Quality Management Plan

South Dakota Department of Agriculture and Natural Resources

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Executive Summary

The South Dakota Department of Agriculture and Natural Resources (DANR) Quality Management Plan serves to document quality management practices conducted by environmental programs. DANR has quality management practices that address the following types of environmental information operations:

1) Environmental information generated by DANR during field sampling;
2) Environmental information generated by laboratory analysis;
3) Environmental information generated through modeling efforts; and
4) Environmental information acquired from sources outside of DANR (databases, publications, contractual projects).

The primary objective of the DANR Quality System is to ensure that environmental information operations collected, produced, evaluated or used by DANR are of acceptable quality, are accurate and reproducible, may be used for their intended purpose, and may be applied to other uses with confidence. Environmental information operations such as collection and analysis procedures must be sufficiently documented to ensure environmental information is scientifically and legally defensible.

The DANR Quality System uses multiple quality management tools for the purpose of assessing environmental information quality and demonstrating quality system compliance. These tools include conducting program quality audits, field audits, and oversight activities; personnel training; review of laboratory quality control results; review of Quality Assurance Project Plans (QAPP), the Quality Management Plan, and Standard Operating Procedures (SOPs).

The United States Environmental Protection Agency has issued policy CIO 2105.1 and requested that organizations use the terminology “quality program” instead of quality system. DANR will continue to use the term “quality system” to remain consistent with DANR’s use of the term “program” in department organization.

Management and Organization

Quality Policy Statement and Organizational Aspects

Quality management is a crucial component of DANR environmental programs and plays a vital role in assuring data quality objectives are met. For this reason, DANR will allocate resources (intramural and extramural money, travel funds, training funds, and provide personnel) to ensure the quality system is effective. Environmental information is typically collected by DANR for project specific assessments, pilot studies, routine monitoring purposes, or as part of a complaint investigation. However, this environmental information is often reviewed and interpreted for use in research projects and the permit writing process and may be used in enforcement actions or as evidence in legal matters.

Regardless of the use, it is critical that environmental information generated or used by DANR be of high quality. A graded approach based on the importance and scale of the project/program and available resources is used to determine the level of effort necessary to produce quality environmental information. It is a goal of the DANR quality system that quality activities result in accurate and defensible environmental information that are suitable for their intended purpose.

It is the policy of DANR that quality assurance activities conducted within all department program areas be sufficient to ensure all environmental information collected, produced, evaluated, or used is scientifically valid, of known precision and accuracy, appropriately documented, and legally defensible and any design, construction, operation, or application of environmental technology is of known and documented quality.

Specifically, it is DANR policy that:

1. All environmental information will be of known and acceptable quality. Information pertaining to environmental information collection, analysis, and evaluation will be documented and available for review/assessment;

2. The intended use of environmental information will be defined before the collection efforts or other activities begin. Consequently, appropriate quality assurance/quality control (QA/QC) measures will be applied to ensure environmental information of a quality commensurate with project objectives. When possible, the potential environmental information quality needs of known secondary users will also be considered when determining data quality objectives. The required level of environmental information quality, the specific QA/QC activities necessary, and the environmental information acceptance criteria will be explicitly described in the QAPP;

3. Quality assurance activities will be designed in the most reasonable and cost-effective manner possible without compromising data quality objectives;

4. Procurement procedures for USEPA funded monitoring projects managed by DANR will be designed to ensure that acceptable QA/QC activities are performed and implemented;

5. DANR programs funded by USEPA and responsible for acquiring, generating, or compiling environmental information operations will develop QAPPs prior to work. These plans will identify procedures required to assure quality environmental information and will specify the mechanisms by which timely corrective action will be taken when environmental information quality undergoes degradation.

6. Quality training for management and staff will be provided to ensure DANR quality policies are achieved and provide staff with the tools to accomplish quality compliance and excellence.

   The Air Quality Program, Inspection, Compliance, and Remediation Program, Livestock Services Program, Minerals, Mining, and Superfund Program, Water Quality Program, Waste Management Program, Drinking Water Program, Geological Survey, and the Watershed Protection Program perform environmental information collection and/or acquisition and have developed or are working on program-level and/or project-specific QAPPS to ensure DANR Quality System compliance. The programs listed above and also referenced in Table 1 are delegated QAPP approval and operate under this Quality Management Plan. As necessary, other DANR environmental programs will develop QAPPs whenever involved in environmental information operations prior to any information gathering work or use. Other DANR programs not specifically delegated QAPP approval under this Quality Management Plan (referenced in Table 1), will provide QAPPs and required supporting documentation to USEPA Region 8 for review and approval as necessary.

7. Technical and administrative authority for all quality matters will be assigned to a Quality Assurance Officer. The QA Officer will review, comment, and concur on all program QAPPs. The QA officer will be the contact person for interaction between USEPA Region 8 and DANR quality management activities.

8. All environmental programs must adhere to the requirements and specifications stated in the QMP and individual program QAPPs.

Organizational Aspects

DANR is led by a Department Secretary, followed by a Deputy Secretary, and is comprised of five divisions, each led by a division director. Those five divisions include Agriculture and Environmental Services, Financial and Technical Assistance, Office of Water, State Fair, and Resource Conservation and Forestry. Within the Office of the Secretary, there are two additional directors leading Finance and Public Affairs. Each division is led by a director and is comprised of programs that are led by an administrator. Most programs contain teams of personnel and are led by a team leader. A DANR administrative organization chart is available in Figure 1. Each program employs a quality manager who is responsible for ensuring quality activities are conducted within their respective program (Figure 2). The DANR QA officer is responsible for ensuring quality system compliance within DANR and provides oversight and guidance to program quality managers. The program quality managers and DANR QA officer are independent from environmental information operations. DANR senior management will ensure that QA personnel, including the DANR QA officer and program quality managers have access to the appropriate levels of management in order to plan, assess, and improve the DANR quality system by following the DANR administrative organization chain of command and quality lines of communication (Figures 1 and 2).

Overall responsibility for the DANR quality system resides with the Department Secretary and Deputy Secretary. However, this responsibility has been delegated to the DANR QA officer. The DANR QA officer has responsibility for quality management activities and compliance within DANR. To ensure quality compliance, the DANR QA officer provides oversight activities to each applicable program. Direct communication with program administrators and the Deputy Secretary may occur when quality issues arise that impact other DANR teams, programs, or divisions.

Senior staff, including the Department Secretary, Deputy Secretary, Division Directors, and program administrators provide a vital role in DANR's quality system and are involved in setting and approving budgets, providing conflict resolution, corresponding with EPA, approving travel, approving training, reviewing, approving, and signing quality documents, and providing chain of command leadership.

Individual team members play an essential role in quality management as they typically are responsible for generating, manipulating, and interpreting environmental information. Each program quality manager has the primary responsibility of ensuring quality activities are completed for their program and maintaining quality system compliance.

Specifically, quality-related roles and responsibilities of DANR staff include:

a. Department Secretary – Approves/signs QMP.
b. Deputy Secretary - Approves/signs QMP; provides senior level conflict resolution; approves out of state travel; corresponds with EPA on senior level issues; approves budgets.
c. Division Directors - Approves/signs QMP; approves travel; approves training, sets/approves budgets, provides division conflict resolution

d. Program Administrators – Approves/signs QMP, approves/signs program QAPP; sets program budgets, provides program conflict resolution; reviews program annual quality reviews.
e. Team Leaders - approves/signs program QAPP; provides training; reviews program annual quality reviews; approves/reviews program SOPs
f. Program Quality Manager – writes/signs program QAPP; prepares program annual quality report; conducts program audits, assessments, oversight; provides program training; writes/updates/reviews program SOPs.
g. Project Manager – reviews QC data, provides contractor oversight
h. Team Members - generating, manipulating, and interpreting environmental information; following SOPs and QAPPs.

The specific responsibilities of the QA officer are:

1. The DANR QA officer will serve as the official contact for quality management. The DANR QA officer will serve as liaison between the USEPA, DANR programs, and other environmental monitoring agencies when it comes to quality management-related issues.

2. The DANR QA officer will be responsible for identifying and responding to quality management needs, problems, and requests from within DANR programs. The QA officer provides technical quality assistance or obtains technical assistance from the USEPA Regional Quality Assurance Management Office as necessary. This will include assistance in preparing detailed quality plans, contract or other external procurement packages requiring quality measures, designing quality management programs for new studies, etc. as appropriate.

3. The DANR QA officer will review and approve program QAPPs.

4. The DANR QA officer will work with program quality managers, individuals who manage projects, and DANR senior staff to correct quality management related problems as needed.

5. The DANR QA officer will prepare and submit an annual quality report to the DANR program administrators, division directors, and the department secretary. Senior staff will have an opportunity to review the report and discuss plan updates. A copy of the final report will be submitted to the USEPA Region 8 Quality Assurance Officer for review.

Quality lines of communication and authority are depicted in Figure 2. The red dotted lines depict internal quality communication within each program. The yellow dotted lines depict quality lines of communication with the DANR QA officer. Black lines represent quality lines of authority. Please note that while the DANR QA officer is not a direct supervisor to any quality manager employees, the Quality Assurance officer provides the quality leadership role under the quality management system.

