



**City of Lawrence**  
UTILITIES

## **Lawrence Utilities Management System (LUMS) Manual**

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## 1. Overview

### 1.1 Description of the Lawrence Utilities Management System

The overall purpose of the LUMS is to improve performance in the areas of environment, health and safety, product and service quality, and biosolids throughout the Department in an integrated manner.

Management Direction – Management Direction provides guidance for the LUMS with consideration of stakeholder input and the strategic needs of department activities. The Department's policy documents their commitment in handling environmental, health and safety, quality, and biosolids issues. Strategic Focus Areas identify general areas of desired improvement. Each employee plays a specific role, holds responsibilities, and has a level of authority, relating to completion of assignments, tasks, and activities.

Planning Processes – Planning processes identify the areas that require control and where those controls are most effective. Compliance with all legal and other agreements are areas requiring controls. Significant environmental impacts and health and safety risks are determined, based on their frequency and severity as related to work activities. Our customer's needs and expectations are also important areas for control. Critical control points are the location in the process where an outcome is controlled. These all work together to determine the kind of controls that are needed to maintain control of the system. Management of change is a control that limits a specific change from adversely affecting the desired outcome.

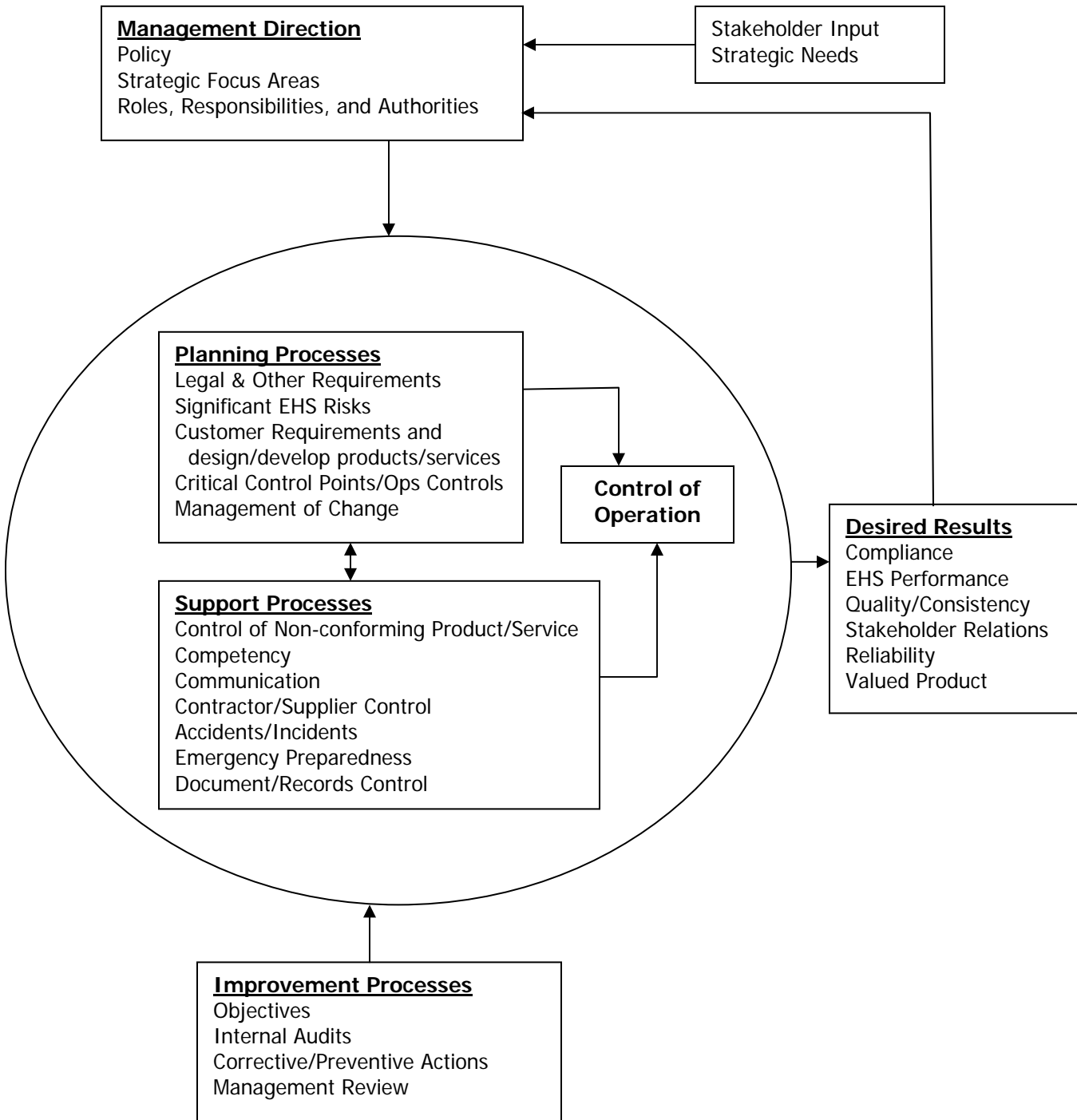
Support Processes - Support processes provide assistance between the areas we want to or are required to manage and the methods used to maintain control.

Operational Controls – Operational controls are the methods, which control activities to produce the desired outcome.

Improvement Processes – Improvement processes provide input to the core. Objectives are activities that result in improvement in a specific strategic focus area. Internal audits review performance of the LUMS toward meeting commitments, as well as areas that need adjustment. Methods to correct and prevent undesirable events are in place to avoid recurrence. Management reviews and provides input on the performance of the LUMS.

Desired Results – The desired results of implementing LUMS is improvements in compliance, environmental and health and safety performance, quality, and stakeholder relations.

(See diagram on next page)



## **1.2 Scope**

The treatment and distribution of safe drinking water to the public, the collection and treatment of wastewater, and the control and return of treated water and biosolids to the environment.

## **1.3 Policy and Desired Results of the Management System**

The Lawrence City Commission approved the Lawrence Utilities Management System Policy on May 22, 2007. See Appendix A for this policy.

The desired results of the management system include improved performance in the following areas: (1) Regulatory Compliance, (2) Environmental and Occupational Health and Safety Performance, (3) Quality Products/Services, and (4) Stakeholder Relations.

## **1.4 Planned Arrangements**

The Lawrence Utilities Management System is consistent with other planned arrangements. These planned arrangements include applicable conformance with ISO 14001 Standard, ISO 9001 Standard, OHSAS 18001 Standard, and the National Biosolids Partnership EMS Program.

## **1.5 Responsibilities and Authorities**

Director of Utilities – defined as top management.

Management Team – assigned by the director to participate in management review and implement LUMS within the work groups that they manage.

LUMS Coordinator – ensure effective implementation and monitoring of LUMS and report on performance for management review.

Individual Managers/Supervisors – implement the LUMS within their work group.

Employees – encouraged to understand LUMS principles, identify means to improve the Departments performance, and continually improve personal performance.

Safety Group – provides a channel for two-way communication between employees and management team. Implements health and safety programs to individual work groups.

## **1.6 Authorizations**

Approved for use: Dave Wagner, Director of Utilities

Appendix A City of Lawrence Administrative Policy 101: LUMS Policy

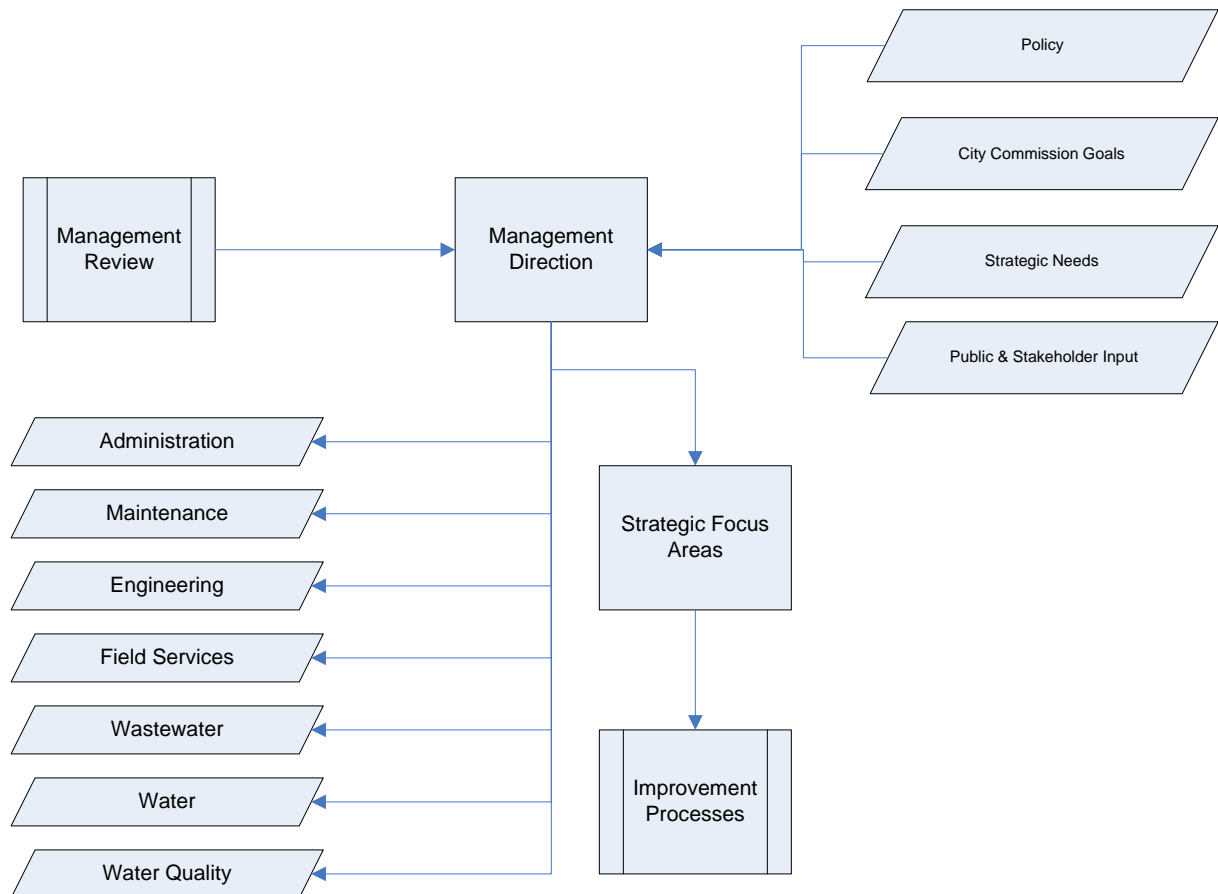
Appendix B Table 1.2.1 LUMS Manual and Planned Arrangements Cross-Reference

## 2.0 Management Direction Process

Purpose – to direct activities in the strategic focus areas to achieve desired results. This includes strategic and tactical planning.

Responsibilities:

Management – make decisions and give direction to all Department divisions and overall improvement planning for strategic focus areas.



