

Appendix O

Voluntary National Guidelines for Management of Onsite and Clustered Wastewater Treatment Systems



Voluntary National Guidelines for Management of Onsite and Clustered (Decentralized) Wastewater Treatment Systems



APPENDIX A: MANAGEMENT MODELS

This appendix presents a description of activities associated with each program element and identifies the party responsible for each activity. A detailed discussion is presented in the Management Handbook. Activities in bold are activities added to program elements from the preceding Management Model.

Note: If applicable, National Pollutant Discharge Elimination System (NPDES) requirements under the Clean Water Act (CWA) or Underground Injection Control (UIC) requirements under the Safe Drinking Water Act (SDWA) supercede any less stringent or inconsistent provisions. Program elements in each model help inform the state, tribe, or EPA in establishing NPDES permit requirements.

MANAGEMENT MODEL 1: HOMEOWNER AWARENESS

Objective: To ensure that conventional onsite systems are sited and constructed properly in accordance with appropriate state, tribal, and local regulations and codes; that they are periodically inspected; and, if necessary, that they are repaired by the Owner. The Regulatory Authority maintains a record of the location of all systems and periodically provides the Owner/User with notices regarding operation and preventive maintenance recommendations.

PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY
 PUBLIC EDUCATION AND PARTICIPATION	Regulatory Authority	<ul style="list-style-type: none"> Educate Owner/User on purpose, use, and care of treatment system. Provide public review and comment periods of any proposed program or rule changes.
	Service Provider	<ul style="list-style-type: none"> Be informed of existing rules and review and comment on any proposed program and/or rule changes. Participate in advisory committees established by the Regulatory Authority.
	Owner/User	<ul style="list-style-type: none"> Be informed of purpose, use, and care of treatment system. Be informed of existing rules and review and comment on any proposed program and/or rule changes. Participate in advisory committees established by the Regulatory Authority.
 PLANNING	Regulatory Authority	<ul style="list-style-type: none"> Coordinate program rules and regulations with state, tribal, and local planning and zoning and other water-related programs. Evaluate potential risks of wastewater discharges to limit environmental impacts on receiving environments during the rule making process. Limit potential risks of environmental impacts from residuals management program and evaluate available handling/treatment capacities. Inform local planning authority of rule changes and recommend its evaluation of potential impacts on land use.
	Developer	<ul style="list-style-type: none"> Hire planners, certified site evaluators, and designers to ensure that all lots of proposed subdivision plats meet requirements for onsite treatment prior to final plat.
 PERFORMANCE	Regulatory Authority	<ul style="list-style-type: none"> Establish system failure criteria to protect public health, e.g., wastewater backups in building, wastewater ponding on ground surface, insufficient separation from ground water or wells.
	Owner/User	<ul style="list-style-type: none"> Regularly maintain system in proper working order.
 TRAINING AND CERTIFICATION/LICENSING	Licensing Board/Regulatory Authority	<ul style="list-style-type: none"> Develop and administer training, testing, and certification/licensing program for site evaluators, designers, contractors, and pumpers/haulers. Maintain a current certified/licensed Service Provider listing.
	Service Provider	<ul style="list-style-type: none"> Obtain appropriate certification(s)/license(s) and continuing education as required. Obtain training from the manufacturer or vendor regarding appropriate use, installation requirements, and O&M procedures of any proprietary equipment to be installed. Comply with applicable federal, state, tribal, and local requirements.
	Owner/User	<ul style="list-style-type: none"> When using third-party services, contract with only the appropriate certified/licensed Service Providers.
 SITE EVALUATION	Regulatory Authority	<ul style="list-style-type: none"> Codify prescriptive requirements for site evaluation procedures. Codify criteria for treatment site characteristics suitable for permitted designs that will prevent unacceptable impacts on ground and surface water resources.
	Site Evaluator	<ul style="list-style-type: none"> Obtain certification/license to practice. Describe site and soil characteristics, determine suitability of site with respect to code requirements, and estimate site's hydraulic and treatment capacity. Comply with applicable federal, state, tribal, and local requirements in the evaluation of sites for wastewater treatment and dispersal.
	Owner	<ul style="list-style-type: none"> Hire a certified/licensed site evaluator to perform site evaluation.

MANAGEMENT MODEL 1: HOMEOWNER AWARENESS

PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY
 DESIGN	Regulatory Authority	<ul style="list-style-type: none"> Codify prescriptive, preengineered designs that are suitable for treatment sites that meet the appropriate prescriptive site criteria.
	Designer	<ul style="list-style-type: none"> Obtain a certification/license to practice. Design a treatment system that is compatible with the site and soil characteristics described by the site evaluator. Comply with applicable federal, state, tribal, and local requirements in the design of wastewater treatment and dispersal systems.
	Owner	<ul style="list-style-type: none"> Hire a certified/licensed designer to prepare system design.
 CONSTRUCTION	Regulatory Authority	<ul style="list-style-type: none"> Administer a permitting program for system construction, including Regulatory Authority review of proposed system siting and design plans. Perform final construction inspection for compliance assurance and inventory data collection. Require that record drawings of constructed system be submitted to the Regulatory Authority by Owner.
	Contractor/ Installer	<ul style="list-style-type: none"> Obtain certification/license to practice. Construct the system in accordance with the approved plans and specifications. Prepare record drawings of completed system and submit to Owner. Comply with applicable federal, state, tribal, and local requirements in the design and construction of wastewater treatment and dispersal systems.
	Designer of Record	<ul style="list-style-type: none"> Approve proposed field changes and submit to Owner. Comply with applicable federal, state, tribal, and local requirements in the design and construction of wastewater treatment and dispersal systems.
	Owner	<ul style="list-style-type: none"> Hire a certified/licensed contractor/installer to construct system. Submit final record drawings of constructed system to Regulatory Authority.
 OPERATION & MAINTENANCE	Regulatory Authority	<ul style="list-style-type: none"> Provide Owner/User with educational materials regarding system use and care. Send timely reminder to Owner of when scheduled preventive maintenance is due.
	Pumper/Hauler	<ul style="list-style-type: none"> Obtain certification/license to practice. Inspect and service system as necessary. Comply with applicable federal, state, tribal, and local requirements in the operation and maintenance of the treatment and dispersal system.
	Owner	<ul style="list-style-type: none"> Perform recommended routine maintenance or hire a certified/licensed pumper/hauler to perform maintenance. Hire a certified/licensed pumper/hauler to periodically inspect, service, and remove septage for proper treatment and disposal.
	User	<ul style="list-style-type: none"> Follow recommendations provided by Regulatory Authority, Service Providers, and/or Owner to ensure that undesirable or prohibited materials are not discharged to system.
 RESIDUALS MANAGEMENT	Regulatory Authority	<ul style="list-style-type: none"> Administer a tracking system for residuals hauling, treatment, and disposal and review to evaluate compliance with 40 CFR Part 503 (Use and Disposal of Sewage Sludge), 40 CFR Part 257, and applicable state, tribal, and local requirements. Inventory available residuals handling/treatment capacities and develop contingency plans to ensure that sufficient capacities are always available.
	Pumper/Hauler	<ul style="list-style-type: none"> Obtain certification/license to practice. Comply with applicable federal, state, tribal, and local requirements in the pumping, hauling, treatment, and disposal of treatment system residuals.
 COMPLIANCE INSPECTIONS/ MONITORING	Regulatory Authority	<ul style="list-style-type: none"> Conduct final construction inspections to ensure compliance with approved plans and permit requirements. Perform compliance inspections at point-of-sale, change-in-use of properties, "targeted areas," and systems reported to be in violation. Conduct compliance inspections of residuals hauling, treatment, and disposal.
	Pumper/Hauler	<ul style="list-style-type: none"> Inform Owner of any noncompliant items observed during routine servicing of system.
	Owner	<ul style="list-style-type: none"> Periodically perform a "walk-over" inspection of the system and correct any deficiencies.

PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY
 <p>CORRECTIVE ACTIONS</p>	Regulatory Authority	<ul style="list-style-type: none"> • Negotiate compliance schedule with Owner for correcting documented noncompliance items. • Administer enforcement program, including fines and/or penalties for failure to comply with compliance requirements. • Obtain necessary authority to enter property to correct imminent threats to public health if the Owner/User fails to comply.
	Designer	<ul style="list-style-type: none"> • Provide Owner with documents (drawings, specifications, modifications, etc.) that may be required by Regulatory Authority prior to corrective action.
	Contractor/ Installer	<ul style="list-style-type: none"> • Perform required repairs, modifications, and upgrades as necessary.
	Owner	<ul style="list-style-type: none"> • Comply with terms and conditions of the negotiated compliance schedule. • Submit required documents for corrective actions to Regulatory Authority. • Hire appropriate certified/licensed Service Providers to perform required corrective actions.
 <p>RECORD KEEPING, INVENTORY, & REPORTING</p>	Regulatory Authority	<ul style="list-style-type: none"> • Administer a database inventory (locations, site evaluations, record drawings, permits, performed maintenance, inspection reports) of all systems. • Maintain a residuals treatment and disposal tracking system. • Maintain a current certified/licensed Service Provider listing that is available to the public.
	Pumper/Hauler	<ul style="list-style-type: none"> • Prepare and submit records of residuals handling as required.
	Owner	<ul style="list-style-type: none"> • Maintain approved record drawings of system. • Maintain maintenance records of system. • Provide drawings, specifications, and maintenance records to new property owner at time of property transfer.
 <p>FINANCIAL ASSISTANCE & FUNDING</p>	Regulatory Authority	<ul style="list-style-type: none"> • Provide the legal and financial support to sustain the management program. • Provide a listing of financial assistance programs available to Owner and the qualifying criteria for each program. • Consider implementing a state or local financing program to assist Owners in upgrading their systems.

MANAGEMENT MODEL 1: HOMEOWNER AWARENESS

MANAGEMENT MODEL 2: MAINTENANCE CONTRACTS

Objective: To allow use of more complex mechanical treatment options or small clusters through the requirement that maintenance contracts be maintained between the Owner and maintenance provider to ensure appropriate and timely system component maintenance by qualified technicians over the service life of the system.

MANAGEMENT MODEL 2: MAINTENANCE CONTRACTS	PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY ¹
	 PUBLIC EDUCATION AND PARTICIPATION	Regulatory Authority	<ul style="list-style-type: none"> Educate Owner/User on purpose, use, and care of treatment system. Provide public review and comment periods of any proposed program and/or rule changes.
		Service Provider	<ul style="list-style-type: none"> Be informed of existing rules, and review and comment on any proposed program or rule changes. Participate in advisory committees established by the Regulatory Authority.
		Owner/User	<ul style="list-style-type: none"> Be informed of purpose, use, and care of treatment system. Be informed of existing rules, and review and comment on any proposed program or rule changes. Participate in advisory committees established by the Regulatory Authority.
	 PLANNING	Regulatory Authority	<ul style="list-style-type: none"> Coordinate program rules and regulations with state, tribal, local planning and zoning and other water-related programs. Evaluate potential risks of wastewater discharges to limit environmental impacts on receiving environments during the rule making process. Limit potential risks of environmental impacts from residuals management program and evaluate available handling/treatment capacities. Inform local planning authority of rule changes and recommend its evaluation of potential impacts on land use.
		Developer	<ul style="list-style-type: none"> Hire planners, certified site evaluators, and designers to ensure that all lots of proposed subdivision plats meet requirements for onsite treatment prior to final plat.
	 PERFORMANCE	Regulatory Authority	<ul style="list-style-type: none"> Establish system failure criteria to protect public health, e.g., wastewater backups in building, wastewater ponding on ground surface, insufficient separation from ground water or wells. Establish minimum performance criteria for manufactured component approvals. Establish minimum maintenance requirements for approved systems.
		Owner/User	<ul style="list-style-type: none"> Regularly maintain system in proper working order.
	 TRAINING AND CERTIFICATION/LICENSING	Licensing Board/Regulatory Authority	<ul style="list-style-type: none"> Develop and administer training, testing, and certification/licensing program for site evaluators, designers, contractors, operators, and pumpers/haulers. Maintain a current certified/licensed Service Provider listing.
		Service Provider	<ul style="list-style-type: none"> Obtain appropriate certification(s)/license(s) and continuing education as required. Obtain training from the manufacturer or vendor regarding appropriate use, installation requirements, and O&M procedures of any proprietary equipment to be installed. Comply with applicable federal, state, tribal, and local requirements.
Owner/User		<ul style="list-style-type: none"> When using third-party services, contract only with the appropriate certified/licensed Service Providers. 	
 SITE EVALUATION	Regulatory Authority	<ul style="list-style-type: none"> Codify prescriptive requirements for site evaluation procedures. Codify criteria for treatment site characteristics suitable for permitted designs that will prevent unacceptable impacts on ground and surface water resources. Establish alternative site acceptance criteria for approved systems providing enhanced pretreatment. 	
	Site Evaluator	<ul style="list-style-type: none"> Obtain certification/license to practice. Describe site and soil characteristics, determine suitability of site with respect to code requirements, and estimate site's hydraulic and treatment capacity. Comply with applicable federal, state, tribal, and local requirements in the evaluation of sites for wastewater treatment and dispersal. 	
	Owner	<ul style="list-style-type: none"> Hire a certified/licensed site evaluator to perform site evaluation. 	

¹ Activities in bold are activities added to program elements from the preceding Management Model.

PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY ¹
 DESIGN	Regulatory Authority	<ul style="list-style-type: none"> Codify prescriptive, preengineered designs that are suitable for treatment sites that meet the appropriate prescriptive site criteria. Administer an evaluation program for approving manufactured components for use with pre-engineered designs.
	Designer	<ul style="list-style-type: none"> Obtain certification/license to practice. Design a treatment system that is compatible with the site and soil characteristics described by the site evaluator. Comply with applicable federal, state, tribal, and local requirements in the design of wastewater treatment and dispersal systems.
	Owner	<ul style="list-style-type: none"> Hire a certified/licensed designer to prepare system design.
 CONSTRUCTION	Regulatory Authority	<ul style="list-style-type: none"> Administer a permitting program for system construction, including Regulatory Authority review of proposed system siting and design plans. Perform final construction inspection for compliance assurance and inventory data collection. Require that record drawings of constructed system be submitted to the Regulatory Authority by Owner. Require Owner to submit a copy of system O&M manual to the Regulatory Authority.
	Contractor/ Installer	<ul style="list-style-type: none"> Obtain certification/license to practice. Construct the system in accordance with the approved plans and specifications. Prepare record drawings of completed system and submit to Owner. Provide Owner with an O&M manual describing component manufacturer's maintenance and troubleshooting requirements/recommendations. Comply with applicable federal, state, tribal, and local requirements in the design and construction of wastewater treatment and dispersal systems.
	Designer of Record	<ul style="list-style-type: none"> Approve proposed field changes and submit to Owner. Comply with applicable federal, state, tribal, and local requirements in the design and construction of wastewater treatment and dispersal systems.
	Owner	<ul style="list-style-type: none"> Hire a certified/licensed contractor/installer to construct system. Submit final record drawings of constructed system to Regulatory Authority. Submit a copy of system O&M manual to Regulatory Authority to record required maintenance.
 OPERATION & MAINTENANCE	Regulatory Authority	<ul style="list-style-type: none"> Provide Owner/User with educational materials regarding system use and care. Send timely reminder to Owner when scheduled preventive maintenance is due. Administer a program that requires the Owner to attest periodically that he or she holds a valid contract with a certified/licensed operator to perform scheduled and any necessary maintenance according to the maintenance requirements described in submitted O&M manual. Require Owner to submit a maintenance report signed/sealed by certified/licensed operator immediately following scheduled maintenance.
	Operator	<ul style="list-style-type: none"> Obtain certification/license to practice. Inspect and service system as necessary in accordance with the submitted O&M manual. Certify to Owner that the required maintenance was performed in a timely manner, describing any system deficiencies observed. Comply with applicable federal, state, tribal, and local requirements in the operation and maintenance of the treatment and dispersal system.
	Pumper/Hauler	<ul style="list-style-type: none"> Obtain certification/license to practice. Inspect and service system as necessary. Comply with applicable federal, state, tribal, and local requirements in the operation and maintenance of treatment and dispersal system.
	Owner	<ul style="list-style-type: none"> Hire a certified/licensed pumper/hauler to periodically inspect, service, and remove septage or other residuals for proper treatment and disposal. Maintain contractual agreement with a certified/licensed operator to perform scheduled maintenance as required. Inform Regulatory Authority of any change in maintenance contract status.
	User	<ul style="list-style-type: none"> Follow recommendations provided by Regulatory Authority, Service Providers, and/or Owner to ensure that undesirable or prohibited materials are not discharged to system.

MANAGEMENT MODEL 2: MAINTENANCE CONTRACTS

¹ Activities in bold are activities added to program elements from the preceding Management Model.

MANAGEMENT MODEL 2: MAINTENANCE CONTRACTS

PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY ¹
 RESIDUALS MANAGEMENT	Regulatory Authority	<ul style="list-style-type: none"> Administer a tracking system for residuals hauling, treatment, and disposal and review to evaluate compliance with 40 CFR Part 503 (Use and Disposal of Sewage Sludge), 40 CFR Part 257, and applicable state, tribal, and local requirements. Inventory available residuals handling/treatment capacities and develop contingency plans to ensure that sufficient capacities are always available.
	Pumper/Hauler	<ul style="list-style-type: none"> Comply with applicable federal, state, tribal, and local requirements in the pumping, hauling, treatment, and disposal of treatment system residuals.
 COMPLIANCE INSPECTIONS/ MONITORING	Regulatory Authority	<ul style="list-style-type: none"> Conduct final construction inspections to ensure compliance with approved plans and permit requirements. Perform compliance inspections at point-of-sale, change-in-use of properties, "targeted areas," and/or systems reported to be in violation. Conduct compliance inspections of residuals hauling, treatment, and disposal. Administer program for confirming that Owners hold valid maintenance contracts with certified/licensed operators and for monitoring timely submittals of certified maintenance reports.
	Operator or Pumper/Hauler	<ul style="list-style-type: none"> Inform Owner of any noncompliant items observed during routine servicing of system.
	Owner	<ul style="list-style-type: none"> Periodically perform a "walk-over" inspection of the system and correct any deficiencies. Attest to the Regulatory Authority that a valid contract exists with a certified/licensed operator to perform necessary system maintenance. Submit a maintenance report signed/sealed by a certified/licensed Service Provider immediately following scheduled maintenance.
 CORRECTIVE ACTIONS	Regulatory Authority	<ul style="list-style-type: none"> Negotiate compliance schedule with Owner for correcting documented noncompliant items. Administer enforcement program, including fines and/or penalties for failure to comply with compliance requirements. Obtain necessary authority to enter property to correct imminent threats to public health if the Owner/User fails to comply.
	Designer	<ul style="list-style-type: none"> Provide Owner with documents (drawings, specifications, modifications, etc.) that may be required by Regulatory Authority prior to corrective action.
	Contractor/ Installer	<ul style="list-style-type: none"> Perform required repairs, modifications, and upgrades as necessary.
	Owner	<ul style="list-style-type: none"> Comply with terms and conditions of the negotiated compliance schedule. Submit required documents for corrective actions to Regulatory Authority. Hire appropriate certified/licensed Service Providers to perform required corrective actions.
 RECORD KEEPING, INVENTORY, & REPORTING	Regulatory Authority	<ul style="list-style-type: none"> Administer a database inventory (locations, site evaluations, record drawings, permits, performed maintenance, inspection reports) of all systems. Maintain a residuals treatment and disposal tracking system. Maintain a current certified/licensed Service Provider listing that is available to the public. Administer an Owner/Service Provider maintenance contract compliance and certified maintenance report tracking system. Record maintenance contract requirement on property deed. Administer a certified maintenance report tracking system.
	Operator	<ul style="list-style-type: none"> Provide certified report of all maintenance and observed system deficiencies to Owner.
	Pumper/Hauler	<ul style="list-style-type: none"> Prepare and submit records of residuals handling as required.
	Owner	<ul style="list-style-type: none"> Maintain approved record drawings and O&M manual of system. Maintain maintenance records of system. Provide drawings, specifications, O&M manual, and maintenance records to new property owner at time of property transfer.
 FINANCIAL ASSISTANCE & FUNDING	Regulatory Authority	<ul style="list-style-type: none"> Provide the legal and financial support to sustain the management program. Provide a listing of financial assistance programs available to Owner/User and the qualifying criteria for each program. Consider implementing a state or local financing program to assist Owners in upgrading their systems.

¹ Activities in bold are activities added to program elements from the preceding Management Model.

MANAGEMENT MODEL 3: OPERATING PERMITS

Objective: To issue renewable/revocable operating permits to system Owner that stipulate specific and measurable performance criteria for the treatment system and periodic submittals of compliance monitoring reports. The performance criteria are based on risks to public health and water resources posed by wastewater dispersal in the receiving environment. Operating permits allow the use of clustered or onsite systems on sites with a greater range of site characteristics.

PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY ¹
 PUBLIC EDUCATION AND PARTICIPATION	Regulatory Authority	<ul style="list-style-type: none"> Educate Owner/User on purpose, use, and care of treatment system. Provide public review and comment periods of any proposed program and/or rule changes.
	Service Provider	<ul style="list-style-type: none"> Be informed of existing rules, and review and comment on any proposed program or rule changes. Participate in advisory committees established by the Regulatory Authority.
	Owner/User	<ul style="list-style-type: none"> Be informed of purpose, use, and care of treatment system. Be informed of existing rules, and review and comment on any proposed program or rule changes. Participate in advisory committees established by the Regulatory Authority.
 PLANNING	Regulatory Authority	<ul style="list-style-type: none"> Coordinate program rules and regulations with state, tribal, and local planning and zoning and other water-related programs. Evaluate potential risks of wastewater discharges to limit environmental impacts on receiving environments during the rule making process. Limit potential risks of environmental impacts from residuals management program and evaluate available handling/treatment capacities. Inform local planning authority of rule changes and recommend its evaluation of potential impacts on land use.
	Developer	<ul style="list-style-type: none"> Hire planners, certified site evaluators, and designers to ensure that all lots of proposed subdivision plats meet requirements for onsite treatment prior to final plat.
 PERFORMANCE	Regulatory Authority	<ul style="list-style-type: none"> Establish system failure criteria to protect public health, e.g., wastewater backups in building, wastewater ponding on ground surface, insufficient separation from ground water or wells. Establish minimum maintenance requirements for approved systems. Establish performance criteria necessary to protect public health and water resources for each defined receiving environment in Regulatory Authority's jurisdiction.
	Owner/User	<ul style="list-style-type: none"> Operate and regularly maintain system in proper working order. Operate system to comply with performance criteria stipulated in operating permit.
 TRAINING AND CERTIFICATION/LICENSING	Licensing Board/Regulatory Authority	<ul style="list-style-type: none"> Develop and administer a training, testing, and certification/licensing program for site evaluators, designers, contractors, operators, pumpers/haulers, and inspectors. Maintain a current certified/licensed Service Provider listing.
	Service Provider	<ul style="list-style-type: none"> Obtain appropriate certification(s)/license(s) and continuing education as required. Obtain training from the manufacturer or vendor regarding appropriate use, installation requirements, and O&M procedures of any proprietary equipment to be installed. Comply with applicable federal, state, tribal, and local requirements.
	Owner/User	<ul style="list-style-type: none"> When using third-party services, contract with only the appropriate certified/licensed Service Providers.
 SITE EVALUATION	Regulatory Authority	<ul style="list-style-type: none"> Codify prescriptive requirements for site evaluation procedures. Codify criteria for treatment site characteristics suitable for permitted designs that will prevent unacceptable impacts on ground and surface water resources. Establish defining characteristics for each receiving environment in the Regulatory Authority's jurisdiction.
	Site Evaluator	<ul style="list-style-type: none"> Obtain certification/license to practice. Describe site and soil characteristics, determine suitability of site with respect to code requirements, and estimate site's hydraulic and treatment capacity. Comply with applicable federal, state, tribal, and local requirements in the evaluation of sites for wastewater treatment and dispersal.
	Owner	<ul style="list-style-type: none"> Hire a certified/licensed site evaluator to perform site evaluation.

¹ Activities in bold are activities added to program elements from the preceding Management Model.

MANAGEMENT MODEL 3: OPERATING PERMITS

PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY ¹
 DESIGN	Regulatory Authority	<ul style="list-style-type: none"> Codify prescriptive, preengineered designs that are suitable for treatment sites that meet the appropriate prescriptive site criteria. Administer a plan review program for engineered designs to meet stipulated performance criteria. Require submission of routine operation and emergency contingency plans that will sustain system performance and avoid unpermitted discharges.
	Designer	<ul style="list-style-type: none"> Obtain certification/license to practice. Certified/licensed designer to design treatment system that is compatible with the site and soil characteristics described by the site evaluator. Comply with applicable federal, state, tribal, and local requirements in the design of wastewater treatment and dispersal systems.
	Owner	<ul style="list-style-type: none"> Hire a certified/licensed designer to prepare system design.
 CONSTRUCTION	Regulatory Authority	<ul style="list-style-type: none"> Administer a permitting program for system construction, including Regulatory Authority review of proposed system siting and design plans. Require designer of record to certify that completed system construction is in substantial compliance with approved plans and specifications. Require that record drawings of constructed system be submitted to the Regulatory Authority by Owner. Require Owner to submit a copy of system O&M manual to the Regulatory Authority.
	Contractor/Installer	<ul style="list-style-type: none"> Obtain certification/license to practice. Construct the system in accordance with the approved plans and specifications. Prepare record drawings of completed system and submit to Owner. Provide Owner with an O&M manual describing component manufacturer's maintenance and troubleshooting requirements/recommendations. Comply with applicable federal, state, tribal, and local requirements in the design and construction of wastewater treatment and dispersal systems.
	Designer of Record	<ul style="list-style-type: none"> Approve proposed field changes and submit to Owner. Certify that construction of the system is substantially in conformance with the approved plans and specifications.
	Owner	<ul style="list-style-type: none"> Hire a certified/licensed contractor/installer to construct system. Submit final record drawings of constructed system to Regulatory Authority. Submit a copy of system O&M manual to Regulatory Authority to record required maintenance.
 OPERATION & MAINTENANCE	Regulatory Authority	<ul style="list-style-type: none"> Provide Owner/User with educational materials regarding system use and care. Administer a program of renewable/revocable operating permits that are issued to Owner stipulating system performance criteria, compliance monitoring reporting schedule, term of permit, and renewal option upon documented compliance with permit. Track and review compliance monitoring reports to ensure that systems are operating in accordance with operating permits.
	Operator	<ul style="list-style-type: none"> Obtain certification/license to practice. Inspect and service system as necessary in accordance with the submitted O&M manual and/or operating permit stipulations. Certify to Owner that the required maintenance was performed in a timely manner, describing any system deficiencies observed. Comply with applicable federal, state, tribal, and local requirements in the operation and maintenance of the treatment and dispersal system.
	Pumper/Hauler	<ul style="list-style-type: none"> Obtain certification/license to practice. Inspect and service system as necessary. Comply with applicable federal, state, tribal, and local requirements in the operation and maintenance of the treatment and dispersal system.
	Owner	<ul style="list-style-type: none"> Hire a certified/licensed pumper/hauler or operator to maintain system. Maintain system in proper working order. Operate and maintain the system in accordance with O&M manual and/or operating permit stipulations. Submit compliance monitoring reports to the Regulatory Authority according to the schedule stipulated in the operating permit.
	User	<ul style="list-style-type: none"> Follow recommendations provided by Regulatory Authority and/or Service Providers to ensure that undesirable or prohibited materials are not discharged to system.

¹ Activities in bold are activities added to program elements from the preceding Management Model.

PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY ¹
 RESIDUALS MANAGEMENT	Regulatory Authority	<ul style="list-style-type: none"> Administer a tracking system for residuals hauling, treatment, and disposal and review to evaluate compliance with 40 CFR Part 503 Use and Disposal of Sewage Sludge, 40 CFR Part 257, and applicable state, tribal, and local requirements. Inventory available residuals handling/treatment capacities and develop contingency plans to ensure that sufficient capacities are always available.
	Pumper/Hauler	<ul style="list-style-type: none"> Comply with applicable federal, state, tribal, and local requirements in the pumping, hauling, treatment, and disposal of treatment system residuals.
 COMPLIANCE INSPECTIONS/ MONITORING	Regulatory Authority	<ul style="list-style-type: none"> Perform inspection programs at point-of-sale, change-in-use of properties, "targeted areas," and/or systems reported to be in violation. Conduct compliance inspections of residuals hauling, treatment, and disposal. Administer a program to monitor timely submittals of acceptable compliance maintenance reports. Notify Owner of impending scheduled submittals of compliance monitoring reports. Perform system inspections randomly and/or at time of operating permit renewal.
	Operator or Pumper/Hauler	<ul style="list-style-type: none"> Inform Owner of any noncompliant items observed during routine servicing of system.
	Owner	<ul style="list-style-type: none"> Submit compliance monitoring reports to Regulatory Authority as stipulated in operating permit. Submit compliance inspection report signed/sealed by a certified/licensed inspector prior to applying for renewal of operating permit.
 CORRECTIVE ACTIONS	Regulatory Authority	<ul style="list-style-type: none"> Negotiate compliance schedule with Owner for correcting documented noncompliant items. Administer enforcement program including fines and/or penalties for failure to comply with compliance requirements. Obtain necessary authority to enter property to correct imminent threats to public health if the Owner/User fails to comply. Require system inspection by certified inspector at time of operating permit renewal.
	Designer	<ul style="list-style-type: none"> Provide Owner with documents (drawings, specifications, modifications, etc.) that may be required by Regulatory Authority prior to corrective action.
	Contractor/ Installer	<ul style="list-style-type: none"> Perform required repairs, modifications, and upgrades as necessary.
	Inspector	<ul style="list-style-type: none"> Obtain certification/license to practice. Inspect treatment system for compliance with operating permit prior to permit renewal.
	Owner	<ul style="list-style-type: none"> Comply with terms and conditions of the negotiated compliance schedule. Submit required documents for corrective actions to Regulatory Authority. Hire appropriate certified/licensed Service Providers to perform required corrective actions.
 RECORD KEEPING, INVENTORY, & REPORTING	Regulatory Authority	<ul style="list-style-type: none"> Administer a database inventory (locations, site evaluations, record drawings, permits, performed maintenance, and inspection reports) of all systems. Maintain a residuals treatment and disposal tracking system. Maintain a current certified/licensed Service Provider listing that is available to the public. Administer a tracking system for operating permits. Administer a tracking database for compliance reports.
	Operator or Inspector	<ul style="list-style-type: none"> Provide certified report of all maintenance and observed system deficiencies to Owner. Perform system monitoring as stipulated in Owner's operating permit.
	Pumper/Hauler	<ul style="list-style-type: none"> Prepare and submit records of residuals handling as required.
	Owner	<ul style="list-style-type: none"> Maintain approved record drawings and O&M manual of system. Maintain maintenance records of system. Submit compliance monitoring reports to Regulatory Authority. Provide drawings, specifications, O&M manual, and maintenance records to new property owner at time of property transfer.
 FINANCIAL ASSISTANCE & FUNDING	Regulatory Authority	<ul style="list-style-type: none"> Provide the legal and financial support to sustain the management program. Provide a listing of financial assistance programs available to Owner/User and the qualifying criteria for each program. Consider implementing a state or local financing program to assist Owners in upgrading their systems.

¹ Activities in bold are activities added to program elements from the preceding Management Model.

MANAGEMENT MODEL 4: RME OPERATION AND MAINTENANCE

Objective: To ensure that onsite/decentralized systems consistently meet their stipulated performance criteria through Responsible Management Entities that are responsible for operation and performance of systems within their service areas.

MANAGEMENT MODEL 4: RME OPERATION AND MAINTENANCE	PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY ¹
	 PUBLIC EDUCATION AND PARTICIPATION	Regulatory Authority	<ul style="list-style-type: none"> Educate Owner/User on purpose, use, and care of treatment system. Hold public meetings to inform the public of any proposed program and/or rule changes.
		Service Provider	<ul style="list-style-type: none"> Be informed of existing rules, and review and comment on any proposed program or rule changes. Participate in advisory committees established by the Regulatory Authority.
		Owner/User	<ul style="list-style-type: none"> Be informed of purpose, use, and care of treatment system. Be informed of existing rules and review and comment on any proposed program and/or rule changes. Participate in advisory committees established by the Regulatory Authority.
		RME	<ul style="list-style-type: none"> Inform Owner/User of care and use of system. Inform Owner/User of RME requirements and prohibited uses of system.
	 PLANNING	Regulatory Authority	<ul style="list-style-type: none"> Coordinate program rules and regulations with state, tribal, and local planning and zoning and other water-related programs. Evaluate potential risks of wastewater discharges to limit environmental impacts on receiving environments during the rule making process. Limit potential risks of environmental impacts from residuals management program and evaluate available handling/treatment capacities. Inform local planning authority of rule changes and recommend their evaluation of potential impacts on land use.
		Developer	<ul style="list-style-type: none"> Hire planners, certified site evaluators, and designers to ensure that all lots of proposed subdivision plats meet requirements for onsite treatment prior to final plat.
		RME	<ul style="list-style-type: none"> Develop criteria (e.g., site evaluation, design, construction) to be required of systems for acceptance into O&M program and inform Owners. Continuously evaluate existing wastewater treatment needs and forecast future needs.
	 PERFORMANCE	Regulatory Authority	<ul style="list-style-type: none"> Establish system failure criteria to protect public health, e.g., wastewater backups in building, wastewater ponding on ground surface, insufficient separation from ground water or wells. Establish minimum maintenance requirements for approved systems. Establish performance criteria necessary to protect public health and water resources for each defined receiving environment in the Regulatory Authority's jurisdiction.
		Owner	<ul style="list-style-type: none"> Regularly maintain system components in proper working order. Comply with any RME requirements regarding care and use of the system.
RME		<ul style="list-style-type: none"> Operate systems to comply with performance criteria stipulated in the operating permits. 	
 TRAINING AND CERTIFICATION/LICENSING	Licensing Board/Regulatory Authority	<ul style="list-style-type: none"> Develop and administer training, testing, and certification/licensing program for site evaluators, designers, contractors, operators, pumpers/haulers, and inspectors. Maintain a current certified/licensed Service Provider listing. 	
	Service Provider	<ul style="list-style-type: none"> Obtain appropriate certification(s)/license(s) and continuing education as required. Obtain training from the manufacturer or vendor regarding appropriate use, installation requirements, and operation and maintenance procedures of any proprietary equipment to be installed. Comply with applicable federal, state, tribal, and local requirements in the evaluation of sites for wastewater treatment and dispersal. 	
	Owner	<ul style="list-style-type: none"> When using third-party services, contract only with the appropriate certified/licensed Service Providers. 	
	RME	<ul style="list-style-type: none"> When using third-party services, contract with only the appropriate certified/licensed Service Providers. Ensure that RME staff who operate and/or maintain systems obtain appropriate certification(s)/license(s) to practice. Arrange for supplemental training as needed for Service Providers and/or staff to manage, operate, and/or maintain systems. 	

¹ Activities in bold are activities added to program elements from the preceding Management Model.

PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY ¹
 SITE EVALUATION	Regulatory Authority	<ul style="list-style-type: none"> Codify prescriptive requirements for site evaluation procedures. Codify criteria for treatment site characteristics suitable for permitted designs that will prevent unacceptable impacts on ground and surface water resources. Establish the defining characteristics of each receiving environment in the Regulatory Authority's jurisdiction. Approve and oversee site evaluation procedures required by RME for system acceptance in the O&M program to ensure that system designs are appropriate for the sites and their stipulated performance criteria.
	Site Evaluator	<ul style="list-style-type: none"> Obtain certification/license to practice. Describe site and soil characteristics, determine suitability of site with respect to code requirements, and estimate site's hydraulic and treatment capacity. Comply with applicable federal, state, tribal, and local requirements in the evaluation of sites for wastewater treatment and dispersal.
	Owner	<ul style="list-style-type: none"> Hire a certified/licensed site evaluator to perform site evaluation. Comply with any additional siting requirements established by RME for system acceptance in the O&M program.
 DESIGN	Regulatory Authority	<ul style="list-style-type: none"> Codify prescriptive, pre-engineered designs that are suitable for treatment sites that meet the appropriate prescriptive site criteria. Administer a plan review program for engineered designs to meet stipulated performance criteria. Require submission of routine operation and emergency contingency plans that will sustain system performance and avoid unpermitted discharges.
	Designer	<ul style="list-style-type: none"> Obtain certification/license to practice. Design treatment system that is compatible with the site and soil characteristics described by the site evaluator. Comply with applicable federal, state, tribal, and local requirements in the design of wastewater treatment and dispersal systems.
	Owner	<ul style="list-style-type: none"> Hire a certified/licensed designer to prepare system design. Comply with any additional design requirements established by the RME for system acceptance in the O&M program.
 CONSTRUCTION	Regulatory Authority	<ul style="list-style-type: none"> Administer a permitting program for system construction, including Regulatory Authority review of proposed system siting and design plans. Require designer of record to certify that completed system construction is in substantial compliance with approved plans and specifications. Require that record drawings of constructed system be submitted to the Regulatory Authority by Owner. Require Owner to submit a copy of system O&M manual to the Regulatory Authority and RME.
	Contractor/ Installer	<ul style="list-style-type: none"> Obtain certification/license to practice. Construct system in accordance with the approved plans and specifications. Prepare record drawings of completed system and submit to Owner. Provide Owner with an O&M manual describing component manufacturer's maintenance and troubleshooting requirements/recommendations. Comply with applicable federal, state, tribal, and local requirements in the design and construction of wastewater treatment and dispersal systems.
	Designer of Record	<ul style="list-style-type: none"> Approve proposed field changes and submit to Owner. Certify that construction of the system is substantially in conformance with the approved plans and specifications.
	Owner	<ul style="list-style-type: none"> Comply with any additional construction requirements established by the RME for system acceptance in the O&M program. Hire a certified/licensed designer to prepare system design. Submit final record drawings of constructed system to Regulatory Authority. Submit a copy of the system O&M manual to the Regulatory Authority and RME to record required maintenance.

¹ Activities in bold are activities added to program elements from the preceding Management Model.

MANAGEMENT MODEL 4: RME OPERATION AND MAINTENANCE	PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY ¹
	 OPERATION & MAINTENANCE	Regulatory Authority	<ul style="list-style-type: none"> • Provide Owner/User with educational materials regarding system use and care. • Administer a program of renewable/revocable operating permits that are issued to RME, stipulating system performance criteria, compliance monitoring reporting schedule, term of permit, and renewal option upon documented compliance with operating permit stipulations. • Track and review compliance monitoring reports to ensure that systems are operating in accordance with operating permits. • Consider replacing individual system operating permits with general permits issued to the RME for classes of systems.
		Operator	<ul style="list-style-type: none"> • Inspect and service the system as necessary in accordance with the submitted O&M manual and/or operating permit stipulations. • Perform system monitoring as stipulated in RME's operating permit. • Certify to RME that the required maintenance and monitoring was performed in a timely manner and noting any system deficiencies. • Comply with applicable federal, state, tribal, and local requirements in the operation and maintenance of the treatment and dispersal system.
		Pumper/Hauler	<ul style="list-style-type: none"> • Obtain certification/license to practice. • Inspect and service system as necessary. • Comply with applicable federal, state, tribal, and local requirements in the operation and maintenance of treatment and dispersal system.
		Owner/User	<ul style="list-style-type: none"> • Follow recommendations provided by Regulatory Authority, Service Providers, and/or Owner to ensure that undesirable or prohibited materials are not discharged to system. • Maintain system components in proper working order. • Comply with any RME requirements regarding care and use of system.
		RME	<ul style="list-style-type: none"> • Operate and maintain systems in accordance with the stipulated operating permit requirements. • Submit compliance monitoring reports to the Regulatory Authority according to the schedule stipulated in the operating permit. • Hire a certified/licensed pumper/hauler or operator to maintain system.
	 RESIDUALS MANAGEMENT	Regulatory Authority	<ul style="list-style-type: none"> • Administer a tracking system for residuals hauling, treatment, and disposal and review to evaluate compliance with 40 CFR Part 503 Use and Disposal of Sewage Sludge, 40 CFR Part 257, and applicable state, tribal, and local requirements. • Inventory available residuals handling/treatment capacities and develop contingency plans to ensure that sufficient capacities are always available.
		Pumper/Hauler	<ul style="list-style-type: none"> • Comply with applicable federal, state, tribal, and local requirements in the pumping, hauling, treatment, and disposal of wastewater treatment system residuals.
		RME	<ul style="list-style-type: none"> • Hire a certified/licensed pumper/hauler to remove, treat, and dispose of residuals. • Comply with applicable federal, state, tribal, and local requirements in the pumping, hauling, treatment, and disposal of treatment system residuals. • Inventory available residuals handling/treatment capacities and develop contingency plans when insufficient capacities are available.
	 COMPLIANCE INSPECTIONS/ MONITORING	Regulatory Authority	<ul style="list-style-type: none"> • Perform inspection programs at point-of-sale, change-in-use of properties, "targeted areas," and/or systems reported to be in violation. • Conduct compliance inspections of residuals hauling, treatment, and disposal. • Administer a program to monitor timely submittals of acceptable compliance maintenance reports. • Perform system inspections randomly and/or at time of operating permit renewal.
Inspector		<ul style="list-style-type: none"> • Obtain certification/license to practice. • Perform system compliance inspections for RME in accordance with prevailing Regulatory Authority requirements. 	
RME		<ul style="list-style-type: none"> • Submit compliance monitoring reports to the Regulatory Authority as stipulated in operating permit. • Submit compliance inspection report signed/sealed by a certified/licensed inspector prior to applying for renewal of operating permit. • Conduct regular reviews of management program with Owner/User and Regulatory Authority to optimize system operation program. • Hire a certified/licensed inspector to inspect system compliance status. 	

¹ Activities in bold are activities added to program elements from the preceding Management Model.

PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY ¹
 CORRECTIVE ACTIONS	Regulatory Authority	<ul style="list-style-type: none"> • Negotiate compliance schedules with RME for correcting documented noncompliance items. • Administer enforcement program including fines and/or penalties for failure to comply with compliance requirements. • Obtain necessary authority to enter property to correct imminent threats to public health if the Owner/User fails to comply. • Require system inspection by certified inspector at time of operating permit renewal. • Negotiate compliance schedules with RME, Owner/User, or both, for correcting documented noncompliance items.
	Designer	<ul style="list-style-type: none"> • Provide Owner/RME with documents (drawings, specifications, modifications, etc.) that may be required by the Regulatory Authority prior to corrective actions.
	Contractor/ Installer	<ul style="list-style-type: none"> • Perform required repairs, modifications, and upgrades as necessary.
	Inspector	<ul style="list-style-type: none"> • Inspect treatment system for compliance with operating permit prior to permit renewal.
	Owner	<ul style="list-style-type: none"> • Comply with terms and conditions of the negotiated compliance schedule for component replacement/repairs. • Submit required documents for corrective actions to Regulatory Authority. • Hire appropriate certified/licensed Service Providers to perform required corrective actions.
	RME	<ul style="list-style-type: none"> • Comply with terms and conditions of the negotiated compliance schedule for system performance.
 RECORD KEEPING, INVENTORY, & REPORTING	Regulatory Authority	<ul style="list-style-type: none"> • Administer a database inventory (locations, site evaluations, record drawings, permits, performed maintenance, and inspection reports) of all systems. • Maintain a residuals treatment and disposal tracking system. • Maintain a current certified/licensed Service Provider listing that is available to the public. • Administer a tracking system for operating permits. • Administer a tracking database for compliance reports. • Administer periodic financial, management, and technical audits of RME.
	Operator or Inspector	<ul style="list-style-type: none"> • Provide certified report of all maintenance and observed system deficiencies to RME. • Provide certified report of all observed system deficiencies to Owner. • Perform system monitoring as stipulated in RME's operating permit.
	Pumper/Hauler	<ul style="list-style-type: none"> • Prepare and submit records of residuals handling as required.
	Owner	<ul style="list-style-type: none"> • Maintain approved record drawings and O&M manual of system. • Maintain maintenance records of system. • Provide drawings, specifications, O&M manual, and maintenance records to new property owner at time of property transfer.
	RME	<ul style="list-style-type: none"> • Maintain system monitoring and service records. • Inventory, collect, and provide permit information to Regulatory Authority.
 FINANCIAL ASSISTANCE & FUNDING	Regulatory Authority	<ul style="list-style-type: none"> • Provide the legal and financial support to sustain the management program. • Provide a listing of financial assistance programs available to Owner/User and the qualifying criteria for each program. • Consider implementing a state or local financing program to assist Owners in upgrading their systems.
	RME	<ul style="list-style-type: none"> • Conduct regular reviews of management program with Owner/User and Regulatory Authority to optimize operations.

¹ Activities in bold are activities added to program elements from the preceding Management Model.

MANAGEMENT MODEL 5: RME OWNERSHIP

Objective: To provide professional management of the planning, siting, design, construction, operation, and maintenance of onsite/decentralized systems through Responsible Management Entities that own and manage individual and clustered systems within their service areas.

PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY ¹
 PUBLIC EDUCATION AND PARTICIPATION	Regulatory Authority	<ul style="list-style-type: none"> Educate Owner/User on purpose, use, and care of treatment system. Provide public review and comment periods of any proposed program and/or rule changes.
	Service Provider	<ul style="list-style-type: none"> Be informed of existing rules, and review and comment on any proposed program or rule changes. Participate in advisory committees established by the Regulatory Authority.
	RME	<ul style="list-style-type: none"> Inform User of care and use of system. Inform User of RME requirements and prohibited uses of system.
	User	<ul style="list-style-type: none"> Be informed of purpose, use, and care of treatment system.
 PLANNING	Regulatory Authority	<ul style="list-style-type: none"> Coordinate program rules and regulations with state, tribal, and local planning and zoning and other water-related programs. Evaluate potential risks of wastewater discharges to limit environmental impacts on receiving environments during the rule making process. Limit potential risks of environmental impacts from residuals management program and evaluate available handling/treatment capacities. Inform local planning authority of rule changes and recommend their evaluation of potential impacts on land use.
	Developer	<ul style="list-style-type: none"> Hire planners, certified site evaluators, and designers to ensure that all lots of proposed subdivision plats meet requirements for onsite treatment prior to final plat.
	RME	<ul style="list-style-type: none"> Continuously evaluate existing wastewater treatment needs and forecast future needs. Require developers to submit proposed subdivision plats to RME for review and comment to ensure compatibility with RME requirements. Plan most cost-effective approach to meeting treatment needs through appropriate mix of central sewerage, clusters, and individual onsite systems.
 PERFORMANCE	Regulatory Authority	<ul style="list-style-type: none"> Establish system failure criteria to protect public health, e.g., wastewater backups in building, wastewater ponding on ground surface, insufficient separation from ground water or wells. Establish minimum maintenance requirements for approved systems. Establish performance criteria necessary to protect public health and water resources for each defined receiving environment in the Regulatory Authority's jurisdiction.
	RME	<ul style="list-style-type: none"> Operate, maintain, and repair systems to comply with performance criteria stipulated in the operating permits.
	User	<ul style="list-style-type: none"> Comply with any RME requirements regarding care and use of the system.
 TRAINING AND CERTIFICATION/ LICENSING	Licensing Board/ Regulatory Authority	<ul style="list-style-type: none"> Develop and administer training, testing, and certification/licensing program for site evaluators, designers, contractors, pumpers/haulers, inspectors, and operators. Maintain a current certified/licensed Service Provider listing.
	Service Provider	<ul style="list-style-type: none"> Obtain appropriate certification(s)/license(s) and continuing education as required. Obtain training from the manufacturer or vendor regarding appropriate use, installation requirements, and operation and maintenance procedures of any proprietary equipment to be installed. Comply with applicable federal, state, tribal, and local requirements in the evaluation of sites for wastewater treatment and dispersal.
	RME	<ul style="list-style-type: none"> When using-third party services, contract with only certified/licensed Service Providers. RME staff who site, design, construct, operate, and/or maintain systems must obtain appropriate certification(s)/license(s) to practice. Arrange for supplemental training as needed for Service Providers and/or staff to manage, operate, and/or maintain systems.

¹ Activities in bold are activities added to program elements from the preceding Management Model.

PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY ¹
 SITE EVALUATION	Regulatory Authority	<ul style="list-style-type: none"> • Codify prescriptive requirements for site evaluation procedures. • Codify criteria for treatment site characteristics suitable for permitted designs that will prevent unacceptable impacts on ground and surface water resources. • Establish the defining characteristics of each receiving environment in the Regulatory Authority's jurisdiction. • Approve and oversee site evaluation procedures used by RME to ensure that system designs are appropriate for the sites and their stipulated performance criteria.
	Site Evaluator	<ul style="list-style-type: none"> • Obtain certification/license to practice. • Describe site and soil characteristics, determine suitability of site with respect to code requirements, and estimate site's hydraulic and treatment capacity. • Comply with applicable federal, state, tribal, and local requirements in the evaluation of sites for wastewater treatment and dispersal.
	RME	<ul style="list-style-type: none"> • Hire a certified/licensed site evaluator to perform site evaluation.
 DESIGN	Regulatory Authority	<ul style="list-style-type: none"> • Codify prescriptive, pre-engineered designs that are suitable for treatment sites that meet the appropriate prescriptive site criteria. • Administer the plan review program for engineered designs to meet stipulated performance criteria. • Require routine operation and emergency contingency plans that will sustain system performance and avoid the submission of unpermitted discharges.
	Designer	<ul style="list-style-type: none"> • Obtain certification/license to practice. • Design treatment system that is compatible with the site and soil characteristics described by the site evaluator. • Comply with applicable federal, state, tribal, and local requirements in the design of wastewater treatment and dispersal systems.
	RME	<ul style="list-style-type: none"> • Hire a certified/licensed designer to prepare system design.
 CONSTRUCTION	Regulatory Design	<ul style="list-style-type: none"> • Administer a permitting program for system construction, including Regulatory Authority review of proposed system siting and design plans. • Require designer of record to certify that completed system construction is in substantial compliance with approved plans and specifications. • Require that record drawings of constructed system be submitted to the Regulatory Authority by RME.
	Contractor/ Installer	<ul style="list-style-type: none"> • Obtain certification/license to practice. • Construct system in accordance with the approved plans and specifications. • Prepare record drawings of completed system and submit to RME. • Provide RME with an O&M manual describing component manufacturer's maintenance and troubleshooting requirements/recommendations. • Comply with applicable federal, state, tribal, and local requirements in the design and construction of wastewater treatment and dispersal systems.
	Designer of Record	<ul style="list-style-type: none"> • Approve proposed field changes and submit to RME. • Certify that construction of the system is substantially in conformance with the approved plans and specifications.
	RME	<ul style="list-style-type: none"> • Hire a certified/licensed designer to prepare system design. • Submit final record drawings of constructed system to Regulatory Authority. • Submit a copy of system O&M manual to the Regulatory Authority to record required maintenance.