Programs are required to participate in DANR's quality management system if they engage in environmental information operations and receive funding for that activity from USEPA. Not all DANR programs and/or divisions engage in activities that would require participation in DANR's quality management system. For example, the State Fair division and the Environmental Funding program, Forestry program, and Resource Conservation program do not engage in activities that require participation in DANR's quality management system. The divisions and

programs that operate under the DANR QMP are identified in Figure 1. Table 1 specifically identifies which programs operate under the DANR QMP and which ones do not.

Figure 1 Department of Agriculture and Natural Resources Administrative Organization Chart

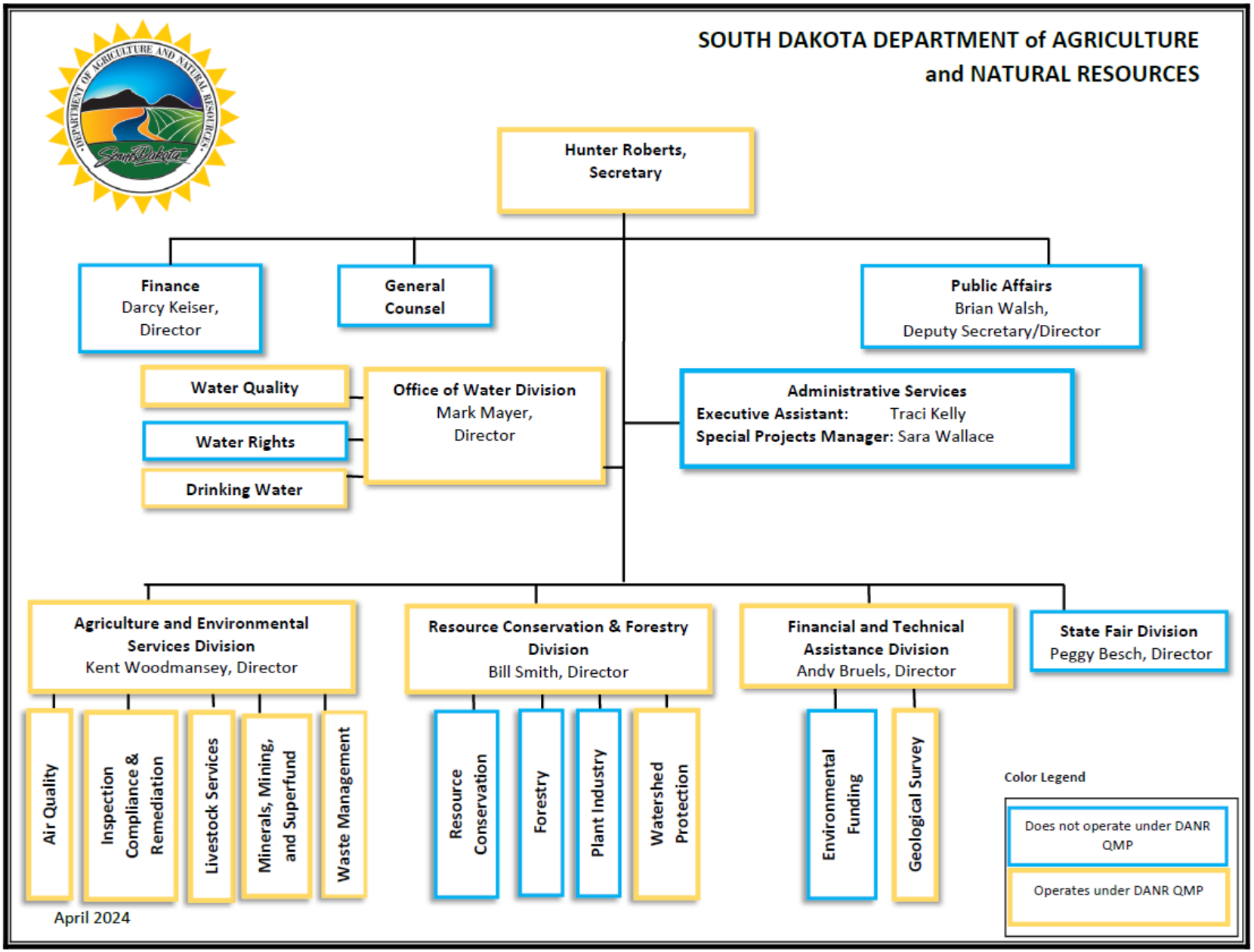

Figure 2 Department of Agriculture and Natural Resources Quality Control Communication Chart

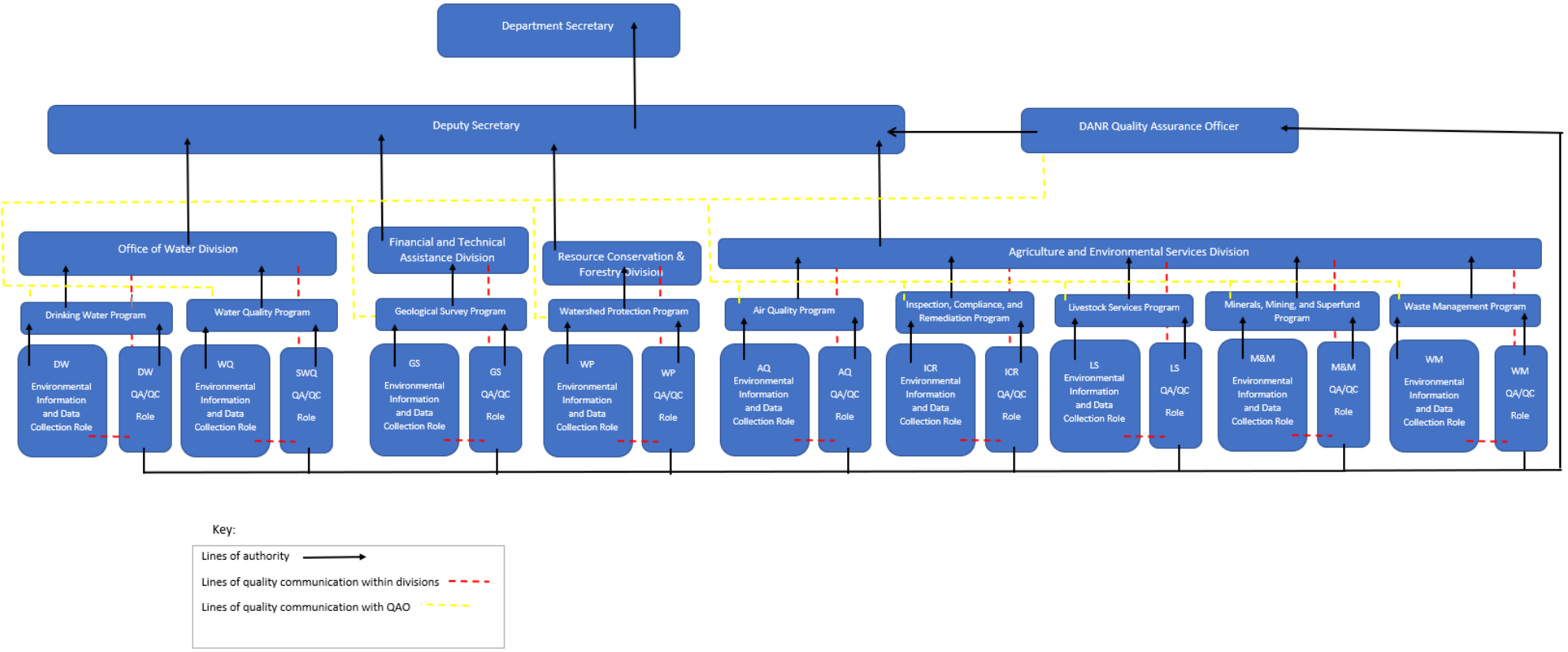

Table 1 DANR Program Status Under QMP and Associated Quality Managers

DANR Quality Assurance Officer	Shannon Minerich	
Programs under DANR QMP	**Quality Manager**	**Regulation**
Water Quality	Aaron Leingang	CWA Sec. 106
Air Quality	Rick Boddicker	Clean Air Sec. 103, 105 TSCA 306
Inspection, Compliance, & Remediation	Jamison Smith	SWDA Sec. 3011(a) FIFRA 23(a)(1-2) SWDA 2007(f)(2)
Livestock Services	Jason Roggow	CWA Sec. 106
Minerals, Mining, and Superfund	Roberta Hudson	UIC SDWA 1443(b)
Watershed Protection	Tyler Frideres	319, 604(b), 104(b)(3), 106
Geological Survey	Tom Marshall	EPA PPG
Drinking Water	Eric Fuehrer	SDWA 1443(a) SDWA 1451(a)(3)
Waste Management	Danny Ellenbecker	SWDA 3011(a)
DANR Programs not included under QMP		
Water Rights		
Environmental Funding		
Resource Conservation		
Forestry		
Plant Industry		

Quality System Components

The DANR quality system is comprised of the following components:

1) Quality system documentation;
2) Annual reviews and planning;
3) Management assessments;
4) Training;
5) Systematic planning of projects;
6) Project-specific quality documentation; and
7) Project and data assessments.

