CITY OF ALCOA

Stormwater Program

Dry Screening

Standard Operating Procedure

September 2016

Updated 6/4/2019

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PURPOSE

The purpose of this document is to provide a Standard Operating Procedure (SOP) for dry weather field screening activities. Dry weather screening is part of the IDDE program that is required in our MS4.

INTRODUCTION

The City Of Alcoa Stormwater Management Program is required under its National Pollutant Discharge Elimination System (NPDES) Permit TNS075132 under Section 4.2.3 to "*develop and implement a plan to detect, identify and eliminate non-stromwater discharges including illegal disposal, to your system…develop and implement standard procedures to be followed to investigate portions of the MS4 that, based on the results of field screening or other identification programs, indicate a reasonable potential of containing illicit discharges or other sources of non-stormwater."*

This document will serve as a standard operation procedure (SOP) for activities associated with the dry screening program within the City Of Alcoa Stromwater Management Program area. The specific methods regarding the conducting of this ongoing program are defined within this document, for the current permit cycle. Any revisions to this document shall be recorded as "Revision" and be subject to appropriate peer review.

EMPLOYEE TRAINING, HEALTH, AND SAFETY

All employees involved in the dry screening program shall become familiar with the protocols outlined in this SOP. The field team shall have a working knowledge of the following:

- Outfall identification numbering
- Sample collection procedures, equipment cleaning, and equipment application for surface water collection\
- Sample record completion (i.e. chain of custody, labeling, etc.)
- Sample handling procedures
- Cartographic tools, Geographic Information Systems (GIS) technologies, and Geographic Positioning System (GPS) units

- Proper use of the HACH Storm Water Test Kit according to manufactures instructions
- Bacteriological, chemical, and biological analysis of data and possible sources of pollution if any is indicated
- Proper procedures regarding tracing events

The Program Manager, or designee, shall review this document to ensure continuing applicability and shall train employees with regards to proper monitoring protocols, as required.

Monitoring activities present a variety of potentially hazardous situations. As a result of the innate hazard potentials, special attention should be paid with regards to employee safety. General safety equipment and protocol shall include the following:

- First aid kit
- Latex gloves
- Flashlight
- Duct tape
- Emergency contacts
- Cell phone
- Disinfectant wipes
- Insect repellant
- Reflective safety vest
- Waders
- Drinking water

EQUIPMENT

The following equipment is needed to perform field screening:

- HACH Surface Water Test Kit or approved equal
- HACH Pocket Pro Conductivity Tester or approved equal
- Dry Screening Form
- Illicit Discharge Form
- Chain Of Custody Form (for bacteriological samples)
- *E. coli* Collection Bottles
- Tracing Dye
- Distilled Water
- Camera

- Maps
- Tape Measure
- Waste Disposal Bags
- Clipboard
- Backpack
- Gallon jug for test wastes

PROCEDURE

Frequency of inspections

Monitoring the outfalls in The City of Alcoa MS4 will be split into two sections, the Pistol Creek outfalls and the smaller streams outfalls. The inspections will be conducted in a yearly rotation to make efficient use of time and resources. (this section was added 6/4/2019)

When to collect samples

Dry screening is to be carried out during dry weather conditions. Dry weather conditions are based on a period of 48-hours without any measurable rainfall. Dry screening sites must be investigated twice in a 24-hour period with a minimum of four hours between each inspection, so there must also be the time available to perform the two inspections in a single workday.

Where to collect samples

Dry screening sites are determined by the outfall locations from storm drainage system that serve residential, urbanized, commercial and industrial areas. Generally, the initial location for dry screening is located at the downstream most outfall of the system or sub-basin. If a suspect illicit discharge is flowing from an outfall, an upstream investigation shall commence using the City storm system mapping and other tools. A map layout of the outfall to be investigated and the upstream drainage area shall be printed and used for locating the site and tracing any identified illicit discharges upstream as necessary.

Dry Screening Data Sheet/ Electronic Form in City Works

Once at the site, the dry screening data sheet (Appendix A) is to be completed. The data sheet is divided into the following Sections:

1. Background Data
    a. Outfall ID/ Water shed
    b. Date of screening/ Investigator(s) name

    c. Sample times
    d. *E. coli* collection
    e. Weather data/ days since last rain
    f. Drainage area land use
    g. Sample location narrative
2. Infrastructure Description
    a. Type, material, dimensions and submerged status of the outfall
    b. Presents of flow
    c. Flow description
3. Chemical Characteristics
    a. Sample times
    b. Test results
4. Physical Flow Characteristics
    a. Presents of odor, color, turbidity, and floatables
    b. Description of the above parameters
    c. Relative Severity Index (RSI)
    d. Indicator Score (based on RSI)
5. Physical Characteristics of the outfall
    a. Presents of Indicators
    b. Description of Indicators
    c. Comments
6. Overall Outfall Characterization
7. Non-Illicit Discharge Concerns
8. Additional Comments/ Site Sketch

Section one of the sheet is to record site characteristics and investigator information. The "*E. coli* Collected" section is determined by the results of the chemical testing which is addressed in the next section. The "Sample Location Narrative" box is for recording the site location information to allow for revisiting the site, and to identify changes that have taken place between investigations at the site. Photos of the site shall be taken to assist with documenting site details, and changes between visits (if any).

When inspection an outfall, the presence of flow is the primary indicator, as all other measurements are dependent on the presence/absence of flow. If flow is not present, then only the measurements of the outfall structure and location information need to be recorded.

Sample collection and Field tests

For sites with flow, samples will need to be collected and used for onsite analysis and *e-coli* samples will be collected for transport to the lab. When collecting these samples, care must be taken in order to not introduce contaminants and to protect the field crew from exposure to pollutants. The following are things to consider when collecting samples in the field.

- Prior to sampling, calibrate the Hach Meters for pH and Conductivity according to manufactures directions.
- Wear surgical gloves when collecting samples, and wash hands with sanitary wipes after the samples are collected.
- Dry weather flows can be shallow, have low flow volumes, and be hard to reach. In some cases, alternative sample collectors may be used. A "dipper," consisting of a measuring cup at the end of a long pole, can be used to catch flows from an out fall. Other capture devices can be used when needed. No matter what is used, make sure not to disturb any sediments or benthic growth that may exist in the flow. Also, be sure to rinse any alternative collector three times with the sample water before collecting the sample.
- For *e-coli* samples fill the bottle to the line, but not over the line. These bottles have preservative added to them.
- Do not touch the inside of the lid or bottle.
- Label the *e-coli* bottle and fill out a chain of custody to go with the sample to the lab.

The physical parameters of the discharge are measured using the proper meter included in the HACH Surface Water Test Kit and the HACH Pocket Pro Conductivity Tester. Duplicate measurements should be taken for the parameters measured by these devices. In between measurements, the instrument is removed from the sample and the probe is rinsed with distilled water. This ensures the meters are functioning properly when the two readings are similar. If meters fail to be consistent in the duplicate tests, an "n" is placed beside the appropriate chemical parameter section on the field sheet.

The chemical parameters shall be checked using the tests and reagents found in the HACH Surface Water Test Kit. If phosphorus and ammonia are detected, then the investigators take and *E. Coli* sample using the appropriate bottle supplied from the Alcoa Water Treatment Plant. The sample shall be labeled and a chain of custody filled out, which will follow the sample to the laboratory at the water treatment plant. If the results from the chemical analysis indicate an illicit discharge, then a tracing event must take place (Water quality test parameters, along with their possible source indicators are shown in Table 1). The tracing event involves using the GIS map associated with that particular outfall to search upstream of the outfall point to locate

the source of the positive concentration of the chemical parameter, and detect if the source is an illicit discharge. If an illicit discharge is found, an Illicit Discharge Report is completed and submitted to the Program Manager. Any unusual measurements from the meters or test kits are noted in the comments box in section three of the field sheet (Appendix A). Visual assessment of the site is made and any physical characteristics of the flow or the outfall are recorded in sections 4 and 5, respectively, of the field sheet.

Table 1. *Water Quality Test Parameters and Source Indicators*

Water Quality Test Parameter	**Use of Water Quality Test**	**Possible Source**
Nitrate	3 to 10mg/L and greater is suspect of an illicit discharge	Failing sewer line, pet or farm animal waste, industrial discharges
Conductivity	>1000uS/cm is suspect of an illicit discharge	Industrial discharges, failing sewage lines,
Ammonia	0.2 to 1.0mg/L and greater is suspect of an illicit discharge	Fertilizers, failing sewer lines, industrial discharges
Phosphorous	1.5 to 5mg/L and greater is suspect of an illicit discharge	Disturbed land areas, commercial cleaning preparations, fertilizers, failing sewer lines
Chlorine	The presents of Chlorine indicate treated water entering the storm water	Failing water lines, swimming pools, irrigation
Dissolved Oxygen	<3mg/L indicates nutrients entering the storm water and/or increased temperatures	Fertilizers, failing sewer lines, disturbed land areas

When all measurements have been taken, the overall outfall characterization is determined by assessing the likelihood of the presence of an illicit discharge. If less than two indicators are

present, then the characterization is “unlikely”. A characterization of “potential” is given if there are two or more indicators present. If there are one or more indicator(s) with a severity of three (from section four and five of the field sheet), then a characterization of “suspect” is given to the outfall point location. If the measurements clearly indicate an illicit discharge, the outfall is characterized as “obvious”.

Concerns not associated with illicit discharges are noted in section seven of the field sheet (Appendix A.) Section eight is used for additional comments and site sketches. If an Illicit Discharge Form is necessary, it should be noted in section eight.

Office Work

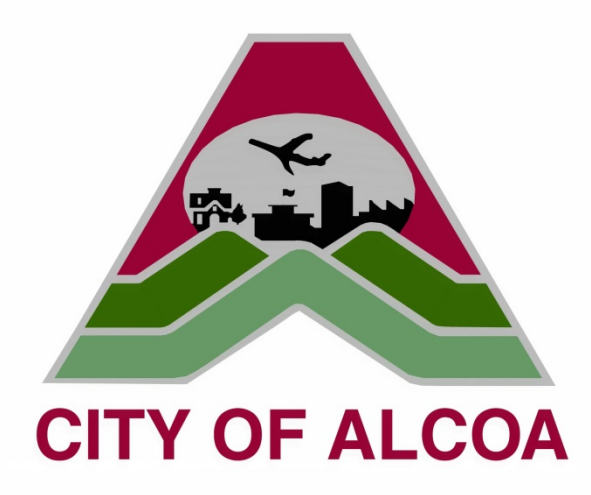
Office work will depend on the method used for logging the data. If the Dry Screening Data Sheets (paper forms) are used, they shall be given to the Program Manager or Designee for verification upon returning to the office. Field sheets and site photos shall be scanned and entered into City Works. Hard copies shall be kept in folders created for each site.

If data is logged into City Works while in the field, a summary of each site shall be created and filled in the hard copy files for each site. In both cases, any GIS updates shall be carried out by the GIS Coordinator.

CITY OF ALCOA

Enforcement Response Plan

Illicit Discharge/Illegal Connections



Dry Screening

Standard Operating Procedure

September 2016

(Updated 2/15/2017)

City of Alcoa Enforcement Response Plan

Illicit Discharge/Illegal Connections

Section 1. Introduction

National Pollutant Discharge Elimination System (NPDES) Permit Number TNS 000000 authorizes the City of Alcoa to discharge stormwater runoff in accordance with certain water quality management programs and provisions as set forth in the permit.

Section 4 of the NPDES General Permit for Discharges from Small Municipal Separate Storm Sewer System (MS4) requires the City of Alcoa to develop, implement, and enforce a stormwater management program to reduce pollutants from the City's MS4. Sections 4.2.3 and 4.5.1 require the City of Alcoa to develop and implement an Enforcement Response Plan (ERP) for Illicit Discharge Detection and Elimination. Under the Illicit Discharge Detection and Elimination Minimum Control Measure, the permit requires the City to develop, implement, and enforce a program of practices and tools (including this ERP) to control, minimize, or eliminate pollutants that have the potential to be discharged to the City storm sewer system, or to waters of the State of Tennessee.

This ERP is intended to guide City of Alcoa personnel in enforcement of discovered illicit discharges or illegal connections to the City's storm sewer system by identifying the City's potential responses to violations of the stormwater program. This ERP also addresses repeat violations through progressive enforcement as needed to eliminate non-stormwater discharges. It should be used only as a guide while recognizing that each situation is unique. Actual enforcement procedures should consider any unusual aspects of a violation or condition, as well as special characteristics of an enforcement action in determining the proper response.

While the purpose is to provide guidance for administration of Section 16-508 (Non-Stormwater Discharges / Illicit Discharge, Detection and Elimination) of the City of Alcoa Municipal Code, it is not intended to limit the judgment and flexibility of the Director of The Stormwater Program in determining an appropriate response to a violation. Professional judgment must be used when implementing all enforcement actions found within this plan.

Minor infractions may be resolved by a verbal notice, telephone call, or letter of warning advising the owner/discharger of the nature of the violation. If such notification fails to generate an adequate response by the owner/discharger, further enforcement actions as set forth in Section 16-515 (Enforcement and Penalties) of the City of Alcoa Municipal Code, may be taken. This ERP also addresses persistent non-compliance, repeat or escalating violations, or incidents of major environmental harm.

Section 2. Enforcement of Illicit Discharge/Illegal Connections to the MS4

The City of Alcoa passed Ordinance 08-154 that established regulations and enforcement oversight regarding Illicit Discharge Detection and Elimination. Sections 16-508 and 16-515 of

this ordinance outline the illicit discharge enforcement options available to the Stormwater Department to assure compliance with NPDES requirements. In addition to these options, a first time violator will be required to attend a "Hot Spot" training session.

Sections 16-508 and 16-515 of Ordinance 08-154, Enforcement Mechanisms include:

a. Verbal Warning
b. Written Warning
c. Recovery of Damages and Costs

Stormwater Inspectors will document activities/conditions at a property using the Illicit Discharge Report Form. Should it be determined that a property is in violation of an illicit discharge or illegal connection, the inspector will contact the owner/discharger and/or responsible person either via verbal or written documentation regarding the corrective action(s) required and the timeline for compliance. In order to assure fair and just enforcement to all parties involved and to provide adequate guidance to City of Alcoa stormwater field personnel, the following protocol shall be employed in enforcement of the City's stormwater management ordinance.

The order of precedence for enforcement responses outlined in this guide should not be construed to prevent the Director from taking a stronger action without first implementing less stringent steps, if in the Director's opinion, a more forceful response is necessary.

A. Enforcement Response – Verbal Warning

Verbal warnings are used to communicate to the owner/discharger of an enforcement action due to a less serious violation.

