



POLICY STATEMENT
Commonwealth of Pennsylvania • Department of Corrections

Policy Subject: Facility Maintenance		Policy Number: 10.2.1
Date of Issue: June 9, 2016	Authority: Signature on File John E. Wetzel	Effective Date: June 16, 2016

I. AUTHORITY

The Authority of the Secretary of Corrections to direct the operation of the Department of Corrections is established by Sections 201, 206, 506, and 901-B of the Administrative Code of 1929, 71 P.S. §§61, 66, 186, and 310-1, Act of April 9, 1929, P.L. 177, No. 175, as amended.

II. APPLICABILITY

This policy is applicable to all facilities operated under the jurisdiction of, or conducting business with the Department of Corrections.

III. POLICY

It is the policy of the Department to achieve effective and efficient facility maintenance.

IV. PROCEDURES

All applicable procedures are contained in the procedures manual that accompanies this policy document.

V. SUSPENSION DURING AN EMERGENCY

In an emergency or extended disruption of normal facility operation, the Secretary/designee may suspend any provision or section of this policy for a specific period.

VI. RIGHTS UNDER THIS POLICY

This policy does not create rights in any person nor should it be interpreted or applied in such a manner as to abridge the rights of any individual. This policy should be interpreted to have sufficient flexibility to be consistent with law and to permit the accomplishment of the purpose(s) of the policies of the Department of Corrections.

VII. RELEASE OF INFORMATION AND DISSEMINATION OF POLICY

A. Release of Information

1. Policy

This policy document is public information and may be released upon request.

2. Confidential Procedures (if applicable)

Confidential procedures for this document, if any, are not public information and may not be released in its entirety or in part, without the approval of the Secretary of Corrections/designee. Confidential procedures may be released to any Department of Corrections employee on an as needed basis.

B. Distribution of Policy

1. General Distribution

The Department of Corrections policy and procedures shall be distributed to the members of the Central Office Executive Staff, all Facility Managers, and Community Corrections Regional Directors on a routine basis. Distribution of confidential procedures to other individuals and/or agencies is subject to the approval of the Secretary of Corrections/designee.

2. Distribution to Staff

It is the responsibility of those individuals receiving policies and procedures, as indicated in the "General Distribution" section above, to ensure that each employee expected or required to perform the necessary procedures/duties is issued a copy of the policy and procedures either in hard copy or via email, whichever is most appropriate.

VIII. SUPERSEDED POLICY AND CROSS REFERENCE

A. Superseded Policy

1. Department Policy

10.2.1, Facility Maintenance, issued August 27, 2008, by former Secretary Jeffrey A. Beard, Ph.D.

2. Facility Policy and Procedures

This document supersedes all facility policy and procedures on this subject.

B. Cross Reference(s)

1. Administrative Manuals

- a. DC-ADM 816, Inmate Compensation
- b. 1.1.1, Policy Management System
- c. 1.1.2, Accreditation Program – Annual Inspections
- d. 3.1.1, Fiscal Administration
- e. 6.3.1, Facility Security

2. ACA Standards

- a. Adult Correctional Institutions: 5-1A-4003-1, 5-1B-4029, 5-1B-4037, 5-2B-4125, 5-2C-4134, 5-3B-4213, 5-3B-4216, 5-3B-4218, 5-3B-4219, 5-3B-4224, 5-5D-4330, 5-7A-4452
- b. Adult Community Residential Services: 4-ACRS-1C-15
- c. Correctional Training Academies: 1-CTA-2A-03
- d. Performance Based Standards for Correctional Industries: 2-CI-6A-7

3. Other

- a. Executive Order 1999-1, Land Use Planning
- b. Executive Order 2003-2, Agricultural Land Preservation Policy



PROCEDURES MANUAL
Commonwealth of Pennsylvania • Department of Corrections

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Release of Information:

Policy Document: This policy document is public information and may be released upon request.

Procedures Manual: The procedures manual for this policy may be released in its entirety or in part, with the prior approval of the Secretary/designee. Unless prior approval of the Secretary/designee has been obtained, this manual or parts thereof may be released to any Department employee on an as needed basis only.

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Section 1 – General Procedures

A. Facility Maintenance

It is the primary objective of a Maintenance Department to provide routine and preventive maintenance for a facility. Each facility shall have a written plan for preventive maintenance of the physical plant and utilities that includes provisions for emergency repairs or replacement in situations that threaten safety or institutional security.¹ **The annual maintenance inspection will review Preventative maintenance to determine compliance with policy.** Construction projects are subordinate to this primary function.

B. General

1. It is the responsibility of the Facility Maintenance Manager (FMM) 1, FMM2, or FMM3 (the ranking or senior FMM, hereinafter called the Lead FMM) to maintain certain records, files, and data, as well as review and update this information at regular intervals on buildings, grounds, physical plant, **equipment**, and operations. **Equipment shall include, but is not limited to, list of assets, elevators, equipment requiring a certificate of operation, etc.**
2. The Department of General Services (DGS), Bureau of Facilities Management, maintains a record of all lands and buildings owned by the Commonwealth, and the data for this inventory is supplied by each facility. It is the responsibility of the Lead FMM of each facility to maintain land and building records of its facilities, to update these records regularly, and to report all changes, in the form of the Biennial Survey, to the Bureau of Operations who will make the appropriate report to DGS/Bureau of Facilities Management.²
3. At each facility, the Maintenance Department shall maintain a complete indexed set of facility drawings. The set should include plot plans, building drawings, utility distribution systems, and other pertinent information. Original facility drawings should be kept up-to-date with changes as they are made, and stored in a locked room or cabinets in accordance with Department policy **6.3.1, “Facility Security.”** Inmates shall never have access to these drawings.
4. The Maintenance Department is responsible for maintenance of the automotive equipment assigned to the facility, Pennsylvania Bureau of Correctional Industries (PCI), and the Bureau of Community Corrections (BCC). Records should be kept on each piece of equipment and data recorded on mileage, maintenance required, and the economics of operations in accordance with Department policy **3.1.1, “Fiscal Administration,” Section 8.**
5. Budget requests are required annually from the facility on Capital Improvements, Maintenance Projects, and Fixed Assets of Capital Equipment. The Maintenance

¹ 5-3B-4224, 5-3B-4218, 1-CTA-2A-03

² 5-1B-4037

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Department has the principal responsibility for assembling information on these classes of items. It is from this original information that the Department's Budget Request is prepared and subsequent allocations are made. A comprehensive rationale is required in narrative form (a needs evaluation study) for Budget Requests. A five-year forecast of major budget items is to be maintained by the Facility Manager/Deputy Superintendent for Facilities Management (DSFM)/designee, and submitted annually at the request of the Director, Bureau of Operations, and/or Director, Bureau of Administration.³

6. It is the responsibility of the Lead FMM to operate the physical plant at the highest possible efficiency. Every effort shall be made to reduce waste to an absolute minimum, and to find ways to conserve energy with input and assistance from facility and Central Office staff. In addition, the physical plant shall be operated to comply with American Correctional Association (ACA) standards. ***The design of all renovations, additions, and new construction of physical plant shall comply with Labor and Industry Uniform Commercial Code (L&I UCC), ACA standards, and the ADA (Americans with Disabilities Act) as well as facilitate personal contact and interaction between staff and inmates.***⁴

7. ***The Bureau of Operations maintains and operates various diagnostic equipment for electrical and piping systems, thermo-imaging, and has contracted the Penn State Facilities Engineering Institute (PSFEI) to perform various services to the Department of Corrections (DOC) to include consultation, remedial planning, and operation efficiency assessments at no additional costs to individual institutions. In coordination with Central Office Bureau of Operations, efforts should be made to utilize the services of this contract, when applicable.***

C. Reports⁵

The following reports shall be prepared at the facility level and shall be submitted monthly unless otherwise indicated. The Lead FMM shall be responsible for preparing reports as well as providing all required records, files, and data to the Bureau of Operations in order to comply with all rules, regulations, codes, and laws whether or not described herein.

1. Annual Inventory of Facility Roadways (Attachment 1-A)

The Pennsylvania Department of Transportation (Penn DOT) maintains an inventory of all highways and roads within the Commonwealth. Annually, each facility ***shall*** report the number of miles of public facility roads divided into the different types of road surfaces as defined below. Each facility shall keep accurate records and record any new construction, abandonment, or change in surface type. The submission of the **Annual Inventory of Facility Roadways** must be received by December 15 each year.

³ 5-1B-4029

⁴ 5-2B-4125

⁵ 5-5D-4330

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- a. Public Roadways: Defined as a roadway that does not have restrictive signage or gates and is open to the public.
- b. Roadway Surfaces:
 - (1) bituminous Type 51 --- ≤ 1 " depth;
 - (2) bituminous Type 52 --- ≤ 7 " but ≥ 1 " depth;
 - (3) bituminous Type 62 --- ≥ 7 " depth;
 - (4) unpaved; and/or
 - (5) concrete.

2. Annual Operations Inspections Reports

The reports shall be submitted as directed in accordance with **Section 4** of this procedures manual.

3. **Monthly Utilities Usage Report** (refer to **Attachments 5-A & 5-C**)

All facilities shall submit this report, which summarizes the utilities consumed and their cost for the month. This report is available electronically for electronic submission to PSFEI as directed in accordance with **Section 5** of this procedures manual.

4. **Monthly Boiler Water Treatment Log** (refer to **Attachment 5-B**)

All facilities utilizing Department owned and operated boilers shall submit this report which summarizes the Boiler Water Analysis and Treatment for the month. This report is available electronically for electronic submission to PSFEI as directed in accordance with **Section 5** of this procedures manual.

5. **Monthly Cooling Tower Reports/Logs** (refer to **Attachments 14-B through 14-E**)

All facilities utilizing Department owned and operated cooling towers, shall submit the Monthly Cooling Tower Reports/Logs which summarize the Cooling Tower Water Analysis and Treatment for the month.

6. Sewage Treatment Plant Discharge Monitoring Report (DMR)

Only those facilities that operate on-site sewage treatment plants are required to submit a National Pollutant Discharge Elimination System (NPDES) Discharge Monitoring Report (DMR). This report summarizes the flow and treatment of sewage during the month, and is due to the Department of Environmental Protection (DEP) by the 15th of the following month. A copy of the signed DMR shall be sent to the Bureau of Operations. In addition,

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copies of any other reports sent to the DEP or any other regulatory agency shall be copied to the Bureau of Operations.

7. Waterworks Operation Report

Those facilities that operate a public water system shall complete and submit all required reporting documents to applicable regulatory agencies with copies forwarded to the Bureau of Operations.

8. Air Quality Reports

Only those facilities that are regulated by a DEP air quality operating permit are required to submit copies of all air quality reports to the Bureau of Operations, as well as copies of all correspondence between a facility and any regulatory agency.

9. Environmental and Safety Reports

- a. All facilities must send copies of any reports generated or correspondence received from any applicable regulatory agency to the Bureau of Operations.
- b. ***The Lead FMM will ensure all accidents within the maintenance department are investigated. Investigations are to be completed within 24 hours and reported to the safety manager in accordance with Department policy 15.1.1, "General Safety," Section 22.***
- c. ***The Lead FMM will ensure applicable safety reports such as, lock out tag out, confined space entry, and trenching are completed and submitted to the facility safety manager in accordance with Department policy 15.1.1.***

10. Recycling (see **Section 10 of this procedures manual**)

11. Biennial Survey

- a. Pursuant to Act 25 of 1975, Section 508 (b), each facility is required to submit a survey of all buildings, equipment, land, and improvements connected with and comprising each facility, including maintenance, repairs, improvements, alterations, and additions to its buildings, land, and equipment.
- b. This report shall be submitted on the anniversary of the construction of each facility and updated every two years thereafter to the Bureau of Operations. This report shall be submitted electronically in the format set forth by the Bureau of Operations.

