Polk County Utilities, Florida

UTILITIES FATS, OILS, AND GREASE POLICY MANUAL

Utilities Code Reference Manual 6(G)



1. GENERAL

10.1 GENERAL

This MANUAL, which contains the PCU Fats, Oils, and Grease (FOG) Policy, shall serve to ensure that all PCU wastewater systems are operated and maintained in accordance with all Federal, State, and Local regulations.

- A. The ENGINEER or CUSTOMER shall be required to review this MANUAL, in addition to the "Utilities Standards and Specifications Manual" and "Industrial Wastewater Pretreatment Policy Manual", before designing a project or installing a fats, oils, or grease interceptor or trap.
- B. PCU believes this MANUAL will provide the ENGINEER or CUSTOMER with the understanding of the need to regulate the introduction of fats, oils, and grease into PCU's wastewater systems.
- C. PCU shall insure that the standards and specifications as set forth in this MANUAL will be uniformly enforced.
- D. PCU reserves the right to update this MANUAL as necessary due to changes in FDEP policies and regulations.
- E. PCU reserves the right to institute at any time a fats, oils, and grease monitoring program either utilizing PCU employees, PCU approved private contractors that are selected and paid for by the CUSTOMER, or a PCU contracted monitoring service on a cost recovery basis from the CUSTOMER.

10.2 **GOALS**

PCU desires to be proactive in complying with the Clean Water Act (CWA) and cooperating with the Environmental Protection Agency (EPA) initiative to abate wastewater overflows within the jurisdiction of PCU in order to protect the public health and the quality of surface waters.

10.3 Objectives

The build up of fats, oils, and grease within a wastewater system result in overflows and excessive maintenance of wastewater collection and treatment systems. Such overflows can result in the transmission of diseases, toxic materials, and/or other hazardous liquids into the environment. Therefore, it is necessary to establish and maintain a fats, oils, and grease monitoring program to protect the health of PCU CUSTOMERS and/or the general public.

10.4 <u>DEFINITIONS</u>

A. Analogous Words and Terms

For the purpose of this MANUAL, the following analogous words and terms shall be interpreted to have similar meanings when not inconsistent with the context:

- 1. Words used in the singular number include the plural and words used in the plural number include the singular.
- 2. Words used in the present tense include the future tense.
- 3. The word "constructed" includes the word "erected," "built," "installed," "rebuilt", and "repaired".
- 4. The word "structure" includes the word "building".
- 5. The word "include" is a word of enlargement and not limitation.
- 6. The word "shall" is mandatory and the word "may" is permissive.

B. Abbreviations

1. Agencies:

AASHTO /	American <i>I</i>	Association of	State Highway	and 1	Fransportation
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Officials

ANSI American National Standards Institute

APWA American Public Works Association

ASSE American Society of Sanitary Engineers

ASTM American Society for Testing Materials

AWWA American Water Works Association

DIPRA Ductile Iron Pipe Research Association

EPA United States Environmental Protection Agency

FCCCHR Foundation for Cross Connection Control and Hydraulic

Research of the University of Southern California

FDOT Florida Department of Transportation

FDEP Florida Department of Environmental Protection

FDNR Florida Department of Natural Resources

FDOH Florida Department of Health

FPSC Florida Public Service Commission

HUD Department of Housing and Urban Development (Federal

and/or State)

NCPI National Clay Pipe Institute

NEC National Electrical Code

NEMA National Electrical Manufacturers Association

NFPA National Fire Protection Association

OSHA Occupational Safety and Health Administration (Federal

and/or State)

PCDNR Polk County Division of Natural Resources

PCDOT Polk County Division of Transportation

PCU Polk County Utilities

UL Underwriters Laboratories

2. General

DIP Ductile Iron Pipe

fps feet per second

F.A.C. Florida Administrative Code

gpd gallons per day

gpm gallons per minute

HDPE High Density Polyethylene

mgd million gallons per day

p.s.i. Pounds per Square Inch (gauge)

PVC Polyvinyl Chloride

ROW Right-of-Way

C. Definitions

Except where specific definitions are used within a specific section of this MANUAL for the purpose of such sections, the following words and phrases are defined and shall have the meaning assigned except in those instances where the context clearly indicates a different meaning. The words "shall" and "will" are mandatory and not discretionary. The word "may" is permissive.

