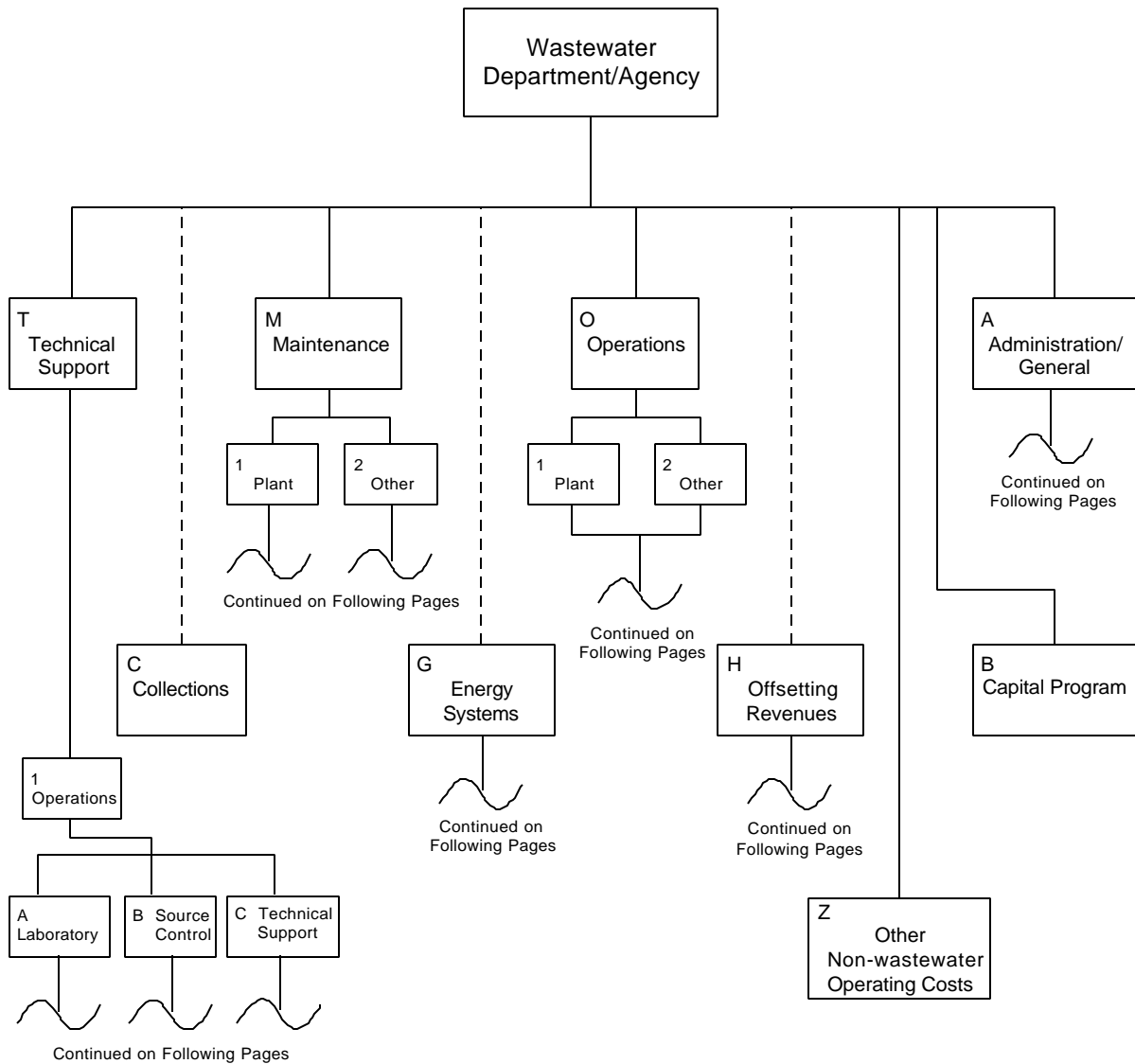


Appendix A MABS Template and Functional Area Descriptions

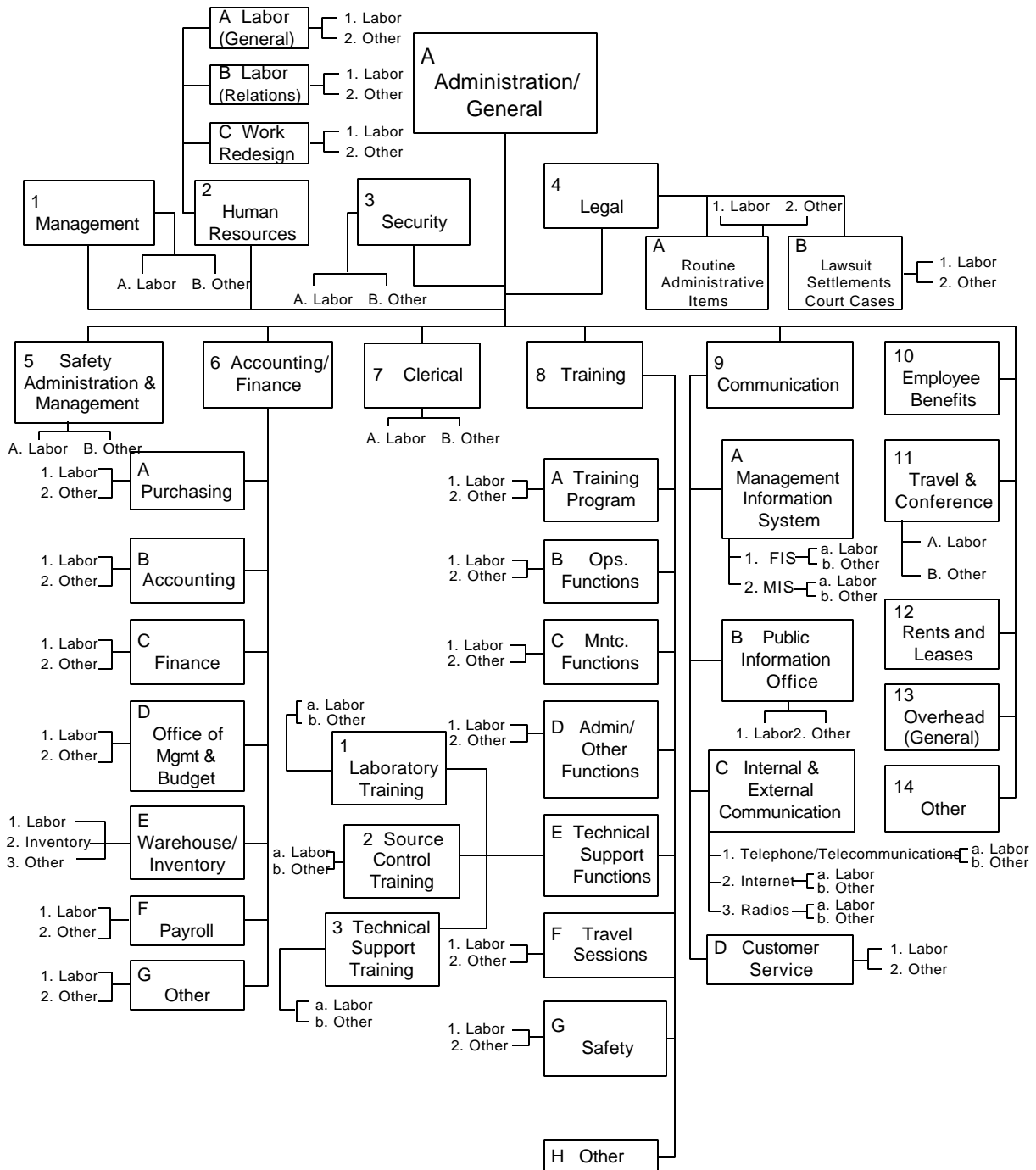
Multi-Agency Template Summary Breakdown of Functional Areas in a Wastewater Treatment Plant