DANR quality system components are implemented through the use of tools including:

1) Quality Management Plan;
2) Quality System Assessments;
3) Quality Assurance Project Plans (QAPP);
4) Data Quality Objectives;
5) Standard Operating Procedures (SOP);
6) Technical Assessments;
7) Data Verification and Validation Assessments; and
8) Training plans.

The following is a summary describing how DANR uses quality system tools to implement quality system components and how they apply to environmental information operation and use. Refer to Organizational Aspects on pages 6 and 7 for component roles and responsibilities of management and personnel.

Quality Management Plan (quality system documentation)

The Quality Management Plan (this QMP) documents how DANR structures the quality system and describes quality policies and procedures, criteria for and areas of application, and roles, responsibilities, and authorities of DANR staff. The plan describes DANR administrative and QA organization and responsibilities and the role of the DANR QA officer. The importance of all department staff in the quality management effort is also acknowledged. The QMP also describes DANR policies and procedures for implementing and assessing the effectiveness of the quality system. This document describes the components of a quality system that must be documented in a Quality Management Plan to comply with USEPA requirements. The Quality Management Plan may be viewed as the 'umbrella' document under which individual projects are conducted. The Quality Management Plan is then supported by project-specific or program QAPPs. A QAPP is the 'blueprint' by which individual projects involving environmental information are implemented and assessed and how specific QA and QC activities will be applied during a particular project.

The DANR QA officer is responsible for the development, implementation, and maintenance of the Quality Management Plan. The DANR QA officer, program administrators, division directors, deputy secretary, and the department secretary will review and approve this document to ensure it represents DANR policy. DANR program quality managers and staff will periodically review the QMP to ensure compliance and understanding. The Quality Management Plan is reviewed annually and updated as necessary. DANR will submit a completed USEPA Region 8 crosswalk to document the annual QMP review in an annual report provided to USEPA Region 8 RQAM. When substantial updates are identified in the QMP, EPA review and approval is required. The

document is reviewed and approved by DANR senior management and the USEPA Region 8 RQAM. EPA approval is valid for a maximum of five years from the signature date of the RQAM.

Quality System Assessments (management assessments)

Annual reviews of DANR QAPPs, the Quality Management Plan, and the Quality System are performed by program quality managers and the DANR QA officer. Compliance with quality system requirements is assessed, and areas needing improvement are identified. The results of annual reviews are provided to program team leaders and program administrators and also supplied to program staff for review. Any deficiencies or corrective actions identified during these reviews allows further opportunity for quality system planning and continual improvement.

Additionally, per requirements set forth in the EPA Region 8 QMP and EPA QA/R2, an annual quality assurance report is submitted to the EPA Region 8 RQAM and Project Officer, and DANR program team leaders and administrators. The annual report will summarize the review of the DANR Quality system and will include:

1) A documented review of the QMP using the USEPA Region 8 QMP Crosswalk and submitting a QMP revision/update if substantive changes are identified;
2) A list of QA training provided to DANR staff including training provider, dates, and number of attendees;
3) A list of all QA documents, including status, and if the document is for a new or continuing project;
4) Summary report of assessments conducted during the reporting year and corrective actions taken to resolve any findings; and
5) Notification if there are any real or perceived risks or vulnerabilities in the DANR Quality System that need to be addressed or if support is needed from USEPA Region 8.

Quality Assurance Project Plan (project-specific quality documentation)

A QAPP must be developed for each USEPA-funded DANR program that performs environmental information operations. Each QAPP must be developed as specified in the latest approved version of USEPA QA/R-5 “EPA Requirements for Quality Assurance Project Plans for Environmental Data Operations.” In some department programs, the QAPP also serves as the Sample Analysis Plan for specific assessment projects.

The QAPP integrates all technical and quality aspects of a project, including planning, implementation, and assessment. The purpose of the QAPP is to document planning results for environmental information operations and to provide a project-specific “blueprint” for obtaining the type and quality of environmental information needed for a specific decision or use. The QAPP documents how quality assurance and quality control are applied to an environmental information operation to assure that the results obtained are of the type and quality needed and expected.

Each program QAPP is prepared and/or maintained by the program quality manager. The DANR QA officer reviews and approves the document based on USEPA-established quality requirements set forth in EPA QA/R-2 guidance and this QMP. The program quality manager, program team leaders, and the program administrator review and approve the document based on content. A copy or electronic version of each program QAPP is provided to the team leaders for distribution to team personnel, contractors, and other involved parties as outlined in the QAPP distribution list. It is the responsibility of all program staff members to follow quality aspects within each program QAPP.

The systematic planning process for project-specific and program QAPPs and SAPs follows EPA QA/G-4 guidance. This guidance ensures that each QAPP describes in detail required quality management elements for each activity. Major elements of a QAPP include: project organization/ management; project goals; project schedule; data needs and associated criteria; data collection, generation and acquisition; quality assurance assessment and oversight; and data validation, usability, and analysis. In the QAPP, the project purpose is discussed, quality activities are described, and data quality objectives are defined.

Each program QAPP is reviewed annually and updated as necessary to maintain accuracy. QAPPs are updated when a review of the document reveals that significant changes to quality objectives have occurred. The QAPP must be approved by the DANR QA officer when substantive changes occur or at least every five years. A QAPP A current copy of each program QAPP is maintained by the respective program and electronic copy is also on file with the DANR QA officer. The DANR QA officer maintains a list that identifies current revision levels for each program QAPP. This list is distributed to program administrators at the time of the annual review. The team leader is responsible for ensuring that the most current revision is implemented for work and available for use. DANR encourages programs to maintain a QAPP revision summary for each QAPP to document changes and determine with internal approval is required.

In the event a program does not operate under the QMP and must submit a QAPP or other QMP to EPA for approval, that program must also submit a completed USEPA Region 8 crosswalk to document compliance with requirements. There are not currently any internal organizations that develop QMPs. All DANR programs must review the EPA QAPP checklist to ensure compliance with all required elements prior to submitting the documents for internal approval.

Data Quality Objectives (data assessment)

Data quality objectives are developed by program quality managers, team leaders, and project officers to address the quality needs of projects and are documented in the program QAPP. Data quality objectives must be developed and documented for all environmental information operation prior to conducting the work. During data generating activities, data quality objectives and results must be reviewed periodically to ensure the data sampling effort produces reliable data and acceptable results. Data assessment is the responsibility of the project officer for each specific project. The DANR QA officer and program quality managers may review work plans developed by team members to ensure quality management elements are incorporated.

Existing data and/or data compiled from other sources is subject to data quality objectives documented in program QAPPs and is assessed by reviewing available quality control data, associated metadata, and documentation. When considering the use of existing data, the project officer will determine quality needs, evaluate the existing data relative to project data quality needs and specifications, and provide documentation of any quality issues in planning documents or in the final report. Any limitations that should be placed on use of the data and how that will affect objectives and use in the project must also be considered and documented. In addition, the Quality Manual from the organization that collected the external data is reviewed by the project officer to ensure an adequate quality system is in place. DANR will only use external data from sources that have an adequate quality system in place or have followed methods and procedures consistent with project requirements.

Standard Operating Procedures

Standard Operating Procedures (SOPs) are a set of procedures or methods team members must follow when conducting field, laboratory, and office work associated with the generation of data. These written procedures are made available and may be used by contractors, field samplers, or department personnel. SOPs may describe the maintenance of commonly used equipment, include instructions for operation and calibration of instruments, describe the proper procedure for performing field measurements, and describe proper sample handling, storage, and custody requirements. It is the responsibility of the team leader or project manager to ensure that SOPs are provided to appropriate personnel and that the SOPs are being followed.

Each program maintains their own SOPs and guidance documents. The program-level and/or project-specific QAPPs must reference all SOPs, other guidance, and forms. Copies of these documents are available to individuals who are responsible for collecting samples and upon request. SOPs and other forms are prepared/written or modified by knowledgeable program staff, the program quality manager, and/or team leader as needed, such as when sampling procedures are changed or when new or different sampling equipment is acquired. Documentation of release, changes, and other use of program SOPs and other procedures is maintained at the program level. It is the responsibility of the program quality manager to review and approve program SOPs and other procedures and withdraw when appropriate. It is the responsibility of all program staff to follow and understand the contents of program SOPs. Policies for use of procedures are delegated to individual programs and if applicable are described in program SOPs, QAPPs, or other procedures and documents.

Technical Assessments (annual reviews and planning)

Technical assessments of field sampling, laboratory activities, standard operating procedures, recordkeeping, data validation, and/or data management are conducted on an annual basis by program quality managers. Results of the review are reported to the DANR QA officer, team leader, and program administrator. Deficiencies and corrective actions must be addressed by the appropriate team members. The program quality manager must follow-up with the team member to ensure the deficiencies have been corrected. Repeated or uncorrected quality deficiencies by DANR personnel will reflect poorly and, at the discretion of the program administrator, may negatively influence employee performance reviews.

