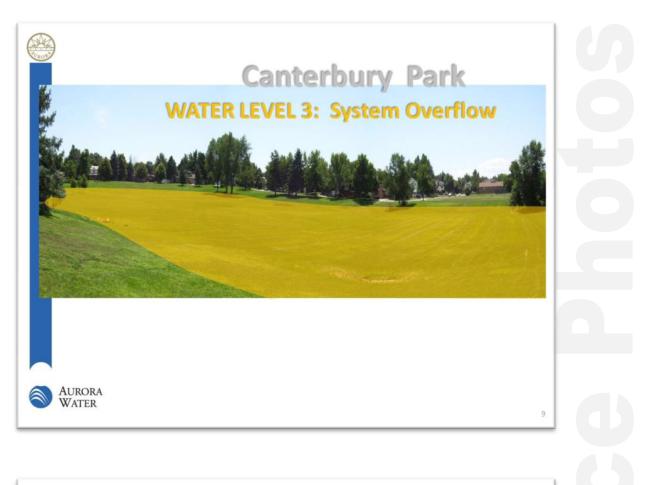


Below: One of the many low-flow grates inside and on the bottom of the pond











CULVERTS AT PEORIA & FLORIDA

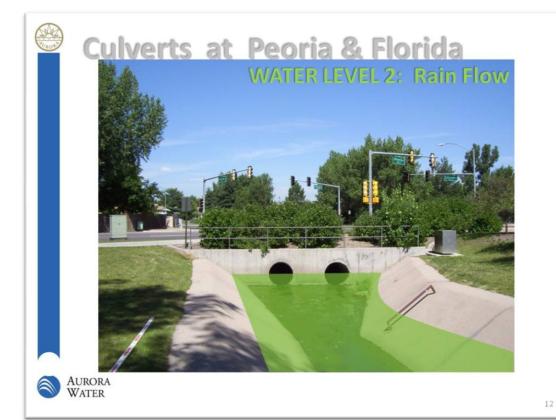
A)	CHARACTERISTICS:
	- Twin 42" Pipes run underneath Peoria & Florida from the Southeast corner diagonally to the
	Northwest corner.
B)	POINT OF ACCESS:
	- Enter onto pedestrian bike path from intersection of Peoria & Florida
C)	DESIGNS & WATER LEVEL MONITORING DIAGRAMS:
	- See Reference Photos 1-3 for projected water levels
D)	OPERATIONS PLAN:
	- Water & Response Level 1 : Normal flow
	Water is flowing thru pipe.
	Maintenance: Trash and debris cleaned off the grate on a monthly scheduled maintenance
	program.
	- Water & Response Level 2: Rain Flow Appendix 3, page 12
	Pipes are efficiently taking on rain water and passing it through the system
	Maintenance: Remove large debris in front of pipes while maintaining personal safety.
	- Water & Response Level 3: System Full Appendix 3, page 13
	Pipes are submerged and water level rises to top of the headwall.
	Maintenance: Remove large debris from in front of pipes while maintaining personal safety.
	- Water & Response Level 3: System breach Appendix 3, page 14
	Water spills onto street and flows across intersection to open ditch on other side.
	Maintenance: Refer to contingency plan and assist EOC as directed.
E)	CONTINGENCY PLAN:
	Used we should be been all the best of the second second because where the second best of the second s

Haul materials by truck to build temporary dyke or sandbag embankments to divert water to prevent private property damages. Contact Emergency Personnel and Fire Department. In addition, pumping of pond to downstream inlet may be necessary (see *StormWater/WasteWater Emergency Pumping Plan*).

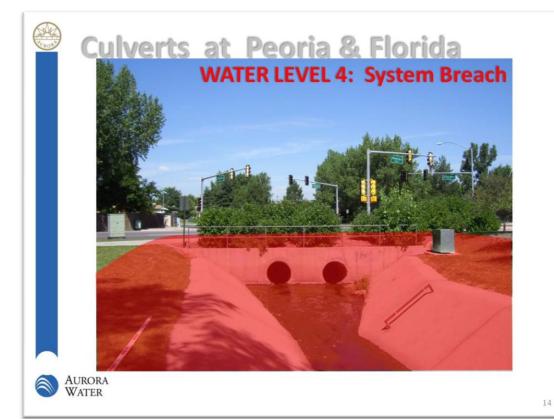
Right: a photo of the two pipes that tend to get blocked easily especially with fallen limbs from the nearby grove of cottonwoods.











EXPO PARK

- A) CHARACTERISTIC:
 - Normal flow from Westerly Creek on the South end.
 - 3 large outfalls flow water into pond from the East.
 - A large outlet structure at North end of the North pond drains water *from* ponds.
 - Has the ability to handle large rain events and detention.
- B) POINT OF ACCESS:
 - Pedestrian walk/Maintenance path runs from North to South on both sides of ponds and the connecting channel
 - Access streets/intersections are E Exposition Ave & S Moline St, E Exposition Ave & Westerly Creek, E Alameda Ave & S Jamaica Way (North Entrance)
- C) DESIGNS & WATER LEVEL MONITORING DIAGRAMS:
 - See Reference Photos for projected water levels
 - See also : Plan Drawing #990183 (outlet structure)
- D) OPERATIONS PLAN:

 - Water & Response Level 2: Rain flow...... Appendix 3, page 16 With increased flow, water level rises to top of outlet grate.

Maintenance: Continue to clean grate if possible as access allows.

Maintenance: Monitor water level; gather pumping equipment and damming supplies to potentially divert flow; protect the public and private property as necessary.

Multitenunce. Terer to contingency plan and assist EOC

E) CONTINGENCY PLAN:

- Haul materials by truck to build temporary dyke or sandbag embankments to divert water to prevent private property damages. Contact Emergency Personnel and Fire Department. In addition, pumping of pond to downstream inlet may be necessary (see *StormWater/WasteWater Emergency Pumping Plan*).



Above: a view of the outflow grate structure located on the north side of Expo Park



To the **left** is the outfall box structure by the YMCA. This is one of three structures bringing in street runoff from the surrounding neighborhood and inlet systems, filling the pond with rainwater in a storm event. The two other structures, like the one off Lansing St shown **below**, are similar in design.





Expo Park, Aerial Photo Map from GIS Imaging; the outflow grate is located at the North tip of the North Pond. Also notice the pedestrian path going around the park for access.









KELLY ROAD DAM

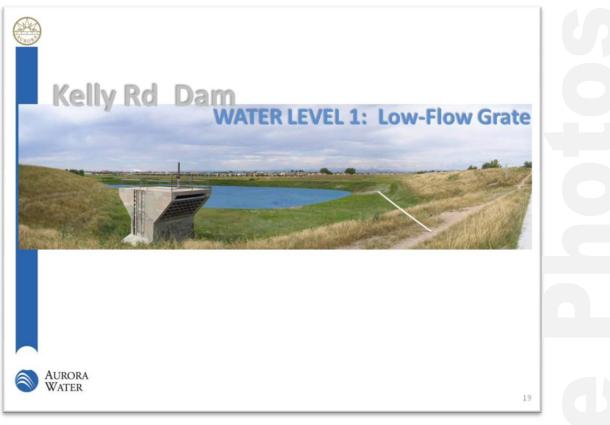
- A) CHARACTERISTICS:
 - Low-flow trash rack & grate on Northeast corner of the basin requires continual maintenance.
 - See **Section 3.2.3 Outlet works** in the *Operation & Maintenance Manual Kelly Rd Dam Westerly Creek*
- B) POINT OF ACCESS:
 - At curb-cut on east side of spillway off East 11th Ave.
 - Access off Uinta Way at south end of the west embankment.
- C) DESIGNS & WATER LEVEL MONITORING DIAGRAMS:
 - See Operation & Maintenance Manual Kelly Rd Dam Westerly Creek
 - See Reference Photos 1-3 for projected water levels
- D) OPERATIONS PLAN:
 - See Operation & Maintenance Manual Kelly Rd Dam Westerly Creek
- E) CONTINGENCY PLAN:
 - Haul materials by truck to build temporary dyke or sandbag embankments to divert water to prevent private property damages. Contact Emergency Personnel and Fire Department. In addition, pumping of pond to downstream inlet may be necessary (see *StormWater/WasteWater Emergency Pumping Plan*).

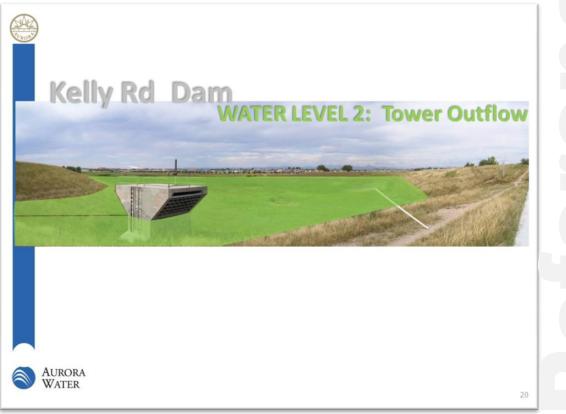


Right: the tall overflow tower houses a 60-inch pipe to take away large loads of water.

Left: the Trash Rack Grate, located nearly 75 yards southwest of the Tower Structure, plugs up easily with debris. The cone in the picture is resting on the overflow grate.