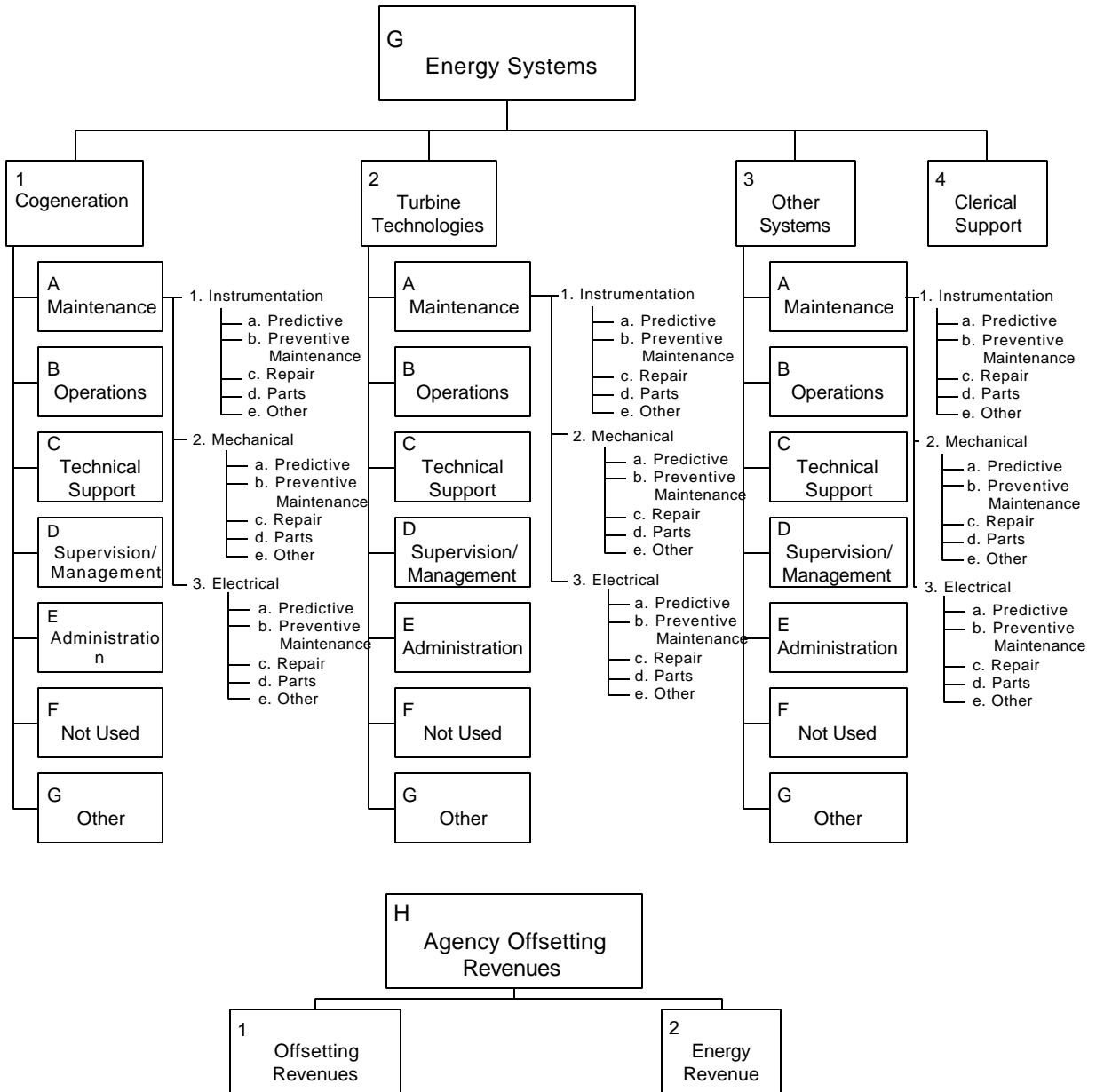
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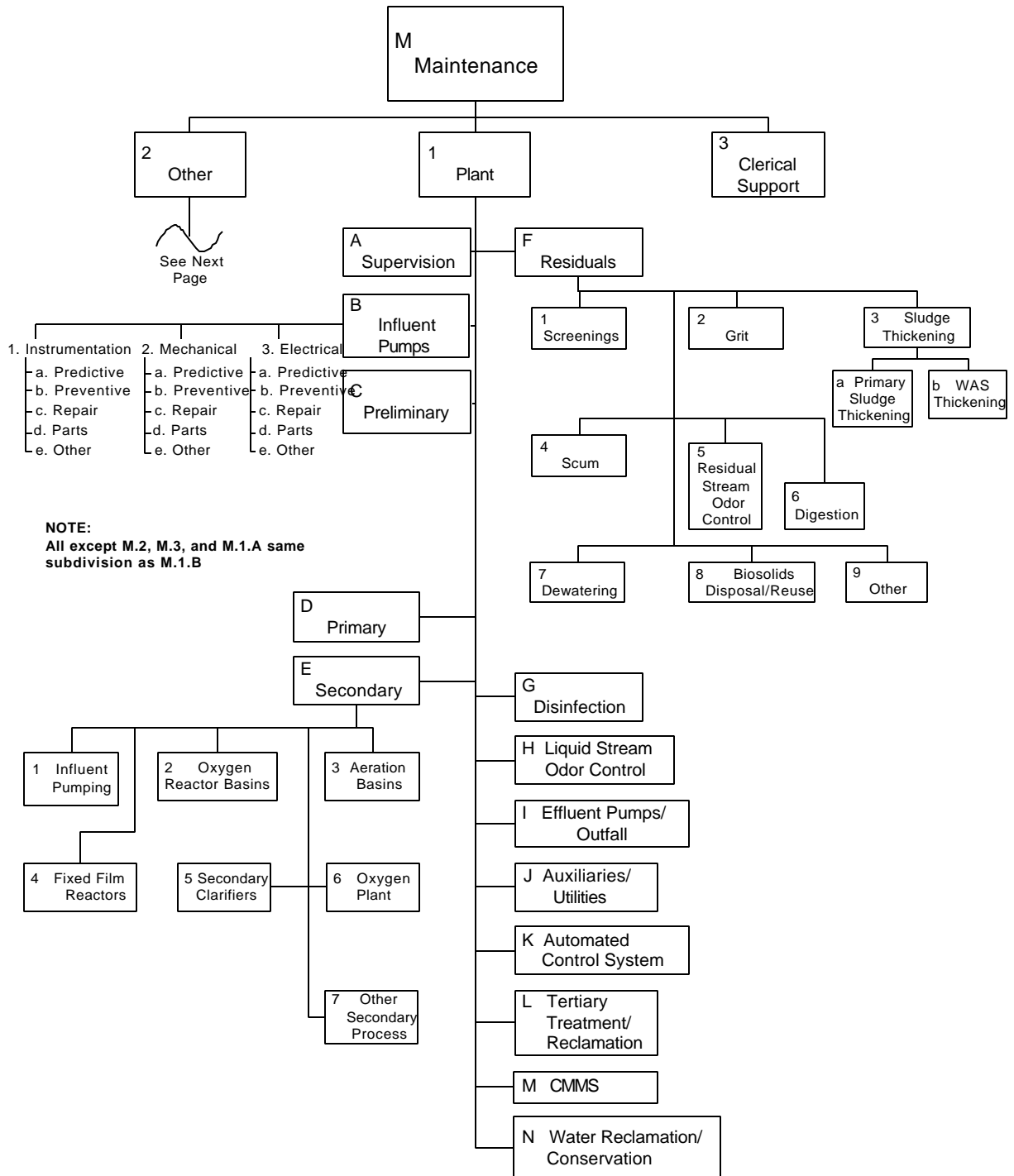
Administration/General Section Breakdown of Functional Areas



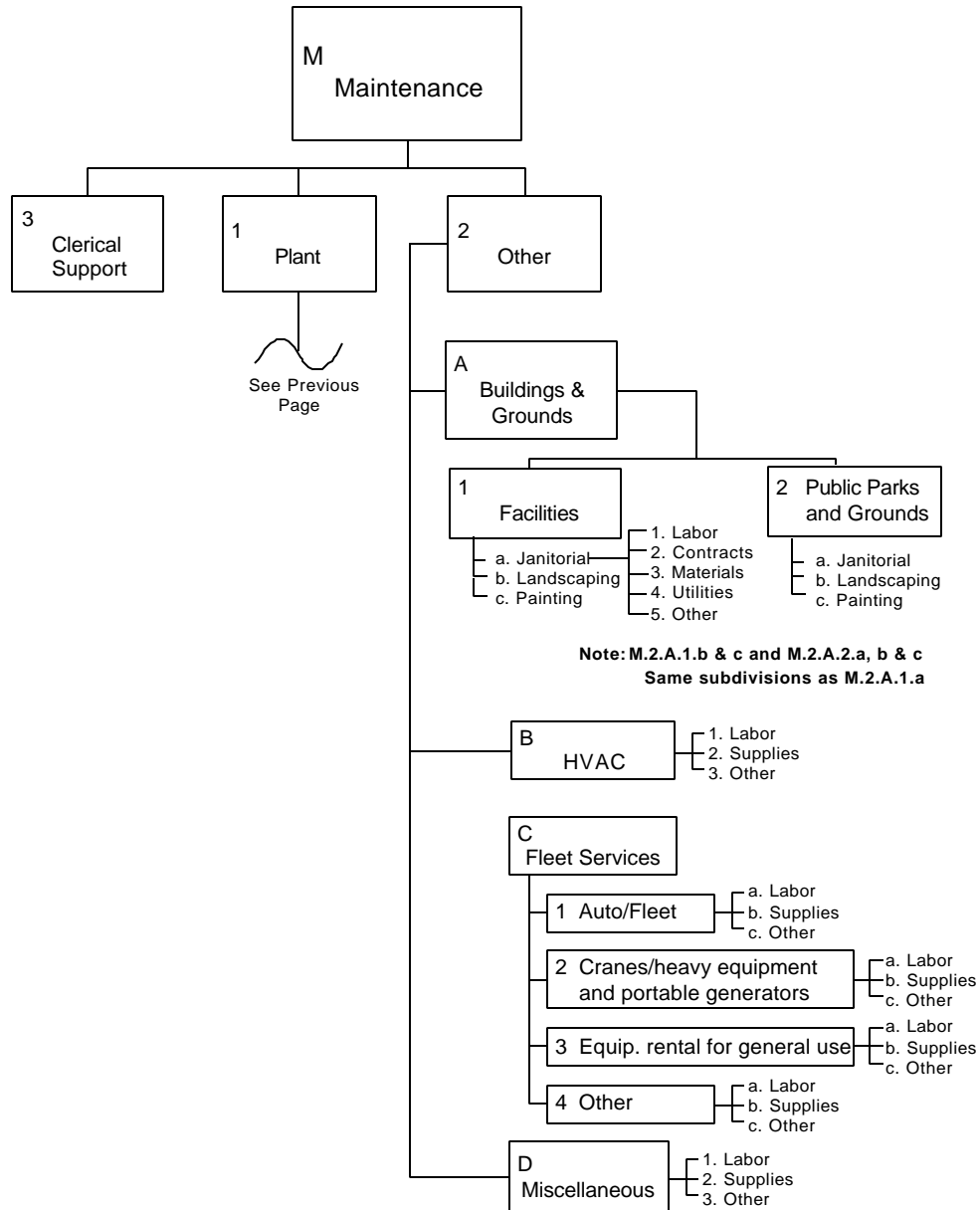
Cogeneration Section Breakdown of Functional Areas



Maintenance Section Breakdown of Functional Areas



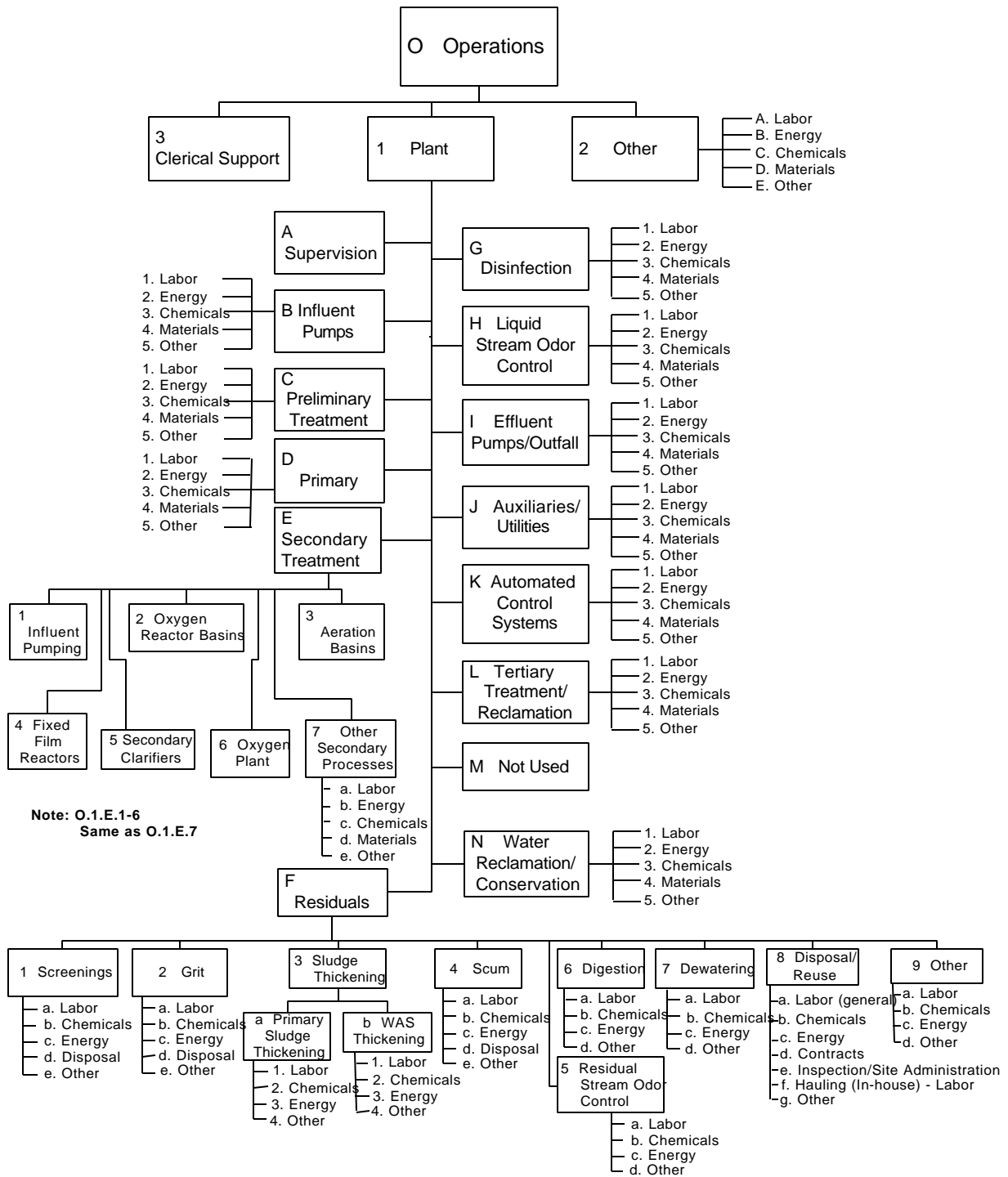
Maintenance Section Breakdown of Functional Areas



