

# **Information Collection Request for Performance Evaluation Studies on Wastewater Laboratories**

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# TABLE OF CONTENTS

<b>1</b>	<b>IDENTIFICATION OF THE INFORMATION COLLECTION.....</b>	<b>1</b>
1(a)	Title and Number of the Information Collection.....	1
1(b)	Short Characterization.....	1
<b>2</b>	<b>NEED FOR AND USE OF THE COLLECTION.....</b>	<b>2</b>
2(a)	Need/Authority for the Collection.....	2
2(b)	Practical Utility/Users of the Data.....	2
<b>3</b>	<b>NONDUPLICATION, CONSULTATIONS, AND OTHER COLLECTION CRITERIA.....</b>	<b>3</b>
3(a)	Non-duplication.....	3
3(b)	Public Notice Required Prior to ICR Submission to OMB.....	3
3(c)	Consultations.....	3
3(d)	Effects of Less Frequent Collection.....	4
3(e)	General Guidelines.....	4
3(f)	Confidentiality.....	5
3(g)	Sensitive Questions.....	5
<b>4</b>	<b>THE RESPONDENTS AND THE INFORMATION REQUESTED.....</b>	<b>5</b>
4(a)	Respondents and SIC/NAICS Codes.....	5
4(b)	Information Needed.....	5
4(b)(i)	Data items.....	5
4(b)(ii)	Respondent Activities.....	5
<b>5</b>	<b>THE INFORMATION COLLECTED – AGENCY ACTIVITIES, COLLECTION METHODOLOGY AND INFORMATION MANAGEMENT.....</b>	<b>7</b>
5(a)	Agency Activities.....	7
5(b)	Collection Methodology and Management.....	7
5(c)	Small Entity Flexibility.....	7
5(d)	Collection Schedule.....	7
<b>6</b>	<b>ESTIMATING THE BURDEN AND COST OF THE COLLECTION.....</b>	<b>8</b>
6(a)	Estimating Respondent Burden.....	8
6(b)	Estimating Respondent Costs.....	10
6(b)(i)	Respondent Labor.....	10
6(b)(ii)	Respondent Capital/Startup and Operation and Maintenance Costs.....	10
6(b)(iii)	Capital/Startup vs. Operating and Maintenance (O&M) Costs.....	11
6(c)	Estimating Agency Burden and Costs.....	12
6(d)	Estimating the Respondent Universe and Total Burden and Costs.....	12
6(e)	Bottom Line Burden Hours and Cost Tables.....	12
6(f)	Reasons for Change in Burden.....	13
6(g)	Burden Statement.....	13
<b>APPENDIX A:.....LIST OF CHEMISTRY &amp; MICROBIOLOGY ANALYTES AND WET TEST METHODS.....</b>		<b>15</b>
<b>APPENDIX B:.....LIST OF TOP CHEMISTRY &amp; MICROBIOLOGY ANALYTES AND WET TEST METHODS AND TIMES FOR ANALYZING.....</b>		<b>17</b>

# **1 IDENTIFICATION OF THE INFORMATION COLLECTION**

## **1(a) Title and Number of the Information Collection**

*Performance Evaluation Studies on Wastewater Laboratories (Renewal)*. OMB Control No. 2080-0021, EPA ICR No. 0234.13.

## **1(b) Short Characterization**

This is a request to renew an existing Information Collection Request (ICR) to support the collection of Proficiency Testing (PT) data on the performance of laboratories that conduct discharge analyses for the Discharge Monitoring Report – Quality Assurance (DMR-QA) study program. This request will replace the expiring ICR, *Performance Evaluation Studies on Wastewater Laboratories* (OMB Control No. 2080-0021, EPA ICR No. 0234.12). This ICR refers only to DMR-QA. Therefore, the figures for burdens only support DMR-QA. EPA is requesting a standard three-year clearance for this ICR.

The National Pollutant Discharge Elimination System (NPDES) program is implemented by the United States Environmental Protection Agency (EPA) and the states that EPA has authorized to implement the program. In accordance with terms and conditions of NPDES permits, chemical monitoring data for wastewater are submitted from a variety of laboratories to the appropriate NPDES permitting authority every year. EPA and states must rely on these results when carrying out permitting, compliance, and enforcement activities. In order to provide an objective demonstration that these laboratories are submitting reliable information, the subject Performance Evaluation (PE) studies were developed. Participation in the DMR-QA studies is mandatory for major dischargers and selected minor dischargers under the NPDES program. Major municipal dischargers are defined as facilities designed to discharge at least 1 million gallons per day of wastewater, service a population of at least 10,000, or have a discharge that causes significant water quality impacts. Non-municipal major facilities are defined as major facilities based on a numerical rating system that evaluates their significance using criteria such as toxic pollutant potential, flow volume and water quality factors. Minor dischargers are selected to monitor the analytes/toxics discharged by the facility.

EPA formerly administered and prepared test standards for the DMR-QA program as part of the Agency's mandate to assure the quality of environmental monitoring data submitted by NPDES permit holders (permittees). Preparation, distribution and grading of the test standards have now been privatized to lessen EPA's burden in carrying out this mandate. The public- and private-sector organizations that manufacture and distribute test samples to contract and in-house laboratories are known as Proficiency Testing (PT) providers. The laboratories submit their analytical results to the PT Providers for evaluation. The PT Providers evaluate the submitted data and send the graded results back to the laboratories. These laboratories then forward copies of their graded data to their permittee clients, who will review the results and forward the data to their designated certifying/enforcement authorities. PT Providers also send electronic copies of the graded results to the designated certifying/enforcement authorities and to EPA.

