AWWA
Rocky Mountain Section
Colorado New Mexico Wyoming

OUTSTANDING WATER LABORATORY AWARD NOMINATION FORM

This award is to recognize an outstanding water laboratory within the Rocky Mountain Section of American Water Works Association. It can be given annually to recognize a water laboratory for exceptional performance, dedication and teamwork.

INSTRUCTIONS: Two (2) copies of each application must be submitted by July 1st of each calendar year. All nominations are to be sent to either: ***RMSAWWA Awards Committee Chair 1685 S. Colorado Boulevard Unit S #315 Denver, Colorado 80222*** or the current Awards Committee Chair, mailing information available on www.rmsawwa.net . Applications including supporting documentation will not be returned.

GUIDELINES: This award nomination form has been developed as a self check based on the honor system. The person in responsible charge for lab operations and another person not associated with laboratory operations should complete the form together.

Using the check sheet as a guide, set up an area within your Lab to present all documentation records, manuals, copies, and proofs that the auditors will need to observe. If the auditor's request any information and you are not able to produce it at that time, then they are to determine that you do not have it. In order to permit fair competition between, but do not have the same processes, analyses or equipment; all final scores are going to be calculated as a percentile of maximum points available to the areas that pertain directly to each facility. So if your lab has a process "A" but not process "B" as does a competitor, the total maximum points available would be the sum of all maximum items within each area that pertains directly to your Lab. We will sum all of the points that you actually earned within each of those areas and divide into the maximum available.

INSTRUCTIONS:

- The total number of points applicable in each section only applies to Labs that have that particular analysis or equipment. For example if there are 4 points available for question (X), and the facility does not have or deal with (X), then those 4 points do not calculate into the facility's final score. Just mark N/A in score column.
- The final score is going to be determined as a ratio or percentage of maximum points available to the specific Lab as compared to the total number of points that were earned.
- When an indicator is called for in the inspection sheet to be on-site, you have the discretion to accept proof that the item in question exists. If the inspection form requires that an item is on site and it is not, and the Lab has not made an effort to prove that the item exists, you have the option not to award the points for that particular item.

Water Laboratory Information

Name of Laboratory _____

Employer: _____

Employer Mailing Address:_____

_____

Employer telephone Number_____

Plant Classification: Class A [ ] Class B [ ] Class C [ ] Class D [ ]

Name of Laboratory Supervisor _____

Name of Additional Inspector _____

Number of Laboratory Employees _____

Names and Titles _____

_____

_____

_____

_____

_____

Number of Water Quality Test Performed per Year _____

Test's Laboratory Performs _____

_____

_____

_____

_____

_____

_____

Type and Model of Test Equipment _____

_____

_____

_____

_____

_____

Narrative:

Interesting facts or accomplishments about your laboratory that have occurred in last year. _____

_____

_____

_____

_____

_____

_____

Water Laboratory Self Check

Organization	Inadequate or Not Available	Adequate or Available	Good	Very Good	Excellent	Score
An organizational chart is available indicating the chain-of-command. Administrative staff, technical staff and support staff are identified.	**0**	N/A	N/A	N/A	**4**	
A job description defining the job duties of each employee is available.	**0**	**1**	**2**	**3**	**4**	
What percentage of Lab employees are Rocky Mountain Water Quality Analyst Association certified.	**0**	1-25%	2-50%	3-75%	4-100 %	
Records are maintained which document staff technical training.	**0**	**1**	**2**	**3**	**4**	
The laboratory is sufficiently staffed for the numbers and types of analyses performed.	**0**	**1**	**2**	**3**	**4**	
MAXIMUM POINTS IN THIS SECTION 20	**Total Points This Section**					
Education - Microbiology	Inadequate or Not Available	Adequate or Available	Good	Very Good	Excellent	Score
Supervisor of analyst has a bachelor's degree in microbiology, biology, or equivalent with at least one college-level laboratory course in environmental microbiology.	**0**	N/A	N/A	N/A	**4**	
Analyst has a high school education 3 months bench experience in microbiology, training in microbiological analysis of drinking water acceptable to the State/EPA an a minimum of 30 days on the job training under an experienced analyst.	**0**	N/A	N/A	N/A	**4**	
Analyst demonstrated acceptable results for precision, specificity, and satisfactory analysis on unknown samples before analyzing compliance samples. experience in the analysis of drinking water samples	**0**	N/A	N/A	N/A	**4**	
MAXIMUM POINTS IN THIS SECTION 12	**Total Points This Section**					
Education – Chemistry	Inadequate or Not Available	Adequate or Available	Good	Very Good	Excellent	Score
Supervisor of analyst has a bachelor's degree with a major in chemistry or equivalent and at least one year of experience in the analysis of drinking water.	**0**	N/A	N/A	N/A	**4**	
Analyst has a bachelor's degree with a major in chemistry or equivalent and at least on year of experience in the analysis of drinking water.	**0**	N/A	N/A	N/A	**4**	
If the analyst is responsible for the operation of analytical	**0**	N/A	N/A	N/A	**4**	

