

# **Idaho Pollutant Discharge Elimination System Program Analysis**

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**State of Idaho  
Department of Environmental Quality**

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# 1 Introduction

## 1.1 Purpose and Scope

As Idaho seeks to gain delegated authority for National Pollutant Discharge Elimination System (NPDES) program elements, overall program structure and budget must be determined. Building a program from the ground up means numerous opportunities to craft a structure that is both responsive and efficient. However, to do this, an accurate understanding of the NPDES workload in the state and the effort necessary to staff a full program is required. Several decision analysis reports written over the last 14 years were used in the final decision to seek NPDES authorization. These reports built a foundation for budgeting but are now outdated. This report will evaluate the needs of the Idaho Pollutant Discharge Elimination System (IPDES) program with regards to both staffing and cost, compares possible options for staffing, and presents a final program budget estimate based on projected workload.

The model used for evaluating resource needs is the State Water Quality Management Resource Model prepared as part of the Gap Analysis Effort sponsored by the US Environmental Protection Agency's (EPA's) Office of Wastewater Management. This model was designed to permit EPA to develop a national estimate of the resource needs faced by state water quality management programs and to provide states with a flexible budget and planning tool. The State Water Quality Management Resource Model version 5.1 is used for this report. Previous decision analysis reports used version 3.1.

This report provides the results from the national resource model. Additionally, estimates of resource needs for a fully functioning IPDES program are calculated based on the current number of NPDES permits in Idaho and resources used for the program from both EPA and DEQ. These estimates are then compared to the national model results to provide projected workload values for calculating an overall budget for the IPDES program.

## 1.2 Summary

This report details projected programmatic workload both in personnel and budget for a fully functional IPDES program. The estimations reported here include staffing at 26 full-time equivalents (FTEs) and a budget of \$2.7 million. The proposed IPDES program organization uses three components: (1) program administration; (2) permitting; and (3) compliance, inspection, and enforcement (CIE). This IPDES program analysis describes each of the three components for the IPDES program and compares estimates from the EPA model to projected workload based on estimates using current EPA and DEQ NPDES commitments.

Currently, it is projected that the 26 positions will be split into the three components as follows:

- Seven positions in program management, including a program manager, three section leads, a data management system coordinator, an attorney, and an administrative assistant
- Eleven positions in permitting
- Eight positions in CIE.

The following subsections of the report evaluate each program component and describe how the workload estimations for each were determined (Table 1). In each subsection, EPA’s model for the specific NPDES component is compared to current resources devoted to implementing the program, and advantages and disadvantages to the various staffing options are discussed.

**Table 1. Summary of model outputs and projected workload.**

Component	Model Estimation Hours (FTEs)	Projected Workload Estimates Hours (FTEs)
Permitting	14,735 (8)	19,800 (11)
Compliance and enforcement	15,099 (8)	14,253 (8)
Program administration	12,800 (7)	9,152 (5)
Data management	5,660 (3)	1,784 (1)
Attorney general’s office support	NA	1,784 (1)
<b>Total</b>	<b>48,294 (27)</b>	<b>46,773 (26)</b>

Notes: FTE = full-time equivalent or 1,784 hours; NA = not available

### 1.3 Resource Model (Version 5.1)

EPA Region 10 provided the Idaho Department of Environmental Quality (DEQ) with a copy of the State Water Quality Management Resource Model version 5.1 in October 2014. This model was developed by a focus group consisting of state representatives, EPA staff, and other concerned stakeholders. The purpose of developing the model was to provide states with a flexible, accurate, and user-friendly tool to estimate resource needs and document budget requests.

Default values for many components are provided in the model and represent the best estimates of the focus group participants for an *average* or *typical* state. The model forecasts programmatic needs for 5 years based on the input and default values. The calculation of a FTE uses 1,784 hours per FTE. Although there are 2,080 hours available in a year, hours allowed for sick, holiday, and vacation leave reduce the total time available per FTE to complete work.

Basic information required to run the model includes the overall number of individual NPDES-permitted facilities and the number of entities requesting coverage under a general permit. Individual permitted facilities are categorized as either major or minor to estimate the resources required to write permits but not further categorized as industrial or municipal. In Idaho, 41 individual permits have been written for major dischargers (32 for major municipal and 9 for major industrial) and 134 permits for minor dischargers (93 minor municipal and 41 minor industrial).

To calculate programmatic resource needs for the pretreatment program, the model requires identifying the total number of municipal dischargers and the number of those with pretreatment programs. Additionally, if DEQ will be taking over the responsibility for regulating Categorical Industrial Users (CIUs) and Significant Industrial Users (SIUs), the total number of these in the state that will be regulated should be identified and added to the model input values.

Because sanitary sewer overflows (SSOs) add an additional burden to the program, the model requires input of municipalities that have SSOs. Also, combined sewer overflows (CSOs) require additional time. Currently, Idaho does not have any CSO facilities.

Finally, the model requires the input of the number of facilities that are covered under the various types of general permits. For Idaho, 94 facilities are covered under the aquaculture general permit, 100 under the pesticide general permit, 80 under the recreational dredging permit, 8 under the ground water remediation general permit, 278 under the construction general permit (GCP), 7 under the multisector general permit (MSGP), and 16 under the municipal separate storm sewer system (MS4) general permit. The workload associated in the permitting section for this includes review and authorization of the notice of intent (NOI) for coverage.