D. Inmate Labor⁶

1. An inmate shall be assigned to the Maintenance Department based on his/her custody level, interest, ability, skill, job availability, and willingness to learn the appropriate trade as determined by Inmate Employment. Inmates shall be paid in accordance with Department policy **DC-ADM 816, “Inmate Compensation.”**
2. The use of inmates in construction and maintenance is intended to provide an opportunity for incarcerated individuals to develop work habits, gain experience, and develop skills in different trades. At the same time, they are to be encouraged to participate in vocational and academic training to provide the basis for further development. **Trades instructors shall report and record both inmate training provided and inmate progress monthly.**
3. While use of inmate labor is encouraged, at no time shall inmates be permitted to work on or be in a position to directly observe work being conducted on security systems, programs, or keying operations that would compromise the security of the facility.

E. Emergency Light and Power Systems⁷

1. Illumination devices for facility exits, housing units, and yard lighting, as well as perimeter lighting, and surveillance systems shall be connected to an emergency generator, a stand-by generator, or other alternate power source.
2. Power generators are inspected weekly.⁸
3. When use of an emergency generator is impractical or its capacity is insufficient, battery units may be used in accordance with applicable codes. Battery operated emergency lights shall only use highly reliable, rechargeable batteries capable of providing power for at least one and one-half hours.
4. To ensure reliability in time of need, emergency power generator(s) are to be tested under **full facility load** at a frequency recommended by the generator manufacturer. Testing must be conducted at least once a month, and only by knowledgeable and qualified staff. During testing, the operator will log operating conditions at regular intervals. Only qualified or certified staff shall operate and maintain the emergency generator(s). This log shall include at a minimum, coolant temperature, oil pressure, output voltage, frequency, and load amperage. This log will be retained and filed in the maintenance manager’s office. The vendor’s factory, or manufacturers that are certified or qualified in repairs, shall be on contract to service generators and switchgear in emergency repair situations and to maintain the reliability for their operation.⁹

⁶ 5-7A-4452

⁷ 5-3B-4216

⁸ 5-3B-4219

⁹ 5-3B-4219

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5. Emergency equipment, such as standby lighting, batteries, power generators, firefighting apparatus, communications systems, and alarms should be checked frequently to ensure their reliability. Testing shall be performed at whichever interval is the shortest between code and the manufacturer's recommendation, but not longer than quarterly. A log shall be maintained regarding these tests with deficiencies noted and repairs made immediately by the Maintenance Department.¹⁰
6. ***A list of all uninterruptable power supplies shall be maintained. This list shall include the battery installation date and unit test date. Batteries shall be changed upon a schedule, but no longer than their expected service life of the battery (example: three, five years).***
7. Other equipment and systems shall be tested according to the manufacturer's specifications.¹¹

¹⁰ 5-3B-4219

¹¹ 5-3B-4219

Section 2 – Maintenance and Construction Project Requests

A. General

1. All work that affects any modification of, or addition to a structure including residences, must be approved by the Department of Labor and Industry (L&I) prior to any work being performed, in accordance with **35 P.S. §§7210.101 to 7210.1103 (Act 45 of 1999)**, as amended by **Act 43 of 2001; Acts 13, 92, 230 of 2004, Act 95 of 2005; Acts 108 and 157 of 2006; Acts 9 and 39 of 2007; and Act 106 of 2008** known as the Uniform Construction Code (UCC) statute.
2. The **DC-178, Project Approval Request (Attachment 2-A)** must be submitted in writing to the **Bureau of Operations and describe the work to be performed. The Bureau of Operations shall evaluate the request, determine if UCC submittal is required, and process the request as described herein.**

B. Project Requests

1. All project requests shall be initiated electronically by each respective department head and forwarded to the Maintenance Department by using the **DC-178** located within the Facility Maintenance Management System. The **DC-178 shall be reviewed and the cost of the project** estimated. After cost and labor feasibility information is secured, the Lead Facility Maintenance Manager (FMM) **shall** present the request to facility executive staff for preliminary approval and funding. Any construction work affecting space allocation and/or involving **facility security systems** must be approved by Central Office **in accordance with Subsection B.3. below.**
2. After preliminary approval has been secured, the Lead FMM will initiate the **project, including the DC-178, if required.**
3. All projects defined in **Subsections C., D., or E. below**, and work involving renovation of buildings, alteration, or modification of any life safety device or system, office space, recreational area, etc., requires a **DC-178** to be completed by the Lead FMM, and submitted to the **Bureau of Operations** for approval. Prior to submission to Central Office, the Facility Manager/designee, **Lead FMM, Business Manager**, and Corrections Institution Safety Manager shall review the project and sign the **DC-178** indicating approval of the work. **The DC-178 shall be reviewed and signed by the Architectural Supervisor, Chief of Facilities Management, Chief of Safety/Environmental Protection, and the Director, Bureau of Operations. Upon obtaining all approval signatures, an electronic copy of the DC-178 shall be emailed to the Facility Manager/designee, Lead FMM, Business Manager, Corrections Institution Safety Manager, and the hard copy filed at Central Office.** No work shall begin, nor any materials ordered, without approval. Once all approvals are obtained, the Lead FMM **shall** assign the project to a Maintenance Manager for administration and assignment to the appropriate trade(s).

4. All projects defined in **Subsections C., D., or E. below** which directly involve the systems which detect, secure, or conduct surveillance of the perimeter require the completion of a **DC-178 and shall be** marked as a Security Project Request. **The Lead FMM shall complete the DC-178 and submit to the Bureau of Operations for approval. Prior to submission to Central Office, the Facility Manager/designee, Deputy Superintendent for Facilities Management (DSFM), Lead FMM, Major of the Guard, Intelligence Captain, Business Manager, Corrections Institution Safety Manager, and Regional Deputy Secretary/designee shall review the project and sign the DC-178 indicating approval of the work. At Central Office, the DC-178 shall be reviewed and signed by the Architectural Supervisor, Chief of Facilities Management, Chief of Safety/Environmental Protection, and Director, Bureau of Operations. Upon obtaining all approval signatures, an electronic copy of the DC-178 shall be emailed to the Facility Manager/designee, Lead FMM, Business Manager, Corrections Institution Safety Manager, and the hard copy filed at Central Office and maintained for a period of three years. No work shall begin, nor any materials ordered, without approval. Once all approvals are obtained, the Lead FMM shall assign the project to a Maintenance Manager for administration and assignment to the appropriate trade(s) (e.g. electrician, plumber, carpenter, etc.).**
5. Any alterations involving facility residences must comply with the provisions of Department policy 3.1.1, “**Fiscal Administration.**”
6. The Project Tracking Module of the Facility Maintenance Management System shall be used by the Lead FMM to identify, prioritize, and track the progress of requested projects.
7. Depending on the nature of the project, a project category shall be assigned to each project as follows:
 - a. Small Maintenance Project (SMP);
 - b. Non-Recurring Maintenance (NRM) **or Fixed Asset (FA) Project**, or
 - c. Capital Project (CP).

C. Small Maintenance Project (SMP)

SMPs consist of any work performed by the facility maintenance staff with a total project cost **of up to \$10,000. A DC-178 is not required for a SMP unless it meets the criteria outlined in Subsections B.3 or B.4. above.**

1. The Facility Manager/designee shall approve and prioritize all projects to reflect the needs of the facility.
2. The Lead FMM shall coordinate and manage all SMPs.

D. Non-Recurring Maintenance (NRM) and Fixed Asset (FA) Projects

1. ***NRM consists of restoration work done to keep a building, structure, or non-structural improvement, including the facility infrastructure, in its present condition or state of usefulness, to prevent its deterioration, or to restore it to its previous condition.***
2. ***FAs are assets of a long-term character, such as buildings, machinery, furniture, and other equipment requiring funding of more than \$5,000, which meet the following general criteria:***
 - a. ***can be expected to have a useful life of more than one year; and***
 - b. ***can be used repeatedly without materially changing or impairing their physical condition; and***
 - c. ***can be kept in serviceable condition by normal repair, maintenance, or replacement of parts or components.***
3. The procedures listed below shall be followed for NRM and ***FA Projects***.
 - a. The Facility Manager/designee shall approve and prioritize all projects ***to reflect the needs of the facility.***
 - b. ***The Lead FMM shall coordinate and manage all projects.***
 - c. ***Each project shall include a description, justification, estimated total project cost (preferably itemized), and submitted separately.***
 - d. In order to be included in the current fiscal year, all requests shall be submitted as directed by the Bureau of Administration or ***Bureau of Operations***.
 - e. Any work requested, meeting the requirements of a project, shall follow the procedures listed below.
 - (1) ***Maintenance work that does not exceed \$10,000 does not require completion of a DC-178 or review/approval from the Bureau of Operations unless a building permit is required by L&I, or work affects security system(s).***
 - (2) ***Projects to be performed by in-house labor and with a total cost greater than \$10,000 requires the completion of a DC-178 marked as In-House Project Request.***
 - (3) ***Projects to be performed by contractors and with total cost greater than \$10,000 and less than \$300,000 may require Department of General Services (DGS) involvement. The Lead FMM shall submit a DC-178 marked***

as NRM or FA Project Request (as applicable), to the Bureau of Operations. The Bureau of Operations shall submit projects to DGS as required, and coordinate with the Lead FMM during the various phases of project design (schematic, construction document, final, etc.) and construction. These projects are also called Agency Projects.

- (4) The local business office shall identify funding categories and coordinate funding approval, using the following categories:
 - (a) FA – Fixed Asset;
 - (b) O/M – Operations and Maintenance;
 - (c) IGWF – Inmate General Welfare Fund;
 - (d) CP – Capital Project;
 - (e) CI – Correctional Industries; and
 - (f) G – Grant Funding.
 - (5) **The Bureau of Operations shall coordinate between the Lead FMM and L&I to ensure timely processing of building permits.**
 - (6) The **DC-178** may be submitted at any time during the year in order to expedite the funding processes in advance of an anticipated project.
 - (7) Project information shall be recorded electronically utilizing the Facility Maintenance Management System Project Tracking and DGS Project Tracking modules. The results from those entries will be compiled automatically by the Bureau of Operations.
- f. **The Bureau of Operations shall coordinate with the facility, DGS, L&I, and any other jurisdictional agencies involved with the project to ensure timely processing of the project.**

E. Capital Projects

The Lead FMM is responsible for identifying and describing the scope of a Capital Project at the facility, and the Bureau of Operations shall assist with this process. The Facility Manager/designee shall approve and prioritize all capital project requests prior to submission to Central Office.

1. General Procedures

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- a. **The Lead FMM shall submit a DC-178 marked as Capital Project Request, to the Bureau of Operations. The Bureau of Operations shall submit projects to DGS as required.**
- b. Each project shall include a brief description of the project including its size, location, number of inmates, staff, etc., and any other pertinent information. Also indicate, in general terms, all major items of construction and facilities to be provided and a projected cost estimate.
- c. The project justification should state why the project is needed. If the proposed project is a new facility or expansion of an existing facility, also explain why existing facilities cannot meet the needs in the area to be served.
- d. The projects shall be prioritized as to needs.
- e. Requests shall be submitted **annually at the request of the Director, Bureau of Operations and/or Director, Bureau of Administration.**

2. Capital Budget Request

The Bureau of Operations shall prepare a request for a Capital Project for the Bureau of Administration for submission with the Department's Capital Budget Request.