Graded results include the names and addresses of the laboratories, analytes tested, concentration of the analytes, and the acceptance criteria and evaluations.

EPA is required to conduct this ICR analysis because more than nine non-Federal entities will be asked to respond to this data request. Because state agencies use the resulting data for their own laboratory certification/enforcement programs and are not reporting any information from the PE studies to EPA, they do not incur any burden under this ICR. In addition, cost and burden to PT Providers are not considered in this ICR because the vendor costs associated with this program are accounted for in the pricing of their standards (i.e., the costs incurred by the Providers is factored into the cost of the PT standards).

The total annual burden and labor costs incurred by the 5,500 permittees associated with this ICR are estimated to be 36,300 hours and \$5,368,055 per year over the 3-year ICR period (calendar years 2020-2022). EPA estimates that it takes 6.6 hours and costs \$976.01 per year per respondent to comply with this requirement. Respondent labor costs are linked with the time it takes to read and understand the annual DMR-QA announcement sent by EPA, plan activities, analyze PT standards, report information to the PT Providers, and maintain records. Respondent operation and maintenance (O&M) costs are associated with purchasing the PT standards. No costs or burdens to PT Providers or state regulatory agencies are associated with this ICR.

## **2 NEED FOR AND USE OF THE COLLECTION**

### **2(a) Need/Authority for the Collection**

Laboratory Performance Evaluation (PE) studies are designed to fulfill the need to monitor the quality of analytical data for select critical analytes within major point-source discharge samples. Results from the PE studies over time have generally shown a slow but regular improvement in average performance by the laboratories producing the monitored data. By helping laboratories identify and correct analytical problems, the PE studies are also responsible for documented improvement in this data.

The Clean Water Act, and the related regulations in 40 CFR part 136, require extensive analyses of water and wastewater samples by permittee-owned laboratories and third-party laboratories contracted by such permittees to control point-source discharges and protect ambient water quality. EPA uses this data as the basis for many important decisions, which include policy and regulation development, compliance and enforcement determinations, and program development. The data quality depends heavily upon the availability of capable laboratory analyses at all levels and reliability must be ensured.

### **2(b) Practical Utility/Users of the Data**

States and laboratory personnel will use the results of these studies to identify problems associated with laboratory analysis and substandard facility discharges. This will improve the quality of water data in critical monitoring areas and the quality of facility discharges returned to the environment. These studies have demonstrated that problems exist and

arise periodically with dischargers and water testing laboratories. Without future studies, many such problems will go unrecognized and unresolved. Results from the DMR-QA studies are used to highlight NPDES facilities and laboratories with apparent analytical problems that should be inspected on-site by state regulatory personnel. Results from the PE studies are used by state personnel as a major part of the basis for certifying laboratories to produce required regulatory data and as a basis for potential regulatory enforcement.

### **3 NONDUPLICATION, CONSULTATIONS, AND OTHER COLLECTION CRITERIA**

#### **3(a) Non-duplication**

Data and results from other federally sponsored water quality programs, such as the Water Pollution (WP) program, can be used to fulfill obligations under the DMR-QA study program only if the laboratories meet the condition that they perform the PE sample analyses between January 1st of the DMR-QA study year and the last day of the DMR-QA study. The DMR-QA study commences on or around March 15th and concludes on or around July 1st of each year.

As of March 1, 2020, EPA has granted full or partial waivers to 17 states to use their state laboratory certification program in lieu of their permittees participating in DMR-QA. No new waivers have been granted since the last ICR was renewed in May 2017.

#### **3(b) Public Notice Required Prior to ICR Submission to OMB**

In compliance with the Paperwork Reduction Act, a notice of this Information Collection Request ICR was published in the Federal Register on October 9, 2019 (84 FR 54140). EPA received no public comments.

#### **3(c) Consultations**

In preparation of this ICR, EPA contacted the seven PT Providers and three responded (PT Provider contact information can be found in Table 3.1, below, and on Page 6 of EPA Form 6400-01 [OMB 2080-0021], which is included as an attachment to this ICR package). The PT Providers were asked to provide input on the estimated time burden for respondents as well as the fees which laboratories need to pay for samples provided by the PT Providers. The PT Providers that responded indicated that it costs \$305 to \$849 per laboratory for chemical/microbiological samples. EPA chose to use the conservative high-end estimate of \$849 per laboratory for the purposes of estimating ICR costs to respondents. For Whole Effluent Toxicity (WET) tests, the range was \$1,008 to \$2,529 per laboratory, and the high-end estimate of \$2,529 was used. It should be noted that this is the cost that both in-house and contract laboratories pay, and this is passed on to the permittee. Therefore, if a lab is contracted by several permittees, then EPA considers that the cost will be distributed evenly among the permittees. However, if a permittee employs an in-house laboratory, the permittee is burdened with the entire cost of obtaining samples as well as the labor costs of the laboratory. Since the ratio of in-house and contract laboratories is unknown, an average was obtained for all laboratories and a

ratio of 0.633 laboratories per permittee was used. This ratio is the same as used in the previous renewal of this ICR. Using this ratio, the cost of obtaining samples is estimated to be \$537.42 per permittee for chemical/microbiological tests and \$1,600.85 for WET tests.