**Table 2. Permitted facilities in Idaho, 2014.**

NPDES Program	Current Number
Major facilities with individual NPDES permits (includes POTWs)	41
Minor facilities with individual NPDES permits (includes POTWs)	134
<b>Clean Water Act (CWA) §316 Program</b>	
Power plants that require CWA §316 reviews	0
<b>Publicly Owned Treatment Works (POTWs)</b>	
All POTWs (with or without pretreatment programs)	125
POTWs with pretreatment programs	13
POTWs with pretreatment programs and with authority to regulate CIUs and SIUs	0
CIUs and SIUs regulated directly by state for pretreatment	0
<b>Wet Weather Dischargers Inventory</b>	
Combined sewer overflows	0
Municipalities with sanitary sewer overflows	0
<b>General Permit Programs (facilities regulated under a general permit)</b>	
Concentrated animal feeding operations	0
Stormwater dischargers	301
Aquaculture dischargers	94
Other facilities	188

Notes: CIU = Categorical Industrial User; SIU = Significant Industrial Users

For the purposes of planning and to estimate projected workload, a proposed schedule of issuing general permits was drafted as shown in Table 3. Typically a general permit will be written when the current EPA-generated permit expires. This proposed schedule is for planning purposes only and does not represent the actual timing for writing these permits.

The three stormwater-related general permits are CGP, industrial MSGP, and MS4. For planning purposes, these are proposed to be written one per year for the first 3 years after program authorization. The aquaculture general permit is actually a series of three permits; one for discharges to impaired waters, one for discharges to unimpaired waters, and one for fish processors. Other general permits include:

- Concentrated animal feeding operations,
- Pesticide general permit,
- Vessel general permit,
- Ground water remediation, and
- Recreational suction dredging.

These remaining general permits are proposed to be completed at a rate of one per year for 5 years after program authorization.

**Table 3. Proposed schedule for renewal of state general permits.**

State General Permits	Previously Issued Permits	Anticipated Schedule for Issuing New General Permits				
		Current Year	Year 2	Year 3	Year 4	Year 5
Concentrated animal feeding operations	1	0	0	0	0	1
Stormwater	3	1	1	1	0	0
Aquaculture	3	0	0	1	1	1
Other	4	1	1	0	1	1

## 2 IPDES Program Analysis

This section describes the three main components of the IPDES program, describes the assumptions that went into the model development, compares the model outputs with the current resources used by EPA and DEQ to provide a projected workload estimate, and compares various staffing options for each of the program components.

Currently there are 41 major permittees, 134 non-major permittees, and 11 general permits covering 583 activities. To estimate the projected workload, this report evaluated the resources that EPA and DEQ currently expend on these dischargers including permitting, inspections, compliance and enforcement. This current expenditure was then projected based on the hours spent per activity (permitting, inspection, etc.) and number of permits/NOIs. EPA's model provided a similar analysis, but as is shown later, appears to underestimate hours needed for permit writing.

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## 2.1 Program Management

Program management encompasses the overall development of rules, guidance, and policy for the IPDES program. In the current programmatic strategy, this area also includes the data management, fee administration, and quality assurance system. The workload required for program management and oversight includes establishing and implementing division policies, developing and updating the state's short- and long-term point source control strategies, and planning legislative actions. Program management and oversight reflects the resource needs of all aspects of the point source control program (including oversight of the pretreatment program and consultation with a deputy attorney general).

### 2.1.1 Model Assumptions

For this component of the IPDES program, the model uses a default value of 6,000 hours for program planning, management, and oversight. Additionally, a default of 3,200 hours for rule and guidance development, review and revisions, and 3,600 hours for administration of the fee program are used. These default values were identified by the focus group during model development as those most likely needed for this program component for a typical state.

Data management is identified in a separate module of the model and includes data management for all water quality programs (e.g., ambient monitoring, Integrated Report needs, and total maximum daily loads [TMDLs]) into a single computation. Therefore, using the model to identify needs for the data management component specific to the IPDES program is less straightforward than other components such as management, permitting, and compliance.

### 2.1.2 Model Comparison to Projected Workload

The EPA model predicts need for 18,460 hours or 10 FTEs in the program management component. A breakdown of the various responsibilities is shown in Table 4.

The projected workload for this component of the IPDES program was determined based on best professional judgment using programmatic structures from other water quality programs within DEQ. Table 4 shows the projected number of hours allocated to each position and compares that to the model's default values. DEQ's current strategy for program management includes a program manager; rules and guidance coordinator; permits lead; and CIE lead. Allocating hours to the projected workload for various activities within the program management component was done as follows:

- Program management
  - Program manager: 100% (1,784 hours)
  - Permits lead: 70% (1,249 hours)
  - CIE lead: 70% (1,249 hours)
- Rules and guidance development
  - Rules and guidance coordinator: 100% (1,784 hours)
  - Permits lead: 30% (535 hours)
  - CIE lead: 30% (535 hours)
- Program administration and support
  - Data management coordinator: 100% (1,784 hours)

- Deputy attorney general: 100% (1,784 hours)
- Administrative assistant for fee administration: 90% (1,566 hours)
- Administrative assistant for program support: 25% (450 hours)

To estimate the projected workload, program fee administration is assumed to be similar to the drinking water program. Roughly three-quarters of the time for the administrative assistant assigned to support that program is used for sending invoices, providing public assistance, updating address information, reporting, and managing the invoice information. Based on fiscal year (FY) 2014, the drinking water administrative assistant spent 1,366 hours in fee administration. Additionally, DEQ's fiscal office used approximately 200 hours in fee administration to assist with invoicing. Administrative support for the program management section would require 450 hours.