BOARD: the Polk County Board of County Commissioners.

DIRECTOR: the person who is responsible for the day to day administration and management of Polk County Utilities.

ENVIRONMENTAL PROTECTION AGENCY (EPA): the Environmental Protection Agency of the United States, its Administrator, or other duly authorized representative of said agency.

FOOD SERVICE ESTABLISHMENT: any facility engaged in preparing and/or packaging food or beverages for sale or consumption, on or off site, with the exception of private residences. Food service establishments shall include, but are not limited to food courts, food manufacturers, food packagers, restaurants, grocery stores, convenience stores, bakeries, cafeterias, lounges, hospitals, correctional facilities, hotels, nursing homes, churches and schools.

FLOATABLE GREASE: oil, fat or grease in a physical state such that it will separate, by gravity, from wastewater by treatment in an approved pretreatment device.

GARBAGE GRINDER: a device that shreds or grinds up solid or semisolid waste materials into smaller particles for discharge into the wastewater collection system.

GRAB SAMPLE: a sample that is taken from a wastewater discharge on a one-time basis with no regard to the volume of flow in the discharge.

GRAY WATER: all of the liquid contained in a grease interceptor that lies below the floating grease layer and above the food solids (sediment) layer. Wastewater that does not contain bodily fluids or waste products.

GREASE: a material either liquid or solid that is composed primarily of fat, oil, and grease from animal or vegetable sources. The terms "fats, oils, and grease" (FOG) and "oil and grease" shall be included within this definition.

GREASE INTERCEPTOR: a device located underground and outside of a food service establishment designed to collect, contain or remove food wastes and grease from the waste stream while allowing the liquid waste to discharge to the wastewater collection system by gravity.

GREASE TRAP: a device whose rated flow is less than 50 gpm, located in a food service establishment and/or under a sink designed to collect, contain or remove food wastes and grease from the waste stream while allowing the balance of the liquid waste to discharge to the wastewater collection system by gravity.

NOTICE OF VIOLATION (NOV): a written notice informing a user that a violation of this ordinance has occurred.

NOTIFY: contact by telephone, in person or via certified United States Mail, return receipt requested.

POLK COUNTY UTILITIES: the Polk County entity which has the responsibility of administering, operating, and maintaining the PCU Utility Systems.

PREMISES: a parcel of real estate or portion thereof including any improvements thereon which is determined by PCU to be a single user for the purposes of receiving, using and paying for sewer services.

PRETREATMENT REVIEW COMMITTEE: a panel made up of the following individuals whose main function is to review user appeals relating to grease issues, Chief Building Inspector or designee, Utilities Director or designee, and the Pretreatment Coordinator or designee. The County Attorney or designee shall serve as a non-voting member of the panel providing substantive and procedural legal advice to the Pretreatment Review Committee.

PUBLICLY OWNED TREATMENT WORKS (POTW): a treatment works, also referred to as a Wastewater Treatment Plant, as defined by Section 212, CWA, (33 U.S.C. 1292) which is owned by PCU. Any devices and systems used to pump, store, treat, recycle and reclaim municipal sewage or industrial

wastes of a liquid nature. The POTW shall include PCU owned and maintained, mains, lift stations that convey wastewater to the POTW. Any sewers that convey waste waters to the POTW from persons outside of a PCU utility service area. Users of the POTW by contract or agreement with PCU.

REFERENCE MANUAL 6(A): the Polk County Utilities Administration Manual, adopted by reference herein.

REFERENCE MANUAL 6(B): the Polk County Utilities Standards and Specifications Manual, adopted by reference herein.

REFERENCE MANUAL 6(C): the Polk County Utilities Cross-Connection Control Policy Manual, adopted by reference herein.

REFERENCE MANUAL 6(D): the Polk County Utilities Reclaimed Water Policy Manual, adopted by reference herein.

REFERENCE MANUAL 6(E): the Polk County Industrial Wastewater Pre-Treatment Policy Manual, adopted by reference herein.

REFERENCE MANUAL 6(F): the Polk County Utilities Water Conservation Policy Manual, adopted by reference herein.

REFERENCE MANUAL 6(G): this Manual, the Polk County Utilities Fats, Oils, and Grease Policy Manual, adopted by reference herein.