**Table 3.1: List of Accredited Proficiency Test (PT) Providers**

Absolute Standards, Inc., Hamden, CT Mr. Stephen Arpie (203) 281-2917 or (800) 368-1131 <a href="mailto:stephen@absolutestandards.com">stephen@absolutestandards.com</a> <a href="http://www.absolutestandards.com">www.absolutestandards.com</a>	New York State Department of Health Wadsworth Center, Albany, NY Dr. Patrick Parsons (518) 474-7161 <a href="mailto:dehspt@health.ny.gov">dehspt@health.ny.gov</a> <a href="http://www.wadsworth.org/programs/ehs/pt">www.wadsworth.org/programs/ehs/pt</a>
Advanced Analytical Solutions, LLC, Parkersburg, WV Fred Anderson (304) 485-6325 <a href="mailto:Fred@advancedqa.com">Fred@advancedqa.com</a> <a href="http://www.advancedqa.com">www.advancedqa.com</a>	NSI Lab Solutions, Raleigh, NC Mr. Mark Hammersla (800) 234-7837 <a href="mailto:mark.hammersla@nsilabsolutions.com">mark.hammersla@nsilabsolutions.com</a> <a href="http://www.nsilabsolutions.com">www.nsilabsolutions.com</a>
Environmental Resource Associates (ERA), Golden, CO (800) 372-0122 <a href="mailto:interlabgroup@eraqc.com">interlabgroup@eraqc.com</a> ; <a href="mailto:info@eraqc.com">info@eraqc.com</a> <a href="http://www.eraqc.com">www.eraqc.com</a>	Phenova Inc., Golden, CO (866) 942-2978 <a href="mailto:info@phenova.com">info@phenova.com</a> <a href="http://www.phenova.com">www.phenova.com</a>
MilliporeSigma, Laramie, WY (800) 576-5690 <a href="mailto:PTService@milliporesigma.com">PTService@milliporesigma.com</a> <a href="http://www.sigmaaldrich.com/pt">www.sigmaaldrich.com/pt</a>	

**3(d) Effects of Less Frequent Collection**

The current frequency for the DMR-QA is judged to be the minimum needed to assess the accuracy of data production required by discharge permits. Under DMR-QA, laboratories producing data are expected to demonstrate adequate analytical proficiency once per year for each analyte they test routinely for their NPDES permittee clients. Collecting water quality data less than once per year to measure the accuracy of laboratory work would potentially delay corrective actions required by the permittee and therefore compromise discharge water quality.

**3(e) General Guidelines**

This ICR was prepared in accordance with the October 2009 version of the ICR Handbook developed by EPA's Office of Environmental Information, Office of Information Collection, Collection Strategies Division. The ICR Handbook provides the most current instructions for ICR preparation to ensure compliance with the 1995 Paperwork Reduction Act (PRA) Amendments and OMB's implementing guidelines.

EPA believes participation in these studies is a reasonable requirement for all laboratories routinely producing data to satisfy NPDES permit requirements. Providing PE samples to the responsible NPDES permitting authorities assures that permittees' laboratories are testing the analytes using methods specified by the permit.

**3(f) Confidentiality**

This information collection does not require respondents to disclose confidential information.

**3(g) Sensitive Questions**

No questions of a sensitive nature are included in any of the information collection requirements outlined in this ICR.

**4 THE RESPONDENTS AND THE INFORMATION REQUESTED**

**4(a) Respondents and SIC/NAICS Codes**

Respondents in DMR-QA studies are NPDES permittees designated by the EPA Region or state with permitting responsibility and the laboratories doing chemical/microbiological analyses and WET analyses for these permittees. These respondents are most likely from the following SIC and NAICS codes:

CATEGORY	SIC NUMBERS	NAICS NUMBERS
Manufacturers	2011 through 3999	311611
Water Supply Systems	4941	22131
Sewerage Systems	4952	22132
Water Testing Laboratories	8734	54194

**4(b) Information Needed**

**4(b)(i) Data items**

In all laboratory PE studies, the data result from analyses of synthetic samples that contain known amounts of specific compounds, usually dissolved in reagent water. In DMR-QA studies, the compounds are those of primary interest with regard to the monitoring requirements found in NPDES permits. All studies also collect sufficient data to properly identify and characterize the respondents. Each respondent reports only data for that portion of the study analytes for which they wish to be certified or as directed by the responsible regulatory official.

**4(b)(ii) Respondent Activities**

The primary burden involves analyzing and reporting results for relevant study samples according to instructions. About 5,500 respondents participated in the 2019 DMR-QA

study. EPA projects that this number of respondents will remain relatively static for the next ICR period.

The DMR-QA program requires major permittees to submit results annually, and minor permittees are selected for participation by the DMR-QA state coordinators. The fluctuation of major permittees and the selection process of minor permittees at the state level causes the exact number of permittees to vary each year. A percentage of these permittees do all the work onsite themselves using in-house laboratories. The remaining permittees contract at least some of the analyses to commercial laboratories. The commercial laboratory may do work for many permittees; the DMR-QA results would then be sent to these permittees. Therefore, there are fewer labs than permittees. However, EPA does not have data on how many in-house laboratories and contract laboratories are used, as permittees may choose to have commercial or in-house laboratories perform the analyses. In addition, EPA does not track how many laboratories participated in one or more studies. Furthermore, EPA does not track how many permittees participated in only chemistry and microbiology testing and those that participated in WET testing. EPA is estimating the “maximum” impact of the DMR-QA program on the regulated community. EPA will assume that all 5,500 permittees will fulfill requirements for the top 10 chemistry and microbiology analytes and the top 10 WET test methods. EPA believes this ICR may overestimate the burden because not all permittees are required to perform WET testing. (See Appendix B for a list of the top 10 chemistry and microbiology analytes and the top 10 WET test methods).