For ease of planning the projected workload estimates shown in Table 4 allocate all the hours associated with a deputy attorney general to the program management component. However, it is more likely that this individual's time will be spent in all three of the IPDES program components (program management, permit appeals, and enforcement). At this time, it is unknown how to best allocate for this position, so the hours for a full-time position will appear in the program management budget.

**Table 4. Hours estimated for program management.**

Activity	Model Estimation (hours)	Projected Workload (hours)
<b>Program Management</b>		
Program manager	—	1,784
Permits lead	—	1249
CIE lead	—	1249
Subtotal	6,000	4,282
<b>Rules and Guidance Development</b>		
Rules and guidance coordinator	—	1,784
Permits lead	—	535
CIE lead	—	535
Subtotal	3,200	2,854
<b>Program Administration and Support</b>		
Data management	5,660	1,784
Fee administration	3,600	1,566
Deputy attorney general	—	1,784
Administrative support	—	450
Subtotal	9,260	5,584
<b>Total</b>	<b>18,460 (10 FTE)</b>	<b>12,720 (7 FTE)</b>

Notes: CIE = compliance, inspection, and enforcement ; FTE = full-time equivalent

Values in Table 5 show the hours needed for data management in the IPDES program based on the model inputs. DEQ is currently (as of 2014) pursuing an EPA Exchange Network (EN) grant

to help defray the costs of developing the infrastructure (database configuration and website application design) for the program. Therefore, the cost of developing a 120-day plan for a one-stop reporting program will be covered under the EN grant. If DEQ is unsuccessful in receiving the federal fiscal year (FFY) 2015 EN grant, the agency will reapply for FFY 2016.

Default values for data management were supplied with the model; however, these values were calculated for an entire water quality program including TMDL, monitoring, reporting, nonpoint source, grants, loans, wetlands, coastal programs, water quality standards, and regional initiatives. Additional costs for start-up of a geographic information system (GIS) were also incorporated into the model. DEQ already has a relatively robust GIS system in place with 2.5 FTE support staff working on GIS implementation. Therefore, for GIS workload estimation, the model was reduced from a default value of 10,800 hours for development to 0. Maintenance and improvement hours should be minimal, roughly 200–400 per year. Data retrieval will not be the responsibility of the GIS staff.

**Table 5. Model outputs for data management component of IPDES program.**

Activity	Model Estimation (hours)
<b>General Data Management Activities</b>	
Data processing	
<ul style="list-style-type: none"> <li>• Integrated Compliance Information System (or equivalent)</li> </ul>	1,050
System maintenance and administration	
<ul style="list-style-type: none"> <li>• User support</li> </ul>	1,290
<b>Data System Improvement and Integration</b>	
Develop objectives and strategies	1,040
Implement system update	1,040
<b>Geographic Information Systems</b>	
Maintenance and improvement	200
<b>Website Design, Development, and Maintenance</b>	
	1,040
<b>Total</b>	<b>5,660 (3.2 FTE)</b>

Model estimates for the overall program management component, including data management, are 18,460 hours or 10 FTEs. As described previously, DEQ’s current projected estimates are 12,720 hours or 7 FTEs for program management. Currently, it is difficult to determine if DEQ’s estimates of need will be low; however, compared to the model, DEQ is planning to staff at just under 70% of the modeled need.

### 2.1.3 Staffing Options

The current strategy for staffing includes a program manager, rules and guidance coordinator, data management coordinator, and fee administration assistant. Additionally, the coordinators for permitting and CIE are included in the overall program management section. The attorney budgeted in this section would be part of the attorney general’s office assigned to the agency.

While the model estimates a need for 3.0 FTEs in data management, the current hiring strategy is for a single data management coordinator. This means that there will be increased demand placed on current DEQ web application developers and database administrators to accommodate the increased flow of data. The discrepancy between the model estimate of three FTEs for data management and DEQ's plan for a single data management coordinator suggests that the agency may want to evaluate options for dealing with the increased demand the IPDES program will place on IT.

## 2.2 Permitting

Permitting encompasses the overall development of individual and general for the IPDES program. In the current programmatic strategy, this area also includes approving applications for coverage under general permits. The workload required for permitting includes engineering plan review; application mailing; pre-permit conference; application receipt, log in, and completeness review; application review; site visit and inspection report review; permit modeling and re-modeling; development or revision of permit limits and other conditions; drafting permit and fact sheet; public notice of permit issuance or renewal; public hearing; receipt, log in, and response to comments; permit finalization; filing NOIs/registrations; and permit maintenance.

### 2.2.1 Model Assumptions

For modelling purposes, current numbers and types of dischargers were identified as shown in Table 2. The number and type of general permits written for and effective in Idaho are shown in Table 6. The model requires that both major and minor individual permits were placed into one of three categories (simple, complex, and very complex) based on their technical complexity and political sensitivity. This allocation was completed by assigning appropriate percentages of each permit type into each of the three categories.

