

Central Davis Sewer District

Collection System

CAPACITY MANAGEMENT, OPERATIONS, AND MANAGEMENT PROGRAM



November 2008

Introduction

Central Davis Sewer District is a Local District established in Utah under title 17A and 17B of the State Code. The District was established in 1960 to provide sewage treatment to the cities of Farmington, Fruit Heights, and Kaysville along with the interconnecting unincorporated areas. Subsequent to the establishment of the District, the cities have turned over ownership, operations and maintenance of the collections and trunk lines to the District. The District owns and operates a 9.9 MGD wastewater treatment plant in west Kaysville and has over 200 miles of sewer lines. This Capacity Maintenance, Operations and Maintenance (CMOM) manual has been established to provide uniform management and operations of these sewer lines. The District Board recognizes the District's responsibility to operate these sewer lines in an environmentally and fiscally responsible manner. As such this manual will cover aspects of the collection system program necessary to provide such an operation. This manual may refer to other District programs and by reference may incorporate these programs into this manual. The District CMOM program is divided into the following sections:

ELEMENT	DESCRIPTION
Capacity Management Program	Includes flow monitoring, system modeling, capacity analysis and GIS mapping
System Preventative Maintenance Program	Includes high pressure cleaning, rodding, manhole inspection, pump station inspection and defect reporting
Basement Backup Program	Includes backup notification log, no fault restoration program, sewage cleanup guidelines, drying inspection report and backflow valve policy
Collection System Damage Program	Includes damage identified during inspections and damage from third party actions. Specifies end points for damage action
Sanitary Sewer Overflow (SSO) Action Plan	Includes notification process, documentation, and cleanup action process flow diagram.

This program is intended to be a guidance document and is not intended to be part of a regulatory requirement. As such, failure to strictly comply with the documentation requirements are in and of themselves not a failure of the program's effectiveness. Documentation failures are intended to be identified during system self audits and will

be addressed as training opportunities. Significant system failures will be followed up with corrective action plans. As such, the last part of this program is a corrective action process. This process will be implemented by all individuals involved in the collection system CMOM program. Not all District employees will necessarily be involved in the collection system operations. As such, not all employees will receive program training.

For the purpose of this program, one definition is needed. The term “sanitary sewer overflow” is intended to mean sewer system out-flows which do reach or have the potential to reach the waters of the State. These SSO’s are untreated and could pose potential health risk to a segment of the local population. SSO’s do not include sewer problems where the collection system damage requires a repair in a trench and any wastewater remains in the trench. Nor does an SSO include a basement backup where all wastewater is returned to the sanitary sewer system during cleanup.

Finally, although not a part of this CMOM program, the District is an active participant in the Blue Stakes of Utah Utility Notification system. This system, regulated under title 54-8A of the Utah State Code, stipulates utility notification of all underground operators when excavation takes place. The intent of this regulation is to minimize damage to underground facilities. The District has a responsibility to mark underground sewer facilities when notified an excavation is going to take place. Appendix A of this program contains information relating to this damage prevention system.

Capacity Analysis Program

Capacity Analysis Program

Central Davis Sewer District believes that the key to preventing sanitary sewer overflows is to evaluate system capacity and to monitor flows throughout the system in order to insure that those capacities are not exceeded. Should a collection sub-system exceed the capacity of the pipes, the system will be immediately re-evaluated and corrective action taken. The following elements are all part of the capacity maintenance process for the District.

1. Initial Capacity Modeling
2. Flow Monitoring
3. Surcharge Flow Analysis
4. Re-evaluation Modeling and Analysis
5. Flow Reduction Evaluation and Implementation
6. Capacity Increase Evaluation and Implementation

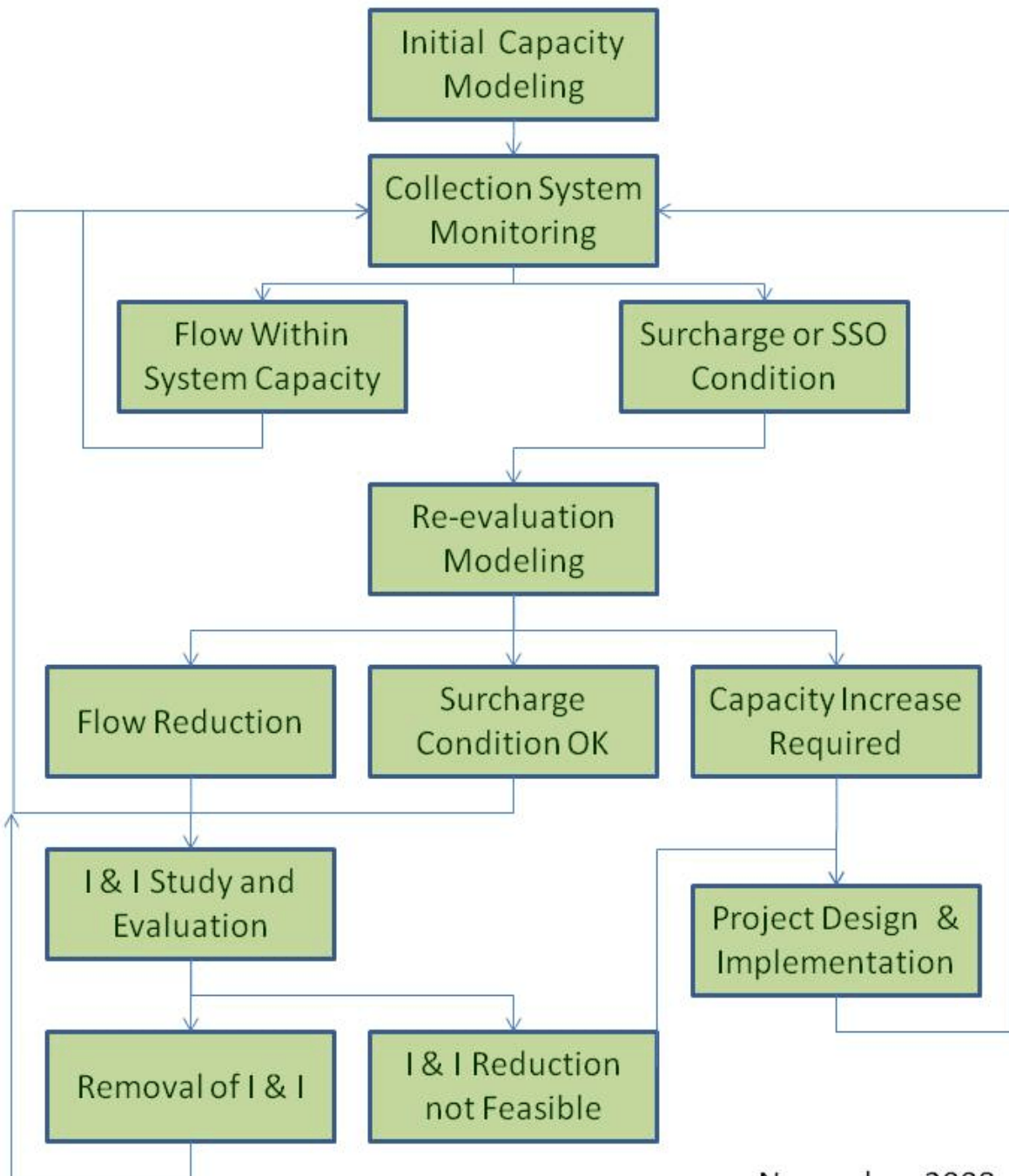
The actual implementation process associated with each of the elements above is shown in Figure 1. This flow chart process forms the backbone of the District's Capacity Analysis Program. Below is a description of the above identified elements.

Initial Capacity Evaluation

The District has performed an analysis and modeling of each critical subsystem contained within the District's collection system. Subsystems are segregated based on the branching of the collection system. Trunk lines and collector lines are evaluated until the system reaches a point where less than 400 residential dwelling unit (RE) equivalents are upstream of that point in the system. The 400 RE point was chosen based on the minimum slope requirements of the State of Utah. An 8-inch pipe constructed on minimum slope will carry the flow from 400 RE. The RE equivalent is based on measured inflow and infiltration in that area plus the number of homes or businesses. Based on this criteria, the following subsystems have been modeled:

1. West Kaysville Trunk System
2. West Farmington Trunk System
3. Crestwood - Angel Street Trunk System

CDSD Capacity Evaluation Flow Chart



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Figure 1

4. Old Mill - Angel Street Trunk System
5. Angel Street - Smith Lane Trunk System
6. Flint Street - Old Mill Lane Trunk System
7. 50 West Kaysville Trunk System
8. Fruit Heights Trunk System
9. East Shepard Lane Trunk System
10. West Shepard Lane Trunk System

The District has a standard flow analysis from each RE. This unit is compared to zoning maps for each city and system peak flows are modeled. The District has evaluated time of concentration issues, but has chosen to use a steady state peak model. This decision was based on this being the worst case scenario and also that the longest time flow takes to reach the Treatment Plant is about 2.5 hours. Based on this time frame, all flows reach a common point within the peak period. This assumption has been confirmed by flow monitoring at the Treatment Plant. The initial modeling and analysis forms the basis for future actions and evaluation.