Strategic Focus Area Considerations:

- Significant Environmental Aspects and Critical Control Points
- Health and Safety Risks and Critical Control Points
- Legal and Other Requirements
- Public Input
- Best Management Practices
- Technology Options
- Product and Service Quality
- Financial/Operational/Business Requirements

## 3.0 Planning Process

Purpose – to provide information that is used for controlling operations including:

- Identifying and tracking legal and other requirements.
- Identifying and analysis of significant environmental and health and safety risks.
- Identifying of critical control points.
- Management of change
- Customer service
  - Product and Service Quality
  - Design and Development

# 3.1 Identifying and Tracking Legal and Other Requirements

Purpose – to identify, track, and communicate applicable legal and other requirements to ensure compliance.

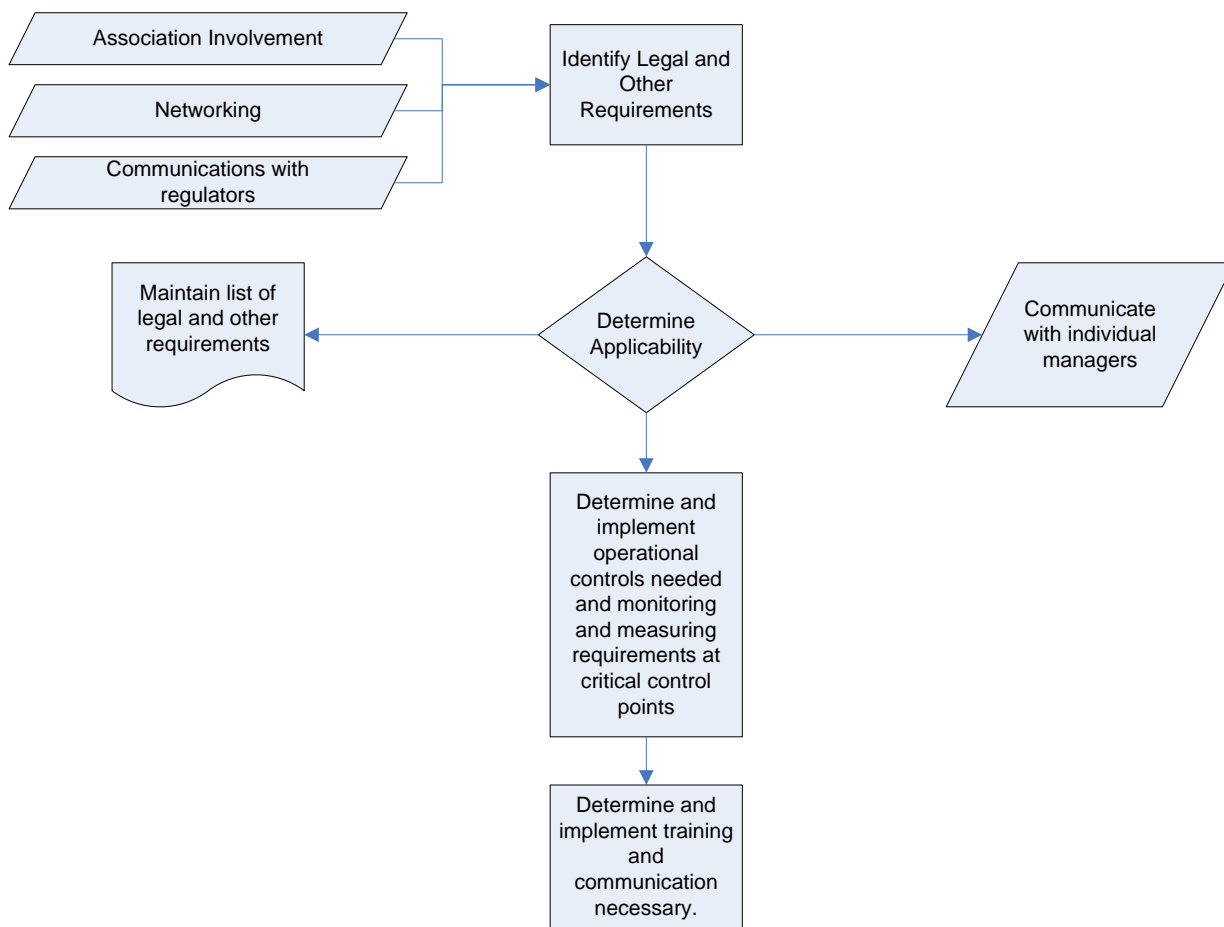
Responsibilities:

Water Quality Manager – Water, Wastewater, Pretreatment, and Laboratory

Residuals Coordinator – Residuals

Utilities Engineer – Design Criteria

Safety Group – Occupational Health and Safety and Security



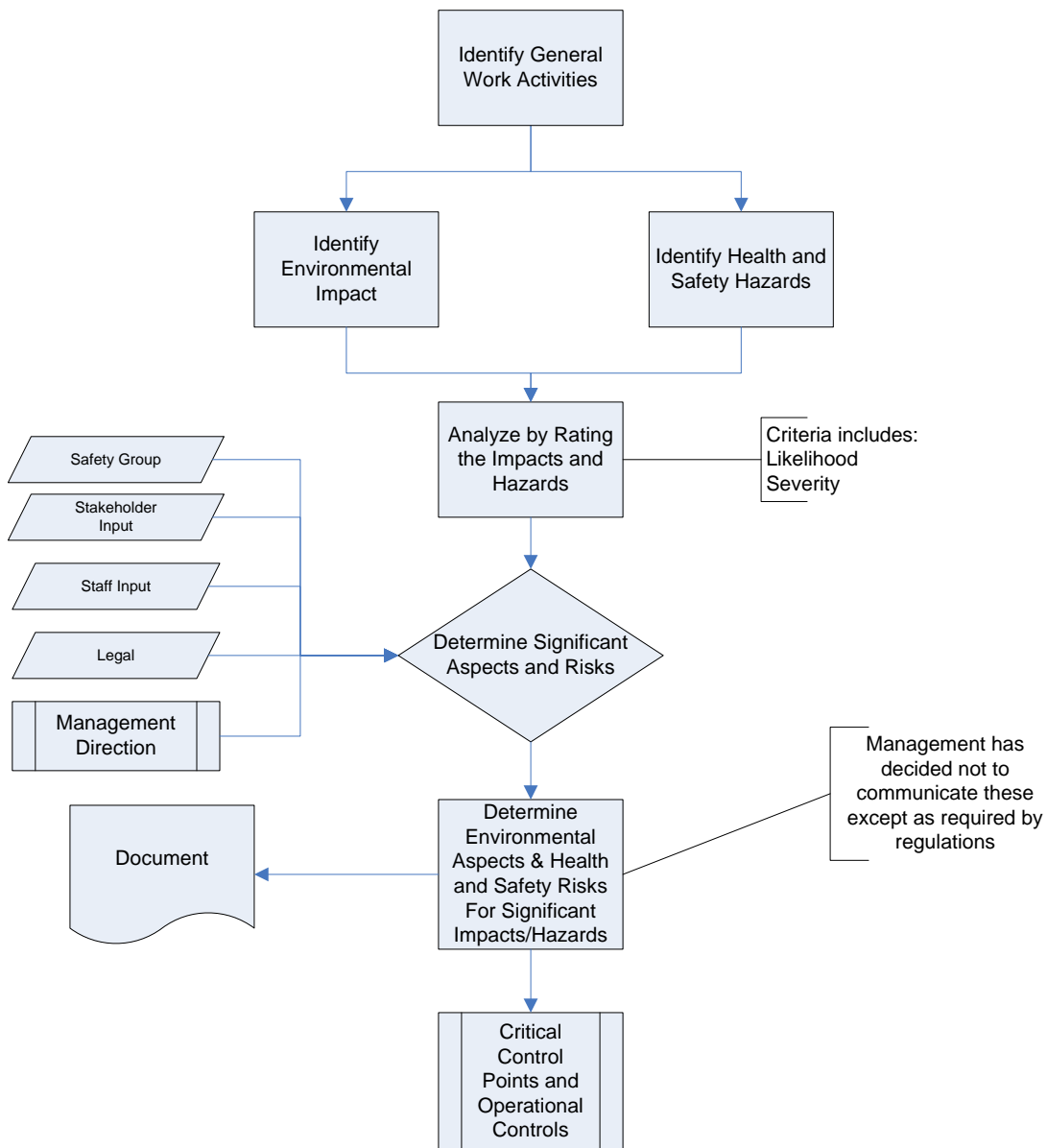
## 3.2 Identification and Analysis of Environmental and Occupational Health and Safety Risks

Purpose – to identify significant environmental, occupational health and safety and quality risks and determine significance.

Responsibilities:

Management – Review and determine significant risks.

Safety Group – Review and analyze environmental and health and safety risks. Provide information to management.



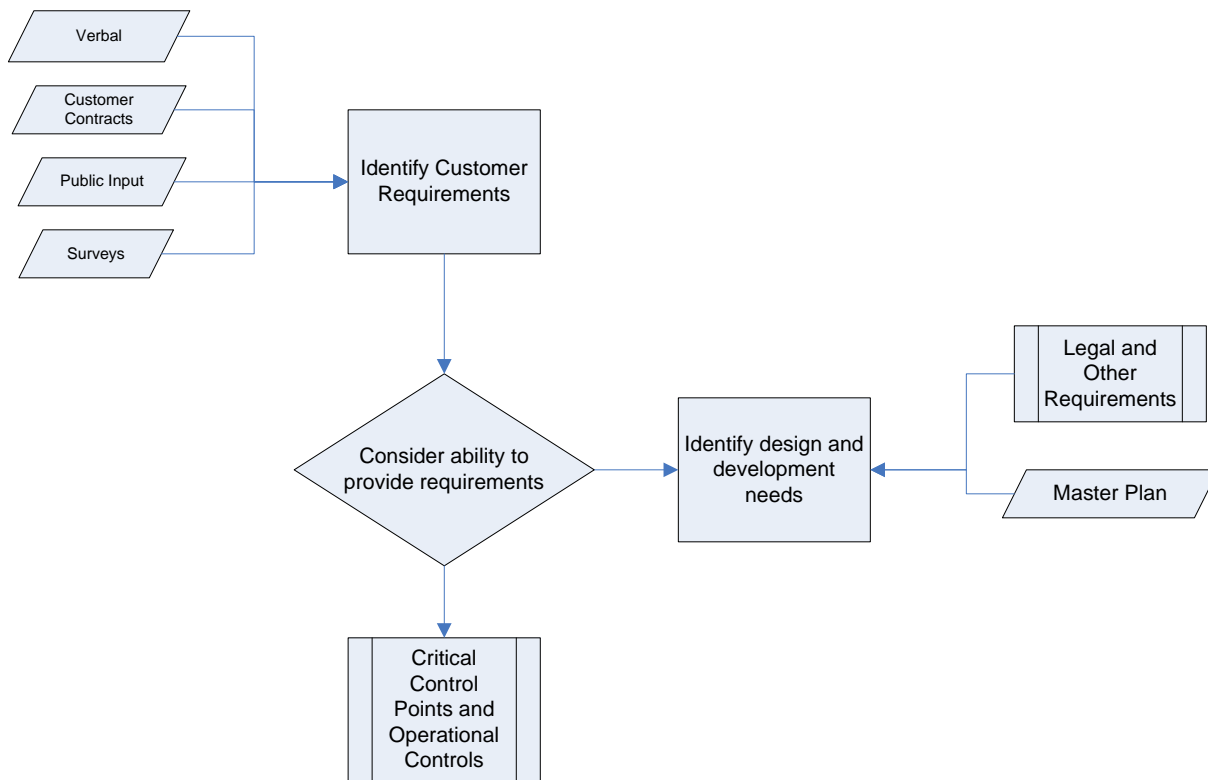
### 3.3 Identification of Customer Requirements and Design and Development

Purpose – to identify and communicate customer requirements and consider customer input in quality changes.

