Pretreatment Program Modification Stakeholders Meeting

February 28, 2011

Pretreatment Program Status

Why Modify the Pretreatment Program?

- WWTP Capacity Increase
- Pretreatment Streamlining Rules

WWTP Changes

- Walnut Creek design flow from 60 MGD to 75 MGD
- South Austin Regional design flow from 50 MGD to 75 MGD
- Harris Branch removed from Local Limits Calculation

City of Austin TPDES Permits

- Anderson Mill
- Balcones Water Reclamation
- Brushy Creek East
- Dessau
- Harris Branch
- Lost Creek
- Onion Creek
- South Austin Regional
- Thoroughbred Farms
- Walnut Creek
- Wild Horse Ranch
- Hornsby Bend Biosolids

Ordinance Changes

SHOW ME THE CHANGES!

Proposed Amendments to Chapter 15-10

(www.ci.austin.tx.us/water/downloads/wwwssd_iw_draft15-10AmendmentsFeb2011.pdf)

Please note that this is a draft document still being reviewed by the City of Austin's Law Department. Additional minor changes are expected to be made to this document. Any substantive changes will be reported to you prior to any potential adoption.

Overview of Ordinance Changes

Three Types of Changes:

- Required Streamlining Rule Changes
- Optional Streamlining Rule Changes
- Everything Else

Required Streamlining Rule Changes

Federal Fact Sheet on Required Streamlining Changes

(www.epa.gov/npdes/pubs/pretreatment_streamlining_required_changes.pdf)

Required Streamlining Rule Changes

Slug Control requirements must be included in IU and SIU Permits as deemed necessary.

- § 15-10-111(A)(6)(i) - new
- § 15-10-111(B)(5)
- § 15-10-101(12) - new

Required Streamlining Rule Changes

Evaluation of SIUs to determine need for Slug Control Plan must be made within first year after designating a user as an SIU.

- § 15-10-58(C)

Previously required once every two years.

Required Streamlining Rule Changes

SIUs are required to notify the Director immediately of any changes at its facility affecting the potential for a slug discharge.

- § 15-10-111(E) - new

Required Streamlining Rule Changes

Significant Noncompliance (SNC) definition is expanded to include additional types of Pretreatment Standards and Requirements.

- § 15-10-311(A)(1)
- § 15-10-311(A)(2)
- § 15-10-311(A)(3)

Required Streamlining Rule Changes

Definition of Best Management Practices (BMP) updated in compliance with 40 CFR Part 403.

- § 15-10-11(B)(5)

Currently no SIU facilities in Austin are affected by this change.

Required Streamlining Rule Changes

SIU Permits must include BMP provisions, if applicable.

- § 15-10-111(A)(5)

Currently no SIU facilities in Austin are affected by this change.

Required Streamlining Rule Changes

Periodic Reports from SIU must include BMP compliance information, if required.

- § 15-10-155(9) - new

Currently no SIU facilities in Austin are affected by this change.

Required Streamlining Rule Changes

Required BMP documentation to be subject to Records Retention Requirements.

- § 15-10-165

Currently no SIU facilities in Austin are affected by this change.

Required Streamlining Rule Changes

Non-Categorical SIUs must comply with the same sampling requirements (including requirement to report all monitoring results) as Categorical SIUs.

- § 15-10-153
- § 15-10-154
- § 15-10-155
- § 15-10-157
- § 15-10-158(C) - new
- § 15-10-182
- § 15-10-184(C)

Required Streamlining Rule Changes

Non-Categorical SIUs are required to provide representative samples in their periodic monitoring reports.

- § 15-10-184(A)
- § 15-10-184(B)

Optional Streamlining Rule Changes

SNC Criteria - Applicability.

According to the federal regulations, certain SNC criteria are intended to be applied to SIUs only.

- § 15-10-311(A)

The current ordinance applies these criteria to all users.

Optional Streamlining Rule Changes

SNC – other changes

Certain violations of BMPs could result in SNC designation.