DANR does not typically conduct laboratory quality audits; however, program quality managers, team leaders, and/or project officers review laboratory QA/QC information related to project samples analyzed by the laboratory. In addition, the DANR QA officer maintains current copies of laboratory quality management plans. Any quality issues are discussed with the laboratory manager. Additional laboratory assessments are accomplished by DANR through use of field duplicates, blanks, split samples, and/or spikes. In general, each data generating activity will be required to collect at least 5% duplicate samples. Sample blanks, splits, and/or spikes are done on a quarterly basis or as deemed necessary by the program quality manager.

Results of program technical reviews provide a foundation for quality program planning and continual improvement.

Data Quality Assessments (data assessments)

The project officer is responsible for examining data and project design as the project progresses, with oversight from the program quality manager and/or team leader. The project

officer will also review results of quality control samples to determine if the data collected will meet project objectives. Project and data quality objectives, and the tools used to determine compliance are outlined in each program QAPP. Unexplained or unexpected results may indicate a deviation from approved SOPs, incorrect laboratory analysis, or inappropriate project design.

Electronic data manually entered or automatically imported into database systems are routinely verified for accuracy by comparing laboratory data sheets against database exports. When deficiencies are discovered, corrections are made. If the deficiency was caused by an error in an electronic file, the laboratory and DANR will work together to correct the issue. For the purpose of improved data quality, the department is working with laboratories to encourage submittal of data in an electronic form in addition to paper. Submittal of electronic data should reduce data input errors.

It is the responsibility of each project officer to ensure data generated or used is of acceptable quality and is sufficient to support completion of assigned work duties and project goals.

Training Plans (training)

DANR is committed to ensuring that training, including quality training, is provided to ensure that management and staff can carry out the department's work successfully. Program quality managers will be provided with QAPP guidance reference materials and will be directed to applicable on-line training when available. Program quality managers may also seek out additional quality training with approval from their respective program administrator and other senior management. Each program will provide hands-on training to ensure all new hires and field personnel are proficient in QAPP and SOP requirements. As new policies or quality-related requirements changes, DANR will ensure staff receive adequate training.

Personnel Qualifications and Training

Basic minimum requirements, including statutory, regulatory, and/or professional certifications, in addition to necessary knowledge, skills, and abilities, have been identified by DANR and the Bureau of Human Resources to ensure qualified individuals are hired. Job descriptions, written in compliance with South Dakota Codified Law 3-6D, the civil services act, list these minimum qualifications and help the department to identify and hire qualified individuals. This information is available in the State Employee Handbook at:
https://bhr.sd.gov/Forms/Policies/Handbook.pdf

Basic training needs are usually determined by an employee's team leader or program administrator. An employee may also request permission to attend training courses. Team leaders meet with their respective team members on an annual basis for a performance review. During these sessions, training needs are often identified and discussed; however, training needs may be discussed at any time. These training needs may be satisfied by either "in-house" training or off-site training outside of DANR. In-house training is usually performed by team leaders or by other employees who have knowledge specific to certain job-related activities. Off-site training, including quality-related training, requires prior approval from the program administrator. Approval is based upon budgetary considerations and the necessity of the training as it relates to employee job function. DANR does not set aside specific funds for training but has the flexibility to accommodate training needs.

Quality-related training is provided to DANR team leaders and staff by each program's quality manager. On the job training typically consists of reviewing program or project-specific QAPPs, SOPs, the QMP, results of audits, data assessments, contractor oversight, or refresher field sampling training courses.

QA retraining may be instituted based on deficiencies identified in an audit or by changing needs as determined by the DANR QA officer, program quality manager, and/or program administrator. When QA retraining is required, on the job training, and/or computer QA training may be implemented by a qualified individual/service appointed by the DANR QA officer, team leader, or program administrator.

Quality-related training for management typically consists of reviewing the results of program audits provided by the respective program quality manager and reviewing the results of the annual quality report that is organized by the DANR QA officer. Quality-related training is documented by each program quality manager. A list of the quality-related training, dates, and number of personnel is also included in the annual quality report to EPA. On the job training, outside training, refresher training, and employee performance evaluations ensure that staff are qualified in their roles and maintain quality-related qualifications. Staff are responsible to understand and retain the quality-related training they receive and successfully implement the role in the quality system.

Quality assurance responsibilities are only a portion of the duties assigned to the DANR QA officer and each program quality manager. These positions are hired through the normal hiring process described above. However, experience and knowledge of the principles of quality management, experimental design, sampling, and data analysis are critical qualifications for quality-related positions. Additionally, QA responsibility, including following the QMP, program or project-specific QAPPs, SOPs and other quality components are incorporated into expected performance standards for all personnel. Any deficiencies, including quality-related deficiencies may be discussed at employee performance evaluations.

Procurement of Items and Services

Pursuant to South Dakota Codified Law Chapter 5-18A-11(2) state purchases of supplies under four thousand dollars may be made in accordance with procedures established by the purchasing agency in the best interests of the state; and (3) state purchases of services under twenty-five thousand dollars may be made in accordance with procedures established by the purchasing agency in the best interests of the state.

The state has contracts with various companies for supplying certain items. If a contract exists, and if the item can be supplied in a timely manner, the item must be purchased as per the contract. If an item costs between $4,000 and $25,000, a minimum of three bids must be obtained from vendors. The item will be purchased from the vendor with the lowest bid. DANR ensures equipment purchased in this manner is suitable by describing in detail the minimum required equipment performance specifications. The project manager or team leader will determine the minimum technical and quality requirements necessary for equipment or supplies, and review the purchase order and equipment specifications to ensure the minimum technical and quality requirements will be met.

DANR uses many types of equipment for environmental information collection purposes. The need for specific equipment is usually established by personnel responsible for the data

collection activities. These employees usually have hands-on experience and have discussed equipment performance with manufacturers and other individuals who perform sampling/analysis work.

The DANR selects laboratories based upon a combination of factors including price, proximity (due to short sample holding times), analytical services available, and data quality. The DANR does not have to go through a formal procurement process when selecting a laboratory. If a written contract is not required and data quality issues arise, the department may immediately switch to a different laboratory.

DANR follows state procedures when soliciting Request for Proposals (RFP) with the state RFP process. This process is managed by the South Dakota Bureau of Administration, Procurement Management. Information is provided for state use providing forms, procedures, publications, policies, and other useful information. This information is available on their website at https://boa.sd.gov/central-services/procurement-management/procurement-management-agencyInfo.aspx - RFP. DANR follows the RFP process that is available at the webpage above. Forms and procedures provided, along with program specific service/contract templates ensures that the services/contract clearly describes the service or items needed and provide for the basis of a thorough review against the same criteria. The DANR team leader and/or Administrator review the contract to ensure the document is complete and accurate, that all service requirements will be met based on requirements for environmental information/environmental information operations, and the evaluation criteria outlined in the specific RFP. The team leader and/or Administrator will approve service contracts and/or grants based on meeting the predefined requirements within the specific RFP, the contractor's ability to complete the desired service, the contractor's work history, and cost estimates.

The DANR QA officer, program quality manager, or project officer will review project work plans to ensure quality elements are consistent with state and USEPA requirements and verify the contractor has an acceptable quality manual or DANR-approved QAPP in place.

Contractors may enter into subcontracts provided that any subcontract acknowledges the binding nature of the contract between SDDANR and the contractor. Oversight of a contractor is typically the responsibility of the project officer assigned to the project. This individual periodically reviews the project deliverables and determines if the contractor is meeting expectations. Quarterly, semi-annual, or annual project reports, as well as meetings with the contractor are often used to assess progress. If the scope of the project changes and requires contract alterations, review and approval by senior staff is necessary.

Final payment is dependent upon timely submittal of a final report or other services as outlined in the contract and upon verification of the deliverables. The project officer is responsible for reviewing the final report or services. If problems arise, senior staff may become involved to resolve those issues.

Documents and Records

All documents and records produced by DANR or its contractors are official records of the department. Other forms of information produced by DANR, such as photographs, microfilm, emails, field notebooks, laboratory analytical results, computer discs or files, audiotapes, etc., are also considered official records. These records serve as documentation of DANR activities and must be managed to ensure the information is available and in useful form and condition.

Document Control

Quality-related documents that require document control are identified by each program and included in program QAPPs. This includes QAPPS, SOPs, PIPs, SAPs, and all quality-related forms, including electronic versions. These documents are listed in DANR's Master Documents List and includes the control revision number or date. The revision number or date is also displayed on each document. Each DANR program is responsible for implementing a process to control and document the release, change, and use of planned procedures. This is documented in program or project QAPPs and reviewed and approved by team leaders and the program quality manager. DANR does not have a standardized document control numbering system; programs may use the document control convention that makes sense for their program. This may be as simple as the document date is the revision date and the most current revision date is the most current revision. SD DANR's Master Documents List is maintained by the DANR QA officer and is included in Appendix 1.

Quality system documents are prepared by the DANR QA officer or the program quality manager. Other quality-related documents, such as SAPs, PIPs, or other program forms are prepared by the project officer. During document development, revision, and approval reviews, the document may be reviewed by other team members, the team leader, and possibly the program administrator. Documents are updated based on changing needs and/or requirements, to better reflect actual conditions, and to provide continual improvement. Each program maintains a document control list and provides the current revision as an attachment in their QAPP. Staff may access the program or project-specific QAPP, the program document list, or the DANR Master Document List to determine and/or authenticate the current revision of each document for issuance and use. All draft quality assurance documents routed through the department for review are marked as "draft." Only current revisions of a quality document may be used; obsolete revisions must be discarded or marked as "obsolete."