Flow Monitoring

The District has installed multiple collections flow meters. Permanent flow monitoring is installed in the following locations:

1. West Kaysville Trunk System
2. West Farmington Trunk System
3. Old Mill - Angel Street Trunk System
4. Fruit Heights Trunk System.

In addition, the District employs portable meters on an as needed bases. Finally, about half the pump stations have flow metering, with the rest of the pump stations having flow metering added on a periodic basis. If a pump station has to be bypassed or reconstructed, a flow meter will be added. Within ten years all major trunk systems and pump stations will have permanent meters installed.

Where flow meters have been installed on a permanent basis, the meters are telemetered to the main SCADA system and are part of the online data base. The flows can be checked locally at the Plant or can be remotely monitored via web access. The on-call operator has access to this data when the Plant is not manned.

All of the pump stations have remote access alarm systems installed. Should an alarm condition occur, such as a pump failure, this alarm will immediately be relayed to the Plant or an on-call operator via a telephone call. The telephone system employed is cellular and is not dependent on land line for communication. Any alarm is responded to by an operator immediately.

As a result of the pump station flow monitoring and the telemetry, the District can monitor if the system flows exceed the capacity of the pump station and thus are storing flows upstream. This information is then used to determine if additional action is needed.

Surcharge Flow Analysis

If any collection subsystem is identified as having any of the following problems the system will be evaluated to determine future action. These problems are:

1. Sanitary Sewer Overflow to the Environment
2. Sanitary Sewer Break Remaining in the Trench
3. Basement Backup
4. Observed Subsystem Surcharging.

The flow evaluation may result in multiple conclusions, some of which may require further action. Possible conclusions and their further action are listed below. This list is not inclusive nor does it require the specific action detailed. These are given as possible examples and will be used by the responsible supervisor for the District to stimulate correct future action.

Flow Reduction Evaluation

Should excessive flows be identified during the surcharge analysis, the solution may be to proceed with an inflow and infiltration study with the ultimate goal of reducing flows. These flow reductions may be achieved by reconstruction of specific areas, internal spot repairs, removal of illegal connections from homes or storm systems, and system grouting. Tools used in the flow reduction may include extensive in line camera inspection, smoke testing, dye testing, and increased inspection or flow monitoring.

Foreign Objects or Obstructions

There are multiple foreign objects which may be found in sewers. These may include objects knocked into sewers during construction, illegally placed in sewer manholes, roots, grease and soaps, bellies in piping systems, etc. Each of

these problems should be found during the backup investigation and a plan developed to insure the problem does not reoccur. Types of action may include increased cleaning frequency, spot repairs, greater pretreatment activity, lining of pipes, and other corrective actions which resolve the problem.

Allowable Surcharging

Some piping systems may be able to accept surcharges without creating problems. Such systems may be deep and surcharging occurs below the level of backing into a basement or overflowing a manhole, or they may be in areas where there are no connections. In such cases the resolution of the observed surcharge may just be additional monitoring.

Revised System Modeling

Where piping system problems cannot be resolved in a less expensive way, the system may be further modeled to determine upgrade needs. Modeling should include known flow information and future projections. Since the system has been shown to have problems, further modeling should be more conservative in flow projections. Revised modeling should follow the guides given next.

Re-evaluation Modeling and Analysis

When a subsystem needs demonstrate unresolvable problems by less costly means, the subsystem should be re-modeled and required action determined. Revised modeling may show that flow reduction may still be viable or it may show that the system can allow current surcharge conditions. Most likely, however, the modeling will normally form the basis for construction to enlarge the subsystem capacity. Modeling should be done either by

1. District staff using commercially available software
2. District staff using spreadsheet models
3. Engineering firms using available software.

It is important to insure the modeling is comprehensive and includes all the potential flow sources. While the current area zoning should be used in the model development, care should be taken to discuss possible changes with municipal officials. Where possible zoning changes appear likely, the model should be re-run with the revised zoning alternatives. Both models should be presented to the District Board for determination as to which to implement.

Capacity Increase Evaluation and Implementation

The capacity evaluation should be expedited based on the impact of the problem on the environment and the possible repeat of the overflow/backup/surcharging. Details on prioritization is given in the next section.

Systems requiring additional capacity should be engineered for expansion by qualified staff or engineering consultants. Project design should be based on accepting engineering standards and should comply with State of Utah regulations. Easements should be obtained, where needed and the design should include an analysis of other utilities in the vicinity. Design review should be done by the applicable regulatory agency, as appropriate. A design report should be prepared for each project. Where appropriate, the subsystem modeling may be substituted for the design report.

Construction bidding for upgrade projects should be done in accordance with the District procurement policy and the State regulatory requirements. Any exceptions to this process should be approved by the Board of Trustees.

System Improvement Prioritization

The priority for improvement should follow the following general guidelines:

High Priority Projects

When there is significant potential for sanitary sewer overflows, or frequent basement backups, the improvement should be considered a high priority and any available budget should be allocated to the project. This allocation is subject to Board discretion.

Medium Priority Projects

Where the problem is infrequent and the possibility exists that it may not repeat in the near future, the priority for correction is medium. Medium priority projects may be delayed until appropriate budget is available or the priority is adjusted to high priority.

Low Priority Projects

If the observed problem is infrequent, there is possibility that it may not repeat in the near future and the possibility that increased flow in the subsystem is low, the correct priority is low. Low priority projects will be placed in the budget process and evaluated against other needs. These projects will eventually be completed, but the work is not prioritized above plant and equipment needs.

Collections Maintenance Program

Collections Maintenance Program

The District has established this collection system maintenance program to insure proper system operations, to minimize any basement backups and to provide for replacement or repair of damaged or worn piping systems. The combined maintenance program should insure that the environment and health of the public are protected at a viable cost for the end users. To this end, the following areas are described and included in this maintenance program:

1. System Cleaning
2. System CCTV Inspection
3. Pump Station/Pressure Lines Inspection
4. Manhole Inspection
5. Defect Reporting
6. Grease Oil and Sand Program

System Cleaning

Collection system cleaning is accomplished through various means and methods. The District has established a goal to clean the entire system every five to seven years. Based on experience over the past 20 years, this frequency significantly reduces basement backups, controls grease problems and flushes any bellies in the system. In addition the District has a listing of identified hot spots which are maintained at a greater frequency. Systems which may have roots are mechanically rodded and areas where restaurants are close together are hydraulic flushed with a high pressure jet truck. The following methods are employed to provide system cleaning:

District Hydraulic Cleaning
Contractor Hydraulic Cleaning
Contractor Mechanical Rodding.

Cleaning records are maintained on a system map which reflects the annual operations. Contractors are required to provide cleaning records associated with their work. Cleaning history may be entered into the District graphical information system (GIS) mapping, however this is not always necessary. Should the cleaning process identify a serious defect, the problem should be reported on a Defect Report Form. The Operations Manager should be given the defect reports for further action. The defect report should be specific as to location and type of problem. A copy of the Defect Report Form is included at the end of this narrative section. A summary of cleaning

activities shall be prepared annually by the Operations Manager or his designee. This summary will normally be presented to the Board of Trustees.

System CCTV Inspection

Closed Circuit TV inspections of the collection system is used to identify problems or possible future failures which need current attention. The CCTV process also identifies the piping condition to allow for replacement prior to failure. Generally the District will conduct CCTV inspection, although contractors may be used on a periodic basis. The District goal is to inspect the system every 15 to 20 years. This inspection frequency is based on the pipe aging process. As such, once the system has been inspected completely, change usually occurs gradually. CCTV will also be employed when a systems operation or capacity is questioned or when a backup occurs into a basement. Any defects identified during the CCTV process should be reported on a Defect Report Form and the form should be given to the Operations Manager for possible repairs. Documentation of CCTV activity is completed using the on-board data management system in the CCTV van. Prior to the on-board system being procured, records were kept on maps similar to the cleaning records. When contractors are employed to inspect the collection system they will be required to submit records for their work. The Operations Manager will prepare an annual summary of CCTV completed for that calendar year.