REPLACEMENT COSTS: expenditures for obtaining and installing equipment, accessories or appurtenances necessary to retain design capacity and performance of the POTW throughout the jurisdiction of PCU

SANITARY SEWER OVERFLOW: releases of untreated sewage into the environment.

WASTEWATER: the liquid and water containing industrial or domestic wastes from dwellings, commercial buildings, industrial facilities, institutions and any other source, whether treated or untreated which is contributed to or permitted to enter the POTW.

2. FOOD SERVICE ESTABLISHMENTS

20.1 GENERAL

All food service establishments are required to have a grease interceptor. The requirements in this document are in addition to any requirements of the Florida Plumbing Code and the Standard Plumbing Code. Multi-family dwellings, such as

triplexes, quadruples, townhouses, condominiums, apartment buildings, apartment complexes or areas of intensified dwellings shall install a grease interceptor, if PCU determines that such a device is needed. A grease trap/interceptor inspection fee, as established by a separate Board approved resolution, shall be paid through the monthly service bill by all food service establishments required to install and maintain grease traps/interceptors in accordance with this MANUAL. All food service establishments shall maintain records on the premises regarding the serving of and/or repairs to its grease interceptor(s) or grease trap(s). Said record shall be made available for inspection by PCU upon request. The record shall include receipts from the hauler servicing the interceptor/trap with the date and amount of wastes pumped. If a grease trap is serviced and/or cleaned by the establishment's employees, the record shall indicate who performed the service and cleaning and the date said service and cleaning took place.

20.2 NEW FACILITIES

Upon the effective date of this document, food service establishments which are newly proposed or constructed, or existing facilities which will be expanded or renovated, where such facility did not previously exist, shall be required to install, operate and maintain a grease interceptor or grease trap according to the requirements detailed in this document.

20.3 EXISTING FACILITIES

For the purpose of sizing and installation of grease interceptors, all food service establishments existing within PCU's utility service areas prior to this MANUAL shall be permitted to operate and maintain existing grease traps/interceptors provided same are in efficient operating condition. Upon the effective date of this document, PCU may require an existing food service establishment to install, operate and maintain a new grease interceptor or trap that complies with the requirements of this MANUAL or to modify or repair any noncompliant plumbing or existing interceptor or trap within ninety (90) days of written notification by PCU when any one or more of the following conditions exist:

- 20.3.1 The facility is found to be contributing oils and grease in quantities sufficient to cause line stoppages or necessitate increased maintenance on the wastewater collection system; and/or,
- 20.3.2 The facility is found to be contributing oils and grease in quantities in excess of 100mg/L; and/or,
- 20.3.3 The facility has an undersized, irreparable or defective grease interceptor or trap; and/or,

- 20.3.4 The facility has a garbage grinder; and/or,
- 20.3.5 Remodeling of the food preparation or kitchen waste plumbing system is performed which requires a plumbing or building permit to be issued; and/or,
- 20.3.6 The existing facility is sold or undergoes a change of ownership.

3. PLUMBING CONNECTIONS

Grease interceptors or traps shall be located in the food service establishments lateral sewer line between all fixtures, which may introduce grease into the sewer system and the connection to PCU's wastewater collection system. Such fixtures shall include but not be limited to, sinks, dishwashers, automatic hood wash units, floor drains in food preparation and storage areas, and any other fixture which is determined to be a potential source of grease. All garbage grinders installed within food service establishments must be plumbed through the grease interceptor(s). Grease interceptor capacity and maintenance frequency must be increased in all such instances to account for increased solids accumulation. Wastewater from sanitary facilities and other similar fixtures shall not be introduced into the grease interceptor or trap under any circumstances.

30.1 GREASE TRAPS

Grease Traps shall be prohibited for new food service establishments, except those facilities where inadequate space is available for the installation of a grease interceptor. Approval of the installation of a grease trap instead of a grease interceptor at a new food service establishment shall meet the following criteria:

30.1.1 Trap design and location:

Grease traps shall conform to the standards in the Plumbing and Drainage Institute (PDI) Standard- G101 document. Grease traps shall be installed in strict accordance with the manufacturer's instructions. Grease traps shall be equipped with a cover that can be opened for inspection and sampling and a mechanism for secure closing.