3. Design and Construction

- a. **The Bureau of Operations shall coordinate with the Lead FMM, outside design professionals, DGS, and any other parties involved in each phase of the project's design (programming/schematic, design development, construction document, final, etc.)**
- b. **DGS shall bid, award, and provide construction administration for the project. The Bureau of Operations and the Lead FMM/designee shall coordinate with the outside design professionals, DGS, and any other parties involved in the project construction.**

F. Maintenance and Renovations of Correctional Industries (CI) Occupied Buildings

The following are the procedures to be used for purchasing materials and providing labor to make maintenance repairs and renovations to CI occupied buildings.

1. The DSFM and/or Deputy Superintendent for Centralized Services (DSCS) shall meet with the Lead FMM and the CI Manager to identify and prioritize maintenance and renovation projects and present these findings to the Facility Manager/designee.
2. The Facility Manager/designee, in reviewing the total facility needs, shall finalize and prioritize the projects within budgetary limits.

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3. **Approval** from the Director of CI shall be required on projects involving expenditures from the CI budget.
4. Supervision and labor shall be provided by the facility Maintenance Department for each project. Material supply costs shall be supplied by CI for each project in the CI building or occupied space.
5. **DC-178s** shall be submitted by CI staff as outlined in **Subsections A., B., C., and D. above.**
6. Materials costs for the maintenance of all existing utilities up to the service entrance of the CI building shall be paid by the facility.
7. Utility meters shall be provided by CI and used within any CI entity to provide an accurate and reliable means of reimbursement to the facility for all utilities used by CI.

Section 3 – Building Identification Systems

A. Method of Designation of Location

All facility buildings must be identified as outlined below. Residences located on grounds are exempt but must have a visible street address.

1. A combination of numbers and letters shall be used to designate specific locations within facilities.
2. Identifying designations of numbers and letters shall be used for the following areas:
 - a. facilities – letters;
 - b. non-inmate housing units – numbers;
 - c. inmate housing units – letter only;
 - d. section – letters;
 - e. level – numbers;
 - f. cell – numbers; and
 - g. bunk – numbers.
3. The following is a sample of the bed assignment number that would be generated from the Diagnostic and Classification Centers (DCC).

Sample (ALBAB21022)

- a. ALB = facility;
 - b. A = inmate housing unit;
 - c. B = section;
 - d. 2 = level;
 - e. 102 = cell; and
 - f. 2 = bunk.
4. All non-inmate rooms shall each receive a unique number following the same general principles as above. **Closets, bathrooms, etc. (even if inside a numbered room) must have a unique number. No room should be a combination of letters and numbers. Suggested room numbering shall include the following:**

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- a. **basement – 001, 002, 003, etc.;**
- b. **ground level – 101, 102, 103, etc.; and**
- c. **second floor – 201, 202, 203, etc.**

B. General Criteria for Signs Denoting Numbers/Letters

1. The following guidelines shall be followed for signs mounted on the exterior of buildings:
 - a. 48 inches square;
 - b. mounted on the main entrance side; and
 - c. background and number/letter shall use highly visible and contrasting colors.
2. Buildings (including guard towers) having a small footprint (200 square feet or less) shall have a number displayed as follows:
 - a. 24 inches square with proportional lettering;
 - b. mounted on the main entrance side; and
 - c. background and number/letter shall use highly visible and contrasting colors.
3. The below guidelines shall be followed for signs mounted on the interior of buildings.
 - a. Living area block/unit and section/level
 - (1) 12 inch square;
 - (2) mounted above entry door; and
 - (3) background and number/letter shall use contrasting colors to interior paint.
 - b. Cell
 - (1) three inch square;
 - (2) mounted above or at the top of the cell door; and
 - (3) **background and number shall use** contrasting colors.
 - c. Bunks

Bunks shall be designated as #1 for the bottom bunk and #2 for the top bunk. Installing signs on individual bunks is not required.

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d. Dorms

Individual bunks shall be numbered in dorm settings. Odd numbers on bottom (1, 3, 5) and even numbers on top (2, 4, 6), etc., or consecutively, if not stacked.

4. Staff Responsibilities

- a. The Facility Manager/designee shall authorize staff and resources for the placement and maintenance of location identification numbers/letters.
- b. The Deputy Superintendent for Facility Management (DSFM) shall be responsible for the coordination and assignment of the requirements for sign criteria.
- c. The Lead Facility Maintenance Manager (FMM) shall determine all facilities, buildings, blocks/units, sections and levels required to be identified. The Lead FMM shall also supervise the acquisition, placement, and maintenance of identifying letters/numbers.

5. Monitoring

A review of the present placement and condition of location identifying letters/numbers shall be included in all Annual Physical Plant Inspections of the facility.

Section 4 – Yearly Physical Plant Inspections

A. General

1. ***The Annual Operations inspection in accordance with Department policy 1.1.2, “Inspections and Audits,” is intended to ensure consistent application of Department policy, ongoing compliance with internal standards, applicable accreditation expected practice, and assessment of overall facility condition.***
2. ***Staff from Central Office Bureau of Operations or designee will lead the inspection team and provide direction to the team members. The team shall consist of Corrections Facility Maintenance Managers (CFMM), one CFMM3 or 2 and one CFMM1. Prior to the inspection, the team leader will contact the facility administration and the inspection team members to let them know the date and time of the inspection.***
3. ***The facility lead CFMM is expected to assist the inspectors in conducting the inspection and prior to the inspection should review the inspection criteria and have all applicable documentation ready and available to the inspection team.***
4. ***Upon entering the facility, the team leader meets with the team, discusses the plan for the inspection, and sets the lunch and exit conference time if it has not been established. The inspection team separates and covers the designated assignments. When inspectors have finished their assignment, they report back to the team leader and may be assigned to help other inspectors. The team leader conducts a short team meeting prior to the exit conference with facility administration. The pre-meeting allows time for questions to be answered and clarifications made so the team leader understands what issues will be presented at the exit conference.***
5. ***The formal exit conference is then completed with key facility administration staff. The conference allows for communication of deficiencies, recommendations, and positive findings to the facility. Each inspection team member is expected to speak about their specific findings. Facility staff may ask questions for clarification. The team leader runs the meeting, takes notes, and records questions that require follow up. The team leader or designee is responsible for completing the executive summary and updating the SharePoint folder.***

B. Inspections

1. Maintenance office records shall be reviewed for acceptable work order procedures, completion dates, safety procedures, and cost accounting of the maintenance/construction projects.
2. Each facility shall be inspected ***annually in accordance with Department policy 1.1.2***, for compliance utilizing the annual Operations Inspection Maintenance ***worksheets located in the Standards SharePoint site on the Intranet***. System log-in information

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will be provided in advance of the inspection. If not provided, contact the Bureau of Operations prior to performing your inspection.

3. Each shop shall be inspected for safety devices, safety, instructions for inmates and staff, tool security methods, cleanliness, and general shop operation and compliance with policy. Compliance with mandatory classroom instruction shall also be reviewed.
4. Blueprints and Facility Plans shall be inspected for security, accessibility, indexing, labeling, and completeness. A complete catalog of all prints with storage location is required.
5. All buildings, both inside and outside of the facility, shall be visibly inspected, using the **Annual Facility Inspection of Buildings (Attachment 4-A)**, for structural soundness and regular preventive maintenance procedures required to maintain the structure and related equipment in good condition. A copy of the Certificate of Occupancy for each building shall be made available by the local maintenance supervisory staff prior to each building inspection.
6. All grounds both inside and outside the facility shall be inspected, using the **Annual Facility Inspection of Grounds and Roadways (Attachment 4-B)**, to determine that proper care is being given to these areas.
7. All utility plants (sewage treatment, water treatment, boiler, electrical distribution, electrical generating, cooling system, and cooling towers) shall be inspected, using the **Annual Facility Inspection of Sewage Treatment Plant (Attachment 4-C)**, **Annual Facility Inspection of Water Treatment Plant (Attachment 4-D)**, **Annual Facility Inspection of Boiler Plant/Remote Boiler (Attachment 4-E)**, **Annual Facility Inspection of Electrical Distribution Systems (Attachment 4-F)**, **Annual Facility Inspection of Electrical Generating Systems (Attachment 4-G)**, and **Annual Facility Inspection of Cooling Systems and Cooling Towers (Attachment 4-H)** for proper operating procedures, preventive maintenance of equipment, safety policy/procedures, and record keeping. Boiler/fuel burning efficiency ratios shall be reviewed. Descriptive information shall be documented about each system (e.g., circulation pump no. 1 has worn out bearings, chiller no. 2 is inoperable due to condenser failure, cooling tower no. 3 chemical feed system is not operating, etc.).
8. Unused buildings, or buildings deteriorated to the point where demolition is in order, shall be identified. All requests for demolition shall be forwarded to the Bureau of Operations for processing.
9. In accordance with Department policy **1.1.2, “Inspections and Audits:”**
 - a. the Annual Operations Inspection Report shall include all attachments (refer to **Attachment 4-A** through **4-H**), an **Executive Summary**, and the maintenance inspection **worksheets found in SharePoint**. The report shall be completed electronically and submitted via **SharePoint**, and

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- b. in response to non-compliant items, corrective Plans-of-Action (POA) shall be submitted by the facility Lead FMM electronically via **SharePoint** indicating that the corrective POAs and supporting documentation have been entered for review **by the inspector**.

C. Records Retention

All yearly physical plant inspection reports shall be retained for a three-year period.

Section 5 – Utility Reports

A. Central Office Responsibilities

1. The **Bureau of Operations** shall be responsible for reviewing all utility reports received, and provide any necessary comment and/or direction to ensure completeness and accuracy of utility forms.
2. The **Bureau of Operations** shall maintain a record of all utility reports received for a minimum of three years.

B. Facility Manager/Designee Responsibilities

1. Ensure the completion of the required utility report(s) **and their submission** to the **Bureau of Operations**.
2. Review and sign each document that is forwarded to the **Bureau of Operations**.
3. Ensure that all utility usage is reported on the proper forms in a timely manner.
4. Ensure that a copy of the completed **Monthly Utilities Usage Report (Attachment 5-A)** and the **Boiler Water Treatment Log Sheet (Attachment 5-B)** is forwarded by the 15th of each month to the office of the Penn State Facilities Engineering Institute (PSFEI) in State College, Pennsylvania, at the address **indicated on the Monthly Utilities Report Instructions for Preparation (Attachment 5-C)**.¹

NOTE: Each facility shall submit a **Boiler Water Treatment Log Sheet** along with their costs for the month. This report is available electronically, and it shall be maintained at the facility for three years.

5. Procedures for completing the **Monthly Utilities Usage Report** are contained in the **Monthly Utilities Usage Report Instructions for Preparation**.

C. Department Forms

In order to provide consistency, all utility usage shall be reported using the following:

1. the Department of Environmental Protection (DEP) approved forms for air, water, and wastewater monitoring and reporting; and
2. the PSEFI approved utilities usage report.