Pump Station/Pressure Line Inspection

Staff inspects each pump station at least weekly for correct operations. Included in this inspection is a visual observation of the pressure line alignment in order to insure there are no leaks. Pump stations are also monitored via remote monitoring through both cell phone telemetry and radio flow monitoring. All pump stations have cell phone access, but only some have flow meters. Flow metering is scheduled to be installed at most pump stations over the next several years. Small pump stations may not be flow monitored based on risks associated with their low flow and storage capacity above the high water alarm. Operators inspecting the pump stations will complete the included Pump Station Inspection Form. Should a problem be encountered that cannot be corrected during the inspection, a Defect Report Form should be completed and the form given to the Operations Manager. If the defect has the potential to cause a sanitary sewer overflow, immediate action should be taken to insure no overflow occurs. During the inspection of the sewer alignment, operators should be looking for unusual puddling. If a potential leak is identified a Defect Report should be completed and given to the District Manager for further action. An evaluation will be made to determine if there is an actual leak and appropriate action taken.

Manhole Inspection

The District schedules annual inspection of the collection manholes and accomplishes this task through the use of part time summer staff. The M/H inspection involves the identification of foreign objects and surcharging that may be present. Crews inspecting the manholes will be given maps by the District Engineer who will monitor the progress and completeness of the inspection process. When a potential defect is identified the manhole should be flagged on the inspection map. Flagged manholes should be checked by an operator within several days to determine further action. If, during the inspection process, the inspection crew believes a problem is imminent, they should immediately cease inspecting and inform the Operations or District Manager of the problem. A cleaning crew should be dispatched immediately to ensure correct system operations. All inspection maps should be retained for documentation of work performed.

Defect Reporting

Defect Reports generated through the cleaning, CCTV inspection, pump station inspection or manhole inspection programs will be prioritized for correction by the Operations Manager. Any defects which has the potential for catastrophic failure and thus create a sanitary sewer overflow should be evaluated immediately and discussed with the District Manager for repair. Repair methods include:

- Spot Excavation Repairs
- Spot Band Repairs
- Segment Excavation Replacements
- Segment Cast in Place Lining
- Segment "U" Lining

When a defect is not flagged for immediate repair, it should be considered for placement on the "hot spot" list. This will allow for vigilant maintenance to ensure failure and a subsequent sanitary sewer overflow does not take place. Defect reports should be used in the Budget process to determine what financial allocation should be made in the next Budget year. The Operations Manager should include outstanding defects in his annual report to the Board.

Grease Oil and Sand Interceptor and Management Program (GOSI)

The District has, since 1998, had a GOSI Program as part of its pretreatment program. This program is used to ensure that commercial entities which may discharge grease, oil and sand are managed in such a manner to ensure collections blockages do not happen. As part of the GOSI program all potential grease dischargers are evaluated

and the need for a grease interceptor determined. Where interceptors are required, they are periodically inspected to ensure they are maintained. Interceptor design guides are stipulated by the District. The continuing inspection of the collection system by CCTV will also help to identify any dischargers which need additional attention. Included at the end of this section is the District's GOSI Program.

Central Davis Sewer District Collection System Defect Report

Location of Defect: _____

Identified by: _____

Description of Defect: _____

Urgency of Needed Corrective Action:

Immediate Action Required:

Repair or Correct Soon:

Problem Stable:

No Immediate Action Needed:

Central Davis Sewer District Pump Station Inspection Report

Inspection Activity	Farmington Ranches	South Farmington	Glovers Lane	Shirley Rae	West Farmington	Hunters Creek	700 West	Shepard Lane	Jeppson Lane	Buffalo Ranches	Winsor Lane	Roueche Lane	Sunset Farms	Galbraith Lane	Schick Lane	Farmington Station	
Check Pressure Line Alignment For Leaks																	
Check Pump Station Site																	
Check Site for Excess Weeds																	
Check Pump Operations																	
Check Dialer Status																	
Check Cell Phone Operation																	
Check Generator Fuel Level																	
Check Generator Fluid Levels																	
Check Exercise Clock for Time Change																	
Check Wetwell for Excess Grease																	
Check Controls for Normal Operations																	
Check Security Fence																	
Check Screen																	
Grease Bearings as Needed																	
Remove Garbage as Needed																	

Inspection Date: _____

Inspection By: _____

Central Davis County Sewer District

GREASE, OIL AND SAND MANAGEMENT PROGRAM

Purpose:

The purpose of this program is to provide for the control and management of grease, oil and sand discharges to the District collection system. This program, in conjunction with the District's Rules and Regulations, will provide a means to reduce interference with the collection system operation and pass through at the treatment plant.

Regulatory Authority:

Regulatory authority to implement this program is found in the Code of Federal Regulations in 40 CFR 403, General Pretreatment Regulations. State authority for the program is given in the Utah Administrative Code R317-8-8, Pretreatment. Specific citations from the District's Rules and Regulations are as follows:

Section 1.2 - Purpose

The objectives are:

- (a) To prevent the introduction of pollutants into the wastewater system which will interfere with the operation of the system or contaminate the resulting sludge;
- (b) To prevent the introduction of pollutants into the wastewater system which will pass through the system, inadequately treated, into receiving waters or the atmosphere or otherwise be incompatible with the system;

Section 2.2.5 - Prohibited Discharges - Specific Categories

- (2) Solids. Solid or viscous substances which will or may cause obstruction to the flow in a sewer or other interference with the

operation of the wastewater treatment facilities such as, but not limited to: grease, garbage with particles greater than one-quarter inch (1/4") in any dimension, animal guts or tissues, paunch manure, bones, hair, hides, or fleshings, entrails, whole blood, feathers, ashes, cinders, sand, spent lime, stone or marble dust, metal, straw, shavings, grass clippings, rags, spent grains, spent hops, waste paper, wood, plastic, gas, tar, asphalt residues, residues from refining or processing of fuel or lubricating oil, mud or glass grinding or polishing wastes.

- (4) Noxious. Any noxious or malodorous liquids, gases, or solids, which either singly or by interaction with other wastes are capable of creating a public nuisance or hazard to life or are sufficient to prevent entry into the sewers for their maintenance and repair.
- (9) Slug Loads. Any pollutants, including oxygen demanding pollutants (BOD, etc.) released in a single extraordinary discharge episode of such volume or strength as to cause interference to the District.
- (11) Hazards or Nuisances. Any wastewater which causes a hazard to human life or creates a public nuisance in the opinion of the District. This includes any pollutants which result in the presence of toxic gases, vapor or fumes within the POTW in a quantity that may cause acute worker health or safety problems.
- (12) Petroleum Oil and Grease. Any petroleum oil, non-biodegradable cutting oil or products of mineral oil origin in amounts which cause interference or pass through.
- (14) Pollutants Which Pass Through or Interfere. Any pollutant which passes through or interferes with the District's wastewater treatment facilities or harms or violates the receiving water quality.

Section 2.13 - Grease, Oil and Sand Interceptors

- (a) Grease, oil and sand interceptors, such as described by the Utah Plumbing Code, shall be required of any user when, in the opinion of

the Manager, they are necessary for the proper handling of liquid wastes containing grease in excessive amounts, or any flammable wastes, sand and other harmful ingredients; except that such interceptors shall not be required for dwelling units. All interceptors shall be of a type and capacity approved by the Manager and shall be located as to be readily accessible for cleaning and inspection.

- (b) All grease, oil and sand interceptors shall be constructed of impervious materials capable of withstanding abrupt and extreme changes in temperature. They shall be of substantial construction, water tight and equipped with easily removable covers which, when bolted in place, shall be gas and water tight.
- (c). Where installed, all grease, oil and sand interceptors shall be maintained by the user at his sole expense, in continuous efficient operation at all times.

Section 4.2.1 - General Permits

All Significant Industrial Users now connected or proposing to connect to the system shall obtain a Wastewater Discharge Permit before connection to and/or discharging to the system. All other industrial users shall be inspected by District representatives and a determination made as to whether they are significant, individually or in combination with other industries. Those determined not to be significant shall have their business license act as their Discharge Permit.

Section 5.2.2 - Surcharges

Industrial Users shall be subject to a surcharge for excessive BOD, suspended solids, biodegradable and nonbiodegradable oil and grease, and for service outside the District boundaries.