To calculate the burden incurred on laboratories performing PE samples, EPA used a ratio of 0.633 laboratories per NPDES permittee. This ratio was calculated based on data procured by four PT Providers in 2006. EPA assumes that the ratio of laboratories per permittee has not changed significantly since the last ICR was approved. Based on this ratio (0.633 laboratories per NPDES permittee) and that there are 5,500 permittees participating in the DMR-QA, EPA estimates there are a total of 3,482 laboratories performing PE studies under DMR-QA. To provide an estimate of respondent burden for the WET testing portion of DMR-QA, EPA determined that an average of 4.77% of all laboratories participating in DMR-QA perform WET PE tests, or 166 laboratories. This percentage is also based on the information from the four providers received in 2006. EPA is not estimating the burden for the PT Providers because this burden is internalized in the cost of obtaining PE samples from the PT Providers.

Respondents (permittees) will participate in the following activities:

1. Read Instructions: Each of the 5,500 respondents will read the instructions provided by EPA.
2. Plan Activities: Each of the 5,500 respondents will incur burden to plan activities associated with the PE studies.
3. Analyze Chemistry and Microbiology Analytes: EPA assumes that all 5,500 respondents will participate in the PE studies for microbiology, trace metals,



demands, minerals, nutrients, and miscellaneous chemical analytes as required by respondents' permits. EPA assumes that 3,482 in-house and contract laboratories will do the work for the 5,500 permittees.

4. Analyze WET: EPA assumes that all 5,500 permittees will participate in the PE studies for WET. It is assumed that 166 in-house and contract laboratories will do the work for the 5,500 permittees.
5. Report Results: Each of the 5,500 respondents will incur burden to report its study results to the PT Provider.
6. Maintain Records: Each of the 5,500 respondents will incur burden to maintain records associated with the PE study.

## **5 THE INFORMATION COLLECTED – AGENCY ACTIVITIES, COLLECTION METHODOLOGY AND INFORMATION MANAGEMENT**

### **5(a) Agency Activities**

EPA provides general program management support, develops guidance, and maintains oversight of state DMR-QA activities. In addition, EPA oversees of the PT Providers and participating laboratories on an as-needed basis.

### **5(b) Collection Methodology and Management**

EPA notifies the permittee of their requirement to participate in the relevant PE program annually. The permittee's in-house or contract laboratory will then select an accredited PT Provider to send them the appropriate PE samples. After following the PT Provider's instructions to complete the PE study, the laboratory then submits the analytical data of these samples back to the selected PT Provider by the instructed deadline. The permittee will use the form approved by OMB to report DMR-QA results. This form will be available in two formats: a hard copy that will be part of the announcement that is mailed annually, and an online PDF form that is available on the EPA website. This PDF form can be filled out and then printed for submission. The PT Provider will grade and send evaluations of the submitted data back to the permittee and the designated certifying/enforcement authority. PT Providers may also send summary data in electronic form to EPA for archiving.

### **5(c) Small Entity Flexibility**

The major requirement under Small Business Regulatory Enforcement Fairness Act (SBREFA) is a regulatory flexibility analysis of all rules that have a "significant economic impact on a substantial number of small entities." Since this data request is not part of a rule, this ICR is not subject to SBREFA.

### **5(d) Collection Schedule**

EPA determines the requirements for the frequency that a permittee must demonstrate proficiency by passing a PE study. The study typically starts on or around March 15<sup>th</sup> and ends on or around July 1<sup>st</sup>. The participating permittees' in-house/contract laboratories demonstrate their proficiency by passing a PE study conducted by an accredited PT Provider for a fee. The PT Provider must submit the results of each study to the participating laboratories. The permittees must then request the participating laboratories to forward the graded results that were transmitted by the PT Provider, and in turn, the permittee must submit the graded results to the appropriate EPA Regional or state DMR-QA coordinator.

In summary: each participating in-house or contract laboratory must report test results to the PT Provider once a year. The PT Provider must submit the results of all studies they conduct to the participating laboratories. The permittees must then require the laboratories to forward them the graded results the laboratories received from the PT Provider. The permittees then submit a copy of the graded results to the appropriate EPA Regional or state DMR-QA coordinator. Participating permittees must re-qualify for each analyte it reports one year from the last certification that it received.

## **6 ESTIMATING THE BURDEN AND COST OF THE COLLECTION**

This section describes the estimated average annual burden and costs for the information collection activities for PE studies that will be conducted by laboratories. For this data submission, PT Providers, state agencies and EPA have no burden and costs. The Agency's burden and cost estimates are outlined in Section 6(c).

To estimate the costs, EPA made assumptions about the burden associated with activities that would likely be needed to fulfill the request. EPA emphasizes that the per-respondent estimates represent the average annual burden and cost over the 3-year period covered by this ICR (2020-2022). Some respondents may incur higher costs, and some will fall below the average. EPA assumed that all respondents perform all the tests included in this analysis. As a result, the burden is assumed to be a high estimate.

Burden and costs are not distinguished by categorized entities, public (federal, state, and local government dischargers) and private (commercial, industrial and others) sectors, because EPA does not currently track this information.

### **6(a) Estimating Respondent Burden**

The average annual respondent burden (in labor hours) for permittees is shown in Table 6.1, below. PT Providers conduct the studies, removing this burden from EPA. Participating laboratories receive samples from the PT Provider and return test results to the PT Providers. The PT Providers evaluate the data and send reports to the laboratories. The total burden on the laboratories is 36,300 hours, with an average of 6.6 hours per respondent (36,300 total hours divided by 5,500 permittees). This estimate includes burden for participating laboratories to read instructions, plan activities, analyze samples, submit data to the PT Providers, and maintain records.

