



DEPARTMENT OF  
**ECOLOGY**  
State of Washington

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**AIR MONITORING PROJECT APPROVAL, SITE SELECTION, AND  
INSTALLATION PROCEDURE**

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*Air Quality Program*

*September 2016*

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State of Washington  
Department of Ecology  
Air Quality Program

Air Monitoring Project Approval, Site Selection, and Installation  
Procedure

Prepared by: Sean Lundblad

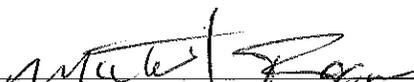
September 2016

  
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## 1 INTRODUCTION

The Air Quality Program is responsible for implementing, maintaining, and supporting the Washington State Ambient Air Monitoring Network (Washington Network). The Air Quality Program (AQP) mission is to enhance and preserve air quality in Washington State. A key strategic goal for the program is to identify, prevent and minimize air pollution. Pursuant to the program's mission and the AQP strategic goal, the monitoring goal of the Washington Network is to provide data of sufficient quality to:

- Determine if air quality is meeting the National Ambient Air Quality Standards (NAAQS)
- Provide near-real-time air quality information for the protection of public health
- Forecast air quality
- Make daily burn decisions and curtailment calls
- Assist with permitting activities
- Evaluate the effectiveness of air pollution control programs
- Evaluate the effects of air pollution on public health
- Determine air quality trends
- Identify and develop responsible and cost-effective pollution control strategies
- Evaluate air quality models

In order to ensure that the Washington Network continues to meet the needs of the Air Quality Program, new monitoring proposals must be reviewed and receive approval prior to sampling.

This procedure describes the process for proposing, selecting and installing monitoring sites within the Washington Network and defines the roles and responsibilities for the organizational positions responsible for carrying out the work.

Figure 1 below presents a procedural flow chart of an air monitoring project within the Washington Network from inception to the beginning of data collection.