instrumentation, he/she should have completed specialized training offered by the manufacturer or another qualified training facility or served a period of apprenticeship under an experienced analysts.						
The laboratory technician should have at least a high school diploma or equivalent, complete a method training program under an experienced analyst and have six months bench experience in the analysis of drinking water samples.	**0**	N/A	N/A	N/A	**4**	
MAXIMUM POINTS IN THIS SECTION 16	**Total Points This Section**					
Equipment	Inadequate or Not Available	Adequate or Available	Good	Very Good	Excellent	Score
The laboratory is provided with all the equipment and reagents necessary to perform the required analyses by approved procedures.	**0**	**1**	**2**	**3**	**4**	
Separate refrigerators and freezers are used for samples and for reagents/standards.	**0**	N/A	N/A	N/A	**4**	
All equipment is in good operating condition and is protected form rust, corrosion, laboratory contamination and other causes of deterioration.	**0**	**1**	**2**	**3**	**4**	
An instrument preventative maintenance log is maintained for each instrument and is up-to date.	**0**	**1**	**2**	**3**	**4**	
Calibration records are maintained for the instruments that require calibration and the records are up-to-date.	**0**	**1**	**2**	**3**	**4**	
The laboratory has adequate bench and floor space for the technicians to perform their work without crowding.	**0**	**1**	**2**	**3**	**4**	
MAXIMUM POINTS IN THIS SECTION 24	**Total Points This Section**					
Safety	Inadequate or Not Available	Adequate or Available	Good	Very Good	Excellent	Score
A written Chemical Hygiene Plan is established and available.	**0**	**1**	**2**	**3**	**4**	
A Safety Officer is identified and responsible for maintenance of the Chemical Hygiene Plan and safety functions.	**0**	N/A	N/A	N/A	**4**	
The Plan includes rules and procedures for reporting accidents and correcting safety deficiencies.	**0**	**1**	**2**	**3**	**4**	
The laboratory has written disposal procedures for hazardous reagents, samples and chemicals.	**0**	**1**	**2**	**3**	**4**	
Appropriate extinguishers are available and subject to regular preventative maintenance and recharging which is recorded.	**0**	**1**	**2**	**3**	**4**	
Adequate eyewash and safety showers are available.	**0**	**1**	**2**	**3**	**4**	
A complete set of MSDS for all chemicals used in the laboratory is maintained and readily available.	**0**	N/A	N/A	N/A	**4**	
Appropriate safety equipment is available for use, i.e. safety shields, gloves, first aid kits, respirators, fire blankets, chemical spill kits.	**0**	**1**	**2**	**3**	**4**	
All chemicals are stored in a safe manner. Acids, bases, flammables, oxidizers, organics, etc. are stored in separate areas.	**0**	**1**	**2**	**3**	**4**	