**Responsibilities:**

Management – Review customer needs and determine ability and desire to meet them.

Utilities Engineer/Consulting Engineer – Determine design and development needs to meet applicable customer requirements.



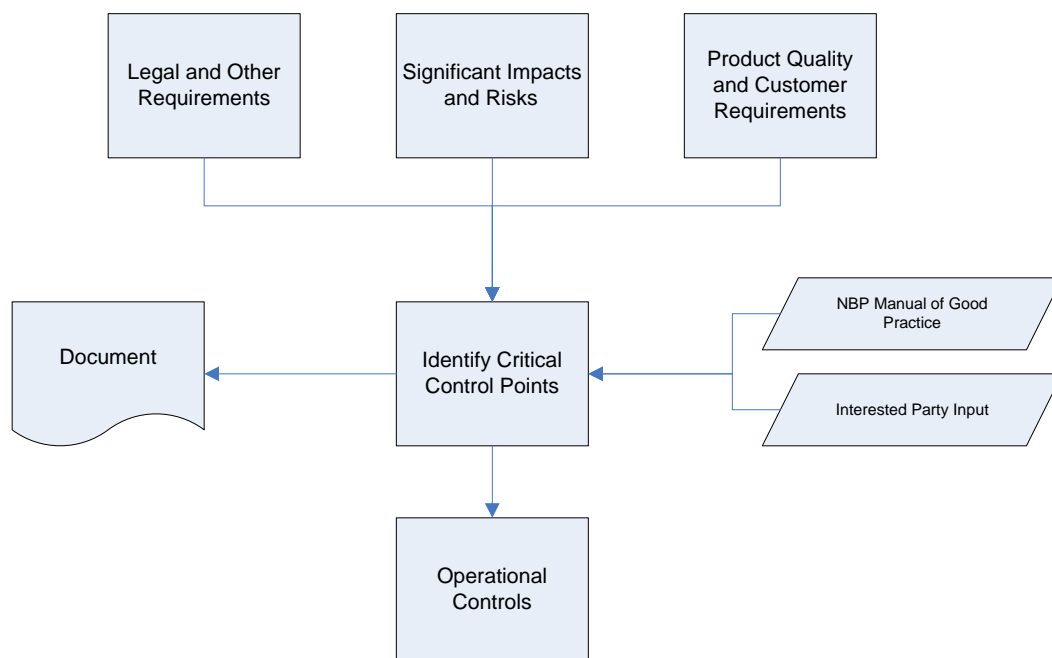
### 3.4 Identification of Critical Control Points

Purpose – to determine activities and locations where controls are needed to manage or control significant environmental, health and safety, product quality and customer service.

Responsibilities:

Managers/Supervisors – critical control points for activities of assigned work groups.

Residuals Coordinator – Residuals and Water Treatment Residual Lime



# 3.5 Management of Change

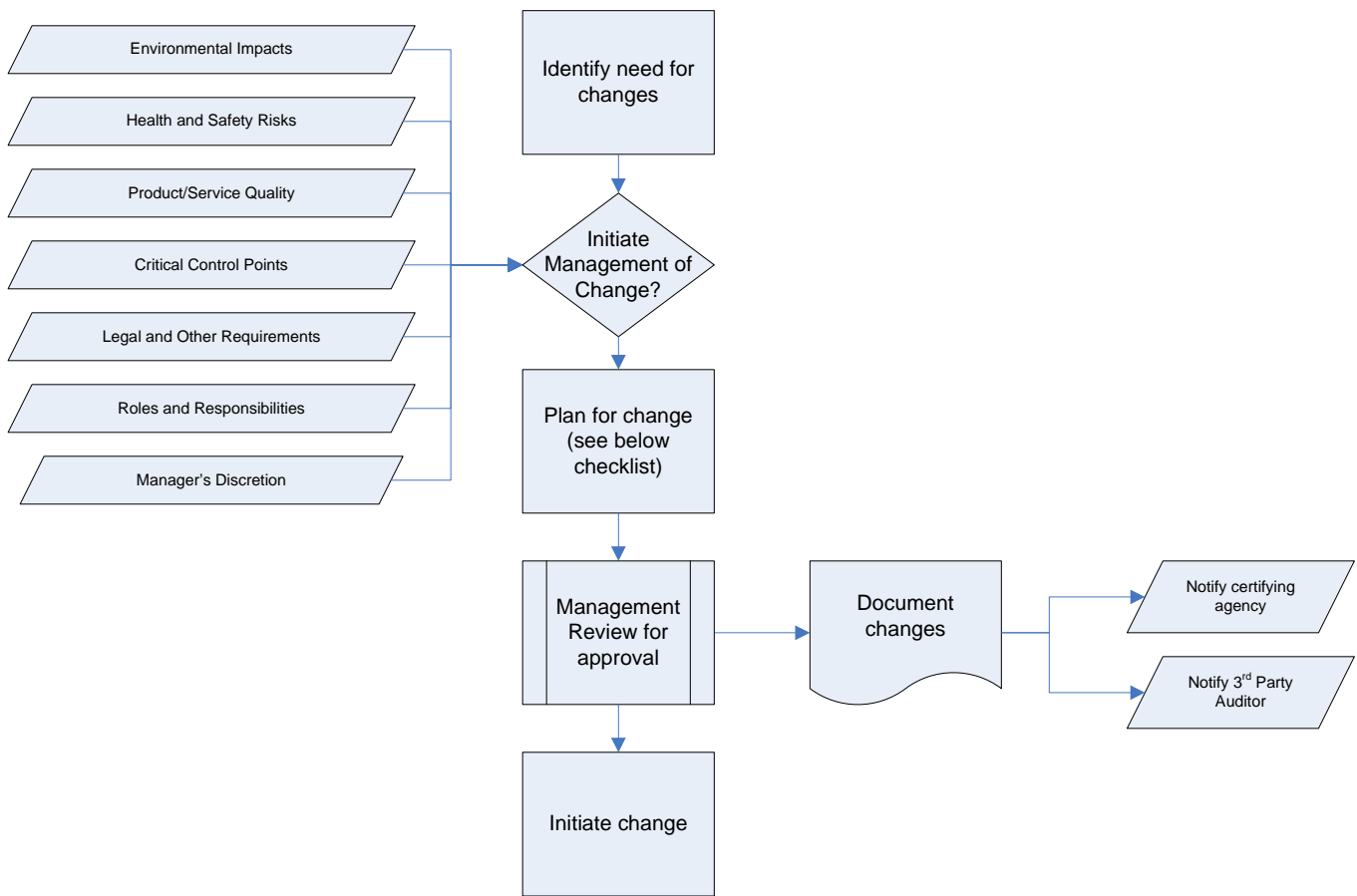
Purpose – This procedure applies when changes or new developments occur or are being planned that can significantly affect the environment, health and safety, quality, and regulatory performance of Department activities.

**NOTE:** A “significant” affect is defined as one that causes a change in information, such as MSDS or specifications, process or equipment drawings or changes in standard operating procedures. Simple replacement of parts or supplies that does not alter the previously listed items is considered “replacement in kind” and does not require Management of Change.

**Responsibilities:**

**Managers –** identifies changes, determines need for Management of Change procedure, and leads the planning.

**Management –** reviews preparations. Approves the implementation of the change.



- Management of Change Checklist:**
1. Review and update safety, environmental, legal, and quality information.
  2. Perform environmental impact and safety hazard analysis.
  3. Modify operations and maintenance procedures.
  4. Change drawings, codes, or standards.
  5. Communicate change to contractors/suppliers or personnel and perform training.
  6. Perform pre-start-up safety review (if applicable).

## 4.0 Support Processes

Purpose – activities to provide assistance to ensure effective operational control including:

- Control of Non-conforming Products
- Control of Contractors and Suppliers
- Competency, Awareness, and Training
- Accidents and Incidents
- Emergency Preparedness
- Document Control and Recordkeeping
- Communications

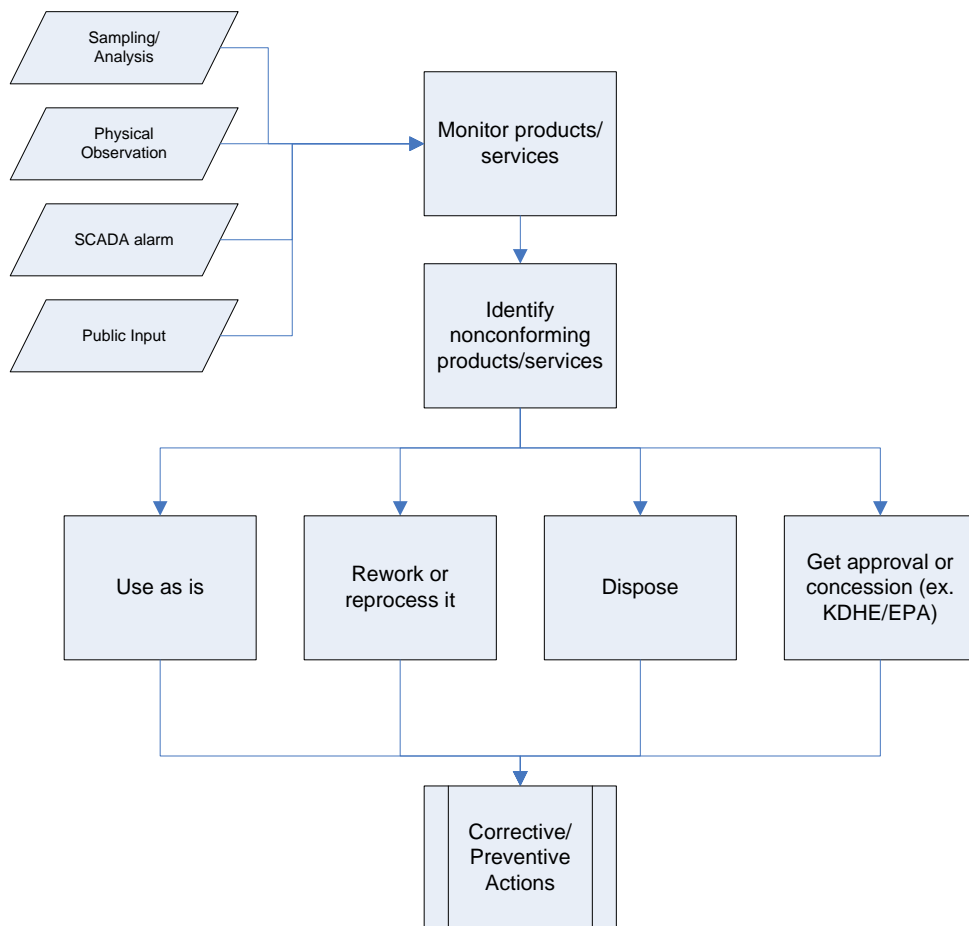
# 4.1 Control of Non-conforming Products

Purpose – to prevent the unintended use or delivery of a product that has not met all requirements.