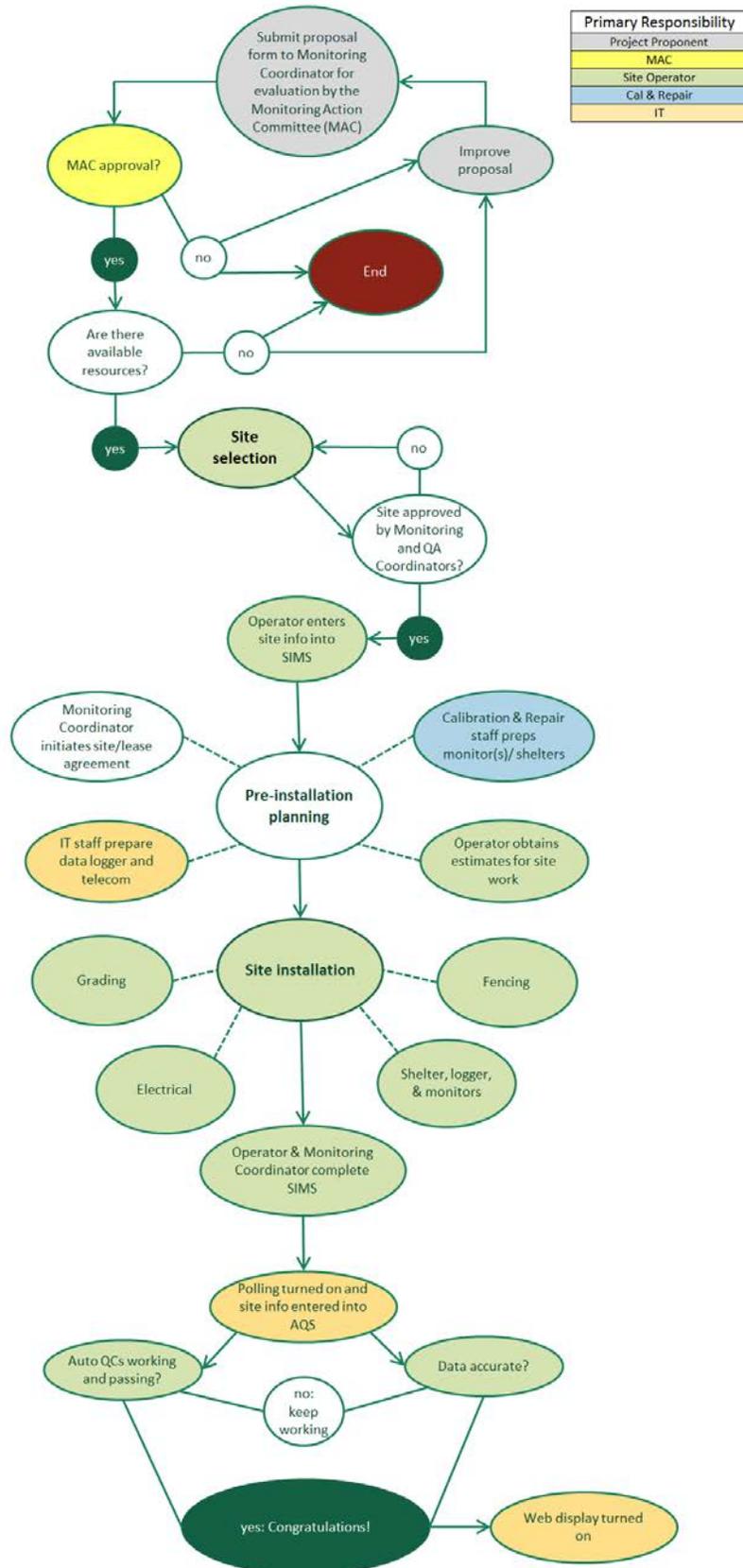


Figure 1: Air Monitoring Project Flow Chart

## 2 ROLES & RESPONSIBILITIES

The following section describes the roles & responsibilities of staff in the Air Quality Program and its partner agencies in relation to the selection and installation of monitoring sites and measured parameters.

### Monitoring Action Committee

The Monitoring Action Committee (MAC) is Ecology's decision-making body for Washington Network monitoring efforts. The MAC discusses and evaluates issues regarding network monitoring policy and the implementation of monitoring operations during bi-monthly meetings. AQP managers and staff comprise the MAC, which is charged with assessing current and future monitoring, identifying communities where monitoring may be needed, identifying data quality objectives, and reviewing collected data to determine if intended monitoring objectives are being met. Washington Network monitoring proposals are brought to the MAC for approval.

The MAC is comprised of the following AQP staff:

Executive sponsor:	AQP Program Manager
AQPLT co-leads:	Northwest Region Office & Technical Services Section Managers
MAC Meeting lead:	AQP Monitoring Coordinator

Team members:

- AQP Quality Assurance Coordinator
- Toxics/Speciation Monitoring Project Manager
- Smoke Management Program representative
- State Implementation Plan Lead
- Science and Engineering Section Manager
- Central or Eastern Regional Office Section Manager (rotating every 2-years)
- Modeling/Meteorology Scientist
- Data Analyst

The AQP Manager has the final approval authority for any proposal in the Washington Network.

### Northwest Regional Office Section Manager

- Serves as the air monitoring policy lead
- Supervises NWRO air monitoring staff and Monitoring Coordinator

### Technical Services Section Manager

- Manages air monitoring operations & Information Technology (IT)

- Approves major equipment purchases
- Supervises Quality Assurance Coordinator and IT Lead

### **Air Monitoring Coordinator**

- Serves as the point of contact for new monitoring requests
- Approves site and shelter rental agreements
- Writes contracts for air monitoring/QA/Telemetry System support in coordination with QA Coordinator and IT supervisor
- Writes and submits annual network plan to EPA
- Reviews and approves site locations in coordination with QA Coordinator
- Manages federal air monitoring grants
- Completes site documentation in SIMS prior to beginning sampling

### **Quality Assurance Coordinator / SWRO & Air Quality Operations Supervisor**

- Reviews, and has final approval authority, for quality assurance project plans (QAPPs) for air monitoring within the Washington Network
- Reviews, revises, and approves Washington Network Quality Assurance Plan and standard operating procedures (SOPs)
- Supervises Calibration & Repair Laboratory staff
- Supervises SWRO air monitoring staff
- Supervises Quality Assurance staff

### **Calibration & Repair Laboratory Staff**

- Maintain equipment inventory
- Calibrate, maintain, and repair Washington Network monitors
- Evaluate, select, acquire, and perform acceptance testing on new monitoring equipment for use in the Washington Network
- Provide technical assistance to site operators in the field on the installation, operation, calibration, maintenance, and repair of Washington Network monitors and equipment