EPA assumes that the respondent burden will be divided among three labor categories: manager, chemist, and records clerk. The labor associated with each of the ICR activities are discussed in more detail below.

- **Read Instructions:** EPA assumes that each of the 5,500 respondents will require 0.5 hours to read the instructions provided by EPA. The burden will be divided between a manager and chemist. Sample instructions and forms can be found in the Draft DMR-QA Study 40 package included in the docket.
- **Plan Activities:** EPA assumes that the manager of each laboratory will require 0.5 hours to plan activities associated with the PE studies. The burden will be divided between a manager and chemist.
- **Analyze Chemistry and Microbiology Analytes:** A total of 5,500 permittees are expected to use a total of 3,482 laboratories (a ratio of 0.633 laboratories for every permittee). Analysis is assumed to require approximately 2.1 hours to analyze PT standards for the top 10 analytes. All hours will be incurred by a chemist. See Appendix B for these tests and the estimated time for an analysis. These estimates assume that the laboratory is adding a DMR-QA sample to the normal processing that occurs in the laboratory using an already calibrated instrument/process.
- **Analyze WET:** A biologist or project manager constructs the test chambers and records organism mortality (morbidity) of test organisms while a chemist analyzes the water chemistry. Biologists and chemists are assumed to require 2.4 hours to analyze PT standards for WET. It is assumed that 166 laboratories do this work for all 5,500 permittees. These estimates assume that the laboratory is adding a DMR-QA sample to the normal processing that occurs in the laboratory using an already calibrated instrument/process.
- **Report Results:** EPA assumes that each of the 5,500 respondents will require 1.0 hours to report the results of the study to the PT Provider. The burden will be divided between a manager and records clerk.
- **Maintain Records:** EPA assumes that each of the 5,500 respondents will require 0.1 hours from a records clerk to maintain the files from the PE study.

**Table 6.1: Estimated Annual Respondent Burden, Performance Evaluation Studies on Wastewater Laboratories (Renewal)**

Collection Activities	Annual # Respondents <sup>1</sup>	Burden				
		Manager	Chemist <sup>2</sup>	Record Clerk	Total Burden (hours/year)	
		hours/year	hours/year	hours/year	Per Respondent	All Respondents
Read Instructions	5,500	0.2	0.3	0	0.5	2,750
Plan activities	5,500	0.2	0.3	0	0.5	2,750
Analyze Chemistry/ Microbiology	5,500	0	2.1	0	2.1	11,550
Analyze WET	5,500	0	2.4	0	2.4	13,200
Report Results	5,500	0.3	0	0.7	1	5,500

Maintain Records	5,500	0	0	0.1	0.1	550
<b>Total Annual Respondent Burden</b>	<b>5,500</b>				<b>6.6</b>	<b>36,300</b>

<sup>1</sup> In 2019, it is estimated that 5,500 NPDES permittees participated in the DMR-QA program. Most of the permittees participate in the Chemistry/Microbiology component. A smaller number of permittees also participate in WET analysis; it is estimated that 4.77% of all labs participate in WET analyses.

<sup>2</sup> Refer to Appendix B for analysis times for Chemistry/Microbiology analytes and WET methods.

## 6(b) Estimating Respondent Costs

Table 6.2 shows the total annual average costs for laboratories over the 3-year ICR period. Average annual labor costs for all 5,500 permittees are estimated to be \$1,992,265. Average annual O&M costs are estimated to be \$3,375,790. EPA estimates each laboratory will incur an annual average labor plus non-labor cost of \$976.01 for this data collection effort (see Table 6.2, below).

### 6(b)(i) Respondent Labor

The labor cost was arrived at by estimating the amount of labor required to participate on an annual basis in the DMR-QA study. Labor costs are based on information provided by the U.S. Department of Labor Statistics, May 2018, National Industry Specific Occupational Employment and Wage Estimate. The labor categories include a manager at an hourly rate of \$59.55, a skilled technician or chemist to conduct the measurements at an hourly rate of \$36.97, and a data entry clerical person at an hourly rate of \$19.59. Table 6.2 lists the estimated burden and costs for labor related to each activity. The annual respondent labor cost for all 5,500 respondents is estimated to be \$1,992,265 for 36,300 hours. The labor costs consider benefits/compensation in addition to salary. EPA relies on the Bureau of Labor Statistics to estimate the benefits/compensation to be 30.9% of total compensation for management positions, 32.5% of total compensations for natural resource positions, and 30.2% of total compensation for office positions. See Table 6.2 for references.

### 6(b)(ii) Respondent Capital/Startup and Operation and Maintenance Costs

There are no Capital/Startup costs associated with this information collection. Operation and Maintenance (O&M) costs for laboratories include all costs related to providing personnel with the space, equipment, and materials necessary to perform the tasks required by this ICR. Since laboratories are driven by their compliance monitoring requirements to purchase the analytical instrumentation and computers and not by this ICR, no capital costs are associated with this ICR. Only the costs associated with purchasing the PT standards is appropriate for consideration in this category.

Permittees may participate in the PE studies for some or all the chemistry and microbiology analytes and WET test methods (refer to Appendix A for a list of chemistry and microbiology analytes and WET test methods). The cost of the PE samples varies with the costs for the chemical, microbiological, and WET testing required for each calendar year. This is complicated by the fact that the participants in any given study need not analyze all the samples available for that study, only the ones that are required

by their permits. EPA estimated a cost of \$969.64 per laboratory based on feedback from PT Providers who did an analysis of the average cost of buying PE samples.