### Responsibilities:

All employees – monitor products and service for assigned work group. Identify and notify supervisor of nonconforming products and services, based on legal, environmental, health and safety, and quality criteria.

Managers – determine actions in response to nonconforming product or service.

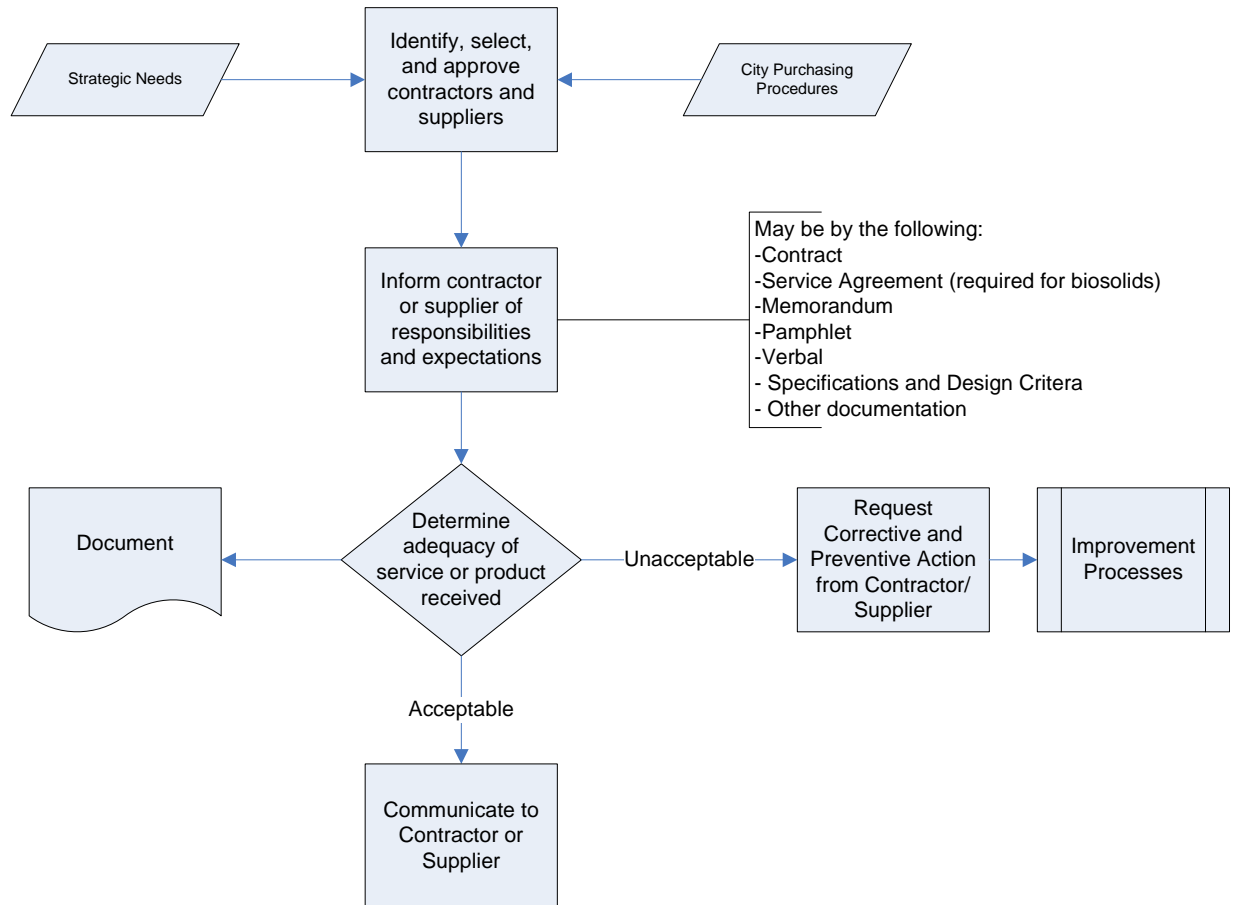


## 4.2 Control of Contractors and Suppliers

Purpose – to evaluate and ensure that the service provided by contractors and suppliers result in positive outcomes.

Responsibilities:

Managers (or designee) – Determine adequacy of service or product received for area of responsibility. Provide input to contractor or supplier.



# 4.3 Internal Communication, Competency, Awareness and Training

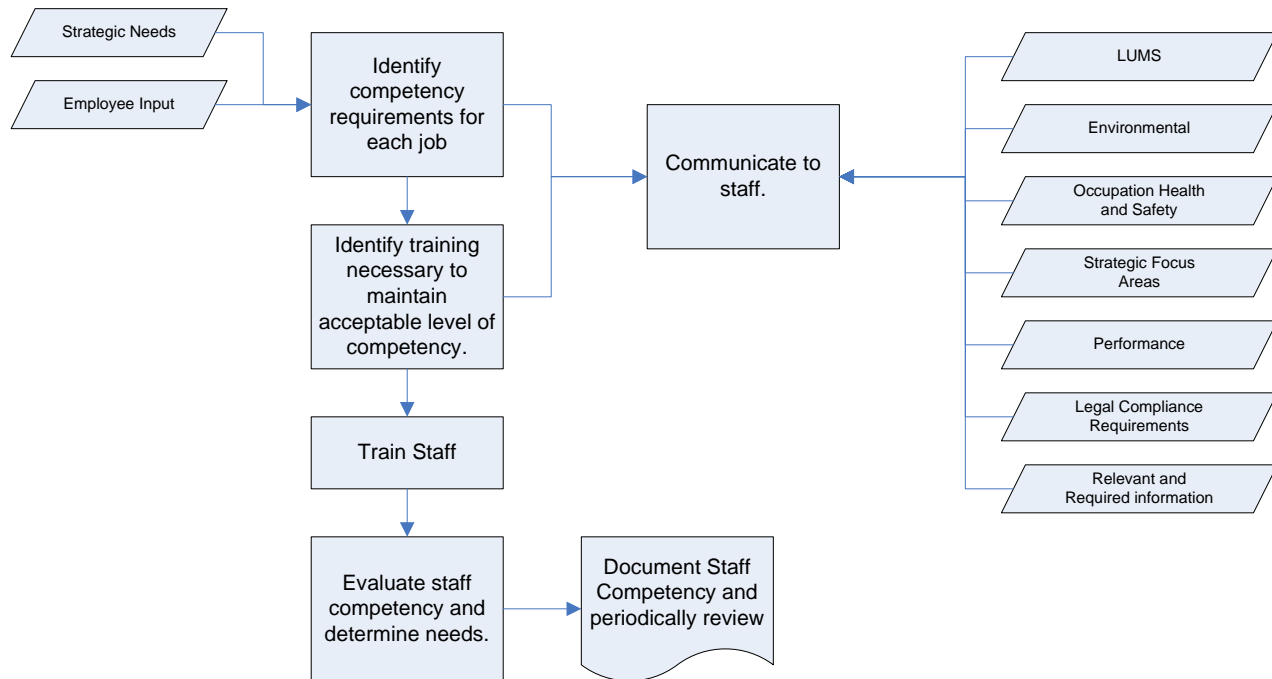
Purpose – to ensure that staff is competent and capable of performing assigned responsibilities safely and effectively through training, awareness, and internal communications.

NOTE: Competency includes appropriate education, training, skills, and experience.

### Responsibilities:

All Staff – Identify needs for improved personal competency, awareness, and training.

Managers – Determine competency, awareness, and training needs for individual assigned work groups and implement. Evaluate level of competency for assigned staff.



Review of competency and training or re-training:

- New employees
- Re-assigned employees
- Periodically
- Upon determination of need

Training Methods:

- On-the-Job (1-on-1)
- Formal Classroom
- Self-Training
- Other

Mandatory Training for All Staff:

- Job Responsibilities
- Environmental Impacts
- Occupational Health and Safety Hazards
- LUMS Awareness
- Emergency Preparedness
- Anything required by legal and other requirements
- Contribution & impact to achieving quality objectives

Items communicated through Safety Committee include:

- Identification of health & safety hazards and determination of effective controls.
- Incident and accident review (to the extent allowed by management).
- Review of policy and strategic focus areas/targets.
- Changes that affect employees health and safety.

The following items are communicated to staff:

- LUMS (Environmental, Safety, Biosolids) Policy
- Significant environmental aspects
- Significant occupational health and safety risks
- Strategic Focus Areas/Objectives
- Performance in achieving outcomes
- Legal compliance requirements
- Annual Performance Report
- Any changing circumstance and its result

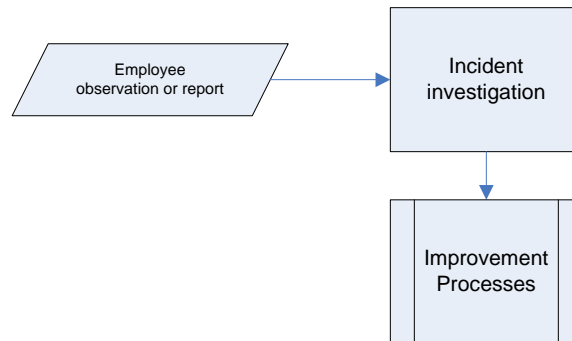
## 4.4 Control of Incidents

Purpose – to limit the negative impacts of incidents and prevent their recurrence.

Responsibilities:

All Staff – report any incidents to individual's supervisor or manager.

Manager – investigate incident.



Steps for employee injury or property damage incidents:

1. Following the incident, the employee(s) involved contacts his supervisor verbally.
2. The employee's supervisor reports incident to the City's Risk Management Office verbally.
3. Employee(s) involved in the incident completes report and submits to his supervisor.
4. Supervisor completes the report and submits to Utilities Director (or designee).
5. Director reviews and submits the report to Risk Management Office.
5. Supervisor conducts internal investigation through corrective and preventive action process.

Steps for all other incidents:

1. Following the incident, the employee(s) involved contacts the supervisor verbally.
2. The employee(s) and/or supervisor investigate the incident through the corrective and preventive action process.

## 4.5 Emergency Preparedness

Purpose – to prepare for and to ensure effective response in emergency situations.