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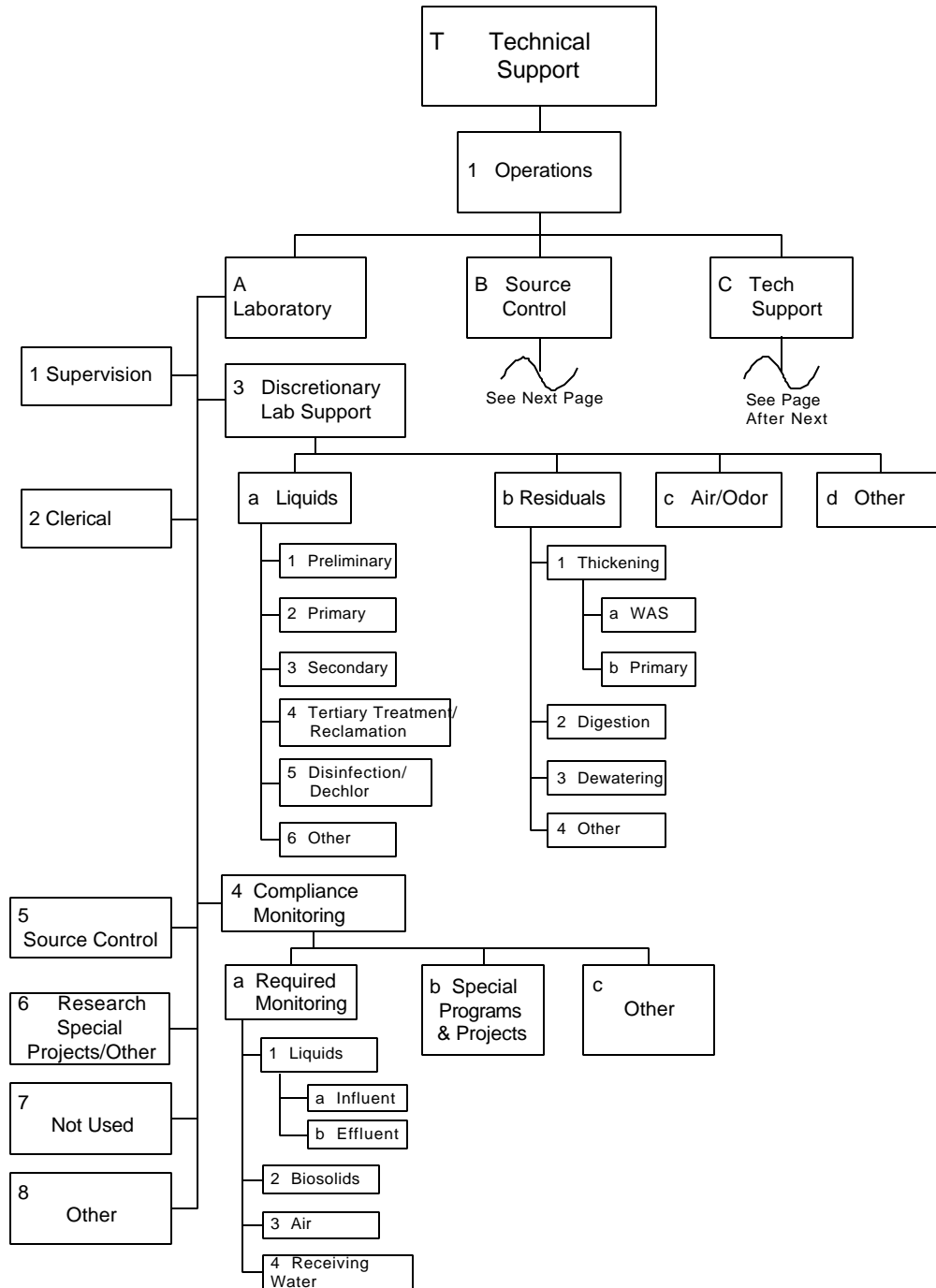
Appendix A

Operations Section Breakdown of Functional Areas

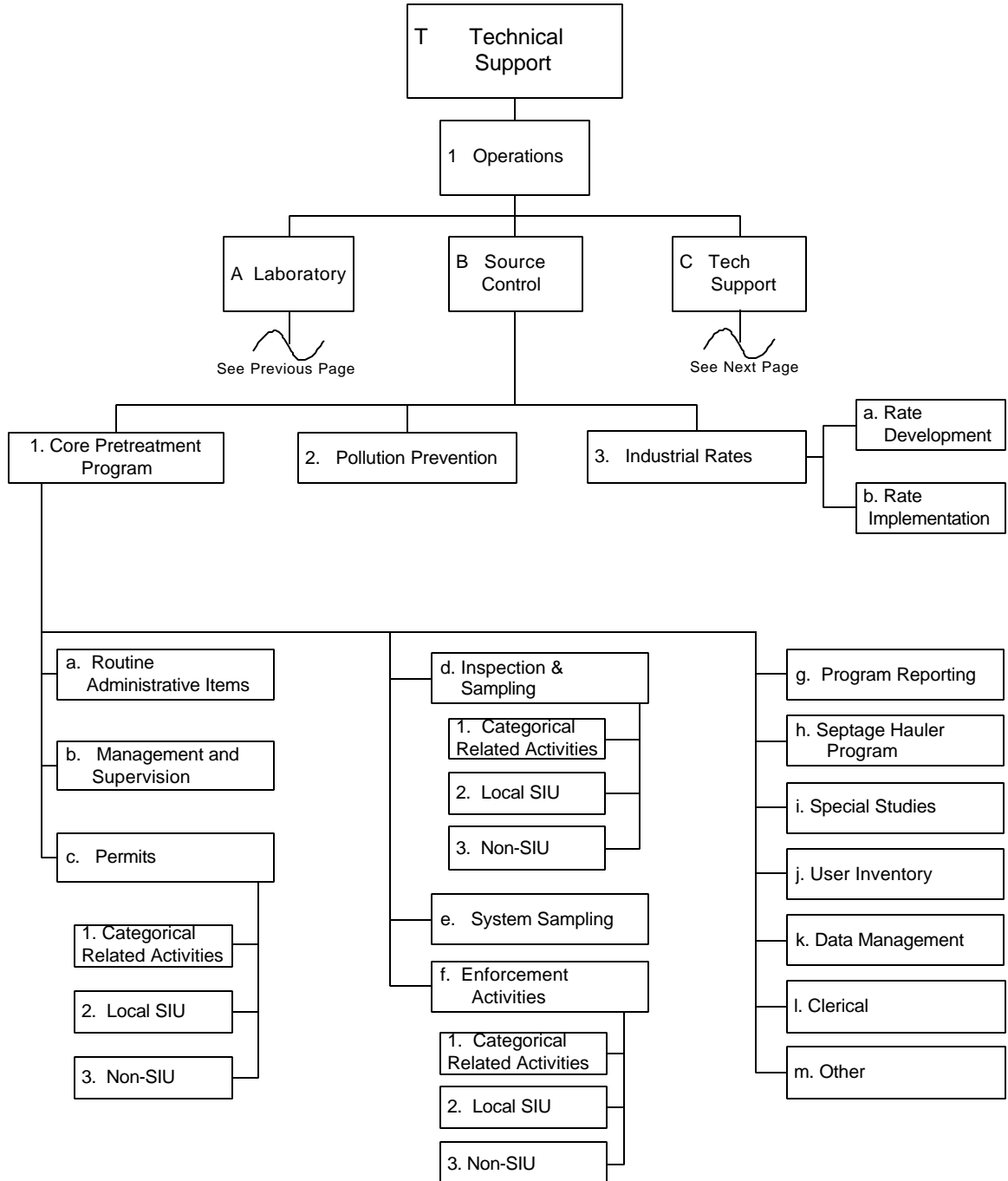


Note: O.1.E.1-6
Same as O.1.E.7

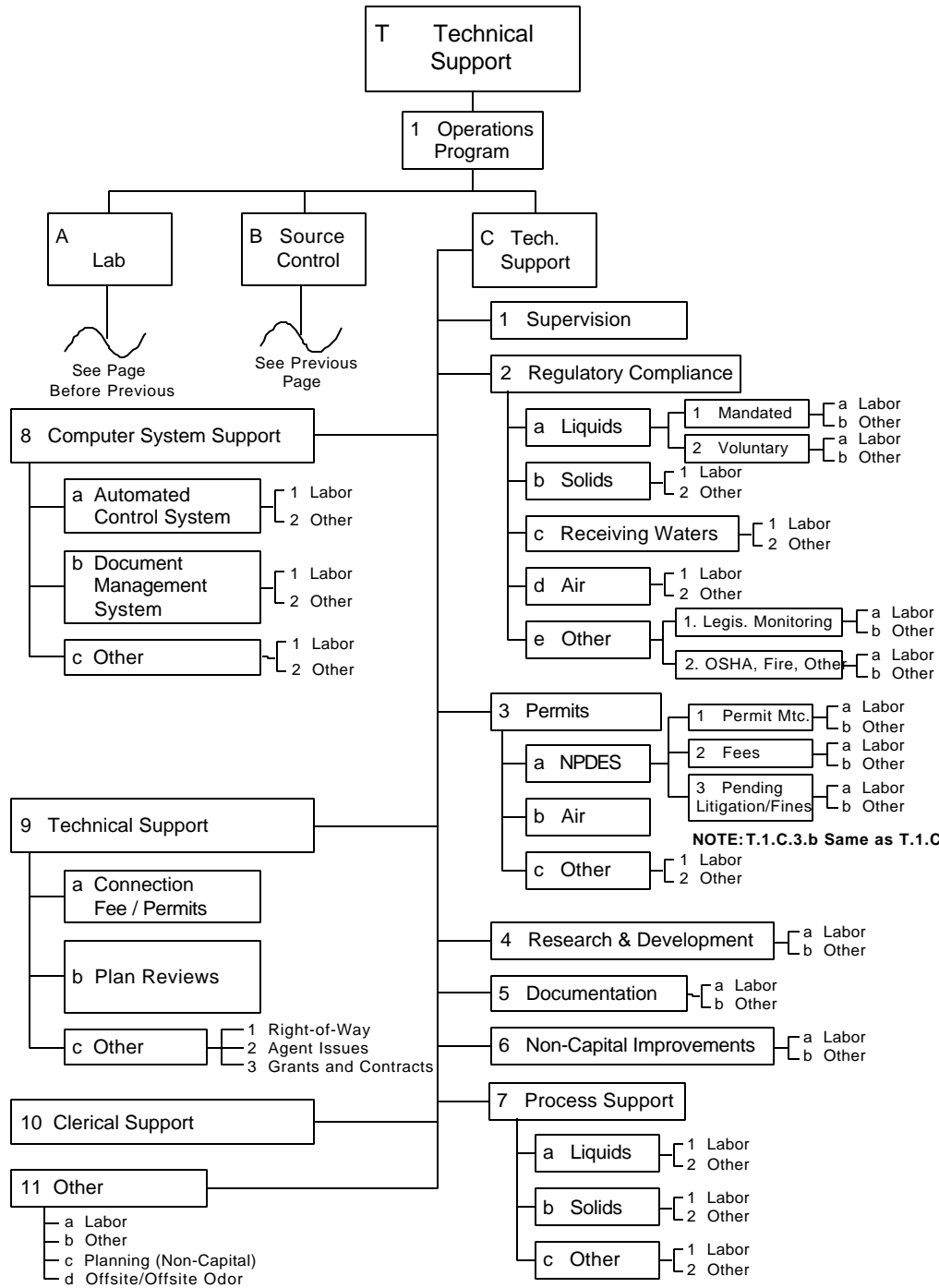
Technical Support Section Breakdown of Functional Areas