**Table 6. Inventory of state general permits.**

State General Permits	Previously Issued
Concentrated animal feeding operations	1
Stormwater	3
Aquaculture	3
Other	4

### 2.2.2 Model Comparison to Projected Workload

The EPA model predicts need for 14,735 hours or 8.3 FTEs in the permitting component. A breakdown of the various responsibilities is shown in Table 7 and uses a percentage value to determine the overall number of permits or facilities that are affected in each of the categories. Since most permits are valid for 5 years, theoretically one-fifth or 20% of all permits in that category should be up for renewal during any given year. Other percentage values used in Table 7 are default values established by the focus group that created this model.

To determine a projected workload for the permitting component, DEQ evaluated the resources being devoted to permit writing at this time. Currently EPA Region 10 employs 13–14 permit writers as follows:

- 10 FTEs on individual permits and pretreatment
- 1 FTE for the MSGP and CGP
- 1 FTE for the MS4 general permit
- 1–2 FTE for other sector-specific general permits (pesticide, vessel, suction dredging, aquaculture)

The discrepancy apparent between EPA’s current staff level for permit writers and the model predictions may be explained somewhat due to the push by EPA Region 10 to address a permitting backlog that has existed for several years. It is estimated that roughly 65% of the permits in Idaho are current (25% effective and 40% pending)<sup>1</sup>. EPA Region 10 has been operating under a court-ordered consent decree to update a number of these permits and has been pushing to complete a number of these permits. However, if Idaho inherits a program that is behind schedule, the model estimates of 8.3 permit writers will not be enough to keep up with the program and work off the backlog of administratively continued permits. DEQ believes that the model estimation of 8.3 FTEs for permit writing is the bare minimum needed to provide support in the permitting component. Based both on the foreseeable prospect of taking over a program with a backlog as well as being prepared for some growth in the number of facilities seeking permits, DEQ projects that 11 FTE would be necessary for the permitting component of the IPDES program.

While attempting to determine an average annual cost for the IPDES program, it is difficult to address one-time costs such as general permits which occur once every 5 years. EPA’s model estimates these needs by applying a percentage of the one-time permit writing and permit renewal for all the general permits a state would anticipate writing. Therefore, while some general permits in Table 7 are shown with no value associated, some do have time and resources allocated. Overall, there will be roughly 2 general permits per year that will need to be written, although some years will see a heavier burden than others.

**Table 7. Model estimations for time required in permitting component.**

Activity	Percentage (%) of Permits/Facilities Affected	Number of Permits/Facilities Affected	Required Effort (hours/permit or facility)	Total Hours Required Effort for Line Item
<b>Permit Issuance</b>				
<b>Individual permit issuance or renewal<sup>a</sup></b>				
• NPDES permits for major facilities	20.0	8.20	400	3,280
• NPDES permits for minor facilities	20.0	26.80	200	5,360
<b>General permits<sup>b</sup></b>				
• Initial permit development				

<sup>1</sup> EPA Region 10 State Authorization Guidance (Draft), March 2014

▪ Concentrated animal feeding operations	One time only	0.00	3,600	0
▪ Stormwater	One time only	1.00	3,600	3,600
▪ Aquaculture	One time only	0.00	400	0
▪ Other	One time only	1.00	400	400
• Permit renewal				
▪ Concentrated animal feeding operations	20.0	0.20	1,800	360
▪ Stormwater	20.0	0.60	1,800	1,080
▪ Aquaculture	20.0	0.60	200	120
▪ Other	20.0	0.80	200	160
• Authorization for coverage under general permit	20.0	116.80	2	234
<b>Permit Appeals</b>				
<b>Individual permits<sup>c</sup></b>				
• NPDES permits issued for major facilities				
▪ Simple	10.0	0.25	40	10
▪ Complex	5.0	0.16	120	20
▪ Very complex	5.0	0.12	240	30
• NPDES permits issued for minor facilities				
▪ Simple	5.0	0.67	40	27
▪ Complex	2.0	0.16	120	19
▪ Very complex	2.0	0.11	240	26
<b>General permits</b>				
• Concentrated animal feeding operations	1.0	0.00	240	0
• Stormwater	1.0	0.02	240	4
• Aquaculture	1.0	0.01	240	1
• Other	1.0	0.02	240	4
<b>Extraordinary permits (e.g., CWA §301(h) permit)</b>	NA	0.0	1,500	0
Total annual workload for permitting activities				14,735
Total FTE:				8.3

- a. The estimate for the effort associated with individual permit issuance reflects the time associated with the following activities: engineering plan review; application mailing; pre-permit conference; application receipt, log in, and completeness review; application review; site visit and inspection report review; permit modeling and re-modeling; development or revision of permit limits and other conditions; drafting permit and fact sheet; public notice of permit issuance or renewal; public hearing; receipt, log in, and response to comments; permit finalization; and permit maintenance. The estimate for permit issuance includes the consideration of pretreatment requirements. Aquaculture facilities and ballast discharges are typically regulated under the NPDES program; therefore, they are included as minor NPDES permits.
- b. The estimate for the effort associated with general permit issuance reflects the time associated with the following activities: development or revision of permit limits and other conditions; drafting permit and fact sheet; public notice of permit issuance or renewal; public hearing; receipt, log in, and response to comments; permit finalization; filing notices of

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intent/registrations; and permit maintenance.