- § 15-10-311(A)(8)

SNC Publication can now be accomplished in a newspaper of "general circulation providing meaningful public notice..." (change from "largest daily newspaper")

- § 15-10-311(B)

Optional Streamlining Rule Changes

EXCEPTIONS TO CATEGORICAL PRETREATMENT STANDARDS

Mass Limits for Concentration Limits

Concentration Limits for Mass Limits

Mass or Concentration Limits for Production Based Limits

- § 15-10-42

See handout for details – the following slides describe the changes in a very simplified way.

Optional Streamlining Rule Changes

Exceptions to Categorical Standards – Highlights of Changes

At the Director's discretion if:

- Substantial Water Conservation can be demonstrated
- Adequate pretreatment is employed and consistently provided (without dilution) to meet all current standards
- Accurate production and flow information is provided for all waste-streams (continuous flow meters)
- The facility's flow and production rates do not vary significantly
- The facility has consistently complied with all pretreatment standards prior to requesting the alternative limit(s)

Optional Streamlining Rule Changes

Exceptions to Categorical Standards – Highlights of Changes

Subsequent to receiving an alternative limit, the CIU must:

- Continue to maintain pretreatment system and consistently treat all prohibited waste
- Continue metering and recording all waste-streams involved (Note: could be especially complicated if combined waste-stream formula is used)
- Continue monitoring and recording production rates and reporting significant changes to the Director
- Continue employing the same or comparable water conservation methods and technologies

Optional Streamlining Rule Changes

Non Significant Categorical Industrial Users (NSCIU)

An NSCIU, if designated at such, becomes subject to significantly reduced reporting and self-monitoring requirements. See:

- § 15-10-111(D) - new
- § 15-10-167 - new

Optional Streamlining Rule Changes

Non Significant Categorical Industrial Users (NSCIU)

Defined as a CIU that never discharges more than 100 gallons per day of total categorical wastewater if the following conditions are met:

- The user has consistently complied with all applicable categorical pretreatment standards and requirements;
- The user, at least once per year, submits the certification statement required in Section 15-10-167 together with any additional information necessary to support the certification statement; and
- The user never discharges any untreated concentrated wastewater.

Rule Changes – *Everything Else*

Equivalent Mass Limits for:

- Local Limits
- Total Cyanide
- TTOs and
- Fats, Oils and Greases

See § 15-10-47 – new (also in handout)

Very much the same process as that described already for the Exceptions to Categorical Standards

Rule Changes – *Everything Else*

Simplification of Permit Transfer Requirements

- § 15-10-93

  This spells out the notice requirements for obtaining a permit transfer. For many users this may eliminate the requirement to complete and submit a new permit application in conjunction with an ownership change.

Rule Changes – *Everything Else*

Reduction of Self-Monitoring Report (SMR) Information Submittal Requirements

- § 15-10-155

  For SMRs, excludes requirement to submit: certain identifying information, list of environmental control permits held and descriptions of operations, production rates, business classifications and process diagrams.

  This information must still be submitted for Baseline Monitoring Reports and permit applications.

Rule Changes – *Everything Else*

Swimming Pool Discharges:

- § 15-10-11(B)(19)
- § 15-10-22(27) - new
- § 15-10-28 - new

Creates a process for obtaining a discharge authorization for water from a swimming pool (see handout).

Rule Changes – *Everything Else*

Permit Requirements and Exceptions:

- § 15-10-53
- § 15-10-91
- § 15-10-98

Clarifies exceptions and requirements for obtaining a permit to better match longstanding implementation practices. Also addresses applicability issue for residential users and swimming pool discharges.

Rule Changes – *Everything Else*

Generators of Grease Trap and Grit Trap Waste.

See:

- § 15-10-197
- § 15-10-198

Grease Traps must be completely cleaned at least once every 90 days (or more frequently depending on accumulations). This is a change from once every three months.

Grease Trap and Grit Trap Waste must be removed using a permitted liquid waste hauler and documented using a waste manifest form approved by the Director (consistent with Chapter 15-5 of the Austin City Code).