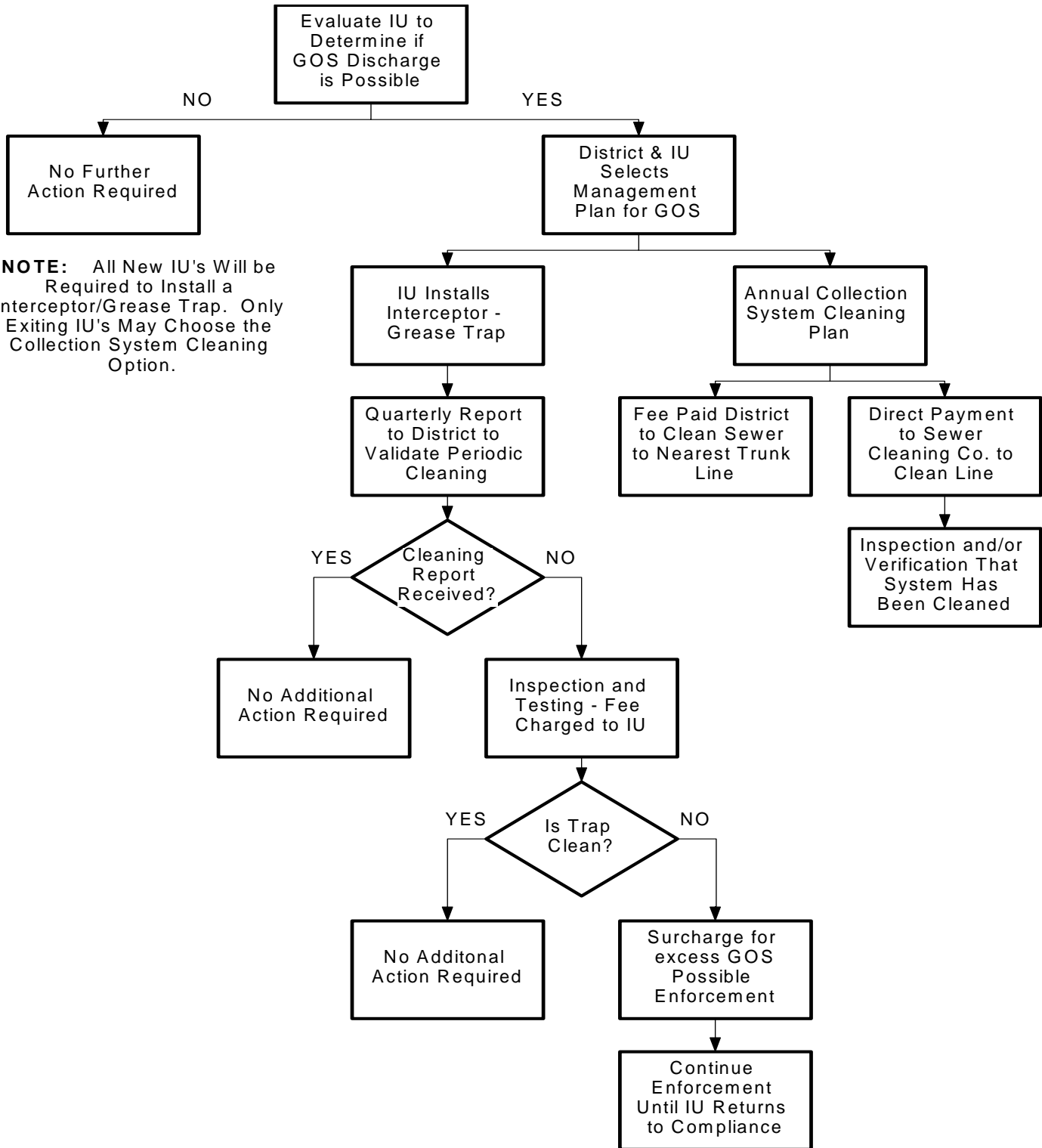
Section 5.2.3 - Fees

The District may adopt fees which may include, but not be limited to, the following:

- (a) Fees for all costs, including maintenance and operation;
- (b) Fees for reimbursement of costs of setting up and operating the Pretreatment Program;
- (c) Fees for monitoring, inspections and surveillance procedures to include, but not limited to, laboratory analysis;
- (d) Fees for reviewing accidental discharge procedures and construction;
- (e) Fees for permit applications;
- (f) Fees for filing appeals;
- (g) Fees for consistent removal (by the District) of pollutants otherwise subject to Federal Pretreatment Standards;
- (h) Fees for connection;
- (i) Fees for repairs and disconnection;
- (j) Fees for inspections and surveys;
- (k) Fees for development and expansion;
- (l) Other fees as the District may deem necessary,

Program Implementation:

This program shall be implemented in accordance with the requirements as set forth in the District Wastewater Rules and Regulations and in such a manner as to minimize the impact on businesses which may be affected by this program. In all cases the District will maintain a uniform decision making process. This process shall be in accordance with the flow diagram which follows. The District shall allow for appeals of program requirements in accordance with the appeal process in the District Wastewater Rules and Regulations.



NOTE: All New IU's Will be Required to Install a Interceptor/Grease Trap. Only Exiting IU's May Choose the Collection System Cleaning Option.

The following steps detail the procedure that District personnel shall follow in implementing this program.

Evaluation:

The District will evaluate an IU discharge to determine if grease, oil or sand management is required at the following events:

1. Issuance of a construction or remodeling building permit.
2. When the collection line in front of the business is television inspected as part of the collection system preventative maintenance program.
3. When a plug in a immediately downstream collection line plugs due to oil, grease or sand.

No further action will be taken if it is determined that no potential exists for significant enrichment of the wastewater with grease, oil or sand. Enrichment is defined as a discharge with greater volume or concentration of grease, oil or sand than that discharged from a typical residential connection. For oil and grease, the typical residential discharge has less than 100 mg/L of oil and grease for any sample taken. Greater concentrations would be enrichment. Also, a significant buildup of oil and grease in the lateral would indicate enrichment. Sand and dirt is not typically discharged from a residential connection. Any potential for sand or dirt discharge would be enrichment.

Implementation:

IU's which are determined to enrich or have the potential to enrich the wastewater with grease, oil, or sand will be required to development a management plan. The management plan shall be implemented through the issuance of a Pretreatment Permit. A \$100.00 annual fee for permitting shall be charged. There are two tracks for management plan development. The

District, with input from the IU, will determine which Track the IU must follow.

TRACK 1

This track is available for IU's which exist at the time of program implementation. However, not all existing IU's may be permitted to use it. Determination will be on a case by case basis. IU's on this track will be permitted to either pay a contractor or the District to annually clean the main sewer line from their place of business to the nearest District trunk line. A trunk line is any sewer line which has an inside diameter of eighteen inches or larger or has been classified as a trunk line by the District Manager.

TRACK 2

This track requires the IU to install and maintain a grease, oil and/or sand trap on their premises. Quarterly cleaning reports will be required unless a different frequency is specified in their Pretreatment Permit. Should cleaning reports not be submitted in a timely manner, as defined by the District Wastewater Rules and Regulations, the District shall inspect and test the grease trap. The following fees shall apply:

Inspection Fee	\$50.00
Testing Fee	\$75.00

Should the testing reveal grease and oil in excess of 100 mg/L, a fine of \$2.00 for each pound of oil and grease discharged for the past reporting period shall be assessed. The pounds of grease and oil shall be determined by using the following

equation:

$$(\text{Total Reporting Period water use in MG})(\text{mg/L O\&G} - 100)(8.34)$$

The IU will also be ordered to return to compliance immediately. Retesting will be done within thirty days if the trap has not been cleaned and a cleaning report submitted. Another inspection and testing fee will be assessed. Should the test results still not comply with the 100 mg/L oil and grease limit, enforcement will be escalated in accordance with the District's Enforcement Response Plan.

Should the testing reveal TSS in excess of 250 mg/L, a fine of \$0.25 for each pound of TSS discharged for the past reporting period shall be assessed. The pounds of TSS shall be determined by using the following equation:

$$(\text{Total Reporting Period water use in MG})(\text{mg/L TSS} - 250)(8.34)$$

The IU will also be ordered to return to compliance immediately. Retesting will be done within thirty days if the trap has not been cleaned and a cleaning report submitted. Another inspection and testing fee will be assessed. Should the test results still not comply with the 250 mg/L TSS surcharge limit, the IU will be placed on a continuous inspection, testing and surcharge schedule.

By following the steps given in the flow diagram and discussed above, the District hopes to maintain a collection system free from excessive backups and a treatment plant in compliance with UPDES discharge conditions.

Central Davis County Sewer District

GREASE AND OIL / SAND INTERCEPTOR DESIGN STANDARD

GENERAL REQUIREMENTS:

Interceptors shall be provided when, in the judgement of the District Manager or his designee, they are necessary for the proper handling of liquid wastes containing grease or solids which may be harmful to, or cause obstruction of the publicly owned treatment works, or interfere with the operation of the treatment works.

For grease traps, all drains from the kitchen, food preparation, meat department, bakery, and dish washing areas shall be connected to the grease interceptor. Fixtures to be connected include, but are not limited to, scullery sinks, pot and pan or other sinks, dish washing machines, soup kettles, and floor drains located in areas where grease containing materials may exist. Toilets, urinals, and similar fixtures shall not waste through the interceptor. All waste shall enter the interceptor through the inlet pipe only.

APPROVAL PROCEDURE:

The size, type and location of each interceptor shall be approved by the Manager in accordance with these standards. Except where otherwise specifically permitted, no wastes other than that requiring separation shall be discharged into any interceptor. One set of plans, including complete mechanical and plumbing sections shall be submitted to the District for approval prior to construction. Such plans shall include the size, type and location of each interceptor.