¹ 4-4330

Section 6 – Surplus Property

A. Acquisition of Surplus Property

1. All property must be acquired through the Department of General Services (DGS), Bureau of Supplies and Surplus Operation, with the Agency Property Control Officer (APCO) acting as liaison for the Department.
2. Authorized individuals at the Federal Surplus Distribution Center at 22nd and Forster Streets, Harrisburg, Pennsylvania, can acquire federal surplus property.
 - a. Federal surplus property requires an acquisition cost, normally no higher than 10% of the original cost.
 - b. Unavailable items may be placed on a waiting list and the Federal Surplus Distribution Center shall try to locate these items.
3. State surplus property is made available from other Departments and can be transferred to the Department by the State Surplus Control Officer at no cost (except transportation costs). Authorized individuals at the State Surplus Distribution Center can acquire state surplus property.
4. Each Facility Manager/designee and the Regional Director of each Community Corrections Region, shall designate those individuals who shall be authorized to sign for the acquisition of state and federal surplus property when visiting these locations. This list must be updated yearly and be submitted to the APCO.
5. The State Surplus Control Office often notifies the APCO of available surplus property. The APCO shall notify each Organizational Property Control Office (OPCO) of that availability. If an OPCO receives information on available surplus property directly from another agency, that information must be forwarded to the APCO within three working days.
6. The APCO must be aware of facility surplus property acquisition needs in order to effectively search for that property. In order to obtain that information, each OPCO must submit an updated list of surplus property acquisition needs to the APCO by the end of January, May, and September of each year.

B. Disposal of Surplus Property

1. If an item is declared surplus within a facility or a Community Corrections Center (CCC), a memorandum with a description of the item(s) must be forwarded to the OPCO. Items declared surplus within Central Office should be listed on a memo and submitted to the APCO.

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2. The Surplus Property Officer must determine if the items are serviceable or unserviceable, as per **Management Directive Manual 215.3, Field Procurement Book**. The OPCO must determine if the surplus, if serviceable, can be used at that organization.
3. When an item is considered to be surplus to the Department, whether it is serviceable or unserviceable, a **STD-551, Surplus Property Disposition Report (submitted through the DGS's Online Property Disposition System)** and **STD-552, Surplus State Property Identification Tag (Attachment 6-A)** must be prepared by the OPCO and submitted to the APCO. The **STD-551** shall be completed electronically utilizing the DGS Surplus Website. The APCO shall send out an Integrated Central Systems broadcast message to each facility advising them of the availability of serviceable surplus property. If no response is received, the APCO shall notify the facilities then forward the **STD-551** and **STD-552** to the DGS, Surplus Property Control Office for disposition to other state agencies. If contacted by other state agencies about the item(s), additional information may be given or authorization for items to be inspected, but under no circumstances are items to be released until the approved forms are received from the DGS, Surplus Property Control Office.
4. If there is no use for any item within the Commonwealth system, all parties shall be informed by memorandum as to disposal of the item in question.

C. Completion of the STD-551

1. All blocks on this form must be filled in. If a block does not apply, fill in with "N/A."
2. More than one **STD-552** may be used with each property report. Example: five desks, required one **STD-551** and five **STD-552**. If the five tag numbers do not fit in the Property Identification Tag block, continue on the reverse side of form.
3. Describe the property as accurately as possible.
4. Describe the condition of the property – Used, New, Serviceable, Unserviceable, etc.
5. The following information shall be filled out in the General Information Blocks:
 - a. date acquired – the year is sufficient and check new or used (condition of item when originally received);
 - b. cost block – this block must be filled in, if the exact cost is not known, give an appropriate cost;
 - c. approximate value – provide an estimate;
 - d. source – where was item purchased;
 - e. location of item – exact location, times when item may be picked up or inspected, contact person, and telephone number;

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- f. cost center – very important, if item is sold and no specific fund is indicated, all monies shall be posted to the General Fund;
- g. incomplete forms shall be returned; and
- h. other information – all questions should be directed to the APCO.

Section 7 – Standardized Cell/Dormitory Furniture

The intention of this section is to ensure that all inmates within all facilities have comparable furnishings as other inmates of their classification and need.

A. Facility Responsibilities

The Facility Manager/designee shall:

1. ensure that, whenever possible, all cell/dormitory furniture is purchased from Pennsylvania Correctional Industries (PCI) and is in compliance with the **Standardized Cell/Dormitory Furniture List (Attachment 7-A)** as issued by the Central Office Cell Furniture Committee.¹ Cell/dormitory furniture purchased in compliance with this policy requires no Central Office review; and
2. ensure that when necessary, a **Cell/Dormitory Furniture Deviation Request Form (Attachment 7-B)** is submitted to the Central Office Cell Furniture Committee to the attention of PCI's Operations Manager. This will require a brief justification and is to be accompanied by a **Policy/Procedure Waiver Request Form** as outlined in Department policy 1.1.1, "Policy Management System."

B. Central Office Responsibilities

1. Cell/Dormitory Furniture Committee

The Cell/Dormitory Furniture Committee shall:

- a. review facility requests for deviations from the approved standardized cell/dormitory furniture list ensuring the selection and purchase of facility furnishings indicate the fire safety performance requirements of the materials selected,² meet American with Disabilities Act (ADA) requirements, security/safety requirements, and deviations can be made that are fiscally responsible;
- b. indicate on the **Cell/Dormitory Furniture Deviation Request Form** if each committee member approves or disapproves the requested deviation(s);
- c. indicate approval or disapproval in the "Business Owner's" signature block of the **Policy/Procedure Waiver Request Form**; and
- d. forward both forms to the next review authority as listed on the **Policy/Procedure Waiver Request Form**.

¹ 4-4134

² 4-4213, 4-ACRS-1C-15

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2. Regional Deputy Secretary

The Regional Deputy Secretary shall:

- a. review each facility's request for deviation and the recommendation of the Cell/Dormitory Furniture Committee; and
- b. indicate approval/disapproval of the request on the **Policy/Procedure Waiver Request Form**.

3. Executive Deputy Secretary

The Executive Deputy Secretary shall:

- a. review the recommendations of the Cell/Dormitory Furniture Committee and Regional Deputy Secretary and provide final approval/disapproval of the facility's request to deviate from the **Standardized Cell/Dormitory Furniture List** on the **Policy/Procedure Waiver Request Form**; and
- b. ensure copies of the **Policy/Procedure Waiver Request Form** and **Cell/Dormitory Furniture Deviation Request** are provided in accordance with the distribution list on the **Policy/Procedure Waiver Request Form**.

Section 8 – Agricultural Land Preservation

Agricultural land preservation shall be in accordance with **Executive Order 2003-2**.

A. Central Office Responsibilities

1. Secretary of Corrections

- a. The Secretary shall make a final approval/disapproval to dispose of, acquire, and/or develop primary agricultural land(s).
- b. Review and approve any proposed language to be submitted for amending or introducing legislative action pertaining to the Department disposing of, acquiring and/or developing primary agricultural land(s).

2. Executive Deputy Secretary

The Executive Deputy Secretary shall review all requests to dispose of, acquire, and/or develop primary agricultural land(s) and provide the Secretary with a recommendation to approve/disapprove facility requests. The recommendation shall be based upon the facility's needs and the Departments' master planning in conjunction with its primary agricultural land use.

3. Deputy Secretary for Administration

If property is to be disposed of, the Deputy Secretary for Administration shall follow the Commonwealth guidelines to surplus Real Property ***in accordance with Section 9 of this procedures manual***.

4. Regional Deputy Secretary

Each Regional Deputy Secretary shall review any request received from a facility within his/her respective region and provide a recommendation to the Executive Deputy Secretary for approval/disapproval of the proposal to dispose of, acquire and/or develop primary agricultural land(s).

5. Legislative Liaison

If property is to be acquired, transferred, donated, or sold; the Director for Legislative Liaison shall prepare language to be inserted into a Legislative Bill. All proposed language is to be submitted to the Secretary for review and final approval.

B. Facility Responsibility

The Facility Manager/designee shall prepare a written request to the respective Regional Deputy Secretary detailing the facility's needs to dispose of, acquire and/or develop primary agricultural land(s).

Section 9 – Identification and Disposition of Real Property

A. Identification and Disposition

1. Agriculture and/or Farming

At those facilities where dairy, farming, or general agriculture exists, a formula of 3 to 3.5 acres per cow shall be used to calculate the necessary “tillable acreage” needed to support a dairy operation. Any agriculture use other than a dairy operation shall need to justify the utility and the acreage for both existing and future use.

2. Sewage and Treatment

If commercial sewerage treatment is not available at existing or proposed facilities, sufficient land is needed for a facility treatment plant and sludge disposal. It should be assumed that 10 acres of land shall be needed to accommodate a treatment plant and approximately 70 acres of tillable land for sludge disposal and spraying.

3. Water

If commercial water is not available at existing or proposed facilities, sufficient land must be identified to support deep wells, water storage, filtration plant, reservoir, and stand pipes. The specific amount of land necessary shall be dependent upon the existing watershed, groundwater, and future use and development near the facility. The water supply shall be tested annually.

4. Facility Buffer for Public Safety

To the extent possible, each facility must have a buffer between the facility and the surrounding community. In urban environments, the facility wall or outer perimeter is assumed to be the buffer and shall be so documented. In all other new and existing facilities, a buffer of 150 or 250 yards from the outer perimeter of the facility to nearest public building or grounds must be identified and maintained, whenever possible, to protect both the inmates and the surrounding community. Where there are external services or facilities outside the 250 yards perimeter of the facility which operate as an inmate program, a sufficient buffer of 150 yards around the service or facility should be identified. When community concerns or inmate security dictates, a vision and sound barrier between the community and the facility must be incorporated as part of the facility buffer.

5. General Land Use

Each facility shall develop and maintain a “General Land Use Plan.” The plan shall be stated in the form of maps, standards, and recommendations of existing and future land development. Land use planning shall be in accordance with **Executive Order 1999-1**. The plan shall include the following elements:

- a. a land use map that designates the location and uses of the land deeded to each facility. The designations must include location and uses of all land and structures specifying categories of public and private use; and
- b. a circulation element, that designates and describes the location of existing and proposed roadways, transportation routes and thoroughfares and other local public or private utilities and facilities. The circulation element shall be correlated with the land use element of the plan.

B. Responsibilities

1. Facility Manager

- a. Each Facility Manager/designee shall prepare and maintain a land use plan for his/her facility. The initial plan shall be forwarded to the Secretary for review and approval. The plan must incorporate the elements found in **Subsection A. above** and must provide a topographical map that clearly defines boundaries and land uses. The facility plan must also clearly justify all land identified for buffer, sewage, and agriculture use. Land that is determined not to be in the scope of this policy shall be reverted to the Commonwealth to be surplus as directed by **Article XXIV-A of the Administrative Code of 1929**, by the Facility Manager.
- b. The Facility Manager/designee shall prepare a written request to the respective Regional Deputy Secretary detailing the facility's needs to dispose of, acquire and/or develop primary agricultural land(s).

2. Regional Deputy Secretary

Each Regional Deputy Secretary shall review any request received from a facility within his/her respective region and provide a recommendation to the Executive Deputy Secretary for approval/disapproval of the proposal to dispose of, acquire and/or develop primary agricultural land(s).

3. Executive Deputy Secretary

The Executive Deputy Secretary shall review all requests to dispose of, acquire and/or develop primary agricultural land(s) and provide the Secretary/designee with a recommendation to approve/disapprove facility requests. The recommendation shall be based upon the facility's needs and the Departments' master planning in conjunction with its primary agricultural land use.