30.1.2 Trap Capacity:

The capacity of the grease trap shall be related to the flow rate as indicated in the table below:

Flow Rates and Grease Retention Capacity Ratings for Grease Interceptors
For Commercial and Institutional Use

Flow Rate (GPM)	Grease Retention Capacity Rating (Pounds)	Maximum Capacity of Fixtures Connected to Interceptor (Gallons)
10	20	25.0
15	30	37.5
20	40	50.0
25	50	62.5
35	70	87.5
50	100	125.0

30.1.3 Flow-through Rate:

Flow-through rates shall be calculated in accordance with the procedures in the PDI Standards G101 document.

30.1.4 Flow Control Device:

Grease traps shall be equipped with a device to control the rate of low through the unit. The rate of flow shall not exceed the manufacturers rated capacity recommended in gallons per minute for the grease trap.

30.1.5 Venting:

The flow-control device and the grease trap shall be vented in accordance with the Florida Plumbing Code current edition. The vent shall terminate not less than six (6) inches above the flood-rim level or in accordance with the manufacturers' instructions.

30.1.6 Inspection, Cleaning, and Maintenance:

Each food service establishment shall be solely responsible for the cost of trap installation, inspection, cleaning, and maintenance. Cleaning and maintenance must be performed when the total volume of captured

grease and solid material displaces more than twenty percent (20%) of the total volume of the unit. Each food service establishment shall determine the frequency at which their grease trap shall be cleaned. All grease traps shall be serviced and cleaned a minimum of every 45 calendar days. PCU reserves the right to require a more frequent servicing schedule based on its periodic evaluation of the cleaning and maintenance record for each individual grease trap.

30.1.7 Repairs:

The food service establishment shall be responsible for the cost and scheduling of all repairs to its grease trap(s). Repairs required by PCU shall be completed within ten (10) calendar days after the date of written notice of required repairs is received by the facility, unless PCU approves in writing of a different schedule. Disposal:

Grease and solid materials removed from a grease trap shall be disposed of in the solid waste disposal system (garbage can) if cleaned by facility owner or employees. No grease or solids removed from a grease trap shall be returned to any grease interceptor, private wastewater system, storm water collection system, or to any portion of PCU's wastewater collection system.

30.2 GREASE INTERCEPTORS:

Grease interceptors shall be installed at all new food service establishments except where physical space is limited. All new and existing grease interceptors shall meet the following criteria:

30.2.1 Interceptor Design and Location:

Grease interceptors shall have a minimum of two (2) compartments and shall be capable of separation and retention of grease and storage of settled solids. Interceptor design shall conform to the requirements of Florida Plumbing Code Sections 10035.1 and1003.5.2. A control manhole over each compartment for monitoring purposes shall be required and installed at the owner/operators sole expense. Covers shall have a gas tight fit. The grease interceptor shall be designed, constructed and installed with an H-20 traffic bearing capacity. Flow control devices shall be required where the water flow through the interceptor may exceed it rated flow. Interceptors shall be installed in a location outside of the building, which provides easy access at all times for inspections, cleaning and proper maintenance, including pumping.

30.2.2 Interceptor Capacity:

Grease interceptor capacity calculations shall be performed by each food service establishment based on size and type of operation according to the formula contained in Table 1003.4.1 and Table 1003.5.1 of the Florida Plumbing Code or this MANUAL, which is greater. Minimum capacity of any one unit shall be seven hundred fifty (750) gallons as required by the Florida Plumbing Code and maximum capacity shall be one thousand two hundred fifty (1,250) gallons. Where sufficient capacity cannot be achieved with a single unit, installation of grease interceptors in series is required. The capacity of the grease interceptor required for food manufacturing or processing facilities or multi-family dwellings which are not covered by the Florida Plumbing Code shall be approved by PCU in accordance with the UTILITIES CODE utilizing the mass and type of food prepared, the wastewater volume produced from food preparation or manufacture, total hours of operation per day, and a load factor depending on the installed equipment.

30.2.3 Inspection, Pumping, and Maintenance:

Each food service establishment shall be responsible for the costs of installing, inspecting, pumping, cleaning, and maintaining its grease interceptor. Pumping services shall include the complete removal of all contents, including floating materials, wastewater, and bottom sludge and solids from the interceptor. Grease interceptor cleaning shall include scraping excessive solids from the walls, floors, baffles, and all pipe work. The return of gray water back into the grease interceptor from which the wastes ere removed will not be allowed. It shall be the responsibility of each food service establishment to inspect its grease interceptor during the pumping procedure to ensure that the interceptor is properly cleaned out and that all fittings and fixtures inside the interceptor are in working condition and functioning properly.