DESIGN STANDARDS:

Design - Interceptors for grease and heavy solids shall be so designed and located as to be readily accessible for cleaning and inspection. Interceptors shall be constructed in accordance with these design specifications and shall have a minimum of two (2) compartments with fittings designed for grease retention. There shall be a minimum of two (2) manholes to provide access for cleaning and inspection of all fixtures and compartments of the interceptor. The tank and the discharge line shall each be vented and the vents shall not tie together less than 42-inches above the tank lid. Interceptor

design and construction shall conform to the drawings found at the end of this section and shall be supplied by either Amcor, Duracrete, or another supplier of equal design and construction.

Location - Each interceptor shall be readily accessible for inspection, servicing, and maintaining in proper working condition. The use of ladders or the removal of bulky equipment in order to inspect or service interceptors shall constitute a violation of accessibility. Location of all interceptors shall be approved by the Manager, and shall be shown on the approved building plan.

INTERCEPTOR SIZING:

The minimum acceptable interceptor volume shall be not less than seven hundred fifty (750) gallons (with a dishwasher - 1000 gals). The size of the interceptor shall be in accordance with one of the following methods and shall be agreed upon in advance by the Manager.

1. In accordance with the sizing criteria as set forth in the Uniform Plumbing Code Chapter 7.
2. The size of the interceptor shall be based on the maximum number of meals served at the maximum periods of the day (either breakfast, lunch or dinner). Volume, in gallons, of the interceptor shall be $2 \frac{1}{2}$ gallons per maximum meals served during the busiest period of the day (Volume = meals X 2.5 gallons).
3. The size of the interceptor may be determined by multiplying the seating capacity times a turnover constant of 1.6 times $2 \frac{1}{2}$ gallons. Seating capacity can be approximated by using ten (10) square feet of dining area per person (Volume = Seating Capacity x 1.6 x 2.5 gallons).
4. The size of the interceptor may be determined from the number of fixture units as determined from the Uniform Plumbing Code Table 4-1 times 7.5 gpm times 15 minute detention time (Volume = FU X 7.5gpm X 15min).
5. The size of the interceptor may be determined by multiplying the estimated peak flow in gpm by 15 minutes detention time. (Volume = Estimated gpm X 15min).

Basement Backup Program

Basement Backup Program

Basement backups are a serious impact on a home or business owner. As such, all reasonable efforts should be taken to prevent such backups from occurring. Sewer system backups are the result of several system problems. Such problems include any one or a combination of the following:

1. Laterals serving real properties are owned by the property owner and lateral maintenance is their responsibility. Roots, low points, and grease are primary problems lateral owners face.
2. Backups caused by main line plugs are usually caused by roots, grease, low points, foreign objects and contractor negligence.
3. Piping system structural damage may cause basement backups. Such structural problems include wear damage, installation damage, excavation damage and trenchless technology damage.
4. Excess flow problems may surcharge a piping system and cause backups into homes. Excess flows usually occur when major storm waters inflow into sanitary sewers. Sanitary sewers are not designed for such flow. In addition, some homeowners may illegally connect foundation drains and sump pumps to the sanitary sewer system.

Basement Backup Response

When the District is notified about a basement backup, the District's staff will log the complaint in the complaint log located in the Accountant's office. The person receiving the call may log the backup complaint or may ask the accountant to document such complaint.

All backup complaints shall be investigated by District staff. If the investigation determines that the case of the backup is only in the lateral, District staff may offer technical information but will not take responsibility for cleanup or subsequent restoration.

When it is determined that the basement backup is the result of items 2 - 4 above, the

District will follow the No Fault Damage Claim Policy of the District. A copy of this policy is included in this program and incorporated by reference. Cleanup of the backup will follow the District's "Clean-up Guidelines after Sewer Overflows" guidance a copy of which is also included. It should be noted that all action the District takes are on a no-fault basis. The District does not accept liability nor does it waive its governmental immunity.

Backup Prevention Design Standard

The District promotes system designs which minimize backups and insure proper operations. To this end the District has a design standard for all system construction. In addition, the District complies with state design standards contained in R317-3. Finally for laterals, the District requires member cities to comply with the international plumbing code for lateral installations. Of specific note, the District has a policy requiring the installation of backflow valves in all home laterals. A copy of this policy is included in this section. The District's design standards are included in Appendix B.

Central Davis Sewer District NO-FAULT SEWAGE BACKUP CLAIMS POLICY

Purpose:

The purpose of this chapter is to assist in the cleanup of real and personal property, and/or compensate persons for the loss of real or personal property, destroyed or damaged as the result of a backup of District facilities, regardless of fault, within the restrictions, limitations and other provisions of this policy.

Cleanup Of Real And Personal Property:

- (A) The Manager may, in accordance with the District's standard procurement procedures, engage the services of one or more cleanup contractors to perform cleanup services at the direction of the Manager on an as-needed basis.
- (B) Upon discovering backup described in this Policy, a property owner should immediately notify the Manager of such event.
- (C) Upon notification of the occurrence of the event, the Manager may contact a cleanup contractor under contract with the District pursuant to subsection (A) above, and direct the cleanup contractor to perform all cleanup work at the premises, in accordance with established cleanup criteria.
- (D) In the event the property owner engages the services of a cleanup contractor prior to notifying the Manager of the event, the District may reimburse the property owner for actual expenses incurred by the property owner, but only up to the amount the District would have paid its own cleanup contractor under subsection (C) above.
- (E) In the event any real or personal property cannot, in the reasonable judgment of the Manager, be restored to its pre-event condition, in accordance with the cleanup criteria, the District may pay to the property owner the estimated fair market value (not the replacement value) at the time of the event, of such real or personal property, with the exception that carpet and major appliances will be replaced with new like-kind items.
- (F) In no event will the District pay, or reimburse the property owner for the payment of special or consequential damages.

Establishment of Cleanup Criteria:

The Manager may, from time to time, establish cleanup criteria which will govern the District's cleanup and payment responsibilities under this Policy. In establishing such cleanup criteria, the Manager may give due consideration to generally available health

guidelines, recommendations from governmental and academic experts, and other sources of guidance reasonably deemed by the Manager to be balanced, unbiased, and protective of health and safety.

Application - Time Limitations:

Any request for reimbursement of cleanup expenses under this policy, or payment of fair market value, may be made by filing a written application in such form as prescribed by the Manager. Such application must be submitted to the District Manager within thirty (30) days after the occurrence of the event.

Qualification For Assistance:

An application or request for assistance or payment under this Policy may qualify only if the Manager, after due inquiry or investigation, makes an affirmative determination that the event was the result of a backup of District facilities, and that none of the following circumstances apply:

- (A) The loss was the result of a force majeure including but not limited to acts of God, acts of public enemies, insurrections, riots, war, landslides, lightning, earthquakes, fires, storms, floods, washouts, droughts, civil disturbances, explosions, acts of terrorism, sabotage, or any other similar cause or event not reasonably within the District's control;
- (B) The loss was caused by either an act or omission of the property owner, the property owner's agent, or a member of the property owner's family or business;
- (C) The property owner failed to file a claim hereunder in a timely manner, or failed to comply with any other procedural requirements of this Policy;
- (D) The loss is the result of intentional or negligent acts of third parties; or
- (E) The loss is wholly covered by private insurance.

Reduction In Assistance:

The District may limit any assistance, or reduce any payment, under this Policy based upon any of the following:

- (A) The property owner did not act responsibly to prevent, avoid or minimize the loss;
- (B) The property owner is unable to fully substantiate or document the extent of the loss;
- (C) The loss is partially covered by private insurance.

Maximum Payments:

Without the express action of the District Board of Trustees, no assistance or payment under this Policy may exceed any of the following:

- (A) Fifteen thousand dollars (\$15,000) per application or location; or
- (B) One-Hundred Fifty thousand dollars (\$150,000) per incident.

Should a catastrophic event occur, the \$150,000 per incident limitation will be prorated against all losses where assistance is requested unless additional funding is approved by the Board of Trustees.

Payment Does Not Imply Liability:

Any assistance or payment made under this Policy shall not be construed as, and does not imply, an admission of negligence or responsibility on the part of the District for any damage or loss. Any assistance or payment made under this Policy is strictly voluntary on the part of the District. This Policy shall not in any way supersede, change or abrogate the state government immunity act, Utah Code Annotated, section 63-30-1 et seq., as amended, or its successor, and its application to the District, or establish in any person a right to sue the District under this Policy. Any assistance or payment made under this Policy and accepted shall constitute a full and complete release of any and all claims against the District, its officers, employees and agents arising from the incident.

Budget Expenditures:

The District authorizes a fund from which amounts may be drawn to make the foregoing assistance or payments. Such fund may be established from the ordinary rate structure of the District.