B. Enforcement Response – Written Notice

A written notice is used to communicate to the owner/discharger of an enforcement action due to a violation. A written notice will be delivered by certified mail or in person by hand with signature of receipt required by the owner/discharger. Following are the two (2) different written notices that can be imposed:

- Notice of Violation (NOV): Serves as written acknowledgement that a violation has occurred at the site and was documented by the Inspector. The NOV provides the owner/discharger with a description of the violation, where and when it occurred, the required corrective action(s), and the deadline for compliance or the issuance of a Stop Work order
- Civil Penalty and Damages: The City may assess a civil penalty to the owner/discharger for an amount between $50 and $5,000 per day, per violation. Each day of violation may constitute a separate offense. The City may also recover any and all damages proximately caused to the City by the violation.

C. Enforcement Response – Penalty Assessment

In order to assess the amount of a civil penalty to be levied against an individual and/or organization in violation of the regulations, it is necessary to evaluate the damages that have resulted from the specific violation. Specific assessment factors will be used to evaluate environmental damages based on TCA § 68-221-1106. The

civil penalty assessment provisions, as stated below (C.1-C.3), may be altered or changed to fit specific circumstances and situations. Changes will be made by the Director's best professional judgment. Civil penalties and damage expenses shall be paid to the City of Alcoa Stormwater Utility within ten (10) days of receipt of the written notice, unless otherwise noted.

In assessing a civil penalty, the City shall follow the provisions of the Schedule of Penalties as set forth in the policy manual. These provisions will also be considered for violations not listed.

1. The harm done to the public health or the environment;
2. Will the civil penalty imposed be a substantial economic deterrent to the illegal activity;
3. The economic benefit gained by the violator;
4. The amount of effort put forth by the violator to remedy the violation;
5. Any unusual or extraordinary enforcement costs incurred by the municipality;
6. The amount of penalty established by ordinance or resolution for specific categories of violations, if any;
7. All equities of the situation which outweigh the benefit of imposing any penalty or damage assessment;
8. Willingness and cooperation of the violator to remedy the violation and remediate the damage;
9. Whether the violation was intentional, accidental, or negligence;
10. Cost incurred by the municipality for any administration, remediation, investigation, enforcement, and monitoring of the violation; and
11. Prior violations for this location and/or business.

In addition to the civil penalty, the City may also recover all damages proximately caused by the violator to the municipality, which may include any reasonable expenses incurred during investigations and enforcement of the resolution. City inspectors will use their best professional judgment in determining the severity of the environmental impacts associated with the violation.

C.1. Illicit Discharges (Non-residential, Non-accidental or Accidental)

First Offense:

Notice of Violation (NOV) will be issued to responsible party for non-stormwater discharge.

** If responsible party does not properly remediate the discharge, then damages consisting of salaries and the cost of all City crew or contracted services to clean up illicit discharge may be assessed to the responsible party.

Second Offense:

Issuance of a Civil Penalty against responsible party of no less than $50.00 and no more than $5,000.00 per day per each violation depending upon environmental damage.

** If responsible party does not properly remediate the discharge, then additional damages consisting of salaries and the cost of all City crew or contracted services to clean up illicit discharge may be assessed to the responsible party.

Third or Subsequent Offense:

Issuance of a Civil Penalty against responsible party of no less than $50.00 and no more than $5,000.00 per day per each violation depending upon environmental damage.

** If responsible party does not properly remediate the discharge, then additional damages consisting of salaries and the cost of all City crew or contracted services to clean up illicit discharge may be assessed to the responsible party.

Note:

An illicit discharge properly reported as an accidental discharge will not be subject to a Civil Penalty as an illicit discharge. However, the responsible party may still be held liable to damages to the City of Alcoa. Additional damages consisting of salaries and the cost of all City crew or contracted services to clean up accidental release may be assessed to the responsible party.

C.2. Illicit Discharge (Residential Wastewater Discharge)

First Offense:

Notice of Violation (NOV) will be issued to responsible party for non-stormwater discharge requiring the responsible party to stop illicit discharge within 10 days.

Failure to Comply:

Issuance of a Civil Penalty against responsible party of no less than $50.00 and no more than $5,000.00 per day per violation, dependent upon environmental damage.

Note:

An illicit discharge properly reported as an accidental discharge will not be subject to a Civil Penalty as an illicit discharge. However, the responsible party may still be held liable for damages to the City of Alcoa. Additional damages to include City employee salaries, equipment use and/or contracted services to remediate illicit discharges may be assessed to the responsible party.

C.3. Illicit Discharge (Residential Other than Wastewater Discharge)

First Offense:

Notice of Violation (NOV) will be issued to responsible party for non-stormwater discharge.

Second Offense:

Issuance of a Civil Penalty against responsible party of no less than $50.00 and no more than $5,000.00 per day per violation dependent upon environmental damage.

** If responsible party does not properly remediate the discharge, additional damages consisting of employee salaries and the costs associated with County crews and/or contracted services to remediate an illicit discharge may be assessed to the responsible party.

** More serious violations, such as deliberate dumping of pesticides, used motor oil or other hazardous or dangerous chemicals into a storm drainage system, will result in an automatic issuance of a Civil Penalty.

** A less serious violation, such as raking leaves into a drainage system, may result in written or verbal warning along with required corrective actions as well as meeting the deadline for rectification compliance.

Note: An illicit discharge properly reported as an accidental discharge will not be subject to a Civil Penalty as an illicit discharge. However, the responsible party may still be held liable for damages to the City of Alcoa. Additional damages consisting of employee salaries and/or contracted service fees to clean up the accidental release may be assessed to the responsible party.

D. Guidance for Enforcement Response Selection

The enforcement response selected should be appropriate for the violation. However, in selecting an enforcement response, City Inspectors must always exercise professional judgment for the situation at hand and attempt to communicate with the owner/discharger of the site where the violation occurred. When considering an appropriate response, the following factors should be considered:

- The magnitude of the violation.
- The potential for discharges/damages, or the actual discharges/damages, off-site or to the waters of the State. Discharges and/or damage to City-owned property (the stormwater system, streets, ditches, etc.) should be included in this evaluation.
- The compliance history of the owner/discharger. Repeated offenses of a similar nature, whether at one site or multiple sites, indicate that an owner/discharger either doesn't understand a particular requirement, or more likely, is choosing to ignore the requirement. NOVs issued on a per day basis combined with civil penalties that graduate rapidly with each violation can be an effective approach for enforcement of repeat offenders.

E. Enforcement Timeframes

In order to be effective, detection and enforcement of illicit discharges/illegal connections and the required response or corrective action from the discharger must be prompt. Due to the dynamic nature of illicit discharges/illegal connections, response times are highly variable depending on the situation. The NPDES Phase II MS4 Permit requires the City to investigate suspected illicit discharges/illegal connections within seven (7) days of discovery. The City may choose to give the discharger a shorter amount of time to reply to the City and/or address the noncompliance issue or violation. However, in situations that involve complex repairs, more time may be appropriate.

Section 3. NPDES Permit Referrals

Section 4.5.2 of the NPDES Phase II MS4 Permit requires the City of Alcoa to account in its ERP for NPDES Permit referrals for those construction projects, industrial facilities, or businesses that are subject to the TNR100000 (the NPDES general permit for stormwater discharges from construction activity) or TNR050000 (the NPDES general permit for stormwater discharges from industrial activity). If the City becomes aware that owners/dischargers of

activities that are subject to the above-mentioned permits are operating without a permit or violating the regulations, it must make TDEC aware of the situation.

The City of Alcoa may choose to notify TDEC, at the local Environmental Field Office (EFO) for persistent noncompliance by the owner/discharger, which appears to be in non-compliance through the City's enforcement efforts. The contact information for the local EFO is as follows:

TDEC-Knoxville Environmental Field Office
3711 Middlebrook Pike
Knoxville, TN 37921
(865) 594-6035

City inspectors who plan to make referrals to TDEC should be prepared to provide the following information:

- Location of violation
- Type of violation
- Time violation occurred
- Name of owner/discharger or facility
- Owner/discharger contact information
- Receiving waterbody

Section 4. Enforcement Tracking

Section 4.5.3 of the NPDES Phase II MS4 Permit requires the City of Alcoa to track instances of non-compliance either in paper files or electronically. Enforcement actions by the City are kept in paper files and electronically in Cityworks. Information contained within the files includes, but are not limited to, the following:

- Contact Information
- Location
- Inspection reports
- Photographic documentation
- Nature of discharge
- Enforcement action
- Follow-up inspection report

Section 5. Requirements for Chronic Violators

Section 4.5.4 of the NPDES Phase II MS4 Permit requires the City of Alcoa to identify chronic violators of any Stormwater Management Program component and reduce the rate of noncompliance recidivism. The City keeps records of all violations and considers the appropriateness of increasing the inspection frequency at the owner's/discharger's sites. If corrective actions are not taken, the City may pursue progressive enforcement and, if needed, may perform the necessary work and assess the incurred costs of repairs against the property owner.

STORMWATER MANAGEMENT
FIRST TIME ASSESMEMENT
SCHEDULE OF CIVIL PENALTIES

Violation	Small SFR	Other		
	.1ac - < 1acre	0-1 acre	>1-5 acre	> 5 acre
No Permit:				
with EPSC	SWO	SWO	SWO	SWO
without EPSC	SWO + $100	SWO + $300	SWO + $600	SWO + $900
Notice of Coverage not Posted	N/A	$100	$100	$100
No SWPPP on Site	N/A	$100	$100	$100
No approved Plans on Site	$50	$200	$200	$200
SWPPP not Current	N/A	$100	$100	$100
EPSC not in accordance w/ SWPPP	N/A	$100	$400	$700
EPSC not Adequate	$50	$100	$400	$700
EPSC not Maintained	$100	$300	$600	$900
Failure to Maintain Construction Entrance	$50	$100	$400	$700
Disturbed more than 50 Acres	N/A	N/A	N/A	$500
Failure to have certified inspector	N/A	$200	$200	$200
Failure to Retain Sediment on Site	$150	$500	$800	$1100
Pollutant (Sed.) discharge into Waters of the State	$150	$500	$800	$1100
Failure to Stop Work	$150	$500	$800	$1100
Interference w/ Inspection Duties	$100	$200	$200	$200
Working beyond limits of permit	SWO	SWO	SWO	SWO
Failure to maintain construction riparian buffer zone	N/A	$300	$600	$900
Violating any other term or condition of the stormwater NPDES permit or Stormwater Management Ordinance.	$50	$200	$200	$200
Failure to maintain required permanent stormwater quantity and / or quality Best	N/A	$300	$600	$900

Management Practices.				
Illicit Discharges (Non-Sediment Related):				
Commercial	N/A	$300	$600	$900
Individual	$50	$50	$100	$150
Failure to retain Water Quality Buffer Zone				
Named, Studied Stream	$125 + $12.50/L.F.	$250 + $25/L.F.	$250 + $25/L.F.	$250 + $25/L.F.
Named, No Study	$25 + 7.50/L.F.	$50 + $15/L.F.	$50 + $15/L.F.	$50 + $15/L.F.
Unnamed Tributary	$10 + $5/L.F.	$25 + $10/L.F.	$25 + $10/L.F.	$25 + $10/L.F.

Notations / Comments:

1. The listed First Time Civil Penalties constitutes a 4th offence (following issuance of a Verbal Warning, Written Warning, and Notice of Violation) with respect to all permitted grading / land disturbance operations.
2. SWO = Stop Work Order. Erosion and sediment control work may continue to remediate current violations or to prevent further discharges from occurring.
3. SFR = Single Family Residential associated with a sketch plan or violation on a residential level.
4. SWPPP = TDEC Approve Stormwater Pollution Prevention Plan (SWPPP).
5. EPCS = Erosion Prevention & Sediment Control.
6. This Schedule of Penalties is based on typical penalty assessments of given violations for **First Time Civil Penalties**. These values may be increased or decreased based upon specific conditions for each site and past performance as specified in the stormwater management ordinance. These values do not include any cost associated with restoration or remediation.
7. Second Time Civil Penalties should double and Third triple etc. until maximum of $5,000 per day per violation is reached.
8. Penalty assessments may be higher for location not retaining sediment on site.
9. Water Quality Buffer Zone linear foot measurement is perpendicular from top of stream bank.
10. Civil penalties noted herein may be increased to a maximum of $5,000 per day per violation based on:
    a. The environmental damages, cost of cleanup, additional inspection costs, etc. that result from the violation(s) and/or
    b. Expenses deferred and/or performance incentives being earned by the permit holder while failing to correct the violation(s).

CHAPTER 5

STORMWATER MANAGEMENT

SECTION

16-501. General provisions.
16-502. Definitions.
16-503. Authority.
16-504. Grading permit required.
16-505. Stormwater management plan.
16-506. Grading, construction, erosion and sediment control.
16-507. Water quality buffers.
16-508. Non-stormwater discharges (illicit discharge, detection and elimination).
16-509. Performance bonds.
16-510. As-built certifications.
16-511. Inspection and maintenance.
16-512. Permit controls and stormwater system integrity.
16-513. Severability.
16-514. Responsibility.
16-515. Enforcement and penalties.
16-516. Repeal clause.
16-517. [Deleted.]
16-518. [Deleted.]

16-501. General provisions. (1) Purpose. It is the purpose of this chapter to:

(a) Apply to all areas located within the jurisdiction of the City of Alcoa.

(b) Protect, maintain, and enhance the environment of the city and the public health, safety and the general welfare of the citizens of the city, by controlling discharges of pollutants to the public stormwater system, with the intent of maintaining and/or improving the quality of the receiving waters into which the stormwater outfalls flow, including, without limitation, lakes, rivers, streams, ponds, wetlands, and groundwater of the state in the City of Alcoa.

(c) Enable the City of Alcoa to comply with the NPDES General Permit for Discharges from Small Municipal Separate Storm Sewer Systems, TMDLs and other applicable state and federal regulations.

(d) Safeguard the health, safety, and general welfare of the citizens.

(e) Preserve the value of land throughout the city.

(f) Establish reasonable and accepted standards of design and procedures that prevent or reduce the discharge of pollutants from developed or redeveloped land.

(g) Preserve the natural beauty and aesthetics of the community.

(h) Minimize property damage by means of flooding.

(2) Rules applying to this chapter. For the purpose of this chapter, the following rules of construction shall apply:

(a) Words used in the present tense shall include the future tense and the singular includes the plural, unless otherwise indicated in the text.

(b) The words "shall" or "must" is always mandatory and not discretionary. The words "may" and "should" are permissive in nature.

(c) Except as herein provided, all words used in this chapter shall have their common dictionary definition. (as added by Ord. #04-041, Nov. 2004, and replaced by Ord. #08-154, Feb. 2008, and Ord. #13-304, March 2013)

16-502. Definitions. (1) "Alcoa Stormwater Board of Appeals." The body which has been delegated the authority by the Board of Commissioners of the City of Alcoa to hear appeals concerning decisions made by the city manager or his designee as to the interpretation of the meaning of this code.

(2) "Applicant." Person submitting an application for a grading permit. Typically, this is the owner or operator of the land-disturbing activity.

(3) "As-built certification." As-built, field-verified plans signed and sealed by a registered professional engineer and/or registered land surveyor, both licensed to practice in the State of Tennessee, showing contours, elevations, grades, locations, drainage and hydraulic structures, permanent best management practices, stormwater management facilities easements, detention basin volumes and other features as required.