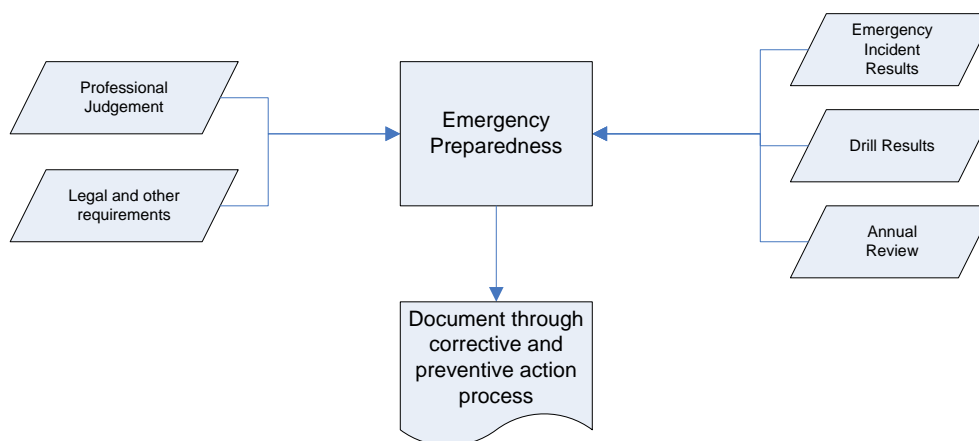
### Responsibilities:

Managers (or designee) – train employees on emergency response plan.

Safety Group – review plan for accuracy and effectiveness.

External Parties (Fire & Med, Police, Health Department, etc.) – review and comment.

Utilities Programs Manager – review, manage and update plan



### Emergency Preparedness Steps:

1. Review emergency preparedness plan for effectiveness through:
  - Review of emergency incident results
  - Drill results
  - Periodic review.
2. If effective, document results.
3. If not effective, make corrections through the corrective and preventive action process.

### The Emergency Preparedness process should consider the following:

- Nature of onsite hazards
- Likely type and scale of emergency
- Method of responding
- Internal/External Communication plans
- Needs of relevant interested parties
- Action(s) to minimize environmental damage or safety risk
- Mitigation and response action(s)
- Evacuation routes and assembly points
- Potential for emergency situations from nearby facilities
- Ability to provide assistance on demand to other agencies
- Other local Emergency Plans that may influence or effect.

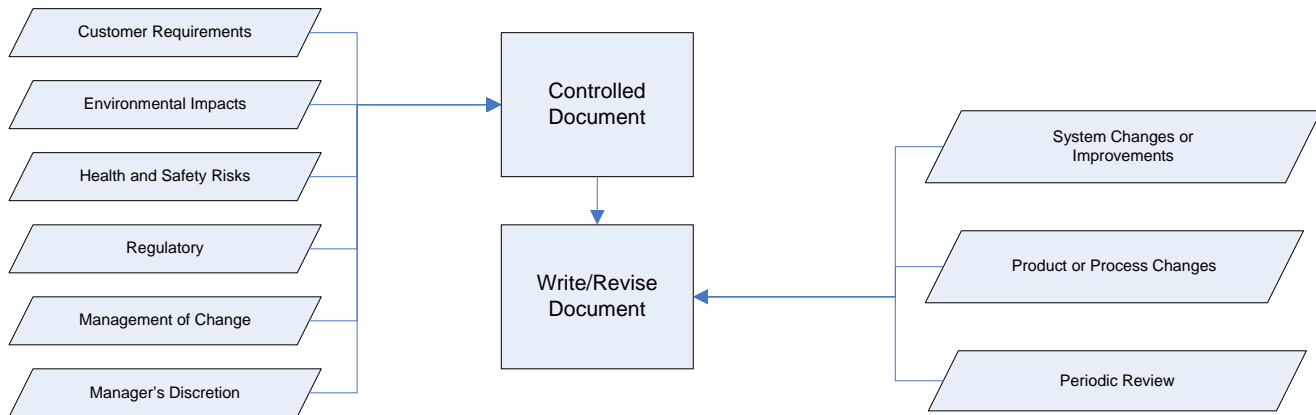
## 4.6 Control of Documents

Purpose – identify and control important documents used for managing activities.

### Responsibilities:

Managers (or designee) – controlled and uncontrolled documents for assigned work group.

Utilities Programs Manager – health and safety documents



### Document Control Steps:

1. Document Control Master folder - houses the Word documents and is accessible to managers
2. Document Control User folder - houses pdf documents and mirrors Master Document Control folder.
3. Managers write (or review documents if assigned to staff). SOP's will follow the correct format (see template).
4. Users review and comment on document.
5. Managers approve or authorize content of the document. Additional approvals may be required for individual work groups. Programs Manager or other designated employee reviews and approves format.
6. Upon approval, programs manager:
  - assigns document number based on the below naming conventions
  - changes Word document to pdf
  - files in the correct folder (see #1 & 2).
7. Obsolete documents are marked obsolete and put in the archive folder.
8. Managers communicate and train affected personnel.
9. Review of documents triggered by:
  - system changes or improvements
  - product or process changes
  - periodic review

Each controlled document will use the following numbering system for identification:

(Three letter document code)(consecutive number for document type)-(revision date in 6 digit number) (Title)

Example: PGM300-081609 Sampling Procedure

Three letter document code

PGM – Program

SOP – Standard Operating Procedure

FRM – Form

PLN - Plan

LUMS Manual

Created Date: 5/1/05

Issued: 5/5/2005

Rev. Date: 10/12/10

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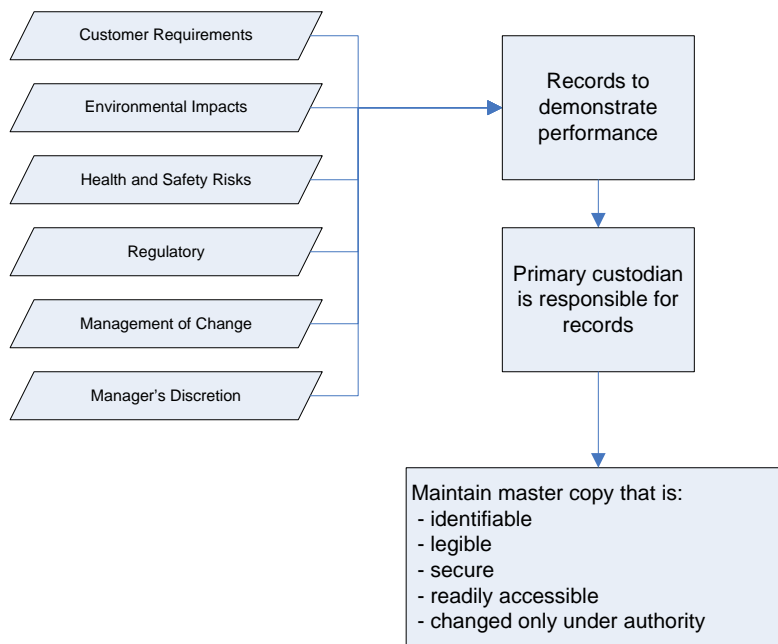
## 4.7 Control of Records

Purpose – identify and control important records to demonstrate Department performance.

Responsibilities:

Managers (or designee) – controlled records for assigned work group.

Utilities Programs Manager – LUMS records



Records Control Steps:

1. Controlled records that have primary custodians outside the department:
  - Department staff copy of scan record for reference and store in assigned folder
  - Forward original signed copy to assigned custodian.
2. Controlled records that have primary custodian inside the department:
  - copy or scan and store in assigned folder. Store original with responsible managers files.
  - destroy according to retention requirements

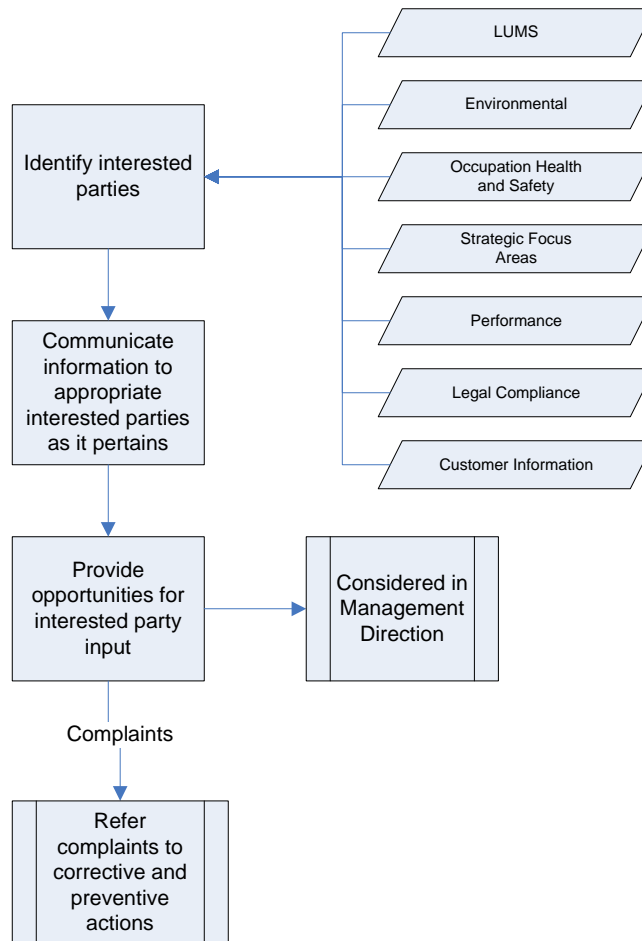
# 4.8 Internal and External Communication

Purpose – provide and receive effective input from internal and external sources.

**Responsibilities:**

Management – provide relevant and required information to employees and receive input.

Utilities Programs Manager – LUMS records and external communications.



Minimum items communicated externally:

- LUMS Policy
- LUMS Procedures
- Legal and other requirements
- Strategic Focus Areas/Objectives
- Annual Performance Report
- Third Party Audit Summary
- Health and safety hazards
- Regulatory Reports
- Product and Service Information
- Information as necessary

Annual Performance Report includes:

- Performance toward Strategic Focus Areas/Objectives
- Performance toward compliance
- Productivity
- Contractor Performance
- Third Party Audit Summary
- Other relevant information deemed necessary by management

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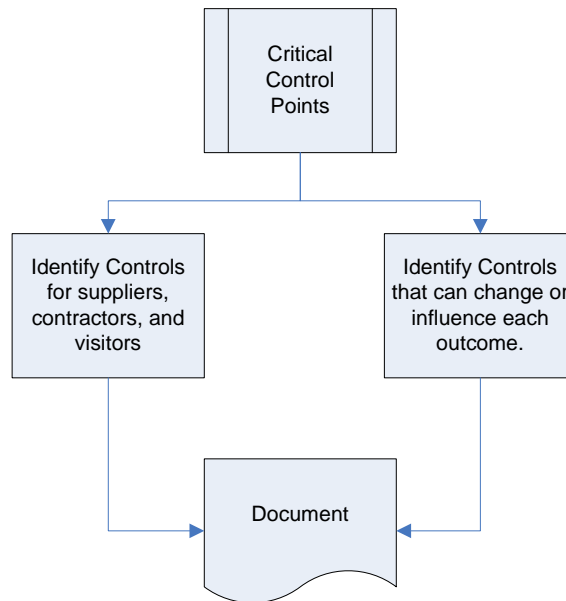
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## 5.0 Operational Control

Purpose – means and methods which control outcomes at specific points to meet legal and customer requirements and manage significant environmental and health and safety risks.