Claims From Other Governmental Agencies:

Notwithstanding any other provisions of this Policy, no application shall be accepted from the United States or any of its agencies, the State of Utah or any political subdivision.

Approved by the Board of Trustees

May 11, 2006

Central Davis Sewer District Clean-up Guidelines after Sewer Overflows

I) Purpose

The purpose of these guidelines is to offer broad clean-up criteria and procedures for the restoration of homes, buildings, other structures and their contents after a sewer overflow event.

In general, the District intends to follow the IICRC S500 2nd Addition Water Damage Restoration Standard as interpreted by District personnel.

Due to the unique circumstances surrounding each event, differing criteria and procedures may be used, in lieu of these guidelines, based on established industry and environmental health standards.

II) Scope

These guidelines describe general procedures to be followed by District personnel and/or the District's Contractor during evaluation and remediation of homes, buildings, other structures and their contents after a sewer overflow event. These guidelines were developed based on published documents from various health Districts, universities, the Centers for Disease Control and Prevention (CDC), the Institute of Inspection Cleaning and Restoration S500 and other relevant sources. These guidelines are not intended to be an all inclusive or a blanket document.

III) Definitions

District: The Central Davis Sewer District Manager or his designee.

Drying system: Any drying system utilizing either open air drying methods or mechanical air movers and dehumidification equipment or a combination of both in order to dry the atmosphere and structure in the most prudent and expeditious manner.

Evaluation: The process of making and prioritizing mitigation and restoration decisions based on sound judgment and appropriate guidelines by an individual with appropriate education and training.

Event: An incident during which sewage waters overflowed onto the affected property.

Loss Assessment: The process of inspecting and documenting damages incurred due to the sewer overflow.

Salvageable: Term used to describe items that can be cleaned and restored rather than disposed.

IV) Guidelines

Response by District crews

Upon receiving a call of an alleged sewer overflow, District crews may, when possible, respond to the site and inspect the District lines to determine if the overflow is due to a blockage in the District's line or on the private lateral servicing the property. If it is determined to be on the private lateral, crews will notify the property owner of its findings and advise the owner to contact a private plumbing or other contractor to clear the blockage. If the blockage is determined to be in the District's main, crews will clean the line to restore normal flow. District crews may also pump out property(s) as deemed appropriate.

Crews, when possible, may notify the District Manager or designee for loss assessment and notify the District's contractor for response and clean-up. If the owner elects to hire his or her own contractor, potential reimbursement by the District may be limited to work performed as noted in these guidelines. Exceptions may be granted as noted at the end of this document.

Response by District's Contractor

Upon receiving a request for response, the contractor should dispatch appropriately trained clean-up crews to the property(s) to begin clean-up operations. The contractor shall use the following guidance in their operations:

- Worker Safety - Clean-up workers must be equipped with appropriate Personal Protective Equipment (PPE) and conduct all work in compliance with applicable NIOSH and OSHA standards.
- Excess Water and Contaminant Removal – Water and any associated contaminant shall be removed and may include the use of pumps, wet vacuums and carpet extraction machines. Extricated material shall be deposited into the appropriate waste stream, either an operable sanitary sewer or double bagged and placed in a container for municipal waste collection.
- Evaluation of property contents for Salvage or Disposal – Property contents should be evaluated as to whether they can be cleaned properly and effectively sanitized, as noted below or should be discarded.

- Structural Drying – Appropriate drying systems should be utilized as soon as possible upon initial response to dry the atmosphere and structure in the most prudent and expeditious manner.
- Clean-up – Clean-up may include any of the following:
 1. Discard any contaminated items that are not salvageable and/or cannot be thoroughly washed or laundered.
 2. Remove all mud, silt or other residues and wash contaminated surfaces and objects with warm, soapy water. Disinfection may be achieved with a bleach and water solution made of one-fourth cup of 5.25 percent chlorine bleach per gallon of water. The use of other commercial disinfectants should be used only as approved in writing by the affected home owner.
 3. Remove and discard any carpet and padding that has been saturated with sewage water.
 4. Loose tiles or buckled flooring should be removed and discarded to allow the support surface to dry. Ceramic and other similarly non-porous tiles may be cleaned, disinfected and reinstalled as needed.
 5. Furniture, expensive rugs, clothing items and drapes may be cleaned by a professional dry cleaner or commercial laundering unless soiled such that cleaning does not return the item to its pre-flood condition.
 6. Wallboard and other porous structural material must be quickly cleaned and dried to a reasonable moisture content and must be free of sagging or other structural defects. Should structural defects appear, structural repair may be authorized by the Manager or his designee.
- Waste Disposal – Water extracted through the cleaning process should be disposed into the sanitary sewer system. Disposal of un-salvageable items should be in accordance with local or State laws and regulations.
- The District Manager or his designee must approve payment of the final clean-up billing.
- Replacement of unsalvageable items will be approved by the District Manager or his designee.

Exceptions to guidelines

Due to the unique circumstances surrounding each event, differing criteria and procedures may be used, in lieu of these guidelines, based on established industry and environmental health standards as approved by the District.

V) References

Centers for Disease Control and Prevention. Guidelines for Environmental Infection Control in Health Care Facilities – Recommendations of CDC and the Healthcare Infection Control Practices Advisory Committee (HICPAC) 2003

Illinois District of Public Health – Cleaning up After Flood and Sewer Overflows

Minnesota District of Health – Protecting Your Health During a Flood

Salt Lake Valley Health District – Mold FAQ

Idaho District of Health and Welfare – Mold in our Homes Fact Sheet

Colorado District of Public Health and Environment – Mold Prevention

IICRC S500 – Standard and Reference Guide for Professional Water Damage Restoration, Second Edition

Winnipeg, Canada Basement Flooding or Sewer Backup Cleaning Procedures.

Metro Sanitation District of Greater Cincinnati Cleaning Assistance Procedures

Iowa State University Flood Cleanup Information

CDS - Basement Moisture Reduction Calculation Sheet

Psychrometric Chart Notes:

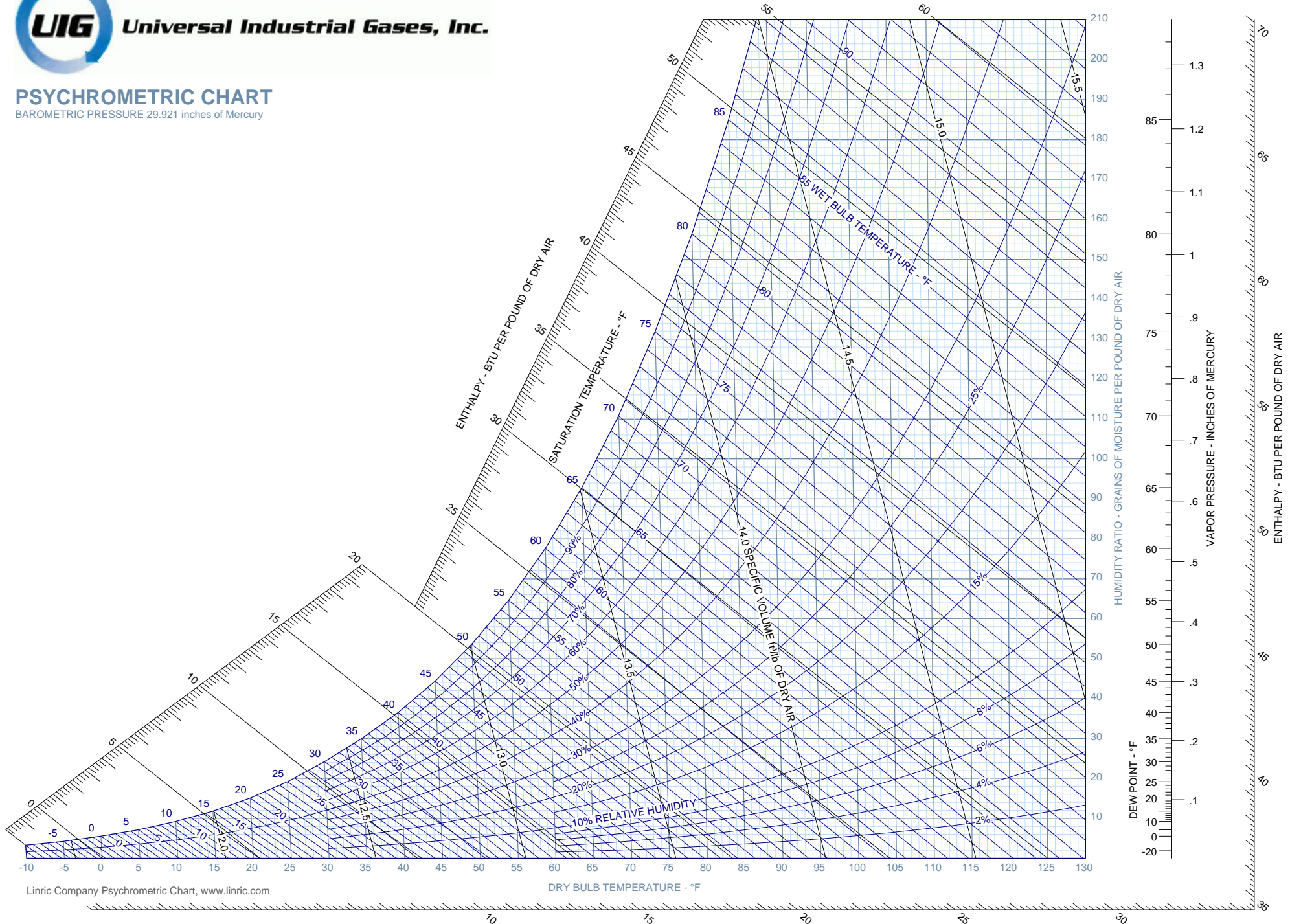
1. Determine Relative humidity from meter inside and outside.
2. Determine inside and outside temperature.
3. If outside temperature is warm or hot and outside RH is low use an open drying system.
4. If the outside temperature is low or the outside RH is high use a closed drying system.
5. Determine grains per pound of moisture in the air.
 - A. If outside grains per pound is less than 35 outside air may be used for drying.
 - B. If outside grains per pound is greater than 50 do not use outside air for drying.
 - C. If inside grains per pound is greater than 55 a conventional dehumidifier will assist in the drying process.
6. The following dehumidifier limits should be used to evaluate drying process:
 - A. Conventional Dehumidifier dries to 55 GPP.
 - B. LGR Dehumidifier dries to 28 - 45 GPP.
 - C. Desiccant Dehumidifiers are not normally available but can dry to 15 GPP.
7. 14 Cu. Ft. of air equals 1 pound of air. There are 7,000 grains per pound.
8. Use AHAM rating of dehumidifier to calculate number of dehumidifiers to use.
9. There are 8.35 pounds in a gallon of water. There are 8 pints in a gallon
10. Use included chart to determine dehumidifier removal if AHAM rating is not available.