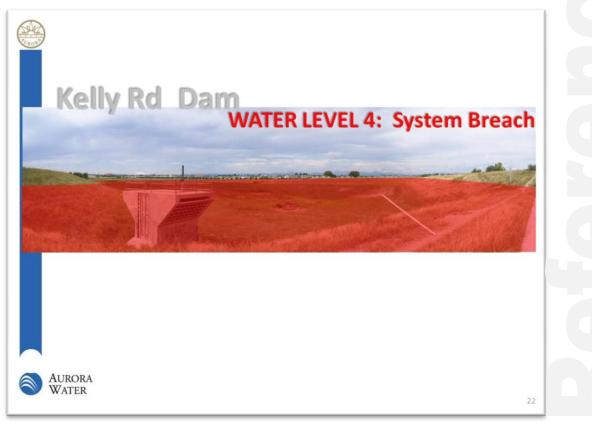












WESTERLY GRATE ON KENTON

A)	CHARACTERISTICS:
	 Normal flow passes under and through a large grate.
	- Grate collects large amounts of trash and debris during most rain events.
B)	POINT OF ACCESS:
	- Just off the Kenton St south of Mississippi Ave.
C)	DESIGNS & WATER LEVEL MONITORING DIAGRAMS:
	- See Reference Photos for projected water levels
D)	OPERATIONS PLAN:
	- Water & Response Level 1: Normal Flow Appendix 3, page 23
	Water passes under grate and through the grate.
	Maintenance: Trash and debris cleaned off the grate on a monthly scheduled maintenance
	program.
	- Water & Response Level 2: Rain Flow Appendix 3, page 24
	Water passes thru grate, which functions to collect debris from incoming flow.
	Maintenance: clean grate of collected algae and debris; maintain flow while ensuring personal
	safety
	- Water & Response Level 3: System Full Appendix 3, page 25
	Under heavy rains, water has reached the top of grate.
	Maintenance: steer clear and monitor, gather sandbags and damming materials as necessary to
	protect public from threat to private property.
	- Water & Response Level 4: System Breach Appendix 3, page 26
	Event has overloaded grate system overflows into surrounding street; water flows west down E
	Arizona Pl. to S Joliet St, across E Mississippi Ave and into open channel on North side.
	Maintenance: refer to contingency plan and assist EOC as directed.
E)	CONTINGENCY PLAN:
	- Haul materials by truck to build temporary dyke or sandbag embankments to divert water to

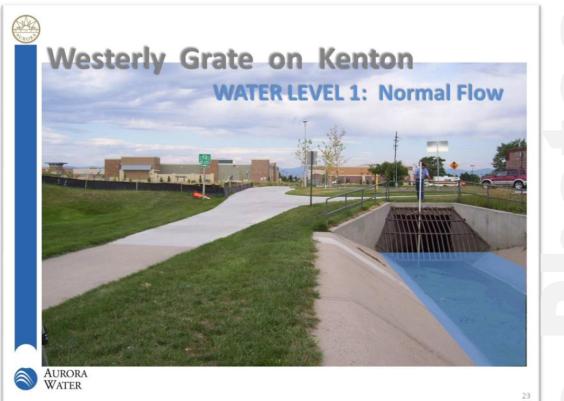
- Haul materials by truck to build temporary dyke or sandbag embankments to divert water to prevent private property damages. Contact Emergency Personnel and Fire Department. In addition, pumping of pond to downstream inlet may be necessary (see *StormWater/WasteWater Emergency Pumping Plan*).



Left: a picture of the grate and water level under normal conditions, notice the algae that could potentially build on grate.

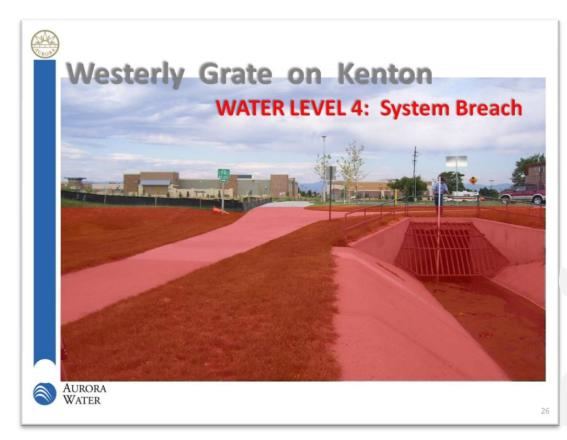
Right: a map of the area and marker showing where the picture was taken











GROUP NAME	<u>Unit Id</u>	Address	Map Page	Qualifier	<u>Qtr</u>	Asset Type	FIRM PANEL #	Priority	<u>Comments</u>
Kelly Dam Road	6A-P-W01	11TH & YOSEMITE ST.	<u>06A</u>	KELLY DAM ROAD AT E 11TH & YOSEMITE		POND	080046-0207G	1	Orange = Follow Plan=1
Expo Park	9CEP-OPA	11100 E ALAMEDA AVE	<u>09C</u>	(5) GRATES EXPO PARK N. EDGE OF N. POND GRATE 5 -	NW	POND	080002-0180 F	1	
Canterbury Park	11CAR-G1A	10997 E ARKANSAS AVE	<u>11C</u>	CANTERBURY PARK ARKANSAS & KENTON	SW	POND	080002-0180 F	1	
Westerly Creek	11CKE-G1	1231 S KINGSTON CT	<u>11C</u>	GRATE ON V DITCH E OF KENTON, S OF MISSISSIPPI	SW		080002-0180 F	1	
	11DCC-OPO	12103 E FLORIDA AVE	<u>12E</u>	CULVERTS AT PEORIA & FLORIDA AVE - CULVERT 1 -	SW		080002-0180 F	1	
	11DCC-OPP	12103 E FLORIDA AVE	<u>12E</u>	CULVERTS AT PEORIA & FLORIDA AVE - CULVERT 2 -	SW		080002-0180 F	1	
Havana Park Pond	5CEL-G1	1108 N IOLA ST.	<u>06C</u>	11TH & DELMAR PKWY, GRATE 1	NW	POND	080002-0180 F	1	
	1DEA-OPE	11601 E 33RD AVE	<u>01D</u>	33RD AND MOLINE BEHIND WAREHOUSE	NW		Yellow= Monitor Frequently	2	Yellow= Monitor Frequently=2
	3BHN-C1	2522 N HANOVER ST	<u>03B</u>	GRATE AT 25TH & HAVANA (END OF HAVANA)	NW			2	
Fitzsimons	3F-DP-D01	2343 N URSULA ST	<u>03F</u>	FITZSIMONS POND		POND		2	
	3GCC-OPE	14007 E 22ND PL	<u>03G</u>	23RD "V" DITCH FROM I-225 TO LAREDO AND COLFAX. VERY CLOSE TO I-225	NE			2	
	3GCC-OPN	14007 E 22ND PL	<u>03G</u>	BRIDGE STRUCTURE AT SABLE VILLAGE DITCH & BILLINGS ST	NE			2	
	5HCO-G1B		<u>05H</u>	S SIDE OF COLFAX & EAGLE	NE			2	
Havana Park Pond	6CEA-G1		<u>06C</u>	11TH & DELMAR PKWY, GRATE 3	NW			2	
Havana Park Pond	6CEA-G2		<u>06C</u>	11TH & DELMAR PKWY, GRATE 2	NW			2	
Havana Park Pond	6CEA-G3		<u>06C</u>	11TH & DELMAR PKWY, GRATE 4	NW			2	
	6JHA-G2B		<u>06J</u>	8TH & HANNIBAL	NE	POND		2	
	9CEA-G1A	445 S LANSING ST	<u>09C</u>	(5) GRATES EXPO PARK E. OF N. POND ON THE EDGE OF THE PARK - GRATE 3 -	NW	Grate 3 of 5		2	
	9CEP-OPC	445 S LANSING ST	<u>09C</u>		NW	Grate 4 of 5		2	
	9CEP-OPG	495 S KINGSTON CIR	<u>09C</u>	(5) GRATES EXPO PARK N.E. OF S. POND NEAR LANSING ST GRATE 2 -	NW	Grate 2 of 5		2	
	9DEP-OPA	11494 E CENTER AVE	<u>09D</u>	(5) GRATES S.E. EXPO PARK NEAR MOLINE IN TURKEY LEG GRATE 1 -	NW	Grate 1 of 5		2	
	11JAR-G2		<u>11J</u>	KINGSBOROUGH NORTH GRATE & OPEN DITCH	SE			2	
Havana Heights	12CEA-G1A		<u>12C</u>	GRATE ON N.W. CORNER OF HAVANA HEIGHTS DETENTION POND	SW	POND		2	
	12HRR-OPC		<u>12H</u>	TWIN 66" TUBES N.E OF CHAMBERS & JEWELL - TUBE 2 -	SE			2	
	12HRR-OPD		<u>12H</u>	TWIN 66" TUBES N.E. OF CHAMBERS AND JEWELL - TUBE 1 -	SE			2	
	15PEA-OPD		<u>15P</u>	2992 S. HALIFAX ST.	SE	POND		2	
	15PEA-OPE		<u>15P</u>	3044 S. HALIFAX ST.	SE	POND		2	