Rule Changes – *Everything Else*

Liquid Waste Haulers Discharging at City Receiving Station

- § 15-10-192(C) - new
- § 15-10-192(D) - new
- § 15-10-193(3) - new

Haulers must follow station operating rules and must get authorization prior to discharge.

Rule Changes – *Everything Else*

Liquid Waste Haulers Discharging at City Receiving Station

- § 15-10-192(E) - new
- § 15-10-193(14) - new

This spells out the cleaning, verification and demonstration requirements that apply to any vehicle that had been used for grit trap or hold-haul tank waste.

Rule Changes – *Everything Else*

Sewer Access Requirements

- § 15-10, Article 11

  Numerous changes to existing Article 11 (Manhole Requirements) made in agreement with Utilities Criteria Manual and Private Lateral Ordinance. Besides adopting different terminology, the changes do not affect the basic requirement for manholes and sample ports.

Rule Changes – *Everything Else*

Surcharge Program Revisions

- § 15-10-121

  Changed to allow potential future use of other pollutants in surcharge calculations. Such a change would require council approval, and no pollutants are currently under consideration for any such potential use.

Rule Changes – *Everything Else*

Definitions

§ 15-10-11 Definitions

- Approval Authority – TCEQ is the Approval Authority
- Authorized Representative – This language was revised to reflect change in 40 CFR 403.3(l)
- Excess Wastewater – Deleted – Wastewater Leak issues are addressed in private lateral ordinance
- Industrial Waste – Simplified
- Instantaneous Limit – Eliminate inconsistent reference to this type of limit – previously Instantaneous Maximum Allowable Limit.

§ 15-10-191 Definitions

- Change to better clarify what is considered approved liquid waste

Ordinance Changes

Other Miscellaneous

§ 15-10-23 Limit on Discharge of Fat, Oil or Grease

- Language addressing the Director's authority to assign limits already addressed in 15-10-46(B)

§ 15-10-29 Limit on Discharge of Total Cyanide

- Removed cyanide as a local limit and convert it to a specific prohibition instead

§ 15-10-30 Total Toxic Organics

- Moved from pretreatment standards to specific prohibitions

§ 15-10-61 Authority to Assign Other Limits

- Addresses assignment of limits where a local limit is not already available

Ordinance Changes

Other Miscellaneous

§ 15-10-92 Application Requirements

- (B) Application must include location of all monitoring sites

§ 15-10-94 Designation of Authorized Representative

- Removes the annual requirement to update

§ 15-10-102 Permit Modification

- (10) Incorporates right of revision

§ 15-10-271 Notice of Violation

- Changes the specified 14 day response requirements to allow more discretion by the Director

§ 15-10-303 Affirmative Defense for Failure to Repair Wastewater Leak

- This section is no longer applicable because the Article – Wastewater Leaks, was removed

Ordinance Questions

Review the proposed draft amendments fully and contact the SSD with any questions you have about a given change.

(512) 972-1060

Submit your comments to:

Email: industrialwaste@ci.austin.tx.us

LOCAL LIMITS

Local Limits

Pollutant	Existing Limit (mg/L)	New Limit (mg/L)	Controlling Standard
Arsenic	0.2	0.2	WAL – 30 TAC 312.43 Table 3
Cadmium	0.4	0.4	SAR – 30 TAC 312.43 Table 3
Chromium	2.4	2.4	SAR – 30 TAC 312.43 Table 3
Copper	1.1	1.1	WAL – TexTox Aquatic Life
Fluoride	65	65	WAL – TexTox Human Health
Lead	0.4	0.4	WAL – TexTox Human Health
Manganese	6.1	6.1	SAR – Hazardous Metals 319
Mercury	0.002	0.002	WAL – TexTox Human Health
Molybdenum	1.1	1.1	SAR - 40 CFR 503 Table 1
Nickel	1.6	1.6	WAL – 30 TAC 312.43 Table 3
Selenium	1.8	1.8	WAL – 30 TAC 312.43 Table 3
Silver	1.0	1.0	WAL – TexTox Aquatic Life
Zinc	2.3	2.3	WAL – Activated Sludge

