

Appendix D: Management Models with Details on Program Elements

MANAGEMENT MODEL 1: HOMEOWNER AWARENESS

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

PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY
PUBLIC EDUCATION AND PARTICIPATION	Regulatory Authority	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	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	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	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 of 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	Hire planners, certified site evaluators and designers to assure all lots of proposed subdivision plats meet requirements for onsite treatment prior to final plat.
PERFORMANCE REQUIREMENTS	Regulatory Authority	Establish system failure criteria to protect public health, e.g. wastewater backups in building, wastewater ponding on ground surface, insufficient separation from groundwater, wells, etc.
	Owner/User	Regularly maintain system to prevent failures.
TRAINING AND CERTIFICATION/ LICENSING	Licensing Board/ Regulatory Authority	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	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.
	Owner/User	When using third party services, contract only with the appropriate certified/licensed Service Providers.
SITE EVALUATION	Regulatory Authority	Codify prescriptive requirements for site evaluation procedures. Codify criteria for treatment site characteristics suitable for permitted designs that will prevent unacceptable impacts on ground surface water resources.
	Site Evaluator	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	Hire a certified/licensed site evaluator to perform site evaluation.

PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY
DESIGN	Regulatory Authority	Codify prescriptive, pre-engineered designs, which are suitable for treatment sites that meet the appropriate prescriptive site criteria.
	Designer	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	Hire a certified/licensed designer to prepare system design.
CONSTRUCTION	Regulatory Authority	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 record drawings of constructed system be submitted to the Regulatory Authority by Owner.
	Contractor/ Installer	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. Comply with applicable federal, state, tribal, and local requirements in the design and construction of wastewater treatment and dispersal systems.
	Designer of Record	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	Hire a certified/licensed contractor/installer to construct system. Submit final record drawings of constructed system to Regulatory Authority
OPERATION & MAINTENANCE	Regulatory Authority	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	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	Perform recommended routine maintenance or hire certified/licensed pumper/hauler to perform maintenance. Hire certified/licensed pumper/hauler periodically to inspect, service, and remove septage for proper treatment and disposal.
	User	Follow recommendations provided by Regulatory Authority, Service Providers, and/or Owner to ensure undesirable or prohibited materials are not discharged to system.
RESIDUALS MANAGEMENT	Regulatory Authority	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/local requirements. Inventory available residuals handling/treatment capacities and develop contingency plans to ensure sufficient capacities are always available.
	Pumper/Hauler	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	Conduct final construction inspections to assure 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.
	Pumper/Hauler	Inform Owner of any non-compliant items observed during routine servicing of system.
	Owner	Periodically perform a "walk-over" inspection of the system and correct any deficiencies.

PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY
CORRECTIVE ACTIONS AND ENFORCEMENT	Regulatory Authority	Negotiate compliance schedule with Owner for correcting documented non-compliance 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 treats to public health if the Owner/User fails to comply.
	Designer	Provide Owner with documents (drawings, specifications, modifications, etc.) that may be required by Regulatory Authority prior to corrective action.
	Contractor/ Installer	Perform required repairs/modifications/upgrades as necessary.
	Owner	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	Administer a database inventory (locations, site evaluations, record drawings, permits, performed maintenance, inspection reports) of all systems. Maintain residuals treatment and disposal tracking system. Maintain a current certified/licensed Service Provider listing that is available to the public.
	Pumper/Hauler	Prepare and submit records of residuals handling as required.
	Owner	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.
FINANCIAL ASSISTANCE & FUNDING	Regulatory Authority	Provide the legal and financial support to sustain the management program. Provide 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.

MAGEMENT 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.

PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY
PUBLIC EDUCATION AND PARTICIPATION	Regulatory Authority	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	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	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	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 their evaluation of potential impacts on land use.
	Developer	Hire planners, certified site evaluators and designers to assure all lots of proposed subdivision plats meet requirements for onsite treatment prior to final plat.
PERFORMANCE REQUIREMENTS	Regulatory Authority	Establish system failure criteria to protect public health, e.g. wastewater backups in building, wastewater ponding on ground surface, insufficient separation from groundwater, wells, etc. Establish minimum performance requirements for manufactured component approvals. Establish minimum maintenance requirements for approved systems.
	Owner/User	Regularly maintain system in proper working order.
TRAINING AND CERTIFICATION/ LICENSING	Licensing Board/ Regulatory Authority	Develop and administer training, testing, and certification/licensing program for site evaluators, designers, contractors, operators, and haulers/pumpers. Maintain a current certified/licensed Service Provider listing.
	Service Provider	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
	Owner/User	When using third party services, contract only with the appropriate certified/licensed Service Providers.
SITE EVALUATION	Regulatory Authority	Codify prescriptive requirements for site evaluation procedures. Codify criteria for treatment site characteristics suitable for permitted designs that will prevent unacceptable impacts on ground surface water resources. Establish alternative site acceptance criteria for approved systems providing enhanced pretreatment.
	Site Evaluator	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	Hire a certified/licensed site evaluator to perform site evaluation.

PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY
DESIGN	Regulatory Authority	Codify prescriptive, pre-engineered designs, which 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	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	Hire a certified/licensed designer to prepare system design.
CONSTRUCTION	Regulatory Authority	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 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	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	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	Hire a certified/licensed contractor/installer to construct system. Submit final record drawings of constructed system to Regulatory Authority Submit copy of system O&M manual to Regulatory Authority to record required maintenance.
OPERATION & MAINTENANCE	Regulatory Authority	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/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	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 timely manner describing any system deficiencies observed. Comply with applicable federal, state, tribal, and local requirements in the operation and maintenance of treatment and dispersal system.
	Pumper/ Hauler	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	Hire certified/licensed pumper/hauler periodically to 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	Follow recommendations provided by Regulatory Authority, Service Providers, and/or Owner to ensure undesirable or prohibited materials are not discharged to system.

PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY
RESIDUALS MANAGEMENT	Regulatory Authority	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/local requirements. Inventory available residuals handling/treatment capacities and develop contingency plans to ensure sufficient capacities are always available.
	Pumper/Hauler	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	Conduct final construction inspections to assure 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 Owners hold valid maintenance contracts with certified/licensed operators and for monitoring timely submittals of certified maintenance reports.
	Operator or Pumper/Hauler	Inform Owner of any non-compliant items observed during routine servicing of system.
	Owner	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 AND ENFORCEMENT	Regulatory Authority	Negotiate compliance schedule with Owner for correcting documented non-compliant 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 treats to public health if the Owner/User fails to comply.
	Designer	Provide Owner with documents (drawings, specifications, modifications, etc.) that may be required by Regulatory Authority prior to corrective action.
	Contractor/ Installer	Perform required repairs/modifications/upgrades as necessary
	Owner	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	Administer a database inventory (locations, site evaluations, record drawings, permits, performed maintenance, inspection reports) of all systems. Maintain 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	Provide certified report of all maintenance and observed system deficiencies to Owner.
	Pumper/Hauler	Prepare and submit records of residuals handling as required.
	Owner	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	Provide the legal and financial support to sustain the management program. Provide 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.

MANAGEMENT MODEL 3: OPERATING PERMITS

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

PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY
PUBLIC EDUCATION AND PARTICIPATION	Regulatory Authority	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	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	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	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 their evaluation of potential impacts on land use.
	Developer	Hire planners, certified site evaluators and designers to assure all lots of proposed subdivision plats meet requirements for onsite treatment prior to final plat.
PERFORMANCE REQUIREMENTS	Regulatory Authority	Establish system failure criteria to protect public health, e.g. wastewater backups in building, wastewater ponding on ground surface, insufficient separation from groundwater, wells, etc. Establish minimum maintenance requirements for approved systems. Establish performance requirements necessary to protect public health and water resources for each defined receiving environment in the Regulatory Authority's jurisdiction.
	Owner/User	Operate and regularly maintain system in proper working order. Operate system to comply with performance requirements stipulated in the operating permit.
TRAINING AND CERTIFICATION/ LICENSING	Licensing Board/ Regulatory Authority	Develop and administer training, testing, and certification/licensing program for site evaluators, designers, contractors, operators, haulers/pumpers, and inspectors. Maintain a current certified/licensed Service Provider listing.
	Service Provider	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.
	Owner/User	When using third party services, contract only with the appropriate certified/licensed Service Providers.
SITE EVALUATION	Regulatory Authority	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	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	Hire a certified/licensed site evaluator to perform site evaluation.

PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY
DESIGN	Regulatory Authority	Codify prescriptive, pre-engineered designs, which are suitable for treatment sites that meet the appropriate prescriptive site criteria. Administer plan review program for engineered designs to meet stipulated performance requirements. Require routine operation and emergency contingency plans be submitted that will sustain system performance and avoid unpermitted discharges.
	Designer	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	Hire a certified/licensed designer to prepare system design.
CONSTRUCTION	Regulatory Authority	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 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	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	Approve proposed field changes and submit to Owner. Designer of record to certify that construction of the system is substantially in conformance with the approved plans and specifications.
	Owner	Hire a certified/licensed contractor/installer to construct system. Submit final record drawings of constructed system to Regulatory Authority Submit copy of system O&M manual to Regulatory Authority to record required maintenance.
OPERATION & MAINTENANCE	Regulatory Authority	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 requirements, compliance monitoring reporting schedule, term of permit, and renewal option upon documented compliance with permit. Track and review compliance monitoring reports for to ensure systems are operating in accordance with operating permits.
	Operator	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 timely manner describing any system deficiencies observed. Comply with applicable federal, state, tribal, and local requirements in the operation and maintenance of treatment and dispersal system.
	Pumper/Hauler	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	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	Follow recommendations provided by Regulatory Authority, and/or Service Providers to ensure undesirable or prohibited materials are not discharged to system.

PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY
RESIDUALS MANAGEMENT	Regulatory Authority	Administer a tracking system for residuals hauling, treatment, and disposal and review to evaluate compliance with <i>40 CFR Part 503 Use and Disposal of Sewage Sludge</i> , <i>40 CFR Part 257</i> , and applicable state/tribal/local requirements. Inventory available residuals handling/treatment capacities and develop contingency plans to ensure sufficient capacities are always available.
	Pumper/Hauler	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	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/Haler	Inform Owner of any non-compliant items observed during routine servicing of system.
	Owner	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 AND ENFORCEMENT	Regulatory Authority	Negotiate compliance schedule with Owner for correcting documented non-compliant 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	Provide Owner with documents (drawings, specifications, modifications, etc.) that may be required by Regulatory Authority prior to corrective action.
	Contractor/ Installer	Perform required repairs/modifications/upgrades as necessary.
	Inspector	Obtain certification/license to practice. Inspect treatment system for compliance with operating permit prior to permit renewal.
	Owner	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	Administer a database inventory (locations, site evaluations, record drawings, permits, performed maintenance, and inspection reports) of all systems. Maintain 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	Provide certified report of all maintenance and observed system deficiencies to Owner. Perform system monitoring as stipulated in Owner's operating permit.
	Pumper/Hauler	Prepare and submit records of residuals handling as required.
	Owner	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	Provide the legal and financial support to sustain the management program. Provide 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.

MANAGEMENT MODEL 4: RME OPERATION AND MAINTENANCE

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

PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY
PUBLIC EDUCATION AND PARTICIPATION	Regulatory Authority	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	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	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	Inform Owner/User of care and use of system. Inform Owner/User of RME requirements and prohibited uses of system.
PLANNING	Regulatory Authority	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 their evaluation of potential impacts on land use.
	Developer	Hire planners, certified site evaluators and designers to assure all lots of proposed subdivision plats meet requirements for onsite treatment prior to final plat.
	RME	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 REQUIREMENTS	Regulatory Authority	Establish system failure criteria to protect public health, e.g. wastewater backups in building, wastewater ponding on ground surface, insufficient separation from groundwater, wells, etc. Establish minimum maintenance requirements for approved systems. Establish performance requirements necessary to protect public health and water resources for each defined receiving environment in the Regulatory Authority's jurisdiction.
	Owner	Regularly maintain system components in proper working order. Comply with any RME requirements regarding care and use of system.
	RME	Operate systems to comply with performance requirements stipulated in the operating permits.
TRAINING AND CERTIFICATION/ LICENSING	Licensing Board/ Regulatory Authority	Develop and administer training, testing, and certification/licensing program for site evaluators, designers, contractors, operators, haulers/pumpers, and inspectors. Maintain a current certified/licensed Service Provider listing.
	Service Provider	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	When using third party services, contract only with the appropriate certified/licensed Service Providers.
	RME	When using third party services, contract only with the appropriate certified/licensed Service Providers RME staff who 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.

PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY
SITE EVALUATION	Regulatory Authority	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 system designs are appropriate for the sites and their stipulated performance requirements.
	Site Evaluator	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	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	Codify prescriptive, pre-engineered designs, which are suitable for treatment sites that meet the appropriate prescriptive site criteria. Administer plan review program for engineered designs to meet stipulated performance requirements. Require routine operation and emergency contingency plans that will sustain system performance and avoid unpermitted discharges be submitted.
	Designer	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	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	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 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	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	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	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 copy of system O&M manual to Regulatory Authority and RME to record required maintenance.

PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY
OPERATION & MAINTENANCE	Regulatory Authority	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 requirements, compliance monitoring reporting schedule, term of permit, and renewal option upon documented compliance with operating permit stipulations. Track and review compliance monitoring reports for to ensure 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	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 was performed timely and noting any system deficiencies. Comply with applicable federal, state, tribal, and local requirements in the operation and maintenance of treatment and dispersal system.
	Pumper/Hauler	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	Follow recommendations provided by Regulatory Authority, Service Providers, and/or Owner to ensure 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	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	Administer a tracking system for residuals hauling, treatment, and disposal and review to evaluate compliance with <i>40 CFR Part 503 Use and Disposal of Sewage Sludge</i> , <i>40 CFR Part 257</i> , and applicable state/tribal/local requirements. Inventory available residuals handling/treatment capacities and develop contingency plans to ensure sufficient capacities are always available.
	Pumper/Hauler	Comply with applicable federal, state, tribal, and local requirements in the pumping, hauling, treatment, and disposal of wastewater treatment system residuals.
	RME	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	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 monitoring timely submittals of acceptable compliance maintenance reports. Perform system inspections randomly and/or at time of operating permit renewal.
	Inspector	Obtain certification/license to practice. Perform system compliance inspections for RME in accordance with prevailing Regulatory Authority requirements.
	RME	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. 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.

PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY
CORRECTIVE ACTIONS AND ENFORCEMENT	Regulatory Authority	Negotiate compliance schedules with RME for correcting documented non-compliance 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 non-compliance items.
	Designer	Provide Owner/RME with documents (drawings, specifications, modifications, etc.) that may be required by Regulatory Authority prior to corrective actions.
	Contractor/ Installer	Perform required repairs/modifications/upgrades as necessary.
	Inspector	Inspect treatment system for compliance with operating permit prior to permit renewal.
	Owner	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	Comply with terms and conditions of the negotiated compliance schedule for system performance.
RECORD KEEPING, INVENTORY, & REPORTING	Regulatory Authority	Administer a database inventory (locations, site evaluations, record drawings, permits, performed maintenance, and inspection reports) of all systems. Maintain 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	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	Prepare and submit records of residuals handling as required.
	Owner	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	Maintain system monitoring and service records. Inventory, collect, and provide permit information to Regulatory Authority.
FINANCIAL ASSISTANCE & FUNDING	Regulatory Authority	Provide the legal and financial support to sustain the management program. Provide 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	Conduct regular reviews of management program with Owner/User and Regulatory Authority to optimize operations.

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 cluster systems within its service area.

PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY
PUBLIC EDUCATION AND PARTICIPATION	Regulatory Authority	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	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	Inform User of care and use of system. Inform User of RME requirements and prohibited uses of system.
	User	Be informed of purpose, use, and care of treatment system.
PLANNING	Regulatory Authority	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 their evaluation of potential impacts on land use.
	Developer	Hire planners, certified site evaluators and designers to assure all lots of proposed subdivision plats meet requirements for onsite treatment prior to final plat.
	RME	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 REQUIREMENTS	Regulatory Authority	Establish system failure criteria to protect public health, e.g. wastewater backups in building, wastewater ponding on ground surface, insufficient separation from groundwater, wells, etc. Establish minimum maintenance requirements for approved systems. Establish performance requirements necessary to protect public health and water resources for each defined receiving environment in the Regulatory Authority's jurisdiction.
	RME	Operate, maintain, and repair systems to comply with performance requirements stipulated in the operating permits.
	User	Comply with any RME requirements regarding care and use of system.
TRAINING AND CERTIFICATION/ LICENSING	Licensing Board/ Regulatory Authority	Develop and administer training, testing, and certification/licensing program for site evaluators, designers, contractors, haulers/pumpers, inspectors, and operators. Maintain a current certified/licensed Service Provider listing.
	Service Provider	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	When using third party services, contract only with 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.

PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY
SITE EVALUATION	Regulatory Authority	Codify prescriptive requirements for site evaluation procedures. Codify criteria for treatment site characteristics suitable for permitted designs that will prevent unacceptable impacts on ground 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 system designs are appropriate for the sites and their stipulated performance requirements.
	Site Evaluator	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	Hire a certified/licensed site evaluator to perform site evaluation.
DESIGN	Regulatory Authority	Codify prescriptive, pre-engineered designs, which are suitable for treatment sites that meet the appropriate prescriptive site criteria. Administer plan review program for engineered designs to meet stipulated performance requirements. Require routine operation and emergency contingency plans that will sustain system performance and avoid unpermitted discharges be submitted.
	Design	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.
	RME	Hire a certified/licensed designer to prepare system design.
CONSTRUCTION	Regulatory Design	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 record drawings of constructed system be submitted to the Regulatory Authority by RME.
	Contractor/ Installer	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	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	Hire a certified/licensed designer to prepare system design. Submit final record drawings of constructed system to Regulatory Authority Submit copy of system O&M manual to Regulatory Authority to record required maintenance.

PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY
OPERATION & MAINTENANCE	Regulatory Authority	Provide User with educational materials regarding system use and care. Administer a program of renewable/revocable operating permits that are issued to RME which stipulate system performance requirements, compliance monitoring reporting schedule, term of permit and renewal option upon documented compliance with operating permit stipulations. Track and review compliance monitoring reports for to ensure 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	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 was performed timely and noting any system deficiencies. Comply with applicable federal, state, tribal, and local requirements in the operation and maintenance of treatment and dispersal system.
	Pumper/Hauler	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.
	User	Follow recommendations provided by Regulatory Authority, Service Providers, and/or Owner to ensure undesirable or prohibited materials are not discharged to system. Comply with any RME requirements regarding care and use of system.
	RME	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 certified/licensed pumper/hauler or operator to maintain system.
RESIDUALS MANAGEMENT	Regulatory Authority	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/local requirements. Inventory available residuals handling/treatment capacities and develop contingency plans when insufficient capacities are available.
	Pumper/ Hauler	Comply with applicable federal, state, tribal, and local requirements in the pumping, hauling, treatment, and disposal of wastewater treatment system residuals.
	RME	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	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 monitoring timely submittals of acceptable compliance maintenance reports. Perform system inspections randomly and/or at time of operating permit renewal.
	Inspector	Obtain certification/license to practice. Perform system compliance inspections for RME in accordance with prevailing Regulatory Authority requirements.
	RME	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. Conduct regular reviews of management program with Regulatory Authority to optimize system operation program. Hire a certified/licensed inspector to inspect system compliance status.

PROGRAM ELEMENT	RESPONSIBLE PARTY	ACTIVITY
CORRECTIVE ACTIONS AND ENFORCEMENT	Regulatory Authority	Negotiate compliance schedules with RME for correcting documented non-compliance items. Administer enforcement program including fines and/or penalties for failure to comply with compliance requirements. Require system inspection by certified inspector at time of operating permit renewal. Negotiate compliance schedules with RME for correcting documented non-compliance items.
	Designer	Provide RME with documents (drawings, specifications, modifications, etc.) that may be required by Regulatory Authority prior to corrective action.
	Contractor/ Installer	Perform required repairs/modifications/upgrades as necessary.
	Inspector	Inspect treatment system for compliance with operating permit prior to permit renewal.
	RME	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	Administer a database inventory (locations, site evaluations, record drawings, permits, and inspection reports) of all systems within the Regulatory Authority's jurisdiction. Maintain residuals treatment and disposal tracking system. Maintain a current certified/licensed Service Provider listing that 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	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	Prepare and submit records of residuals handling as required.
	RME	Maintain system monitoring and service records. Inventory, collect, and provide permit information to Regulatory Authority.
FINANCIAL ASSISTANCE & FUNDING	Regulatory Authority	Provide the legal and financial support to sustain the regulatory program. Provide 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	Conduct regular reviews of management program with Regulatory Authority to optimize operations.