Department planning documents typically are reviewed by a team leader, a program administrator, and a division director. These reviews ensure compliance with all statutes, contractual requirements, and assistance agreement requirements.

Documents and records must accurately reflect completed work. DANR program and project-specific QAPPs define the existing forms that must be used while completing project work. Additionally, the SOPs, PIPs, and/or SAPs will outline the types of records that must be kept for that work process (such as maps, field notes, photographs, forms). The project officer will routinely review records and other documents to ensure they are complete and fulfilling requirements for project goals.

Document Storage

In 1967, The South Dakota Legislature established the Records Management Program and the Records Destruction Board. In the same act, the Legislature required every state agency to develop a records retention and destruction schedule and declared that "No record shall be destroyed or otherwise disposed of by any agency of the State unless it is determined by a majority vote of such board that the record has no further administrative, legal, fiscal, research, or historical value." In accordance with this act, DANR has established the Department of Agriculture and Natural Resources Records Retention and Destruction Schedule manual (2021). This manual is available at: https://boa.sd.gov/central-services/docs/DANR_Revised_2021.pdf. This manual sets forth the rules and laws governing records and provides guidance on how the

different types of records (paper and electronic) are retained, how they are stored and for how long, and the destruction time schedule. This guidance is specific to different types of records, including grants and communication, but is also broken down into different types of records for each DANR program. This document also provides guidance on retention and destruction for documents and records that contain confidential information or may be subject to litigation, preservation of electronic media, removal of obsolete documentation, compliance with federal retention guidelines, and disposition/destruction of paper and electronic files. Archived files and scanned or electronic files may be accessed for use and/or retrieval within the specified retention period.

Documents and records are stored electronically according to the DANR Records Retention and Destruction Schedule manual. The program quality manager, team leader, or project officer is responsible for ensuring that documents are maintained according to existing DANR guidelines, and available for transmittal, distribution, and are accessible for use. It is the responsibility of each employee to correctly file materials according to program guidance. Some programs maintain centralized filing systems and/or separate files for each program member based upon document accessibility needs. These separate files are incorporated into the main program document archives/microfilm files when they are no longer active.

Some documents maintained by DANR are confidential. Pursuant to South Dakota Codified Law Chapter 1-27-3, records can be held confidential only where specifically provided for by law. Confidential files include items such as signed complaint forms, enforcement related materials, attorney/client documents, personnel matters, and any other information deemed by law to be sensitive in nature. Confidential documents and other forms of information must be stored in secured files and only be accessible by appropriate staff. Each program is responsible for managing the custody and confidentiality of evidentiary documents and records. Using existing state law, the program administrator and team leader will assist project officers to determine if documents are confidential. Each program QAPP must establish and implement appropriate chain of custody procedures for evidentiary records if the program has requirements more specific than those listed in this QMP.

Documents intended for public use are made available through the South Dakota State Library and the DANR website. However, paper copies of most documents may also be obtained directly from DANR. A copying fee may be charged depending upon document size and the number of documents requested per firm/individual per year.

Computer Hardware and Software

Computer hardware and software are purchased, installed, maintained, updated, and controlled by the South Dakota Bureau of Information and Telecommunications (BIT). BIT is responsible for evaluating and testing computer hardware and most software. The provided software has capabilities allowing for word processing, database creation and evaluation, mapping and geographical information systems, statistical analyses, and other functions. At the recommendation of DANR, specific computer software may be required to allow DANR staff to fully complete job duties. Examples include software for field meters, databases, and other program specific applications.

BIT periodically conducts audits of software and files stored at individual workstations. Any issues are brought to the attention of senior staff. BIT also has a “Help Desk” that DANR personnel can access for help with computer problems. Training for operation of some software

programs is available from BIT. Occasionally, special training sessions are available from the software company or from other individuals who are trained to operate particular software.

Computer hardware and software needs are determined by BIT and DANR personnel. BIT policy and documentation regarding purchasing, installing, maintaining, updating, and controlling computer hardware and software is available at http://bit.sd.gov/services/. BIT reviews software products to ensure compatibility with the state system. DANR personnel also review computer hardware and software purchases to ensure the product is sufficient to meet expectations.

Planning

Environmental programs within DANR are often formed as a result of federal or state legislation. In response to legislation, DANR division directors and the department secretary determine the need for new environmental programs. The new workload may be incorporated into an existing program or a new program may be created. Cost and scheduling constraints, including personnel needs, are considered.

New and existing environmental programs at DANR operate under the authority and intent provided by South Dakota law. The environmental information operations conducted by these programs follow established program goals or activities. The environmental information operation processes and details are further defined in DANR approved QAPPs, sample analysis plans, project implementation plans, partnership agreements, and/or contracts. DANR approved QAPPs will follow guidance set forth in USEPA's QA/G-5 & QA/R-5 documents and contain all required elements as appropriate.

All DANR programs requiring the collection, generation, acquisition, or compilation of environmental information that are funded by USEPA grants maintain DANR approved QAPPs. Each program QAPP outlines quality requirements associated with data collection, generation of exiting data, and compilation of data from external sources. All data collected, generated, compiled, or otherwise used by DANR will conform to quality requirements under this QMP and appropriate state standards as identified in individual program QAPPs.

DANR encourages programs to use EPA's *Data Quality Objectives Process* (QA/G-4, EPA 2000) to adequately and systematically plan for projects. The systematic planning elements that must be incorporated into project design include: organization information, project goal, schedule (including resource needs, milestones, and applicable requirements), objectives/needs, project questions and issues to be addressed, data criterion/requirements, data collection description (including the identification of the type and quantity needed), quality assurance (including specification of performance criteria to measure quality), and project analysis (including how the data will be used to support the project objectives). QAPP design must follow *EPA Requirements for Quality Assurance Project Plans* (QA/R-5, EPA) and include all required elements.

Identification and involvement of customers and suppliers are part of the planning process and must be adequately described in the project QAPP. This information is also discussed in the Procurement section of this document.

Quality is measured on a graded approach. Performance criteria for measuring quality must be specifically defined in project QAPPs. DANR will only use data that meets quality requirements,

project requirements, and state standards. Any exceptions will be at the discretion of the project officer and quality manager, and a written justification will be included in the project report. QAPP preparation, maintenance, and elements are described and/or referenced in the "Quality System Components" section of this document. Any constraints on data collection, including data generated, modeled, or otherwise obtained, must be identified and discussed in the project QAPP.

DANR uses multiple methods to inform all parties that might be affected or have interest in environmental programs and projects. Public meetings, mailings, DANR website, and small interested party meetings are used to disseminate information and solicit comments. As necessary, plans may be altered in response to comments received. Once final, the plan is submitted for review and approval by appropriate authorities.

Implementation of Work Processes

Work performed by DANR staff is reviewed by team leaders to ensure the task was properly completed according to approved plans. Team leaders also track staff activities and report to program administrators during weekly meetings. Quarterly, semi-annual, or annual project reports and annual performance appraisals are used by team leaders or program administrators to document and verify that work is performed according to approved plans. Team leaders are independent from environmental information operations work staff and are not directly involved in the data collection activities that they review.

DANR implements SOPs for process or activities that are critical to data collection, generation, and compilation to ensure the results meet the required quality for the intended use. Team leaders and quality managers from each program identify processes or activities that require standardization during internal quality assessments. The DANR QA officer may also identify procedures during routine program audits.

Each applicable program has a QAPP that is approved by the DANR QA officer. QAPP contents define document control, distribution, and revision, and at minimum conform to requirements under this QMP. Any changes or additions to the QAPP, SOPs, or other procedures and documents are reviewed by the quality manager, technical staff, team leaders, and program administrators. It is the responsibility of the team leader and program quality manager to verify that SOPs, QAPPs, other procedures, and other quality documentation are updated and approved as prescribed. It is the responsibility of the team Leader to ensure that revised quality documents are implemented. Obsolete procedures are deleted from SOPs, QAPPs, other procedures, and other quality documentation during annual internal QAPP and SOP reviews conducted by each program. Staff are instructed to remove obsolete documents from work areas when new revisions are released.

Assessment and Response

DANR QA/QC activities are assessed by all DANR personnel. Each team member is responsible for conducting QA/QC activities for their own work or project. Program quality managers are responsible for reviewing quality activities for their program and ensuring quality activities meet program quality goals. The DANR QA officer is responsible for overseeing DANR quality activities and ensuring programs comply with DANR's quality management policy.

Assessment Planning, Implementation, Documentation, and Reporting

Assessments are planned according to the scope of the assessment, budget constraints, management priorities and criteria, and grant/program coverage.