Technical Support Section Breakdown of Functional Areas



Technical Support Section Breakdown of Functional Areas



FUNCTIONAL AREA DEFINITIONS

A. Administration/General

A.1 Management - Labor and supplies associated with overall management of the agency. This functional area also includes costs associated with preparing governing board packages and presentations, and overhead and administration costs not readily identified to the various functional areas previously identified.

A.2 Human Resources - Labor and supplies associated with the human resource areas for the agency. This functional area also includes costs associated with hiring and dismissal practices, administering policies and procedures, and related activities.

A.2.A Labor (General)

A.2.B Labor (Relations)

A.2.C Work Redesign

A.3 Security - Labor and supplies associated with providing security and protective services for the agency. This functional area also includes costs associated with maintaining and operating card-key systems, security contracts, and/or related activities.

A.4 Legal Services - Labor and supplies associated with providing legal services for the agency. This functional area also includes court costs and associated legal fees. Break into categories indicated, such as routine administrative items and court cases.

A.4.A Routine Administration Items

A.4.B Lawsuit Settlements & Court Cases

A.5 Safety Administration & Management - Labor and supplies associated with administration and management of the agency's safety program. This functional area also includes costs associated with hiring safety consultants and administering and developing safety programs, and Worker's Compensation claims and cases.

A.6 Accounting/Finance - Labor and supplies associated with accounting and finance functions for the agency. These functional areas consist of purchasing, accounting, finance, office of management and business, the warehouse/inventory, or other related costs.

A.6.A Purchasing. Costs associated with the purchasing of equipment and supplies. Includes costs related to purchase orders, development of bid specifications, and other related costs, such as contract management for non-capital or non-technical bids or purchases. W&MBE resources and costs are included in this item.

A.6.B Accounting. Costs associated with accounting functions, including invoice payments, billing, error correction, and vendor relations.

A.6.C Finance. Costs associated with the treasury management function, including investments, securities and cash management, and financial reporting functions.

A.6.D Office of Management and Budget. The office of Management and Budget is responsible for the following: 1) prepares the 5-Year Financial Outlay Plan, 2) coordinates preparation of the annual budget and budget performance reports, 3) prepares financial projections, schedules of rates and charges, tax rate proposals and other financial materials, 4) develops and monitors operating procedures and controls to assure compliance with budgetary constraints, and 5) provides other assistance as necessary.

A.6.E Warehouse/Inventory. Costs associated with operation of stores. Includes tasks such as stores issues, inventory, procurement, warehousing and uniforms.

A.6.F Payroll

A.6.G Other. Miscellaneous accounting/finance costs not included in other categories.

A.7 Clerical - Labor and supplies associated with providing clerical support for the administration and management of the agency. This functional area also includes costs not readily identified to other functional areas.

A.8 Training - Labor and supplies associated with providing training for the agency. This functional area also includes costs associated with hiring training consultants and administering and developing training programs.

A.8.A Training Program. Labor and other costs associated with the development and operation of training programs for the agency.

A.8.B Operations Functions. Labor and other costs associated with training the operations staff.

A.8.C Maintenance Functions. Labor and other costs associated with training the maintenance staff.

A.8.D Admin/Other Functions. Labor and other costs associated with training the administrative staff.

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A.8.E Technical Support Functions. Labor and other costs associated with training the technical support staff.

A.8.E.1 Laboratory

A.8.E.2 Source Control - Resources and/or labor associated with: Registration, class tuition, staff time spent in training classes, both technical and “soft training” such as communication skills, team-building, supervisory training. *(From Source Control Definitions Rev. 7/10/98.)*

A.8.E.3 Technical Support

A.8.F Travel Sessions. Labor and other costs associated with attending training sessions or off-site training. Does not include conference attendance. See Item A11 for conference attendance.

A.8.G Safety . Safety training and education, hazardous materials and confined space programs, MSDS and OSHA required training is included in this item. Tailgate training and OJT is not included herein. Tailgate and OJT is included in the respective functional process areas, like primary treatment.

A.8.H Other. Labor or costs not identified elsewhere. Specify resources allocated to this item.

A.9 Communications - Labor and supplies associated with providing the communications needs for the agency. This functional area also includes costs associated with the public information officer, internal communications and management information system.

A.9.A Mgmt. Information System. Program cost associated with operating and maintaining the agency’s management information and financial information systems. Programming, repairs, and other system resource allocations are included in this item. Computer maintenance contracts, hardware, software programming, computer system administration and repairs resources (excluding direct support for data entry in the respective functional areas) are included herein.

A.9.A.1 FIS

A.9.A.2 MIS

A.9.B Public Information Office. Labor and supplies associated with public information. Includes media relations, public information meetings, and focus groups. Preparation of videos, books, or pamphlets used or seen by the public are included in this item.

A.9.C Internal /External Communications. Costs related to communication systems that are not included in the other functional areas shown. Resources required to support the

agency telephone system and radio system, or preparation of videos for internal use only are included in this item. Also included is video equipment maintenance and repair.

A.9.C.1 Telephone/Telecommunications

A.9.C.2 Internet

A.9.C.3 Radios

A.9.D Customer Service

A.10 Employee Benefits - Costs of employee benefits, including but not limited to, retirement, health insurance and deferred compensation, holidays, vacations, or other related compensation. Licenses, certification fees, or other items paid by the agency for employees are included in this item.

A.11 Travel & Conference – Labor and other costs associated with attending conferences.

A.12 Rents and Leases – The cost associated with rents or leases not specified elsewhere.

A.13 Overhead (general)

A.14 Other - Costs not properly charged elsewhere. This would include office equipment, furniture, copiers, books, and periodicals.

B. Capital Program - Not used for this study

C. Collections – Any costs associated with maintaining and operating the collection systems. Also include costs for providing technical support, administration and Supervision/Management for the collection systems functional area.

Costs placed in this functional area are not used in the study except to confirm total agency costs.

G. Energy Systems – Generally consists of resources and costs associated with energy production systems. Administration, Operations, Maintenance and Revenue, among other areas, are included. See detail below.

G.1 Cogeneration Systems (Engine Driven Power Generation Equipment)

G.1.A Maintenance - Labor, materials, and supplies associated with the maintenance of the Cogeneration equipment, equipment associated with delivering fuel to the

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Cogeneration facilities, air quality related equipment, and various electrical generation support systems. Emergency power equipment, such as an emergency generator, is not included in this functional area. Emergency generation's system cost should be allocated to the process functional areas they support, or if not readily identifiable, then to the auxiliaries functional area (see Section M.1.J). Break costs and resources into trades (electrical, instrumentation, mechanical), then predictive versus preventative versus repairs, followed by labor, materials, contracts, and other.

G.1.B Operations - Labor (inclusive of benefits), chemicals, utilities and other costs associated with operating the Cogeneration facilities, air quality related equipment and related electrical generation support systems. Revenues from Cogeneration Operations should be listed in revenues specified herein. Break resources into labor, materials, chemicals, contracts, power, natural gas, and other.

G.1.C Technical Support - Labor and other costs, such as contractual services associated with providing technical support to the Cogeneration functional area.

G.1.D Supervision/Management Supervision/Management - Labor and other costs associated with supervising and managing the operating activities of the cogeneration functional area.

G.1.E Administration - Labor and other costs, such as allocated overhead, associated with operating, maintaining and technically supporting the cogeneration functional area.

G.1.F Not Used

G.1.G Other - Labor and other costs associated with operating activities of the cogeneration functional area. Specify activities associated with resources charged to this item.

G.2 Turbine Technologies

G.2.A Maintenance - Labor, materials, and supplies associated with the maintenance of the turbine system equipment, equipment associated with delivering fuel to the turbine power facilities, air quality related equipment, and various electrical generation support systems. Emergency power equipment, such as an emergency generator, is not included in this functional area. Emergency generation's system cost should be allocated to the process functional areas they support, or if not readily identifiable, then to the auxiliaries functional area (see Section M.1.J). Break costs and resources into trades (electrical, instrumentation, mechanical), then predictive versus preventative versus repairs, followed by labor, materials, contracts, and other.

G.2.B Operations - Labor (inclusive of benefits), chemicals, utilities and other costs associated with operating the turbine system facilities, air quality related equipment and related electrical generation support systems. Revenues from turbine system Operations

should be listed in revenues specified herein. Break resources into labor, materials, chemicals, contracts, power, natural gas, and other.

G.2.C Technical Support - Labor and other costs, such as contractual services associated with providing technical support to the turbine system functional area.

G.2.D Supervision/Management - Labor and other costs associated with supervising and managing the operating activities of the turbine system functional area.

G.2.E Administration - Labor and other costs, such as allocated overhead, associated with operating, maintaining and technically supporting the turbine system functional area.

G.2.F Not Used

G.2.G Other - Labor and other costs associated with operating activities of this functional area. Specify activities associated with resources charged to this item.

G.3 Other - Other Power Producing Systems (Specify)

G.3.A Maintenance - Labor, materials, and supplies associated with the maintenance of the specified power producing equipment, equipment associated with delivering fuel to the specified power producing facilities, air quality related equipment, and various electrical generation support systems. Emergency power equipment, such as an emergency generator, is not included in this functional area. Emergency generation's system cost should be allocated to the process functional areas they support, or if not readily identifiable, then to the auxiliaries functional area (see Section M.1.J). Break costs and resources into trades (electrical, instrumentation, mechanical), then predictive versus preventative versus repairs, followed by labor, materials, contracts, and other.

G.3.B Operations - Labor (inclusive of benefits), chemicals, utilities and other costs associated with operating the specified power producing system facilities, air quality related equipment and related electrical generation support systems. Revenues from specified power producing system Operations should be listed in revenues specified herein. Break resources into labor, materials, chemicals, contracts, power, natural gas, and other.

