
Erosion & Sediment Control Permits

Monitoring &
Reporting
Requirements for
ESC Permitted
Sites

City of Surrey

Updated January, 2012



This document is an addendum to the City of Surrey Erosion and Sediment Control (ESC) By-law No 16138, March 2007. The requirements presented hereafter specify the inspecting, monitoring and reporting standards for use by ESC Supervisors on permitted construction sites located within the City.

These monitoring and reporting requirements will be revised and updated as new information warrants change.

Please forward inquiries concerning these requirements to:

City of Surrey
Engineering Department
Drainage and Environment Section
14245 – 56th Avenue
Surrey, V3X 3A2

Or:

escbylaw@surrey.ca

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1. Introduction

The use of erosion and sediment control best management practices (BMP's) on construction sites is intended to reduce, and if possible, eliminate the export of sediment-laden water into the City's stormwater system. In order for sediment and erosion controls to be effective they need to be appropriately designed, implemented, inspected, and maintained.

Poor BMP performance or failure not only stems from insufficient design considerations, but is more frequently a result of poor installation and maintenance practices.

As part of the ESC By-law, sites that require an ESC permit are obligated to implement an inspection program to ensure that planned ESC facilities are maintained, and meet the design and treatment performance requirements. In addition, ESC monitoring and reporting on all sites will ensure equal standards are applied, and that problems can be identified and addressed within appropriate timeframes to limit damage to the City's drainage network and aquatic receiving environments.

The following document specifies the monitoring and reporting requirements for ESC Permits issued by the City under the ESC By-law.

1.1. THE ESC SUPERVISOR

In accordance with the By-law the professional acting as the ESC Supervisor must meet the following criteria:

“ An engineer, biologist, geoscientist, applied scientist, or technologist who is registered and in good standing in British Columbia with a professional organization constituted under an Act, acting under the association's code of ethics and subject to disciplinary action by that association...”

1.1.1. Role of the ESC Supervisor

The ESC Supervisor is retained by the Developer to monitor, provide advice, and report on the site's performance under the ESC Permit.

The primary duties of the ESC Supervisor are:

- Review the proposed ESC Plan, signing off on the validity of the proposed ESC concept to adequately address expected issues on-site
- Monitor to ensure ESC facilities are implemented according to the ESC Plan; particularly at the commencement of clearing and grubbing
- Liaise with the various contractors to co-ordinate the implementation of ESC Facilities in a proactive and diligent manner
- Conduct site inspections as needed in accordance with this document and on-site construction scheduling to ensure measures are implemented and maintained appropriately
- Submit site reports to the City in accordance with section 7 of this document
- Advise the Engineer of Record/Owner of any ESC deficiencies or actions required to be implemented to adapt to changing site conditions or unforeseen problems that arise regarding erosion and sediment control
- Keep a detailed record of any changes to the ESC Plan and coordinate plan revisions with the plan designer as dictated by the performance of the site
- Co-ordinate the removal of ESC measures with site operations
- Monitor and report on the parameters identified in this document

- Liaise with the City regarding the management of the site under the ESC Permit, and
- Provide confirmation reports to the City to facilitate the release of held securities.

It is an obligation of the permit holder to retain the services of an ESC Supervisor at all times. Should this not be the case, then the Permit will be deemed in non-compliance.

1.1.2. Changing the ESC Supervisor on an ESC Permit

The ESC Supervisor registered against a ESC Permit can be reassigned to another individual as long as:

- The person to whom the role is being designated to meets the minimum requirements set forth in the ESC By-law
- The developer submits a new Schedule “D” document¹ completed by the new ESC Supervisor accompanied by a letter acknowledging the change of the ESC Supervisor.

Ensure that the request clearly references the ESC Permit number and that that the change is being made for and that a separate Schedule “D” document is submitted for each ESC Permit that the request is being made for.

Once this information has been received and reviewed; upon approval the City will update the ESC Permit accordingly. Until the changes have been made in the system the previous ESC Supervisor will remain the acting ESC Supervisor unless otherwise agreed to by the City.

1.1.3. Withdrawing services as the ESC supervisor

Should the ESC Supervisor choose to withdraw their services against an ESC Permit, the ESC Supervisor must submit written notification to the City advising of this decision. Until the notification has been received and processed by the City, the ESC Supervisor is still deemed responsible for the carrying out of the ESC Supervisor’s duties under active permits.

¹ Attached to the ESC By-law and available on the City's website at www.surrey.ca/esc under Related Documents

2. Frequency of Monitoring

2.1. INITIAL INSPECTION

Construction can only commence under the guidance of the ESC Supervisor to ensure the proactive implementation of ESC Facilities from the onset of construction.

A recommended construction sequence for starting construction is:

1. Hold a pre-construction meeting
2. Post the ESC Permit
3. Flag or fence clearing limits
4. Install catch basin protection, if required
5. Grade and install construction entrance(s)
6. Install perimeter protection
7. Construct sediment ponds and traps
8. Grade and stabilize construction roads
9. Construct surface water controls (interceptor dikes, pipe slope drains, etc.) simultaneously with clearing and grading for project development.

2.2. STANDARD FREQUENCY

The standard site monitoring requirements for active sites is at least once every 7 days and within 24hrs following significant rainfall events². Divergence from this frequency is allowed in agreement with the City as specified in Section 2.4.