The principal tools for determining the effectiveness of the quality system include assessments and activities outlined in the Quality System Components section of this document. A management system review is performed on an annual basis by the QA officer and program quality managers. This review is aimed at determining the effectiveness of management controls in meeting DANR's quality policy. Reviews of QAPPs and SOPs are also performed on an annual basis by the program quality manager to determine if procedures, methods, requirements, and objectives remain appropriate. Technical assessments performed by the program quality manager are also performed on an annual basis or as necessary. The purpose of technical assessments is to review data, sampling procedures, and other associated documentation; and/or observe field sampling procedures to ensure staff are following SOPs and fulfill the level of competence, experience, and training as required in program QAPPs. Data quality assessments are performed on a continual basis by all program staff to ensure that data quality objectives are met. Project officers and/or program quality managers conducting assessments must not have any conflicts of interest and cannot be assessing their own work. Program quality managers may conduct QA/QC activities on projects when they are the project officer but must remain independent during program technical assessments. The team leader may assume technical assessment duties as needed to ensure the program quality manager's independence from the work being assessed. Each DANR program has the freedom to select the appropriate assessment tools to maximize quality review to coincide with the types of projects that are occurring in their program. DANR assessors are not expected to conduct all types of assessments using all tools, but must conduct some types of assessments, at a frequency as indicated in program or project QAPPs. The roles and responsibilities of the types of assessments and the roles and responsibilities are delegated to the project QAPP. Additionally, personnel conducting assessments have the authority to request and receive access to documents and records, access to program administration and staff, and organizational freedom to assess and report results to management. Any disputes that occur as a result of assessments are discussed by the DANR QA officer, program quality manager, and the program administrator. If further resolution is warranted, the DANR QA officer will involve the DANR Deputy Secretary and/or USEPA as appropriate.

When quality associated problems or issues requiring discussion or department action are noted, a written report documenting significant problems or changes to quality assurance activities will be prepared by the program quality manager and provided to team leaders and the DANR QA officer. Program administrators, division directors, and the department secretary will be involved as necessary.

On an annual basis, the program quality manager for all programs operating under the DANR QMP submit a report to the DANR QA officer, and their respective team leaders and Administrators. The contents of the annual report include a list/update of all document revisions that are under document control; a summary of the results of all QA/QC activities (audits, data quality assessments, oversight, calibrations, and others listed above); and any issues, corrective actions, and resolutions. The DANR QA officer reviews the information to determine the adequacy of each program assessment and the overall adequacy of the DANR Quality System. The DANR QA officer verifies that that each program is conducting QA/QC activities as directed under program QAPPs, that the results of the QA/QC activities are reasonable and meeting objectives; and that noncompliance resolution is appropriate and being addressed. The DANR QA officer also reviews the QMP on an annual basis and makes updates as necessary. Portions

of this information, along with additional components required by USEPA, are summarized in a report and submitted to DANR management as a briefing and the USEPA. DANR management will review the information and may provide comments or ask questions if further clarification or action is required. The annual report is emailed to DANR management and USEPA and an electronic copy is stored.

Response and Corrective Action

When quality related deficiencies are discovered, a written corrective action or correction is issued by the quality manager or DANR QA officer, depending on who conducted the quality assessment. The corrective action may require immediate action or the program may be issued a compliance schedule with completion dates. Corrective actions and compliance schedules are also reported to team leaders and the program administrator. The DANR QA officer, team leader, program quality manager, and/or program administrator will monitor the timeliness of the corrective action to ensure it is completed within the specified time frame. Follow-up audits may be scheduled and conducted by the program quality manager or DANR QA officer for verification and documentation of corrective actions.

The quality manager from each program has the authority to conduct quality assessments within the program and has full access to documents, data, and records. Each program quality manager reports quality issues directly to the program administrator. The DANR QA officer may also become involved in quality conflict resolution as necessary and may need to elevate the issue to provide dispute resolution. The DANR QA officer has the authority to conduct quality assessments with applicable programs and has access to necessary information. The DANR QA officer reports quality issues directly to the applicable program administrator. In the event of conflict, the DANR QA officer may report to program administrators, division directors, or the deputy secretary as necessary. The DANR QA officer may also communicate conflict issues and request guidance from EPA Region 8 as appropriate.

Quality Improvement

Quality improvement begins by using the methods outlined in this document: following written procedures, conducting appropriate quality activities, and issuing corrective actions as necessary. By following these methods, DANR personnel ensure that sampling procedures and data collection, evaluation, and management methods are consistent, which results in the improvement of DANR's quality system. Problems arise on occasion and DANR makes every effort to correct these problems and put measures in place to prevent future occurrence. Quality managers and the DANR QA officer use the annual quality report as the process and avenue for reviewing the quality system and making recommendations on continual improvement. Root-cause analyses and investigation often lead to the reason that a quality issue was discovered. This investigation results in quality-related decisions to resolve and prevent the issue and is clearly documented in the annual report. Prevention and resolution may include updates to the QAPP, SOPs, other documents, employee training, discontinued use of certain products or services, and others.

There is a high level of communication between team members and senior staff. DANR personnel are aware of QA/QC expectations and their possible consequences to the regulated community. Data quality errors may result in an incorrect interpretation of the data which may lead to mistakes that are either unnecessarily costly or adversely impact human and environmental health. For this reason, data quality is a priority for DANR. It is the responsibility

of all DANR personnel to prevent quality related problems, detect data quality reliability issues, document, and implement corrective actions, and track changes to ensure problems have been remedied. Program quality managers, project officers, and other DANR personnel are highly encouraged to communicate quality improvement opportunities with suppliers and contractors, and identify and propose solutions as appropriate.