4. Secretary of Corrections

- a. The Secretary shall make the final approval/disapproval to dispose of, acquire and/or develop primary agricultural land(s).

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Section 9 – Identification and Disposition of Real Property

- b. The Secretary will review and approve any proposed language to be submitted for amending or introducing legislative action pertaining to the Department disposing of, acquiring, and/or developing primary agricultural land(s).

5. Deputy Secretary for Administration

If property is to be disposed of, the Deputy Secretary for Administration shall follow the Commonwealth guidelines to surplus Real Property ***in accordance with Management Directive 625.5.***

6. Legislative Liaison

If property is to be acquired, transferred, donated, or sold then the Director, Legislative Affairs shall prepare language to be inserted into a Legislative Bill. All proposed language is to be submitted to the Secretary for review and final approval.

Section 10 – Recycling

A. General

1. Pursuant to **Act 101 of 1998, the Municipal Waste Planning, Recycling, and Waste Reduction Act (53 P.S. § 4000.101 et seq.)**, each **Commonwealth agency** is required to: establish and implement a source-separation and collection program for recyclable materials produced as a result of **agency** operations; establish and implement a waste reduction program for materials used in the course of **agency** operations to the maximum extent practicable and feasible; give due consideration and preference to the use of compost materials in all land maintenance activities which are to be paid with public funds; review and revise procurement procedures and specifications on a continuing basis to encourage the use of goods, supplies, equipment, materials, and printing that may be recycled or reused, and develop new procedures and specifications, which encourage the use of goods, supplies, equipment, materials, and printing that may be recycled or reused.
2. Pursuant to **Act 57 of 1998**, the Commonwealth Procurement Code (**62 Pa.C.S. §§101-4604**) the Department of General Services (DGS) establishes procurement policy governing the procurement, management, control, and disposal of supplies, services, and construction for executive and independent agencies.
3. **Commonwealth agencies are** required to have a source separation and collection program for recyclable materials produced as a result of **agency** operations, including, at a minimum, white paper, mixed paper/cardboard, aluminum, plastic, glass, and tires. **Commonwealth agencies should** incorporate into their recycling programs efforts to recycle, reuse, or refurbish pallets and collect toner cartridges for remanufacturing. **Commonwealth agencies should** also include programs to reuse or recycle, as appropriate, batteries, scrap metal, and fluorescent lamps and ballasts.

B. Recycling

The recycling program has many aspects that are combined to provide an environmentally effective and fiscally responsible program. Central Office and each facility will review their program annually for effectiveness and provide a written report on activities of the past fiscal year, goals and objectives for the following fiscal year, and program recommendations.

C. Responsibilities

1. The Director **of the** Bureau of Operations **or** designee is responsible for the coordination of the overall Department Recycling Program.
2. The Facility Manager/designee is responsible for instituting the recycling program on a local level by appointing a Recycling Coordinator at his/her facility. The Recycling Coordinator shall ensure that the facility is in compliance with local laws regulating the

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types of products to be recycled. The Recycling Coordinator shall also review his/her waste stream products for additional items to be recycled.¹

3. **Monthly data shall be entered into the Recycling section of the Facility Maintenance Management System (FMMS) by the Business Manager/designee and the Recycling Coordinator, as appropriate. The data will be electronically compiled and reviewed by the Bureau of Operations quarterly.**
4. A quarterly report will be generated **indicating** the total amount of recycled material, trash generation, the corresponding percentages of recycling to trash, and the cost avoidance associated with these efforts. This report **will be available to the Facility Manager/designee for review within the Reports section of the FMMS.**
5. An annual report will be generated **electronically** with the compiled information **being sent to DGS** as required by **Management Directive 205.22, Recycling, Waste Reduction, and Procurement of Environmentally Referable Products.**

¹ 4-4003-1

Section 11 – Agility Program

A. Agility Program – State or Municipal Agency

The Agility Program combines a number of federal, state, local, and other publicly funded organizations, which together, form innovative partnerships to better serve customers and employees.

B. Responsibilities

1. The Deputy Secretary for Administration is responsible for the coordination of the Pennsylvania Department of Transportation (Penn DOT) Agility Program. An on-going project list is kept on file to indicate work being completed for Penn DOT.
2. The Lead Facility Maintenance Manager (FMM) shall coordinate all work with the local Penn DOT Maintenance Manager. Project tracking shall be monitored and recorded for monthly agility savings. Agility savings shall be recorded in the monthly SCAN report to the Bureau of Operations. Types of projects shall be reported monthly to the Deputy Secretary for Administration at Central Office.

Section 12 – Maintenance Work Orders

A. Requesting Maintenance Work

1. **All new work meeting the guidelines of a project (refer to the Glossary of Terms of this procedures manual) or requiring a Building Permit shall be submitted in accordance with Section 2 of this procedures manual.**
2. All work requests for repairs and maintenance shall be electronically initiated by each respective staff member utilizing the Facility Maintenance Management System located on DOCNet. All work requests are forwarded electronically to the Maintenance Department for review, evaluation, disposition, approval, assignment of a priority code, and scheduling of the work.
3. **All new work (not classified as a project) must be approved by the Facility Manager/designee or Deputy Superintendent for Facilities Management (DSFM) prior to submission. A full description of the work shall be provided with the submission. New work shall be reviewed by the lead Facility Maintenance Manager (FMM) and presented to the Facility Manager/designee or DSFM for final approval and funding before any materials have been ordered.**
4. **The facility department (e.g. activities, administration, education, medical, training, etc.) where the work is to be completed must submit an electronic work order (only one job assignment per request). An improper request will be returned by an automatic email to the originator with comments.**
5. All maintenance requests (**with the exception of “Emergency”**) shall be submitted through the standard process. **A Work Request declared as an emergency by the Shift Commander** may be submitted **verbally**, but must be followed up with the normal submission process.

B. Submission Process

1. **A work request shall be entered into the electronic Facility Maintenance Management System by any staff within the originating facility department (e.g. activities, administration, education, medical, training, etc.). Electronic submission is the ONLY acceptable format.**
2. **Department/Section Heads are required to maintain a log of all work requests generated by their respective department, recording the electronically assigned work request tracking number. All work requests require a department or section head’s approval. Naming an “Approver” will automatically generate an email to the “Approver” notifying him/her of the work request.**

C. Safety Related Work Requests

1. **Staff submitting a work request indicating a “Safety” concern must file all required reports with the Facility Safety Manager.**
2. **The Facility Safety Manager shall approve the work request prior to forwarding it to the Maintenance Department for action.**
3. **Work Requests submitted as “safety related” which do not meet the criteria of Safety Related will be forwarded to the Maintenance Department as a standard work request by the Facility Safety Manager.**

D. Maintenance Priority Code Numbers

Maintenance Priority Code Numbers include the following:

1. #1 Emergency – Security/**Life Safety** repairs – overtime may be authorized;
2. #2 Immediate – Health and Safety repairs – work that needs to be addressed immediately, overtime may be authorized;
3. #3 Urgent – repairs that need to be addressed the next scheduled work day. Parts or materials may need to be ordered; and
4. #4 Routine – general repairs and preventive maintenance.

E. Equipment Association

Work orders related to “Assets” as defined in **Section 13** of this procedures manual shall be indicated on the work order when assigned. ***This will facilitate creation of historic maintenance patterns for critical equipment.***

F. Work Requests

1. Maintenance staff shall ensure that the work has been properly issued through the ***Facility Maintenance Management System.***
2. When a physical plant emergency situation occurs, the department or section head/designee ***responsible for the location in which it occurred*** shall notify the FMM’s office immediately. The FMM/designee shall assess the emergency, take appropriate action, and notify the Facility Manager/designee of the status, if warranted.
3. A maintenance duty officer call-in system may be employed to facilitate communication between the facility and FMMs. Limitations of a paging system must be recognized due to range, terrain, batteries, availability to phones, and personal emergencies.

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4. As Work Order assignments are completed, it shall be the responsibility of each maintenance staff member to provide information listing staff/inmate, time, and materials used.
 - a. ***At the discretion of the Lead FMM, staff members may be given computer access for the purpose of completing the Work Order electronic process.***
 - b. ***If computer access is not available, the completed Work Order shall be forwarded to the maintenance office for administrative tracking. The Work Order shall be signed and dated by the maintenance staff member completing the work.***
 - c. ***Staff members who have been delegated the responsibility of completing their own Work Order electronic process shall do so within five business days of completing the work.***

5. All staff shall cooperate with maintenance personnel to ensure access is gained quickly into work areas. An “inconvenience” is not justification to refuse or delay access to maintenance staff. Only situations which would significantly compromise **safety or** security shall be justified in refusing entry. In such instances, the Work Order shall be returned to the lead FMM **with a notation in the staff comments area** stating the cause of area denial and supervising authority directing the refusal action. The work request shall be canceled and must be resubmitted to the Maintenance Department by the originating department.

Section 13 – Preventive Maintenance¹

A. General Procedures

1. The Facility Maintenance Management System Preventive Maintenance Module shall be used for the purpose of scheduling and tracking all items requiring preventive maintenance, ***inspection, or permitting***. The **Preventive Maintenance Plan (Attachment 13-A)** can be used for documentation purposes. The plan includes provisions for emergency repairs or replacement in situations that threaten safety or facility security.²
2. Preventive maintenance criteria includes the following:
 - a. equipment/system that requires maintenance as described in the original equipment manual (OEM);
 - b. equipment/system that requires regular maintenance as described in Department policy to maintain its sensitivity or capability;
 - c. equipment that has displayed a history of failure which could be prevented by regular maintenance;
 - d. equipment required to maintain a clean and sanitary environment including, but not limited to, air and water filtration equipment;
 - e. ***equipment requiring inspections to maintain certificate of operation; and***
 - f. ***permitting renewals and/or testing required to maintain operation of equipment.***

B. Process

All equipment meeting the criteria above shall be entered into the Facility Maintenance Management System under the category of “Assets” and at a minimum include the following information:

1. Status of equipment
 - a. asset type;
 - b. short designation;
 - c. make (manufacturer);
 - d. model;

¹ 5-3B-4218

² 5-3B-4224, 2-CI-6A-7

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- e. location of equipment;
- f. inspection **or testing** requirement and date (if required);
- g. **permit renewal date**;
- h. service purchase contract number (if applicable);
- i. warranty expiration date (if applicable); and
- j. date acquired.

2. Preventive Maintenance Tasks

To maintain equipment in its optimum level of efficiency and reliability each item shall include:

- a. tasks to perform;
- b. interval at which the tasks shall be performed; and
- c. starting date (The date from which all future work will be automatically generated based on the interval) for each task.

3. Procedures

- a. safety related procedures; and
- b. general work to be performed.

4. System Parts

- a. critical parts; and
- b. regular required parts.

5. A non-editable history, with report generator, is provided automatically for planning purposes.

6. Work Procedures

All preventive maintenance work orders shall be given the priority Routine/Preventive Maintenance and be scheduled with other assignments as described in **Section 12** of this procedures manual.