GROUP NAME	<u>Unit Id</u>	Address	Map Page	Qualifier	<u>Qtr</u>	Asset Type	FIRM PANEL #	Priority	<u>Comments</u>
	1FCC-OPB	12930 E BARANMOR PKY	<u>01F</u>	BARANMOR DITCH: SABLE/PEORIA GRATE AT URSULA	NW			3	Green= Monitor=3
	2EOF-OPA	2800 N PEORIA ST	<u>02E</u>	GRATE AT SANDCREEK E OF PEORIA	NW			3	
	3BFU-G1	10081 E 25TH AVE	<u>03B</u>	GRATE AT 25TH & FULTON (BY OLD STAPLETON) ,, IF FULTON EXTENDED TO 26TH AVE. ITS RIGHT	NW			3	
	3P-WQ-D01	2239 N ENSENADA ST	<u>03P</u>	22ND PLACE AND E CARMEL CIR		POND		3	
	4AEA-G1A		<u>04A</u>	GRATE IN ALLEY NORTH OF E 16TH AVE BETWEEN AKRON & ALTON ST	NW			3	
	4AEA-OPA		<u>04A</u>	WESTERLY CREEK MONTVIEW TO COLFAX, GRATE AT 19TH & BOSTON	NW			3	
	4GBI-G3B		<u>04G</u>	(2) GRATES WEST SIDE OF N. BILLINGS ST. FROM COLFAX TO EVERGREEN - GRATE 2 - HALF WAY	NE	Grate 2 of 2		3	
	4GBI-G7B		<u>04G</u>	(2) GRATES WEST SIDE OF N. BILLINGS ST. FROM COLFAX TO EVERGREEN GRATE 1 - CLOSER TO	NE	Grate 1 of 2		3	
	4GBK-G1A		<u>04G</u>	GRATE ON BLACKHAWK BETWEEN EVERGREEN AND MONTVIEW	NE			3	
	4GEA-OPD		<u>04G</u>	GRATE ON FENCE W OF SABLE N OF COLFAX (PHILLIPS EASEMENT)	NE			3	
	4GCC-OPB		<u>04G</u>	(3) GRATES E. EVERGREEN AVE GRATE 3 - FROM N. BOUNTY ST TO N. CLARK ST BY GRANBY	NE	Grate 3 of 3		3	
	4GEV-G1A		<u>04G</u>	(3) GRATES E. EVERGREEN AVE - GRATE 1 - FROM N. BOUNTY ST. TO N. CLARK ST.	NE	Grate 1 of 3		3	
	4GEV-G1B		<u>04G</u>	(3) GRATES E. EVERGREEN AVE GRATE 2 - FROM N. BOUNTY ST TO N CLARK ST NEAR GRANBY	NE	Grate 2 of 3		3	
	4JCC-OPM	15305 E COLFAX AVE	<u>04J</u>	COLFAX & CHAMBERS NE CORNER (BANK PARKING)				3	
	4NCO-G4A	1510 N ARGONNE ST	<u>04N</u>	GRATE AT END OF CONCRETE PAN - N OF COLFAX E OF ARGONNE ST	NE	CDOT TYPE C INLET		3	
	4NCO-G5A	18955 E COLFAX AVE	<u>04N</u>	(3) GRATES N. SIDE OF E. COLFAX BETWEEN N. ARGONNE ST AND N. CEYLON - GRATE 2 -	NE	Grate 2 of 3		3	
	4NCO-G6A	18955 E COLFAX AVE	<u>04N</u>	(3) GRATES N. SIDE OF E. COLFAX BETWEEN N. ARGONNE ST. AND N. CEYLON - GRATE 3 -	NE	Grate 3 of 3		3	
	4NEA-G1A	1624 N BISCAY CIR	<u>04N</u>	(3) GRATES JUST OFF E. COLFAX BY STORES. (LANCASTERS) BETWEEN N. ARGONNE ST AND N	NE	Grate 3 of 3		3	
Triangle Park	4PCC-OPG	1636 N ENSENADA WAY	<u>04P</u>	TRIANGLE PARK DETENTION POND - COLFAX & ESPANA (GRATE & OUTFALL)	NE	POND		3	
	4PEA-OPL	1701 N ESPANA ST	<u>04P</u>	18" PIPE ON ESPANA ST N OF 19TH AVE	NE			3	
	5HRR-OPA		<u>05H</u>	GRATE BEHIND KMART 13TH & GRANBY	NE			3	
	5KEA-OPC		<u>05K</u>	CULVERT SE CORNER OF 13TH & AIRPORT	NE			3	
Springhill	5MSH-G1		<u>05M</u>	OUTLET STRUCTURE AT DPSP (SPRINGHILL)	NE	POND		3	
	6ASX-G1A		<u>06A</u>	NE CORNER OF DAYTON & 6TH - BOTH SIDES OF BIKE PATH - GRATE 1	NW			3	
	6ASX-G1B		<u>06A</u>	NE CORNER OF DAYTON & 6TH - BOTH SIDES OF BIKE PATH - GRATE 2	NW			3	
	6BEA-OPA		<u>06B</u>	6TH & HAVANA, NE CORNER	NW			3	
	6BSX-G3		<u>06B</u>	N SIDE OF 6TH AVE HAVANA TO DAYTON GRATE 3	NW			3	
	6BSX-G5		<u>06B</u>	N SIDE OF 6TH AVE HAVANA TO DAYTON GRATE 2	NW			3	
	6BSX-G8A		<u>06B</u>	N SIDE OF 6TH AVE HAVANA TO DAYTON GRATE 1	NW			3	

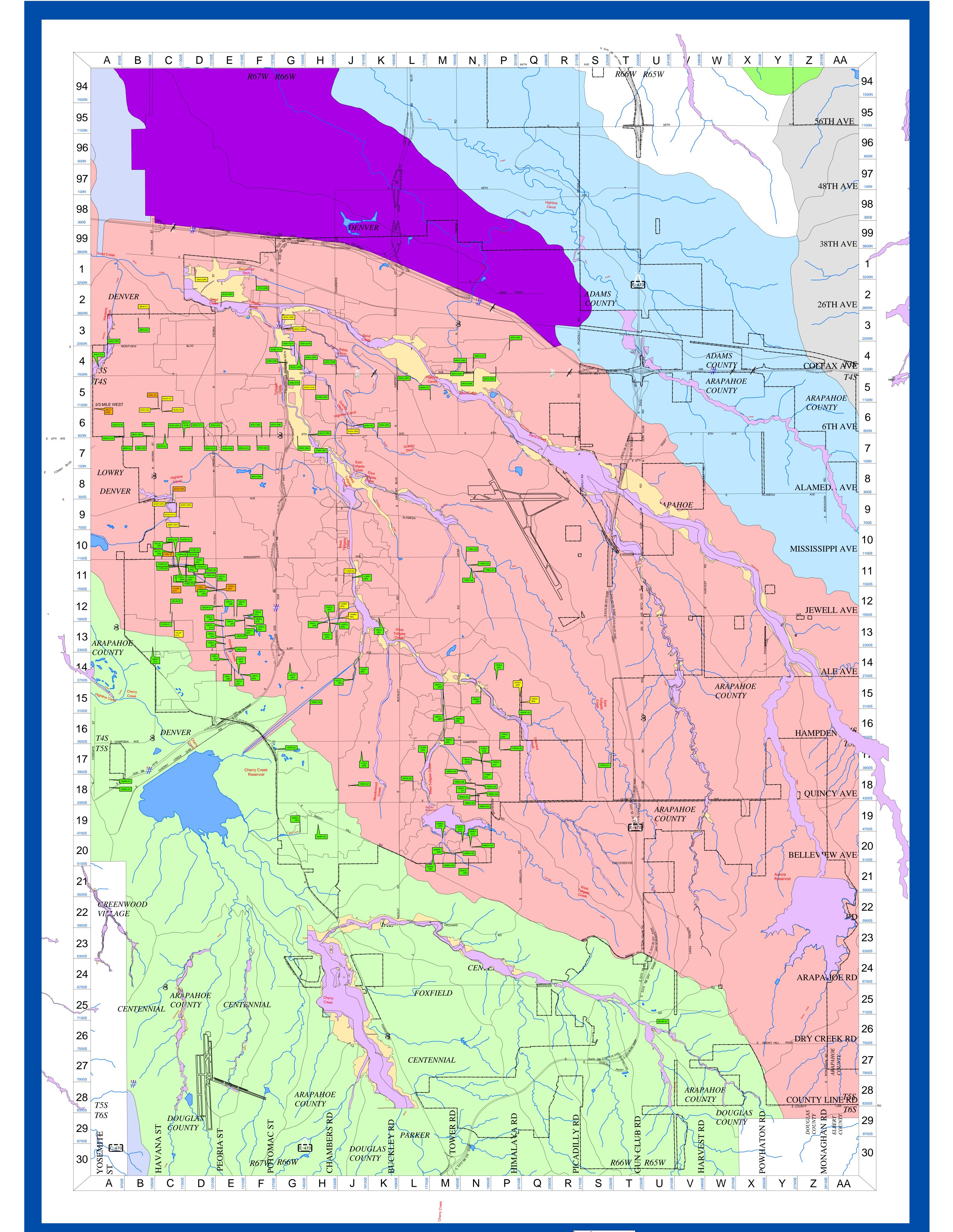
GROUP NAME	<u>Unit Id</u>	Address	Map Page	Qualifier	Qtr	Asset Type	FIRM PANEL #	Priority	<u>Comments</u>
	6CSV-G1		<u>06C</u>	7TH AVE & JAMAICA ST (LOW FLOW BETWEEN HOUSES)	NW			3	
	6CSX-G11B		<u>06C</u>	(HAVANA TO POTOMAC WEST SIDE OF 6TH AVE - GRATE 2 -) S.E. OF N. MOLINE AND E. 6TH	NW			3	
	6CSX-G5A		<u>06C</u>	(HAVANA TO POTOMAC WEST SIDE OF 6TH AVE - GRATE 1 -) S.E OF N. KENTON AND E. 6TH	NW			3	
	6DSX-G1C		<u>06D</u>	S.W. OF E. 6TH AVE AND N. DELMAR CIR. JUST WEST OF DELMAR PARK (HAVANA AND POTOMAC	NW			3	
	6DSX-G1D		<u>06D</u>	S.W. OF E. 6TH AVE AND N. DELMAR CIR. JUST WEST OF DELMAR PARK (HAVANA AND POTOMAC	NW			3	
	6DSX-G4A		<u>06D</u>	(HAVANA TO POTOMAC ON W. SIDE OF 6TH AVE - GRATE 3 -) 1/2 BLOCK W. OF NOAKLAND ST.	NW			3	
	6ESA-G1A		<u>06E</u>	8 -) E. OF DELMAR PARK 12495 E 6TH	NW			3	
	6FSX-G5A		<u>06F</u>	(HAVANA TO POTOMAC WEST SIDE OF 6TH AVE - GRATE 9 -) BETWEEN N. TOLEDO AND N. VAUGH	NW			3	
	6FSX-G6A		<u>06F</u>	(HAVANA TO POTOMAC WEST SIDE OF 6TH AVE - GRATE 10 -) BETWEEN N. TOLEDO AND N	NW			3	
	6FSX-G6E		<u>06F</u>	(HAVANA TO POTOMAC WEST SIDE OF 6TH AVE GRATE 11 -) BETWEEN N. VAUGHN AND N.	NW			3	
	6GSX-G6A		<u>06G</u>	S OF 6TH AVE W OF BILLINGS (GREENBELT)	NE			3	
	6HCC-OPA		<u>06H</u>	N OF 6TH, W SIDE OF TOLLGATE - GRATE AT OUTFALL	NE			3	
	6JEA-G1		<u>06J</u>	HOLDING POND GRATE 7TH & JASPER	NE			3	
Highline Canal Drainage	6J-WQ-D01	15404 E 8TH AVE	<u>06J</u>	15404 E 8TH AVE		POND		3	
	7ESA-G3A		<u>07E</u>	N. PEORIA ST (HAVANA TO POTOMAC WEST	NW			3	
	7ESA-G4A		<u>07E</u>	S. SIDE OF 6TH AVE. BETWEEN N. DELMAR CIR AND N. PEORIA ST (HAVANA TO POTOMAC WEST	NW			3	
Central Facilities	7F-WQ-D01	13602 E ELLSWORTH AVE	<u>07F</u>			POND		3	
	7HRR-OPF		<u>07H</u>	MALL GRATE LOCATED IN FIELD N OF 12 EVANSTON WAY				3	
	7KEA-OPC		<u>07K</u>	CULVERT CROSSING 6TH AVE E OF NORFOLK (DP6A TO APACHE PARK)				3	
	8FEA-G8A		<u>08F</u>	GRATE AT CENTRAL DETENTION POND - NW CORNER BEHIND PARKS DEPT STORAGE AREA	NE			3	
Courthouse	8H-WQ-D01	14999 E ALAMEDA AVE	<u>08H</u>	NORTH OF COURHOUSE AT MUNICIPAL CENTER COMPLEX		POND		3	
AMC	8H-WQ-D02	15153 E ALAMEDA PKWY	<u>08H</u>			POND		3	
AMC	9H-P-W01	15151 E ALAMEDA PKWY	<u>09H</u>	NE CORNER OF E ALAMEDA PRKY AND E ALAMEDA DR (VACATED)		POND		3	
	10CCC-OPA	895 S KENTON ST	<u>10C</u>	SEWER LINE CROSSING N OF KENTUCKY & GRATE JUST N OF CROSSING	NW			3	
	10CCC-OPE	1010 S JOLIET ST	<u>10C</u>	W SIDE OF V DITCH N OF MISSISSIPPI (BY PEDESTRIAN WALK BRIDGE)	NW			3	
	10CEA-G1	971 S LANSING ST	<u>10C</u>	BEHIND CANTERBURY NURSING HOME - GRATE 1	NW			3	
	10CEA-G2	1001 S KINGSTON ST	<u>10C</u>	BEHIND CANTERBURY NURSING HOME - GRATE 2	NW			3	
	P10C-G1		<u>10C</u>	PRIVATE GRATE IN YARD	NW			3	