### **Quality Assurance Staff**

- Conduct independent performance evaluations (audits)
- Conduct site evaluations to ensure siting criteria are consistent with monitoring objective
- Conduct final level validation of ambient air monitoring data
- Write standard operating procedures
- Conduct special monitoring projects
- Evaluate air monitoring equipment
- Maintain Quality Assurance laboratory and standards (separate from operations)

### **Information Technology Staff**

- Configure and maintain the Washington Network telemetry system, web sites and communication network including the following:
  - Central servers and databases configuration, procurement and maintenance
  - Data logger hardware and software configuration, procurement and maintenance
  - Telecommunication network, contracts, services, configuration, hardware and software procurement and maintenance
  - Ambient air monitoring and associated metadata backup
  - Public ambient air quality data website configuration, hardware and software procurement and maintenance
- Define, implement and maintain security practices for data, data loggers and other equipment, the telecommunication network and servers.
- Define procedures for requesting IT and Washington Network related services including use of the Site Information Management System (SIMS)
- Submit air monitoring, quality control, and performance audit data to EPA

### **Eastern Regional Office Section Manager**

- Supervises Ecology Eastern and Central Region air monitoring staff

### **Air Monitoring Site Operators (Ecology or Local Agency)**

- Work with Air Monitoring Coordinator to identify, procure, and establish monitoring locations
- Obtain quotes for services (electrical, fencing, site grading) related to ambient air monitoring stations
- Work with Calibration & Repair laboratory to obtain equipment and monitors
- Install monitoring sites/shelters/equipment
- Complete site documentation in SIMS prior to beginning sampling
- Operate monitors/sites
- Perform routine maintenance
- Perform minor repairs
- Routinely review QC results
- Conduct preliminary level validation of air monitoring data
- Maintain monitoring sites (remove debris, cut grass, control weeds, keep shelter clean and dry)

## **3 AIR MONITORING REQUESTS AND APPROVAL**

All air monitoring requests must be submitted to the Air Monitoring Coordinator, who will bring proposals to MAC for evaluation and preliminary approval. The MAC will evaluate all

proposals for consistency with the Air Quality Program's (AQP's) strategic goals. To this end, the monitoring objective(s) must be clearly defined and site characteristics must be consistent with the objective(s). In short, monitoring data collection efforts must:

- Meet a well-defined purpose
- Be consistent with the strategic goals of the Air Quality Program
- Comply with federal and state requirements and specifications
- Be efficient and cost-effective
- Yield high quality data that is appropriate for intended use

### **Monitoring Objectives**

EPA defines three broad objectives for ambient air monitoring, each of which is important and must be considered individually:

- To provide air pollution data to the general public in a timely manner
- To determine compliance with National Ambient Air Quality Standards (NAAQS) and emissions strategy development
- To support air pollution research

Pursuant to these broad categories, there are six primary monitoring objectives. The primary monitoring objective(s) for a given location must be determined prior to data collection:

1. Determine the highest concentrations expected to occur in the area covered by the network
2. Measure typical concentrations in areas of high population density
3. Determine the impact of significant sources or source categories on air quality
4. Determine general background concentration levels
5. Determine the extent of regional pollutant transport between populated areas; and in support of secondary standards
6. Measure air pollution impacts on visibility, vegetation damage, and other public welfare-based impacts

### **Spatial Scales**

Sites must be located such that the spatial scale represented by the monitor aligns with the monitoring objective. Sites in the Washington Network fall into one of the five spatial scale categories listed below:

- **Micro:** Concentrations associated with area dimensions ranging from several meters up to about 100 meters.

- **Middle:** Concentrations typical of areas up to several city blocks in size with dimensions ranging from about 100 meters to 0.5 kilometer.
- **Neighborhood:** Concentrations within an extended area that has relatively uniform land use with dimensions in the range of 0.5 to 4.0 kilometers.
- **Urban:** Overall, citywide conditions with dimensions on the order of 4 to 50 kilometers. This scale would usually require more than one site for definition.
- **Regional:** Usually a rural area of reasonably homogeneous geography that extends from tens to hundreds of kilometers.

The following table illustrates the relationship between the primary monitoring objectives and appropriate spatial scales.