Section 14 – Cooling Tower Procedures

A. Standard Operating Procedure for Annual Maintenance of Condenser Water Systems Operated Year Round

1. At least once per year, it is essential to take a condenser water system out of service for preventative maintenance and maintenance. All work will be completed prior to April 30 each year in accordance with the **Cooling Tower Procedures Rational (Attachment 14-A)**.
2. The Lead Facility Maintenance Manager (FMM) shall notify all contractors and coordinate all work for annual maintenance. Procedures for tower system cleaning and water treatment equipment preventative maintenance are detailed below.
 - a. Coordinate all chiller opening and cleaning programs and Eddie Current Inspections.
 - (1) Condensers will be opened and brushed clean annually with Eddie Current Inspections accomplished at least every three to five years. If brushing fails to remove debris, chemically clean and review water treatment program with Cooling Tower Water Treatment Vendor as hard scales should not be present.
 - (2) Evaporators will be opened, brushed clean, and have Eddie Current Inspections at least every three to five years.
 - (3) If valves are not installed on upper and lower ports typically found on chiller end bells of condenser and evaporator tube bundles, install $\frac{3}{4}$ " ball valves immediately. The availability of these valves is critical to maintaining chillers, and plugs prohibit this preventative maintenance. The upper ports permit air removal when filling systems air may accumulate during the season. The bottom port is used to periodically and regularly remove accumulating sediment from the end bells, reducing corrosion of these structures.
 - b. Towers shall be comprehensively cleaned every year.
 - c. Coordinate any repairs and inspections at each annual maintenance.
 - d. Coordinate annual maintenance program with Water Treatment Vendor.
3. Drain system, securing water treatment systems by pulling and cleaning all condenser pump strainers.
4. Where possible, high pressure wash the entire tower, inside and outside; including all distribution decks, walls, structural elements, fan blades, and slats removing all accumulated debris. Remove all algae and deposits by hand if required. Be careful not to pressure wash the fill as it can be easily damaged. In towers where fill is less than 1" from the tower basin or resting on it, this area must be physically cleaned in accordance with **Subsection A.5. below**.

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- a. Bleach and detergent should be used during high pressure washing. For bleach, use a dilution of one ounce per gallon. Dish wash or laundry detergent should be used in very small quantity to have just a little bit of visible foam.
 - b. Observe all safety procedures when using a pressure washer most notably goggles, respirator covering mouth and nose with HEPA filter rated for aerosols, water resistant coverall, and gloves.
 - c. Anyone working around the tower and the mist created by power washing should be wearing safety gear, or remain upwind of the spray to supervise.
 - d. It is fine to allow waste water to flow into the storm drains or into the sanitary drain.
 - e. Prevent waste from entering the return plumbing to the chiller plant if possible.
5. For towers where the fill is less than 1” from the tower basin, or resting on it, clean out the base of the fill as follows:
- a. make a flushing wand by inserting a piece of ½” rigid PVC into a hose and secure it with a hose clamp. PVC should be long enough to extend through fill;
 - b. flush the base of each piece of fill gently with the wand by sliding the wand from the exterior of the tower towards the center, at a low angle, keeping the PVC as low as possible; and
 - c. work from one side to the other then in reverse.

NOTE: If this cannot be done, there is a good chance that the fill is damaged beyond repair and will need to be replaced as water treatment programs will not be able to effectively prevent microorganism colonization in accumulating mud and debris and minimize the potential for airborne hazards.

6. For towers and drift eliminators:
- a. remove and clean as per manufacturer’s instructions;
 - b. if not available, brush with soap and bleach using soft long bristle brush;
 - c. inspect, repair any damage, and/or replace as needed; and
 - d. inspect, clear, and repair any damaged spray nozzles.
7. Hose down the entire tower starting at the top and flush fill from both sides to remove any loose debris and remnants of power wash sprays and finally rinse out basins. Remove any remaining debris.
8. Notify the Lead FMM that the system is ready for inspection.

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9. The Lead FMM will inspect towers for cleanliness and direct any additional maintenance as deemed needed. This inspection shall be logged into the **Plant Log** and the Lead FMM will submit necessary documentation to the Bureau of Operations verifying that the system has been cleaned as per the Department's Standard Operating Procedure (SOP) prior to start-up (certification by email is sufficient).

10. Refill the system and re-start as follows:
 - a. fill the system then turn on all condenser pumps and circulate water across all towers and chillers. Do not operate tower fans or turn chillers on;
 - b. add one gallon of bleach to each tower cell. Add the bleach at the screen, where water is pulled from the tower back to the chiller plant or condenser pump suction;
 - c. circulate treated water across condenser systems for two hours;
 - d. blow down condenser tube bundle drains valves and pump strainers;
 - e. blow down drain ports heavily on any equalizing lines between towers to get disinfectant into these structures and remove debris; and
 - f. turn on tower fans for the final 15 minutes of circulation.

11. Perform the following annual maintenance to water treatment systems:
 - a. repair any leaky chemical feed tubing;
 - b. flush each chemical pump by dropping the suction fitting into a bucket of warm water and pumping for a couple of minutes. This cleans the pump head and fittings of dried chemicals and debris and extends pump life expectancy;
 - c. repair or replace any missing or damaged fittings;
 - d. re-prime chemical pumps;
 - e. pull bleed line strainers, clean, and reinstall; and
 - f. open bleed line solenoid, clean, and reassemble.

NOTE: Repairs can be done anytime, but flushing the pumps and cleaning out the bleed structures shall be done while performing **Subsection A.12. below**.

12. Re-start-up water treatment systems and verify all equipment is in proper working order to include:
 - a. initial application of Inhibitor should ensure it is present at strength at start-up to re-establish corrosion control; and

b. biocide programs should commence immediately.

13. Completion of the SOP shall be logged into the **Plant Log** by the Utility Plant Supervisor.

B. Standard Operating Procedures for the Circulation of all Cooling Tower Systems

1. Biocide will be applied to each system on a regular basis, independent of which Chillers are in use. Fans do not need to be operated, or chillers not under load turned on during this procedure in accordance with **Cooling Tower Procedures Rational**.
2. Turn on all condenser pumps for two hours twice per week, such as Monday and Thursday or Tuesday and Friday, at a pre-determined time. Document these procedures clearly for all staff using the **Condenser Pump Circulation Log (Attachment 14-B)**.
3. Coordinate this activity with the Water Treatment Vendor so biocides are (at least) applied during these intervals.
4. Confirm automated biocide applications programs have been programmed into treatment controllers to correspond to condenser pump operating schedules at each monthly Water Treatment Vendor service visit.
5. The date and times the pumps are turned off and verification that the biocide pump is pumping in shall be logged in the **Plant Log** and on the **Daily Water Treatment Log (Attachment 14-C)**.

NOTE: In order for this program to work, the Water Treatment Vendor and site staff must agree on an exact schedule. The Water Treatment Vendor must be diligent in maintaining the correct date and time settings in the treatment controllers, which are notorious for being off by a couple to many minutes between service visits. Site staff must be diligent in turning on the condenser water pumps at the agreed upon times.

C. Legionella Testing Protocol and Action Plan for Cooling Tower Systems

1. Routine Legionella Testing Program for Cooling Towers
 - a. Each facility will schedule Legionella testing in accordance with the **Cooling Tower Procedures Rationale**.
 - b. Legionella testing shall be completed by a Certified Lab, at a minimum of twice annually.
 - c. Every independent condenser water system will be tested whether in operation or on stand-by. Condenser pumps will be turned on at the time of sampling.
 - d. The first test each year shall be in May. This test provides information with respect to the condition of the system at start-up or after annually cleaning. If Legionella are

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detected, annual cleaning techniques and/or start-up procedures may need to be reviewed.

- e. The second test shall be completed in July. This test identifies problems associated with routine operation. Detections would more typically indicate water treatment program problems or physical cleanliness issues within the tower system.

2. Action Plan for Legionella Detection in Cooling Tower Systems

- a. The Action Plan has been adopted based on published guidance from several agencies including the Centers for Disease Control and Prevention (CDC), Occupational Safety and Health Administration (OSHA), and the Association of Water Technologies (AWT) and offers a reasonable approach to managing Legionella detections in cooling tower systems.
- b. Any detection will mandate a meeting between the Lead FMM, Utility Plant Supervisor, and the Water Treatment Vendor. The meeting shall include a physical inspection of the cooling system, a review of water treatment programs, and agreement on what steps will be taken to address the detection.

c. Response to Legionella detections

Legionella Concentration	Action
< 1 CFU/ml	System under control: Continue routine maintenance and water treatment programs; retest system in accordance with established protocol.
1-10 CFU/ml	Investigate program: Review biocide application programs; increase and/or alter program to reduce count: retest system in accordance with established protocol.
>10 to <100 CFU/ml	Investigate program: Review biocide application programs; increase and/or alter program to reduce count: Identify and address any potential colonization points and perform maintenance to remove: retest system each 7-14 days until Legionella reduced to below 10 CFU/ml.
>1000 CFU/ml	Investigate problem: Perform immediate decontamination and take steps to limit exposure to aerosols ejected from cooling tower. If tower can be taken out of service do so. A critical review of applied water treatment programs and physical maintenance programs should be accomplished and steps taken to

prevent reoccurrence: retest system several days after decontamination.

D. Water Treatment Vendor Requirements for the Management of Cooling Tower System

1. The Water Treatment Vendor shall, at a minimum, complete a site visit each month that the cooling systems are in operation in accordance with the **Cooling Tower Procedures Rationale**.
2. At each monthly visit, the below services shall be performed.
 - a. The plant staff supervising the visit shall document all tasks performed by the Water Treatment Vendor on the **Cooling Tower Water Treatment Vendor Service Log (Attachment 14-D)**. This form shall be attached to the vendor's service report prior to forwarding it to the Lead FMM.
 - b. When arriving on site, the Water Treatment Vendor shall report to the Utility Plant Supervisor and:
 - (1) review the results of Heterotrophic Plate Count (HPC) testing accomplished by site utility plant staff; and
 - (2) review condenser pump operation schedule for periodic biocide feeding to all systems.
 - c. Inspect each tower with plant staff and identify any observed problems perceived to be related to water treatment such as algae growth or scale development. The vendor shall document any problems in their service report together with what issues may have caused the problem and what actions were taken to resolve the condition.
 - d. Collect samples from each circulating condenser system and perform tests to ensure the vendor's Scale, Deposit, and Corrosion Inhibitor is being fed appropriately. Results of testing shall be documented in the service report along with the vendor's stated limits for each test parameter. At a minimum, the vendor will test each system for pH, conductivity, inhibitor level, total alkalinity, and total hardness.
 - e. Check all chemical feed and bleed systems for proper operation, be responsible for maintaining all programming, time block and date settings, and document any faults in the equipment upon inspection and what actions were taken to correct them. The vendor will acknowledge this service has been performed in their service report at every visit.

NOTE: The vendor will document any alarms observed on bleed/treatment controllers when inspected, discuss this with the staff member accompanying them, and provide immediate training on what the problem was and how it was corrected.