- c. For the purposes of the model, both major and minor individual permits are placed into one of three categories (simple, complex, and very complex) based on their technical complexity and political sensitivity. This allocation was completed by accepting the following default percentages of each permit type in each of the three categories: 30% simple major, 40% complex major, 30% very complex major. For minor discharge permits, the default values are 50% simple, 30% complex, and 20% very complex.

Notes: CWA = Clean Water Act; NA = not applicable; FTE = full-time equivalent

### 2.2.3 Staffing Options

The first option for structuring the IPDES permitting component would be a completely centralized permitting component operating out of the state office. Advantages to centrally locating the permit writers include improved consistency among permit writers, increased accountability to the state office program, less overhead spent in managing and supervising separately located individuals, the ability of the program to set priorities and guidelines, and removing permit writers from local or regional pressures. Some disadvantages to a centrally located permits office would be the distance and separation from the facility that the permit is being written for, increased difficulty for the facility operators to access the permit writer in person, potential for less involvement and understanding of the specific difficulties facing a particular facility, and decreased involvement from the regional office staff who may have more information regarding specific issues with the facility, such as TMDL waste load allocations.

Based on workload estimations from the EPA model and the current EPA staffing, one possible way of structuring this option would be to have the permit writers specialized by types, such as municipal permit writers (major and minor), industrial permit writers, pretreatment permit writer, and general permit writers. Additional resources would be allocated to a modeling expert to assist with all permit types.

The second option for structuring the IPDES permitting component would be a completely decentralized structure. Advantages to this option include improved responsiveness to the facility operators and the ability of the permit writer to more quickly access the facility. Additionally, the permit writers would have closer access to the TMDL writers. However, some disadvantages to this option include increased costs in time and dollars spent on managing and supervising the various staff (staff reporting to different supervisors), decreased consistency in permits, decreased accountability for workloads and reaching performance measures, the need for individual permit writers to have expertise in multiple types of permits, and an increased susceptibility of the permit writer to local or regional pressures. Additionally, writing of general permits may be problematic if all permit writers are allocated to regional concerns. General permits affect all regions equally, and no one region is likely to take on the burden for a general permit. A possible structure for this option would be two permit writers in each region except one (likely Lewiston) responsible for all types of facilities within the region. Each region would also be expected to take on at least one general permit (MS4, MSGP, CGP, aquaculture, pesticide, and recreational dredging).

The third option for structuring the IPDES permitting component is a hybrid of the previous two methods. Advantages to this option include increased responsiveness to the facility operators, the ability of the permit writer to have quick access to the facility, increased consistency in permits among regions, moderate accountability to the overall program for performance measures and workloads, reduced pressure on regional permit writers to have expertise in all aspects of permit

writing and modeling. Disadvantages to this option are similar to the decentralized option where there are different supervisors and pressures placed on permit writers based on regional concerns. However, regional pressures may be offset to some degree by the ability of the state office permit writers to review and assist. While not completely decentralized, the regional offices would have resources allocated for permit writing who would then be responsible for the various permits for the region. In addition to these regional permits staff, specialist permit writers would be housed in the state office. These specialists might include a major municipal permit writer, a major industrial permit writer, general permit writers, and a modeling expert.

The centralized and hybrid approaches allow the state office to be responsible for general permits. Additionally, when writing permits with water quality based effluent limits, it will be beneficial for the permit writer to have ready access to the water quality standards staff who can help with questions regarding a particular criterion. The decentralized option may overwhelm the individual permit writers in each region as they have to work through all the different types of IPDES permits that need to be written and the amounts of information that need to go into each type.

## 2.3 Compliance, Inspection, and Enforcement (CIE)

The compliance, inspection, and enforcement component covers aspects of permit maintenance such as reviewing discharge monitoring reports, inspecting facilities according to the compliance monitoring strategy, reporting on compliance issues, and enforcing permit conditions. DEQ works with EPA currently in the CIE component of IPDES by inspecting facilities and reporting those findings to EPA staff in the Office of Enforcement and Compliance Assurance.

### 2.3.1 Model Assumptions

States must review discharge monitoring reports (DMRs) submitted by all regulated facilities. The number of DMRs submitted by a particular facility varies according to facility size, whether it is a municipal or industrial facility and the expected nature of pollutants. Table 8 describes the expected average number of DMRs per facility class used in the model.

**Table 8. Discharge monitoring reports by facility.**

Type of Facility	Average Number of DMRs per Facility per Year
Major facility with individual NPDES permit	12.0
Minor facility with individual NPDES permit	4.0
Combined sewer overflows and sanitary sewer overflows	0.0
Non-stormwater general permittee	4.0
Aquaculture general permittee	12.0
Stormwater general permittee	1.0

Many states provide substantial assistance to regulated and unregulated facilities to enhance the ability of these facilities to comply with regulations and protect public health. Typical assistance activities include compliance assistance (e.g., permit development guidance and data submittal assistance); technical assistance (e.g., on-site assistance and troubleshooting, assistance to non-

NPDES facilities, CWA §104(g), award program, outreach to technical and professional organizations, and operator certification and continuing education); financial assistance (e.g., assistance with financial management and loan applications); and capacity assurance. The model applies a percentage add-on to all point source control activities (i.e., permitting, compliance, enforcement, and septage) for this line item: add-on for assistance activities, 10.0%. This add-on is shown as a line item in Table 9.