G.3.C Technical Support - Labor and other costs, such as contractual services associated with providing technical support to the specified power producing system functional area.

G.3.D Supervision/Management - Labor and other costs associated with supervising and managing the operating activities of the specified power producing system functional area.

G.3.E Administration - Labor and other costs, such as allocated overhead, associated with operating, maintaining and technically supporting the specified power producing system functional area.

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G.3.F Not Used

G.3.G Other - Labor and other costs associated with operating activities of this functional area. Specify activities associated with resources charged to this item.

G.4 Clerical – Labor and supplies associated with providing clerical support for the activities in direct support of the power production functional area.

H. Offsetting Revenues - from Operations

H.1 Offsetting Revenues - Revenues generated from agency activities which are associated with treatment plant/facility operations and directly offset operational expenses. Offsetting revenues include, but are not limited to, sampling chargebacks to outside districts or agencies, compost sales, and other miscellaneous items. Revenue from power generation or sales is not included in this item. Refer to G – Energy Systems for additional information.

H.2 Energy Revenue – Income due to sales of power or energy from the byproduct of the wastewater treatment facility(ies) such that the cost of energy is offset or reduced.

M. Maintenance

This functional area generally consists of activities associated with maintaining the treatment plant activities. Break costs and resources into instrumentation, electrical, and mechanical trades whether indicated or not. As available, further break resources into preventative, predictive, and repair maintenance activities. Repair service contracts are included in these items. Operational contracts, such as hauling residuals or for utilities, are not included in these items. Labor generally associated with “light” maintenance, such as, greasing pump bearings or housekeeping is not included in this item. Refer to O.1 – Operational Functional areas for additional information.

M.1 Plant - Plant Maintenance Program Costs

M.1.A Supervision - Labor and supplies associated with supervising the plant maintenance program. This item also includes management costs directly associated with managing the maintenance program. Executives or management staff responsible for several functional areas, such that the resource can not be allocated to a specific functional area, is not included herein. Refer to A.1 for additional information. Supervision and management as a function and not a title is included in this item. Resources titled supervisors or managers, or portion of time, not performing those functions are not included in this item.

M.1.B Influent Pumps - Labor, materials, and supplies associated with maintaining the influent pumping system. Influent pumping generally consists of only the pumping equipment(s) and/or with the auxiliary devices, equipment, control systems, or other support. This functional area also includes influent metering and associated systems. Break costs into the maintenance trades and maintenance type.

M.1.C. Preliminary Treatment - Labor, materials, and supplies associated with maintaining the preliminary treatment systems. Preliminary treatment includes, but is not limited to, chemical addition for preliminary treatment, the grit chamber/removal facilities, grit classifier, grit pumps through the grit classifier, and the screening process. This functional area does not include influent metering (see Section M.1.B), influent pumping (see Section M.1.B), or influent chemical addition for odor control (see Section M.1.H). Break costs into the maintenance trades and maintenance type.

M.1.D. Primary - Labor, materials, and supplies associated with maintaining the primary treatment systems. The primary treatment functional area includes, but is not necessarily limited to, the primary tanks, sludge and scum collection equipment, coagulant chemical addition for primary treatment, and associated support systems. This functional area generally includes sludge piping up to, but not including, sludge thickening equipment (see Section M.1.F.3), coagulant chemical addition for preliminary treatment (see Section M.1.C), and support systems. Break costs into the maintenance trades and maintenance type.

M.1.E. Secondary Treatment - Labor, materials, and supplies associated with maintaining the secondary treatment systems. Secondary treatment includes, but is not necessarily limited to, the aeration basins, clarifier tanks, cryogenic and/or aeration systems, and associated support systems. Break costs into the maintenance trades and maintenance type.

M.1.E.1 Influent Pumping. Labor, materials, and supplies associated with maintaining the secondary influent pumping system. This item includes electric motor or internal combustion engines, pumps, and appurtenance.

M.1.E.2 Oxygen Reactor Basins. This functional area generally includes the oxygen reactor basins and support systems, such as recirculation air compressors or oxygen deck compressors.

M.1.E.3 Aeration Basins. Labor, materials, and supplies associated with maintaining air conveyance systems and piping. Including maintenance of blowers, mixers, or other devices used to mix or introduce air into water. This includes the aeration basin and support systems.

M.1.E.4 Fixed Film Reactors. Labor, materials and supplies associated with maintaining fixed media treatment systems. Fixed media processes are those secondary processes that employ biological mass attached to some media, fixed or rotating. This functional area

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is limited to biological processes and infrastructure required for fixed media treatment, such as pumping or rotating equipment. This item does not include secondary clarifier facilities.

M.1.E.5 Secondary Clarifiers. This functional area generally includes the clarifier basins, mechanical collection equipment, and support systems, such as the mixed liquor distribution channels, return activated sludge pumping, waste activated sludge pumping, channel aeration equipment, activated sludge collectors, and scum collectors. This functional area does not include waste activated sludge thickening (see Section M.1.F.5) or scum thickening (see Section M.1.F.4).

M.1.E.6 Oxygen Plant. This functional area generally consists of the oxygen production facilities, such as a cryogenic plant or pressure swing absorption unit, and support systems, including the main air compressors. Specify activities for resources indicated in this item.

M.1.E.7 Other Secondary Processes. This functional area generally consists of any labor, materials, and supplies not properly charged elsewhere in the secondary maintenance processes.

M.1.F Residuals - Labor, materials, and supplies associated with maintaining the various residual solids treatment systems. Residual solids treatment consists of screenings and grit handling, primary sludge thickening, scum thickening, waste activated sludge thickening, digestion, dewatering, biosolids treatment/disposal/reuse, and associated support systems. Break costs into the maintenance trades and maintenance type.

M.1.F.1 Screening. This functional area includes the rag storage and handling area, and equipment or processes after the scraper/rake on the screening process.

M.1.F.2 Grit. This functional area includes the grit storage and handling area, and equipment or process after the discharge of the grit classifier.

M.1.F.3 Sludge Thickening. This functional area includes process equipment and support systems between the inlet into the thickening device to the inlet into the digestion process.

M.1.F.3.a Primary Sludge Thickening

M.1.F.3.b WAS Thickening

M.1.F.4 Scum . This functional area includes process equipment and support systems between the inlet into the scum thickening or water separation device into the inlet to the digestion process.

M.1.F.5 Residual Stream Odor Control. Labor, materials, and supplies associated with maintaining the odor control systems.

M.1.F.6 Digestion . This functional area includes process equipment and support systems between the inlet into the digestion process to the inlet of the dewatering process. This area includes processes and chemicals systems which may be associated with digestion such as for sulfide control in digester gas. The equipment included in this area generally consists of mixing systems, heating systems, aeration systems (aerobic digestion), pumping systems, and gas flaring, gas compressor facilities not used for cogeneration purposes, or disposal systems. Iron scrubbers or other technology used to remove sulfide from digester gas included herein.

M.1.F.7 Dewatering. This functional area includes process equipment and support systems between the inlet into the dewatering process to the inlet of the biosolids storage area. This area includes processes and chemicals systems which may be associated with dewatering such as for coagulation. The equipment included in this area generally consists of pumping systems, dewatering equipment, conveyors, or other.

M.1.F.8 Biosolids Disposal/Reuse. This functional area includes the biosolids reuse and disposal program. This area also includes facilities for any process to further reduce pathogens, such as composting. Maintenance contracts for equipment or facility maintenance associated with biosolids reuse/disposal programs are also included in this area. Vehicle maintenance specifically identified for biosolids program use only is identified in this item. Refer to T1C2b, T1C7, M2A1&2, and O1F8 for additional information.

M.1.F.9 Other. Any residuals maintenance cost not properly charged elsewhere in these functional areas. Green-waste or composting program resources, which support grounds, buildings, or open areas, are not properly charged to this area. Refer to M2A1&2 for additional information. Specify activities for resources charged to this area.

M.1.G Disinfection - Labor, materials, and supplies associated with maintaining the disinfection and dechlorination systems and auxiliaries for tertiary treatment. This functional area generally consists of chemical addition systems, tanks, process devices, or other related facilities. Break costs into the maintenance trades and maintenance type. This item does not include disinfection maintenance cost associated with plant utilities or water reclamation/conservation. Refer to M1J, L, and N for additional information.

M.1.H Liquid Stream Odor Control - Labor, materials, and supplies associated with maintaining the various sulfide and odor control systems and auxiliaries. This functional area generally consists of chemical addition systems, scrubber facilities, and influent chlorination system equipment. This functional area does not include odor control associated with residuals (see Section M.1.F.5). Break costs into the maintenance trades indicated and by the maintenance activity indicated.

M.1.I Effluent Pumps/Outfall - Labor, materials, and supplies associated with maintaining the effluent pumping system. Effluent pumping generally consists of only the pumping

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equipment(s) and/or with the auxiliary devices, equipment, control systems, or other support. This functional area also includes effluent metering, outfall, and associated systems. Break costs into the maintenance trades indicated and by the maintenance activity indicated.

M.1.J Auxiliaries/Utilities - Labor, materials, and supplies associated with maintaining the various plant wide systems and auxiliaries which cannot be specifically broken into or readily identifiable to the various process areas previously indicated. This functional area generally includes plant water systems, plant wide instrument air systems, or the like. Piping or other infrastructure located in process areas should be allocated to those areas. Limit the costs for this functional area to the specific system or device listed. Resources for disinfecting plant utility water are included in this item. Break costs into the maintenance trades and maintenance type.

M.1.K Automated Control Systems - Labor, materials, and supplies associated with maintaining the plant SCADA/Automation systems. Break costs into the maintenance trades and maintenance type. This item includes systems higher than PLC level systems. Costs for hardware repairs are included in this item. PLC level system or field device repair and maintenance cost are included in instrumentation maintenance items for the respective process areas. Programming or technical support costs are not included in this item. Refer to T1C18a and O1K for additional information.

M.1.L Tertiary Treatment/Reclamation - Labor, materials and supplies associated with maintaining the tertiary treatment systems. This functional area includes facilities, downstream of secondary treatment, yet upstream of the inlet to disinfection facilities. The equipment in this process includes, but is not limited to coagulation/flocculation facilities and filtering facilities. Break costs into the maintenance trade and maintenance type.

M.1.M CMMS - (Computerized Maintenance Monitoring System) Labor, materials and supplies associated with maintaining and monitoring the CMMS. CMMS administration, development, and maintenance included in this item.

M.1.N Water Reclamation/Conservation - Labor, materials and supplies associated with maintaining the water reclamation treatment systems. This functional area includes facilities, downstream of secondary treatment, yet upstream of the outlet to disinfection facilities. The equipment in this process includes, but is not limited to coagulation/flocculation facilities and filtering facilities. Disinfection facility costs, associated with water reclamation, are included in this area. Break costs into the maintenance trade and maintenance type.