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	11CCC-OPG		<u>11C</u>	ALL GRATES ON WESTERLY "V" DITCH FROM KENTON TO PEORIA - GRATE 4 -	SW			3	
	11CCC-OPM		<u>11C</u>	ALL GRATES ON WESTERLY "V" DITCH FROM KENTON TO PEORIA - GRATE 2 -	SW			3	
	11CKN-G1		<u>11C</u>	ALL GRATES ON WESTERLY "V" DITCH FROM KENTON TO PEORIA - GRATE 3 -	SW			3	
	11CKN-G2		<u>11C</u>	ALL GRATES ON WESTERLY "V" DITCH FROM KENTON TO PEORIA - GRATE 5 -	SW			3	
	11CKN-G3			ALL GRATES ON WESTERLY "V" DITCH FROM KENTON TO PEORIA - GRATE 1 -	SW			3	
	11DCC-OPC			ALL GRATES ON WESTERLY "V" DITCH FROM KENTON TO PEORIA - GRATE 11 - VILLAGE	SW			3	
	11DCC-OPM			ALL GRATES ON WESTERLY "V" DITCH FROM KENTON TO PEORIA - GRATE 7 -	SW			3	
	11DCC-OPN			ALL GRATES ON WESTERLY "V" DITCH FROM KENTON TO PEORIA - GRATE 8 -	SW			3	
	11DLM-G1		<u></u>	ALL GRATES ON WESTERLY "V" DITCH FROM KENTON TO PEORIA - GRATE 6 -	SW			3	
	11DLM-G2			ALL GRATES ON WESTERLY "V" DITCH FROM KENTON TO PEORIA - GRATE 9 -	SW			3	
	11DEA-G2		<u></u>	ALL GRATES ON WESTERLY "V" DITCH FROM KENTON TO PEORIA - GRATE 10 - VILLAGE	SW			3	
	11DAA-G3			GRATE EAST OF OAKLAND & ARKANSAS - GRATE 1 -				3	
	11DEA-G4		<u>11D</u>	GRATE EAST OF OAKLAND & ARKANSAS - GRATE 2 -	SW			3	
	11G-DP-D01	13923 E ARKANSAS DR	<u>11G</u>			POND		3	
	11JRR-OPD		<u></u>	W SIDE OF TOLLGATE E IDALIA - GRATE ON OUTFALL	SE			3	
	11NEA-G1			(4) GRATES N. OF LOUISIANA ON SIDE CREEK - GRATE 1 -	SE	Grate 1 of 4		3	
	11NEA-G2		<u>11N</u>	(4) GRATES N. OF LOUISIANA AVE ON SIDE CREEK - GRATE 2 -	SE	Grate 2 of 4		3	
	11NEA-G3		<u>11N</u>	(4) GRATES N. OF LOUISIANA AVE ON SIDE CREEK - GRATE 3 -	SE	Grate 3 of 4		3	
	11NEA-G4			GRATE 4 - IN CREEK ACCROSS FROM E.	SE	Grate 4 of 4		3	
	12CEA-C1		<u>12C</u>	(2) GRATES BY FENCE LINE AT 1802 S. JOLIET N. OF JEWELL AVE GRATE 2 -	SW	Grate 2 of 2		3	
	12CJO-R1		<u>12C</u>	JEWELL AVE GRATE 1 -	SW	Grate 1 of 2		3	
	12ECC-OPD			(2) BOXES ON THE N. SIDE OF UTAH PARK - BOX 1 -	SW			3	
	12ECC-OPF		<u>12E</u>	BRIDGE ON TUCSON E. OF UTAH PARK - GRATE 1 -	SW			3	
	12ECC-OPG		<u>12E</u>	BRIDGE ON TUCSON E. OF UTAH PARK - GRATE 2 -	SW			3	

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	12ECC-OPH			(2) GRATES ON JEWELL & UVALDA & (1) GRATE TO S. OF DUCK CREEK - GRATE 1 - NW OF JEWELL AND	SW	Grate 1 of 2		3	
	12ECC-OPI			(2) GRATES ON JEWELL & UVALDA & (1) GRATE TO S. OF DUCK CREEK - GRATE 2 - SW OF JEWELL &	SW	Grate 2 of 2		3	
	12EEA-G7A		<u>12E</u>	(2) GRATES N. OF JEWELL ON DITCH FROM TUCSON TO SEDIMENT POND - GRATE 1 -	SW	Grate 1 of 2		3	
	12EEA-G7B		<u>12E</u>	(2) GRATES N. OF JEWELL ON DITCH FROM TUCSON TO SEDIMENT POND - GRATE 2 -	SW	Grate 2 of 2		3	
	13BEA-G1A		<u>13B</u>	ILIFF & HAVANA (BEHIND CARWASH)	SW			3	
	13ECC-OPA			BOX E. OF PEORIA ON JEWELL BY OVERLAND HIGH SCHOOL (ALSO GRATE BY BALL FIELD) - GRATE 1 -	SW			3	
	13EEA-G2A			(9) GRATES ON BIG MUDDY FROM YALE TO PACIFIC DRIVE - GRATE 7 -	SW	Grate 7 of 9		3	
	13EEA-G4A			(9) GRATES ON BIG MUDDY FROM YALE TO PACIFIC DRIVE - GRATE 8 -	SW	Grate 8 of 9		3	
	13EIL-G1			(9) GRATES ON BIG MUDDY FROM YALE TO PACIFIC DRIVE - GRATE 6 - STRAIGHT WEST FROM S.	SW	Grate 6 of 9		3	
	13EOV-G1A		<u>13E</u>		SW			3	
	13EOV-G5A		13E	(2) GRATES ON JEWELL & UVALDA & (1) GRATE TO S. OF DUCK CREEK - GRATE 3 - SW JEWELL &	SW	Grate 3 of 2		3	
	13EPD-G1		<u>13E</u>		SW	Grate 9 of 9		3	
	13HCC-OPA		<u>13H</u>	(4) GRATES ON TIERRA DETENTION POND - GRATE 3 ·	SE	Grate 3 of 4		3	
	13HCC-OPB		<u>13H</u>	(4) GRATES AT TIERRA DETENTION POND - GRATE 2 -	SE	Grate 2 of 4		3	
	13HCC-OPC		<u>13H</u>	(4) GRATES S.E. SIDE OF TIERRA PARK	SE	Grate _ of 4		3	
	13HCC-OPH		<u>13H</u>	(4) GRATES AT TIERRA DETENTION POND - GRATE 1 -	SE	Grate 1 of 4		3	
	13KCC-OPL		<u>13K</u>	GRATE W OF MOBILE ON PUBLIC SERVICE EASEMENT	SE			3	
	14EIL-G5A			(9) GRATES ON BIG MUDDY FROM YALE TO PACIFIC DRIVE - GRATE 5 - SOUTH OF S. RACINE WAY	SW	Grate 5 of 9		3	
	14EIL-G6A		14E		SW	Grate 4 of 9		3	
	14EYL-G2A			(9) GRATES ON BIG MUDDY FROM YALE TO PACIFIC DRIVE - GRATE 3 - SOUTH OUTLET OF E.	SW	Grate 3 of 9		3	
	14EYL-G3A			(9) GRATES ON BIG MUDDY FROM YALE TO PACIFIC DRIVE - GRATE 2 -	SW	Grate 2 of 9		3	
	14EYL-G4A		<u>14E</u>	(9) GRATES ON BIG MUDDY FROM YALE PACIFIC DRIVE - GRATE 1 -	SW	Grate 1 of 9		3	
	14GCC-OPA		<u>14G</u>	GRATE AT DETENTION POND OUTFALL AT ANNAHEIM ST. AND HARVARD AVE.	SE			3	
	14JCC-OPA			N OF ILIFF AT CHERRY CREEK SPILLWAY - UNDER DRAIN	SE			3	
	14JCC-OPE			S OF WHEEL PARK ENTRANCE ROAD - GRATE AT BOX STRUCTURE	SE			3	
	15MCC-OPD		<u></u>	(2) GRATES ON E. SIDE OF HUTCHINSON N. OF DARTMOUTH - GRATE 2 - ACCROSS FROM WHERE	SE	Grate 2 of 2		3	
	15MCC-OPF			(2) GRATES ON E. SIDE OF HUTCHINSON N. OF DARTMOUTH - GRATE 1 -	SE	Grate 1 of 2		3	
	15NEA-OPA		<u>15N</u>	UNNAMED CREEK N OF BATES AVE E SIDE OF CHANNEL	SE			3	
	15PEA-OPC		<u>15P</u>	GRATE AT END OF CONCRETE EASEMENT BETWEEN 19543 & 19541 E LINVALE DR	SE			3	