Universal Industrial Gases, Inc.

PSYCHROMETRIC CHART

BAROMETRIC PRESSURE 29.921 inches of Mercury



Various Dehumidifier AHAM and CFM/H ratings:

CONVENTIONAL REFRIGERANTS (Dries to 55 GPP's)

<u>Dehumidifier</u>	<u>AHAM rating/not max!</u>	<u>Dries to approximately</u>
Drizair 80 & Ebac BD-80 XE	40 pints 40 pints	55 Grains 55 Grains
Drizair 110	58 pints	55 Grains
Drizair 1200	64 pints	55 Grains
Drizair 200	108 pints	55 Grains
Ebac Orian 200	100 pints	55 Grains

L. G. R. REFRIGERANTS (Below 40 gpp's) (Dries to 28 – 45 GPP's)

<u>Dehumidifier</u>	<u>AHAM rating/not max!</u>	<u>Dries to approximately</u>
Dri-Eaz Evolution	65 pints	< 40 Grains
Drizair 2000	110 pints	30 to 32 Grains
Phoenix 200	124 pints	≈ 30 Grains
Phoenix 200 Max.	135 pints	≈ 30 Grains
Atlantic LGR	140 pints	≈ 30 Grains
Drizair 2400	148 pints	35 to 37 Grains
Phoenix 300	176 pints	30 to 32 Grains

DESICCANTS

<u>Dehumidifier</u>	<u>C.F.M. rating</u>	<u>C.F.H. rating</u>
Dritec 150	110 cfm	6,600 cfh
Dritec 325	250 cfm	15,000 cfh
AQS 1000	750 cfm	45,000 cfh
Dri-Eaz Mobile	2000 cfm	120,000 cfh
Dry Max 2000	2000 cfm	120,000 cfh

Central Davis County Sewer District
Policy on the Installation of Backflow Valves

Reference Regulatory Documents:

The following regulations are incorporated in the establishment of this policy:

1. Utah Administrative Code R156-56-701. This code section adopts the 1997 edition of the International Plumbing Code.
2. The 1997 International Plumbing Code, section 715.1 Sewage Backflow.

District Policy:

Whereas the State of Utah has adopted the International Plumbing Code(IPC) as its plumbing building standard;

Whereas the Cities within the District use the IPC as their statute for plumbing construction and installation; and

Whereas the IPC requires the installation of a sewage backwater valve “where the overflow rim of the lowest plumbing fixtures are below the next upstream manhole in the public sewer.”

Now, therefore, be it resolved by the Central Davis County Sewer District that it endorses stringent implementation of the backwater valve standard as stipulated by rules already propagated.

Collection System Damage Program

Collection System Damage Program

The Collection System Damage Program is prepared to provide a uniform mechanism to respond to external damage to the collection system. This program is not intended to respond to degradation or wear. Collection damage may occur as a result of multiple factors, some identified as a result of inspection activities and some identified as a result of damage by third parties such as contractors. This damage program will be divided into the following sections:

1. Damage Identification
 - A. District Identification Activities
 - B. Third Party Identification Activities
2. Damage Response Actions

Damage Identification

The identification of system damage which may result in a sanitary sewer overflow or basement backup is important to prevent environmental, public health, or economic harm. Identification of damage may be from either internal activities or external activities.

Internal activities which may result in the identification of damage include the follow:

1. Collections Maintenance Activities
2. CCTV Inspection Activities
3. Manhole Inspection Activities
4. Public Complaints.

The first three activities are discussed in the Maintenance Program and the identification of damage will result in the generation of a Defect Report. For this purpose, activities performed by contractors cleaning and CCTV'ing the system are considered as if they were internal staff. Public complaints received by the District will be logged in by staff and immediately handed off to the District or Operations Manager. Based on inspection by staff, a Defect Report may be generated. This staff inspection will normally be completed the day of the complaint, unless the complaint references a basement backup or overflow, in these cases the response will be immediate.

External activities which identify damages include:

1. Contractor Notification of Damage
2. Directional Drilling Notification of Damage
3. Public Damage Complaints

All three of these notifications generally require immediate response. District staff should respond and evaluate the seriousness of the damage and the effect on the environment. Damages which include a release to the environment should be public noticed in accordance with the Sanitary Sewer Overflow Management Program. Damages which cause a basement backup should trigger the Basement Backup program. Damages which remain in the trench should be de minimus and do not require more action than the repair of the damage.

Whatever the cause of collection system damage, the response should be expeditious to prevent environmental or economic harm. District staff should consider all damages an emergency until it is shown by inspection to a lower priority.

Damage Response Actions

When damages occur in the collection system, the following actions help define the path staff should take. These action plans are not inclusive of all options available but are indicative of the types of response that may be taken.

Stable Damage

Inspection activities may show a system damage which has been there for an extended period of time. Such damage may not require immediate action but may be postponed for a period of time. When stable damage is identified and not acted upon immediately, a defect report should be prepared. If such a defect is identified and repaired immediately, a defect report is not needed. An example of stable damage could be a major crack in a pipeline or a severely misaligned lateral connection where infiltration is occurring.

Unstable Damage

Unstable damage is damage which has a high likely hood that failure will occur in the near future. Such damage may be a broken pipe with exposed soil or a line which has complete crown corrosion. In these cases, action should be as soon as there is time a contractor, materials and other necessary resources available. When such unstable damage is identified, if possible, consideration should be given to trenchless repairs which may be able to be completed quicker than standard excavation. Immediately after identification the District Manager should be contacted to review and take care of budget considerations. Where the

damage is extensive, an emergency District Board Meeting may be needed to allocate funds.

Immediate Damage

When a contractor or others damage a collection line such that the line is no longer capable of functioning as a sewer, this immediate damage must be handled expeditiously. Such damage allows untreated wastewater to pool in the excavation site, spill into the environment or possibly backup into a basement. Under such conditions the priority should be given to an immediate repair. Since excavation damage may be a result of contractor negligence or it could be a failure of the District to adequately protect the line by appropriately following the Damages to Underground Utilities Statute 54-8A, priority should be given to effecting a repair and not to determining the eventual responsible party. In all such cases, the District Manager or the Operations Manager should be contacted and should respond to direct activities. If neither of these individuals are available, the next ranking Staff member should handle management of the repair.

As can be determined from the above action plans, priority should always be preventing sanitary sewer overflows and attendant environmental damage, to prevent basement backups and financial impacts, and to prevent public health issues.

This Damage Program provides District staff with the starting point for actions when damages are identified. It is intended as a guide. Management has great confidence in the capabilities of staff members, and encourages all staff to think of alternative or innovative solutions which reduce damage and further protect the desired results of this policy.