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- f. Provide any routine preventative maintenance to the chemical feed system, such as tightening any leaky connections and cleaning up the fittings, etc. Provide instruction to staff on managing these tasks between vendor visits.
- g. Clearly document inhibitor feed settings and any changes made during the visit (i.e., 30% PFB [Post Feed Bleed] Pump at 20%, or 5 SPP [seconds per pulse] pump 50%, or 2% CYC [cycle times] Pump 20%).
- h. Clearly document the application programming of all biocides:
 - (1) example: Bio 257: M, W, F at 8AM for 20 min; Pump 20/80%; pre-b to 800; 2 hr lock; and
 - (2) example: Bio 077: T, Th at 4PM for 30 min; Pump 100/50%; pre-b 15 min; lock 1 hr.
- i. Prepare a service report to include any problems, together with why the problem needs to be addressed and recommended corrective action.
- j. Before leaving, report to the Utility Plant Supervisor and review the service visit.
- k. Other services provided by the vendor shall include:
 - (1) start-up of all water treatment systems in coordination with the cooling tower start-up;
 - (2) provide a training seminar at each facility. The training will discuss the treatment programs, chemical hazards, and include a review of treatment and bleed systems, the programming of these devices and response to alarms;
 - (3) train site staff in the evaluation of the Heterotrophic Plate Count (HPC) samplers;
 - (4) prepare a formal report on company letterhead and have it signed by the Cooling Tower Water Treatment Vendor's Certified Water Treatment Specialist (CWTS) or other qualified person in charge (as per the State Qualification) by December 31 of each year, summarizing their service during the cooling season and documenting any issues impacting water treatment programs that the Lead FMM is required to address;
 - (5) each facility will conduct its own monthly **Dipslide (HPC) Testing (Attachment 14-E)**. The Water Treatment Vendor shall provide instruction on sample collection and evaluation of samplers. Samples from each tower system shall be collected two days prior to the vendor's scheduled service visit. HPC testing conducted by Department staff and the observed condition of cooling towers shall be the basis for performance evaluation of the vendor. The vendor may perform its own HPC testing or utilize an alternate methodology for evaluating its

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microbiological programs, but site results will be the basis for monitoring performance; and

- (6) if the outcome of the HPC test indicates a count greater than 10,000 CFU's/ml, or algae development in continuously bathed sections of the cooling tower, the vendor will be immediately required to make changes to the program to achieve the desired performance targets, unless the vendor identifies conditions beyond its reasonable control to have caused such events. Utility plant staff shall be responsible for the removal of algae on surfaces not continuously contacted by condenser water and subject to fouling.

3. Treatment Additives Applied to Cooling Tower Systems

- a. The vendor shall provide a blended inhibitor. The inhibitor shall contain appropriate anti-scalants, dispersants, corrosion inhibitors, alkalinity as deemed needed, and contain an azole, as appropriate for the operating equipment and water quality at the facility. Inhibitor programs shall seek to limit corrosion of mild steel below two mils per year, copper to less than 0.2 mils per year, and prevent all scale deposition within towers and chillers.
- b. The vendor shall identify how product residual in the system will be monitored and what levels will be achieved for control (tracer level is acceptable, such as Molybdenum: 0.3 – 0.5 ppm). This shall be shown on every service report.
- c. The vendor is responsible to achieve appropriate feed rates for their additives, but shall achieve these minimum standards in cycled up cooling water systems:
 - (1) Dispersant: 6 ppm;
 - (2) Phosphonate: 2 ppm;
 - (3) pH: 8-9.3; and
 - (4) Azole: 1 ppm.
- d. The vendor shall submit a Material Safety Data Sheet (MSDS) for each of their products together with a signed document stating that their corrosion inhibitor contains (at a minimum) the required additive groups and that the minimums shall be maintained in cycled up cooling water systems. The vendor shall further state what the limiting cycles of concentration shall be for the facility site, for example five to seven cycles, and identify the limiting conductivity, for example 1200-1500 micromhos to be programmed into controllers.
- e. The vendor shall apply a dual and alternating biocide program, or biocide and bio-penetrant programs, but at least two additives shall be automatically applied to all condenser systems. The basis of performance shall be, all systems shall be

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maintained with heterotrophic bacteria counts at or below 10,000 CFU's/ml at all times and seek to prevent any algae development in towers.

- f. The responsive vendor will be concerned with Legionella management and apply biocide programs that effectively minimize this hazard, and provide continual leadership and guidance regarding any site conditions that might contribute to Legionella problems.

4. Beginning with every cooling season, each facility shall:

- a. update the water treatment equipment to include flow activated, integrated water treatment controllers having the capability for bleed control, inhibitor feed management, and dual and alternating biocide application. Acceptable controllers from Walchem, LMI, Pulsafeeder, or Advantage control shall be acceptable. No proprietary equipment shall be utilized or tracer dye systems purchased;
- b. upgrade chemical feeding systems to three chemical metering pumps: inhibitor and two biocides. Three facility sites with Brominators shall retain them for now, but Brominators shall not be added to any other site;
- c. the use of all floaters shall be discontinued and the practice of applying slug doses of bleach to systems in lieu of Accepted-Good-Engineering Programs shall be discontinued;
- d. begin a program wherein all condenser systems that do not circulate continuously, will be circulated at least twice per week. The Water Treatment Vendor and site staff will work out a schedule so biocide is applied to all systems when all circulation pumps are on to promote better microbiological controls; and
- e. improve start-up and seasonal shutdown physical cleaning programs, and address issues related to debris in towers more effectively.

E. Shut Down and Annual Maintenance of Seasonally Operated Condenser Water Systems

1. The Lead FMM shall notify all contractors and coordinate all work for annual maintenance in accordance with **Cooling Tower Procedures Rationale**.
2. Procedures for tower system cleaning and water treatment equipment preventative maintenance are outlined below.
 - a. Coordinate all chiller opening and cleaning programs and Eddie Current Inspections.
 - (1) Condensers will be opened and brushed clean annually with Eddie Current Inspections accomplished at least every three to five years. If brushing fails to remove debris, chemically clean and review the water treatment program with the Water Treatment Vendor as hard scales should not be present.

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- (2) Evaporators will be opened, brushed clean, and have Eddie Current Inspections at least every three to five years.
 - (3) If valves are not installed on upper and lower ports typically found on chiller end bells of condenser and evaporator tube bundles, install ¾" ball valves immediately. The availability of these valves is critical to maintaining chillers, and plugs prohibit this preventative maintenance. The upper ports permit air removal when filling systems air may accumulate during the season. The bottom port is used to periodically and regularly remove accumulating sediment from the end bells, reducing corrosion of these structures.
- b. Towers shall be comprehensively cleaned every year.
 - c. Coordinate any repairs and inspections at each annual maintenance.
 - d. Coordinate the annual maintenance program with the Water Treatment Vendor.
3. Two hours prior to shutdown, apply non-oxidizing biocide. This shall be supplied by the Water Treatment Vendor, and can be manually added to the towers unless a non-oxidizing biocide is in use. Whether or not using non-oxidizing biocide, discuss and coordinate this procedural step with your Water Treatment Vendor.
 - a. Circulate condenser water across all pumps, chillers, and towers.
 - b. Do not add or allow a large dose of an oxidizing biocide or bleach into the system prior to shutdown as its residual effects may be aggressive and it should not be the last thing metallurgy in the systems is in contact with prior to winter storage or draining.
 4. Prior to shutdown, provide the following preventive maintenance to the water treatment equipment systems. Repairs can be done anytime but flushing the pumps and cleaning out the bleed structures is to be accomplished while **Subsection E.3. above** is in progress.
 - a. Flush each chemical pump by dropping the suction fitting into a bucket of warm water and pumping for a couple of minutes. Turn pumps up all the way. Do not put suction lines back into chemicals and simply leave pump and tubing full of water for winter. This procedure cleans the pump head and fittings and prevents chemicals from coagulating inside them, which reduces operating problems and extends life expectancy.
 - b. Close chemical containers to prevent evaporation/contamination over winter.
 - c. Repair any leaky chemical feed tubing.
 - d. Pull bleed line strainers, clean, and reinstall.

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- e. Open bleed line solenoid, clean, and reassemble.
5. Turn off condenser systems, securing water treatment systems, drain cooling towers, equalizing legs and plumbing in danger of freezing.
6. Where possible, high pressure wash the entire tower, inside and outside; including all distribution decks, walls, structural elements, fan blades, and slats removing all accumulated debris. Remove all algae and deposits by hand if required. Be careful not to pressure wash the fill as it can be easily damaged. In towers where fill is less than 1” from the tower basin or resting on it, this area must be physically cleaned (reference **Subsection E.7. below**).
 - a. Bleach and detergent should be used during high pressure washing. For bleach, use a dilution of one ounce per gallon. Dish wash or laundry detergent should be used in very small quantity to have just a little bit of visible foam.
 - b. Observe all safety procedures when using a pressure washer most notably goggles, respirator covering mouth and nose with HEPA filter rated for aerosols, water resistant coverall, and gloves.
 - c. Anyone working around the tower and the mist created by power washing should be wearing safety gear, or remain upwind of the spray to supervise.
 - d. It is fine to allow all waste water to flow to storm drains or into the sanitary drain.
 - e. Prevent waste from entering the return plumbing to chiller plant if possible.
7. For towers where the fill is less than 1” from the tower basin, or resting on it, clean out the base of the fill as outlined below.
 - a. Make a flushing wand by inserting a piece of ½” rigid PVC into a hose and securing with a hose clamp. PVC should be long enough to extend through the fill.
 - b. Flush the base of each piece of fill gently with the wand by sliding the wand from the exterior of the tower towards the center, at a low angle (keeping the PVC as low as possible).
 - c. Work from one side to the other then in reverse.

NOTE: If this cannot be done, there is a good chance that the fill is damaged beyond repair and will need to be replaced as water treatment programs will not be able to effectively prevent microorganism colonization in accumulating mud and debris and minimize the potential for airborne hazards.

8. For towers with drift eliminator:
 - a. remove and clean as per manufacturer’s instructions;

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- b. if not available, brush with soap and bleach using soft long bristle brush;
 - c. inspect, repair any damage, and/or replace as needed; and
 - d. inspect, clean, and repair any damage to spray nozzles.
9. Hose down the entire tower starting at the top and flush fill from both sides to remove any loose debris and remnants of power wash sprays and finally rinse out basins. Remove any remaining debris.
 10. Notify the Lead FMM when the system is ready for inspection.
 11. The Utility Plant Supervisor shall schedule and complete all equipment openings, cleanings, inspections, and repairs. All activities shall be logged into the **Plant Log**.
 12. The Lead FMM will inspect towers for cleanliness and direct any additional maintenance as deemed needed. This inspection shall be logged into the **Plant Log** and the Lead FMM will submit documentation to the Bureau of Operations verifying the system has been cleaned as per the Department's SOP prior to start-up (certification by email is sufficient).

F. Start-Up of Seasonally Operated Condenser Water Systems

1. Notify Water Treatment Vendor with the date you will be starting up the tower system and coordinate their start-up visit. It is important to get the system dosed with inhibitor and biocide at start-up. This is the Water Treatment Vendor's responsibility. Refer to the **Cooling Tower Procedures Rationale**.
2. Re-clean all towers
 - a. Hose out distribution decks, fill, and basins allowing water to drain or run onto the ground.
 - b. If (any green or black) algae is observed, pressure wash or physically scrub to remove it. Observe all safety procedures when using a pressure washer most notably goggles, respirator covering mouth and nose with HEPA filter rated for aerosols, water resistant coverall, and gloves.
 - c. Physically clean out all loose debris from cooling tower basins.
3. Fill the system, then turn on all condenser pumps and circulate water across all towers and chillers. Do not operate tower fans or turn on chillers.
4. Add one gallon of bleach to each tower cell. Add the bleach at the screen, where water is pulled from the tower back to the chiller plant or condenser pump suction.
5. Circulate treated water across condenser systems for two hours.