*Table 1. Spatial Scales for Monitoring Objectives*

<b>Monitoring Objective Appropriate Siting Scale</b>	
Highest Concentration	Micro, Middle, Neighborhood
Population	Neighborhood, Urban
Source impact	Micro, Middle, Neighborhood
General/background & Regional Transport	Urban, Regional
Welfare-related	Urban, Regional

### **Submitting Air Monitoring Proposals**

Requests for new monitoring must be submitted to the MAC using the [Washington Network Air Monitoring Project Proposal](#) at the end of this document. At a minimum, all monitoring proposals must include the following:

- The monitoring objective
- The pollutant(s) to be monitored
- A general location (e.g., city, area, etc.)

### **MAC Review and Approval of Air Monitoring Projects**

During its regularly-scheduled, bi-monthly meetings, the MAC evaluates monitoring proposals received. The MAC evaluates and prioritizes all monitoring proposals (new sites, additional monitors at an existing site, etc.) in terms of the Air Quality Program’s strategic goals and the MACs Guiding Principle.

MAC approval of a given proposal is not a guarantee that new monitoring projects will be implemented. Resource impacts and project feasibility must be considered when determining whether a given project will be implemented. Managers and supervisors of affected work sections and units will evaluate the resource impacts of each project to their work groups and provide timely information to the MAC on project feasibility before any work begins.

In general, once a project is approved and is determined to be feasible, the work of implementation is assigned to a designated site operator in the jurisdiction where monitoring is to occur. For Ecology-operated monitors, this is typically regional office air monitoring staff. Unless otherwise agreed upon, local air agency operators typically are responsible for implementing new state-supported monitoring efforts in their jurisdictions.

### **Non-Washington Network Air Monitoring Projects**

Local air agencies and other air monitoring partners conduct monitoring that is not part of the Washington Network. Monitoring projects that are not funded by Ecology and are not part of the Washington Network do not require MAC approval and are not supported by Ecology. Upon request, Ecology will collect (via telemetry), store, and display data (via its public website) from non-Washington Network ambient air monitoring projects provided that:

- The partner entity complies with all Ecology IT security policies, standards, and guidelines and
- All monitors, equipment, data loggers, and telecommunication costs are paid by the partner agency and
- Impacts to Ecology staff are de minimis in nature.

## **4 QUALITY ASSURANCE PROJECT PLANS**

EPA requires that all projects funded by EPA involving the generation, acquisition, and use of environmental data are planned, documented, and have an agency-approved Quality Assurance Project Plan (QAPP). Because of the EPA mandate, Ecology has implemented a mandatory requirement to prepare QAPPs for all projects generating and/or interpreting environmental data. Ecology formalizes this requirement in Ecology Policy 1-21, “Establishing Quality Assurance.”

The QAPP is the critical planning document for any environmental data collection operation as it documents how quality assurance and quality control activities will be implemented during the project’s life cycle. It serves as a “blueprint” for site operators, project officers, and program managers responsible for designing, coordinating, and implementing air pollution monitoring projects and provides the foundation to ensure that the data collected during the project will be the correct type and of adequate quality for intended uses.

Ecology follows EPA’s “graded approach” to writing QAPPs, meaning that project managers must consider the scale and potential impacts of each project when working with the QA Coordinator to determine the appropriate level of detail and appropriate data quality objectives contained in the QAPP. Find more information on the graded approach to QAPPs in Ecology’s Quality Assurance Plan.

The majority of new projects/sites aimed at determining NAAQS compliance, providing near-real-time PM<sub>2.5</sub> data via correlated nephelometers, or measuring meteorological parameters do not require a separate QAPP as these types of monitoring activities are routine in nature and are already fully addressed by Ecology's existing Quality Assurance Plan and Standard Operating Procedures. Unique projects funded either entirely, or in part, by Ecology or via Ecology pass-through of EPA funds, *and* that fall outside the scope of the Quality Assurance Plan and SOPs, will require a project-specific QAPP.

Project managers must consult with the AQP QA Coordinator to determine if a QAPP is required for a new monitoring project.

If the AQP Coordinator determines a QAPP is required, the AQP QA Coordinator will work with the project manager to determine the appropriate level of QAPP detail (i.e., the "grade" of the Graded Approach). The AQP QA Coordinator will also provide timely review of all QAPPs. All monitoring project QAPPs are required receive AQP QA Coordinator approval *prior* to any data collection.