2.3. SIGNIFICANT RAINFALL EVENTS

Under the City's requirements, the ESC Supervisor is required to conduct a site inspection of a permitted project within 24hrs of a Significant Rainfall Event (SRE). A SRE is categorised as 24mm of rainfall within a 24hrs period.

The rainfall station assigned to the site is set at the time of the plan review based on the information supplied by the plan designer.

The City currently has 6 rainfall stations across the City that monitors and report rainfall, at 5 minute intervals. These rainfall stations are located at:

- Port Kells
- Kwantlen Park
- Surrey Municipal Hall
- Semiahmoo Fish & Game Club
- Chantrell Creek
- Whiterock STP (Pier)

A map showing the geographical locations and prescribed rainfall catchments is presented in Appendix 1. Live feeds of the rainfall information are available on the City's website at www.surrey.ca/esc.

² Defined under the ESC By-law as a "Precipitation event which meets or exceeds the intensity of 25mm of total rainfall depth in a 24 hour period"

There have been a number of instances whereby there have been consecutive SRE events that have occurred within 24hrs of each other. When this occurs the City will allow a monitoring buffer between inspections. Another site inspection is not required if the SRE's are within 48hrs of each other, based on the hour the SRE occurs.

2.4. VARIATIONS TO THE STANDARD FREQUENCY

2.4.1. Seasonal Variation

Over the summer, generally late June to early September, the standard inspection frequency can be reduced to bi-weekly intervals to monitor BMP placement & conditions.

The City will monitor the weather forecast and will automatically set the seasonal variation.

2.4.2. Inactive Sites

Construction projects that are scheduled to be inactive for longer than four (4) weeks can apply to have the site status switched to "In-active". In requesting that the City review the project to consider setting the project to this the status; the ESC Supervisor must certify that:

- The ESC Plan has been fully implemented for the current phase of construction
- That all BMP's are adequately maintained, and sufficient to render the site protected

In addition the Developer must provide a signed statement outlining the intended project schedule.

The inspection schedule will be assessed based on the site conditions and the ESC control measures that have been implemented. The following categories will weigh in on determining the monitoring interval; whether it is set to bi-weekly, monthly, on-hold, and possibly not requiring SRE monitoring.

2.4.2.1. Stability of ESC Facilities

Are the deployed ESC facilities:

- Well constructed
- Are they likely to need regular on-going maintenance?

2.4.2.2. Type of Coverage

Is the treatment measure applied to erodible surfaces a temporary measure or a permanent measure for example blow straw has a maximum life span of approximately 3 months where as germinated seed is considered a permanent control measures.

2.4.2.3. Season

Over the summer the schedule for inactive sites may be placed on hold pending a site review. Please note that any reductions made for over the summer will likely not be automatically carried over to the following winter.

2.4.3. On Maintenance

Only applicable for sub-division related ESC permits that incorporate single family lots that are less than 2000 sq meters.

Typical monitoring frequency:

- Summer: monthly(30 day intervals)
- Winter: Bi-weekly (14 day intervals)

Any requests to deviate from this frequency will only be consider by the City for exemplary sites and will take into consideration the season, installed ESC measures, site conditions and the Permit holder’s duty of care.

To change the projects status from active construction to on-maintenance the ESC Supervisor must arrange for an on-site meeting with the City. Inspection requests can be made to the e-mail account escbylaw@surrey.ca

Building permits will not be released on a subdivision project until the ESC works have been reviewed and signed off by the City.

The City will only allow the site to transition to this site status if the Developer’s ESC responsibilities have been fully implemented to an acceptable standard.

Please note that the City will not allow the release of Building permits under the site Servicing Agreement until the ESC Permit has been set to this status.

2.4.4. Deficiencies and Variations to Standard Frequency

Once site deficiencies have been identified, the monitoring frequency will be set back to the standard frequency (weekly). It is a requirement of the permit that the identified deficiencies are corrected as soon as practical after the inspection but in no case later than 7 days once identified.

Only when a follow-up monitoring inspection identifies that all deficiencies have been corrected and that there are no new deficiencies will inspections returns to the varied monitoring frequency.

3. Delegation of Site Monitoring

The ESC Supervisor may choose to delegate to a suitably qualified individual under their supervisor the responsibility to monitoring and reporting on their behalf. The ESC Supervisor must, however, signoff on all correspondence with the City of Surrey and be ultimately responsible to identify and address ESC issues as they arise.

Should an individual acting under an ESC Supervisor carryout a fraudulent inspections, fail to monitor in an appropriate timeframe, or otherwise abuse the site monitoring process, the ESC Supervisor will be deemed the ultimate responsible person whom the City will hold accountable for the failure to monitor in a professional manner.

4. Monitoring Requirements

The ESC By-law requires permitted sites to undertake regular site inspections and monitoring. The installation of erosion and sediment control BMP facilities alone isn't sufficient to meet the requirements of the permit. To ensure that prescribed BMP's remain effective, regular inspections and maintenance must be conducted during construction, post construction maintenance periods, and through to substantial completion. Substantial completion is defined as the point at which a minimum of 90% of the land use is ready (including landscaping) or being used for the purpose intended.