Appendix 1 - DANR Master Documents List

SDDANR Master Documents List **(6/17/26)**

Program	Document Title	In Use or Obsolete Document?	Document Revision/Date	QAPP Approval Date by QAO	Annual Review Date	Document Type	Location (optional)
AQ	Bi-Annual Ozone Transfer Standard Template	In use	2022		3/6/2025	form	R:\work\AirQuality\AQ Audits, Checks, Machine Data\Biannual checks\Biannual Ozone Transfer Standard Checks
AQ	Bi-Annual Verification + Calibration Template	In use	2022		3/6/2025	form	R:\work\AirQuality\AQ Audits, Checks, Machine Data\Biannual checks\Biannual Verification + Calibration Checks
AQ	Gas Analyzer Audit Form	In use	2013		3/6/2025	form	R:\work\AirQuality\AQ Audits, Checks, Machine Data\Audits+Checks\Gasses\Audits
AQ	Particulate Checks + Audit Template	In use	2013		3/6/2025	form	R:\work\AirQuality\AQ Audits, Checks, Machine Data\Audits+Checks\Particulate\Continuous
AQ	PM2.5 Manual Method SOP 2.6	In use	06/01/2018		6/1/2025	SOP	R:\work\AirMon\Equipment Manuals\1Standard Operating Procedures\Particulate
AQ	SD SOP 2.5 BAM 1020 continuous PM	In use	06/29/2021		6/1/2025	SOP	R:\work\AirMon\Equipment Manuals\1Standard Operating Procedures\Particulate
AQ	SD SOP 7.0 Gas and MET monitor	In use	07/13/2022		6/1/2025	SOP	R:\work\AirMon\Equipment Manuals\1Standard Operating Procedures\Gas+MET
AQ	SD QAPP for Ambient Air Monitoring	In use	10/01/2024	01/09/2025	10/1/2025	QAPP	R:\work\AirMon\Equipment Manuals\2Quality Assurance\Quality Assurance Project Plan(QAPP)
DW	Drinking Water Program Quality Assurance Project Plan	Obsolete	Jan-07		Not applicable	QAPP	
GS	Dedicated Pump Replacement Plan for the GWQMN		01/01/2025		1/2/2025	SAP	
GS	GWQMN Bottle Count Form		09/23/2021		1/2/2025	form	X:\Public\GWQMN\GWQMN Forms & Lables\Empty Forms
GS	GWQMN COC Form		02/06/2020		1/2/2025	form	X:\Public\GWQMN\Water Quality forms\2020
GS	GWQMN Monitoring Well Field Sampling Sheet		10/07/2021		1/2/2025	form	X:\Public\GWQMN\GWQMN Forms & Lables\Empty Forms
GS	GWQMN Nitrate Ammonia Field Sampling Sheet		10/07/2021		1/2/2025	form	X:\Public\GWQMN\GWQMN Forms & Lables\Empty Forms
GS	GWQMN QAPP	in use	March 2025 Revision IV	06/26/2025	6/25/2025	QAPP	X:\Public\GWQMN\GWQMN QAQC
GS	GWQMN Quality Assurance Practices Checklist March 2024		03/08/2024		3/31/2025	form	X:\Public\GWQMN\GWQMN QAQC\Misc QAQC Files
GS	GWQMN SOP		February 2020 (soon to be revised)		3/31/2025	SOP	In QAPP page 25
GS	Intensive Nitrate Sampling Plan for the GWQMN		01/01/2025		4/30/2024	SAP	
GS	SOP Appendix A: Monitoring Well Sampling		5/3/2013 (soon to be revised)		3/31/2025	SOP	X:\Public\GWQMN\GWQMN QAQC\SOPs
GS	SOP Appendix B: Sampling Equipment Decontamination		5/3/2013 (soon to be revised)		3/31/2025	SOP	X:\Public\GWQMN\GWQMN QAQC\SOPs
GS	SOP Appendix C: Maintenance and Calibration of Equipment		5/3/2013 (soon to be revised)		3/31/2025	SOP	X:\Public\GWQMN\GWQMN QAQC\SOPs
GS	SOP Appendix D: Sample Preservation, Handling, Storage, and Documentation		5/2/2013 (soon to be revised)		3/31/2025	SOP	X:\Public\GWQMN\GWQMN QAQC\SOPs
GS	SOP Appendix E: Quality Assurance/Quality Control Samples		5/2/2013 (soon to be revised)		3/31/2025	SOP	X:\Public\GWQMN\GWQMN QAQC\SOPs
GS	SOP Appendix F: Monitoring Well Design, Installation, and Development		01/23/2024		3/31/2025	SOP	X:\Public\GWQMN\GWQMN QAQC\SOPs
ICR	2023 - IC&R - QAPP-Final	In use	March 2023	March 2023	5/1/2025	QAPP	M:\DANR\Ag_and_EnvServices\Inspection_Compliance_and_Remediation\QAPP for ICR Program
ICR	QAPP Team Lead Signatures		March 2023			form	M:\DANR\Ag_and_EnvServices\Inspection_Compliance_and_Remediation\QAPP for ICR Program
ICR	SOP Appendix A: Sampling Protocols		01/07/2022			SOP	M:\DANR\Ag_and_EnvServices\Inspection_Compliance_and_Remediation\QAPP for ICR Program
ICR	SOP Appendix B: Recommended Analytical Methods For Petroleum Products		01/07/2022			SOP	M:\DANR\Ag_and_EnvServices\Inspection_Compliance_and_Remediation\QAPP for ICR Program
ICR	SOP Appendix C: Standard Operating Procedures		01/07/2022			SOP	M:\DANR\Ag_and_EnvServices\Inspection_Compliance_and_Remediation\QAPP for ICR Program
ICR	SOP Appendix F: Additional Information Sources		01/07/2022			SOP	M:\DANR\Ag_and_EnvServices\Inspection_Compliance_and_Remediation\QAPP for ICR Program
ICR	SOP Appendix I: Feed, Fertilizer, Seed, and Pesticide Standard Operating Procedure Manual		02/01/2022			SOP	M:\DANR\Ag_and_EnvServices\Inspection_Compliance_and_Remediation\QAPP for ICR Program
ICR	SOP Appendix J: EPA's Pesticide Sampling Guide		2019			SOP	M:\DANR\Ag_and_EnvServices\Inspection_Compliance_and_Remediation\QAPP for ICR Program
ICR	SOP Appendix K: EPA's FIFRA Inspection Manual		2019			SOP	M:\DANR\Ag_and_EnvServices\Inspection_Compliance_and_Remediation\QAPP for ICR Program
ICR	SOP Appendix L: Precision Charts		June 2017			SOP	M:\DANR\Ag_and_EnvServices\Inspection_Compliance_and_Remediation\QAPP for ICR Program
LS	Livestock Services Quality Assurance Project Plan	In use	1.0 (7/22/2025)	07/22/2025	7/22/2025	QAPP	M:\DANR\Ag_and_EnvServices\Livestock_Services\FEEDLOTS\QAPP\2507 LSP QAPP.pdf
LS	Livestock Services Standard Operating Procedures for Water Quality Sampling	In use	1.0 (7/22/2025)	07/22/2025		SOP	M:\DANR\Ag_and_EnvServices\Livestock_Services\FEEDLOTS\QAPP\2507 LSP SOP.pdf
MM	Cyanide Sampling SOP (App C of MM QAPP)	In use	Aug-13		3/1/2025	SOP	M:\DANR\Ag_and_EnvServices\Minerals&Mining\MM QAPP
MM	Equipment Storage and Calibration Procedures (App D of MM QAPP)	In use	Apr-24		3/1/2025	SOP	M:\DANR\Ag_and_EnvServices\Minerals&Mining\MM QAPP
MM	Lab Data Sheet/COC Form (App A of MM QAPP)	In use	Oct-20		3/1/2025	form	M:\DANR\Ag_and_EnvServices\Minerals&Mining\MM QAPP
MM	MM QAPP	In use	1/24/2024	02/13/2024	3/1/2025	QAPP	M:\DANR\Ag_and_EnvServices\Minerals&Mining\MM QAPP
MM	Portion of SOP for Field Samples: Vol 1 (App F of MM QAPP)	In use	May-18		3/1/2025	SOP	M:\DANR\Ag_and_EnvServices\Minerals&Mining\MM QAPP
MM	SOP 4 Monitor Well Sampling (App E.1 of MM QAPP)	In use	May-13		3/1/2025	SOP	M:\DANR\Ag_and_EnvServices\Minerals&Mining\MM QAPP
MM	SOP 6: QA/QC Samples (App E.2 of MM QAPP)	In use	05/02/2013		3/1/2025	SOP	M:\DANR\Ag_and_EnvServices\Minerals&Mining\MM QAPP
MM	SOP 7: Sample Preservation, Storage, and Handling Documentation (App E.3 of MM QAPP)	In use	05/02/2013		3/1/2025	SOP	M:\DANR\Ag_and_EnvServices\Minerals&Mining\MM QAPP
MM	SOP 8: Sampling Equipment Decontamination (App e.4 of MM QAPP)	In use	05/03/2013		3/1/2025	SOP	M:\DANR\Ag_and_EnvServices\Minerals&Mining\MM QAPP
MM	State Chain of Custody (App B of MM QAPP)	In use	Mar-24		3/1/2025	form	M:\DANR\Ag_and_EnvServices\Minerals&Mining\MM QAPP
WM	HW Complaints Management Procedure	In use	November-24			SOP	R:\work\WM\Waste Mgmt_HW\HW QAPP
WM	Hazardous Waste Database Update	In use	06/27/2023			SOP	R:\work\WM\Waste Mgmt_HW\HW QAPP
WM	Hazardous Waste Pgm Mgmt of Financial Assurance Documents	In use	11/22/2024			SOP	R:\work\WM\Waste Mgmt_HW\HW QAPP
WM	Hazardous Waste Inspection	In use	06/12/2023			SOP	R:\work\WM\Waste Mgmt_HW\HW QAPP
WM	Hazardous Waste Notification	In use	06/27/2023			SOP	R:\work\WM\Waste Mgmt_HW\HW QAPP
WM	Hazardous Waste Permit Writing	In use	06/12/2023			SOP	R:\work\WM\Waste Mgmt_HW\HW QAPP
WM	Hazardous Waste Program Authorization	In use	11/22/2024			SOP	R:\work\WM\Waste Mgmt_HW\HW QAPP
WM	Hazardous Waste Rule-Making	In use	06/12/2023			SOP	R:\work\WM\Waste Mgmt_HW\HW QAPP
WM	Waste Management Program Quality Assurance Project Plan	In use	8/28/2023	08/29/2023	3/28/2025	QAPP	R:\work\DES\Waste Mgmt_HW\HW QAPP
WM	SD QAPP for SWIFR Grants for States and Territories	In use	Rev 1, Oct 2023	11/06/2023	1/10/2025	QAPP	N:\WASTEMGT\SWIFR
WP	PIPs for Volunteer Samplers	In use	Apr-24		4/13/2024	PIP	N:\WATRSHED\Volunteer Monitoring\QAPP QA QC Materials\2024\2024 plans
WP	QAPP for External Parties	In use	4/1/2022	05/27/2022	8/6/2025	QAPP	N:\WATRSHED\QAQC\QAPP's\SOPs and QAPP\QAPP's for WPP
WP	Northwestern Great Plains Reference Site Project QAPP	In use	08/7/2025 Version 1	08/12/2025		QAPP	N:\WATRSHED\QAQC\QAPP's\SOPs and QAPP\QAPP's for WPP
WP	QAPP for Monitoring Harmful Algal Blooms	In use	4/1/2021	04/01/2021	8/6/2025	QAPP	N:\WATRSHED\QAQC\QAPP's\SOPs and QAPP\QAPP's for WPP