### 2.3.2 Model Comparison to Projected Workload

The EPA model predicts need for 15,099 hours, or 8.5 FTEs, in the CIE component. A breakdown of the various responsibilities is shown in Table 9.

**Table 9. Model estimations for time required in compliance, inspection, and enforcement section.**

Activity	Number of DMRs	Required Effort (FTE hours/DMR)	Total Required Effort for Line Item (FTE hours)	
<b>Discharge Monitoring</b>				
Review discharge monitoring reports (DMRs)	3,729	1	3,729	
Activity	Percent of Facilities Affected	Number of Facilities Affected	Required Effort (FTE hrs/facility)	Total Required Effort for Line-Item (FTE hrs)
<b>Inspections</b>				
<b>Routine Compliance Inspections</b>				
Major facilities with individual NPDES permits				
• Inspection	50.0%	20.5	40	820
• Sampling with inspection	50.0%	10.3	8	82
Minor facilities with individual NPDES permits				
• Inspection	20.0%	26.8	32	858
• Sampling with inspection	50.0%	13.4	8	107
Performance compliance inspections (PCIs)				
• PT performance audit	20.0%	2.6	50	130
CSOs/SSOs2				
• Inspection	20.0%	4.2	16	67
• Sampling with inspection	50.0%	2.1	8	17
General permittees				
• Inspection				
o CAFOs	20.0%	0.0	6	0
o Stormwater (SW)	10.0%	30.1	6	181

Activity	Percent of Facilities Affected	Number of Facilities Affected	Required Effort (FTE hrs/facility)	Total Required Effort for Line-Item (FTE hrs)
○ Aquaculture general permittees	28.0%	26.3	20	526
○ Other general permittees	20.0%	37.6	6	226
● Sampling with inspection				
○ CAFOs	50.0%	0.0	2	0
○ Stormwater	50.0%	15.1	2	30
○ Aquaculture general permittees	50.0%	13.2	2	26
○ Other general permittees	50.0%	18.8	2	38
<b>Performance Audit Inspections (PAIs)</b>	2.0%	0.8	24	19
<b>Diagnostic Inspections</b>	1.0%	1.2	160	192
<b>Assistance Activities<sup>a</sup> (add-on)</b>	Not Applicable; see footnote a			2,712
Total annual workload for compliance and inspection activities				9,760
<b>Total compliance and inspection FTEs</b>				<b>5.5</b>

Activity	Percentage (%) of Facilities Affected	Number of Facilities Affected	Required Effort (FTE hours/facility)	Total Required Effort for Line Item (FTE hours)
<b>Enforcement</b>				
<b>Complaint Investigation</b>				
Individual permittees				
● Major facilities with individual NPDES permits	10.0	4.10	16	66
● Minor facilities with individual NPDES permits	5.0	6.70	16	107
General permittees				
● CAFOs regulated by general permit	20.0	0	16	0
● Stormwater dischargers regulated by general permit	10.0	30.10	16	482
● Aquaculture dischargers regulated by general permit	5.0	4.70	16	75
● Other facilities regulated by general permit	5.0	9.40	16	150
Non-permitted facilities <sup>b</sup>	NA <sup>a</sup>	165.60	16	2,640

Emergency response actions <sup>c</sup>	NA <sup>b</sup>	NA	NA	176
<b>Violation Response</b>				
Initial response				
• Individual permittees				
▪ Major facilities with individual NPDES permits	50.0	20.50	4	82
▪ Minor facilities with individual NPDES permits	50.0	67.00	4	268
• General permittees				
▪ CAFOs regulated by general permit	20.0	0	4	0
▪ Stormwater dischargers regulated by general permit	5.0	15.05	4	60
▪ Aquaculture dischargers regulated by general permit	5.0	4.70	4	19
▪ Other facilities regulated by general permit	5.0	9.00	4	38
Follow-up response (e.g., conference)				
• Individual permittees				
▪ Major facilities with individual NPDES permits	20.0	4.10	40	164
▪ Minor facilities with individual NPDES permits	20.0	13.40	32	429
• General permittees				
▪ CAFOs regulated by general permit	50.0	0	40	0
▪ Stormwater dischargers regulated by general permit	40.0	6.02	32	193
▪ Aquaculture dischargers regulated by general permit	50.0	2.35	32	75
▪ Other facilities regulated by general permit	50.0	4.70	32	150
Administrative orders (with the possibility of a penalty)				
• Individual permittees				
▪ Major facilities with individual NPDES permits	5.00	0.21	160	34
▪ Minor facilities with individual NPDES permits	5.00	0.67	160	107
• General permittees				
▪ CAFOs regulated by general permit	1.00	0.00	160	0
▪ Stormwater dischargers regulated by general permit	1.00	0.06	160	10