Because EPA does not have sufficient information to estimate how many analytes are contained in the PE samples sent to each laboratory, EPA assumes that a single PE sample contains standards for the top ten analytes for chemistry and microbiology and the top 10 WET test methods, based on information from the PT Providers. Therefore, laboratories participating in the chemistry and microbiology PE study are assumed to receive and run analyses for 10 analytes. Similarly, those participating in the PE study for WET would receive samples for each of 10 WET test methods. EPA estimates the costs of obtaining PE samples to be \$969.64 per laboratory and \$613.78 per permittee (respondent). Average annual O&M costs (fees for PE samples) for the respondents is estimated to be \$3,375,790.

**Table 6.2: Estimated Annual Respondent Costs, Performance Evaluation Studies on Wastewater Laboratories (Renewal)**

Collection Activities	Labor Cost <sup>1</sup>					Non-Labor Cost		Labor Plus Non-Labor	
	Manager <sup>2</sup>	Chemist <sup>3</sup>	Record Clerk <sup>4</sup>	Labor Costs		Cost of Standards per PE Study <sup>5</sup>		Average Labor plus Non-Labor Costs	
	at \$86.18/hr.	at \$54.77/hr.	at \$28.21/hr.	per Respondent	All Respondents	per Respondent	All Respondents	per Respondent	All Respondents
Read Instructions	\$17.24	\$16.43	\$0	\$33.67	\$185,185	\$0	\$0	\$33.67	\$185,185
Plan activities	\$17.24	\$16.43	\$0	\$33.67	\$185,185	\$0	\$0	\$33.67	\$185,185
Analyze Chemistry and Microbiology	\$0	\$115.02	\$0	\$115.02	\$632,610	\$537.42	\$2,955,810	\$652.44	\$3,588,420
Analyze WET	\$0	\$131.45	\$0	\$131.45	\$722,975	\$76.36	\$419,980	\$207.81	\$1,142,955
Report Results	\$25.85	\$0	\$19.75	\$45.60	\$250,800	\$0	\$0	\$45.60	\$250,800
Maintain Records	\$0	\$0	\$2.82	\$2.82	\$15,510	\$0	\$0	\$2.82	\$15,510
<b>Total Annual Respondent Costs</b>				<b>\$362.23</b>	<b>\$1,992,265</b>	<b>\$613.78</b>	<b>\$3,375,790</b>	<b>\$976.01</b>	<b>\$5,368,055</b>

<sup>1</sup> Median salaries from U.S. Bureau of Labor Statistics (BLS), May 2018, National Industry Specific Occupational Employment and Wage Estimates (<http://www.bls.gov/oes/>). As a percentage of total compensation, BLS estimates benefits to be 30.9% for management positions, 32.5% for natural resource positions and 30.2% for office positions. (Employer Costs for Employee Compensation, September 2019, Table 5, [https://www.bls.gov/news.release/archives/ecec\\_12182019.htm](https://www.bls.gov/news.release/archives/ecec_12182019.htm))

<sup>2</sup> BLS, Natural Science Manager 11-9121 (\$59.55/hr., median salary only--see Footnote 1).

<sup>3</sup> BLS, Chemist 19-2031 (\$36.97/hr., median salary only--see Footnote 1).

<sup>4</sup> BLS, Information and Record Clerk 43-4199 (\$19.69/hr., median salary only--see Footnote 1).

<sup>5</sup> Based upon estimated cost of \$849 per chemistry/microbiology laboratory and \$2,529 per WET laboratory. Includes a factor of 0.633 labs per respondent. WET analysis is multiplied by 0.0477 since only 4.77% of all labs perform WET tests. Therefore, the average cost for each respondent is  $\$2,529 \times 0.633 \times 0.0477 = \$76.36$ .

**6(b)(iii) Capital/Startup vs. Operating and Maintenance (O&M) Costs**

There are no Capital/Startup costs associated with this information collection. The annual Operating and Maintenance costs associated with this ICR are estimated to be \$613.78 per respondent.

**6(c) Estimating Agency Burden and Costs**

EPA’s role is advisory and involves program management only. The burden to the Agency, other than the time required to put together the annual announcement and printing and mailing costs of the annual announcement, is low. On average, 3,000 announcements are printed annually to send out to permittees as well as spare copies. This annual average is also a conservative estimate because in 2013 EPA began distributing announcements by e-mail when possible. The annual burden is estimated below:

- Maintaining records of active participants in the program: 80 hours
- Putting together the annual announcement and answering questions: 480 hours (40 hours/month)
- Cost of printing 3,000 announcements: \$1,920
- Cost of mailing announcements: \$3,360
- Total Agency Burden and Cost: 560 hours and \$5,280

**6(d) Estimating the Respondent Universe and Total Burden and Costs**

The respondents for this ICR are major and select minor NPDES permittees. Some or all permittees in states that have received EPA waivers from the DMR-QA program may not be required to participate. Permittees who participate may use contract laboratories to perform the work, but the burden is considered to be upon the permittees, since they bear the costs of labor as well as operations & maintenance. As itemized in section 6(b), the annual respondent burden is 6.6 hours and \$976.01 per participant. The total annual respondent burden is 36,300 hours and \$5,368,055 for 5,500 participants. Currently, there are 7 PT Providers. PT Providers’ burdens are not assessed in this ICR because their cost burden for this ICR is part of the estimated PE sample cost burden for the laboratories. Burden and costs to EPA is minimal, being limited to the drafting of the annual announcement and printing/mailing costs, which come to a total of 560 hours and \$5,280 on an annual basis.