## **5 INFORMATION TECHNOLOGY HEIRARCHY AND SECURITY**

All fixed monitoring sites within the Washington Network are equipped with PC-based data loggers that are TCP/IP-addressable. These loggers are connected to a central data acquisition system (central system) that polls the loggers at least once per hour for air monitoring data. The responsibility for IT in Washington State resides the Washington Technology Solutions (WaTech) Office of the Chief Information Officer (OCIO). All state-wide IT policies, standards, and guidelines apply to Ecology, local air agencies, and other Washington Network partners and their respective staff. In the Air Quality Program, the Information Technology and Telemetry Unit implements and maintains the requirements of the OCIO and the Department of Ecology.

All monitoring projects within the Washington Network require data collection, storage, web display, and retention. It is the responsibility of the project manager to alert the Air Quality Program Information Technology and Telemetry Unit supervisor as soon as a project receives MAC approved in order to ensure:

- Appropriate resources exist to take on the project
- Ample time and funding exists to acquire all data collection equipment and software
- Data collection, storage, retention, and web display processes flow as smoothly as possible

All project managers/site operators must update the Site Information Management System (SIMS) as soon as a monitoring site has been selected. Find additional information on SIMS in Section 7 of this document.

## 6 SITE SELECTION

All new projects that have been approved by the MAC, and for which resources have been identified, are required to go through the site selection process described below. The remaining sections of this document describe the process for selecting appropriate monitoring locations, installing monitoring stations, and maintaining the Site Information Management System.

### Factors to Consider When Choosing a Monitoring Location

Washington Network monitors used to determine compliance with the NAAQS and for reporting near-real-time levels of criteria pollutants are sited in accordance with the pollutant-specific criteria described in detail in 40 CFR 58, App. E and Ecology's instrument-specific SOPs. Washington Network meteorological sites are required to meet PSD-quality specifications and are selected and installed in accordance with the specifications of the Ecology's Meteorological Monitoring SOP and the Quality Assurance Handbook, Volume IV.

Additional information on locating monitors can be found through EPA's [technical assistance documents](#) on NAAQS compliance monitoring.

When selecting a monitoring location, special attention should be given to the following:

- Cost – with an emphasis on identifying the most cost-effective option(s) that meet the monitoring objective(s)
- Safety - of the site operator and QA personnel at the proposed location. Important items to consider include:
  - Security/safety of ladders for rooftop monitoring installations.
    - All fixed ladders must meet Occupational Safety and Health Administration safety requirements.
    - Step ladders must be appropriate for the height of the rooftop and weight of the site operator and light enough to be manageable for staff of varying physical stature and strength.
  - Slip hazards must be mitigated (e.g., laying down mats on slick roof tops)
  - Station wiring/electrical power must be installed by a licensed and bonded electrician to avoid shock hazards
- Security - of the site, instruments, and equipment:
  - Install proper fencing or other barriers to vandalism/theft
  - Ensure adequate locks/barriers to unwanted entry on all exterior shelter doors and windows

- Follow all Ecology IT security policies regarding the data logger:
  - No keyboards, mice, or monitors
  - All required Ecology IT security software must be installed
- Logistics – of site access, power availability, telecommunications
- Atmospheric conditions – of how wind movements around the site affect sampling, etc.
- Topography – of how terrain or man-made obstructions may adversely affect concentrations
- Pollutant considerations – of unintended/unwanted influence from nearby sources

In order to prevent sampling bias, air flow around the monitor must be such that collected data is representative of the general air flow in the area and the monitor inlet is toward the direction of predominant winds. Nearby sources that might unduly impact the sample (e.g. a rooftop air inlet near a stack or a ground-level inlet near an unpaved road) must be avoided.

Due to various physical, logistical, and meteorological constraints, particularly in urban environments, tradeoffs may have to be made in choosing a site location.

### **Finding and Obtaining an Appropriate Site**

The Air Monitoring Coordinator will assist the site operator in finding an appropriate site that meets the monitoring objective(s). Assistance includes:

- Helping the station operator identify appropriate sites through:
  - The use of online mapping software such as Google or Bing Maps
  - In-person visits to potential sites identified through online tools
  - Contacting property owners to obtain permission to use land/facilities
  - Arranging evaluations of proposed site installations (e.g., obtaining an engineering assessment for a rooftop met tower)
- Coordinating and approving site/shelter rental agreements

The site operator responsible for installing the site will evaluate the proposed location for compliance with the siting criteria defined in 40 CFR 58, Appendix E for the specific pollutant(s) being monitored. In addition to the CFR criteria, other site-specific factors to consider are as follows:

- The room/shelter must be clean and dry. Automated instruments and data loggers need to be maintained in a dry, clean, temperature controlled environment. Consistently maintaining shelter temperatures in the 20 to 30 degree Celsius range is ideal.
- Determining the appropriate size, dimension, and power needs of the monitoring shelter (if needed).