Local Limits – How the Numbers Breakdown

	SAR TBLL's (mg/L)	WALNUT TBLL's (mg/L)	MOST RESTRICTIVE TBLL's (mg/L)	EXISTING (mg/L)	2009-2011 TBLL Assessed Limit (mg/L)
ARSENIC	1.05	0.41	0.41	0.2	0.2
CADMIUM	0.47	0.60	0.47	0.4	0.4
CHROMIUM	3.20	4.53	3.20	2.4	2.4
COPPER	1.64	1.92	1.64	1.1	1.1
CYANIDE	13.41	9.93	9.93	1.0	1.0
FLUORIDE	443.05	234.64	234.64	65	65
LEAD	4.14	0.82	0.82	0.4	0.4
MANGANESE	24.44	18.74	18.74	6.1	6.1
MERCURY	0.07	0.03	0.03	0.002	0.002
MOLYBDENUM	1.75	2.26	1.75	1.1	1.1
NICKEL	3.30	2.94	2.94	1.6	1.6
SELENIUM	6.13	1.82	1.82	1.8	1.8
SILVER	3.15	1.29	1.29	1.0	1.0
ZINC	5.49	4.89	4.89	2.3	2.3

Local Limits

- **Wastewater Treatment Plants**
  - **SAR**
  - **Walnut**
  - **Harris Branch**
    - Will assess Technically Based Local Limits (TBLLs) at Wildhorse Ranch once Applied Materials is cutover.

Local Limits

- **Determine the Pollutants of Concern (POCs)**
  - Influent initial scan at WWTPs
- **Collect and Analyze data**
  - 7 Day consecutive sampling
  - Commercial Sampling
  - Domestic Sampling
  - Hauled Waste Sampling
- **Calculate MAHLs (Maximum Allowable Headworks Loadings) for each POC**
  - Using appropriate literature values and permit limits to determine most restrictive MAHL in lbs/day for each POC
- **Designate and implement local limits**
  - After calculations were completed, we compared WWTPs' TBLLs to determine the most restrictive TBLLs for use throughout the city.

Local Limits Influent Initial Scan Results

SAR WWTP
EPA ID: TX0071889
TPDES Permit #: WQ0010543012
13009 Falwell lane

Analytical Results >0.1 mg/L or Local Limits
Aluminum, Total
Arsenic, Total
Barium, Total
Boron, Total
Cadmium, Total
Chloride
Chromium, Total
Copper, Total
Cyanide, Total
Fluoride
Lead, Total
Manganese, Total
Mercury, Total
Molybdenum, Total
Nickel, Total
Nitrate -as N
Nitrogen, Total Organic
Oil and Grease
Phosphorus, Total
Selenium, Total
Silver, Total
Sulfate
TDS
Zinc, Total

Walnut Creek WWTP
EPA ID: TX0046981
TPDES Permit #: WQ0010543011
7113 FM 969

Analytical Results >0.1 mg/L or Local Limits
Aluminum, Total
Arsenic, Total
Barium, Total
Cadmium, Total
Chloride
Chromium, Total
Copper, Total
Cyanide, Total
Fluoride
Lead, Total
Manganese, Total
Mercury, Total
Molybdenum, Total
Nickel, Total
Nitrate -as N
Nitrite
Nitrogen, Total Organic
Oil and Grease
Phosphorus, Total
Selenium, Total
Silver, Total
Sulfate
TDS
Zinc, Total