▪ Aquaculture dischargers regulated by general permit	1.00	0.02	160	3
▪ Other facilities regulated by general permit	1.00	0.05	160	8
<hr/>				
Civil and criminal referral				
<hr/>				
• Individual permittees				
▪ Major facilities with individual NPDES permits	0.50	0.001	1,000	1
▪ Minor facilities with individual NPDES permits	0.25	0.002	1,000	2
• General permittees				
▪ CAFOs regulated by general permit	0.25	0.00	1,000	0
▪ Stormwater dischargers regulated by general permit	0.05	0.00	1,000	0
▪ Aquaculture dischargers regulated by general permit	0.25	0.00	1,000	0
▪ Other facilities regulated by general permit	0.25	0.00	1,000	0
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Post-referral follow-up				
<hr/>				
• Individual permittees				
▪ Major facilities with individual NPDES permits	75.0	0.00	480	0
▪ Minor facilities with individual NPDES permits	75.0	0.001	480	0
▪ CIUs and SIUs regulated directly by state for pretreatment	75.0	0.00	480	0
• General permittees				
▪ CAFOs regulated by general permit	75.0	0.00	480	0
▪ Stormwater dischargers regulated by general permit	75.0	0.00	480	0
▪ Aquaculture dischargers regulated by general permit	75.0	0.00	480	0
▪ Other facilities regulated by general permit	75.0	0.00	480	0
<hr/>				
Total annual workload for enforcement activities				5,339
Total enforcement FTEs				<b>3.0</b>
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- a. Many states provide substantial assistance to regulated and unregulated facilities to enhance the ability of these facilities to comply with regulations and protect public health. Typical assistance activities include compliance assistance (e.g., permit development guidance and data submittal assistance); technical assistance (e.g., on-site assistance and troubleshooting, assistance to non-NPDES facilities, award program, outreach to technical and professional organizations, and operator certification and continuing education); financial assistance (e.g., assistance with financial management and loan applications); and capacity assurance. The focus group recommended applying a 10% add-on to all point source control activities (i.e., permitting, compliance, enforcement and septage) for this line item.
  - b. Based on the experience of participating states, it was assumed that the number of complaint investigations for nonpermitted facilities would be approximately equal to three times the number of complaint investigations for permitted facilities.
  - c. To ensure the ability to respond to emergency situations such as natural disasters, algal blooms, or spills that impact water quality, States must maintain an emergency response staff. For the purposes of the model, it is assumed that the size of this staff will be equal to 5% of all FTEs dedicated to complaint investigations.

*Notes:* POTWs = Publicly Owned Treatment Works; CIU = Categorical Industrial User; SIU = Significant Industrial Users; CAFO = concentrated animal feeding operation; FTE = full-time equivalent

The model estimates that the CIE component for the IPDES program will need 15,099 hours (8.5 FTEs) to fully support the program.

Identifying the projected workload in compliance and inspection is less clear than for the permitting component. DEQ performed 50 inspections in 2014 expending approximately 2,955 hours (1.7 FTEs). Time associated with inspections performed by EPA staff was not provided while this report was being crafted and was not included in this estimate. Using the current paradigm of 50 inspections needing 2,955 hours to complete, the 124 inspections required for the program would require approximately 7,328 hours (4 FTEs).

In addition to these 50 inspections, DEQ performed inspections at aquaculture facilities totaling 1,586 hours (1 FTE). Combining resources projected for NPDES inspections (7,328 hours) with those needed to complete aquaculture inspections (1,586 hours) a projected workload for inspection and compliance monitoring is estimated at 8,914 hours (5 FTES).

DEQ does not have experience in conducting enforcement actions for NPDES permit compliance. EPA currently relies on 1 to 2 staff in the Office of Enforcement and Compliance Assurance along with help from an attorney from the Attorney General's office when necessary. DEQ estimates that the resource needs from the model (5,339 hours; 3 FTEs) are accurate for this part of the CIE component. Combining the 5,339 hours with the projected workload of 8,914 hours provides an estimate of 14,253 hours (8 FTEs) for CIE.

The following describes possible options for structuring this group.

### **2.3.3 Staffing Options**

The first option for structuring this component is centralizing all inspectors in the state office. The advantage of this option is similar to the advantages seen with the permitting component—improved consistency and more programmatic control of resources. However, the disadvantages, while similar, are more significant with a centralized inspection group. Since Idaho is a large state, traveling to inspect a periodic storm event (in the case of the MSGP or CGP) or other unplanned inspections becomes time and cost prohibitive. A centralized inspection and compliance group would be less effective and more costly due to the travel requirements.

The second option of a completely decentralized component would share the same advantages and disadvantages as the permitting component. The advantages of increased responsiveness and quick access to the facility weigh more heavily in favor of a decentralized inspection group than a decentralized permitting group. It is very important and more cost effective to have inspectors located in each regional office who can quickly respond to reports of violations, unplanned inspections, and other concerns that may arise. The disadvantages of decreased program accountability and reaching performance measures are the same as those facing other decentralized groups such as TMDLs, ambient surface water monitoring, and source water assessments.

The third option of a hybrid approach would allocate resources to the regional offices for inspection and compliance and to the state office for review and enforcement. To maintain consistency across the state, CIE staff in the state office would be tasked with reviewing inspection reports and ensuring all regional staff have access to and are trained in the appropriate inspection procedures. In addition to conducting inspections when needed, the staff in the state office would also be responsible for coordinating enforcement actions with the attorney general's office. Having inspectors in regional offices would allow for fast and efficient responses to facility needs. A disadvantage to this option and to the completely decentralized option is the current EPA push for inspectors to specialize in a particular facility type. This would mean that the inspector would have to choose a facility type such as aquaculture to specialize in and be credentialed for that type of facility. Becoming credentialed for other types of facilities, such as industrial facilities, would require additional training and specialization. A version of option three would have multiple credentialed inspectors in each region who are only part time in the IPDES program.