Sanitary Sewer Overflow Action Plan

Sanitary Sewer Overflow Action Plan

Whenever sanitary sewer leave the confines of the collection or treatment system, immediate action is necessary to prevent environmental, public health or financial damage from occurring. In addition, quick action is normally needed to mitigate damage which has already occurred. For the purpose of this section, the following are part of the emergency action plan.

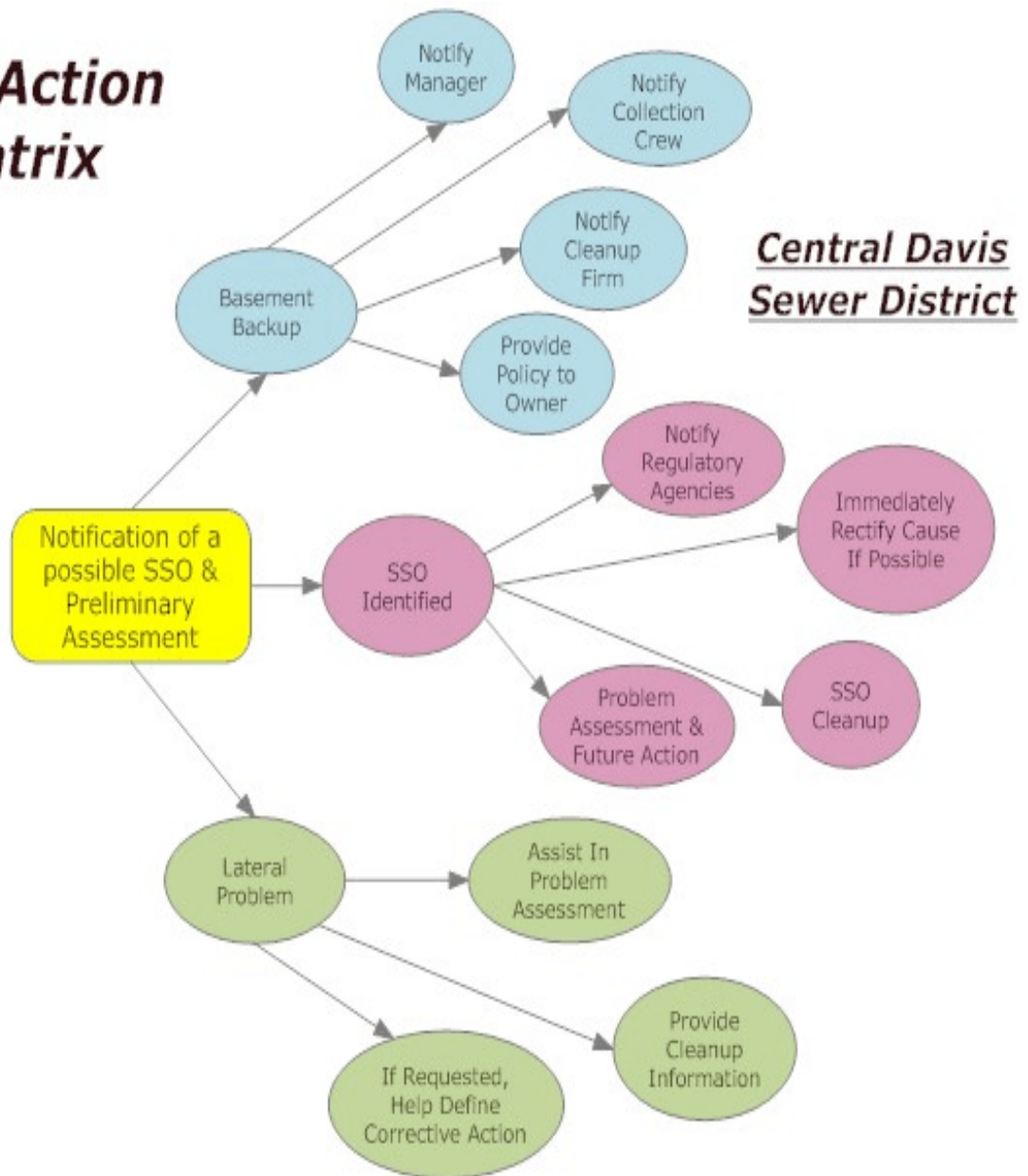
1. Basement backups
2. Sanitary sewer overflows to the waters of the state
3. Sanitary sewer breaks which remain in the trench
4. Sewer lateral backups.

All of the above conditions are likely to cause some damage. Each should be treated as an emergency, and corrective actions taken in accordance with District directions. Only item 2 requires full notification of both the State DEQ and Davis County Environmental Health Department. Item 3 may be reported to the Davis County Environmental if, in the opinion of the responsible staff member there is potential for a public health issue. An example of where a public health issue may be present is when an excavator breaks both a sewer and a water line in the same trench. In such cases, the County Environmental Health representatives should be contacted and the situation explained. If the County Representative requests further action on the part of the District, staff should try and comply. If, in the opinion of the responsible staff member, the County request is unreasonable, The District Manager should be immediately notified. Care should always be taken to error on the side of protecting public health over a financial consideration. When a basement backup occurs, the staff member responding should follow the Basement Backup Program procedures. Lateral backups, while the responsibility of the property owner, should, none the less, be treated as serious problems. Care should be taken to provide advise to the property owner in such cases, but the property owner is ultimately the decision maker about what actions should be taken.

Response Activities

There are specific steps that should be followed once a notification is received that an overflow may be occurring. The following figure outlines actions that could be taken when the District receives notice that a possible overflow has or is occurring.

SSO Action Matrix



When a sanitary sewer overflow occurs that spills into the environment and has the potential of reaching the waters of the State of Utah, specific notification requirements are needed. In such cases the following Notification procedure should be followed and documented. Notification requirements are a part of the District's Utah Pollution Discharge Elimination System permit. Failure to comply with these requirements are a violation of the permit conditions.

Agency Notification Requirements

Both the State of Utah Division of Water Quality and the Davis County Environmental Health Department should be immediately notified when an overflow is occurring. The requirement in the UPDES Permit stipulates this notice should be given within 24 hours. However, all significant attempts should be made to notify them as soon as possible so they can observe the problem and the extent of the issue while the problem is happening. At the end of this section, a notification form is provided to document notification activities. After an SSO has taken place and the cleanup has been done, a written report of the event should be submitted to the State DEQ. This report should be specific and should be inclusive of all work completed. If possible the report should also include a description of followup actions such as modeling or problem corrections that has or will take place.

Public Notification

When an SSO occurs and the extent of the overflow is significant and the damage cannot be contained or is of a de minimus size, the public may be notified through proper communication channels. This could include press releases to the local news agencies and publication in an area paper. Leaflets may also be delivered to home owners or citizens in the area of the spill. Notification should be sufficient to insure that the public health is protected. When and if Federal laws are passed concerning notification requirements, these legal requirements are incorporated by reference in this document. In general, notification requirements should increase as the extent of the overflow increase.

Overflow Cleanup

When an overflow happens, care should be taken to clean up the environment to the extent feasible based on technology, good science and financial capabilities. Cleanup could include removal of contaminated water and soil saturated with wastewater and toilet paper, disinfection of standing water with environmentally adequate chemicals or partitioning of the affected area from the public until natural soil microbes reduce the hazard. Cleanup is usually specific to the affected area and may differ from season to season. As such, this guide does not include specific details about cleanup. The responsible staff member in conjunction with the State DEQ, the local health department and the owner of real property should direct activities in such a manner that they are all satisfied with the overall outcomes. If, during the cleaning process, the

responsible staff member believes the State or the County are requesting excessive actions, the District Manager should be contacted. This can be done 24 - seven at the following cell phone number - 801-560-3938.

Corrective Action

All SSO's should be followed up with an analysis as to cause and possible corrective actions. An SSO which is the result of grease or root plug may be placed on the preventative maintenance list for more frequent cleaning. Serious or repetitive plugging problems may require the reconstruction of the sewer lines. An overflow that results from inadequate capacity should be followed by additional system modeling and either flow reduction or capacity increase. If a significant or unusual weather condition caused flooding which was introduced to the sanitary sewer system incorrectly, the corrective action may include working with other agencies to try and rectify the cross connection from the storm sewer to the sanitary sewer. Finally, should a problem be such that it is not anticipated to reoccur, no further action may be needed.

Central Davis Sewer District Log of Contact with Other Agencies

Location of SSO _____

Date of SSO _____

AGENCY	PHONE NUMBER	CONTACT MADE		REMARKS
		YES	NO	
U.S. EPA Region VIII	(303) 293-1788 (24 hour Hot Line)			
Utah Division of Water Quality	Day: (801) 538-6146 Night: (801) 538-6333			
County Environmental Health	Day: (801) 451-3296 Night: (801) 451-5610			
EMERGENCIES FOR THE FOLLOWING:	911			
City Police	Phone: 911			
County Sheriff:	Phone: 911			
Local Fire Department	Phone: 911			