**6(e) Bottom Line Burden Hours and Cost Tables**

The bottom-line burden hours and costs for this ICR are shown in Table 6.3. This includes the burden and costs to the 5,500 respondents that are affected by this ICR.

**Table 6.3: Bottom Line Burden and Costs, Performance Evaluation Studies on Wastewater Laboratories (Renewal)**

<b>Cost / Burden</b>	<b>Average per Year</b>
<b>(A) Number of Respondents (Permittees)</b>	5,500
<b>(B) Number of Responses per Permittee</b>	1
<b>(C) Burden Hours per Permittee</b>	6.6

<b>Cost / Burden</b>	<b>Average per Year</b>
<b>(D) Total Burden Hours [D = A × B × C]</b>	36,300
<b>(E) Per Permittee Labor Costs</b>	\$362.23
<b>(F) Per Permittee O&amp;M Costs</b>	\$613.78
<b>(G) TOTAL LABOR COST [G = (A × B) × E]</b>	\$1,992,265
<b>(H) TOTAL O&amp;M COST [H = (A × B) × F]</b>	\$3,375,790
<b>TOTAL COSTS (LABOR PLUS O&amp;M COSTS FOR ALL 5,500 PERMITTEES)</b>	<b>\$5,368,055</b>

**6(f) Reasons for Change in Burden**

Participation in the DMR-QA PE study has decreased from an estimated average of 5,700 permittees to 5,500 since the last renewal of this ICR. This is due to a slight decrease of NPDES major permittees over the last three years through permit terminations or permittees using state-certified laboratories that are exempt from DMR-QA PE studies.

Labor and O&M costs have been updated since the previous renewal of this ICR. Labor costs increased modestly due to changes in employee benefit compensation costs and inflation. O&M costs also increased, although the total burden hours per respondent remained the same; O&M costs reflect the costs of obtaining PE samples from the PT Providers. The estimated annual average cost of obtaining PE samples increased from \$560.36 to \$613.78 per respondent.

**6(g) Burden Statement**

The annual public reporting and recordkeeping burden for this collection of information is estimated to average 6.6 hours per response. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9 and 48 CFR chapter 15.

To comment on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques, EPA has established a public docket for this ICR under Docket ID Number EPA-HQ-OECA-2013-0547, which is available for online viewing at [www.regulations.gov](http://www.regulations.gov), or in person viewing at the Enforcement and Compliance Docket in the EPA Docket Center (EPA/DC), EPA West,

Room 3334, 1301 Constitution Avenue, NW, Washington, D.C. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Reading Room is (202) 566-1744, and the telephone number for the Enforcement and Compliance Docket is (202) 566-1752. An electronic version of the public docket is available at [www.regulations.gov](http://www.regulations.gov). This site can be used to submit or view public comments, access the index listing of the contents of the public docket, and to access those documents in the public docket that are available electronically. When in the system, select “search,” then key in the Docket ID Number identified above. Also, you can send comments to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW, Washington, D.C. 20503, Attention: Desk Officer for EPA. Please include the EPA Docket ID Number EPA-HQ-OECA-2013-0547 and OMB Control Number 2080-0021 in any correspondence.



**APPENDIX A: LIST OF CHEMISTRY & MICROBIOLOGY ANALYTES  
AND WET TEST METHODS**

<b>Chemistry and Microbiology Analytes</b>	
<b>Microbiology</b>	<b>Trace Metals</b>
<i>Escherichia coli</i> ( <i>E. coli</i> )	Aluminum
Fecal Coliform, MF or MPN	Antimony
Total Coliform, MF or MPN	Arsenic
<b>Minerals</b>	Barium
Alkalinity, total (CaCO <sub>3</sub> )	Beryllium
Chloride	Cadmium
Fluoride	Chromium, total
Hardness, total (CaCO <sub>3</sub> )	Chromium, hexavalent
Specific conductance (25°C)	Cobalt
Sulfate	Copper
Total Dissolved Solids (180°C)	Iron
<b>Nutrients</b>	Lead
Ammonia (as N)	Manganese
Nitrate (as N)	Mercury
Nitrite (as N)	Mercury (Low Level)
Orthophosphate (as P)	Molybdenum
Total Kjeldahl-Nitrogen (as N)	Nickel
Total Phosphorus (as P)	Selenium
<b>Miscellaneous Analytes</b>	Silver
Non-Filterable Residue (TSS)	Thallium
Oil and Grease	Vanadium
pH	Zinc
Total Cyanide	<b>Demands</b>
Total Phenolics (4-AAP)	5-day Biochemical Oxygen Demand (BOD <sub>5</sub> )
Total Residual Chlorine	5-day Carbonaceous BOD (CBOD <sub>5</sub> )
Total Residual Chlorine (Low Level)	Chemical Oxygen Demand (COD)
Settleable Solids	Total Organic Carbon (TOC)
Turbidity	