Local Limits – 7 Day Consecutive Sampling Events

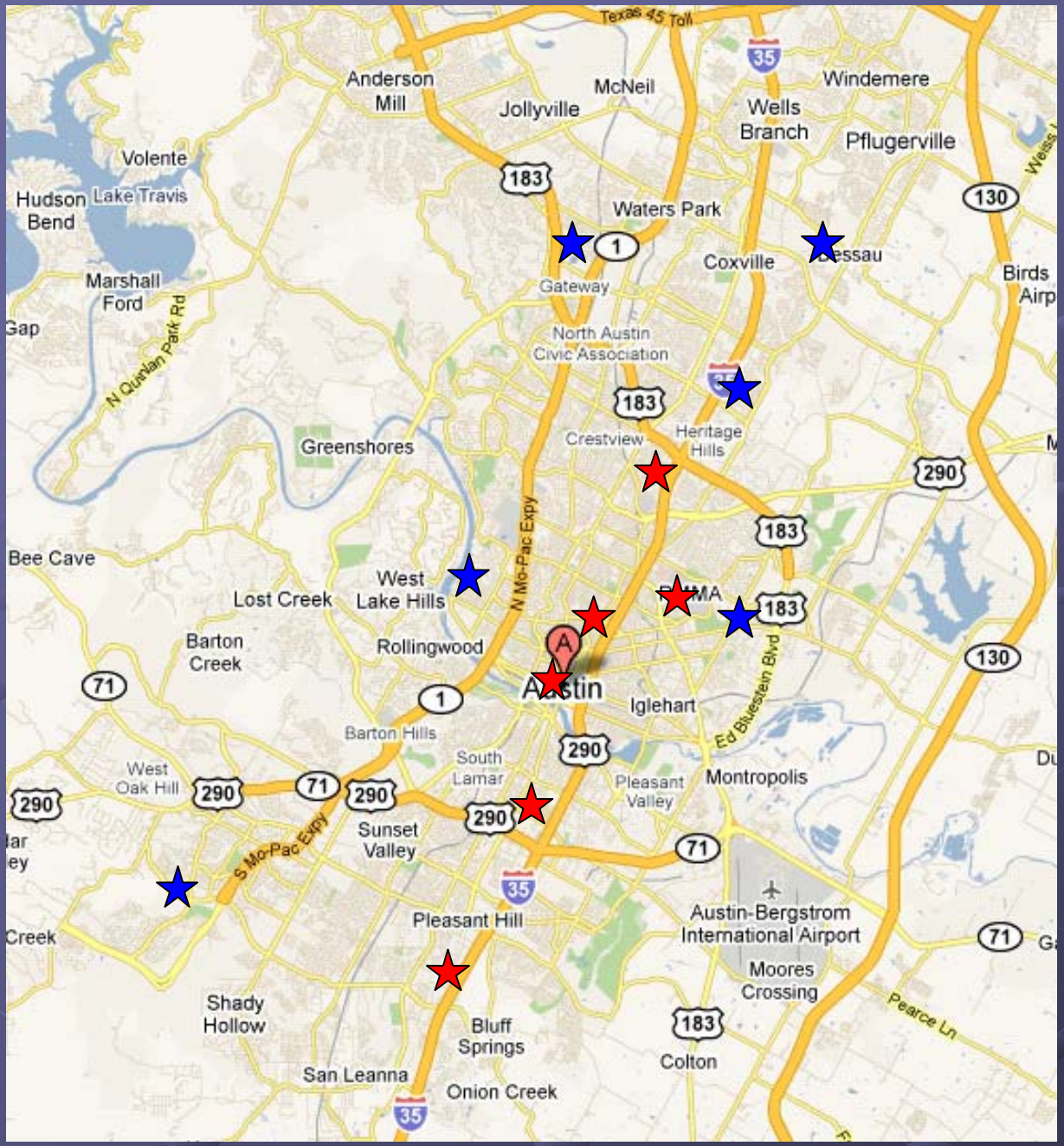
- Collection points to determine percent removal efficiency
  - Influent
  - After Primary Treatment
  - Effluent
  - Recirculating flows
  - Sludge

Local Limits – Commercial Sampling

- Six sampling sites
- One 24 hr sampling event at each site

Local Limits – Domestic Sampling

- Six sampling sites
- One 24 hr sampling event at each site



Overview of Sampling Points

- Red stars = Commercial Sampling Points
- Blue stars = Domestic Sampling Points

Local Limits – Hauled Waste Sampling

- Sampled three types of hauled waste:
  - Package plants (two samples)
  - Septic tank (seven samples)
  - Chemical toilet (six samples)
- Based on availability
- Grabs from liquid waste haulers discharging into Walnut Creek WWTP.