MANAGEMENT MODEL 5: RME OWNERSHIP

¹ Activities in bold are activities added to program elements from the preceding Management Model.

PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY ¹
 <p>OPERATION & MAINTENANCE</p>	Regulatory Authority	<ul style="list-style-type: none"> • Provide User with educational materials regarding system use and care. • Administer a program of renewable/revocable operating permits that are issued to RME that stipulate system performance, compliance monitoring reporting schedule, term of permit, and renewal option upon documented compliance with operating permit stipulations. • Track and review compliance monitoring reports to ensure that systems are operating in accordance with operating permits. • Consider replacing individual system operating permits with general permits issued to RME for classes of systems.
	Operator	<ul style="list-style-type: none"> • Inspect and service system as necessary in accordance with the submitted O&M manual and/or operating permit stipulations. • Perform system monitoring as stipulated in RME's operating permit. • Certify to RME that the required maintenance and monitoring were performed in a timely manner and noting any system deficiencies. • Comply with applicable federal, state, tribal, and local requirements in the operation and maintenance of the treatment and dispersal system.
	Pumper/Hauler	<ul style="list-style-type: none"> • Obtain certification/license to practice. • Inspect and service system as necessary. • Comply with applicable federal, state, tribal, and local requirements in the operation and maintenance of the treatment and dispersal system.
	User	<ul style="list-style-type: none"> • Follow recommendations provided by Regulatory Authority, Service Providers, and/or Owner to ensure that undesirable or prohibited materials are not discharged to system. • Comply with any RME requirements regarding care and use of system.
	RME	<ul style="list-style-type: none"> • Operate and maintain systems in accordance with the stipulated operating permit requirements. • Submit compliance monitoring reports to the Regulatory Authority according to the schedule stipulated in the operating permit. • Hire a certified/licensed pumper/hauler or operator to maintain system.
 <p>RESIDUALS MANAGEMENT</p>	Regulatory Authority	<ul style="list-style-type: none"> • Administer a tracking system for residuals hauling, treatment, and disposal and review to evaluate compliance with 40 CFR Part 503 Use and Disposal of Sewage Sludge, 40 CFR Part 257, and applicable state, tribal, and local requirements. • Inventory available residuals handling/treatment capacities and develop contingency plans when capacities available are insufficient.
	Pumper/ Hauler	<ul style="list-style-type: none"> • Comply with applicable federal, state, tribal, and local requirements in the pumping, hauling, treatment, and disposal of wastewater treatment system residuals.
	RME	<ul style="list-style-type: none"> • Hire a certified/licensed pumper/hauler to remove, treat, and dispose of residuals. • Comply with applicable federal, state, tribal, and local requirements in the pumping, hauling, treatment, and disposal of treatment system residuals. • Inventory available residuals handling/treatment capacities and develop contingency plans when capacities available are insufficient.
 <p>COMPLIANCE INSPECTIONS/ MONITORING</p>	Regulatory Authority	<ul style="list-style-type: none"> • Perform inspection programs at point-of-sale, change-in-use of properties, "targeted areas," and/or systems reported to be in violation. • Conduct compliance inspections of residuals hauling, treatment, and disposal. • Administer a program to monitor timely submittals of acceptable compliance maintenance reports. • Perform system inspections randomly and/or at the time of operating permit renewal.
	Inspector	<ul style="list-style-type: none"> • Obtain certification/license to practice. • Perform system compliance inspections for RME in accordance with prevailing Regulatory Authority requirements.
	RME	<ul style="list-style-type: none"> • Submit compliance monitoring reports to Regulatory Authority as stipulated in operating permit. • Submit a compliance inspection report signed/sealed by a certified/licensed inspector prior to applying for renewal of operating permit. • Conduct regular reviews of management program with Regulatory Authority to optimize system operation program. • Hire a certified/licensed inspector to inspect system compliance status.

¹ Activities in bold are activities added to program elements from the preceding Management Model.

PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY ¹
 CORRECTIVE ACTIONS	Regulatory Authority	<ul style="list-style-type: none"> • Negotiate compliance schedules with RME for correcting documented noncompliance items. • Administer the enforcement program including fines and/or penalties for failure to comply with compliance requirements. • Require system inspection by a certified inspector at time of operating permit renewal. • Negotiate compliance schedules with RME for correcting documented noncompliance items.
	Designer	<ul style="list-style-type: none"> • Provide RME with documents (drawings, specifications, modifications, etc.) that may be required by the Regulatory Authority prior to corrective action.
	Contractor/ Installer	<ul style="list-style-type: none"> • Perform required repairs, modifications, and upgrades as necessary.
	Inspector	<ul style="list-style-type: none"> • Inspect treatment system for compliance with operating permit prior to permit renewal.
	RME	<ul style="list-style-type: none"> • Comply with terms and conditions of the negotiated compliance schedule. • Submit required documents for corrective actions to the Regulatory Authority. • Hire appropriate certified/licensed Service Providers to perform required corrective actions.
 RECORD KEEPING, INVENTORY, & REPORTING	Regulatory Authority	<ul style="list-style-type: none"> • Administer a database inventory (locations, site evaluations, record drawings, permits, and inspection reports) of all systems within the Regulatory Authority's jurisdiction. • Maintain a residuals treatment and disposal tracking system. • Maintain a current certified/licensed Service Provider listing, which is available to the RMEs. • Administer a tracking system for operating permits. • Administer a tracking database for compliance reports. • Administer financial, management, and technical audits of RME.
	Operator or Inspector	<ul style="list-style-type: none"> • Provide a certified report of all maintenance and observed system deficiencies to RME. • Provide a certified report of all observed system deficiencies to Owner. • Perform system monitoring as stipulated in RME's operating permit.
	Pumper/Hauler	<ul style="list-style-type: none"> • Prepare and submit records of residuals handling as required.
	RME	<ul style="list-style-type: none"> • Maintain system monitoring and service records. • Inventory, collect, and provide permit information to Regulatory Authority.
 FINANCIAL ASSISTANCE & FUNDING	Regulatory Authority	<ul style="list-style-type: none"> • Provide the legal and financial support to sustain the regulatory program. • Provide a listing of financial assistance programs available to RME and the qualifying criteria for each program. • Consider implementing a state or local financing program to assist RME in upgrading systems.
	RME	<ul style="list-style-type: none"> • Conduct regular reviews of management program with Regulatory Authority to optimize operations.

MANAGEMENT MODEL 5: RME OWNERSHIP

¹ Activities in bold are activities added to program elements from the preceding Management Model.