30.2.4 Interceptor Pumping Frequency:

All grease interceptors shall be pumped and serviced every 120 calendar days. PCU reserves the right to require a more frequent servicing schedule based on its periodic evaluation of the cleaning and maintenance record for each individual grease interceptor.

Each food service establishment shall determine the frequency at which its interceptor(s) shall be pumped according to the following criteria:

- A. When the floatable grease layer exceeds six inches (6") in depth as measured by an approved dipping method; or,
- B. When the settable solids layer exceeds eight inches (8") in depth as measured by an approved dipping method; or,
- C. When the total volume of settable solids is more than three quarters (3/4) of the total clearance of the outlet pipe located at the bottom of the interceptor; or,
- D. When the total volume of captured grease and solid material displaces more than twenty percent (20%) of the capacity of the interceptor as calculated using an approved dipping method; or,
- E. When the interceptor is not retaining/capturing oils and greases; or the oil/grease concentration of the water being discharged, as determined through sampling and analysis, is greater than 100 mg/L.

30.2.5 Repairs:

Each food service establishment shall be responsible for the cost and scheduling of all repairs to its grease interceptor(s). Repairs required by PCU shall be corrected within ten (10) calendar days after the date of written notice or requiring the repairs is received by the facility of unless notice from PCU establishes a different compliance date.

30.2.6 Disposal:

Wastes removed from each grease interceptor shall be disposed of at a facility permitted to receive such wastes or at a location designated by PCU for such purposes. Neither grease nor solid materials removed from interceptors shall be returned to any grease interceptor, private wastewater system, storm water collection system, or to any portion of PCU's wastewater collection system.

30.3 <u>Interceptor Additives:</u>

Any chemicals, enzymes, emulsifiers, live bacteria or other grease cutters or additives shall be approved by PCU prior to their use by the food service establishment or the grease hauler. Material Safety Data Sheets and any other applicable information concerning the composition, frequency of use and mode of action of the proposed additive shall be sent to PCU together with a written statement outlining the proposed use of the additive(s). Based upon the information received and any other information solicited from the potential user or supplier, PCU shall permit

or deny the use of the additive in writing. All additives shall be evaluated by PCU to determine if they will be compatible with PCU's WWTF and wastewater collection system. Permission to use any specific additive may be withdrawn by PCU at any time. The addition of any of these chemicals or additives does not eliminate the need to pump and service a grease trap or interceptor.

30.4 Alternative Grease Removal Devices or Technologies:

Alternative devices and technologies such as automatic grease removal systems shall be subject to written approval by PCU prior to installation. Approval of the device shall be based on demonstrated (proven) removal efficiencies and reliability of operation. PCU may approve these types of devices depending on manufacturers' specifications on a case-by-case basis. The food service establishment may be required to furnish analytical data demonstrating that grease discharge concentrations to PCU wastewater collection system will not exceed the established limitation.

4. ENTRY, INSPECTION, AND SAMPLING

40.1 Entry:

All food service establishments shall allow PCU, bearing proper credentials and identification, to all parts of the premises during reasonable business hours, for the purpose of inspection, observations, and sampling in accordance with the provisions of this Document. Any user refusing PCU entry to or upon the premises of the user for the purposes of inspection, sampling effluents or performing such other duties as required by the document shall constitute a violation of the terms of this document. PCU may seek a warrant or use any other legally available procedures to discharge their duties.

40.2 <u>Inspection and Sampling:</u>

PCU may inspect the facilities of any food service establishment, to ascertain compliance with this document. Grease interceptors and traps shall be inspected as necessary to insure compliance with specific grease trap/interceptor requirements and to determine if proper cleaning and maintenance schedules are being performed. PCU may collect effluent samples to determine compliance. PCU shall re-inspect any user that received a deficiency notice after the original inspection. In the event that the user is compliant with all of the deficiencies, there shall be no charge for the re-inspection. In the event of continuing non-compliance,

successive re-inspections will be scheduled and appropriate fees shall be charged to the user for the first and all successive re-inspections. Such fees may be charged to the appropriate account of the Polk County Utilities Water & Sewer bill.