Local Limits - Calculate MAHL for each POC

- Determined flows (2007-2010):
  - WWTP
    - Influent
    - Effluent of Primary Clarifiers (7 day consecutive)
    - Effluent
  - Industrial Flow
    - Process and total flows
  - Commercial Flow
    - Calculated using billing system and ratio between Walnut Creek and SAR Flow
  - Domestic Flow
    - Back calculated from plant influent flow subtracting out hauled waste (Walnut Creek only), commercial and industrial flows

Local Limits - Calculate MAHL for each POC

- Determine lbs/day for each POC for:
  - Commercial
  - Residential
  - Industrial
  - Hauled waste
  - Each WWTP (influent, primary clarifier effluent, effluent, sludge, and supernatant)
- Calculate lbs/day for each POC using literature values (limiting factors) for:
  - Activated sludge
  - Anaerobic Digestion
  - Stream Standards
    - Aquatic Life
    - Human Health
  - Sludge 40 CFR 503
  - Sludge 30 TAC 312
  - Hazardous Metals TAC319

Local Limits - Calculate MAHL for each POC

- Calculate Removal Efficiencies for each WWTP
  - Primary removal efficiencies
  - Total removal efficiencies
- Determine MAHL (lbs/day) based on most restrictive limiting factor.
- Include a 10% safety factor
- Subtract out the domestic, commercial, and hauled waste contributions (lbs/day) to derive the MAIL (Maximum Allowable Industrial Loading)
- Use the total contributing flows from the SIUs and the MAIL to determine the TBLLs.

Local Limits - Technically Based Local Limits

WALNUT CREEK WWTP
TBLL Calculations
TOTAL FLOWS

Pollutants of Concern	MAHL Loading (lbs/day)	MAHL-10% Safety Factor (lbs/day)	Commercial Loading (lbs/day)	Domestic Loading (lbs/day)	Hauled Waste (lbs/day)	MAIL (lbs/day)	Industrial Flow (MGD)	TBLLs (mg/L)	Existing TBLL's (mg/L)
Arsenic	3.54	3.19	0.22	1.01	0.00	1.95	0.5713	0.41	0.2
Cadmium	3.03	2.73	0.04	0.17	0.00	2.52	0.5054	0.60	0.4
Chromium (T)	11.85	10.67	0.13	0.41	0.01	10.12	0.2680	4.53	2.4
Copper	64.09	57.68	5.30	5.07	0.41	46.90	2.9362	1.92	1.1
Cyanide	29.19	26.27	0.75	3.38	0.00	22.14	0.2672	9.93	1.0
Fluoride	8746.18	7871.56	75.00	171.80	0.03	7624.74	3.8964	234.64	65
Lead	20.87	18.78	0.22	1.35	0.01	17.19	2.5089	0.82	0.4
Manganese	686.23	617.61	2.54	6.09	0.08	608.90	3.8964	18.74	6.1
Mercury	0.14	0.13	0.01	0.03	0.00	0.08	0.3694	0.03	0.002
Molybdenum	32.40	29.16	2.01	1.69	0.00	25.45	1.3506	2.26	1.1
Nickel	27.44	24.70	0.45	1.01	0.01	23.23	0.9473	2.94	1.6
Selenium	2.80	2.52	0.37	1.69	0.12	0.33	0.0219	1.82	1.8
Silver	11.13	10.02	0.11	0.68	0.01	9.21	0.8551	1.29	1.0
Zinc	172.90	155.61	8.28	39.91	2.28	105.14	2.5767	4.89	2.3

Key Dates and Timelines

- Due date for Program modification keyed off the South Austin Regional Permit
- Submittal due to TCEQ on April 1, 2011

Questions?

Contact Information

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Special Services Division

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Website: www.ci.austin.tx.us/water/specialservices.htm