"No smoking" and "No eating" signs are displayed at the entrances to the laboratory.	**0**	**1**	**2**	**3**	**4**	
Evacuation plans are posted in the laboratory.	**0**	**1**	**2**	**3**	**4**	
Warning signs are posted in hazardous areas.	**0**	**1**	**2**	**3**	**4**	
Regular safety classes are held and attendance is documented.	**0**	**1**	**2**	**3**	**4**	
Eye protection is worn by all personnel in all areas that require eye protection and these areas are clearly defined and labeled.	**0**	**1**	**2**	**3**	**4**	
MAXIMUM POINTS IN THIS SECTION 56	**Total Points This Section**					
Data Reporting and Documentation	Inadequate or Not Available	Adequate or Available	Good	Very Good	Excellent	Score
Chain-of-custody records are maintained for each sample indicating location, time, date, and person performing the sample, the type of container and any preservation used. The time, date and person receiving custody of the sample in the laboratory is clearly indicated.	**0**	**1**	**2**	**3**	**4**	
Bench sheets are kept for each analytical batch. They indicate the person performing the test, the date and time of the test, the method used and any other information critical to the method.	**0**	**1**	**2**	**3**	**4**	
If a calculation procedure is used to obtain the final results of a test, it is listed on the bench sheet along with the final results.	**0**	**1**	**2**	**3**	**4**	
All records are written in waterproof ink. Errors are lined out with a single line with the initials of the person making the change and the date written beside the line-out.	**0**	**1**	**2**	**3**	**4**	
All records are maintained by the laboratory in accordance with Federal & State regulations and written record disposal procedures are in place.	**0**	**1**	**2**	**3**	**4**	
MAXIMUM POINTS IN THIS SECTION 20	**Total Points This Section**					
Miscellaneous, Resources and Text's	Inadequate or Not Available	Adequate or Available	Good	Very Good	Excellent	Score
The laboratory is maintained in a neat, clean and well organized manner.	**0**	**1**	**2**	**3**	**4**	
Controlled access security is provided for samples.	**0**	**1**	**2**	**3**	**4**	
The correct edition of Standard Methods for Examination of Water and Wastewater is available depending on testing procedure.	**0**	N/A	N/A	N/A	**4**	
Methods of Chemical Analysis of Water and Wastes, USEPA 600/4-79-020 (Revised March 1983)	**0**	N/A	N/A	N/A	**4**	
Handbook for Analytical Quality Control in Water and Wastewater, USEPA600/4-79-019, March 1979	**0**	N/A	N/A	N/A	**4**	
40 CFR 136, most current edition.	**0**	N/A	N/A	N/A	**4**	
MAXIMUM POINTS IN THIS SECTION 24	**Total Points This Section**					

Quality Assurance and Quality Control	Inadequate or Not Available	Adequate or Available	Good	Very Good	Excellent	Score
The laboratory has a written Quality Assurance Manual and the QA Manual covers the following topics from the Manual for the Certification of Laboratories Analyzing Drinking Water USEPA 570/9-90/008, Fourth Edition 1997.	**0**	**1**	**2**	**3**	**4**	
Are the following in either the QA or SOP manuals:						
Sample collection and handling.	**0**	N/A	N/A	N/A	**4**	
Preservation techniques. (Methods of preserving samples before analysis)	**0**	N/A	N/A	N/A	**4**	
Maximum holding times for samples before analysis.	**0**	N/A	N/A	N/A	**4**	
Analytical methods used.	**0**	N/A	N/A	N/A	**4**	
Calibration procedures for each analytical test.	**0**	N/A	N/A	N/A	**4**	
Calculations required to reach a final result for each analytical test.	**0**	N/A	N/A	N/A	**4**	
Acceptance criteria for each analytical test. (Ex. Upper & lower warning & controls)	**0**	N/A	N/A	N/A	**4**	
Methods for calculating accuracy. (SM 1020 & 1030) (spikes & standards)	**0**	N/A	N/A	N/A	**4**	
Methods for calculating precision. (SM 1030C) (duplicates)	**0**	N/A	N/A	N/A	**4**	
Method detection limits. (40CFR136 Appendix B)	**0**	N/A	N/A	N/A	**4**	
Expression of results (SM 1050B)	**0**	N/A	N/A	N/A	**4**	
Procedures for preparation of correction action reports.	**0**	N/A	N/A	N/A	**4**	
Data review & rejection (policies on outliers, cross checking & calculations for rejection)	**0**	N/A	N/A	N/A	**4**	
Instruments Preventative Maintenance measures and frequency.	**0**	N/A	N/A	N/A	**4**	
Procedures and frequency of system audits.	**0**	N/A	N/A	N/A	**4**	
The QA Manual is reviewed and updated on a regular basis and the date of last review/update is on the first page of the manual.	**0**	N/A	N/A	N/A	**4**	
SOP's for each test performed in the laboratory are available.	**0**	N/A	N/A	N/A	**4**	
SOP's are reviewed at regular intervals with the last review date listed on each SOP.	**0**	N/A	N/A	N/A	**4**	
Each SOP must list the reference method.	**0**	N/A	N/A	N/A	**4**	
Deviations from the reference method are emphasized and EPA validated	**0**	N/A	N/A	N/A	**4**	
Chemicals have listed upon them the date of receipt, the date of opening and the expiration date.(including solutions prepared in the laboratory)	**0**	N/A	N/A	N/A	**4**	
Appropriate grade chemicals are used for each analytical procedure with chemical grade listed on the SOP.	**0**	N/A	N/A	N/A	**4**	