(4) "Best Management Practices (BMP or BMPs)." Schedules of activities, prohibitions of practices, maintenance procedures, stormwater quality and quantity management facilities, structural controls, water quality buffers and other management practices designed to prevent or reduce the pollution of waters of the United States and to provide water quality treatment, water quantity control, channel protection, overbank flood protection and extreme flood protection in accordance with this chapter. Water quality BMPs may include structural devices, such as stormwater ponds, extended detention ponds or bioretention areas, and non-structural practices such as vegetated construction buffers, water quality buffers or natural open spaces.

(5) "Buffer enhancement plan." A plan showing the establishment and/or restoration of the water quality buffer. The plan may be included as part of a comprehensive site plan required under another city ordinance, a

stormwater management plan, and/or a separate plan following the specifications set out in this chapter.

(6) "City manager." The city manager or his/her designee for the City of Alcoa, Tennessee.

(7) "Channel." A natural or artificial watercourse of perceptible extent, with definite bed and banks to confine and conduct continuously or periodically flowing water. "Channel flow" is that water which is flowing within the limits of the defined channel.

(8) "Community waters." Community waters include streams, rivers, wetlands, ponds and lakes as defined in this chapter.

(9) "Comprehensive development plan." An engineering plan showing all required infrastructure such as stormwater management facilities, potable water, sanitary sewer, roadway infrastructure, best management practices, erosion prevention and sediment control, water quality buffers, easements and all other appurtenances for proposed development and redevelopment in accordance with and as required by this chapter and all rules, regulations and specifications of the City of Alcoa.

(10) "Construction." Any placement, assembly, or installation of facilities or equipment (including contractual obligations to purchase such facilities or equipment) at the premises where such equipment will be used, including preparation work at such premises.

(11) "Construction related waste." Waste that is generated through construction, land development and land-disturbing activities that may cause adverse impacts to water quality. Construction related waste includes, but is not limited to, discarded building materials, concrete truck washout, chemicals, litter, hazardous materials, oil and sanitary waste at the construction site.

(12) "Covenants for permanent maintenance of stormwater best management practices." A legal document executed by the property owner(s) or a homeowners' association as a owner of record and recorded with the Blount County Register of Deeds which guarantees perpetual and proper maintenance of best management practices.

(13) "Cut." Portion of land surface or area from which earth has been removed or will be removed by excavation; the depth below original ground surface to the excavated surface.

(14) "Developer." The person, firm or corporation, both public and private, engaged in the development of land, such as subdivisions or other land improvements.

(15) "Development." Development is the improvement of one (1) lot or two (2) or more contiguous lots, tracts or parcels of land for any purpose involving:

(a) One (1) or more residential or nonresidential buildings, or a single nonresidential building on a lot or lots regardless of the number of occupants or tenure; or

(b) The division or allocation of land or space, between or among two (2) or more existing or prospective occupants by means of, or for the purposes of streets, common areas, leaseholds, condominiums, building groups or other features.

(c) A subdivision of land.

(d) The process of grading, clearing, filling, quarrying, construction, or reconstruction to improved or unimproved real estate or other similar activities when not excluded by exemptions from this chapter.

(16) "Director." The Director of Public Works and Engineering or his/her designee for the City of Alcoa, Tennessee.

(17) "Easement." A legally dedicated right-of-way for the city to manage/maintain stormwater flow facilities or other utilities within specified boundaries.

(18) "Enclosed stormwater system." Part of the stormwater system that is encompassed by a pipe or other underground structure excluding short segments culvert.

(19) "Erosion." The wearing away of land by action of wind, water, ice, or gravity.

(20) "Erosion Prevention and Sediment Control plan (EPSC plan)." A formal plan for the control of soil erosion and sediment resulting from land-disturbing activity. The plan shall be reviewed and approved by the director before a grading permit may be issued. The plan may be included as part of a comprehensive development plan required under another city ordinance, a stormwater management plan, and/or a separate plan following the specifications set out in this chapter.

(21) "Excavation." See Cut.

(22) "Exceptional Tennessee Waters." Surface waters of the State of Tennessee that satisfy characteristics of exceptional Tennessee waters as listed in chapter 1200-4-3-.06 of the official compilation--Rules and Regulations of the State of Tennessee. Characteristics include waters designated by the Water Quality Control Board as Outstanding National Resource Waters (ONRW); waters that provide habitat for ecologically significant populations of certain aquatic or semi-aquatic plants or animals; waters that provide specialized recreational opportunities; waters that possess outstanding scenic or geologic values; or waters where existing conditions are better than water quality standards.

(23) "Existing land use." Means a land use which, prior to the effective date of the ordinance comprising this chapter is either:

(a) Completed;

(b) Ongoing, as in the case of agricultural activity;

(c) Under construction; or

(d) Fully approved by the governing authority.

(24) "Fill." Portion of land surface or area to which soil, rock or other materials have been or will be added; height above original ground surface after the material has been or will be added.

(25) "Grading." Any operation or occurrence by which the existing site elevations are changed by cutting, filling, borrowing, stock piling, or where any ground cover, natural or man-made, is removed, or any building or other structures are removed or any water course or body of water, either natural or man-made, is relocated on any site, thereby creating an unprotected area. "Grading" is synonymous with "land-disturbing activity."

(26) "Grading permit." A permit issued to authorize excavation and/or fill or other land disturbing activities to be performed under the guidelines of this chapter.

(27) "Hotspot." See "pollutant hotspots."

(28) "Illicit discharge." Any discharge to the stormwater system that is not composed entirely of stormwater and not specifically exempted in this chapter.

(29) "Impaired waters." Any segment of surface waters that have been identified by the Tennessee Department of Environment and Conservation as failing to support one (1) or more classified uses.

(30) "Impervious surfaces." Those areas that prevent or impede the infiltration of stormwater into the soil as it entered in natural conditions prior to development. Common impervious areas include, but are not limited to, rooftops, sidewalks, walkways, patio areas, driveways, parking lots, storage areas, compacted gravel and soil surfaces, awnings and other fabric or plastic coverings.

(31) "Land-disturbing activity." Any activity on private or public land that may result in soil erosion and the movement of sediments. Land disturbing activities include, but are not limited to, development, re-development, demolition, construction, reconstruction, clearing, grading, filling, logging and/or tree chipping operations, haul roads associated with the development, and excavation.

(32) "Lake" or "pond." An inland body of standing water.

(33) "Native vegetation." Plants indigenous to East Tennessee or the southeastern United States.

(34) "NPDES." National Pollutant Discharge Elimination System.

(35) "Owner" or "property owner." The legal owner of the property as recorded in the Blount County Register of Deeds office at the time of application of the grading permit.

(36) "Operator." For the purpose of this chapter and in the context of stormwater associated with construction activity, operator means any person associated with a construction project that meets either of the following two (2) criteria:

(a) A person having operational control over construction plans and specifications, including the ability to authorize modifications to

those plans and specifications. This person is typically the owner or developer of the project or a portion of the project; or

(b) A person having day-to-day operational control of those activities at a project which are necessary to ensure compliance with a site plan, EPSC plan, SWMP, SWPPP or sketch plan for the site or other permit conditions. This person is typically a contractor or commercial builder and is often authorized to direct workers at a site to carry out activities required by approved plans or comply with other permit conditions.

(37) "Person." Any individual, firm, corporation, partnership, association, organization or entity, including governmental entities, or any combination thereof.

(38) "Pond." See "lake."

(39) "Priority construction activity." Any land-disturbing activity that is one (1) acre or greater in area that discharges into, or upstream of, waters of the State of Tennessee recognized as impaired for situation or Exceptional Tennessee Waters. Also, priority construction activities can include land-disturbing activities of any size that, in the judgment of the director or his/her designee, require coordination with adjacent construction activities or have conditions that indicate a higher than normal risk for discharge of sediment or other construction related wastes.

(40) "Stormwater management manual." A document prepared and maintained by the City of Alcoa which contains policies, procedures, enforcement response procedures, technical criteria and guidelines and other supporting documentation or tools for implementation of the provisions of this chapter. "Policy manual" is synonymous with "stormwater management manual."

(41) "Pollutant hotspot." An area where the land use or activities generate highly contaminated runoff, with concentrations of pollutants in excess of those typically found in stormwater.

(42) "Project." The entire proposed development regardless of the size of the area of land to be disturbed.

(43) "Redevelopment." The improvement of a lot or lots that have been previously developed.

(44) "Restaurant." An establishment or facility where food is prepared and sold.

(45) "River." See "stream."

(46) "Runoff." The water resulting from precipitation that is not absorbed by the soil.

(47) "Sanitary sewer." Systems of underground conduits that only collect domestic or industrial waste and deliver sanitary wastewater to a wastewater treatment plant.

(48) "Sediment." Solid material, both inorganic (mineral) and organic, that is in suspension, is being transported, or has been moved from the site of origin by wind, water, gravity, or ice as a product of erosion.

(49) "Sedimentation." The action or process of forming or depositing sediment.

(50) "Sewage." Human wastes carried by water from residences, buildings, industrial establishments or other places, together with such industrial wastes, stormwater or other water as may be present; or any substance discharged from a sanitary sewer collection system.

(51) "Sinkhole." A naturally occurring depression where drainage collects in the earth's surface that is a minimum of two feet (2') deep. These depressions are typically denoted as closed contours and/or a hole, fissure or other opening in the ground, often underlain with limestone, dolomite or other rock formation that provides for and is being designated as a natural conduit for the passage of stormwater.

(52) "Sketch plan." An erosion prevention and sediment control plan required for land-disturbing activities that are greater than one-tenth (0.1) acre and less than one (1) acre.

(53) "Slope." The degree of deviation of a surface from the horizontal, usually expressed in percent or degrees.

(54) "Soil stabilization." Measures which protect soil from erosion.

(55) "Stormwater" also "stormwater runoff" or "runoff." Surface water resulting from rain, snow, or other form of precipitation, which is not absorbed into the soil and results in surface water flow and drainage.

(56) "Stormwater Management Plan (SWMP)." An engineering plan for the location and/or design of best management practices, water quality buffers, stormwater management facilities, and water quality credit areas within a proposed development or redevelopment. A stormwater management plan includes a map showing the extent of the land development activity and location of BMPS, design calculations BMPS, and may contain as-built plans and covenants for permanent maintenance of stormwater best management practices.

(57) "Stormwater Pollution Prevention Plan (SWPPP)." A written plan required by and prepared in conformance with the State of Tennessee General NPDES permit for discharges of stormwater associated with construction activities, that includes site map(s), an identification of construction/contractor activities that could cause pollutants in stormwater, and a description of measures or practices to control these pollutants. It must be prepared and approved before construction begins.

(58) "Stormwater system." The system of roadside drainage, roadside curbs and gutters, curb inlets, swales, catch basins, manholes, gutters, ditches, pipes, lakes, ponds, sinkholes, channels, creeks, streams, storm drains, and similar conveyances and facilities, both natural and manmade, located within the city which are designated or used for collecting, storing, or conveying

stormwater, or through which stormwater is collected, stored or conveyed, whether owned or operated by the City of Alcoa or other person.

(59) "Stream" or "river." A stream or river is defined as a linear surface water conveyance that can be characterized with either perennial or ephemeral base flow and either:

(a) Has published floodplain elevations that have been computed as part of an approved flood study;

(b) Is identified as a blue line on a 2.5-minute USGS quadrangle, unless otherwise designated by Tennessee Department of Environmental Conservation (TDEC); or

(c) Is determined to be a stream or river by the City of Alcoa, the United States Army Corps of Engineers (USACE) or Tennessee Department of Environmental Conservation (TDEC).

(60) "Stream centerline." The centerline of the low flow channel of a stream or river.

(61) "Stripping." Any activity which removed or significantly disturbs the vegetative surface cover including clearing and grubbing operations.

(62) "Structure." Anything constructed or erected such that the use of it requires a more or less permanent location on or in the ground. Such construction includes, but is not limited to, objects such as buildings, towers, smokestacks, overhead transmission lines, carports and walls.

(63) "Swale." A natural or manmade depression or wide shallow ditch used to route or filter runoff.

(64) "Top of bank." The uppermost limit of an active stream channel, usually marked by a break in slope. Also known as a stream bank.

(65) "Total Maximum Daily Load (TMDL). A calculation of the maximum amount of a pollutant that a water body can receive and still meet water quality standards, and an allocation of that amount to the source(s) of the pollutant as designated and/or defined by the Tennessee Department of Environment and Conservation.

(66) "Vegetation." Collection of plant life, including trees, shrubs, bushes, and grass.

(67) "Vegetative construction buffer." The area of land adjacent to waters of the state in its undeveloped state of vegetation, which facilitates the protection of water quality and aquatic habitat during construction.

(68) "Vegetative erosion prevention and sediment control practices." Measures for the stabilization of erosive or sediment producing areas by covering the soil with:

(a) Permanent seeding, sprigging or planting, produce lont-term vegetative cover;

(b) Temporary seeding, producing short-term vegetative cover; or

(c) Sodding, covering areas with turf of perennial sod-forming grass.

(69) "Variance." A grant of relief from specific requirements of this chapter that permit construction or activities in a manner otherwise prohibited by this chapter, where specified enforcement would result in unnecessary or undue hardship.

(70) "Watercourse." Any natural or artificial watercourse, stream, river, creek, channel, ditch, canal, conduit, culvert, drain, waterway, gully, ravine, or wash in which water flows either continuously or intermittently and which has a defined channel, bed and banks, and including any area adjacent thereto subject to inundation by reason of overflow or flood water.

(71) "Water Quality Buffer (WQB)" is an overlaying zone that encompasses all land within the areas as described in § 16-507. The water quality buffer is intended to be composed of undisturbed vegetation; or the re-establishment of vegetation bordering streams, ponds, wetlands, reservoirs, or lakes, which exists or is established to protect those water bodies.

(72) "Wastes, industrial/commercial." Liquid or other wastes resulting from any process of industry, manufacture, trade or business, or from the development of any natural resources.

(73) "Wastes, other." Discarded brush; sawdust; shavings; accumulated leaves; lawn clippings; animal wastes; used or previously applied lime; garbage; trash; refuse, loose used paper, paper products, plastic containers, or metal containers; ashes, offal, discarded tar; discarded paint; discarded or uncontained solvents; used, discarded, or spilled petroleum products, antifreeze, motor vehicle fluids; used or discarded tires, gas tanks, or chemicals; or any other used, uncontained, or unpackaged, or disposed of materials which may discharge to or otherwise enter the stormwater system.

(74) "Wastewater." See sewage.

(75) "Water quality volume credit." A decrease in the water quality volume for one (1) or more areas of a proposed development which is obtained only for specific site development features or approaches that can reduce or eliminate the discharge of pollutants in stormwater runoff. Water quality volume reductions can only be obtained when specific technical criteria, as defined by the policy manual.

(76) "Water quality volume credit areas." Areas within the proposed development or redevelopment for which a water quality volume credit can be obtained.