Ideally, site monitoring should incorporate daily visual checks by the Site Supervisor or Engineer of Record. Site inspections should target critical areas on and off the site and should include:

- All disturbed areas,
- Soil stockpiles,
- Vehicle entry/exit points,
- All erosion and sediment control facilities,
- Storm water conveyance measures,
- Points of storm water discharge from the site (overland and piped flows), and
- Receiving waters within 50m of the site.

Between the specified monitoring periods, it is the responsibility of contractors on site to avoid interfering with ESC devices and facilities, repairing them as required. The Site Supervisor/Engineer of Record should conduct routine visual checks to ensure that the specified facilities outlined in the ESC plan are installed as specified and functioning accordingly. BMP's must be in good working condition until the up-stream area they manage is sufficiently stabilized so that the control measures are no longer required to protect the downstream drainage system.

Although the By-law requires post event monitoring after significant rainfall, ideally spot checks would be conducted during these events to evaluate BMP performance under storm flow conditions when the likely hood of deficiencies are more prevalent.

This section specifies the frequency and parameters required by the ESC Supervisor in fulfilling the monitoring and inspection requirements of the ESC Permit.

4.1. INSPECTION OF BMP INSTALLATION AND MAINTENANCE

The ESC Supervisor is required to conduct visual inspections to ensure that all ESC measures are installed in accordance with the approved ESC Plan in a timely manner. The inspections should identify any installation deficiencies that could impair the BMP's performance and notify the Site Supervisor to remedy the deficiency.

It is the responsibility of the ESC Supervisor to identify any maintenance issues that need addressing where by the efficiency of the BMP is likely to be compromised during the next rain event. Likewise it is up to the discretion of the ESC Supervisor to evaluate whether or not the installed BMP facilities are capable of meeting the ESC requirements of the Permit and see to it that measures are undertaken to mitigate any potential deficiencies in the ESC Plan.

4.1.1. Considerations When Inspecting BMPs

When inspecting the BMP's deployed on the Construction site the Monitor should critically review the following issues for each BMP:

When reviewing if something has been installed as per the ESC Plan

- The BMP has been installed/implemented as denoted on the ESC Plan
- The BMP has been constructed based on the specifications in the ESC Plan, &
- Should the BMP utilise a manufactured product, it has be used in accordance with the manufactures recommendations.

When reviewing if something has been maintained properly:

- The BMP has not been damaged or tampered with
- The BMP has not deteriorated and still meets the plan specifications to which it was designed, &
- The product is free of accumulated sediment or debris that will impede performance

4.1.2. BMP Suitability

Monitors should also assess whether or not the BMP's that are being used are adequate for the intended task that they are being specified form. For example if the Rock pad is failing on a consistent basis leading to muddy roads, is it the right BMP for the task. Sampling at Monitoring Points

4.1.3. ESC Plan-specified Monitoring Points

Sampling locations for assessing site performance are stipulated in the approved ESC Plan. Monitoring points should appropriately reflect site discharge at the downstream boundary of the site and be independent of any drainage flows that convey water from further up the drainage catchment or adjacent sites.

Should it not be possible to isolate site discharge at the downstream boundary from any influence from external sources; the monitor is to sample representative site discharge as it enters the drainage system i.e. catchbasins, outlet of a sediment pond, pump discharge to an inlet etc.

4.1.4. Additional Monitoring Points

Should flocculants be used on site as part of the ESC treatment train then a suitable site immediately downstream should be available to monitor the effectiveness of the treatment measure and chemical loading. Flocculent treated stormwater must undergo appropriate filtration prior to discharging from the site and must be monitored.

4.1.5. Environmental Parameters

Turbidity (NTU's)

Water turbidity will be primarily used as an in-situ indicator for the level of sediment concentration within site storm water discharge. Although the correlation between NTUs and TSS is generally strong and well documented, it is also site-specific dependant on the particular characteristics of the catchments being monitored (geology, slope, aspect, soils, vegetation and land use).

Initial site monitoring studies examining the correlation between TSS and NTU within the City of Surrey identified an average relation of 1:1.2 NTU:TSS units. Based on these findings, the trigger

value for requiring site discharge to be analysed for TSS is 65 NTU's. Should continual site monitoring identify on a particular site an alternate NTU value that more accurately reflects a comparative value for 75 mg/L TSS; an agreement in writing with the City may be possible to set an alternate trigger value.

TSS (mg/L)

As specified above, TSS analysis is required as part of the monitoring process should the in-situ turbidity reach or exceed the trigger point of 65 NTU.

The By-law specifies no discharge of sediment-laden water from construction sites greater than 75mg/L of Total Suspended Solids (TSS).

In-situ field sampling of site discharge is to be conducted using turbidity readings in Nephelometric Turbidity Units (NTU's). NTU results can be obtained in the field using hand held meters and are to be used for initial reporting and as a trigger for the collection of samples for the analysis of discharge TSS loading (refer to section 4.2).

In addition to the parameters specified within the ESC By-law the following parameters should be monitored under certain conditions. The inclusion of these parameters is to identify and evaluate whether or not there are any undue risks posed to downstream aquatic receiving environments from particular ESC Facilities and treatment measures.