M.2 Other - Other Maintenance Program Costs

M.2.A Buildings and Grounds – Labor, contracts, materials and supplies associated with building or grounds maintenance. This functional area also includes utilities (natural gas, power, and water), landscaping, janitorial, facility painting, and maintenance contract costs associated with building or grounds maintenance, such as trash disposal or window

washing. Rent and building leases are included in this item. Green-waste or composting programs that support building or green-area maintenance work within the facility boundaries are also included in this item.

M.2.A.1 Facilities - Plant Buildings and Grounds are internal to plant fences, walls, and borders. *(DLID OM 4.)*

M.2.A.1.a Janitorial

M.2.A.1.b Landscaping

M.2.A.1.c Painting

M.2.A.2 Public Parks and Grounds - (Public Enhancements) – Labor, contracts, materials and supplies associated with grounds maintenance for areas outside the treatment plant or building area boundaries. For example, maintenance resources associated with operating and maintaining wetlands or parklands not associated with treating wastewater is included in this item. This functional area also includes utilities (natural gas, power, and water), landscaping, janitorial, facility painting, and maintenance contract costs associated with said grounds maintenance, such as trash disposal or window washing. Rent and building leases are included in this item. Green-waste or composting program resources that support this area are also included. Specify the activity allocated to this item. Public Buildings and Grounds are external to plant fences, walls, and borders. *(DLID OM 5.)*

M.2.A.2.a Janitorial

M.2.A.2.b Landscaping

M.2.A.2.c Painting

M.2.B HVAC - Heating, Ventilation, and Air-Conditioning - Labor, materials and supplies associated with heating, ventilation, and air conditioning system maintenance. This functional area also includes utility (power and natural gas) and contract costs associated with HVAC.

M.2.C Fleet Services - Labor, supplies and materials associated with maintaining the fleet of rolling equipment for the agency. Break costs into the four areas indicated. Specifics not covered in this description are indicated below. In addition, fleet or equipment associated with Biosolids Reuse/Disposal programs is not included in this item. Refer to M1F8 for additional information.

M.2.C.1 Auto/Fleet. Costs associated with maintaining the agency's vehicles such as, but not limited to, trucks, automobiles, electric carts, or bicycles. Costs associated with vehicles for the biosolids programs such as semi-tractor trailer rigs, are charged to (identified in) Item M.1.F.8. Vehicle rental costs are included in this item.

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M.2.C.2 Cranes/heavy equipment and portable generators . Costs associated with maintaining these types of equipment. Equipment which can be associated with specific process areas should be charged accordingly. Only equipment for general use throughout the facilities is identified in this item. Equipment associated with Biosolids Reuse/Disposal programs is not included in this item. Refer to M1F8 for additional information.

M.2.C.3 Equipment Rental for general use. Costs associated with renting equipment for use throughout the treatment facility and can not be charged or allocated directly to a single process area. Equipment rented for specific process areas should be charged accordingly.

M.2.C.4 Other. Costs not previously identified are placed in this item.

M.2.D Miscellaneous – Labor, materials and supplies associated with various maintenance activities not identified elsewhere, such as maintenance planning and scheduling, or other maintenance cost not readily identified.

M.3 Clerical Support – Labor, materials, and supplies associated with providing clerical support for the maintenance activities of the agency (clerical resources in direct support of maintenance activities).

O. Operations

This functional area generally consists of activities associated with operating the treatment plant facilities. Labor, materials, or services related to “light” maintenance, such as greasing bearings or housekeeping, are included in this functional area. Utilities (power, natural gas, and water), operating contracts and chemical contracts are included in this item. Repair and maintenance contracts are not included in this item. Refer to M1-Maintenance for additional information. Utility cost for administration-type buildings are also not included in this item. Refer to M2A1 for additional information.

O.1 Plant - Plant Operations Program Costs

O.1.A Supervision - Labor and supplies associated with supervising the plant operations program. This item also includes management costs directly associated with managing the maintenance program. Executives or management staff responsible for several functional areas, such that the resource can not be allocated to a specific functional area, is not included herein. Refer to A.1 for additional information. Supervision/Management and management as a function and not a title is included in this item. Resources titled supervisors or managers, or portion of time, not performing those functions are not included in this item.

O.1.B Influent Pumps - Labor, materials, and supplies associated with operating the influent pumping system. Influent pumping generally consists of only the pumping equipment(s) and/or with the auxiliary devices, equipment, control systems, or other support. This functional area also includes influent metering and associated systems. Break costs into the labor, energy, and other costs indicated in this functional area.

O.1.C Preliminary Treatment - Labor, materials, and supplies associated with operating the preliminary treatment systems. Preliminary treatment includes, but is not limited to, the grit chamber/removal facilities' grit classifier, grit pumps through the grit classifier, and the screening process. This functional area does not include influent metering (see Section O.1.B), influent pumping (see Section O.1.B), or influent chemical addition for odor control (see Section O.1.H). Break costs into the chemical, energy, utility, and contract costs included in this functional area.

O.1.D Primary - Labor, materials, and supplies associated with operating the primary treatment systems. Primary treatment includes, but is not necessarily limited to, the primary tanks, sludge and scum collection equipment, and associated support systems. This functional area also generally includes sludge piping up to, but not including, sludge thickening equipment, coagulant chemical addition for advance primary treatment, and support systems. Break costs into the labor, materials, chemicals, and energy costs included in this functional area.

O.1.E Secondary Treatment - Labor, materials, and supplies associated with operating the secondary treatment systems. Secondary treatment includes, but is not necessarily limited to, the aeration basins, clarifier tanks, cryogenic and/or aeration systems and associated support systems. Break costs into the appropriate functional areas shown, and include breakdowns by labor, materials, chemicals and energy for each functional area.

O.1.E.1 Influent Pumping. Labor, materials, and supplies associated with operating the secondary influent pumping system. This item includes electric motor or interval combustion engines, pumps, and appurtenance.

O.1.E.2 Oxygen Reactor Basins. This functional area generally includes the oxygen reactor basins and support systems, such as blowers and/or re-circulation air compressors (a.k.a. oxygen deck compressors).

O.1.E.3 Aeration Basins. Labor, materials, and supplies associated with operating air conveyance systems and piping. Including operation of showers, mixers, or other devices used to mix or introduce air into water. This includes the aeration basin and support systems.

O.1.E.4 Fixed Film Reactors. Labor, materials and supplies associated with operating fixed media process systems. Fixed media processes are those secondary processes that employ biological mass attached to some media, fixed or rotating. This functional area

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does not include secondary clarification. Break costs into the labor, chemical and utility costs included in this functional area.

O.1.E.5 Secondary Clarifiers. This functional area generally includes the clarifier basins, mechanical collection equipment, and support systems, such as the mixed liquor distribution channels, return activated sludge pumping, waste activated sludge pumping, channel aeration equipment, activated sludge collectors, and scum collectors. This functional area does not include waste activated sludge thickening (see Section O.1.F.5) or scum thickening (see Section O.1.F.4).

O.1.E.6 Oxygen Plant. This functional area generally consists of the oxygen production facilities, such as a cryogenic plant or pressure swing absorption unit, and support systems, including the main air compressors.

O.1.E.7 Other Secondary Processes. This functional area generally consists of operational labor, materials, and energy costs not properly charged elsewhere in the secondary treatment functional area. Specify activities for resources included in this area.

O.1.F Residuals - Labor, materials, and supplies associated with operating the various residual solids treatment systems. Residual solids' treatment consists of screenings and grit, hauling and disposal, primary sludge thickening, scum thickening, waste activated sludge thickening, digestion, dewatering, biosolids treatment/disposal/reuse, and associated support systems. Break costs into the appropriate functional area and subcategories indicated.

O.1.F.1 Screening. This functional area includes the rag storage and handling area, and equipment or processes after the scraper/rake on the screening process. This area also includes the disposal contract costs.

O.1.F.2 Grit. This functional area includes the grit storage and handling area, and equipment or process after the discharge of the grit classifier. This area also includes the disposal contract costs.

O.1.F.3 Sludge Thickening. This functional area includes process equipment and support systems between the inlet into a thickening device to the inlet into the digestion process.

O.1.F.3.a Primary Sludge Thickening

O.1.F.3.b WAS Thickening

O.1.F.4 Scum . This functional area includes process equipment and support systems between the inlet into the thickening or water separation device to the inlet into the digestion process.

O.1.F.5 Residuals Stream Odor Control. Labor, materials, and supplies associated with operating the odor control systems.

O.1.F.6 Digestion . This functional area includes process equipment and support systems between the inlet into the digestion process to the inlet of the dewatering process. This area includes processes and chemicals which may be associated with digestion. The equipment included in this area generally consists of mixing systems, heating systems, aeration systems (aerobic digestion), pumping systems, and gas flaring or disposal systems.

O.1.F.7 Dewatering. This functional area includes process equipment and support systems between the inlet into the dewatering process to the inlet of the biosolids storage area. This area includes processes and chemicals which may be associated with dewatering such as for coagulation. The equipment included in this area generally consists of pumping systems, dewatering equipment, conveyors, or other.

O.1.F.8 Disposal/Reuse. This functional area includes the biosolids reuse disposal program. It also includes any process to further reduce pathogens, such as composting. Contracts for disposal/reuse are also included in this area along with the contractors siting administration and monitoring of these sites. Agency site inspection and administration are included in this item. Refer to T1C2b, T1C7, M2A1&2, and M1F8 for additional information.

O.1.F.9 Other. Any residual operations cost not properly charged elsewhere in these functional areas. Green-waste or composting program resources, which support grounds, buildings, or open areas, are not properly charged to this area. Refer to M2A1&2 for additional information. Specify activities for resources charged to this area.

O.1.G Disinfection - Labor, materials, and supplies associated with operating the disinfection and dechlorination systems and auxiliaries for tertiary treatment. This functional area generally consists of chemical addition systems, tanks, contact basins/channels, process devices, or other related facilities. Break costs into the labor, chemicals, energy, and other categories as indicated. Refer to O1L and O1N for additional information.

O.1.H Liquid Stream Odor Control - Labor, materials, and supplies associated with operating the various sulfide and odor control systems and auxiliaries. This functional area generally consists of chemical addition systems, scrubber facilities, influent chlorination system equipment. This functional area does not include odor control associated with residuals (see Section O.1.F.5). Break costs into the labor, chemicals, energy and other categories as indicated.

O.1.I Effluent Pumps/Outfall - Labor, materials, and supplies associated with operating the effluent pumping system. Effluent pumping generally consists of only the pumping equipment(s) and/or with the auxiliary devices, equipment, control systems, or other support.

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This functional area also includes effluent metering, outfall, and associated systems. Break costs into the labor, energy, and other costs indicated for this functional area.

O.1.J Auxiliaries/Utilities - Labor, materials, and supplies associated with operating the various plant wide systems and auxiliaries which cannot be specifically broken into or readily identifiable to the various process areas previously indicated. This functional area generally includes plant water systems, and plant wide instrument air systems, or the like. Piping or other infrastructure located in process area should be allocated to those areas. Limit the costs in this functional area to the specific system or device listed. Break costs into water, natural gas, power, and other costs as indicated. Includes disinfection associated with utility water (*DLID OM 6.*)

O.1.K Automated Control Systems - Labor, materials, and supplies associated with monitoring and operating the plant SCADA/automation systems. This includes system higher than the PLC level systems. PLC or lower level systems costs are included in the respective functional process area.