5. ENFORCEMENT, REVIEW COMMITTEE, MEETINGS, CITATIONS, INJUNCTIVE RELIEF, AND DAMAGE ASESSMENTS

50.1 <u>Enforcement Response Plan</u>

Whenever PCU determines that a grease trap or interceptor is in need of pumping, repairs or other maintenance, or in the event that an additional grease interceptor is required, PCU shall proceed as prescribed below:

- 50.1.1 PCU conducting the inspection who determines that a violation exists shall immediately notify the owner/manger of the food service establishment that a violation exists and must be addressed promptly.
- 50.1.2 PCU may issue the food service establishment a Notice of Violation (NOV) stating the nature of the violations. Upon issuance of an NOV:
 - A. PCU shall perform a first re-inspection ten (10) calendar days after issuance of the NOV, to allow sufficient time for corrective action by the food service establishment of be completed. In the event that the food service establishment is compliant with all of the deficiencies, there shall be no charge for the reinspection. If all of the deficiencies have not been corrected, a first re-inspection fee shall be charged to the food service establishment in accordance with the fee schedule adopted by a separate Board approved resolution. A second re-inspection will be performed after a minimum of ten (10) additional calendar days have passed. In the event that the food service establishment is compliant with all of the deficiencies that shall be no additional charge for the re-inspection. If all of the deficiencies have still not been corrected, a second re-inspection fee shall be charged to the food service establishment in accordance with the fee schedule adopted by a separate Board approved resolution. If a third or more re-inspections are required a re-inspection fee for each successive re-inspection shall be charged to the food service establishment in addition to other enforcement actions if all of the deficiencies have still not been corrected in accordance with the fee schedule adopted by

a separate Board approved resolution. All fees shall be added to the Polk County Water and Sewer bill of the food service establishment.

- B. If the food service establishment responds with an acceptable explanation for the violation, and a plan for rectifying the situation, or makes good a deficiency within the prescribed time, enforcement ceases at the discretion of PCU.
- C. If a food service establishment continues to violate the provisions set forth in this document, or fails to initiate/complete corrective action in response to a NOV, PCU may pursue one of more of the following options:
 - Pump the grease interceptor and place the appropriate charge on the facility's monthly sewer bill in accordance with the fee schedule adopted by a separate Board approved resolution; and/or,
 - 2. Assess further inspection fees as provided in accordance with the fee schedule adopted by a separate Board approved resolution; and/or,
 - Terminate water and sewer service.

50.2 <u>Pretreatment Review Committee</u>

At any point during the enforcement process, a food service establishment may request a meeting of the Pretreatment Review Committee to appeal any request being made by PCU.

50.3 Conciliation Meetings:

At any point before or during the enforcement action, PCU may, but is not required to invite representatives of the user to a conciliation meeting to discuss the violations and methods of correcting the cause of the violation. If the user and PCU can agree to appropriate remedial and preventive measures, they shall commit such agreement to writing with provisions for a reasonable compliance schedule. If an agreement is not reached through the conciliation process, PCU shall continue with the enforcement policy as outlined in this document and take all appropriate action to insure compliance with his document or other law or regulation.

50.4 Civil and Injunctive Relief

Upon approval of the County Attorney or designee, PCU may file, in a court of competent jurisdiction, a suit seeking the issuance of an injunction, damages or other appropriate relief to enforce the provisions of this document or other applicable law or regulation. Suit may be brought to recover any and all damages suffered by PCU as a result of any action or inaction of any user or other person who cause or suffers damage to occur to the POTW or for any other expense, loss or damage of any kind or nature suffered by PCU.

50.5 Assessment of Damages to Users

When the discharge from a food service establishment causes an obstruction, damage or any other impairment to the facilities or any expense of whatever character or nature to PCU, PCU may charge the expenses incurred by PCU to clear the obstruction, repair damage to the facility and any other expenses or damage of any kind or nature suffered by PCU. PCU shall file a claim with the food service establishment or any other person causing or suffering said damages to occur seeking reimbursement for any and all expenses or damages suffered by PCU. If the claim is ignored or denied, PCU may charge the expense to the Polk County Water and Sewer bill, or notify the County Attorney, or designee, to take such measures as shall be appropriate.