PH

The PH of site discharge is to be included in the monitoring schedule when either flocculants are used as part of the ESC treatment train or when any de-watering/discharge from site (as either surface or piped flow) has been in contact with raw or curing concrete.

- Acceptable range of PH discharge = 6.5³ to 9.03

Water Temperature

Between the months of June through to September, water temperature discharge is to be added to the monitoring from open sediment facilities that maintain large volumes of standing water.

- Acceptable limits for temperature discharge = <15°C.

Temperature avoidance has been document at 15°C with temperatures >24-25°C considered lethal for salmon.⁴

4.1.6. Sampling Equipment

Scientific equipment utilized for the monitoring of in-situ turbidity is to be conducted using meters that generate a digital read out. The testing of discharge turbidity is to be undertaken using a meter capable of testing NTU either using ISO or USEPA testing standards. The use of a Triton Turbidity Wedge or Secchi Disk is not sufficient to meet the monitoring requirements specified under the By-law.

³ PH values deemed acceptable for the protection of freshwater aquatic ecosystems as specified within the Canadian Environmental Quality Guidelines, Canadian Council of Ministers of the Environment (CCME), 2002.

⁴ Fisheries and Oceans Canada Land Development Guidelines for the Protection of Aquatic Habitat (1993).

TSS measurements are to be analyzed by a registered laboratory and all samples are to be accompanied by a chain of custody form that can be made available if required.

Discharge pH monitoring should be conducted using a suitable analytical probe capable of a digital readout. Litmus paper and indicator solutions that require subjective interpretation are not sufficient for monitoring.

5. Closure of the ESC Permit

For all ESC Permits except those associated with a subdivision, the permit can only be closed upon the completion of construction, once all erodible surfaces have been stabilised and ESC Measures removed.

When the ESC Permit is attached to a Land Development single family subdivision; the ESC Permit remains effective until substantial completion⁵ of all construction within the original extent of the permit at the time of issuance. The permit holder will be held accountable for overall site discharge, common property (i.e. roadways, catch basins, park boundaries, drainage measures etc), and remaining undeveloped lots until substantial completion.

Once the site has reached a point where by the ESC Supervisor has determined that temporary ESC Facilities are no longer required, only then can the Permit Holder proceed with the removal of ESC Facilities. This work should be carried out under the guidance of the ESC Supervisor to ensure that the process is completed in a diligent manner, such as removing sediment accumulation on pavement around CB protection prior to pulling the device, ensuring that tracking is limited when back filling ponds, swales are treated where check dams have been removed, and so forth.

Once the decommissioning works have been completed, the ESC Supervisor is required to inspect the site to ensure that all temporary ESC Facilities are removed and that there are no outstanding deficiencies. Only then should the ESC Supervisor submit a Permit Closure Request.

The ESC Permit Closure Request must be in the form of a letter to the City signed by the ESC Supervisor, stating the following:

1. All construction related works are complete,
2. The site is stabilized and poses no further risk to the drainage system from sediment laden stormwater runoff,
3. There are no outstanding deficiencies, and
4. All temporary ESC facilities have been removed from the site.

Once the City has received this request, the City will then inspect the site before authorizing the closure of the ESC Permit and releasing the held securities.

⁵ "Substantial Completion" means the stage of construction at which a minimum of 90% of construction (including landscaping) is complete and the land is ready, or is being used for the intended purpose.

6. Reporting System

6.1. GETTING STARTED

When a qualified professional is first registered against an ESC Permit as the ESC Supervisor, the City will generate their user account and arrange for training. At the training the City will present the ESC Supervisor with their user password for the reporting system.

To navigate to the web interface go to www.surrey.ca/esc and click on Other Resources FAQ's to be redirected to the page with the web link to the On-line ESC Supervisor Reporting System. For ease of future access copy the web link to a shortcut on your desk top.

To log into the system the user is required to enter the e-mail address and password that are registered against the ESC Supervisor to whom is registered against the permit.

6.2. SYSTEM COMPATIBILITY

The on-line web interface has been built to operate using Microsoft® Internet Explorer®. When using the on-line reporting system ensure that:

- JavaScript has been enabled on your browser. If JavaScript is disabled for the browser in use, the interface may not display properly or may not function.
- You are use Microsoft® Internet Explorer® 7.0 or later.

If trying to use this system on other platforms please be aware that some web page functions may not function as intended or display properly.

6.3. ALLOWING FIELD STAFF TO MONITOR AND REPORT ON YOUR BEHALF

If the ESC Supervisor chooses to download their site inspections obligations onto a subordinate; the ESC Supervisor is still deemed liable for the performance of the person to whom they assign to act under their guidance. Any abuse of the system, failure to monitor the site or failure to report in a diligent manner by a person to whom they have shared their login credentials with be their responsibility.

6.4. THE SYSTEM AT A GLANCE (TOUR OF HOMEPAGE)

The user homepage provides the ESC Supervisor with an overview of all their ESC Permit that they are registered against with the City. The page provides

- A summary of the ESC Supervisors contact information
- A bulletin board that the city will broad cast notifications to all ESC Supervisors
- A list of all their ESC Permits that are currently under application review (Permit Management: Pre-Construction), and
- A list of all their Active ESC Permitted sites (Permit Management: Active Construction).