(77) "Waters of the state." Any and all waters, public or private, on or beneath the surface of the ground, which are contained within, flow through, or border upon Tennessee or any portion thereof except those bodies of water confined to and retained within the limits of private property in single ownership which do not combine or effect a junction with natural surface or underground waters.

(78) "Wetland." An area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically

adapted for life in saturated soil conditions. Wetland determination shall be made by the United States Army Corps of Engineers, the Tennessee Department of Environment and Conservation, and/or the Natural Resources Conservation Service, or a qualified professional that has been trained in the identification and delineation of wetland areas. (as added by Ord. #04-041, Nov. 2004, and replaced by Ord. #08-154, Feb. 2008, and Ord. #13-304, March 2013)

16-503. Authority. (1) The city manager and the staff under the city manager's supervision shall administer the provisions of this chapter.

(2) The city manager has the authority to promulgate rules, regulations, policies and guidance consistent with this chapter to carry-out the meaning and intent of this chapter in a City of Alcoa Stormwater Management Manual (or policy manual). The policies, criteria and requirements stated in the policy manual shall be enforceable, consistent with other provisions of this chapter.

(3) In the event that the city manager or his/her designee determines that a violation of any provision of this chapter has occurred, or that work does not have a required permit, or that work does not comply with an approved plan or permit, the city manager or his/her designee may issue a notice of violation to the permittee or property owner and/or any other person or entity having responsibility for activities performed at a development, at which time the enforcement provisions of this chapter shall be implemented. (as added by Ord. #04-041, Nov. 2004, and replaced by Ord. #08-154, Feb. 2008, and Ord. #13-304, March 2013)

16-504. Grading permit required. (1) No individual, partnership, firm, association, joint venture, public or private corporation, trust, estate, commission, board, public or private institution, utility, county, city, or other political subdivision, cooperative, or any other legal entity shall engage in any land-disturbing activity within the corporate limits of the City of Alcoa without meeting the requirements of this chapter, unless exempted from this chapter.

(a) The owner or operator of land-disturbing activities not exempted under § 16-504(2) must obtain a grading permit prior to commencing land disturbing activities;

(b) A grading permit shall be required for the following land-disturbing activities:

(i) Any residential, non-residential, development or redevelopment what will result in a land-disturbing activity greater than one-tenth (.1) of an acre. The director of engineering and public works or his/her designee may require developments or redevelopments that disturb less than one-tenth (.1) of an acre to obtain a grading permit as deemed necessary to protect adjacent properties or streams from erosion and off site sedimentation. Such activities shall require:

(A) Grading permit application;

(B) One (1) copy of a sketch plan is required for land disturbing activity of greater than one-tenth (.1) of an acre and less than one (1) acre.

(C) Five (5) copies of a full EPSC plan, as set forth in this chapter and the policy manual for land disturbing operations of one (1) acre or greater and all non-residential developments or redevelopments of any size, along with a copy of any applicable state or federal permits;

(D) Appropriate fee, if applicable;

(E) Department of public works and engineering review and approval of the plans;

(F) Site inspection and inspection documentation, in accordance with this chapter;

(G) Grading permit;

(H) Ongoing and final inspection; and

(I) Signature, after final inspection, for certificate of compliance from the director.

(ii) Installation, maintenance and repair of any underground public utility lines when such activities occur within fifty feet (50') of waters of the state.

(c) The director may require developments or redevelopments that conform to § 16-504(2)(a) to develop a full EPSC plan, as set forth in this chapter and the policy manual, as deemed necessary to protect streams and adjacent properties from erosion and off-site sedimentation.

(d) Land disturbing activities not exempted under § 16-504(2) of this chapter shall not commence until:

(i) The owner or operator of any land-disturbing activities that will result in greater or equal to one (1) acre of disturbed area obtains from the Tennessee Department of Environment and Conservation a Notice of Coverage (NOC) under the State of Tennessee General NPDES Permit for Discharge of Stormwater Associated with Construction Activities, or certification that the land-disturbing activity does not require coverage under the state permit, prior to obtaining a grading permit. A copy of the NOC and the associated Stormwater Pollution Prevention Plan (SWPPP) or certification that the site does not require coverage under the state permit must be submitted prior to the issuance of a grading permit.

(ii) The owner or operator shall obtain all required permits for the applicable development or redevelopment from the state and/or federal agency(s). A copy of the permit(s) must be submitted before a grading permit will be issued.

(2) Exemptions. The exemptions listed in this section shall not be construed as exempting these land-disturbing activities from providing adequate erosion prevention and sediment control measures to protect adjoining property owners, nearby watercourses and the public right-of-way from sediment impacts. The owner or operator whose activities have been exempted from the requirements for a grading permit shall nevertheless be responsible for otherwise conducting all land-disturbing activities in accordance with the provisions of this chapter and other applicable laws, including responsibility for controlling erosion, sedimentation and runoff. The only exemptions are as follows:

(a) Any land-disturbing activity that is less than one-tenth (1/10) acre that:

(i) Is not part of a larger common plan of development or sale that would disturb more than one (1) acre; or

(ii) Is not located within two hundred feet (200') of the bank of any waters of the state.

(b) Installation, maintenance and repair of any underground public utility line when such activity:

(i) Involves less than one (1) acre of disturbed land; or

(ii) Is not within two hundred feet (200') of the bank of any waters of the state.

(c) Agricultural practices that lie outside the 100-year floodway.

(d) Emergency work to protect life or property. Upon completion of emergency work the disturbed area shall be shaped and stabilized in accordance with this chapter. The city must be contacted within seventy-two (72) hours of the incident.

(3) Additional requirements for grading permits. (a) Land disturbing activities performed in accordance with approved plans shall commence within one (1) year from the issue date of the grading permit; otherwise the grading permit will become null and void and the plan must be resubmitted for approval.

(b) The grading permit application shall at a minimum contain an erosion prevention and sediment control plan prepared as required by this chapter and the policy manual. The plan can be included with the overall stormwater management plan, comprehensive development plan or can be a standalone plan.

(4) Pre-construction conference and inspection. (a) For all land-disturbing activities greater than 0.10 acres, a grading permit shall be issued only after a pre-construction inspection by the director indicates that perimeter erosion prevention and sediment control measures have been installed in accordance with the approved plan.

(b) Attendance at a pre-construction meeting with the director prior to issuance of a grading permit is required for owners and operators of developments or redevelopments that are:

(i) Required to submit an EPSC, comprehensive development plan, stormwater management plan; or

(ii) A priority construction activity, as defined in this chapter; or

(iii) Will discharge stormwater runoff to Exceptional Tennessee Waters.

(c) Owners and operators of land development activities no listed in § 16-504(4)(a) may be required to attend a pre-construction meeting when coordination with adjacent construction activities is needed or when conditions indicate a higher than normal risk for pollutant discharges.

(5) Grading permits--time limitations, phasing and conditions.

(a) Grading permits shall expire one (1) year from the date of permit issuance. After one (1) year, the grading permit will become null and void and the plan must be resubmitted for approval.

(b) If a tract is to be developed in phases, then a separate grading permit may be required for each phase.

(c) The issuance of a grading permit does not authorize the discharge of hazardous substances or oil resulting from a spill that occurs on the site of the land-disturbing activity. A grading permit issued by the city may specify any condition under which the land disturbing activity shall be undertaken. The issuance of a grading permit does not relieve the permittee of any obligation or responsibility of complying with the provisions of any other law or rules and regulations of any federal, local or additional state authority. It is the responsibility of the owner or operator to thoroughly review, understand and adhere to all applicable local, state and federal laws and regulations with regard to site development and property regulations when submitting the EPSC or sketch plan. (as added by Ord. #04-041, Nov. 2004, and replaced by Ord. #08-154, Feb. 2008, and Ord. #13-304, March 2013)

16-505. Stormwater management plan. (1) General requirements.

(a) The stormwater management plan shall include the specific required elements that are listed and/or, described in the policy manual and the State of Tennessee General NPDES Permit for Discharge of Stormwater Associated with Construction Activities, latest edition. The director may require submittal of additional information in the stormwater management plan as necessary to allow an adequate review of the existing or proposed site conditions. Omission of any required items shall render the plans incomplete and they will be returned to the applicant prior to review by the director.

(b) The stormwater management plan shall be subject to any additional requirements as set forth in the City of Alcoa's subdivision

regulations, zoning ordinances, streets and drainage construction specifications and/or all other city regulations.

(c) No building permit shall be issued until the required stormwater management plan is approved by the director.

(d) The stormwater management plan shall be prepared and stamped by an engineer, landscape architect, or architect competent in civil and site design and licensed to practice in the State of Tennessee. Portions of the stormwater management plan that require hydraulic and/or hydrologic calculations and design shall be prepared and stamped by a professional engineer competent in civil and site design and licensed to practice in the State of Tennessee.

(e) The approved stormwater management plan shall be adhered to during grading and construction activities. Under no circumstance is the owner of land development activities, or any person(s) acting on the owner's behalf, allowed to deviate from the approved s management plan without prior approval of a plan amendment by the director.

(f) The approved stormwater management plan shall be amended if the proposed site conditions change after plan approval is obtained, or if it is determined by the director during the course of grading or construction that the approved plan is inadequate.

(g) Other state and/or federal permits that may be necessary for construction in and around streams and/or wetlands shall be approved through the appropriate lead regulatory agency prior to final approval of a stormwater management plan to the City of Alcoa.

(h) Best management practices, stormwater management facilities, water quality buffers and water quality volume credit areas shown in stormwater management plans shall be maintained through the declaration of a protective covenant, entitled "Covenants for Permanent Maintenance of Stormwater Best Management Practices." The covenant must be approved and shall be enforceable by the City of Alcoa. The covenant shall be recorded with the deed, run with the land, and continue in perpetuity.

(i) Best management practices, stormwater management facilities, water quality buffers and water quality volume credit areas shall be placed into a permanent easement that is recorded with the deed to the parcel. A maintenance right-of-way or easement, having a minimum width of fifteen feet (15') from a public road or private road shall also be provided to access such permanent easements.

(j) Owners of land development activities not exempted from submitting a stormwater management plan may be subject to additional watershed or site specific requirements other than those stated in this chapter in order to satisfy local, state or federal requirements, or where the director has determine through stormwater master plans,

engineering studies, a history of existing or documented water quality problems, or engineering judgment that additional restrictions are needed to limit adverse impacts of the proposed development on water quality, channel protection, overbank flooding and/or extreme flooding. Areas subject to additional requirements may also include developments, redevelopments or land uses that are considered pollutant hotspots.

(k) The director may waive or modify the requirements of the chapter if adequate water quality treatment, channel protection, overbank flood protection and/or extreme flood protection are suitably provided by a downstream or shared off-site best management practice or if engineering studies determine that installing the required best management practice(s) would actually cause adverse impact to water quality or cause increase channel erosion or downstream flooding.

(l) This chapter is not intended to repeal, abrogate or impair any existing easements, covenants, deed restrictions or existing ordinances and regulations. However, where the provisions of this chapter and other regulations conflict or overlap that provision which is more restrictive or imposes higher standards or requirements shall prevail. It is required that the director be advised of any such regulatory conflicts upon submittal of the plan.

(2) Applicability--stormwater management plan. (a) Any non-residential development or redevelopment of any size or any residential development or redevelopment that will result in a land-disturbing activity that is greater or equal to one (1) acre shall submit a stormwater management plan for approval by the director.

(b) The stormwater management plan shall be submitted in conjunction with the Erosion Prevention and Sediment Control Plan (EPSC), and/or comprehensive development plan, for proposed development and redevelopment in accordance with and as required by this chapter and all rules, regulations and specifications of the City of Alcoa.

(c) Existing land use, as defined in this chapter, for which a stormwater management plan was not required prior to the effective date of this chapter shall be exempted from the requirements of a stormwater management plan.

(3) Conformity to plans. (a) The approved stormwater management plan, upon which subsequent permits may be issued by the City of Alcoa, shall be adhered to during grading and construction activities. Under no circumstance is the owner or operator allowed to deviate from the approved stormwater management plan without prior approval of a plan amendment by the director. Amendments to the approved plan must comply with this chapter.

(b) The director shall require that an approved stormwater management plan be amended if it is determined that the approved plan

is inadequate. The approved stormwater management plan shall be amended if the proposed site conditions change after plan approval is obtained or if it is determined by the director during the course of grading or construction that the approved plan is inadequate.

(4) Stormwater quality treatment requirements. All new developments or redevelopments required to submit a stormwater management plan shall provide treatment of stormwater runoff in accordance with the following requirements:

(a) Stormwater runoff generated from the development or redevelopment must be treated for water quality prior to discharges from the property in accordance with the stormwater pollutant removal treatment standard and criteria provided in the policy manual.

(b) The treatment of stormwater runoff shall be achieved through the use of one (1) or more best management practices that are designed and constructed in accordance with the design criteria, guidance and specifications provided in the policy manual.

(c) Methods, designs or technologies for best management practices that are not provided in the policy manual for stormwater management may be submitted for approval by the director if it is proven that such methods, designs or technologies will meet or exceed the stormwater treatment standards set forth in the policy manual and this chapter. Proof of such methods, designs, or technologies must meet the minimum testing criteria set forth in the policy manual.

(d) Best management practices shall not be installed within the public right-of-way without prior approval of the director.

(5) Channel protection requirements. (a) All new developments or redevelopments that are required to submit a stormwater management plan shall provide downstream channel erosion protection by capturing the channel protection volume (the runoff volume from the 1-year frequency, 24-hour storm) and discharging such volume over no less than a 24-hour period using the design methods provided in the policy manual.

(b) Downstream channel erosion protection may be provided by an alternative approach in lieu of controlling the channel protection volume, subject to prior approval by the director. Sufficient hydrologic and hydraulic analysis demonstrating that the alternative approach will offer adequate channel protection from erosion must be presented in the stormwater management plan.

(6) Overbank flood protection and extreme flood protection.

(a) Overbank flood protection shall be provided such that the calculated peak discharge of stormwater runoff resulting from the 2-year, 10-year, and 25-year return frequency, 24-hour duration storm events shall be no greater after development or redevelopment of the site than that which would result from the same 2-year, 10-year, and 25-year

return frequency, 24-hour duration storms on the same site prior to development or redevelopment.

(b) Extreme flood protection shall be provided such that the calculated peak discharge of stormwater runoff resulting from a 100-year frequency, 24-hour duration storm shall be no greater after development or redevelopment of the site than that which would result from a 100-year frequency, 24-hour duration storm on the same site prior to development or redevelopment.

(c) A downstream hydrologic analysis shall be performed to determine if the proposed development or redevelopment causes an increase in peak discharge as compared to predevelopment runoff rates for the same site, or has the potential to cause downstream channel and streambank erosion. This analysis must be done for the 2-year, 10-year, 25-year and the 100-year return frequency, 24-hour duration storm events, at the outfall(s) of the site, and at each downstream tributary junction and each public or major private downstream stormwater conveyance structure to the point(s) in the stormwater system where the area of the portion of the site draining into the system is less than or equal to ten percent (10%) of the total drainage area above that point.