Responsibilities:

Managers – individual assigned areas.



Operational Control Considerations:

1. Measure acceptable parameters.
2. Measure performance of actual parameters.
  - Maintenance and preventive maintenance
  - Lab analysis
  - Process and operations
  - Customer satisfaction
3. Parameters requiring measurement equipment require calibration and documentation of calibration.

## 6.0 Improvement Process

Purpose – to evaluate processes, identify areas requiring improvement, and implement the changes necessary to make those improvements by providing input. Improvement processes include:

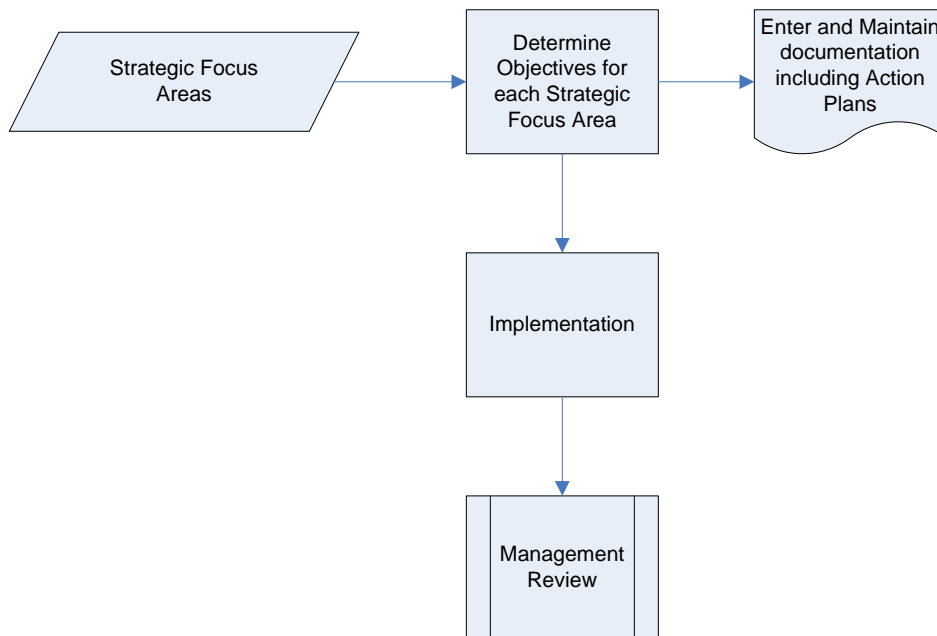
- identifying objectives to make improvements in the strategic focus areas
- conduct internal audits to identify areas of nonconformance
- correct and prevent actions through root cause identification and correction
- management review of the overall performance of the management system processes.

## 6.1 Identifying Objectives

Purpose – actions to improve performance in the strategic focus areas.

Responsibilities:

Management – identify actions in alignment with strategic focus areas. Assure that they meet S.M.A.R.T. criteria. Reviewed annually for progress and performance at the end of the year.



Objectives Criteria:

- Specific
- Measurable
- Achievable
- Relevant
- Time-Bound

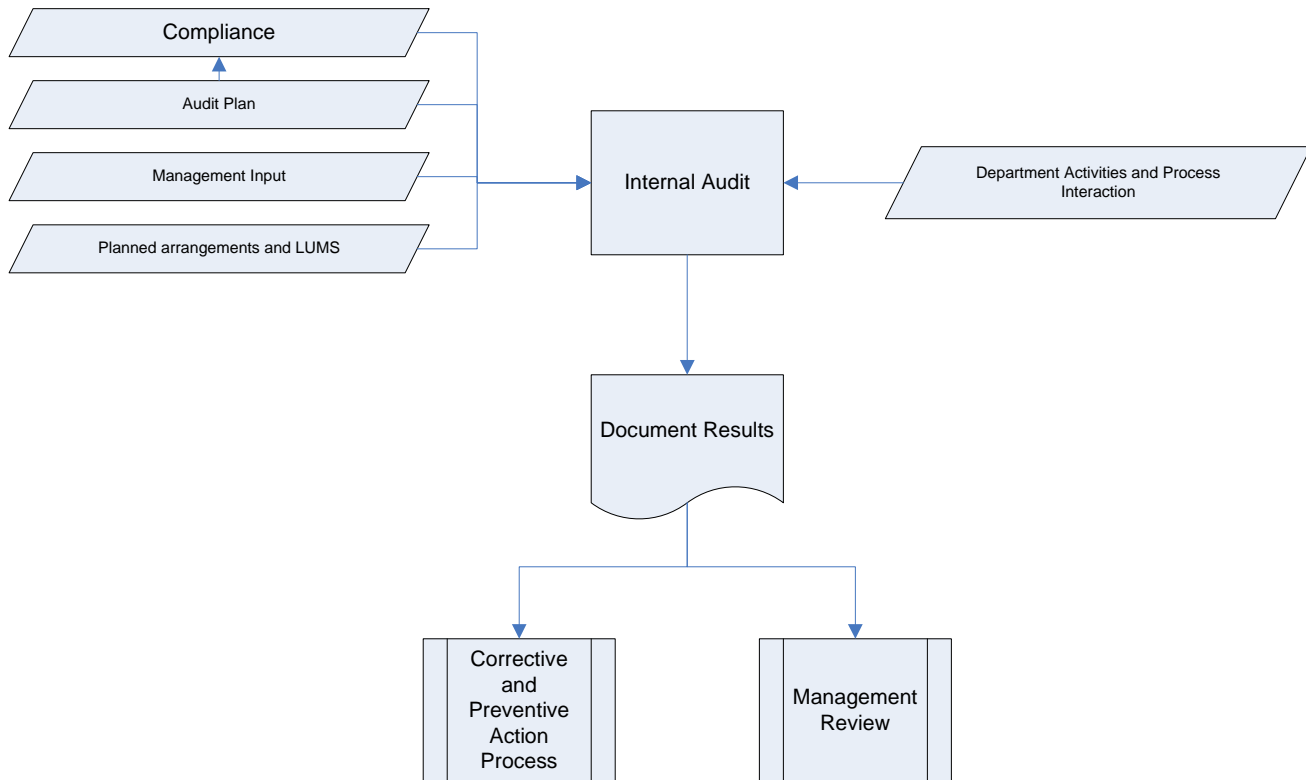
## 6.2 Internal Audits

Purpose – to identify areas where nonconformances with the management system exist and where the Department can make improvements.

### Responsibilities:

Utilities Programs Manager – acts as lead auditor and is responsible for audit scheduling and coordination, training, and documentation. May use other internal auditors as needed.

Water Quality Manager – audits for compliance with regulatory requirements.



## 6.3 Corrective and Preventive Actions

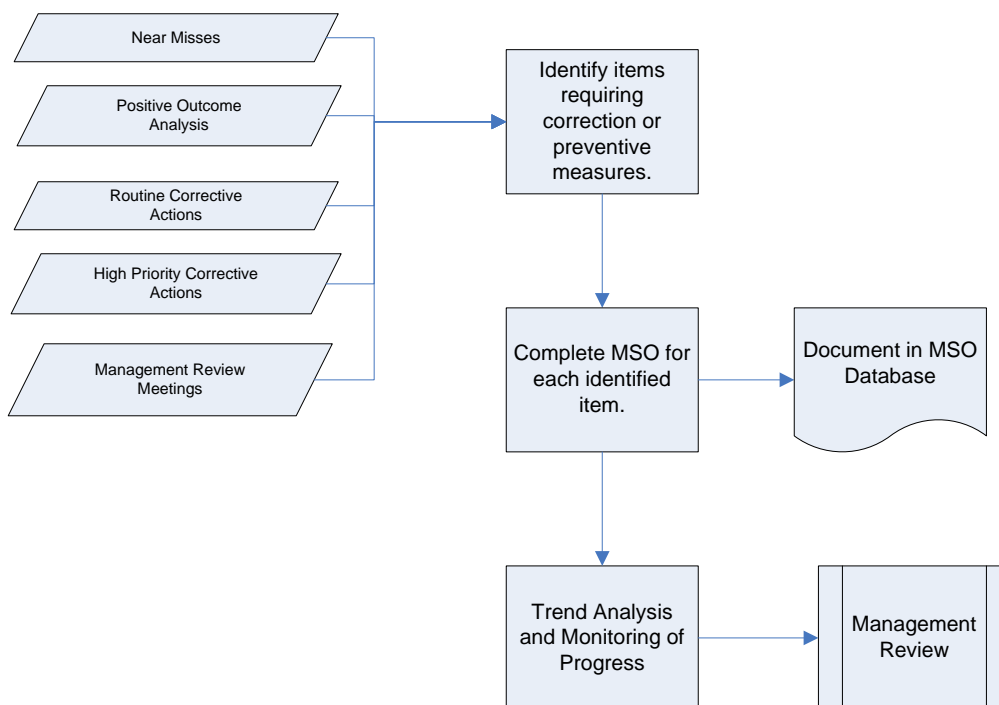
Purpose – to identify problems or potential problems, determine root cause, and implement changes for correction and to prevent an occurrence. Identify root cause trends and correct.

### Responsibilities:

All staff – identify actions that require correction or prevention, document using the MSO database, and prevent or correct the action.

Utilities Programs Manager – review trends and report to management.

Safety Group – Review safety related MSO entries.