- Identifying the appropriate types of cabinets, tables, or shelving for current and future monitoring.
- Ensuring adequate power is located onsite/nearby. Installing power can be very expensive, especially if there is no power nearby.
- Ensuring the site is reasonably secure from vandalism and theft.
- Ensuring reliable internet availability as well as download/upload speeds are adequate to meet telemetry needs.

Site operators must provide basic site location information (e.g., address, latitude and longitudinal coordinates) to the Air Monitoring and Quality Assurance Coordinators via email prior to any site installation. The Air Monitoring and Quality Assurance Coordinator will review and approve locations that meet siting criteria and are consistent with stated monitoring objectives of proposals approved by MAC.

## **7 SITE INFORMATION MANAGEMENT SYSTEM**

EPA requires states to keep records on monitoring location metadata such as address, geographic information (lat/longs, elevation), land use types, etc. To satisfy this requirement and to characterize sites and monitored parameters through time, the Air Quality Program uses the Site Information Management System (SIMS). SIMS is the repository for all site and parameter information that is needed to meet EPA reporting requirements. The information in SIMS is used by IT staff to configure the telemetry system and EPA's Air Quality System. SIMS also serves as the air monitoring and IT equipment inventory which satisfies state and federal requirements for equipment tracking.

SIMS site information is updated by station operators whenever a site is established or discontinued and as monitored parameters and/or physical conditions at the site change. IT and Calibration & Repair staff maintain the Equipment Inventory portion of SIMS.

SIMS includes:

- Site Information (address, physical location, type of monitoring site, probe information, monitored parameters)
- Monitor/Station type (SLAMS, NCore, Near-road, SPMS)
- Instrumentation and methods (pollutant being measured, equipment manufacturer's make and model, etc.)
- Measurement scale (micro, middle, neighborhood, etc.)
- Land use (industrial, commercial, etc.)
- Location setting (urban, rural, etc.)
- Monitoring objective

- Telemetry and telecommunication information (central setup, data logger channel mapping)
- Physical location and characteristics (address, latitude and longitude coordinates, elevation, etc.)
- Probe location (top of building, ground level, etc.)
- Equipment inventory

In addition to SIMS, Ecology's ambient air monitoring website includes additional site information:

- Site photos, including the 8 compass cardinal point pictures (N, NE, E, SE, etc.)
- A Microsoft Bing map showing the location of all monitoring locations in the state
- Washington Air Quality Advisory (WAQA) information

## 8 SITE INSTALLATION

Following the AQP Monitoring and QA Coordinator's approval of a site location, the project manager or site operator is responsible for:

1. Completing the required site information in SIMS *prior to data collection*. IT staff will not configure sites or establish data collection in the central system until SIMS has been updated with the required basic site information.
2. Contacting the SWRO & Air Quality Operations Unit supervisor to arrange for the acquisition of the instruments and equipment needed for monitoring. Prior notice of at least 60 days is required. Allow for additional time if new instruments or equipment is needed.
3. Contacting the IT Unit Supervisor to acquire data logging and telecommunication equipment. Prior notice of at least 30 days is required.
4. Obtaining bids and scheduling contractors for the following elements:
  - Electrical
  - Site Grading
  - Fencing and any additional site security measures
  - Crane (e.g., for lifting monitors/shelters onto rooftops)
5. Installing the shelter (if needed)
6. Installing adequate room/shelter temperature controls
7. Installing sample line(s) and probe(s)
8. Installing instruments and equipment (sampler platforms, pumps, data logger, modem, router, etc.)
9. Conducting initial quality control checks on all monitors/sensors and ensuring that monitors are operating properly
10. Confirming that Automated QC checks are occurring on the required schedule

11. Confirming that all quality control results are being reported to the EnvistaARM
12. Confirming that diagnostic data are being reported to the EnvistaARM

For Ecology-operated sites: Prior to scheduling contractors for fencing, electrical, and other site work, project personnel must work with their Purchasing Coordinators to ensure that all work complies with laws and agency contract rules.