O.1.L Tertiary Treatment/Reclamation - Labor, materials and supplies associated with the operating the tertiary treatment systems, including disinfection (*DLID OM 7*). This process includes, but is not limited to coagulation/flocculation and filtering systems downstream of secondary treatment, yet upstream of disinfection. The boundary for this process area is the inlet to the tertiary process to the effluent pipe. Break costs into the labor, chemical and utility costs included in this functional area. Refer to O1G and O1N for additional information.

O.1.M Not Used

OR

O.1.M Water Reclamation ... Includes disinfection associated with Water Reclamation and Water Reclamation side-streams (*DLID OM 8.*)

O.1.N Water Reclamation/Conservation - Labor, materials and supplies associated with operating the water reclamation treatment systems. This functional area includes facilities, downstream of secondary treatment, yet upstream of the outlet to disinfection facilities. The equipment in this process includes, but is not limited to coagulation/flocculation facilities and filtering facilities. Disinfection facility costs, associated with water reclamation, are included in this area.

O.2 Operations - Other - Labor, materials, and supply costs not properly charged elsewhere in this functional area. This would include remote operations items such as the support of off-site operators by plant crews, or Control Center clerks) and costs associated with public projects and/or wetlands (*DLID OM 10.*)

O.3 Clerical Support - Labor, materials, and supply associated with providing clerical support for operating the treatment facilities.

T. Technical Support - Operational Program Costs

T.1 Operations - Technical Support - Operational Program Costs - Operation and Maintenance Technical Support costs. Technical Support does not include costs associated with the daily, routine and normal operations of the treatment facilities or treatment functional areas. The basic functional areas included herein consist of providing technical support for the treatment works, source control support, and laboratory process support. Capital program costs (see Section T.1.C) are not included in joint operational or maintenance costs. Only non capital costs are included or identified.

T.1.A Laboratory - Labor costs include all laboratory personnel. Personnel that are involved in the collection of laboratory samples are not included in this area, but instead are assigned to the appropriate functional area such as source control or sludge thickening. Contract laboratory costs are included, as well as materials, supplies, services, maintenance and miscellaneous costs associated with analyzing samples (*From Lab Definitions, 5/98*)

T.1.A.1 Supervision - Includes labor and other costs associated with direct management and supervision on the laboratory. Note that supervision/management is defined by function, not title, and includes the activities such as hiring, personnel reviews, budgeting, resource management, staff meetings, coordination with outside agencies, and workload planning. Staff titled supervisors or managers and not performing these functions, or portions of time thereof, are not included in this item. (*From Lab Definitions, 5/98*)

T.1.A.2 Clerical - Includes labor and other costs associated with clerical support for laboratory operations. Note that this category does not include the labor and other costs associated with time analytical staff spend on clerical functions such as purchasing and data entry. (*From Lab Definitions, 5/98*)

T.1.A.3 Discretionary Lab Support - This includes labor, materials, services, and other laboratory costs associated with or required for treatment plant process control that is not specifically required by the NPDES permit. These costs include, but are not limited to, TSS, BOD, or other laboratory tests for the various liquid or residual processes. Sampling and sample equipment maintenance costs are not included in this item, but instead are allocated to the appropriate functional maintenance or operational area. Costs are to be broken down into the sub-categories of liquid stream, residuals, air/odor and other, and should be further refined to the lowest level of cost allocation possible (e.g. WAS residuals thickening or primary vs. secondary liquids). (*From Lab Definitions, 5/98*)

T.1.A.3.a Liquids

T.1.A.3.a.1 Preliminary Treatment

T.1.A.3.a.2 Primary

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T.1.A.3.a.3 Secondary Treatment

T.1.A.3.a.4 Tertiary Treatment/Reclamation

T.1.A.3.a.5 Disinfection/Dechlor

T.1.A.3.a.6 Other

T.1.A.3.b Residuals

T.1.A.3.b.1 Thickening

T.1.A.3.b.1.a WAS

T.1.A.3.b.1.b Primary

T.1.A.3.b.2 Digestion

T.1.A.3.b.3 Dewatering

T.1.A.3.b.4 Other

T.1.A.3.c Air/Odor

T.1.A.3.d Other

T.1.A.4 Compliance Monitoring

T.1.A.4.a Required Monitoring - This includes labor, materials, services, and other laboratory costs associated with and specifically required by the NPDES permit. These costs include, but are not limited to, plant influent and effluent monitoring and 40CFR part 503 biosolids requirements. Sampling and sample equipment maintenance costs are not included in this item, but instead are allocated to the appropriate functional maintenance or operational area. Costs are to be broken down into the sub-categories of required monitoring, special programs and projects, and other (e.g. stormwater programs), and should be further refined to the lowest level of cost allocation possible (e.g. influent vs. effluent required monitoring or biosolids required monitoring). *(From Lab Definitions, 5/98)* Compliance Monitoring performed in excess of the required minimum is recorded in Compliance Monitoring (e.g. Coliform minimum requirements 2 per week; actual 7 per week.) (DLID OM 1.)

T.1.A.4.a.1 Liquids

T.1.A.4.a.1.a Influent

T.1.A.4.a.1.b Effluent

T.1.A.4.a.1 Biosolids

T.1.A.4.a.1 Air

T.1.A.4.a.1 Receiving Waters

T.1.A.4.b Special Programs & Projects - Suggest clarifying this in the functional area definition to be special, one-time, required monitoring programs or projects. Examples would be a TIE/RE, a chlorine study, etc. (*L. Faas September 04, 1998 4:08 PM*)

T.1.A.4.c Other - Suggest clarifying this in the functional area definition to be other required monitoring, such as Stormwater programs, CSO monitoring, etc. (*L. Faas September 04, 1998 4:08 PM*)

T.1.A.5 Source Control - Cost of laboratory analyses of all samples collected for source control program including compliance samples, rate development and implementation, system sampling, pollution prevention, and special studies. (*From Source Control Definitions Rev. 7/10/98.*)

OR

This includes labor, materials, services, and other laboratory costs associated with the source control program. These costs include, but are not limited to, industrial compliance monitoring and collection system monitoring. Sampling and sample equipment maintenance costs are not included in this item, but instead are allocated to the appropriate functional maintenance or operational area. Costs for this area do not need to be broken down to a further level of detail. (*From Lab Definitions, 5/98*) Include 4 sub-boxes if possible: System Monitoring, Inspection and Sampling, Septage, and Special Studies (*L. Faas September 04, 1998 4:08 PM*)

Delete categories T.1.A.6, T.1.A.7 and T.1.A.8. These categories are not needed because they are covered by the "Other" boxes under discretionary and required monitoring and the Z category for Other Non-Wastewater Operating Costs. (*From Lab Definitions, 5/98*)

T.1.A.6 Not Used

T.1.A.7 Not Used Suggest using this and defining as non-required, non-source control collection system monitoring. This could be overflows, CSOs, pump station monitoring, etc., that is not required in the NPDES permit. (*L. Faas September 04, 1998 4:08 PM*)

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T.1.A.8 Not Used -

T.1.B Source Control – Resource, labor, and other costs generally associated with implementing a source control or industrial waste discharge program, except as noted herein. Administration and overhead such as training, accounting, safety, among others, provided by resources in other functional areas are not included in this functional area, except as noted below. Refer to T.1.B.8 for more information.

T.1.B.1 Core Pretreatment Program

T.1.B.1.a Routine Administrative Items - Resources and/or labor associated with: Staff meetings, Nonplanning related budgeting (pulling budget together), Timekeeping, Internal reports (monthly reports, status reports), Participating in planning (work planning), Safety committee work, Continuous improvement processes, Coordination and contractual agreements with other agencies/jurisdictions, Policy development and ordinance revisions unless specifically tied to one of the other template activities.

T.1.B.1.b Management and Supervision - Resources and labor associated with management and supervision. Any FTE that is responsible for writing performance appraisals is a manager or supervisor. This category includes the time of any manager who is directly responsible for management of the Source Control Program whether classified as manager or supervisor. The actual amount of FTE attributed to supervision will be determined by actual time on the following supervisory responsibilities: Management of staff, Direction of staff, Staffing schedules, Reviewing and signing time sheets, Planning/program development, Budgeting for programs (not pulling budget together), Supervisor/Manager time spent on workman's comp, etc. re: specific employees, Supervisor/Manager time spent on hiring, discipline, etc. for specific employees

T.01.B.01.c Permits

T.01.B.01.c.1 Categorical Related Activities - Resources and/or labor associated with: IU Discussions/Negotiations, Permit Processing, Plan Review, Application Processing, Permit administration/compliance review, SDPC TTO Plan Review/Approval, Permit administration/compliance review , Application of site specific user charges if included in permits

T.01.B.01.c.2 Local SIU - Resources and/or labor associated with: IU Discussions/Negotiations, Permit Processing, Plan Review, Application Processing, Permit administration/compliance review , SDPC TTO Plan Review/Approval, Application of site specific user charges if included in permits

T.1.B.01.c.3 Non-SIU - Resources and/or labor associated with: IU Discussions/Negotiations, Permit Processing, Plan Review, Application Processing, Permit administration/compliance review , Batch discharge or special discharge approval, SDPC TTO Plan Review/Approval (if applicable), Application of site specific user charges if included in permits

T.01.B.01.d Inspection & Sampling

T.01.B.01.c.1 Categorical Related Activities - Resources and/or labor associated with:, Combined sampling and inspection events, Discrete sampling or inspection events, Investigations at facility location, Preparation of field inspection notes, Field IU Surveys, Surcharge or user charge sampling, Annual major facility inspections and permit reviews

T.01.B.01.c.2 Local SIU - Resources and/or labor associated with:, Combined sampling and inspection events, Discrete sampling or inspection events, Investigations at facility location, Preparation of field inspection notes, Field IU Surveys, Surcharge or user charge sampling, Annual major facility inspections and permit reviews

T.1.B.01.c.3 Non-SIU - Resources and/or labor associated with inspection and sampling of non-SIUs with permits or other control mechanisms:, Combined sampling and inspection events, Discrete sampling or inspection events, Investigations at facility location, Preparation of field inspection notes, Field IU Surveys, Surcharge or user charge sampling , Annual major facility inspections and permit reviews,

T.01.B.01.e System Sampling - Resources and/or labor associated with:, Periodic Collection System Sampling Programs, Headworks Sampling, Investigations/Incident Response in Collection System, Upstream/downstream monitoring (investigations)

T.01.B.01.f Enforcement Activity

T.01.B.01.c.1 Categorical Related Activities - Resources and/or labor associated with written enforcements including:, Progressive Enforcement Action in Response to Violations, NOVs, Cease & Desist Orders, Administrative Actions, Injunctions, Fines, Enforcement Fees, Penalties, etc., SNC Determination

T.01.B.01.c.2 Local SIU - Resources and/or labor associated with written enforcements including:, Progressive Enforcement Action in Response to Violations, NOVs, Cease & Desist Orders, Administrative Actions, Injunctions, Fines, Enforcement Fees, Penalties, etc., SNC Determination

T.1.B.01.c.3 Non-SIU - Resources and/or labor associated with permitted written enforcements of non_SIUs with permits or other control mechanisms, including:, Progressive Enforcement Action in Response to Violations, NOVs, Cease & Desist Orders, Administrative Actions, Injunctions, Fines, Enforcement Fees, Penalties, etc., SNC Determination

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T.01.B.01.g Program Reporting - Resources and/or labor associated with:, Pretreatment Reports to Oversight Agency, Pollution Prevention Reports to Oversight Agency, SNC Publication, Response/Follow-Up to PCI or Audits

T.01.B.01.h Septage Hauler Program - Resources and/or labor associated with:, Permitting for septage, monitoring, anything else re: septage haulers

T.01.B.01.i Special Studies - Resources and/or labor associated with:, Local limits development, Studies of new pollutants of concern in WTP not necessarily leading to pollution prevention , activities, Targeting particular groups, Tracking sources of particular pollutants, Evaluating different pretreatment technologies

T.01.B.01.j User Inventory - Resources and/or labor associated with:, Identification and Verification of Dischargers, -Office support

T.01.B.01.k Data Management - Resources and/or labor associated with:, Computerized programs and programming, Data base administration, Data entry

T.01.B.01.l Clerical - Resources and/or labor associated with:, Secretarial and other clerical services specifically in support of the Source Control Program.