ESC SUPERVISOR HOME PAGE

Personal Information

Name: Thomas Moore
 Address: 2011 Surrey Place
Display of ESC Supervisor contact information
 Fax: (604)591-0001
 Work: (604)591-0001
 Email: thomas@gtc.ca
 Organization: Green Thumb Consulting Ltd

[Update Personal Information](#)

Bulletin Board

Welcome to the ESC Supervisor on-line permit management interface. The current monitoring frequency is set for the winter schedule

Bulletin Board

PERMIT MANAGEMENT: PRE-CONSTRUCTION

Permit #/ESC Reference #	Address	ESC Permit	Report Template	Construction	Initiate Site
<i>Display of ESC Permits that are in the application phase and that have not started construction and therefore monitoring</i>					
4509-0022-00	8040 160 St	Issued	Create Template	Project main	Start

PERMITS MANAGEMENT: ACTIVE CONSTRUCTION

Permit #/ESC Reference #	Address	Site Status	Inspection Type	Scheduled Inspection Date	Active Report Submission	Report History	Report Template
<i>Management window for managing Active ESC Permits</i>							
4509-0022-00	8040 160 St	Active	SRE		View	View	Edit
4510-0021-00 RA-1432	2121 160 St	Active	SRE	26-AUG-2011	Create Report	View	Edit
4511-0037-00	16484 52 Ave	Active	Regular	21-OCT-2011	Create Report	View	Edit

Powered by CSDC's AMANDA

Screen shot of the ESC Supervisor Home Page

6.4.1. Personal Information

The ESC Supervisor can modify their contact information and System password at any time by clicking on the *Update Personal Information* link under the personal Information section on the home page.

Should you forget your user password, please submit a password change request to the escbylaw@surrey.ca e-mail address. The password reset request must come from the ESC Supervisor's e-mail account that is shown on their record. It is the ESC Supervisors responsibility to notify any monitors to whom they have given their account credentials to of the password change.

6.4.2. Bulletin Board

The Bulletin Board is for general announcements to be broadcast to all active ESC Supervisors.

6.4.3. Viewing ESC File Information

To view the information recorded against an ESC File, the user can click on the permit number shown by the blue hyperlink to open up a page showing the file information.

The page that opens shows:

- The Permit Details
- File Contact Information
- Process Information that conveys information about key steps in the application process, &
- General permit information pertaining to both general site attributes and monitoring parameters.

6.4.4. Permit Management: Pre-Construction

Under the *Permit Management: Pre-Construction* heading is displayed information relating to ESC Permits that are either under review or have not started construction. This section will allow users to:

- Track permits during the application phase
- Manage the initial report template, and
- Start the monitoring cycle.

As part of the on-line system, once the drawings have been accepted by the City, the ESC Supervisor will be required to create the initial monitoring template for submission. The representative from the City overseeing the permit application process will screen the template to ensure that it reflects the initial plan stage prior to issuing the ESC Permit.

One feature that has been added is the ability to communicate to the ESC Supervisor the status of the construction permit. In the past there have been numerous occasions whereby the ESC Supervisor was not informed that construction had started; particularly when it came to land development related projects. Now when Land Development projects go to construction, the ESC Supervisor will be able to see it via this system.

Once the ESC permit has been issued the system will display *'Start'* under the "Initiate Site Inspection" column. Please refer to the Commencement of Construction Section for more information.

6.4.5. Permit Management: Active Construction

This section of the home page is where the user will manage the permit inspections and reporting once construction has started.

Under this section you will find the following headings

- Site Status – whether the site is Active or Inactive (see also section xx)
- Inspection type - whether the inspection is a regular inspection or Significant Rainfall inspection (refer to
- Scheduled inspection date (refer to section 5)
- Active Report submission (refer to section 8)
- Report History – link to all submitted reports
- Report Template – link to manage the active reporting template

6.4.6. Tabs (Help, Contact Us, Home Page, Log Out/Exit)

Down the side of the ESC Supervisor home page is a number of quick control tabs to direct the User to information about where to find help, how to contact the City with questions, as well as controls to log out (directs the user to the login page), and Exit (log out and close the web page). Also available is a quick link to navigate back to the ESC Supervisor home page.

6.5. INSPECTION SCHEDULES

The system is based around a Scheduled inspection date. There is a five (5) day inspection/reporting window in which the ESC Supervisor is expected to conduct and file the monitoring report: three (3) days before the Scheduled Inspection Date and two (2) days after.

Any inspection carried out more than 3 days in advance of the Schedule Inspection Date, while the report can be submitted, will not trigger the scheduling of a new Scheduled Inspection Date.

Once the Scheduled Inspection Date has passed the System will flag this to the ESC Supervisor by changing the *Create Report* link to red. If a monitoring report submission hasn't been submitted by the end of the 48hr period since the Scheduled Inspection Date, the system will automatically categorise the inspection as a "Missed Submission".

6.5.1. Regular Inspection Schedules

Regular inspections are scheduled based on either the standard reporting frequency or an authorised variation (refer to section 2.4).