### High Priority Corrective Actions include:

- Complaints (1 MSO may be entered for more than one related complaint).
- Emergency Operations
- Noncompliance
- Safety/Security
- Non-conforming product/service
- Audits (Internal/External)

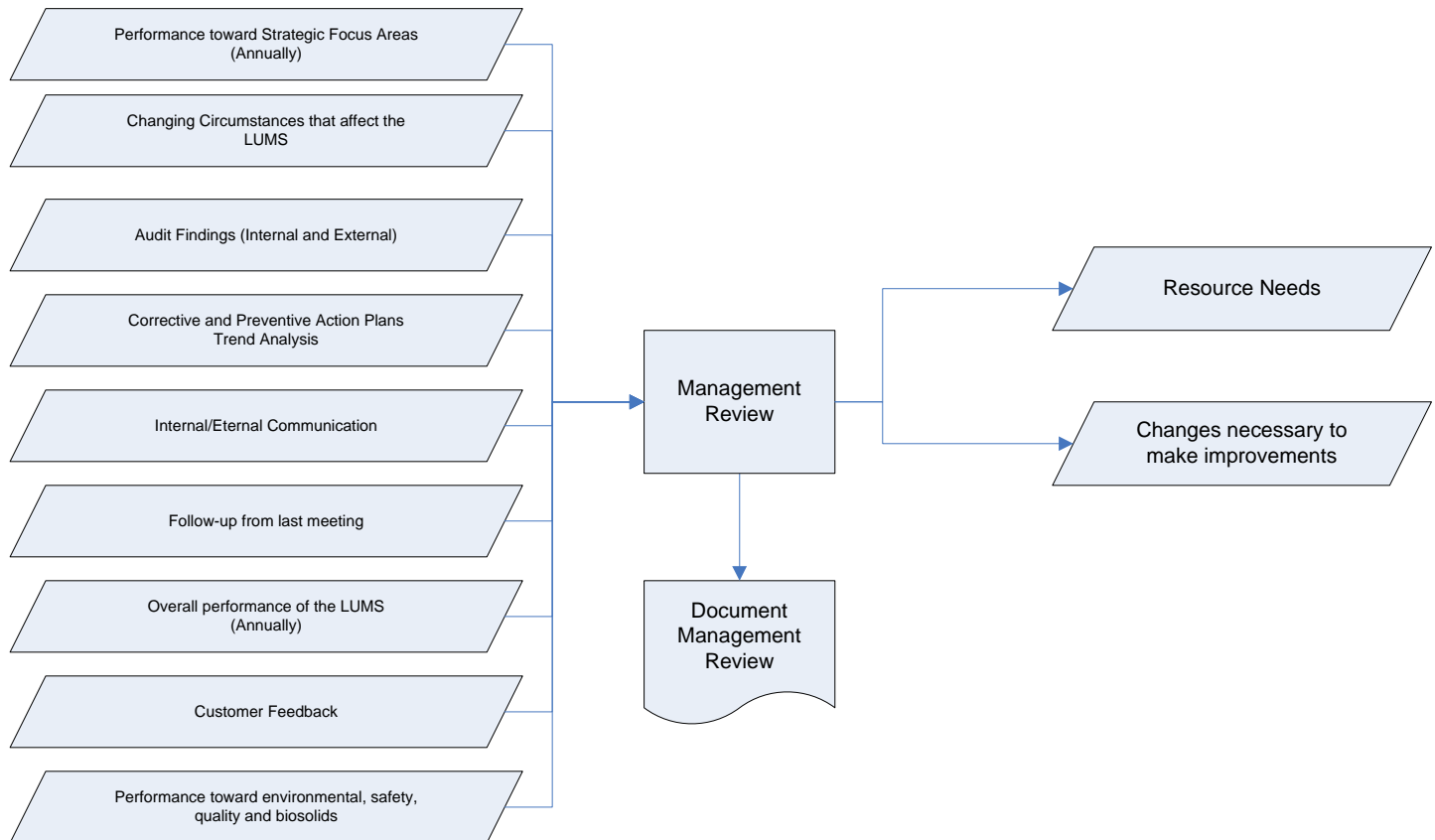
## 6.4 Management Review

Purpose – to review the performance of the management system and outcomes.

### Responsibilities:

Utilities Programs Manager – make recommendations to management on management system performance.

Management – review management system performance and direct changes to assure desired outcomes.



## LUMS Glossary

**Action Plan** – (Interchangeable with implementation plan) process to make progress toward strategic focus areas and objectives, to identify resources, deadlines, responsible parties, and other details; used to make changes or improvements.

**Audit** – a systematic review to identify deficiencies to be corrected or resolved.

**Auditor** – competent person(s) conducting an audit.

**Authority** – the right or power to enforce rules or give orders.

**Awareness** – mindful and conscious of the implication of each action or activity

**Biosolids** – solid organic matter recovered from a wastewater treatment process and used especially as fertilizer, usually referred to in the plural.

**Biosolids Management Activities** – all activities that impact biosolids quality, including pretreatment activities, wastewater treatment processes, solids stabilization processes, conditioning and dewatering processes, transportation, storage, and beneficial use or disposal.

**Code of Good Practice** – broad guidance for the production, management, transportation, storage, and use or disposal of biosolids.

**Competency** – the ability to use knowledge effectively and readily to perform tasks and activities; a developed aptitude or ability. May include applicable education, training, skills, and/or experience.

**Continual Improvement** – a management system process for improving the LUMS to achieve Utility Department strategic focus areas and objectives as described in City LUMS.

**Contractors** – companies that hold contracts for services, goods, and other activities not directly completed by the Department of Utility.

**Critical Control Points** – anywhere an outcome of a significant environmental aspect or occupational health and safety risk or product or service quality can be changed.

**Corrective Actions** – specific actions and steps taken to correct noncompliance with legal and other requirements or nonconformance with processes, programs or procedures, to mitigate any resulting impacts to the environment, health and safety, product or service quality, or to public perception.

***Division Safety Assistants*** – employees assignments represent each work group on health and safety matters; each safety assistant reports to and assists his or her work group manager as needed on health and safety issues, as well as participates in the Department's safety committee.

***Documents*** – information and its supporting medium (paper, magnetic, electronic, computer disc, photograph, or combination thereof). For the purpose of the LUMS, it is the various documents that collectively comprise management system documentation, including the LUMS policy, program, procedures, processes, operating instruction, and other supporting documents required by the LUMS and applicable laws and regulations.

***Education*** – any formal training, conferences, workshops, or classroom work.

***Emergency*** – any event that may go offsite, or requires emergency personnel to control.

***Emergency Preparedness*** – an emergency planning process to ensure that emergency situations affecting the Utility Department have been identified, response plans and procedures have been developed, training personnel, and readying equipment for use.

***Emergency Response*** - specific emergency plans and activities that are initiated to contain an emergency situation and bring it under control in order to minimize environmental and occupational health and safety impacts.

***Environment*** – surrounding in which the Utility Department operates, including air, water, land, natural resources, flora, fauna, humans, and other interrelation.

***Environmental*** – where referenced throughout this manual, includes all Utility Department activities: the treatment and distribution of clean drinking water and the collection and treatment of wastewater and the control and return of treated water and biosolids to the environment.

***Environmental Aspect*** – Utility Department's activities, products, or services that impact the environment.

***Environmental Impact*** – any change to the environment (positive or negative) including public nuisance that wholly or partially results, directly or indirectly, from the Utility Department's activities.

***Environmental Management System (EMS)*** – systematic program that describe and document the way an organization manages environmental aspects and critical control points by identifying the parts critical to compliance, by setting clear and attainable goals, by setting a mechanism for periodic checking of the parts of the system, and by involving the public or stakeholders in the process.

***Experience*** – the act of repeating a task or activity to reinforce learning.

**Hazard** – situation with a potential for harm in terms of human injury or ill health, damage to property, damage to the workplace environment, or a combination thereof.

**Hazard Identification** – process of determining situations that can be a health and safety risk.

**Incident** – event that may give result in an accident. An incident may not include ill health, injury, damage, or other loss and is referred to a “near-miss”. May include “near-misses,” emergency situations, and accidents.

**Interested Parties** – individuals or organizations, public or private, affected by Utilities Department activities, those expressing interest in the Department of Utilities activities, or those the Department believes would be interested in its activities.

**Internal Audit** – a systematic internal review for objectively evaluating the Utility Department’s conformance to the requirements of the LUMS and identifying deficiencies to be corrected or resolved.

**ISO 9001:2008 Standard** – quality management system standard.

**ISO 14001:2004 Standard** – environmental management system standard.

**LUMS** – acronym for the Lawrence Utility Management System intended to be consistent with the following planned arrangements: ISO 14001:2004 Standard, OHSAS 18001:1999 Specification, ISO 9001:2008 and the National Biosolids Partnership EMS for Biosolids.

**Lawrence Utilities Management System (LUMS) Policy** – consists of management’s commitment toward management system ideals for environmental, occupational health and safety, quality, and biosolids.

**Legal Requirements** - the environmental and occupational health and safety federal, state, and local laws and regulations that are applicable to the Utility Department activities.

**Management of Change** – a process for updating documents, processes, procedures, practices, and training in response to changes.

**Management Review** – addresses the possible need for changes to policy, improvement processes, LUMS, or any process based on internal and external audit results, changing circumstances, and our commitment to continual improvement.

**Management System Order (MSO)** – recording and tracking method for strategic focus areas/objectives, routine and high priority corrective and preventive actions, and other items as management deems necessary.

**Management Team** – the management team includes the Director of Utilities as top management and other management and administrative staff as assigned by the Director of Utilities.

**Measurement** – the systematic method of estimating, testing, or otherwise evaluating key parameters being monitored.

**Monitoring** – the systematic process of watching, checking, observing, inspecting, keeping track of, regulating, or otherwise controlling key parameters and characteristics of activities to determine compliance with a specific standard, regulatory or other performance requirement, or to measure progress toward strategic focus areas/objectives.

**NBP** – acronym for National Biosolids Partnership, a not-for-profit alliance between the Water Environment Federation (WEF), the National Association of Clean Water Agencies (NACWA), and the US Environmental Protection Agency (EPA) whose purpose is to promote safe and environmentally sound biosolids management.

**National Manual of Good Practice** – detailed guidance for the identification of critical control points and the selection of appropriate management practices.

**Near-miss** – an unexpected or undesirable event that fails being defined as an accident or incident by a very small margin; reported via MSO.

**Noncompliance** – a deviation from federal, state, or local laws; regulations; and other compliance requirement applicable to the Utility Department's activities.

**Nonconformance** – a deviation from the established program and management system requirements that has the potential to create a noncompliance situation, significant environmental impact, occupational health and safety hazard or risk, or public perception issue.

**Objective** – a detailed performance improvement requirement, applicable to Utility Department or parts thereof, that arises from strategic focus area, and that needs to be set and met in order to achieve overall strategic focus areas.

NOTE: The LUMS has adopted the term "objectives". This term is used in the same manner as "objectives," used in the NBP EMS Standard and "targets" in ISO and OHSAS planned arrangements.

**Occupational Health and Safety** – conditions and factors that affect the well-being of employees, temporary workers, contractor personnel, visitors, and any other person in the workplace.

**Occupational Health and Safety Management System** – a system that assists management in decreasing safety risk, associated with the business of the organization, see OHSAS 18001:1999.

**OHSAS 18001:1999** – acronym for the Occupational Health and Safety Assessment Series; similar to ISO standards.

**Operational Controls** – any control in place to ensure management and decrease environmental impact, safety risk, and quality; includes conformance with policy requirements; and achievement of strategic focus areas and objectives.

**Other Requirements** – other binding practices and requirements to which the Utility Department subscribes as part of the LUMS. Examples include binding agreements with customers, suppliers, public organizations, and commitments to “beyond compliance” performance.

**Performance** – measurable results for any department activities.

**Planned Arrangements** – include ISO 9001, ISO 14001, OHSAS 18001, and NBP Biosolids EMS.

**Pollutants** – materials that make water, wastewater and biosolids physically impure if present at certain concentrations.

**Preventive Action** – specific actions and steps taken to identify, analyze, and eliminate the root causes of noncompliance and/or nonconformance and to put in place solutions that prevent a recurrence.

**Product** – something made or created; Department’s goods and services.

**Public** – see **Interested Parties**.

**Public Education** –communications for educating interested parties and other stakeholders on the Department’s activities and the LUMS. May be used interchangeably with Public Outreach.