T.01.B.01.m Other - Resources and/or labor associated with activities in the domain of source control but not specifically defined in the other template boxes:, Union negotiations and activities by both staff and supervisors/managers

T.1.B.2 Pollution Prevention - POLLUTION PREVENTION AND UNPERMITTED DISCHARGERS PROGRAMS: Resources and/or labor associated with: Source identification for new pollutants, Waste minimization audits, Public outreach to commercial dischargers, Public outreach to households not including hazardous waste collection events or facilities, Public outreach to schools and other organizations, Coordination of P2 activities with other agencies, Commercial program certification , Incentive programs, Technical assistance, Sampling for pollution prevention activities, Dry cleaner/auto shop/other similar group programs including inspections and enforcement of nonpermitted dischargers

T.1.B.3 Industrial Rates

T.1.B.3.a Development - Resources and/or labor associated with: Development of user charges as relate to industrial users., Permit fee calculations, Noncompliance fees

T.1.B.3.b Implementation - Resources and/or labor associated with: IU Discussions/Negotiations with specific companies related to rates if not included in permit process, Calculations of company or site specific billings using agency developed rates, if not included in permit process, Permit Processing, Plan Review, Application Processing,

Initial billing and fee collection, collection of past due fees, and activities on past due accounts.

T.1.C Technical Support – These items generally consist of providing technical, engineering or scientific support in the areas specified.

T.1.C.1 Supervision - Labor or other costs associated with supervision/ administration of technical support functions. This item also includes management cost directly associated with managing the technical support programs and functional areas. Executive management or management time that can not be allocated to specific functional areas are not included herein.

T.1.C.2 Regulatory Compliance - Labor and materials associated with preparing regulatory compliance documents such as, but not limited to, the Discharge Monitoring Report. The resources associated with maintaining compliance, excluding the resource requirements for securing permits, and included herein. This functional area also includes labor allocated for legislative issues and monitoring. Costs are broken into mandated or voluntary compliance as indicated. This item does not include any costs associated with laboratory functions, such as BOD, TSS or other laboratory testing.

T.1.C.2.a Liquids – Costs associated with maintaining compliance with the liquid stream processes and meeting the NPDES permit requirements. Break expenditures and resources into mandated and voluntary categories as available.

T.1.C.2.a.1 Mandated

T.1.C.2.a.2 Voluntary

T.1.C.2.b Solids – Costs associated with maintaining compliance with the solids stream processes within the treatment plant boundary such as thickening, dewatering, or digestion and meeting NPDES permit or EPA 503 regulations compliance for those areas. This item does not include off-site biosolids program support functions. Break expenditures and resources into mandated and voluntary categories as available. Refer to T1C7, M1F8, and O1F8 for additional information.

T.1.C.2.b.1 Mandated

T.1.C.2.b.2 Voluntary

T.1.C.2.c Receiving Waters – Costs associated with identifying environmental impacts or demonstrating compliance with receiving water plans. This item includes technical support associated with reports on benthic samples; water analysis, or testing of native species for impacts due to the discharge of plant effluent. Other program costs such as rentals, leases,

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slip fees, vessel maintenance, contract costs, or other receiving water program costs are included in this item. Break expenditures and resources into mandated and voluntary categories as available.

T.1.C.2.c.1 Mandated

T.1.C.2.c.2 Voluntary

T.1.C.2.d Air – Costs associated with meeting air pollution discharge requirements or local Air Quality Management Districts regulations. Item includes attending AQMD inspections or meetings. Break expenditures and resources into mandated and voluntary categories as available.

T.1.C.2.d.1 Mandated

T.1.C.2.d.2 Voluntary

T.1.C.2.e Other – Costs associated with meeting other types of regulation compliance such as, but not limited to, OSHA, Fire Department, local building and safety laws. This item also includes monitoring legislation at the local, state and federal levels of government. Break resources into legislative monitoring versus permits not included in items a through e, above.

T.1.C.2.e.1 Legis. Monitoring

T.1.C.2.e.2 OSHA, Fire, Other

T.1.C.3 Permits - Labor, materials, or other expenditures associated with permits, such as but not limited to, NPDES, air quality management district or fire department permits. This functional area also includes labor allocated for developing required permits.

T.1.C.3.a NPDES – Costs associated with applying for or maintaining permits and required documentation. Item does not include compliance reporting (see Item T.1.C.2). This item does include any fees, annual or otherwise, required by the regulatory agency. Any fines or penalties received from the regulatory agencies are included in this item as indicated.

T.1.C.3.a.1 Permit Mtc.

T.1.C.3.a.2 Fees

T.1.C.3.a.3 Pending Litigation/Fines

T.1.C.3.b Air – Costs associated with applying for or maintaining permits and required documentation. Item does not include compliance reporting (see Item T.1.C.2). This item

does include any fees, annual or otherwise, required from the regulatory agency. An example of the costs within this item are those associated with the application or completion of EPA Title V Air permits.

T.1.C.3.b.1 Permit Mtc.

T.1.C.3.b.2 Fees

T.1.C.3.b.3 Pending Litigation/Fines

T.1.C.3.c Other – Includes permit costs not specifically identified elsewhere.

T.1.C.4 Research & Development – Labor, materials, or other expenditures associated with obtaining or developing new technology within the treatment facilities, such as but not limited to conducting equipment trials. This item does not include costs with laboratory tests such as BOD or TSS examinations.

T.1.C.5 Documentation - Labor, contracts, and materials used for maintaining plant drawings, O&M manuals, and similar information for existing facilities, or for non-capital construction/modification projects. Also included in this functional area is the development of master drawings for the existing facilities.

T.1.C.6 Non Capital Improvements - Labor, contracts, and materials for non-capital plant improvements.

T.1.C.7 Process Support - Labor, contracts, and materials for process engineering, including studies of existing processes and process optimization work. Troubleshooting equipment failures or process upsets is included in this item. Provide costs in process areas as indicated, such as for liquids or solids, or biosolids processes. Refer to T1C2b, M1F8, and O1F8 for additional information.

T.1.C.7.a Liquids

T.1.C.7.b Solids

T.1.C.7.c Other

T.1.C.8 Computer System Support – Labor and materials associated with providing technical support for the various non Management Information Systems (MIS) or Financial Information Systems (FIS) computer systems, such as, but not limited to, the Automated Control System (SCADA System) or Document Management Systems for Computer Aided Drawing packages. This item is broken into areas specified below. Refer to the Administrative Functional Area for Management or FIS related items.

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T.1.C.8.a. Automated Control Systems – Technical support associated with the various treatment plant automated control systems. This item includes software programming or configuration required for this system. This item also included engineering or technical support for both the PLC systems and higher level systems. This item does not include line or field staff time. This functional area also does not include repairs or maintenance of hardware, such as cable or fiber optics. Refer to the Operational and Maintenance Functional Areas for additional information (O.1.K. and M.1.K.).

T.1.C.8.b. Document Management System – Technical support and line-staff support associated with operating and maintaining a document management system. GIS and CAD system support and resource costs are included in this item. Resources required to directly support this effort, such as data base entry, are included in this item. Resource support from a centralized computer technical support group is not included herein. Refer to A.9.A for additional information.

T.1.C.8.c. Other Computer Systems – Includes support activities associated with operating and maintaining other technical support type of computer systems. This functional area does not include support for MIS or FIS systems.

T.1.C.9 Technical Support – Generally consists of resources required for providing engineering or technical support on public matters, or such as connection permits, plan reviews for new developments or for other (outside) public agencies, associated with agency non-capital projects or issues. This item does not include calls from the public for customer service or rates related information. Refer to A.9.D for additional information.

T.1.C.9.a Connection Fee/Permits – Resources, labor and materials associated with connection permits, plan reviews, or fees.

T.1.C.9.b Plan Reviews – Resources, labor, and materials associated with plan reviews for Public and other public agencies.

T.1.C.9.c Technical Support for Public, Other – Resources, labor and materials associated with reviewing Rights of Way issues, coordinating outside agency issues for non-capital agreements, or other non-capital contract issues. This item also used for technical support costs not associated with items a or b above. Please note the activities charged to this item.

T.1.C.9.c.1 Right-of-Way

T.1.C.9.c.2 Agent Issues

T.1.C.9.c.3 Grants and Contracts

T.1.C.10 Clerical Support – Labor, contracts, and supplies associated with providing clerical support for the technical support functions (clerical support in direct support of activities in these functional areas).

T.1.C.11 Technical Support - Other - Labor, contracts, and materials not included in other technical support functions. This includes general technical support, engineering support, computer programming, and planning.

T.1.C.11.a Labor

T.1.C.11.b Other

T.1.C.11.c Planning (non-capital)

T.1.C.11.d Offsite/Onsite Odor

Z. Other Non-Wastewater Op. Costs

Agency operational resources and costs associated with functional areas not related to treating wastewater and outside the boundaries of the wastewater treatment facilities. Managing a storm-water system is an example of a non-wastewater-related cost. However, operating and maintaining a storm-water system within the treatment facilities are not included in this item. Said items are included in the appropriate Operational and Maintenance functional areas.

Supplemental Guidelines

Full Time Equivalent Employee (FTE) - 1840 hours of resource time or labor

Preventative Maintenance - Maintenance work that is intended to extend the useful life or improve the operation of existing equipment. Especially as it pertains to manufacturers recommendations for setup; calibration; lubrication; inspection; and routine maintenance. *(M. Esquer, Normalization FactorsB-95.doc Rev B 03/19/98 12:06 PM)*

Predictive Maintenance - Maintenance work that is designed to assess the condition of machinery while it is in operation and measure it over time to detect problematic or degenerative traits before they become more serious or result in failure. (The most common predictive techniques are: Vibration Analysis; Oil Analysis/Tribology; Thermal Imaging/Infrared; Motor Current Analysis; Ultrasonics.) *(M. Esquer, Normalization FactorsB-95.doc Rev B 03/19/98 12:06 PM)*