A number of issues can alter the duration between Regular Inspection Dates; these being

- 1) the occurrence of a Significant Rainfall event
- 2) Identified site deficiencies, or
- 3) Missed report submissions

6.5.2. Significant Rainfall Event Inspection Schedules

SRE Inspections are considered a higher priority than a regular inspection. If you have completed a Regular inspection immediately prior to a SRE, the ESC Supervisor is required to complete the SRE inspection.

When a Significant Rainfall is detected the system will instigate the following procedure:

- 1) An e-mail alert will be sent to the ESC Supervisor to advise that this rainfall trigger has occurred.

The System will only notify the ESC Supervisor if they have an Active Site within the rainfall catchment for which the SRE has occurred. The e-mail will identify the applicable catchment that triggered the SRE requirement and the applicable ESC Permits.

- 2) It will create a new inspection event against all applicable ESC Permits. This required inspection will show in the ESC Supervisors permit list on their home page and will be indicated by the letters 'SRE' under the "Inspection Type" column.

Should the Rainfall Station be incorrectly recorded against the permit, please send correspondence to the e-mail address escbylaw@surrey.ca; that references the ESC Permit number and the proposed Rainfall Station you think it should be changed too.

Please be aware of the following System attributes:

- There could be a maximum 2hr delay between the actual occurrence of a SRE and the time that the system sends out the alert.
- A SRE can occur at any time and there is an expectation that the inspection is carried out within 24hrs of the time the SRE is triggered.
- When a SRE is triggered the system will remove any scheduled inspections that are open or that have not been submitted. When this occurs these inspections are replaced by the SRE Inspection. If you have saved a partial report it will not be recorded in the system.

- When a SRE occurs within 48hrs of the previous SRE, the system will not schedule another SRE Inspection within that timeframe. Only if a following SRE occurs after 48hrs from the previous SRE, will another monitoring event be scheduled.

Once the SRE Inspection has been closed the system will set a new scheduled Regular inspection based on the monitoring interval set for the permit.

6.5.3. Identified Site Deficiencies

When site deficiencies have been identified, the monitoring frequency will be set back to the standard frequency (weekly) until such time that all the deficient items have been corrected.

6.5.4. Missed Submissions and Inspection Schedules

When a missed submission is recorded against a permit, the system will schedule the next Scheduled Inspection Date for seven (7) days from the date of the missed Scheduled Inspection. This scheduling is independent of the current default or alternate monitoring frequency set for the permit

7. Permit Setup in the Monitoring Reporting System

7.1. PERMIT ACTIVATION IN THE MONITORING REPORTING SYSTEM

The ESC Supervisor will only see new permits on their Supervisor's Homepage after the ESC Permit application has been reviewed for the first time and the ESC Supervisor recorded against the permit number.

As soon as the Permit appears on the ESC Supervisors home page, the Supervisor will be able to track the progress of the permit application by clicking on the permit number to open the file information.

As part of the Permit application process, ESC Supervisors are now required to prepare and submit the initial reporting template before the ESC Permit can be issued. This step will ensure that both the reporting template is ready for the commencement of construction and to verify that the monitoring report template matches the accepted ESC Plan on file.

7.2. BUILDING A MONITORING REPORT TEMPLATE

Once the ESC Plan has been accepted during the review process, the ESC Supervisor will be able to create the initial monitoring report template. If the ESC Plan has not accepted the "Create Template" link will not be available to the User.

At any time during the creation of the monitoring template, the User can save the work in progress and return to it at a later time.

The first tab of the template is the general information tab. The only information the User needs to complete is the ESC Plan Stage they are referencing when they build the report template.

As the ESC Plan is dynamic and changes based on the scope of work, this will provide both the user and the City a reference point to help them understand which plan stage is currently applicable to the template.

The next three (3) tabs relate to the prescribed BMP's that are in the ESC Plan. Under each of the tab's (Erosion Control Measures, Stormwater Conveyance, and Sediment Control Measures) the User is presented with a list of BMP options that they can use in the site reporting template. A full list of the available options is presented in later in this section.



When the user selects a BMP option a descriptor will show at the bottom of the page to indicate examples of what is commonly associated with this BMP. When selecting BMP's, the user can highlight multiple BMP's while holding down the shift key to add a group of BMP's to the Template all at once.

While some BMP's relate to the entire site, others can be broken down to particular areas of the site or could be used in multiple areas. In order to accommodate this, the user can assign a location against each BMP. This ability is crucial when reporting site deficiencies.

Once the user is satisfied that they have included all the BMP's that are referenced in the plan stage they are referencing, they can move onto the Site Discharge Tab.

The monitoring locations should already be entered once the plan has been reviewed; however, the user is free to modify these locations as long as they comply with the requirements discussed under Section 5.

The following tables indicate the available BMP options that are assigned to each BMP Category.