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- a. Blow down the condenser tube bundle drains valves.
 - b. Blow down drain ports heavily on any equalizing lines between towers to get disinfectant into these structures.
6. Turn on tower fans during the last 15 minutes of circulation.
 7. Dump the entire system and perform the following tasks:
 - a. check each distribution deck for chip scale and remove it; and
 - b. pull and clean all condenser pump strainers.
 8. Notify the Lead FMM that the system is ready for inspection.
 9. The Lead FMM will inspect towers for cleanliness and direct any additional maintenance as deemed needed. This inspection is to be logged into the **Plant Log** and the Lead FMM shall submit documentation to the Bureau of Operations verifying that the system has been cleaned as per the Department's SOP prior to start-up (certification by email is sufficient).
 10. Refill the system and start-up.
 - a. Start-up water treatment systems and verify all treatment equipment is in proper working order.
 - b. Initial applications of biocide and inhibitor should begin immediately upon refilling. It is important to have full strength inhibitor levels at start-up to re-establish corrosion control, and for biocide to be added immediately to begin the process of controlling microorganisms in the system.
 11. Completion of the SOP will be logged into the **Plant Log** by the Utility Plant Supervisor.

NOTE: If valves are not installed on upper and lower ports typically found on chiller end bells, both condenser and evaporator, install ¾" ball valves immediately. The availability of these valves is critical to maintaining chillers. The upper valve permits air removal which may accumulate during the season. The bottom valve is used to periodically and regularly remove accumulating sediment from the end bells, reducing corrosion of these structures.

G. Standardization of Water Treatment Equipment for all Cooling Tower Systems

1. All Department sites shall comply with the following directives and immediately review their cooling tower system water treatment systems in accordance with the **Cooling Tower Procedures Rationale**.

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2. All treatment and control systems will immediately be upgraded, where applicable, to comply with the standards herein.

NOTE: State Correctional Institution (SCI) Laurel Highlands and SCI Benner Township will not be required to replace their Brominators with a liquid feed system until all construction contracts have expired.

3. One set of equipment shall be installed on each independent cooling tower system.
4. Each tower system shall have a flow activated, integrated water treatment controller with the following capabilities:
 - a. continuously monitors system conductivity and effects bleed-off;
 - b. ability to feed inhibitor based on water meter contact, cycle times, proportional to bleed, and proportional to post bleed feed;
 - c. ability to feed two biocides, with programmable pre-bleed and bleed lock out;
 - d. all controllers shall have at least four pigtails into which chemical pumps and bleed solenoid plug into; and
 - e. approved manufacturers include LMI, Pulsafeeder, Advantage, or Walchem. No proprietary equipment shall be utilized or shall any tracer dye systems be installed at Department sites.
5. Each tower system shall have three chemical metering pumps that shall be directly plugged into their treatment controllers: one for the inhibitor and two for biocides.
 - a. Each site may select their own chemical metering pumps based on the recommendations of their Water Treatment Vendor.
 - b. Each pump shall be properly installed with suction assemblies, priming valves, and injection assemblies.
 - c. Brominators are not to be installed in lieu of liquid feed equipment.
6. Spill pallets or other suitable containment shall be installed at each site to prevent chemical spills. All treatment additives shall be stored on containment systems.
7. The practice of manually applying slug doses of bleach to systems and the use of floaters, in lieu of compliance with these equipment requirements, shall be discontinued.

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Glossary of Terms**

Agency Project – Project performed by contractors and with total cost greater than \$10,000 and less than \$300,000. These projects are also called Non-Recurring Maintenance (NRM) or Fixed Asset (FA) Projects.

Agency Property Control Officers (APCO) – Staff designated by the Deputy Secretary for Administration to coordinate the transfer of all surplus property for the Department.

Agency Purchase Request (APR)

American Correctional Association (ACA) – The ACA and the Commission on Accreditation for Corrections (CAC) are private, non-private organizations that administer the only national accreditation program for all components of adult and juvenile corrections. Their purpose is to promote improvement in the management of correctional agencies through the administration of a voluntary accreditation program and the ongoing development and revision of relevant, useful standards.

Asset – Asset will refer to any piece of equipment, which requires preventive maintenance.

Automotive Activity Report, STD-544 – Monthly report to document vehicle activity.

Automotive Officer – Employee (appointed by lead Facility Maintenance Manager [FMM] responsible for obtaining and recording information for all vehicles in accordance with Department policy 3.1.1, “**Fiscal Administration Procedures Manual.**”)

Buildings – All structures within or adjacent to the facility compound including both housing and non-housing structures.

Business Office Funding Category – The following categories are to be used to indicate areas of funding:

1. FA – Fixed Asset (400);
2. M – Operations and Maintenance (300);
3. IGWF – Inmate General Welfare Fund;
4. CP – Capital Project Funding;
5. CI – Correctional Industries; and
6. G – Grant Funding.

Capital Project Request – See Project Approval Request.

Cell – Individual living unit within a housing unit.

Cell Furniture Committee – A three person group comprised of the following individuals: Central Office Chief of Security, Bureau of Correctional Industries Operations Manager, and Director of Operations.

Central Office Fiscal Approval – Any project in excess of \$10,000 needs to be approved by the Department’s Chief of Fiscal Management.

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Department – The Pennsylvania Department of Corrections.

Department of General Services (DGS) – The central construction, purchasing, publishing, security, real estate, and maintenance agency for the Commonwealth. DGS is responsible for administering construction and renovation projects at our state correctional facilities and providing a multitude of services to state government.

Department or Section Head – An employee responsible for planning, organizing, directing, and supervising staff in their respective facility department or section (e.g. activities, administration, education, medical, training, etc.).

Department of Labor and Industry (L&I) – L&I maintains plan and specification review and inspection authority over all state-owned buildings. L&I reviews and approves drawings and specifications for construction, alteration, and repair projects; and any project affecting the life safety requirements for a building. Approval must be given in writing and a building permit issued, if required. State law requires that L&I issue a Building Permit for any work under its jurisdiction prior to commencement of the work. The Bureau of Operations Architectural Supervisor will coordinate between the facility and L&I.

Emergency Work – Any repairs that require immediate action by maintenance staff to prevent major damage to the physical plant or to prevent a threat to staff, inmate, public health, welfare, safety, or security.

Executive Summary – A summary prepared by the Facility Manager/Director for submission to the Regional Deputy Secretary. This document shall summarize the results of the Annual Spring Inspection and should highlight any significant area(s) of need which required immediate attention. In addition, specific follow-up plans for significant needs should be discussed.

Facility – Adult State Correctional Institutions, Motivational Boot Camp, Training Academy, Community Corrections Centers, and the Central Office Complex as a group and/or individually.

Facility Maintenance Management System – A software application provided for use by all institutions containing the Work Order (WO) and Preventative Maintenance (PM) systems as well as other tools for the purpose of tracking projects, work orders, critical systems, and maintenance operations.

Facility Maintenance Manager (FMM) – A management level employee responsible for planning, organizing, directing, and supervising maintenance staff in all physical plant maintenance, repair, heating, and utility plant operations of a State Correctional Facility.

Facility Manager – The Superintendent of an institution, Commander of a Motivational Boot Camp, Director of a Community Corrections Center, or Director of the Training Academy.

Housing Unit – Any unit designated as living quarters whether permanent or temporary.

In-House Project Request – See Project Approval Request.

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Inspection Team – A team of several management or supervisory level personnel, with a team leader.

Level – Vertical position of the floor or level within the building.

Maintenance Department – Department responsible for all physical plant maintenance, utility plant operations (including water, heating, and sewage systems), in State Correctional Facilities.

NRM/FA Project Request – See Project Approval Request.

Organizational Property Control Officer (OPCO) – Designated by the Facility Manager of each facility and the Regional Director of each Community Corrections Region. The OPCO shall handle all matters pertaining to acquisition or disposal of surplus property at that particular facility or region.

Preventive Maintenance – The task of planned, periodic maintenance which includes: examining, checking, testing, dismantling, replacing consumables, cleaning or other work, short of over-haul or renovation, to ensure that equipment failures are kept at a minimum. ***A system designed to enhance the longevity and/or usefulness of buildings or equipment in accordance with a planned schedule.***

Priority Number – The priority of the project, to be set by the Facility Maintenance Manager, using a numbering code as follows:

1. #1 Emergency – Security/Life Safety repairs – immediate; overtime may be authorized.
2. #2 Immediate – Health and Safety repairs – work that needs to be addressed immediately; overtime may be authorized.
3. #3 Urgent – repairs that need to be addressed the next scheduled work day. Parts or materials may need to be ordered.
4. #4 Routine – general repairs and preventive maintenance.

Project Approval Request – The **DC-178, Project Approval Form** shall be submitted to the Bureau of Operations with the appropriate project type marked (In-House, NRM/FA, Capital, or Security). Any project with total project cost greater than \$5,000 needs to be submitted for review at least 30 days prior to the project. (Emergency projects may be handled by phone and followed up with appropriate hard copy.)

Project Category – Project categories are classified as follows:

1. Small Maintenance Project (SMP): Maintenance and/or repairs which consist of any work performed by the facility maintenance staff with a total project cost up to \$10,000.

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2. Fixed Asset (FA) Project: As defined in Management Directive 310.3, fixed assets are assets of a long-term character, such as buildings, machinery, furniture, and other equipment requiring funding of more than \$5,000, which meet the following general criteria:
 - a. those items that can be expected to have a useful life of more than one year; and
 - b. those items that can be used repeatedly without materially changing or impairing their physical condition and that can be kept in serviceable condition by normal repair, maintenance, or replacement of parts or components.
3. Non-Recurring Maintenance (NRM) Project: Maintenance and/or repairs which consist of normal upkeep or restoration work needed to keep a building, structure, or non-structural improvement in its present condition or state of usefulness; to prevent its deterioration; or to restore it to its previous condition. The following are considered NRMs:
 - a. projects performed by in-house labor and with total cost greater than \$10,000;
 - b. projects performed by contractors and with total cost greater than \$10,000 and less than \$100,000; and
 - c. projects performed by contractors and with total cost greater than \$100,000 and less than \$300,000 and not funded by State bond proceeds.
4. Capital Project (CP): All new construction, land acquisition, or improvement to existing structures, which change the use or function, or increase the usefulness. Projects are considered capital, and must be authorized in a capital budget if State bond proceeds are used and the total project is valued at \$100,000 or more; or other State current revenue sources (e.g. appropriations, executive authorizations, or restricted accounts) are used and the total project is valued at more than \$300,000.

Project Cost – Total cost of project requiring funding by the Business Office.

Project Number – A number assigned to a project.

Project Title – A brief title of the project, reflecting the nature of the work to be performed.

Real Property – For purposes of this policy, “real property” will be land and generally whatever is erected or growing upon or affixed to the land.

Recycling Coordinator – Employee assigned by lead FMM who is responsible for obtaining and recording information for recycling.

Routine Maintenance – Maintenance functions that can be pre-scheduled by the FMM through the maintenance work order system.

Section – Subdivision of a building into identifiable functional areas.

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Surplus Property – Furniture, equipment, vehicles, land, structures, or any other property that is no longer useable or required by a Commonwealth or Federal Agency.

Utility Plant Operator (UPO) – A non-management level employee responsible for maintenance, repair, and utility plant operations of a State Correctional Facility.

Utility Plant Supervisor (UPS) – A management level employee responsible for planning, organizing, directing, and supervising utility plant operators in maintenance, repair, and utility plant operations of a State Correctional Facility.

Utility Reports – A comprehensive overview of reported utility usage, over a specified time, at all facilities of the Department.

Work Order – An electronic form within the Facility Maintenance Management System application that is used to identify, prioritize, schedule, and assign work to appropriate maintenance staff.