Logs exist detailing the preparation of all reagents. Log must include the date, the lot number of the chemicals, the person performing the preparation, volumes and weights of materials used. They may include details and results of any standardization procedure followed and time of preparation.	**0**	N/A	N/A	N/A	**4**	
All balances are checked for accuracy against the certified weights on a regular basis.	**0**	N/A	N/A	N/A	**4**	
Balance calibrations by service technicians are performed on a regular basis (at least once a year for analytical balances) and records are maintained of the calibration.	**0**	N/A	N/A	N/A	**4**	
Control charts are maintained for accuracy and precision results and the charts are up-to-date	**0**	N/A	N/A	N/A	**4**	
A minimum of a three point calibration (MDL, mid-range and upper calibrated point) is used for each analytical procedure. If a blank is included in the calibration, a minimum of 3 other points must be used.	**0**	N/A	N/A	N/A	**4**	
Laboratory contamination is controlled through analysis of a reagent blank in each analytical batch.	**0**	N/A	N/A	N/A	**4**	
Other quality control measures for each batch include a sample duplicate performed at a frequency of at least 10% of the samples in the batch and a standard analyzed at a frequency of at least 5% of the samples in the batch. At least 1 calibration check daily/ or each use.	**0**	N/A	N/A	N/A	**4**	
An NIST traceable certified thermometer is available. A record is maintained of the annual calibration of other thermometers in the laboratory against the NIST thermometer.(Reference thermometer must be certified at least every five years)	**0**	N/A	N/A	N/A	**4**	
The temperature of refrigerators is logged twice daily.	**0**	N/A	N/A	N/A	**4**	
The thermometer used must be either certified or calibrated against an NIST traceable thermometer.	**0**	N/A	N/A	N/A	**4**	
The bulb of the thermometer used is submerged in water or other suitable liquid.	**0**	N/A	N/A	N/A	**4**	
Laboratory pure water is checked annually for suitability and heavy metals.	**0**	N/A	N/A	N/A	**4**	
A monthly check of lab water for residual chlorine, conductance or resistivity, plate count and pH is performed.	**0**	N/A	N/A	N/A	**4**	
Records are maintained of these checks.	**0**	N/A	N/A	N/A	**4**	
Laboratory pure water should have a conductivity value < 2.0 micros-cm at 25°C. Records are kept of regular QC checks of the laboratory water.	**0**	N/A	N/A	N/A	**4**	
Each lot number of membrane filters is checked for sterility prior to use or on a quarterly basis, and the check recorded.	**0**	N/A	N/A	N/A	**4**	
Sterile buffered water is prepared in accordance with the current version of Standard Methods and preparation data recorded.	**0**	N/A	N/A	N/A	**4**	
Each batch of dilution water is checked for sterility and records maintained.	**0**	N/A	N/A	N/A	**4**	
A thermometer calibrated against an NIST traceable thermometer is used to monitor incubator temperatures. If used to monitor a 44.5+0.2°C incubator, the thermometer is calibrated in at least 0.2 °C increments.	**0**	N/A	N/A	N/A	**4**	
All procedures requiring the use of blanks, calibration checks, duplicate samples and other QC data are clearly recorded on the bench sheets.	**0**	N/A	N/A	N/A	**4**	
A QA Manager or Officer is identified and responsible for the QA Manual and other QA functions.	**0**	N/A	N/A	N/A	**4**	