Erosion Control BMP's

BMP	Example
Construction staging	Phase earthwork, areas of construction aimed at reducing the erodible surfaces.
Cut slope protection/stabilisation	RECP's, Bonded Fibre Matrix (BFM), Rock, Compost blanket, Stabilised Mulch Matrix (SMM), Flexible Growing Media (FGM).
Erodible surface protection - Permanent	Grass, Landscape, Vegetation, Turf Reinforcement Matt (TRM).
Erodible surface protection - Temporary	Straw, Poly, Hydroseed, Mulch, Compost blanket.
Retained vegetation	Established vegetation retained to reduce the exposed soils.
Seeding	Broadcast seeding in support of erodible surface management objectives.
Slope length treatment	Wattles, Brush Berm, Compost Sock, Compost Berm, Hog Fuel/Wood Mulch Berm, Contour Silt Fencing.
Stockpile surface protection	Hydroseed, Poly, Mulch w tackifier.
Surface texturing	Surface Roughening, Upslope tracking, Texturing.
Vehicle grade separation	Parking Pad, Engineered Product (Mud Mats [®]).
Vehicle restriction	Restricting vehicles to non-sediment generating surfaces.
Working surface augmentation	Gravel, Rock, Sand, Pit-run, 3-Inch Minus, Wood Mulch.

Drainage Control BMP's

BMP	Example
Check dams	Rock, Sand Bag, Compost Sock, Composite design (Rock + Sand), Engineered Manufactured Products.
Channel protection	RECP, TRM, Sod, Rock, Poly.
Clean water diversion	Isolation and directing of clean water from neighbouring catchments away from/around or through the construction area to prevent contamination.
Diversion berm	Divert or containment of clean flows to prevent access to the construction area i.e. Earthen berm, sand bags.
Diversion swale	Capture and convey clean water around the construction area.
Energy dissipaters	Rock, Lock Block, Level Spreader, Lined Sumps.
Interceptor swale	Swale to intercept flows from the construction site to a appropriate treatment facility.
Slope drain	Rock, Poly, RECP, Piped.

Sediment Control BMP's

BMP	Example
Bio filtration - Passive treatment w or w/o floc.	Used in place of a pond with discharged water (treated and/or filtered) being released in a sheet flow over an establish vegetation or manufactured filter surface.
CB/LB Protection - Off-site	Manufactured CB Inserts, Surrounds, Geotextile or a designed BMP.
CB/LB Protection - On-site	Manufactured CB Inserts, Surrounds or a Designed BMP. Use of geotextile prohibited.
Flocculent - Application prior to pond	Use of flocculent as a once off application or passively in the on-site flow treatment train upstream of a engineered pond.
Flocculent - Mechanical filtration unit	Flocculent dosage is calibrated based on the inflow water quality, system typically requires electricity and/or potable water connection.
Flocculent - Passive filtration unit	Flocculent dosage is via product that is designed to dose at a specific rate. Filtration is generally passive using settling tanks.
Infiltration	Use of on-site soils with a high infiltration rate to prevent the discharge of sediment laden water.
Manufactured filter strips	Compost Filter Media or manufactured Bio Filtration Media 2m or greater in width based on the flow path.
Wheel wash - Mechanical	Automated wheel wash that uses recycled water under pressure to clean the tires.
Wheel wash - Passive	Engineered Wheel Wash that uses standing water or a non-mechanical system i.e. manual tyre washing.
Perimeter controls	Compost berms, compost socks, silt fence (woven, non-woven, wire backed), containment berm.
Road sweeping - External pavement	Any sediment tracked from or deposited onto the neighbouring streets, lanes and sidewalks to be removed.
Road sweeping - Internal pavement	Removal of sediment deposited on internal paved surfaces to prevent stormwater contamination.
Rock access pad	Rock (3inch or greater free of fine sediments with supporting geotextile underlay).
Sediment control pond	Engineer designed pond to capture suspended sediments.

Sediment trap	Small trap designed to capture coarse sediment and larger suspended sediments.
Stockpiles - Containment	Silt Fence (Woven, Non-Woven, Wire Backed), Compost Berm, Compost Sock, Wattles (Straw, Wood, Coir).
Vegetated filter strips	Retained, established vegetation greater than 5m in width based on the flow path.

7.3. SUBMISSION AND APPROVAL OF THE INITIAL MONITORING REPORT TEMPLATE

Once the ESC Supervisor has created the initial monitoring report template and has submitted it for review, the template status will show as “Submitted”, at which point the following steps will occur.

The City will cross reference the template with the ESC Plan and will either:

- Accept the template without change,
- Accept the template making minor changes, or
- Ask for the template to be revised.

If the template is accepted the system will change the template status to “Approved”. If the template needs further attention the status will revert back to “Create Template”.

The ESC Permit will not be issued unless a reporting template has been accepted by the City.

7.4. EDITING A MONITORING REPORT TEMPLATE AFTER CONSTRUCTION HAS BEGUN

At anytime the user can revisit the template to add, remove or modify the location of the BMP. This is done by clicking on the “Edit” link under “Report Template” as shown below. The steps for modifying the template are the same as when setting up the initial template.

If the user is trying to remove a BMP that is currently identified as being in non-compliance the system will not allow that BMP to be removed. In order to remove this BMP it first has to be indicated in the inspection report as being rectified: both as per the plan and maintained.

Changes to monitoring templates after the commencement of construction are not required to be submitted for approval. The City may review the template and make changes to the active template if there are significant inadequacies identified should the site be audited.