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	16HEA-G3		<u>16H</u>	NE CORNER OF S SATELLITE YARD	SE			3	
	16MCC-OPB		<u>16M</u>	(2) GRATES ON E. SIDE OF HUTCHINSON FROM E. DARTMOUTH TO E. HAMPDEN - GRATE 1 - ON E.	SE	Grate 1 of 2		3	
	16MCC-OPD		<u>16M</u>	(2) GRATES ON E. SIDE OF HUTCHINSON FROM E. DARTMOUTH TO E. HAMPDEN GRATE 2 -	SE	Grate 2 of 2		3	
	16QOF-G1		<u>16Q</u>	S JERICHO WAY & E DARTMOUTH DR - GRATE AT CONSERVATORY POND	SE			3	
Conservatory Pond at Jericho	P16Q-WQ-D04	20373 E GIRARD DR	<u>16Q</u>	3300 S JERICHO WAY		POND		3	
	17FPR-G1		<u>17F</u>	LARGE GRATE S OF DETENTION POND - PARKER & HAMPDEN	SE			3	
Parker & Hampden Pond	17F-DP-W01	S PARKER RD	<u>17F</u>	SE CORNER PARKER RD AND E HAMPDEN AVE (NORTH)		POND		3	
	17JOC-OPB	E HAMPDEN AVE	<u>17J</u>	E OF KALISPELL, S OF HAMPDEN	SE			3	
	17LRR-OPA		<u>17L</u>	FLARED END SE CORNER OF CIMMARON ELEM SCHOOL	SE			3	
	17NCC-G1A		<u>17N</u>	(4) GRATES FROM LEHIGH TO E. MANSFIELD DRIVE ON BIKE PATH - GRATE 2 -	SE	Grate 2 of 4		3	
	17NCC-G1B		<u>17N</u>	(4) GRATES FROM LEHIGH TO E. MANSFIELD DRIVE ON BIKE PATH - GRATE 3 -	SE	Grate 3 of 4		3	
	17NLH-G10A		<u>17N</u>	(4) GRATES FROM LEHIGH TO E. MANSFIELD DRIVE ON BIKE PATH - GRATE 1 -	SE	Grate 1 of 4		3	
	17NMF-G1A		<u>17N</u>	(4) GRATES FROM LEHIGH TO E. MANSFIELD DRIVE ON BIKE PATH - GRATE 4 -	SE	Grate 4 of 4		3	
	17PRG-G2			N OF GENOA E OF BIKE PATH - GRATE ON PHILLIPS EASEMENT	SE			3	
	17PRG-G3B		<u>17P</u>	GRATE N SIDE OF POND - BY PHILLIPS EASEMENT - N OF GENOA E OF BIKE PATH	SE			3	
	17STW-G1		<u>178</u>	3720 S. TEMPE WAY GRATE NORTH OF POND	SE			3	
	17S-WQ-D01	3720 S TEMPE WAY	<u>175</u>			POND		3	
	18ABO-G1		<u>18A</u>	CLOSE TO S. BOSTON ST. N.E OF S. BOSTON AND E. NASSAU AVE.	SW			3	
	18ABO-G2		<u>18A</u>	N.E OF E. OXFORD DR. AND S. BOSTON ST. AT THE CURVE WHERE STREET NAME CHANGES.	SW			3	
	18JEA-G1		<u>18J</u>	E NASSAU DR & S MARGUERITE PKWY ADDED TO TROUBLE SPOTS 10/21/08	SE			3	
	18LPD-G5		<u>18L</u>	PRINCETON DR & S RICHFIELD ST	SE			3	
	18NEA-G11		<u>18N</u>	CHANNEL & (5) GRATES AT W. TOLLGATE CREEK FROM E. PRINCETON DR TO S. RESERVOIR RD	SE	1 of 5 grates		3	
	18NEA-G2		<u>18N</u>	CHANNEL & (5) GRATES AT W. TOLLGATE CREEK FROM E. PRINCETON DR TO S. RESERVOIR RD.	SE	1 of 5 grates		3	
	18NEA-G3		<u>18N</u>	CHANNEL & (5) GRATES AT W. TOLLGATE CREEK FROM E. PRINCETON DR TO S. RESERVOIR RD.	SE	1 of 5 grates		3	
	18NEA-G4		<u>18N</u>	CHANNEL & (5) GRATES AT W. TOLLGATE CREEK FROM E. PRINCETON DR TO S. RESERVOIR RD.	SE	1 of 5 grates		3	
	18NEA-G5		<u>18N</u>	CHANNEL & (5) GRATES AT W. TOLLGATE CREEK FROM E. PRINCETON DR TO S. RESERVOIR RD.	SE	1 of 5 grates		3	

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	18NEA-G6		<u>18N</u>	SUMMER VALLEY - LARGE GRATE E OF RESERVOIR RD	SE			3	
	18NEA-G8		<u>18N</u>	GRATE AT END OF EASEMENT	SE			3	
	18NEA-G9		<u>18N</u>	CHANNEL & (5) GRATES AT W. TOLLGATE CREEK FROM E. PRINCETON DR TO S. RESERVOIR RD.	SE	1 of 5 grates		3	
	19GEA-OPJ		<u>19G</u>	E. END OF SHOP CREEK DRAINAGE. 4673 S CRYSTAL WAY.	SE			3	
	19HEP-G1	S EVANSTON ST	<u>19H</u>	S OF SMOKY HILL - EVANSTON & TUFTS PL	SE			3	
Shop Creek	20G-DP-W01	S PARKER RD	<u>20G</u>	DPSH SHOP CREEK AT S PARKER RD		POND		3	
	20MCC-OPF	17711 E GRAND AVE	<u>20M</u>	QUINCY DRAINAGE AREA, CONCRETE CHANNEL - LOCATED BEHIND ADDRESS	SE			3	
	20MEA-G2	18279 E GRAND AVE	<u>20M</u>	(3) GRATES QUINCY DRAINAGE AREA - GRATE 3 -	SE	Grate 3 of 3		3	
	20MEA-G3	18239 E GRAND AVE	<u>20M</u>	(3) GRATES QUINCY DRAINAGE AREA - GRATE 2 -	SE	Grate 2 of 3		3	
	20MRR-OPK		<u>20M</u>	(3) GRATES QUINCY DRAINAGE AREA GRATE 1 -	SE	Grate 1 of 3		3	
	20NCC-G1		<u>20N</u>	(2) GRATES AT AQUA VISTA PARK S.E. TURKEY LEG	SE	1 of 2 grates		3	
	20NCC-OPD		<u>20N</u>	W. OF WHITAKER CIR. BETWEEN 18758 AND 18748 E. WHITAKER CIR.	SE			3	
	20NEA-G1A		<u>20N</u>	(2) GRATES AT AQUA VISTA PARK S.E. TURKEY LEG	SE	1 of 2 grates		3	
	20NTF-G1A		<u>20N</u>	GRATE AT END OF EASEMENT	SE			3	
Aurora Reservoir	23X-P-W01	26081 E ORCHARD RD	<u>23X</u>	AURORA RESERVOIR		POND		3	
	26UAP-G1		<u>26U</u>	AURORA PARKWAY PARK. N.W. CORNER OF AURORA REGIONAL POND (TALLYN'S REACH POND).	SE			3	
Aurora Regional Pond	26U-RG-W01	7450 S COOLIDGE WAY	<u>26U</u>	REGIONAL POND		POND		3	
	26V-WQ-D01	24966 E GEDDES PL	<u>26V</u>			POND		3	
	27S-WQ-D01	22298 E AURORA PKWY	<u>27S</u>			POND		3	
	27U-WQ-D01	7613 S DUQUESNE WAY	<u>27U</u>			POND		3	
	27U-WQ-D02	23954 E KETTLE PL	<u>27U</u>			POND		3	
	28U-WQ-D01	8065 S CATAWBA CT	<u>28U</u>			POND		3	
	28U-WQ-D02	8087 S COOLIDGE WAY	<u>28U</u>			POND		3	
	P28U-DP-D01	8191 S COOLIDGE WAY	<u>28U</u>			POND		3	
	-94P-WQ-D01	6033 N ENSENADA CT	<u>94P</u>	60TH AND DUNKIRK		POND		3	



City of Aurora, Colorado 2009 Trouble Spots



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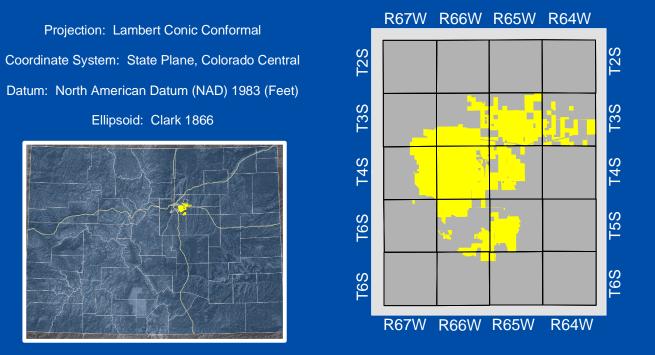