## **3 Personnel Cost Estimation**

### **3.1 Final Budget Predictions**

The EPA national model estimates 18,460 hours (10.3 FTEs) for program management, 14,735 hours (8.3 FTEs) for permitting, and 15,099 hours (8.5 FTEs) for compliance, inspection, and enforcement for a total of 48,294 hours (27 FTEs). Based on a comparison of the model estimates to the current resources devoted to program implementation, this report estimates that the IPDES program would be fully staffed with 12,720 hours (7 FTEs) in program management, 19,800 (11 FTEs) in permitting, and 14,253 hours (8 FTEs) in compliance, inspection, and enforcement for a total of 46,773 hours (26 FTEs). These final estimates were used in estimating an overall budget for the IPDES program.

On average an FTE will cost the agency \$100,000. This does not reflect the direct pay to the employee but incorporates the various costs to the agency in addition to the salary of the employee. For the entire program's staffing needs as outlined in this report, the IPDES program would require \$2.7 million dollars. The final estimate of the annual costs is shown in Table 10.

**Table 10. IPDES program cost estimation.**

<b>Program Item</b>	<b>Total Cost (\$)</b>
Personnel	2,721,396.50
Equipment	6,520.00
Laboratory & Sampling	31,055.00
Licensing	2,698.00
Total program cost	2,761,669.50

### 3.2 Training and Other Program Needs

Staff in the IPDES program will need a significant amount of training to properly complete their job responsibilities, including the week-long EPA-sponsored Water Quality Standards and Permit Writer's Training. Additional state-specific training will include water quality standards 101 from the Surface Water Program, a state-specific permit writer's training (to be developed) and DEQ-specific employee training (e.g., TRIM document management, purchasing, Pcard, and new employee orientation). Inspectors in the IPDES program will need EPA inspector training until DEQ can provide a similar level of training and credentials for inspections. Permit writers will need training in the various modeling programs necessary for calculating water quality such as AquaTox and CORMIX. Additional operating costs will include equipment associated with inspection monitoring and software licenses for permit writers as detailed below.

For the permitting staff, access to modeling software will be necessary for determining water quality based effluent limits. While AquaTox is a software program provided at no cost by EPA, CORMIX requires a software license. DEQ currently maintains a license with support for seven users at a cost of \$2,698 per year. A detailed description of the projected training needs will be outlined in the capacity development plan.

For the inspection and compliance section, staff will need cameras with a global positioning system (GPS) and date stamping capability on each digital picture. This equipment is critical for completing inspections and documenting violations that may end up in court. A Ricoh WG-4 GPS costs \$420 and meets all needs for this purpose. Portable composite samplers cost about \$1,750 each. Portable dissolved oxygen, pH, conductivity, and turbidity monitors can be purchased for about \$600 each. A rugged tablet for data collection costs \$3,750. Six tablets would cost \$22,500. Initial startup costs for equipment in the CIE section would be \$39,120. Yearly maintenance costs, assuming a replacement schedule one of each per year on a 6-year rotation would be \$6,520.

EPA's resource model estimated \$37,570 per year associated with sampling for inspections. This number was incorporated into the overall program budget by subtracting the identified costs (\$3,120) for sampling equipment (camera, samplers, meters, and tablets) from the overall \$37,575. The remainder, \$31,055, was then identified as laboratory and contracting costs associated with sampling for inspections.

### 3.3 Existing Resources

DEQ's current funding allocation includes the following:

- \$163,018 for NPDES inspections
- \$46,655 for §401 program administration
- \$300,000 for IPDES program management

These currently allocated funds total \$509,673, which DEQ has available to direct towards funding the overall IPDES program. Additionally, the agency is requesting funding for another 3 FTEs (an additional \$261,400) for FY 2016. These additional funds would bring the total dollars available to the agency for funding the program to \$771,073 (or 28% of the total projected need for the program). This leaves approximately \$2.0 million needed to fund the full program.

The statement of purpose and fiscal note to HB 406 which directed DEQ to seek authorization for the NPDES program indicated that the program would likely need 25 FTEs. This was based on the previous decision analysis reports from 2000 through 2005. These previous reports did not incorporate time or cost estimations for general counsel assistance. Therefore, DEQ believes that the estimate provided here is a closer approximation of the overall need for the IPDES program. DEQ's estimation, as identified in this report, is that the program will require 26 FTEs and \$2.7 million.

## **4 Conclusions**

This report compares the estimated needs as modeled by the State Water Quality Resource Model version 5.1 to the best-projected estimates of resource needs to meet Idaho's responsibility for permitting under the CWA §401. This report identified resource needs for 12,720 (7 FTEs) in program management, 19,800 (11 FTEs) in permitting, and 14,253 (8 FTEs) in compliance, inspection, and enforcement.

Additionally, this report identified a possible increased need for resources in data management. As EPA moves toward electronic reporting and requiring states to participate in electronic data submittal, data management and information technologies will become significantly more important. EPA is currently proposing a change to the federal register that would require electronic submittal of basic facility and permit information, monthly discharge monitoring reports, and notification of information from general permit covered entities. While not specifically budgeted in this analysis, this report identified a need for plans to be considered to increase the IT capacity.