Reagent water used in trace metals analysis must have a resistivity of >16.5 megohm-cm at 25°C and a log is kept of the daily readings. Records are kept of regular QC checks (blanks) of the laboratory water.	**0**	N/A	N/A	N/A	**4**	
A functional fume hood is used and its face velocity is checked at regular intervals and the check recorded.	**0**	N/A	N/A	N/A	**4**	
The results of the most recent EPA DMR QA study or equivalent were acceptable for all compliance required parameters.	**0**	N/A	N/A	N/A	**4**	
IDCs – Method performance is demonstrated as specified by the published method or if not specified, a minimum of four replicates of a quality control or reference sample are processed through all steps of the analytical procedure.	**0**	N/A	N/A	N/A	**4**	
IDCs are performed for each analyst and each instrument.	**0**	N/A	N/A	N/A	**4**	
MDLs are calculated for all chemistry analytes and system background is below the MDL.	**0**	N/A	N/A	N/A	**4**	
The laboratory must perform and pass PE samples at least annually within the acceptance limits specified in the regulations, or, if there are no requirements specified in the regulations, within policy described by their certifying authority.	**0**	N/A	N/A	N/A	**4**	
Electronic records are verified initially and periodically by manual calculations.	**0**	N/A	N/A	N/A	**4**	
Access to computer programs and electronic data is limited to appropriate personnel. An active security system is in place.	**0**	N/A	N/A	N/A	**4**	
Computer audit trails are in placed and reviewed.	**0**	N/A	N/A	N/A	**4**	
Computerized data has a backup system.	**0**	N/A	N/A	N/A	**4**	
Each lot of sterile sample collection containers and sterile Petri dishes are checked for sterility.	**0**	N/A	N/A	N/A	**4**	
Laboratory media preparation records include: date of preparation; type of medium; lot number; sterilization time and temperature; final pH; technician's initials. Media is checked for sterility and appropriate reactions using appropriate QC organisms.	**0**	N/A	N/A	N/A	**4**	
All prepared media meets guidelines as specified in Standard Methods.	**0**	N/A	N/A	N/A	**4**	
Expired media, reagents, chemicals, etc. are not used in analyses and are discarded appropriately.	**0**	N/A	N/A	N/A	**4**	
Compliance bacteriological testing is strictly adhered to as stated by the State/EPA Primary Drinking Water Regulations and Standard Methods.	**0**	N/A	N/A	N/A	**4**	
For the Total Coliform Rule, all total coliform positive cultures tested for the presence of either fecal coliforms or E. coli.	**0**	N/A	N/A	N/A	**4**	
For the Total Coliform Rule, proper authority notified promptly by laboratory of positive total coliform, fecal coliform or E. coli results.	**0**	N/A	N/A	N/A	**4**	
For the Total Coliform Rule, a written site and sampling plan exists and is followed.	**0**	N/A	N/A	N/A	**4**	
MAXIMUM POINTS IN THIS SECTION 252	**Total Points This Section**					

SCORE SHEET

AREA	Maximum Applicable Points	Maximum Applicable Points This Laboratory	Actual Points Earned
Organization	20		
Education - Microbiology	12		
Education - Chemistry	16		
Equipment	24		
Safety	56		
Data Reporting and Documentation	20		
Miscellaneous	28		
Quality Assurance and Quality Control	252		
Total Points	428		

Total Applicable Points	Total Points Earned

Final Score = Total Earned/Total Applicable * 100