**Quality Management System** – system that assists management in identifying methods to maintain products and service consistency and focusing on customer requirements.

**Records** – various records or reports of activities required by the management system and applicable laws and regulations, including, but not limited to records or reports of equipment calibration, monitoring, measurement, laboratory testing, inspections, operating logs, emergency response, incidents, outside party inquiries, public participation meetings, audits, corrective and preventive actions, management reviews, and periodic performance reports. Records describe the results of specific activities for a prescribed event, activity and/or period of time.

**Responsibilities** – specific tasks that an individual performs that accomplishes and/or supports Department and LUMS activities.

**Risk** – combination of the likelihood, severity and consequence(s) of a specific hazardous event occurring.

**Risk Assessment** – process of estimating the magnitude of risk and deciding whether or not the risk is tolerable.

**Role** – the activity that an individual performs in relation to the Department activities.

**Safety** – freedom from unacceptable risk of harm.

**Service** – work done for customers.

**Service Agreement** – the contract between the Department and a service or product provider to perform specific activities or supplies.

**SMART Criteria** – The criteria that define and evaluate the suitability of a practical strategic focus area/objectives. Acronym relates to **s**pecific, **m**easurable, **a**chievable, **r**elevant, and **t**ime-bounded.

**Stakeholder** – somebody or something with a direct interest, involvement, or investment in something.

**Standard Operating Procedure (SOP)** – standard work instructions and practices for employees describing the “how to” steps in managing the aspects, risks, and critical control points of a specific management activity affecting activities, compliance with legal and other requirements, and health and safety risks, and product or service quality.

**Strategic Focus Areas** - Broad environmental, occupational health and safety, and quality performance improvement based on LUMS policy to ensure activities comply with applicable laws and regulations, and prevent other unregulated adverse environmental, health and safety impacts by effectively managing all environmental aspects, health and safety risks, quality, and critical control points.

NOTE: The LUMS has adopted the term “strategic focus areas”. This term is used in the same manner as “objectives” used in ISO 14001:2004 Standard and OHSAS 18001:1999 Specification.

**Suppliers** – individual or company that provides items for reuse.

**Third Party Verification Audit** – a systematic, structured audit of the Department management system, performed by a qualified independent third party auditor using a standardized protocol for verification.

**Top Management** – for the purposes of LUMS, top management is the Director of Utilities.

**Training** – to increase knowledge, skill, awareness, or understanding.

**Utility** – refers to the water and/or wastewater utilities as they relate to the City of Lawrence Department of Utilities and all activities. It should be understood that all biosolids management activities as described in the NBP EMS Standard are a function of the wastewater operation including those performed by contractors.

**Utility Department Safety Group**– assigned safety assistants and managers to represent the Wastewater and Water Utilities in matters of health and safety. The Utility Department Safety Committee assists the manager in developing and maintaining health and safety training and competency.

## **Appendixes**

Appendix A City of Lawrence Administrative Policy 101: LUMS Policy

Appendix B LUMS Manual and Planned Arrangements Cross-Reference

Appendix C Documents Requiring Control

Documents of External Origin Requiring Control

Records Requiring Control

City of Lawrence  
Administrative Policy

SUBJECT Lawrence Utility Management System (LUMS) Policy	APPLIES TO Utility Department / All Divisions	EFFECTIVE DATE May 22, 2007
APPROVED BY City Manager/City Commission (1)	TOTAL PAGES 1	POLICY NUMBER 101

*Approved  
5-11-2008*

1.0 **Purpose:** Establish guiding principals of conduct for the City’s Utility Department to reduce its environmental impact and occupational health and safety hazards and improve product quality and services.

2.0 **Definitions:**  
Code of Good Practice – Broad framework of goals and commitments to guide specific Utility Department activities.

Management System (MS) – Plan which describes and documents the way the Lawrence Utilities Department manages activities, by identifying the parts critical to compliance and quality, by setting clear and attainable goals, by implementing a mechanism for periodic checking of the system, and by involving the public and stakeholders in the process.

3.0 **Policy:**  
The City of Lawrence Department of Utilities commits to:

- ◆ The prevention of pollution, injury, and ill health, as it relates to the Utilities Department, the promotion of energy and resource conservation and the appropriate health and safety practices.
- ◆ Production of quality products and services, including consideration of customer and interested party input.
- ◆ Continual improvement in the management of environmental, health and safety, and product and service quality, including development and implementation of goals and targets. The goals and targets will be set and reviewed for alignment with current City Commission goals.
- ◆ Comply with all applicable environmental laws, appropriate occupational health and safety practices, product and service standards, National Biosolids Partnership Code of Good Practice, and any other requirements to which the organization subscribes.

(1) Approved by City Commission on 5/22/07.

## Appendix B Table 1.2.1 LUMS Manual and Planned Arrangements Cross-Reference

LUMS Manual	ISO14001:2004	OHSAS18001:2007	ISO9001:2008	NBP EMS
Section #	Section #	Section #	Section #	Section #
Preamble	4.1	4.1	4.1	1
1.1 Purpose/Scope/Authorizations	4.1, 4.4.1, 4.4.4	4.1	5.5.1, 5.5.2	1, 1A
1.2 LUMS flowchart	4.3.1, 4.3.2, 4.5.1, 4.5.3, 4.6, 4.3.3	4.3.1, 4.3.2, 4.3.3, 4.3.4, 4.4.6, 4.5.2, 4.6	4.1, 4.2.2	3, 4, 5, 10, 14, 17
2.1 Policy, planning, planned arrangements	4.2, 4.4.4	4.2	5.1, 5.3, 4.2.1, 4.2.2	1B, 1C, 1.2, 6
2.2 Lines of Authority	4.4.1	4.4.1	5.5, 5.5.1	7
2.3 Roles/Responsibilities	4.4.1	4.4.4	5.5, 5.5.2, 6, 6.3, 6.4	1F,7
2.4 Management Direction Process	4.4.1, 4.3.3, 4.5.1	4.4.1, 4.3.3, 4.3.4, 4.5.1	5.4.1, 5.4.2,	1, 1F, 5, 6, 7
3.1 Planning Process	4.3.1, 4.3.2,	4.3.1, 4.3.2, 4.5.1	5.2, 5.4, 5.4.1, 5.4.2, 7.2.1, 7.2.2, 8.5.1, 7.3	3, 10, 4, 4, 13, 1E
3.2 Mgt of Change		4.4.3		3, 4
3.3 Operational Control	4.4.6, 4.5.1	4.3.1, 7.1, 7.2.1, 7.2.2, 7.3, 7.4, 8.4, 7.5, 7.6, 8.2.1, 8.2.3, 8.2.4, 8.4		3, 10
3.4.1 Control of Contractors and suppliers	4.4.2, 4.4.6	4.4.1	7.4.1, 7.4.2, 7.4.3	10
3.4.2 Competency, Awareness, and Training	4.4.1, 4.4.2	4.3.1, 4.4.2	6.2.2	8
3.4.3 Accidents and Incidents	4.4.7	4.4.7,4.5.1,4.5.2		14
3.4.4 Emergency Preparedness	4.4.7	4.4.7	8.3	1C,11
3.4.5 Document Control and Recordkeeping	4.4.1,4.4.2,4.4.4, 4.4.5, 4.5.2, 4.5.4,	4.3.1, 4.4.4, 4.4.5, 4.5.3	4.2.3, 4.2.4	4, 8, 12, 13
3.4.6 Communications	4.2, 4, 4.3, 4.4.2,4.4.3	4.2, 4.3.2, 4.4.3	5.5, 5.5.3, 7.2.3	1C,2, 9, 6, 15
4. Improvement Process	4.5.5, 4.5.3, 5.2	4.6, 4.5.4, 4.5.2	5.6, 8.3, 8.2.2, 8.5.2, 8.3.3	16,14,17
Appendix A Policy	4.2, 4.4.4,	4.2	5.3	1B, 2
Appendix B Planned Arrangements Cross Reference	4.4.4	4.4.4	4.1, 4.2.1, 4.2.2	12
Appendix C Sig EHS Rankings	4.3.1	4.3.1, 4.3.2,		3
Appendix D CCP	4.3.1, 4.3.2, 4.5.2	4.3.1, 4.3.2, 4.5.2,		1D,3
Appendix E Ops Control	4.3.1, 4.3.2, 4.5.2, 4.4.6	4.3.1, 4.3.2, 4.4.6		1E,10
Appendix F Doc Control and Recordkeeping	4.4.4, 4.4.5, 4.5.4	4.4.5, 4.5.3	4.2.3, 4.2.4	4, 12

Appendix G Table 2.9.1 Documents Requiring Control

<b>Document Name</b>	<b>Master Copy Location</b>	<b>Responsible Person</b>
LUMS Manual	Network	Utilities Programs Manager
SOP's, forms, and other documents that meet controlled criteria	Network	Specific Work Group Manager
Strategic Focus Areas	Network	Director (or designee)
Contractor Service Agreements	Network (secondary)	Primary – Clerk's office Secondary - Network
LUMS Policy	Network	Legal Services
Emergency Response Plan	Network Server	Director (or designee)
Process Drawings/ equipment info	GIS Files	Utility Engineer/GIS
Safety Programs	Network	Director (or designee)

Appendix G Table 2.9.2 Documents of External Origin Requiring Control

<b>Document Name</b>	<b>Location</b>	<b>Responsible Person</b>
Job Descriptions	Network	Personnel Manager
Material Safety Data Sheets	MSDS Stations	Safety and Training Assistant

Appendix G Table 2.9.3 Records Requiring Control

<b>Record Name</b>	<b>Location</b>	<b>Responsible Person</b>	<b>Retention Requirement</b>
Department of Utilities Annual Report	Network	Utilities Programs Manager	Permanently (may be digital)
Maintenance Records	Maintenance Database	Utilities Maintenance Superintendent	Permanently (may be digital)
Management Review Minutes	Network	Utilities Programs Manager	Permanently (may be digital)
Sampling & analysis (all laboratory records)	Element System	Water and Wastewater Managers and Water Quality Manager	3 years (may be digital)
Internal Audit Reports	Network	Utilities Programs Manager	Permanently (may be digital)
3 <sup>rd</sup> Party Audit Results	Network	Utilities Programs Manager	Permanently (may be digital)
Training Records/Evaluations	Responsible Manager files	Responsible Manager	Permanently (may be digital)
Corrective and Preventive Action Plans	MSO Database	Utilities Programs Manager	Permanently (may be digital)
Environmental Impact Assessment	Network	Utilities Programs Manager	Permanently (may be digital)
Safety Risk Assessment	Network	Utilities Programs Manager	Permanently (may be digital)
Material Safety Data Sheets (obsolete versions)	Water and Wastewater Manager Files	Water and Wastewater Managers	Permanently
Written communications to and from regulators and other relevant external parties.	Network	Responsible Manager	Permanently (may be digital)
SCADA	SCADA Network	Water and Wastewater Managers	Permanently (may be digital)
Pretreatment NOV's	Network	Water Quality Manager	Permanently (may be digital)