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Legend High Priority Trouble Spots Medium Priority Trouble Spots Low Priority Trouble Spots 100_Year_Flood_Plain 500 Year Flood Plains - Streets - Wallmap Section Line Lines Drainage Basins Boundry MAJOR_NAME Box Elder Creek Cherry Creek First Creek Irondale Gulch Lost Creek Sand Creek South Platte River Third Creek

Ellipsoid: Clark 1866



DATE: 07.08.09 FILE: I:/GIS/Arc9_MXDs/Utilities/Drainage_Basins.mxd



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Overflow

Low-Flow

Grates

Outflow Box







11th Ave & Del Mar WATER LEVEL 1: Low-Flow Grates







11th Ave & Del Mar WATER LEVEL 2: Outflow Grate





11th Ave & Del Mar WATER LEVEL 3: Overflow Grate





11th Ave & Del Mar WATER LEVEL 4: System Breach



Canterbury Park WATER LEVEL 1: Low-Flow Grates - Inter



Canterbury Park WATER LEVEL 2: Outflow Grate



- 2. A. - 3

Canterbury Park WATER LEVEL 3: System Overflow



Canterbury Park WATER LEVEL 4: System Breach





Culverts at Peoria & Florida WATER LEVEL 1: Normal Flow







Culverts at Peoria & Florida WATER LEVEL 2: Rain Flow





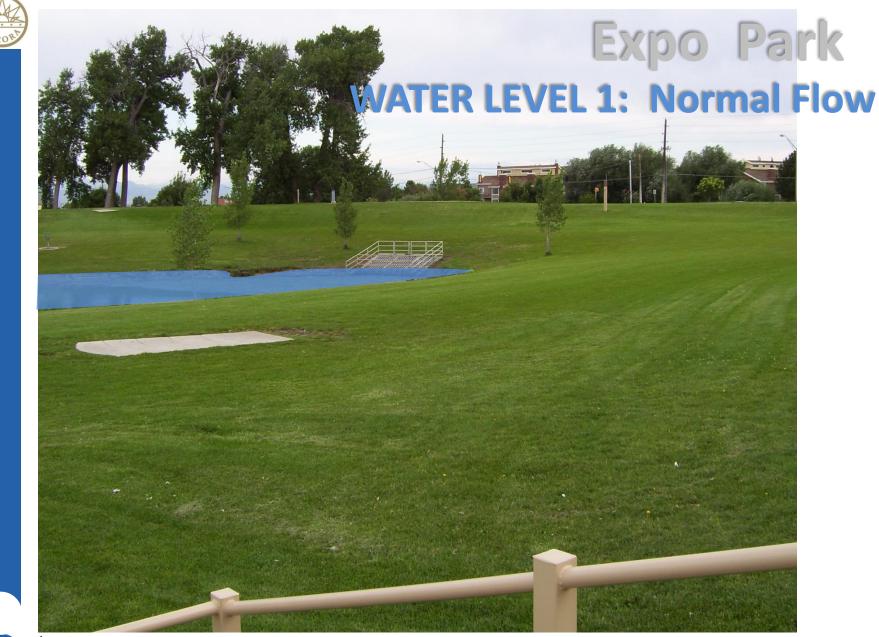
Culverts at Peoria & Florida WATER LEVEL 3: System Full



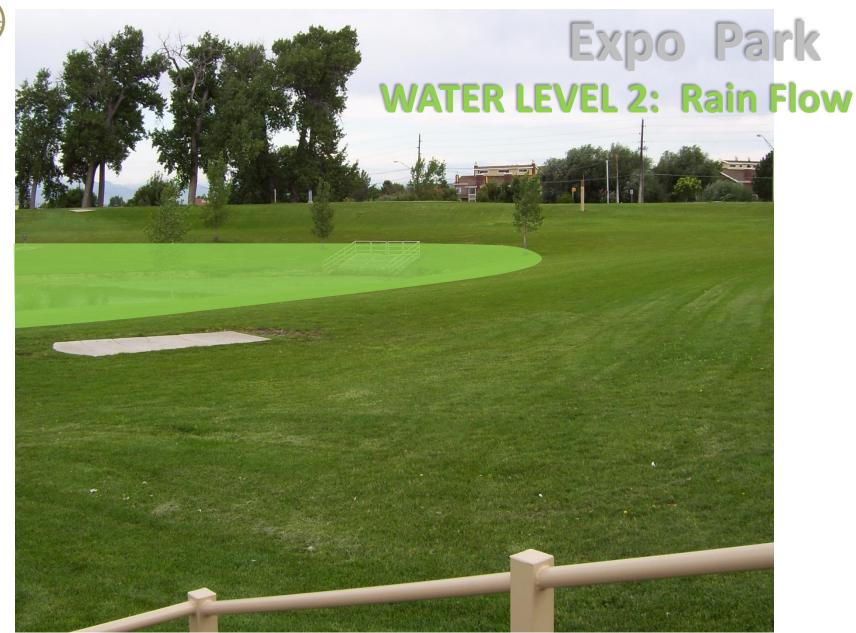


Culverts at Peoria & Florida WATER LEVEL 4: System Breach





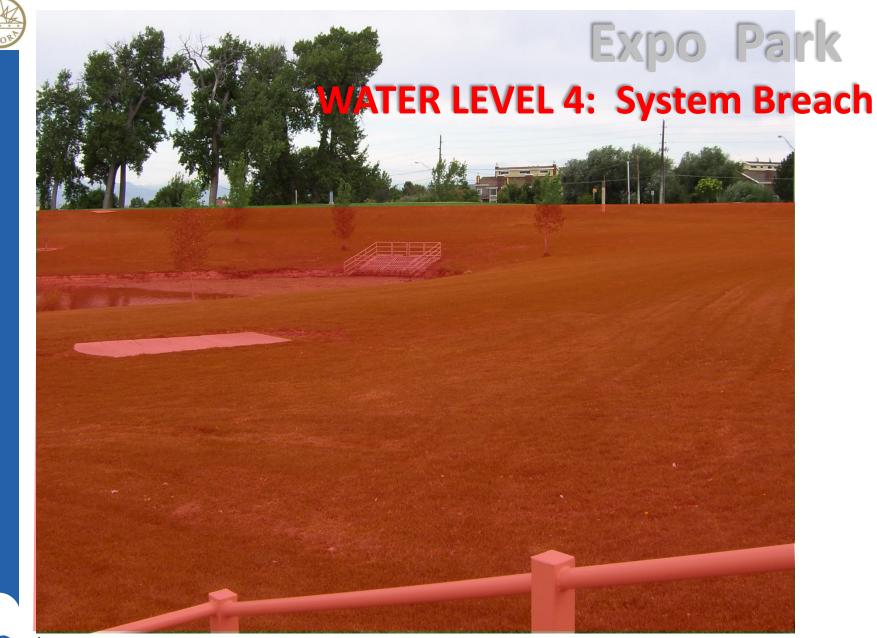
















Kelly Rd Dam WATER LEVEL 1: Low-Flow Grate







Kelly Rd Dam WATER LEVEL 2: Tower Outflow





Kelly Rd Dam WATER LEVEL 3: Concrete Spillway



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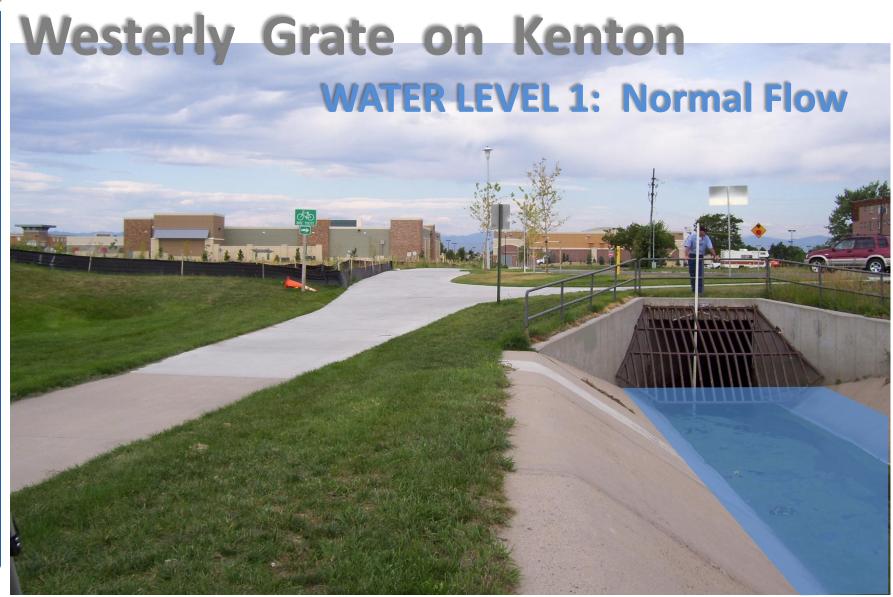


Kelly Rd Dam WATER LEVEL 4: System Breach



22





















Westerly Grate on Kenton WATER LEVEL 4: System Breach

TTAm &



MESSAGE 1 (Internal Alert)

This is an advisory message which is meant to inform key people that weather conditions are such that flood producing storms could develop later in the day. It will be issued by PMS after consultations with NWS. If PMS feels this weather advisory requires priority handling by the communications dispatcher, the message will be preceded with the statement: "THIS IS A **RED FLAG** MESSAGE."

MESSAGE 2 (Flash Flood Watch)

This message indicates that a Flash Flood Watch has been issued by NWS and/or PMS feels the risk is high that a life-threatening flood may occur later in the day. PMS will add any additional information that is available. If PMS feels this watch requires priority handling by the communications dispatcher, it will be identified as a **RED FLAG** message.