(d) If peak discharge increases are identified in the ten percent (10%) downstream analysis area, as defined in § 16-505(6)(c), downstream flood protection shall be provided such that calculated peak discharges for the 2-year, 10-year and 100-year return frequency, 24-hour duration storm events after development or redevelopment are no greater after development or redevelopment of the site than that which would result from the same duration storms in the same downstream analysis area prior to development or redevelopment. These criteria must be applied throughout the ten percent (10%) downstream analysis area.

(e) Downstream flood protection can be provided by downstream conveyance improvements and/or purchase of flow easements in lieu of peak discharge controls subject to prior approval by the director and satisfaction of the following requirements:

(i) Sufficient hydrologic and hydraulic analysis must be presented that shows that the alternative approach will offer adequate protection from downstream flooding for all potentially affected downstream property owners.

(ii) The applicant is responsible for all state and federal permits that may be applicable to the site including, but not limited to TDEC, NPDES, ARAP permits, U.S. Army Corps of Engineers section 404 permits, and TVA section 26A permits.

(iii) Developments and redevelopments that do not cause an increase in peak discharges are not exempt from conformance with water quality treatment and downstream channel protection requirements stated in this chapter.

(7) Sinkhole requirements. The following sinkhole and drainage well plan information and/or approval from the appropriate regulatory agency must be provided prior to the alteration of the natural drainage for a watershed discharging to such features as sinkholes and/or drainage wells.

(a) Proposed onsite and offsite drainage channels that are tributary to a sinkhole throat or drainage well inlet shall be delineated, along with appropriate hydraulic calculations, to define the existing and altered (if appropriate) 100-year flood plain and to confirm that offsite flooding will not be increased.

(b) Detailed contours are to be shown for all sinkholes that are to receive stormwater runoff from the site. These contours are to have a maximum interval of two feet (2') and are to be verified by field surveys.

(c) The extent of the area considered to be a sinkhole is, at a minimum, the limits determined by the 100-year water surface elevation, assuming plugged conditions (zero outflow).

(d) A geologic investigation of all sinkholes receiving stormwater runoff from the site shall be performed. The report from this investigation shall be signed and sealed by a registered professional experienced in geology and groundwater hydrology and shall contain the following:

(i) Location and nature of aquifers;

(ii) Potential for siltation problems;

(iii) Foundation problems that may be expected around sinkholes;

(iv) Details of drainage structures to be built in sinkholes;

(v) Any other factors relevant to the design of drainage from sinkholes;

(vi) Plans showing the 100-year flood plain;

(vii) This flood plain shall be designated as a drainage easement on final subdivision plat;

(viii) Details of plan for grading and clearing of vegetation within the 100-year flood plain.

(d) Compliance with any and all conditions that may be required by the federal government or the State of Tennessee shall be documented. The Tennessee Division of Groundwater Protection is the primary regulatory agency for sinkholes and drainage wells.

(e) Demonstration that development will not occur within the area flooded by the 100-year flood. The 100-year elevation may be lowered by construction of a detention pond. Calculations that document a lowering of the 100-year flood elevation shall be based on the 100-year, 24-hour storm using an appropriate safety factor for discharge into the sinkhole. (as added by Ord. #04-041, Nov. 2004, and replaced by Ord. #08-154, Feb. 2008, and Ord. #13-304, March 2013)

16-506. Grading, construction, erosion prevention and sediment control. (1) Purpose. The City of Alcoa has in the past experienced development causing the displacement of large quantities of earth. Soil erosion and sedimentation can result from such development. Sediment is one (1) cause of the contamination of water supplies and water resources and a cause of pollution. A build-up of sediment can negatively impact resources, clog watercourses and cause flooding, which can result in damage to public and private lands. The result is a threat to the health, safety, and general welfare of the community.

(2) Existing eroding areas. Upon written notification from the director, the owner of a parcel of land, which exhibits unstable or eroding soil conditions shall correct such conditions within a thirty (30) calendar day period. This period may be extended upon request if conditions warrant. Minimum correction measures shall include stabilizing slopes and re-vegetating all exposed soil surfaces. Before commencing corrective measures, the owner shall consult with the director to determine an acceptable method of correction.

(3) EPSC and sketch plan required components. (a) Erosion Prevention and Sediment Control plans (EPSC plans) submitted to the director shall contain the required components, as listed in and in accordance with the State of Tennessee General NPDES Permit Discharge of Stormwater Associated with Construction Activities, this chapter, the policy manual and as applicable to the proposed land-disturbing activity.

(b) Sketch plans submitted to the director shall contain the required components, as listed in and in accordance with this chapter, the policy manual and as applicable to the proposed land-disturbing activity.

(c) The director may request that additional information be submitted as necessary to allow a thorough review of the site conditions and proposed erosion prevention and sediment control measures.

(d) Omission of any required items shall render the plans incomplete and the plans will be returned to the applicant prior to review by the director.

(e) All sketch plans shall be developed by the owner and/or his/her agent.

(f) All EPSC plans shall be prepared and stamped according to § 16-505(1)(d).

(g) Any legally protected state or federally listed threatened or endangered species and/or critical habitat located in the area of land-disturbing activities (if any) shall be identified in the EPSC plan. The EPSC plan shall also include written documentation from the United States Fish and Wildlife Service that indicates:

(i) Approval of the best management practices that will be utilized to eliminate potential impacts to legally protected state or federally listed threatened or endangered species and/or critical

habitat. Said best management practices shall also be included on the EPSC plan; or

(ii) A finding of no potential impact as a result of the proposed land-disturbing activity.

(4) Conformity and amendments to approved plans. (a) The approved EPSC or sketch plan, upon which subsequent permits may be issued by the City of Alcoa, shall be adhered to during all grading and construction activities. Under no circumstance is the owner or operator allowed to deviate from the approved EPSC or sketch plan without prior approval of a plan amendment by the director.

(b) The director shall require the grading permit holder to take corrective actions, which may include amendment of an approved EPSC or sketch plan, if it is determined that the approved plan does not adequately protect against erosion, sedimentation or discharges of other construction related wastes despite the adherence of the owner or operator with approved protective practices.

(c) The owner or operator is required to resubmit an EPSC or sketch plan for approval by the director if site plans or conditions change during land-disturbing activities.

(d) Plan amendments must comply with this chapter and the policy manual.

(6) Documentation kept at the project site. Owners or operators of land disturbing activities that require an EPSC, sketch plan and/or coverage of the State of Tennessee General NPDES Permit for Discharges of Stormwater Associated with Construction Activities shall keep documentation listed below at the site of the land-disturbing activity from the date that the grading permit is approved to the date of termination of coverage:

(a) A copy of the approved EPSC or sketch plan;

(b) A copy of the current grading permit;

(c) A copy of the approved SWPPP and notice of coverage;

(d) A copy of the plans as approved by the department of public works and engineering; and

(e) Documentation and inspection of the erosion prevention and sediment control practices located on the site of the land-disturbing activity, prepared in accordance with the inspection documentation requirements of State of Tennessee General NPDES Permit for Discharges of Stormwater Associated with Construction Activities, if applicable.

(f) Any other records required by the Tennessee General NPDES Permit for Discharges of Stormwater Associated with Construction Activities.

(7) Inspections. During grading or construction, site inspections shall be performed in accordance with the following:

(1) The owner or operator, or his/her designee, shall perform regular, documented inspections of the land-disturbing activity in accordance with the inspection requirements of the State of Tennessee NPDES Permit for Discharges of Stormwater Associated with Construction Activities, this chapter and the policy manual.

(2) Site inspection documentation shall be maintained on-site during normal working hours by the owner or operator or designee and shall be made available for review by the director immediately upon request.

(8) Fees. The Board of Commissioners of the City of Alcoa at its discretion may set fees for obtaining a grading permit. Such fee schedule may be established by resolution.

(9) General criteria. The following general criteria are minimum requirements for the control of pollutants from land-disturbing activities. All soil erosion prevention and sediment control measures and practices shall conform to the requirements of this chapter. The application or measures and practices shall apply to all features of the site including street, utility installations, drainage facilities and other temporary and permanent improvements. Measures shall be installed to prevent or control erosion and sediment pollution during all stages of any land-disturbing activity.

(a) Requirements for best management practices. Owners and operators of land-disturbing activities shall implement appropriate erosion prevention and sediment control Best Management Practices (BMPs) in accordance with the State of Tennessee General NPDES Permit for Discharges of Stormwater Associated with Construction Activities and the Tennessee Erosion and Sediment Control Handbook, latest edition.

(b) Technical design criteria. The design of erosion prevention and sediment and pollution management controls, including BMPs, stabilization practices and structural practices, shall be performed in accordance with criteria and requirements stated in the State of Tennessee General NPDES Permit for Discharges of Stormwater Associated with Construction Activities and the Tennessee Erosion and Sediment Control Handbook, latest edition, except where more stringent criteria are set forth in this chapter or are required by the director.

(c) Control measure construction and maintenance standards. The installation, inspection and maintenance of erosion prevention and sediment control practices, stabilization practices and structural practices shall be performed in accordance with the standards provided in the State of Tennessee General NPDES Permit for Discharges of Stormwater Associated with Construction Activities and the Tennessee Sediment and Erosion Control Handbook, latest edition, except where more stringent standards are required by the director. If periodic inspections or other information indicate that a control measure has been used

inappropriately or incorrectly, the owner or operator must replace or modify the control for relevant site situations.

(d) More stringent criteria or standards. The director may require more stringent criteria and standards where deemed necessary to reduce the potential for pollution impacts to streams, public property or adjacent property from sediment-laden stormwater runoff or discharges of other construction related wastes.

(e) Control of other construction related wastes. Owners and operators of land-disturbing activities shall control other construction related wastes, as defined in this chapter, in accordance with the State of Tennessee General NPDES Permit for Discharges of Stormwater Associated with Construction Activities, or as required by the director. The discharge of such wastes in the stormwater discharges from a land-disturbing activity shall be prevented or minimized in accordance with the EPSC or sketch plan for the site of the activity.

(f) Installation of controls before grading begins. Erosion prevention and sediment controls and measures for the control of other construction related wastes shall be in place and functional before a grading permit will be issued and earth moving operations begin. EPSC controls shall be constructed and maintained throughout land-disturbing activities. Temporary controls and measures may be removed at the beginning of the work day when they conflict with the day's activities, but must be replaced at the end of the work day.

(g) Establishment of permanent vegetation. A permanent vegetative cover shall be established on disturbed areas not otherwise permanently stabilized. Permanent vegetation shall not be considered established until ground cover is achieved which, in the opinion of the director, is mature enough to control soil erosion satisfactorily and to survive seasonal weather conditions. If it is determined by the director that the vegetation will not withstand seasonal weather conditions, the release of un-obligated monies or bonds may be delayed.

(h) Protection of adjacent properties. Sediment controls shall be designed to retain mobilized sediment on the site of the land-disturbing activity. Properties adjacent to the site of a land-disturbance activity shall be protected from sediment deposition. If sediment escapes the construction site, off-site accumulations of sediment that have not reached a stream must be removed as soon as possible (e.g., fugitive sediment that has escaped the construction site and has collected in a street must be removed so that it is not subsequently washed into storm sewers and streams by the next rain and/or so that it does not pose a safety hazard to users of public streets) and measures implemented to prevent the reoccurrence of the same. Should sediment deposition occur in waters of the state, owners or operators shall not initiate remediation/ restoration of a stream without first receiving approval from the City of

Alcoa and TDEC. Approval for remediation/restoration efforts from the City of Alcoa does not authorize access to private property. Arrangements concerning removal of sediment on adjoining property must be settled by the owner or operator with the adjoining landowner.

(i) Timing and stabilization of sediment trapping measures. Sediment basins and traps, perimeter dikes, and other measures intended to trap sediment on-site must be constructed as a first step in grading and be made functional before up slope land disturbance takes place.

Earthen structures such as dams, dikes, and diversions must be stabilized within seven (7) days of construction. These measures must be maintained in good working order and must remain in lace until such time as the director deems the area to be stabilized and/or as required by the State of Tennessee General NPDES Permit for Discharges of Stormwater Associated with Construction Activities.

(j) Sediment basins. Temporary basins shall be designed in accordance with the State of Tennessee General NPDES Permit for Discharges of Stormwater Associated with Construction Activities, except where more stringent criteria are required by the director. Any equivalent control measure that is substituted for a temporary sediment basin must be justified and approved by the director.

Permanent detention ponds that will be used as sediment basins during construction shall be designed so that the permanent detention pond outlet structure serves as the outlet structure of the sediment basin. All permanent detention ponds used as sediment basins shall be cleaned of loose sediments, re-graded to ensure design capacity, and stabilized prior to conversion. Sod shall be used as the stabilization method on sediment basins that must remain in place for an indefinite period of time, such as during residential subdivision development. Sod shall be installed from the permanent pool elevation to the top of the berm. Stabilization measures other than sod may be approved by the director. In addition, converted detention ponds must meet the criteria as set forth in § 16-510 prior to release of bond and/or Certificate of Occupancy (CO).

(k) Sodding detention ponds, ditches and draining swales. Sod shall be used on detention ponds, ditches and drainage swales or if velocities warrant other stabilization techniques. Stabilization methods other than sodding may be approved by the director. The owner or operator shall maintain sodded areas until vegetation is permanently established.

(l) Cut and fill slopes. Cut and fill slopes must be designed and constructed in a manner which will prevent erosion. Consideration must be given to the length and steepness of the slope, the soil type, upslope drainage area, groundwater conditions, and other applicable factors. Slopes which are found to be eroding excessively within one (1) year of

project completion must be provided with additional slope stabilizing measures until the problem is corrected. The following guidelines shall be utilized to prepare and implement an adequate design for cut and fill slopes:

(i) Topsoil for the area should be stockpiled and then used for replacement on the graded area.

(ii) Roughened soil surfaces are generally preferred to smooth surfaces on slopes.

(iii) Diversions should be constructed at the top of long steep slopes which have significant drainage areas above the slope. Diversions or terraces may also be used to reduce slope length.

(iv) Concentrated stormwater should not be allowed to flow down cut or fill slopes unless contained within an adequate temporary or permanent channel, flume, or slope drain structure.

(v) Wherever a slope face crosses a water seepage plane which endangers the stability of the slope, adequate drainage or other protection should be provided.

(vi) Slopes 3:1 or steeper shall be stabilized with erosion control matting or approved equal. The owner or operator shall maintain matted areas until vegetation is permanently established.

(m) Working in or crossing watercourses. Construction vehicles shall be kept out of watercourses. The channel (including bed and banks) must always be re-established immediately after in-channel work is completed. Where a live watercourse must be crossed by construction vehicles regularly during construction, a temporary stream crossing must be provided, the design of which must be approved by the director and the State of Tennessee where appropriate.