Prior to site installation, IT staff will:

1. Provide a data logger that has been set up according to the standard configuration for the parameters being measured. Among other pre-configured items, this includes:
  - Data channel configurations
  - Diagnostic data polling
  - All automated quality control sequences and control limits
2. Provide all telecommunications equipment

After the required site installation information is entered into SIMS by the operator, IT staff will:

1. Ensure that results are being collected by the data logger
2. Ensure that all required diagnostic data are being polled
3. Ensure that the data logger is being polled by the central system
4. Assign an Air Quality System (AQS) ID number
5. Enter the site information in AQS
6. Turn on display of the site on the Washington Air Quality Advisory (WAQA) map



*Figure 2: Electrical installation at Jennie Reed Near-road site in Tacoma*

## 9 TIMELINE

Many variables affect the time it takes to install a new site. Following approval of a project proposal, a typical site installation will take from 3 to 6 months to complete. Complicated projects (such as Near-road or NCore) may take longer. The addition of a single monitor at an existing site should be considerably shorter (days to weeks).

Project managers and/or site operators planning to install a new site should allow sufficient time to complete the necessary elements of the installation. The following timeline provides a rough estimate for planning purposes. Many of these tasks can occur simultaneously:

### **Request Approval Process**

- MAC evaluation 60 days

### **Site Selection Process for MAC-approved projects**

- Proposed site selection forms completed 15 days
- Air Monitoring Coordinator / QA Coordinator approval 15 days
- Establishment of site/lease agreement 60 days

### **Monitor/Equipment procurement**

- Existing monitors/equipment (i.e., already in-house) 60 days
- New monitors/equipment 90 days or more

### **Telemetry and Telecommunication Setup**

- Acquiring telecommunication services 30 days
- Configuring Telemetry Setup (after SIMS) 15 days
- Establishing data logger to analyzer communications  
(new manufacturer, new type of analyzer) 30-60 days
- Ordering new IT/Telecommunication equipment 30-90 days

### **Site Installation**

- Site grading, electrical, shelter, fencing 30-60 days
- Monitor(s), sample line(s), and equipment 15 days
- Post-installation quality control/troubleshooting 15 days

## 10 REFERENCES

“Probe and Monitoring Path Siting Criteria for Ambient Air Quality Monitoring.” Code of Federal Regulations Title 40, Pt. 58, Appendix E, 2013 ed.

U.S. Environmental Protection Agency. Office of Air Quality Planning and Standards. *Quality Assurance Handbook for Air Pollution Measurement Systems Volume II: Ambient Air Quality Monitoring Program*. Research Triangle Park, 2013 (EPA-454/B-13-003).

U.S. Environmental Protection Agency. Office of Air Quality Planning and Standards. *Quality Assurance Handbook for Air Pollution Measurement Systems Volume IV: Meteorological Measurements Version 2.0*. Research Triangle Park, 2008 (EPA-454/B-08-002).

Washington Network Air Monitoring Project Proposal			
Project Title:			
Date:			
Proposed location: (city)			
This is a proposal to: (choose one)			Add a permanent site
			Add a temporary site
			Add a permanent parameter to an existing site
			Add a temporary parameter to an existing site
Parameters:			PM2.5
			Ozone
			Meteorological
			Other (specify):
Is this part of a larger project?			Yes
			No
Monitoring objective: (choose one)			Highest Concentration Site
			Population Exposure
			Source-Oriented
			Background
			Regional Transport
			Vegetation/welfare Impacts
Brief Project Description:			
Why is this project needed and how does it relate to AQP strategic goals?			
Is a Quality Assurance Project Plan Required?	Contact the AQP QA Coordinator prior to submitting project proposal to determine whether a QAPP is required. If a QAPP is required, the QAPP must be complete, approved, and signed by all signatories prior to data collection.		
		Yes	
		No	
Are partner agencies involved?		Yes	If yes, which ones?
		No	
Expected project results/products?			
Proposed schedule:	Start Date:		End Date:
<b>Budget</b>			
Estimated resources (one time plus ongoing)	Site Operator:		IT/Data Mgt:
	Calibration & Repair:		Data Analysis:
Estimated capital costs: (dollars)	Analyzer/Instrument:		Data Logger:
	Telecommunications:		Supplies:
Estimated total costs:			
Funding source:			

Figure 3: Washington Network Air Monitoring Project Proposal Form