MESSAGE 3 (Flash Flood Warning)

This message indicates that a Flash Flood Warning has been issued by NWS and/or PMS feels that a life-threatening flood is imminent. Again, PMS will add any additional information that is available. This warning message requires priority handling by the communications dispatcher (i.e. **AUTOMATIC RED FLAG**)

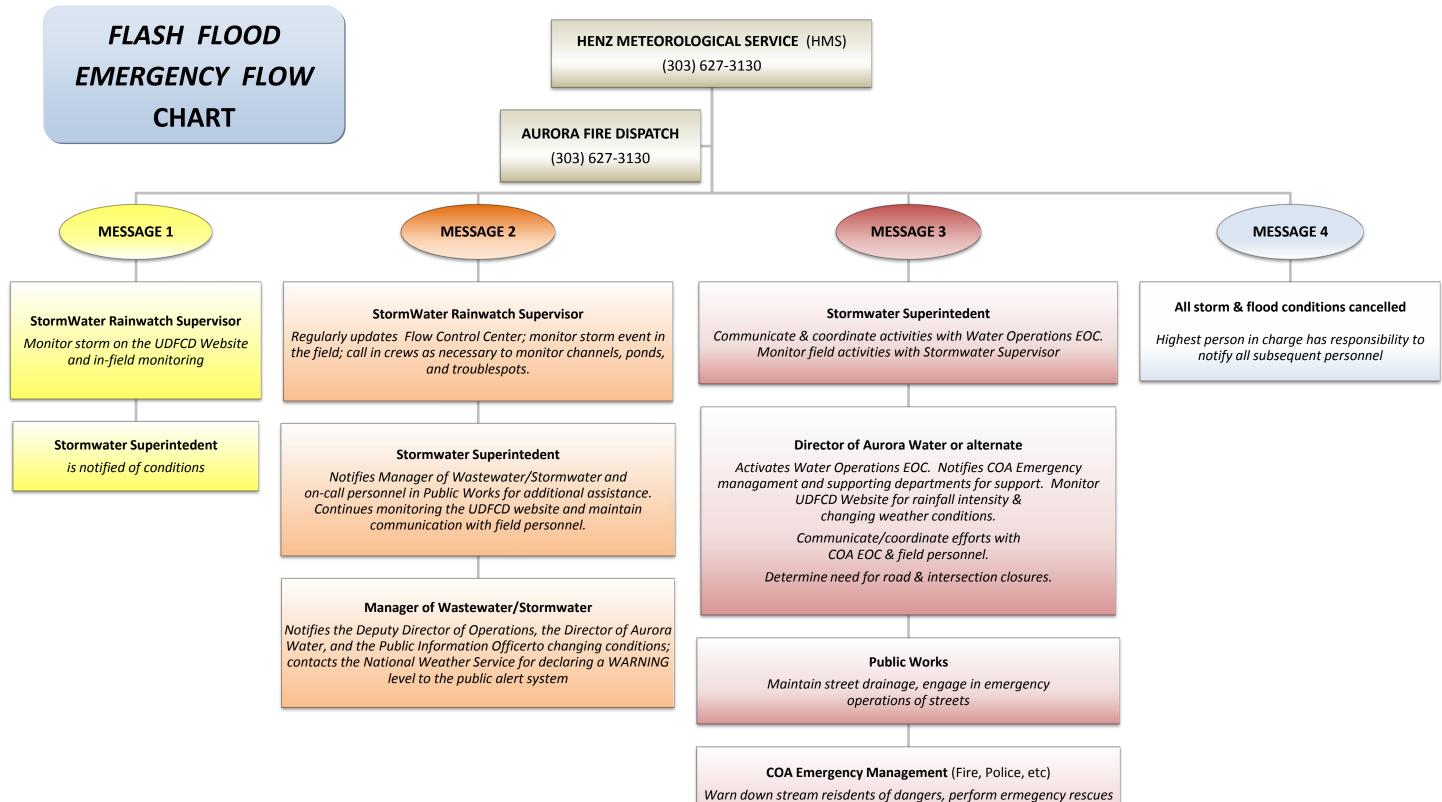
MESSAGE UPDATE

This message will be used by PMS to update any of the previous messages, particularly in the event of a disagreement between PMS and NWS. For example, this message can be used to narrow a watch or warning area as more information becomes available or to provide more site-specific data and direction during an event. If PMS feels this update requires priority handling by the communications dispatcher, it will be identified as a **RED FLAG** message.

MESSAGE 4 (All Clear)

This message cancels the flood potential status. This message is issued by PMS after consultation with NWS and other entities involved with direct PMS communications.

Note: PMS (on this page only) is reference to Urban Drainage Flood Control District (UDFCD) contracted Private Meteorological Forecaster; NWS is reference to the National Weather Service. Rain gauges are maintained by *One Rain* and inspected quarterly (see contact information).



& oversee necessary evacuations

Emergency Contacts Phone List

Emerge	ency	911
Fire:	24-hour Dispatch	(303) 627-3130
HENZ N	Meteorological Service	(303) 458-0789
Utilitie	s Flow Control	(303) 326-8388
Nation	al Weather Service	(303) 361-0674
Flood F	Prediction Center	(303) 458-0789
	Drainage Flood ntrol District (UDFCD)	(303) 455-6277
One Ra	in (Dave Pruett)	(303) 774-2033

Stormwater Administration

<u>Title</u>	<u>Name</u>	<u>Office</u>	<u>Cell</u>
 Superintendent Supervisor Supervisor Supervisor 	Eugene Lee David Pyle Richard Platt Mike Earnest	(303) 326-8062 (303) 326-8065 (303) 326-8064 (303) 326-8063	(720) 207-4752 (303) 916-7692 (303) 526-6373 (720) 670-9924
Director of Utilities:	Mark Pifher	(303) 739-7378	
Deputy Director of Operations:	Dana Ehlen	(720) 427-6025	
Director of Public Works:	David Chambers	(303) 739-7300	(303) 330-6737
Storm/Wastewater Manager:	Mark Donelson	(303) 326-8060	(720) 427-6160
Water Treatment Manager:	Tim Smith	(303) 739-6763	(303) 241-9661
Water T&D Manager:	Tom Ries	(303) 326-8118	(720) 427-6621
Superintendent of Water Services:	Michael Mills	(303) 326-8130	
Manager of Public Works / Streets:	Chris Carnahan	(303) 326-8200	(303) 618-9212
Director of Communications:	Kim Stuart	(303) 739-7008	
Aurora Public Information Officer:	Greg Baker	(303) 427-2081	

Trucks and Equipment at Central Facilities*

<u>Heavy Trucks</u>	<u>Specific Type</u>	<u>Ownershi</u> p	Location		_		
11775	Single-Axle	StormWater	Snow Plow Pa	rking			
32055	Single-Axle	StormWater	Snow Plow Pa	rking			
70531	Single-Axle	StormWater	Snow Plow Pa	rking			
01725	Single-Axle	WasteWater	Snow Plow Pa	rking			
32057	Tandem-Axle	StormWater	Snow Plow Pa	rking			
40894	Tandem-Axle	StormWater	Snow Plow Pa	rking			
40897	Tandem-Axle	WasteWater	Snow Plow Pa	rking			
51517	Tandem-Axle	StormWater	Snow Plow Pa	rking			
01738	Tandem-Axle	StormWater	Snow Plow Pa	rking			
32045	Tractor Unit	Water T&D	Water Dept Pa	arking Area			
90206	Vac-con	StormWater	Snow Plow Pa	rking			
<u>Light Trucks</u>	<u>Size</u>	<u>Fuel</u>	<u>4x4?</u>	<u>Bed Type</u>	Winch?	Hoist?	Location
10412	1-Ton	Diesel	Y	Crew-Cab	Y	Y	Main Parking Area
22034	1-Ton	Diesel	Y	Crew-Cab	Y	Y	Main Parking Area
41654	1-Ton	Diesel	Y	Crew-Cab	Y	Y	Main Parking Area
52139	1-Ton	Diesel	Y	Crew-Cab	Y	Y	Main Parking Area
80795	1-Ton	Diesel	Y	Crew-Cab	Y	Y	Main Parking Area
80936	1-Ton	Gasoline	Y	Crew-Cab	Y	Y	Main Parking Area
11841	1-Ton	Diesel	Y	Dump-bed	No	No	Main Parking Area
31392	1-Ton	Diesel	Y	Dump-bed	No	No	Main Parking Area
01742	1-Ton	Gasoline	No	Dump-bed	No	No	Main Parking Area
10406	1-Ton	Diesel	Y	Flat-bed	No	Y	Main Parking Area
11842	1-Ton	Diesel	Y	Flat-bed	Y	Y	Main Parking Area
41463	1-Ton	Diesel	Y	Flat-bed	Y	Y	Main Parking Area
81027	1-Ton	Gasoline	No	Flat-bed	Y	Y	Main Parking Area
30755	1-Ton	Diesel	Y	Fuel Truck	Y	No	Main Parking Area
41634	3/4-Ton	Diesel	Y	Fuel Truck	Y	No	Main Parking Area
41625	1-Ton	Diesel	Y	Pickup, Crew	Y	No	Main Parking Area
51481	1-Ton	Gasoline	Y	Vactor Support	Y	Y	Main Parking Area
Light Trucks	<u>Size</u>	Fuel	4-Wheel?	<u>Extra</u>			
31173	3/4-Ton	Gasoline	Y	Supervisor			
62252	SUV	Gasoline	Y	Superintendent			
70628	3/4-Ton	Gasoline	Y	Supervisor			
70776	3/4-Ton	Gasoline	Y	Supervisor			
<u>Loaders</u>	Make	<u>Feature</u>	Location				
41608	Bobcat	Track machine	Storage Area				
80968	Bobcat	Skidsteer	Storage Area				
91328	Bobcat	Skidsteer	Storage Area				
91672	John Deere	644H	Main Parking				
			0				