(n) Underground utility construction. The construction of underground utility lines shall be subject to trench dewatering devices or other methods. Water shall be discharged in a manner which will not adversely affect flowing streams, drainage systems, or off-site property.

(o) Temporary stone construction entrance. Wherever construction access routes intersect paved public and/or private roads, provisions must be made to minimize the transport of sediment by runoff or vehicle tracking onto the paved surface by clearing the area at the entrance of all vegetation, roots, and other objectionable material and placing a two inch (2") to three inch (3") diameter stone layer at least six inches (6") thick for a minimum of fifty feet (50') from the edge of the hard surface public road. The construction entrance must be underlain with filter fabric. This entrance shall be a minimum of twenty feet (20') in width, a minimum length of fifty feet (50'), and shall be maintained for the duration of the project or until a permanent access drive is constructed. The stone layer shall be replaced or overlain with new stone

when necessary to ensure that sediment is not transported off the site of the land-disturbing activity. Where sediment is transported onto a public road surface, the roads shall be cleaned thoroughly at the end of each day or more often if deemed necessary. Sediment shall be removed from roads by shoveling or sweeping and be transported to a sediment-controlled disposal area. Street washing shall be allowed only after sediment is removed in this manner.

(p) Removal of temporary measures. All temporary erosion prevention and sediment control measures shall be disposed of within thirty (30) days after final site stabilization is achieved or after the temporary measures are no longer needed, unless otherwise authorized by the director. Trapped sediment and other disturbed soft areas resulting from the disposition of temporary measures shall be properly disposed of and/or permanently stabilized to prevent further erosion and sedimentation.

(q) Stripping, cleaning and grading to be minimized. Stripping of vegetation, re-grading, and other development activities shall be conducted so as to minimize erosion. Clearing and grubbing must be held to the minimum necessary. Pre-construction vegetative cover shall not be destroyed, removed, or disturbed more than ten (10) calendar days prior to grading or earth moving. Construction must be sequenced to minimize the exposure time of cleared surface areas. (as added by Ord. #04-041, Nov. 2004, and replaced by Ord. #08-154, Feb. 2008, and Ord. #13-304, March 2013)

16-507. Water quality buffers. (1) Purpose. It is the purpose of the water quality buffers to:

(a) Protect public and private water supplies;

(b) Minimize thermal stream pollution by adding or preserving stream canopy;

(c) Trap sediment, nutrients and other pollutants in surface run-off;

(d) Promote bank stabilization;

(e) Protect wetlands;

(f) Minimize the impact of floods;

(g) Reduce stormwater runoff velocities;

(h) Protect channel bank area from erosion and scour;

(i) Protect wildlife habitat; and

(j) Generally maintain water quality.

(2) General requirements for the water quality buffer. (a) The water quality buffer shall be established, managed and maintained to protect the physical and ecological integrity of the buffered water body, reduce the potential for flooding, provide tree canopy, stabilize streambanks, and filter runoff from developed areas. Management of the water quality

buffer includes specific limitations on alteration of the natural conditions as set forth in this chapter and the policy manual.

(b) Except as otherwise provided in this chapter, the water quality buffer must be maintained in a use-restricted, undisturbed state in accordance with this chapter. The water quality buffer must meet, or have the ability to meet through vegetation improvement and growth, the minimum vegetated targets defined for the buffer in this chapter.

(3) Applicability--water quality buffer. All non-residential new development, modifications to existing developments, and/or redevelopments of any size, or any residential development or redevelopment that will result in a land-disturbing activity that is greater or equal to one (1) acre shall establish, protect and maintain water quality buffers along all streams, rivers, lakes, ponds and wetlands that are located in, or portions of which are located in, the City of Alcoa as set forth in this chapter and in the policy manual.

(4) Standards for buffer width. Except as otherwise provided in this chapter, the water quality buffer must be maintained in a vegetated state as defined in this chapter and the policy manual. Any property or portion thereof that lies within the WQB is subject to the restrictions of the WQB as well as any and all zoning restrictions that apply to the parcel as a whole. The water quality buffer width shall be determined as follows:

(a) The water quality buffer width shall follow state and/or federal regulatory buffer zone and/or riparian buffer zone requirements as set forth in the policy manual and/or other applicable publications.

(b) A water quality buffer shall be provided along each side of a stream, as measured perpendicular from the top of bank of the active channel and extending landward. The WQB may be divided into two (2) zones:

(i) Inner zone. The inner zone of the water quality buffer shall be a minimum width of thirty-five feet (35') or one-half (1/2) of the total required total buffer, whichever is greater.

(ii) Outer zone. The outer zone of the water quality buffer shall be the remainder of the WQB, if applicable, that extends beyond the inner zone.

(c) If state and/or federal regulatory buffer requirements are not applicable, as set forth in the policy manual, a minimum total buffer of thirty-five feet (35') shall apply.

(d) For ponds and lakes that are directly connected to community waters, a minimum buffer of thirty feet (30') shall be provided around the perimeter of ponds and lakes. The buffers shall be measured perpendicular from the topographic contour that defines the normal pool elevation.

(i) Water quality buffers shall not be required around the perimeter of hydraulically disconnected ponds or ponds that

are newly designed and constructed for the purposes of stormwater quality treatment.

(e) A minimum buffer width of thirty feet (30') shall be provided around the perimeter of a wetland, or wetlands area that extends beyond the edge of the required buffer width.

The extended buffer shall be adjusted so that the extend of the wetlands as measured from the outermost edge of the wetlands is thirty feet (30').

(i) Water quality buffers are not required for wetlands designed and constructed for the purposes of stormwater quality treatment.

(f) Where steep slopes of fifteen percent (15%) or greater are located within fifty feet (50') of the water body, one (1) of the following conditions shall apply:

(i) The water quality buffer width in the steep slope area shall be adjusted to include an additional twenty feet (20') from the outer edge of the WQB. The additional twenty feet (20') shall follow the outer zone criteria.

(ii) The water quality buffer in the steep slope area shall have a minimum width of the total required buffer width and follow the inner zone criteria.

(5) Standards for buffer vegetation. The vegetative goal is a use-restricted, vegetated buffer that is located along the perimeter of community waters within the City of Alcoa, containing natural vegetation and grasses, enhanced or restored, that are native in origin.

(a) The inner zone and wetland vegetative targets are native mature, moderately dense forest with woody shrubs and under story vegetation.

(b) The outer zone vegetative targets are a minimum of mowed dense grass that covers the entire zone.

(c) The minimum pond or lake buffer vegetative targets shall be the same as the outer zone.

(d) If community waters do not have an established water quality buffer, then a water quality buffer enhancement plan shall be required when land adjacent to such a water body is proposed for development or redevelopment. Such a buffer plan shall be submitted to the director for approval and comply with the following:

(i) All planting plans shall be drawn to scale and may be part of a larger landscaping plan, comprehensive development plan or a stormwater management plan.

(ii) The planting plan shall be a part of the required engineering site plan review submittals.

(iii) The planting plan shall include a "plant schedule" which lists the number and common and botanical name(s) of all

existing and proposed plantings. The "plant schedule" shall also list the height, spread, and where applicable, the caliper of all new plantings at the time of planting. The landscaping plan must be designed by a licensed landscape architect.

(iv) Stream banks must be planted with native vegetation that represents both woody (trees and shrubs) and herbaceous species as determined by a landscape architect. Density shall depend on the re-vegetation technique to be used and existing site conditions.

(v) No trees shall be planted in a utility easement;

(vi) No species may comprise more than one third (1/3) of the total planted trees or shrubs;

(vii) Seedlings/trees must be guaranteed at a seventy-five percent (75%) survivorship; and

(viii) Invasive species must be removed and managed.

(6) Activities within the water quality buffer. The water quality buffer shall be established, managed and maintained to protect the physical and ecological integrity of community waters, reduce flooding potential, provide tree canopy and filter runoff from developed areas. Management of the WQB includes specific limitations on alteration of the natural conditions.

(a) The following activities are prohibited within the water quality buffer:

(i) The storage of pesticides, herbicides, and fertilizers;

(ii) The use or application of fertilizers;

(iii) Parking lots;

(iv) New structures;

(v) Vehicle storage and vehicle maintenance;

(vi) Waste storage;

(vii) Other manmade impervious areas;

(viii) Uses known to contribute pollutants to waterways;

(ix) Septic tanks and septic drain fields;

(x) Buildings, accessories, structures and all types of impervious surfaces;

(xi) Hazardous or sanitary waste landfills;

(xii) Receiving areas for toxic or hazardous waste or other contaminants;

(xiii) Mining;

(xiv) Dumpster storage;

(xv) Grease bin storage;

(xvi) Animal lots or kennels;

(xvii) Other uses known to contribute pollutants to waterways; and

(xviii) Stormwater retention and detention facilities except those built as constructed wetland that meet the approval of the department of public works and engineering.

(b) The following activities are allowed within the inner zone of the water quality buffer:

(i) The limited use or application of pesticides and herbicides.

(ii) Individual trees within the WQB may be removed if in danger of falling, causing damage to dwellings or other structures, causing blockage of the stream, standing in the path of an approved water, sanitary sewer, storm main; and/or the roots of a tree are penetrating or in danger of penetrating a sewer, water or storm drainage line at a joint or pipe connection. The root wad or stump should be left in place, where feasible, to maintain soil stability.

(iii) With prior approval by the director, infrastructure such as roads, bridges, storm drainage, stormwater management facilities that are appropriate for use in a riparian zone (i.e., wetlands, buffers), and utilities provided that they adhere to the following standards:

(A) The width should be the minimum width needed to allow for maintenance access and installation;

(B) WQB crossings shall be at an angle that minimizes clearing requirements; and

(C) The minimum number of WQB crossings should be used within each development, with no more than one (1) crossing every one thousand (1,000) linear feet. The director may approve additional crossing if justified by traffic, safety, or access issues.

(iv) Paths and green way trails, provided the design and location are approved by the City of Alcoa.

(v) Access areas for utilities that are located in the water quality buffer shall be allowed. Access areas must be minimized to the extent possible and shall be located at intervals no less than four hundred feet (400') unless warranted by valid safety, access, or service issues.

(vi) Removal of forest vegetation that has the potential to impact traffic safety or limit access, to areas immediately surrounding the approved stream or utility crossing. Such areas shall be vegetated with a minimum of dense grass.

(vii) Bank stabilization/restoration/habitat alteration projects.

(viii) Disturbances as required to establish and/or restore buffer areas in accordance to an approved buffer enhancement plan.

(ix) The pruning of native vegetation is allowed provided that the health and function of the vegetation is not compromised. However, only the individual removal of under-story nuisance non-native vegetation (i.e. honeysuckle, kudzu, privet) causing minimal soil disturbance is permitted. On land where the removal of such nuisance vegetation would cause a reduction in the amount of stream canopy by fifty percent (50%) or more, re-vegetation with native plants is required to provided, at a minimum, fifty percent (50%) of the previous canopy. For areas where such nuisance vegetation removal would cause a reduction in the amount of stream bank vegetation, re-vegetation with native plants is required to meet the previous coverage.

(x) Other uses permitted and approved by TDEC or under section 404 of the Federal Clean Water Act.

(xi) Education/scientific research that does not require any prohibited activities identified in this section.

(c) The following activities are allowed within the outer zone of the water quality buffer:

(i) All activities that are allowed within the inner zone.

(ii) Land disturbance and grading, but must be re-vegetated according to § 16-507(5).

(iii) Clearing, grubbing and re-vegetation, performed in accordance with an approved stormwater management, comprehensive development, buffer enhancement and/or EPSC plan.

(iv) Disturbances necessary for the construction of utility access areas and approved stream crossings.

(v) Ongoing vegetative maintenance activities such as mowing, bush-hogging, and weed-eating.

(7) Protection of the water quality buffer. All water quality buffers must be protected during construction/development activities.

(a) Prior to the initiation of land disturbing activities, construction layout surveys must include staking and labeling of the water quality buffer perimeter. A combination of stakes, flagging and/or silt fence may be used to insure adequate visibility of the WQB. The layout must be inspected and approved by the director before the grading permit issuance.

(b) All areas of the water quality buffer, including stream banks, must be left in a stabilized condition upon completion of construction activities. No activity eroding bare or unstable stream banks shall remain, unless approved by the director. Placement of riprap and

other hard armor is allowed only when bioengineering alternatives are not feasible.

(c) Water quality buffers cannot be encroached upon or disturbed during project construction, unless they are being established, restored, or enhanced in accordance with an approved buffer enhancement plan.

(d) Once construction is completed and the certificate of occupancy or final plat is accepted, water quality buffers must be maintained in accordance with the recorded covenants for permanent maintenance of stormwater best management practices. In order to provide for long-term protection and maintenance, the City of Alcoa shall require that the water quality buffer be protected in perpetuity by placing the buffer in a permanent water quality or other easement that is recorded with the property's deed. If the area is not publicly owned, the easement should be held by one (1) of the following non-governmental entities:

(i) A variable third party such as a land trust, land management company or utility. The purpose of the third party is to provide monitoring and oversight to ensure the perpetual protection of the area in accordance with the requirements of a buffer area. The organization shall:

(A) Have the legal authority to accept and maintain such easements;

(B) Be bona fide and in perpetual existence; and

(C) Have conveyance instruments that contain an appropriate provision for re-transfer in the event the organization becomes unable to carry out its functions.

(ii) A Homeowners Association (HOA), provided that the following criteria are met:

(A) Membership in the HOA is mandatory and automatic for all property owners of the subdivision and their successors;

(B) The HOA shall have lien authority to ensure the collection of dues from all members; and

(C) The HOA assumes the responsibility for protecting, monitoring and maintaining the area as a conservation easement, in perpetuity.

(iii) If neither of the above-stated non-governmental entities is able to provide perpetual protection of the buffer area, then the property owner must assume responsibility for the maintenance and protection for the buffer area.

(8) Water quality buffer enhancements. The property owner may restore or enhance vegetation within a water quality buffer with prior approval of a buffer enhancement plan by the director.

The director shall have the authority to require a property owner to restore or enhance water quality buffers that have been disturbed or do not meet, or have the potential to meet through natural vegetative succession, the vegetative targets for buffer areas that are defined herein.

(a) Enhancement of water quality buffers must be performed in accordance with the requirements of § 16-507(5) and the guidance provided below:

(i) All areas/zones of the buffer being enhanced must be planted with vegetation that is appropriate to achieve the vegetative targets stated in § 16-507(5).

(ii) All areas/zones of the buffer being enhanced must be stabilized against erosion.

(iii) If the outer zone of the WQB and the buffer around a pond or a lake will consist largely of grasses after enhancement, seeding must be performed at a rate sufficient to provide healthy, dense, permanent vegetative cover for one hundred percent (100%) of the buffer area within one (1) growing season. Mulch, pebbles, wood chips and other non-vegetative ground cover are not acceptable for buffer enhancement.