<b>WET Organisms/Test Conditions/End Points</b>		
<b>Analyte Number</b>	<b>Organisms/Conditions</b>	<b>End Points</b>
<b>Test Code 13/EPA Method 2000</b> 754	Fathead minnow ( <i>Pimephales promelas</i> ) - MHSF 25°C	LC50
<b>Test Code 14/EPA Method 2000</b> 755	Fathead minnow ( <i>Pimephales promelas</i> ) - 20% DMW	LC50
<b>Test Code 15/EPA Method 1000</b> 756 808 810	Fathead minnow ( <i>Pimephales promelas</i> ) - MHSF Fathead minnow ( <i>Pimephales promelas</i> ) - MHSF Fathead minnow ( <i>Pimephales promelas</i> ) - MHSF	NOEC SURVIVAL IC25 (ON) GROWTH NOEC (ON) GROWTH
<b>Test Code 16/EPA Method 1000</b> 759 812 814	Fathead minnow ( <i>Pimephales promelas</i> ) - 20% DMW Fathead minnow ( <i>Pimephales promelas</i> ) - 20% DMW Fathead minnow ( <i>Pimephales promelas</i> ) - 20% DMW	NOEC SURVIVAL IC25 (ON) GROWTH NOEC (ON) GROWTH
<b>Test Code 19/EPA Method 2002</b> 764	<i>Ceriodaphnia dubia</i> - MHSF 25°C	LC50
<b>Test Code 20/EPA Method 2002</b> 765	<i>Ceriodaphnia dubia</i> - 20% DMW 25°C	LC50
<b>Test Code 21/EPA Method 1002</b> 766 767 768	<i>Ceriodaphnia dubia</i> - MHSF <i>Ceriodaphnia dubia</i> - MHSF <i>Ceriodaphnia dubia</i> - MHSF	NOEC SURVIVAL IC25 REPRODUCTION NOEC REPRODUCTION
<b>Test Code 22/EPA Method 1002</b> 769 770 771	<i>Ceriodaphnia dubia</i> - 20% DMW <i>Ceriodaphnia dubia</i> - 20% DMW <i>Ceriodaphnia dubia</i> - 20% DMW	NOEC SURVIVAL IC25 REPRODUCTION NOEC REPRODUCTION
<b>Test Code 32/EPA Method 2021</b> 788	<i>Daphnia magna</i> - MHSF 25°C	LC50
<b>Test Code 38/EPA Method 2021</b> 794	<i>Daphnia pulex</i> - MHSF 25°C	LC50
<b>Test Code 42/EPA Method 2007</b> 798	Mysid ( <i>Mysidopsis bahia</i> ) - 25°C	LC50
<b>Test Code 43/EPA Method 1007</b> 799 816 818	Mysid ( <i>Mysidopsis bahia</i> ) Mysid ( <i>Mysidopsis bahia</i> ) Mysid ( <i>Mysidopsis bahia</i> )	NOEC SURVIVAL IC25 (ON) GROWTH NOEC (ON) GROWTH
<b>Test Code 44/EPA Method 2006</b> 803	Inland silverside ( <i>Menidia beryllina</i> ) - 25°C	LC50
<b>Test Code 45/EPA Method 1006</b> 824 825 826	Inland silverside ( <i>Menidia beryllina</i> ) Inland silverside ( <i>Menidia beryllina</i> ) Inland silverside ( <i>Menidia beryllina</i> )	NOEC SURVIVAL IC25 (ON) GROWTH NOEC (ON) GROWTH
<b>Test Code 46/EPA Method 2004</b> 804	Sheepshead minnow ( <i>Cyprinodon variegatus</i> ) - 25°C	LC50
<b>Test Code 47/EPA Method 1004</b> 805 820 822	Sheepshead minnow ( <i>Cyprinodon variegatus</i> ) Sheepshead minnow ( <i>Cyprinodon variegatus</i> ) Sheepshead minnow ( <i>Cyprinodon variegatus</i> )	NOEC SURVIVAL IC25 GROWTH NOEC (ON) GROWTH

## APPENDIX B: LIST OF TOP CHEMISTRY & MICROBIOLOGY ANALYTES AND WET TEST METHODS AND TIMES FOR ANALYZING

### CHEMISTRY/MICROBIOLOGY ANALYTE CHECKLIST

Rank	Analyte	Time (in minutes) for one analysis*
1	pH	10
2	Total Suspended Solids	30
3	Ammonia (as N)	5
4	Total Residual Chlorine	3
5	Biochemical Oxygen Demand (BOD)	45
6	Carbonaceous BOD	45
7	Total Phosphorus as P	10
8	Settleable Solids	10
9	Fecal Coliform (MF)**	30
10	Oil and Grease	15
<b>TOTAL (minutes)</b>		203
TOTAL (hours)		3.38

\* These estimates assume the DMR-QA sample is being added as additional single analyses to an already calibrated instrument/process, and to the normal processing that occurs in the laboratory.

\*\* 24 hours for incubation

**2.1 hours per permittee for Chemistry/Microbiology**

**using ratio of 0.633 labs per permittee**

### WET ORGANISMS/TEST CONDITIONS/END POINTS CHECKLIST

Rank	Analyte	Time (hours) for one analysis***	type of test
1	Fathead minnow - MHSF - NOEC Survival	10	Chronic
2	Fathead minnow - MHSF - NOEC (ON) Growth	10	Chronic
3	Ceriodaphnia - MHSF - NOEC Survival	10	Chronic
4	Fathead minnow - MHSF 25°C - LC50	3	Acute
5	Fathead minnow - MHSF - IC25 (ON) Growth	10	Chronic
6	Ceriodaphnia - MHSF - NOEC Reproduction	10	Chronic
7	Ceriodaphnia - MHSF - IC25 Reproduction	10	Chronic
8	Ceriodaphnia - MHSF 25°C - LC50	3	Acute
9	Fathead minnow - MHSF 20°C - LC50	3	Acute
10	Mysid - 40 fathoms - NOEC Survival	10	Chronic
<b>TOTAL (hours)</b>		79	

\*\*\* based on set-up, maintenance, data crunching at conclusion, 10 hr. (chronic) also includes daily weighting

**50.0 hours for WET analysis per lab using ratio of 0.633 labs per permittee.**

**Because only 4.77% of labs do WET analyses, the following number will be used for time burden for WET tests:**

**2.4 hours for WET analysis**