*Red Highlights denote locations other than Stormwater facilities

Trucks and Equipment at Central Facilities*

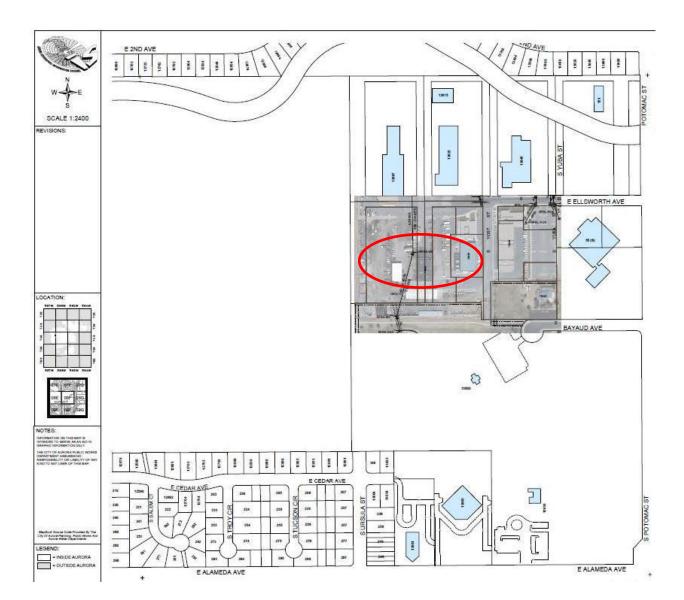
<u>Heavy Equipm</u>	ent	Type	<u>Feature</u>	Location		
61291	Cat	Backhoe		Main Parking		
50998	John Deere	Bulldozer		Trailer Parking Line		
80578	Cat	Bulldozer		Trailer Parking Line		
30468	Cat	Excavator	Water T&D	Water Parking		
50800	Linkbelt	Excavator	Water T&D	Water Parking		
62191	Bobcat	Excavator	Water T&D	Water Parking		
70346	John Deere	Excavator	Rubber-Tire	Main Parking		
81920	Bobcat	Excavator		Snow Plow Parking		
21964	John Deere	Tractor	Farming	Storage Area		
<u>Pumps</u>	<u>Quantity</u>	Location	<u>Special Comm</u>	ent		
Submersible	5	Stormwater	Two (1.5"), Four (2"), and One (6")			
2" Trash	3	Stormwater	Proper hoses in storage			
3" Trash	5	Stormwater	Proper hoses in storage			
(6" & 8" Pump Trailers are kept at Nome Facility)						
Response Trailer outfitted with pumps & needed hoses - refer to the						
<u> </u>	Stormwater/Wastewater Emergency Pumping Plan					
<u>Trailers</u>	<u>Type</u>	<u>Feature</u>	<u>Location</u>			
80363	6" Hose		Trailer Parking	Line		
50507	Barricade		Trailer Parking Line			
11118	Forming	(Board)	Trailer Parking Line			
21951	Lowboy	(Ramped)	Trailer Parking Line			
40423	Lowboy	(Tilting)	Trailer Parking Line			
81506	Lowboy	(T&D)	Trailer Parking Line			
01770	Lowboy	(Tilting)	Trailer Parking Line			
20378	Pump response		Trailer Parking Line			
60492	Shoring		Trailer Parking Line			
60942	Shoring		Trailer Parking Line			
20833	Utility		Trailer Parking Line			
50521	Utility		Trailer Parking Line			
61364	Utility		Trailer Parking Line			
80183	Utility		Trailer Parking	Line		
80394	Weed		Trailer Parking Line			
91659	Weed		Trailer Parking Line			
60842			Trailor Darking	Lino		
	Welder		Trailer Parking			
	Welder		Trailer Parking	Line		
<u>Miscellaneous</u>	<u>Equipment</u>	Location				
22064	<u>Equipment</u> Forklift (gas)	StormWater Par	king Bay			
22064 50518	<u>Equipment</u> Forklift (gas) Hydraulic Power	StormWater Par Trailer Parking L	king Bay ine			
22064	<u>Equipment</u> Forklift (gas)	StormWater Par	king Bay ine ine			

*Red Highlights denote locations other than Stormwater facilities

CENTRAL FACILITY

13646 E. Ellsworth Ave Aurora, CO 80012

Map Page: 08F



This facility serves as the base of operations for *Stormwater* and other departments. Its employees and all their trucks, trailers, tools, stores, storages, and equipment can be found here on a regular basis.

Near the emergency exit gate, *Stormwater* manages several small bins that hold a supply of any number materials like sand, concrete base, small granite, or squeegee.

Water T&D also houses two larger bins supplied with an ample supply of concrete base in one and road base in the other.



Water T & D's two main storages bins at the Southwest corner of Aurora's property.

Stormwater also holds a few very small bins just outside the cold storage shed. One of those bins is loaded with an ample supply of t-posts for fencing. In a major event, any of these materials can be used for fencing barriers, for damming water or to diverting water, or as a sandbag fill.







Supplies for making Sandbags can be found in the back of Stormwater's cold storage shed. Stormwater maintains a supply of some 300 sandbags ready to use. The building remains locked at all times and requires an employee with a key for entry.



B<mark>url</mark>ap sacks and tarps

SOUTH SATELLITE

14303 E. Hampden Ave Aurora, CO 80014

Map Page: 16H





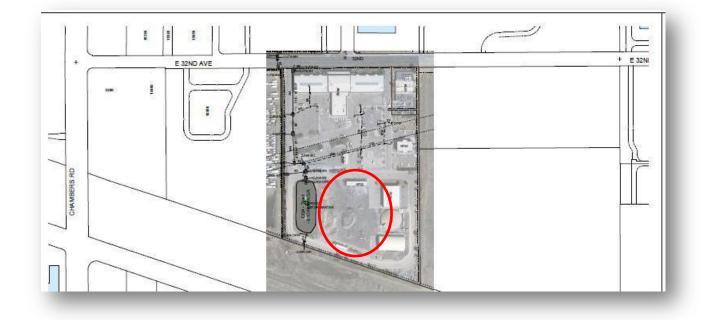
South Satellite, which houses several departments in *Public Works,* has a few stockpiles of materials that can be used in emergency situations. The types of materials include road base, road millings, compaction fill, and chunks of concrete. These are free standing stockpiles, not being contained in any type of bin and are generally open to access from all sides. A few of these piles are shown above and below.



NORTH SATELLITE

15700 E. 32nd Ave Aurora, CO 80011

Map Page: 02J





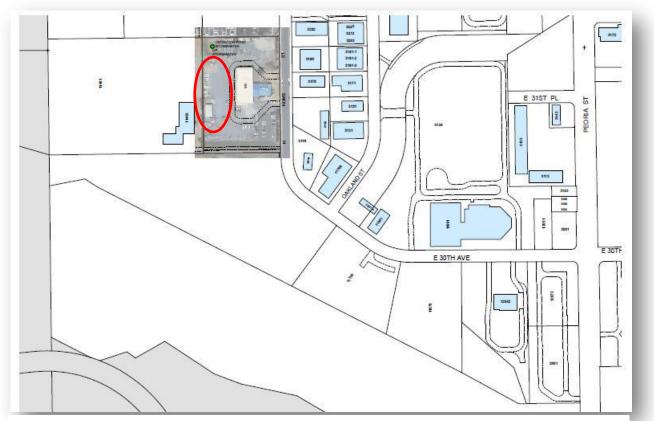
As seen above, *North Satellite* houses a few stockpiles of materials on the Southern side of the facility. Maintained by the *Street* department in *Public Works*, the kinds of materials which can be found there include road base, road millings, and possibly some types of compaction fill. These are free standing stockpiles, not being contained in any type of bin and are generally open to access from all sides.

NOME FACILITY

3151 N. Nome St. Aurora, CO 80010

Map Page: 02D

Requires a gate code from a Wastewater Supervisor to gain entrance to the facility.

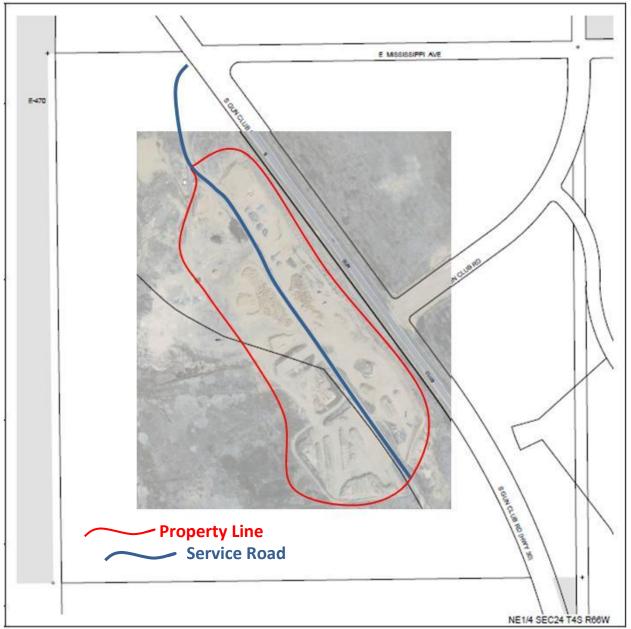


There are a few small bins, not pictured, that the *Division of Wastewater* houses inside the property on Nome St. A small supply of compaction fill and squeegee material is available for use in an emergency. Nome also houses equipment for pumping procedures; refer to the **Stormwater/Wastewater Emergency Pumping Plan** for information regarding pumping. A code is required for admittance through the entrance gate, so contact a Supervisor from *Stormwater/Wastewater*.

AURORA STORAGE FACILITY

24024 E Hwy-30 Aurora, CO 80018

Map Page: 11T



Gate under lock for Emergency and Stormwater Personnel with a #2396 key.



Located at E Mississippi where E 6th Ave turns to S Gun Club Rd, *the City of Aurora* owns a rather large parcel of land for the purpose of stockpiling large quantities materials. *Stormwater* maintains the property and can provide information to the resources stockpiled there and where particular materials are located within the 90 acres of space.

In an emergency, materials ranging from clay-dirt and bark-mulch to large sizes of granite and sandstone are open to use for any emergency. Gate is normally open during business hours and locked during all other times. Please contact *Stormwater* to gain entrance into the facility at (303) 326-8050.