(iv) Where the removal of such vegetation would cause a reduction in the amount of stream canopy by fifty percent (50%) or more, re-vegetation with native plants is required to provide the cover of the previous canopy at a minimum. For areas where such vegetation, re-vegetation specifications with native plants is required to return the amount of vegetative cover to its previous state, at a minimum. To reduce the potential for stream bank erosion, re-vegetation measures along stream banks must include sufficient erosion control measures, such as turf reinforcement mats, erosion control blankets, straw wattles, etc., to stabilize the area in the short- and long-term.

(v) To increase the chances for the success and health of the buffer area, the plant species, density, placement, and diversity proposed in the buffer enhancement plans must be appropriate for stream, wetland, and pond/lake buffers to achieve the vegetative target that is defined for the buffer through natural succession. Proposed planting and long-term maintenance practices must also be appropriate and properly performed.

(vi) Vegetation mortality must be accounted for all planting densities that are proposed in buffer enhancement plans.

(9) Water quality buffer averaging. A reduction in the water quality buffer width over a portion of property in exchange for an increase in buffer width elsewhere on the same property such that the average WQB width remains the required total minimum width may be granted. Provided that the following conditions are met:

(a) The width of the averaged buffer within the boundaries of the property to be developed shall not be less than the minimum total required width; and

(b) The width of the buffer shall not be less than thirty-five feet (35') at any location, except where stream crossings have been approved by the director.

(c) Those areas of the water quality buffer having a minimum width of thirty-five feet (35') (or less at the stream crossing) can comprise no more than fifty percent (50%) of the buffer length.

(d) Buffer averaging is required for WQB that have stream crossings.

(e) Buffer averaging is prohibited for any portion of the developments that have or have planned land use as described:

(i) Areas that have slopes greater than fifteen percent (15%) that are located within fifty feet (50') of the stream to be buffered;

(ii) Developments or facilities that include on-site sewage disposal and treatment system drainfields (i.e., septic systems), raised septic systems, subsurface discharges from a wastewater treatment plant, or land application of bio-solids or animal waste;

(iii) Landfills (active or closed);

(iv) Junkyards or similar scrap-metal facilities;

(v) Commercial or industrial facilities that store and/or service motor vehicles;

(vi) Commercial greenhouses or landscape supply facilities;

(vii) Developments or facilities that have commercial or public pools;

(viii) Agricultural facilities, farms, feedlots, and confined animal feed operations; and

(ix) Animal care facilities, kennels, and commercial/ business developments or facilities that provide short-term or long-term care of animals; and

(x) Other land uses deemed by the director to have the potential to generate higher than normal pollutant loadings.

(10) Plats prepared for recording. Unless otherwise provided herein, all site development plans and plats prepared for recording shall:

(a) Show the extent of any WQB on the subject property by metes and bounds and be labeled as "Water Quality Buffer."

(b) Provide a note with reference to the WQB stating that there shall be no clearing, grading, construction or disturbance of vegetation except as permitted by the City of Alcoa Public Works and Engineering Department.

(c) Permanent boundary markers, in the form of sign age as specified in the policy manual or otherwise approved by the director shall be required to be installed prior to the recording of the final plat or the issuance of a certificate of occupancy.

(11) Conflict with state requirements. The State of Tennessee may require water quality buffers during construction activities via provisions contained in Tennessee Construction General Permit (CGP) or other regulatory permits and processes. The state's requirements may, or may not, align with the City of Alcoa's requirements and policies for water quality buffers. It is the responsibility of the site developer to be informed and educated on any state-level buffer requirements. If a site developer intends to apply the City of Alcoa's buffer requirements in lieu of any requirements of the State of Tennessee, the developer must first obtain approval from TDEC and provide the City of Alcoa with written documentation of such approval. In instances where the city and TDEC requirements conflict, the more stringent shall apply. (as added by Ord. #04-041, Nov. 2004, and replaced by Ord. #08-154, Feb. 2008, and Ord. #13-304, March 2013)

16-508. Non-stormwater discharges (illicit discharge, detection and elimination). (1) Purpose. The uncontrolled discharge of pollutants to the stormwater system has an adverse impact upon the water quality of the receiving waters.

(a) The 1987 amendments to the Federal Water Pollution Control Act, commonly known as the Clean Water Act, established the National Pollutant Discharge Elimination System (NPDES) program, which requires permits for discharges from stormwater systems into waters of the United States. The Environmental Protection Agency has promulgated regulations implementing the NPDES program.

(b) The NPDES regulations for stormwater discharges require certain municipalities, including the City of Alcoa, to:

(i) Prohibit through ordinance, order or similar means, illicit discharges to the stormwater system;

(ii) Develop and implement a plan to detect and address non-stormwater discharges including illegal dumping;

(iii) Implement appropriate enforcement procedures and actions; and

(iv) Identify and prohibit contamination of stormwater from "pollutant hotspots," as defined in this chapter.

(2) Prohibitions. (a) No person shall cause or allow an illicit discharge to the stormwater system, or any component thereof, or onto driveways, sidewalks, streets, parking lots, sinkholes, creek banks, or other areas draining to the stormwater system. Illicit discharges include, but are not limited to the following:

(i) Any sanitary sewer, including any sanitary sewer connected to the stormwater system as of the date of adoption of this chapter except as deemed unavoidable due to collection system operation/maintenance and extreme weather events;

(ii) Discharges of wash water resulting from the hosing or cleaning of gas stations, auto repair garages, or other types of automotive services facilities;

(iii) Discharges resulting from the cleaning, repair, or maintenance of any type of equipment, machinery, or facility, including motor vehicles, cement-related equipment, and port-a-potty servicing, etc.;

(iv) Discharges of wash water from mobile operations such as mobile automobile washing, steam cleaning, power washing, and carpet cleaning, etc.;

(v) Discharges of wash water from the cleaning or hosing of impervious surfaces in industrial and commercial areas including parking lots, streets, sidewalks, driveways, patios, plazas, work yards, and outdoor eating or drinking areas, etc.;

(vi) Discharges from material storage areas containing chemicals, fuels, grease, oil, or other hazardous materials;

(vii) Discharges of pool or fountain water containing chlorine, biocides, or other chemicals; at the point of entry to an enclosed storm sewer system; discharges of pool or fountain filter backwash water;

(viii) Discharges of sediment, or construction-related wastes, etc.;

(ix) Discharges of food-related wastes (e.g., grease, food processing, restaurant kitchen mats and trash bin wash water, etc.);

(x) Discharges of heated water from commercial or industrial operations;

(xi) Discharges of dyes (without prior permission of the city);

(xii) Discharges of laundry wastewater;

(xiii) Known discharges from leaking water or sewer lines remaining uncorrected for seven days;

(xiv) Discharges or discarding of animal fecal waste or dead animals;

(xv) Discarding vehicles, equipment parts and/or fluid;

(xvi) Discarding lawn clippings, leaves, or branches;

(xvii) Discarding trash or debris into containers or areas not intended for the purpose of trash/debris disposal; and

(xviii) Discharges from the following land uses, areas or activities that are identified herein as pollutant hotspots:

(A) Vehicle, truck or equipment maintenance, fueling, washing or storage areas including but not limited to: gas stations, automotive dealerships, automotive repair shops, and car wash facilities;

(B) Any property containing more than four hundred (400) parking spaces, or one hundred twenty thousand (120) square feet of impervious area;

(C) Recycling and/or salvage yard facilities;

(D) Restaurants, grocery stores and other food service facilities;

(E) Commercial facilities with outside animal housing areas, including animal shelters, fish hatcheries, kennels, livestock stables, veterinary clinics, or zoos;

(F) Construction areas;

(G) Other producers of pollutants identified by the director by information provided to or collected by him/her or his/her representatives, or reasonably deduced or estimated by him/her or his/her representatives from engineering or scientific study.

(c) Subject to the provisions of subsection (d), the following discharges shall not be in violation of this chapter:

(i) Waterline flushing of potable waterlines;

(ii) Landscape irrigation;

(iii) Diverted stream flows or rising groundwater;

(iv) Infiltration of uncontaminated groundwater (as defined at 40 C.F.R., 35.2005(20)) to separate storm drains;

(v) Pumping of uncontaminated groundwater;

(vi) Discharges from potable water sources, foundation drains, uncontaminated air conditioning condensation, irrigation waters, springs, water from crawl space pumps, or footing drains;

(vii) Lawn watering;

(viii) Individual noncommercial car washing on residential properties; or car washing of less than two (2) consecutive days in duration for a charity, nonprofit fund raising, or similar noncommercial purpose;

(ix) Flows from riparian habitats and wetlands;

(x) Dechlorinated swimming pool discharges;

(xi) Incidental street wash water from street cleaning equipment designed for cleaning paved surfaces and limiting waste discharges;

(xii) Street deicing for public safety;

(xiii) Any activity authorized by a valid NPDES permit; and

(xiv) Any flows resulting from firefighting.

(d) If the director finds that any of the activities listed in subsection (c) above are found to cause or may cause sewage, industrial wastes or other objectionable wastes to be discharged into the stormwater system, the director shall so notify the person performing such activities and shall order that such activities be stopped or conducted in such a manner as to avoid the discharge of sewage, industrial wastes or other wastes into the stormwater system.

(3) Notification of spills and illicit discharges. As soon as anyh person has knowledge of any illicit spills or discharges to the stormwater system in violation of this chapter, such person shall immediately notify the director of this discharge. If such person is directly or indirectly responsible for such discharge or responsible for the operation of the system or business, then such person shall also take immediate action to ensure the containment and cleanup of such discharge and shall confirm such telephone notification with a written report to the director within three (3) calendar days.

(a) At a minimum, the written report for any illicit discharge shall include:

(i) Date and time of the discharge;
(ii) Location of the discharge;
(iii) Material or substance discharged;
(iv) Duration and rate of flow;
(v) Total volume discharged;
(vi) Total volume recovered;
(vii) Cause or reason for the discharge;
(viii) Remediation and containment action taken;
(ix) Material Safety Data Sheets (MSDS) for the discharged material (if applicable);
(x) Action taken to prevent further discharges; and
(xi) Description of any environmental impact.

(4) Requirements for monitoring. The director may require any person engaging in any activity or owning any property, building or facility (including but not limited to a site of industrial activity) to undertake such reasonable monitoring of any discharge(s) to the stormwater system operated by the city and to furnish periodic detailed reports of such discharges. (as added by Ord. #04-041, Nov. 2004, and replaced by Ord. #08-154, Feb. 2008, and Ord. #13-304, March 2013)

16-509. Performance bonds. (1) General requirements.

(a) Performance bonds shall name the City of Alcoa as beneficiary and shall be guaranteed in the form of a surety bond, cashier's check, or letter of credit from an approved financial institution or insurance carrier. The surety bond, cashier's check, or letter of credit shall be provided in a form and in an amount to be determined by the director. The actual amount shall be based on submission of plans and

estimated construction, installation or potential maintenance and/or remediation expenses.

(b) The director may refuse brokers or financial institutions the right to provide a surety bond, letter of credit, or cashier's check based on past performance, ratings of the financial institution, or other appropriate sources of reference information.

(2) Prior to issuance of a grading permit. (a) When reviewing any application for a grading permit, the city shall consider the past record of the permit applicant in complying with previous grading permits, plans, and this chapter. The city may require the permit applicant to post a performance bond prior to issuing the grading permit. If a permit applicant has had three (3) or more violations of previous permits or this chapter as amended within three (3) years prior to the date of filing of the application under consideration, the city shall require a performance bond before the grading permit is issued.

(b) Upon forfeiture, the city at its election may use the performance bond proceeds or any part thereof to hire a contractor and/or use its own forces to stabilize and place erosion control measures on the site of the land-disturbing activity.

(c) A performance bond in the form of government security, cash, irrevocable letter of credit, or any combination may be provided for the following conditions:

(i) Rough grading, site development, large residential developments, or commercial development when there is a disturbed area greater than five (5) acres.

(ii) Where there exists a substantial likelihood for runoff or sediment problems to adversely impact city rights-of-way, other property, or waters of the state.

(iii) When a site drains into sinkholes or when the site is used for a borrow pit or waste area.

(d) Any body amount shall be based on a remediation and completion estimate as determined by the director based on the size of the disturbed area.

(e) Within sixty (60) days of the final inspection, the balance of all bonds not extended or obligated shall be refunded or terminated except as otherwise provided therein.

(f) Performance bond may be released upon receiving the final certificate of occupancy or final plat along with site visit and release approval by the director.

(3) Prior to final plat approval. Prior to plat approval, a performance bond which guarantees satisfactory completion of construction work related to the erosion and sediment control, stormwater management plan, best management practices, water quality buffers and/or water quality treatment

may be required for a period of two (2) years. (as added by Ord. #04-041, Nov. 2004, and replaced by Ord. #08-154, Feb. 2008, and Ord. #13-304, March 2013)

16-510. As-built certifications. (1) Prior to the release of a bond, as-built drawings shall be provided to the director, certifying that all best management practices comply with the design shown on the approved plan(s) as required by this chapter and the policy manual. Features such as the boundaries of vegetated buffers, water quality volume credit areas, water quality buffers, stormwater management facilities, elevation of structural BMPS etc. shall be provided to verify compliance with approved plans. Other contents of the record drawings must be provided in accordance with guidance provided in the policy manual for stormwater quality management.

(2) As-built drawings shall include sufficient design information to show that the best management practices required by this chapter will operate as approved. This shall include all necessary computations used to determine percent pollutant removal and the flow rates and treatment volumes for quality as required to size best management practices and detention volume for quantity.

(3) The as-built drawings shall be stamped by the appropriate design professional required to stamp the approved plans, as stated in § 16-505(1)(d) of this chapter. (as added by Ord. #04-041, Nov. 2004, and replaced by Ord. #08-154, Feb. 2008, and Ord. #13-304, March 2013)

16-511. Inspections and maintenance. (1) Right of entry. (a) The director may, during reasonable hours, enter upon any property which discharges or contributes, or is believed to discharge or contribute, to stormwater runoff or the stormwater system, stream, natural drainage way, or other stormwater system to monitor, remove foreign objects or blockages, and to inspect for compliance with the provisions of this chapter.

(b) Failure of a property owner, person(s) working on behalf of the property owner, or other legal occupant of the property, such as a lessee, to allow such entry by the director onto a property for the purposes set forth in § 16-511(1)(a) shall be cause for the issuance of a stop work order, withholding of a certificate of occupancy, final plat and/or civil penalties, fines and/or damage assessments in accordance with this chapter.

(2) Requirements. (a) The owner(s) or his/her designee of best management practices and/or water quality volume credit areas shall at regular and appropriate frequencies inspect and properly operate and maintain all best management practices, stormwater facilities and/or water quality volume credit areas in such manner as to maintain their full and intended function. Inspection and maintenance of privately-owned best management practices, stormwater facilities and/or water

quality volume credit areas shall be performed at the sole cost and expense of the owner(s) of such features, or his/her designee.

(b) Inspections and maintenance shall be performed in accordance with the requirements provided in this chapter, the policy manual and/or prevailing practices. The director has the authority to impose more stringent inspection and maintenance requirements as necessary for purposes of water quality and quantity protection and public safety.