WP	QAPP for Reference Site Development	In use	4/1/2022	05/27/2022	8/6/2025	QAPP	N:\WATRSHED\QAQC\QAPP's\SOPs and QAPP\QAPP's for WPP
WP	QAPP for Volunteer water Quality Samplers	In use	Rev 3, August 2025	08/26/2025	8/22/2025	QAPP	N:\WATRSHED\QAQC\QAPP's\SOPs and QAPP\QAPP's for WPP
WP	SOP for Field Samplers (volume I) Tributary and In-Lake Sampling Techniques	In use	01-May		4/2/2024	SOP	N:\WATRSHED\QAQC\QAPP's\SOPs and QAPP\2018 Volume I
WP	SOP For Field Samplers (Volume II) Biological and Habitat Related Techniques	In use	01-May		4/3/2024	SOP	N:\WATRSHED\QAQC\QAPP's\SOPs and QAPP\2018 Volume II
WP	SOP for Volunteer Samplers	In use	May-22		4/4/2024	SOP	N:\WATRSHED\QAQC\QAPP's\SOPs and QAPP\QAPP's for WPP
WP	South Dakota Nonpoint Source Program QAPP	In use	4/1/2022	04/01/2022	8/6/2025	QAPP	N:\WATRSHED\QAQC\QAPP's\SOPs and QAPP\QAPP's for WPP
WP	Statewide Lakes Assessment QAPP	In use	Version 1, 2025	08/27/2025	8/12/2025	QAPP	N:\WATRSHED\QAQC\QAPP's\SOPs and QAPP\QAPP's for WPP
WP	South Dakota QAPP for the Rotating Basins Project	In use	4/1/2022	04/01/2022	8/6/2025	QAPP	N:\WATRSHED\QAQC\QAPP's\SOPs and QAPP\QAPP's for WPP
WP	South Dakota QAPP for the Stream Discharge Monitoring Program	In use	4/1/2022	04/01/2022	8/6/2025	QAPP	N:\WATRSHED\QAQC\QAPP's\SOPs and QAPP\QAPP's for WPP
WP	Rapid City Streams Monitoring QAPP	In use	07/11/2025 Version 1	07/29/2025	7/11/2025	QAPP	N:\WATRSHED\QAQC\QAPP's\SOPs and QAPP\QAPP's for WPP
WQP	2n survey (Survey123 App)		June-22		3/6/2025	form	ESPR1SQL14.state.sd.local\prod04
WQP	Field Manual for the Investigation of Fish Kills		1990		3/6/2025	SOP	United States Department of the Interior, Fish and Wildlife Service, Resource Publication 117 (in SWQ QAO's office)
WQP	Fish Tissue Contamination Field Sheet-Individual Fish-Hg		January-14		3/6/2025	form	M:\DANR\Office_of_Water\Water_Quality\02_STANDARDS TEAM\AARON\Quality Assurance (in QAPP page 34)
WQP	Fish Tissue Field Data Collection/Chain of Custody Form		October-08		3/6/2025	form	M:\DANR\Office_of_Water\Water_Quality\02_STANDARDS TEAM\AARON\Quality Assurance (in QAPP page 33)
WQP	Handbook for Analytical Quality Control in Water and Wastewater Laboratories		June-01		3/6/2025	SOP	EPA website:https://www.epa.gov/quality/handbook-analytical-quality-control-water-and-wastewater-laboratories-march-1979
WQP	Handbook for Reporting, Investigating, and Remediating Petroleum Releases in South Dakota		January-22		3/6/2025	SOP	R:\Work\IC&R\QA\AppendixA.pdf
WQP	Lab Data Sheet/COC Form		May-23		3/6/2025	form	R:\Work\DENR WQ lab sheets\DENR_HL_Datasheets.mdb (Access 2000 file format)
WQP	Probe calibration (Survey123 App)		July-22		3/6/2025	form	ESPR1SQL14.state.sd.local\prod04
WQP	Quality Assurance Project Plan for the Water Quality Program	in use	1/1/2024	01/17/2024	11/21/2025	QAPP	M:\DANR\Office_of_Water\Water_Quality\02_STANDARDS TEAM\AARON\Quality Assurance
WQP	Recommended Procedures for Reviewing Beneficial Use Designations, with Special Emphasis on Fishery & Rec. Uses	Obsolete	December-99		NA	SOP	M:\DANR\Office_of_Water\Surface_Water_Quality\AARON\Quality Assurance
WQP	Sampling for Mercury and Selenium Fish Plug Collection Procedures		March-24		3/10/2025	SOP	M:\DANR\Office_of_Water\Water_Quality\02_STANDARDS TEAM\AARON\Fish Flesh Contaminants
WQP	South Dakota Department of Agriculture and Natural Resources Records Retention and Destruction Schedule		December-22		3/10/2025	SOP	https://boa.sd.gov/central-services/docs/DANR_Revised_2022.pdf
WQP	South Dakota Department of Environment and Natural Resources Water Quality Monitoring Strategy		11/1/2007 (currently in revision)		3/10/2025	SOP	Sean Kruger and Paul Lorenzen OneDrive
WQP	South Dakota Fish Contaminants Sampling Protocol		1/2/2024(in revision)		3/10/2025	SOP	M:\DANR\Office_of_Water\Water_Quality\02_STANDARDS TEAM\AARON\Fish Flesh Contaminants
WQP	Water Quality Program Standard Operating Procedures For Water Quality Sampling Rev V		November-25		11/14/2025	SOP	M:\DANR\Office_of_Water\Water_Quality\02_STANDARDS TEAM\AARON\Quality Assurance
WQP	UAA Enterprise (Survey123 App)		June-22		3/10/2025	form	ESPR1SQL14.state.sd.local\prod04
WQP	Wildlife Disease-Fish Mortality (Survey123)		July-22		3/10/2025	form	ESPR1SQL14.state.sd.local\prod04
WQP	WWTP Reconnaissance Inspection (Survey123)		February-22		3/10/2025	form	ESPR1SQL14.state.sd.local\prod04
WQP	WQM SOP for the WQP		08/18/2025		3/5/2025	SOP	M:\DANR\Office_of_Water\Water_Quality\02_STANDARDS TEAM\AARON\Quality Assurance
WQP	DANR Pesticide Sampling SOP (April-October)		08/01/2025		8/1/2025	SOP	M:\DANR\Office_of_Water\Water_Quality\02_STANDARDS TEAM\AARON\Quality Assurance
WQP	QA/QC Sampler Audit Checklist		09/24/2024		3/14/2025	form	M:\DANR\Office_of_Water\Water_Quality\02_STANDARDS TEAM\AARON\Quality Assurance\Trainings&Audits
WQP	Screening-5 fish composite		03/19/2025		3/19/2025	SOP	M:\DANR\Office_of_Water\Water_Quality\02_STANDARDS TEAM\AARON\FishFleshContaminants/2024Mercury&Selenium
WQP	Backpack Electrofishing SOP		08/01/2025		8/1/2025	SOP	M:\DANR\Office_of_Water\Water_Quality\02_STANDARDS TEAM\AARON\Quality Assurance
WQP	Collection, Handling, and Preservation of Fish SOP		08/01/2025		8/1/2025	SOP	M:\DANR\Office_of_Water\Water_Quality\02_STANDARDS TEAM\AARON\Quality Assurance
WQP	Calibration & Preservation Item Guidelines (CPIG)		08/01/2025		8/1/2025	form	M:\DANR\Office_of_Water\Water_Quality\02_STANDARDS TEAM\AARON\Quality Assurance
WQP	How to Put on Powder-Free Nitrile Gloves Without contamination		08/01/2025		8/1/2025	SOP	M:\DANR\Office_of_Water\Water_Quality\02_STANDARDS TEAM\AARON\Quality Assurance
WQP	Aquatic Invasive Species Procedure for South Dakota Dept of Ag & Nat Res WQP		08/04/2025		8/4/2025	SOP	M:\DANR\Office_of_Water\Water_Quality\02_STANDARDS TEAM\AARON\Quality Assurance
WQP	South Dakota Hydrologic Duration Assessment Method (Beneficial Use Assessment)		08/01/2024		8/5/2025	SOP	M:\DANR\Office_of_Water\Water_Quality\02_STANDARDS TEAM\AARON\Quality Assurance
WQP	Eurofins Cheat Sheet for PFAS Sampling		08/05/2025		8/5/2025	form	M:\DANR\Office_of_Water\Water_Quality\02_STANDARDS TEAM\AARON\Quality Assurance
WQP	PFAS Surface Water Sampling SOP		08/05/2025		8/5/2025	SOP	M:\DANR\Office_of_Water\Water_Quality\02_STANDARDS TEAM\AARON\Quality Assurance
WQP	D-net Macroinvertebrate Sampling in Freshwater Streams		07/30/2025		7/30/2025	SOP	M:\DANR\Office_of_Water\Water_Quality\02_STANDARDS TEAM\AARON\Quality Assurance
	DANR Annual QA/QC Report Template	in use	8/6/2025			template	Teams Quality Files
	DANR QA/QC Training Record	in use	2/1/2024			form	Teams Quality Files
	DANR Supplemental QAPP Requirements	in use	12/1/2022			form	Teams Quality Files
	Quality Management Plan	in use	VI - January 2023		6/17/2026	QMP	
	SOP Appendix H: Pesticide Sampling Plan and Procedures		June 2017			SOP	M:\DANR\Ag_and_EnvServices\Inspection_Compliance_and_Remediation\QAPP for ICR Program
WQP	Toolbox Maintenance Check Sheet		12/10/2024		8/28/2025	form	M:\DANR\Office_of_Water\Water_Quality\02_STANDARDS TEAM\AARON\Quality Assurance

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Appendix 2 - Updates Section

Date	Update Description	Page(s)
1/29/24	Appendix 2 (Updates Table) added to document	31-32
4/25/24	Organization chart updated to reflect personnel changes	9
4/23/24	DANR Master Document list updated	27-28
4/25/24	Updated “Apiary” to “Resource Conservation” program (correction)	
4/25/24	Updated QAMs in Table 1	
8/04/25	Updated QAMs in Table 1	
8/27/25	DANR Master Document List updated	27-28
6/17/26	DANR Master Document List updated	27-28