(c) Inspection and maintenance activities shall be documented by the property owner or his/her designee. Such documentation shall be maintained by the property owner for a minimum of three (3) years, and shall be made available for review by the director.

(d) Prior to release of the certificate of occupancy and/or final plat the property owner shall provide the City of Alcoa with an accurate as-built drawing of the property and an executed covenant for all best management practices, stormwater management facilities, water quality buffers and water quality credit areas. The property owner shall record these items with the Blount County Register of Deeds. The location of the best management practices, stormwater facilities, water quality buffers and water quality volume credit areas, and the easements associated with each of these features shall be shown on a plat that is recorded with the Blount County Register of Deeds.

(e) The removal of sediment and other debris from best management practices shall be performed in accordance with all local, state and federal laws. Guidelines for sediment removal and disposal are referenced in the policy manual and/or regulations of other agencies. The director may stipulate additional guidelines if deemed necessary for public safety.

(f) This chapter does not authorize access to neighboring private property by the owner of best management practices, stormwater facilities, water quality buffer or water quality volume credit areas or his/her designee. Arrangements for access to neighboring private property by the property owner or his/her designee for purposes of compliance with this chapter must be handled solely by the owner or his/her designee and the owner(s) of the neighboring property(s).

(3) Corrective action. The director may order the property owner or his/her designee to perform corrective actions to best management practices, stormwater management facilities, water quality buffers, areas of water quality volume credit areas as necessary to properly maintain the full and intended function of the features for the purposes of water quality treatment, channel erosion protection, overbank flood protection, extreme flood protection or water quality volume reduction and/or to ensure adherence to local performance standards and/or ensure the public safety. If the property owner or his/her designee fails to perform corrective action(s), the city manager or his/her

designee shall have the authority to order the corrective action(s) to be performed by the city or others. In such cases where a performance bond exists, the city shall utilize the bond to perform the corrective actions. In such cases where a performance bond does not exist or is not sufficient to perform the corrective actions, the city may perform such actions and the property owner shall reimburse the city for double its direct and related expenses. If the property owner fails to reimburse the city in accordance with this section, the City of Alcoa is authorized to file a lien for said costs against the property and to enforce the lien by judicial foreclosure proceedings. (as added by Ord. #04-041, Nov. 2004, and replaced by Ord. #08-154, Feb. 2008, and Ord. #13-304, March 2013)

16-512. Permit controls and stormwater system integrity. (1) Any alteration, improvement, or disturbance to best management practices, stormwater management facilities, water quality buffers or water quality volume reduction areas shown in as-built drawings shall be prohibited without written authorization from the director. This does not include alterations that must be made in order to maintain the intended performance of the stormwater management facilities or BMPs.

(2) Other state and/or federal permits that may be necessary for construction in and around streams and/or wetlands shall be approved through the appropriate lead regulatory agency prior to submittal of a comprehensive development plan, stormwater management plan or other required plan to the city.

(3) NPDES permits. Persons or entities who hold NPDES general, individual and/or multi-sector permits shall provide either a copy of such permit or the permit number assigned to them by the Tennessee Department of Environment and Conservation to the director no later than sixty (60) calendar days after issuance of the permit. (as added by Ord. #04-041, Nov. 2004, and replaced by Ord. #08-154, Feb. 2008, and Ord. #13-304, March 2013)

16-513. Severability. (1) This chapter is not intended to repeal, abrogate, or impair any existing easements, covenants, deed restrictions or, except where otherwise stated, existing ordinances and regulations. However, where the provisions of this chapter and other regulation conflict or overlap, that provision which is more restrictive or imposes higher standards or requirements shall prevail. It is required that the director be advised of any such regulatory conflicts upon submittal of a comprehensive design plan, stormwater management plan or other required plan.

(2) Each separate provision of this chapter is deemed independent of all other provisions herein so that if any provision or provisions of this chapter shall be declared invalid, all other provisions thereof shall remain enforceable. (as added by Ord. #04-041, Nov. 2004, and replaced by Ord. #08-154, Feb. 2008, and Ord. #13-304, March 2013)

16-514. Responsibility. This chapter does not imply a warranty or the assumption of responsibility on the part of the City of Alcoa for the suitability, fitness or safety of any structure with respect to flooding, water quality or structural integrity. This chapter is a regulatory instrument only and is not to be interpreted as an undertaking by the City of Alcoa to design any structure or facility. (as added by Ord. #04-041, Nov. 2004, and replaced by Ord. #08-154, Feb. 2008, and Ord. #13-304, March 2013)

16-515. Enforcement and penalties. (1) Enforcement during construction. (a) If the director finds any person, firm, or entity has engaged in or directed land-disturbing activities without having obtained a required grading permit, the following shall occur:

(i) First offense. A stop work order and a notice of violation will be issued.

(ii) If work continues. A court citation and/or assessment of civil penalties in the minimum amount of fifty dollars ($50.00) and a maximum amount of five thousand dollars ($5,000.00), in accordance with the schedule of penalties included in the policy manual, for each day work continues without a grading permit.

(iii) The permit fees will double if/when a permit is issued.

(b) The requirements of this chapter shall be enforced by the director who shall inspect all the work, grading or construction involved. Failure to properly install or maintain best management practices, water quality buffer, stormwater management facilities and/or water quality volume credit areas as specified on the approved plans will result in the following actions:

(i) First offense. Verbal warning with a maximum of two (2) days for compliance. If conditions warrant, a stop work order will be immediately issued.

(ii) Second offense. Written warning with a maximum of five (5) days for compliance. If conditions warrant, a stop work order will be immediately issued.

(iii) Third offense. Notice of violation, stop work order, suspension of all site activities until violation corrected, and TDEC notification. If the violation is not corrected on or before the deadline for compliance noted in the notice of violation, then noncompliance after such date will constitute a fourth offense.

(iv) Fourth offense. A court citation and/or civil penalty of a minimum of fifty dollars ($50.00) per day per violation and a maximum of five thousand dollars ($5,000.00) per day per violation and possible damage assessment, in accordance with the schedule of penalties that is included in the policy manual.

(v) An additional penalty of five hundred dollars ($500.00) may be added to the schedule of penalties that is included in the policy manual, up to a maximum of five thousand dollars ($5,000.00) for any person or entity that has more than three (3) years prior to the date current grading permit or other stamped, dated and approved documentation.

(vi) Any performance bond posted may be forfeited based on the circumstances if compliance is not achieved after notice of violation within the time specified in the notice. Any grading permit granted may also be suspended.

(c) All stop work orders shall be effective immediately upon issuance and shall be in effect until the necessary corrective action or mitigation has occurred. Such notice shall be in writing and shall be given to the owner of the property, an agent of the owner, or the person in charge of the job site, or conspicuously posted at the project location, and shall state the necessary corrective actions with a completion date before other activities can resume. The director may release the stop work order if, following inspection of the site, the director finds conformance with all applicable requirements.

(i) Any person or entity who receives three (3) related written notices of violations shall be required to retake or, in the case of an entity, to have its management retake the Level I Fundamentals of Erosion Prevention and Sediment Control Workshop sponsored by the TDEC or approved equal. If after completing the course again, the same person or entity receives a subsequent written environmental violation within three (3) years of completing the course, requests for other city grading permits will be denied to that person. The person may appeal within thirty (30) days of the denial by requesting a hearing by the Alcoa Stormwater Board of Appeals to attempt to obtain the desired permits.

(2) Enforcement after construction. The requirements of this chapter shall be enforced by the director who shall inspect the best management practices, and/or water quality volume credit areas at regular and appropriate intervals. Failure to properly maintain best management practices, stormwater management facilities, water quality buffer, and/or water quality volume credit areas to their full and intended function shall result in a written requirement for corrective action that includes a deadline for compliance. Corrective actions will be in accordance with § 16-511(3). If conditions warrant, a stop work order will be immediately issued. A court citation and civil penalty of a minimum of fifty dollars ($50.00) per day per violation and a maximum of five thousand dollars ($5,000.00) per day per violation and possible damage assessment may also be levied on the property owner by the City of Alcoa.

(3) Variances. The director may waive or modify specific criteria which are deemed inappropriate or too restrictive for site conditions, by granting a variance as set forth herein. Variances may be granted in writing under the following conditions:

(a) At the time of plan submission, an applicant may request variances to become part of the approved stormwater management plan. The applicant must explain the reasons for requesting variances in writing and must submit documentation that the issuance of a variance will not result in a reduction in water quality. Specific variances which are allowed must be documented on the approved stormwater management plan.

(b) During construction, a permit holder may request variances to the approved plans. Until such time as the amended plan is approved by the city, the land-disturbing activity and associated construction shall not proceed, except in accordance with the plans as originally approved.

(c) Absent unusual circumstances, a response to the variance request should be given by the city within twenty (20) working days. No variance shall be considered valid unless in writing and signed by the director.

(4) Appeals. Any applicant or permit holder may appeal decisions or the interpretation of the meaning of this chapter to the Alcoa Stormwater Board of Appeals of the City of Alcoa pursuant to the provisions of § 18-816 of the Alcoa Municipal Code.

(5) Unlawful acts. Any person who may:

(a) Violate any provision of this chapter;

(b) Violate the provisions of any permit issued pursuant to this chapter;

(c) Fail or refuse to comply with any lawful notice to abate issued by the director, which has not been timely appealed to the Alcoa Stormwater Board of Appeals, within the time specified by such notice; or

(d) Violate any lawful order of the City of Alcoa Stormwater Board of Appeals within the time allowed by such order shall be guilty of a violation.

Each day of such violation or failure or refusal to comply shall be deemed a separate offense and punishable accordingly.

(6) Penalties. (a) Any person violating the provisions of this chapter shall be guilty of a misdemeanor and punished as provided in the general provisions of the city code. Each day that a continuing violation of this chapter is maintained or permitted to remain shall constitute a separate offense.

(b) Any person violating the provisions of this chapter may be assessed a civil penalty by the city of not less than fifty dollars ($50.00)

nor more than five thousand dollars ($5,000.00) per day for each day of the violation. Each violation shall constitute a separate violation.

(c) In assessing the civil penalty, the city shall follow the provisions of the schedule of penalties as set forth in the policy manual and for any violation not listed may consider the following in determining the appropriate amount:

(i) The harm done to the public health or the environment;

(ii) Whether the civil penalty imposed will be of substantial economic detriment to the illegal activity;

(iii) The economic benefit gained by the violator;

(iv) The amount of effort put forth by the violator to remedy this violation;

(v) Any unusual or extraordinary enforcement costs incurred by the municipality;

(vi) The amount of penalty established by ordinance or resolution for specific categories for violations; and

(vii) All equities of the situation which outweigh the benefit of imposing any penalty or damage assessment.

(d) In addition to the civil penalty in subsection (b) above, the city may recover all damages proximately caused by the violator to the city which may include any reasonable expenses and attorneys' fees incurred in investigating, enforcing and/or correcting the violations of this chapter.

(e) The city may bring legal action to enjoin the continuing violation of this chapter and the existence of any other remedy in law or equity shall be no defense to any such action.

(f) The remedies set forth in this section shall be cumulative, not exclusive, and is not to be a defense to any action, civil or criminal, that one (1) or more of the remedies set forth herein has been sought or granted.

(7) Notice of violation. Whenever the director determines that a violation of any provision of this chapter has occurred, the director may issue a notice of violation to the property owner or operator, utility, facility operator, lessee, tenant, contractor, permittee, the equipment operator and/or any other person or entity violating the provisions of this chapter. The notice of violation shall:

(a) Be in writing;

(b) Include a description of the property sufficient for identification of where the violation has occurred;

(c) List the violation;

(d) State the action required; and

(e) Provide a deadline for compliance or to stop work.

(8) Judicial proceedings and relief. (a) The city attorney may initiate proceedings seeking legal and/or equitable relief in any court of competent jurisdiction against any person who has violated or is making substantial steps towards:

(i) Violating the provisions of this chapter;

(ii) Violating the provisions of any permit issued pursuant to this chapter;

(iii) Failing or refusing to comply with any lawful order issued by the director, which has not been timely appealed to the Alcoa Stormwater Board of Appeals within the time allowed by this chapter; or

(iv) Violating any lawful order of the Alcoa Stormwater Board of Appeals within the time allowed by such order.

(b) The city attorney may also initiate civil proceedings in any court of competent jurisdiction seeking monetary damages for any damages caused to publicly owned stormwater facilities by any person.

(9) Special fund created. All damages and civil penalties collected under this chapter, following adjustment for the expenses incurred in making such collections, shall be allocated and appropriated for the administration of the city's stormwater program. (as added by Ord. #04-041, Nov. 2004, and replaced by Ord. #08-154, Feb. 2008, and Ord. #13-304, March 2013)

16-516. Repeal clause. The provisions of any ordinances or resolution or parts thereof in conflict herewith are repealed, except for ordinances or resolutions or parts thereof which provide stricter standards from those provided herein which strict standards should prevail and be enforced. (as added by Ord. #04-041, Nov. 2004, and replaced by Ord. #08-154, Feb. 2008, and Ord. #13-304, March 2013)

16-517. [Deleted.] (as added by Ord. #04-041, Nov. 2004, and deleted by Ord. #08-154, Feb. 2008)

16-518. [Deleted.] (as added by Ord. #04-041, Nov. 2004, and deleted by Ord. #08-154, Feb. 2008)

c. List the violation;

d. State the action required; and,

e. Provide a deadline for compliance or to stop work.

16-515.08 Judicial Proceedings and Relief.

a. The City attorney may initiate proceedings seeking legal and/or equitable relief in any court of competent jurisdiction against any person who has violated or is making substantial steps towards:

1. Violating the provisions of this article;
2. Violating the provisions of any permit issued pursuant to this article;
3. Failing or refusing to comply with any lawful order issued by the Director, which has not been timely appealed to the Alcoa Stormwater Board of Appeals within the time allowed by this article; or,
4. Violating any lawful order of the Alcoa Stormwater Board of Appeals within the time allowed by such order.

b. The city attorney may also initiate civil proceedings in any court of competent jurisdiction seeking monetary damages for any damages caused to publicly owned storm water facilities by any person.

16-515.09 Special Fund Created.

All damages and civil penalties collected under this chapter, following adjustment for the expenses incurred in making such collections, shall be allocated and appropriated for the administration of the city's stormwater program.

16-516. Repeal Clause. The provisions of any ordinances or resolutions or parts thereof in conflict herewith are repealed, except for ordinances or resolutions or parts thereof which provide stricter standards from those provided herein which strict standards should prevail and be enforced.

16-517. Effective Date.

SECTION 3. That a public hearing is hereby set for February 12, 2008 at 7:00 p.m.

SECTION 4. This ordinance shall take effect on final passage, the public welfare requiring it.

Mayor

ATTEST:

Ray E. Rickesin
Recorder

APPROVED AS TO FORM:

Shelly L. Wilson
City Attorney

Passed on First Reading 1/8/08 Ray E. Rickesin Recorder

Passed on Second Reading 2/12/08 Ray E. Rickesin Recorder