PERMITS MANAGEMENT: ACTIVE CONSTRUCTION

Permit #/ESC Reference #	Address	Site Status	Inspection Type 	Scheduled Inspection Date	Active Report Submission 	Report History 	Report Template 
4509-0022-00	8040 160 St	Active	Regular	20-OCT-2011	Create Report	View	Edit
4510-0021-00 RA-1432	2121 160 St	Active	Regular	07-SEP-2011	Create Report	View	Edit
4511-0037-00	16484 52 Ave	Active	Regular	04-NOV-2011	Create Report	View	Edit

The active reporting template can be modified at any time by clicking on edit under the report template column

8. Regular Monitoring Report Submission

8.1. COMMENCEMENT OF CONSTRUCTION

Once construction has started the User will need to click on the “Start” link under the “Initiate Site Inspection” column to start the monitoring cycle under the ESC Permit.

PERMIT MANAGEMENT: PRE-CONSTRUCTION					
Permit #/ESC Reference #	Address	ESC Permit Status 	Report Template Status 	Construction Permit Status	Initiate Site Inspection 
4508-0001-00	18635 52 Ave	Issued	Create Template		Start

Once the permit has been issued the user can initiate monitoring by clicking on start under the “Initiate Site Inspection” column

As soon as the user triggers this control, the permit will be moved from the Permit Management: Pre Construction section to the Active Construction section.

The System will also set the first monitoring inspection for the same day in keeping with the requirement that monitoring should start once construction starts.

8.2. CREATE MONITORING REPORT

In order to enter the site inspection results, the user will select the *Create Report* link that is shown against the permit.

While ideally all site changes made to ESC Plan should be made in consultation with the ESC Supervisor; there are times when a monitor will find ESC Measures that have been deployed on the fly. Before starting the Create Report process check that the reporting template is up to date with all the items you need to use in your submission.

Should the user identify halfway through entering a report that they need to add a BMP, the system will only allow the reporting template to be modified if you *have not* saved your progress; however changing the template will result in the entered data being lost.

Check the reporting template before starting the report submission process

Once you have used the “Save Work in Progress” feature the reporting template is locked. Any changes made to the report template after this point will only show in the next inspection report.

Once selected the user will be presented with a report window that has seven (7) tabs showing:

- Inspection Details*
- General BMP's*
- Erosion Control Measures *
- Stormwater Conveyance*
- Sediment Control Measures*
- Site Discharge*
- Attachments

The tabs denoted with the astrix are mandatory as part of the report submission process.

8.2.1. Inspection Details Tab

When the user selects the create report link on a permit, the first window is the inspection details tab. In this tab the system includes a view of information that is generic for the selected permit: Permit number, Project Address, ESC Supervisor, and the *Report Type*.

One thing you will notice is that request for rainfall information is no longer a requirement as this information is automatically linked to the system.

The user is responsible for completing all the fields that have the astrix next to the field.

Monitors information (Inspected by & Position Title)

Because the City allows the ESC Supervisor to use a designate under their supervision the report template requires that the monitor's information to be referenced, even if the ESC Supervisor is doing the report.

Date of Inspection

The Date of Inspection field is to be used to record the actual date of the inspection, do not use the date that you are submitting the report on. The report submission date is automatically recorded when the report is submitted.

Time of Inspection

This information field under the Time of Inspection is based on a 24 hour clock so please enter the time you started your inspection accordingly. The format should be hh:mm so that 1:25pm is entered as 13:25.

Stage of Construction

When the Users selects the Stage of Construction info field they will notice that they are presented with a list that has a present range of option based on the type of project of construction project

Construction Status

Under the Construction Status info field the user is presented with a drop down with the options being Active and In-active. These are for reference purposes only to describe if there was activity on site at the time of the site inspection. The information reported here will not have any bearing on the overall construction status; request to change the site to In-active at the permit level must be submitted by the ESC Supervisor (refer to section 2.4)

ESC Plan Stage

The ESC Plan stage that is indicated on this page is pulled from the report template that is currently being referenced (See pg 18)

8.2.2. General BMPs Tab

Under the general BMP Tab the user will see the following general BMP's listed:

BMP 1: Is the ESC Permit site sign placed at the primary site entrance or site office?

BMP 2: Have all changes to the ESC plan been recorded and signed off by the designer?

BMP 3: Has construction been restricted to the area defined in the ESC Plan?

BMP 4: Have all temporary ESC measures that are no longer required been removed?

BMP 5: Based on construction, are all BMP's implemented as specified on the plan phase?

BMP 6: Are there any off-site areas being used that need to be managed?

These BMP's are considered universal to all sites and are indicative of general site management requirements under the issued permit.

When completing this reporting page please be aware of the following form validation rules:

- 1) If the user does not input a 'Y/N' value under the In Compliance column, the system will require that the user enters an explanation under the Comments column as to why a response was skipped.
- 2) If the user enters an 'N' value under a BMP then the System will require that an explanation be provided under the comments column and remedial comments under the "remedial action required" column
- 3) If there is a Deficiency date noted the user will be required to respond with a 'Y/N' response under the "In Compliance" column. Once a deficiency has been flagged it must be denoted as being addressed (i.e. 'Y' result) before it is cleared.

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CREATE REPORT [Printer-friendly version](#)

Permit Number: 4508-0115-00

[Inspection Details](#) | [General](#) | [Erosion Control Measures](#) | [Storm Water Conveyance](#) | [Sediment Control Measures](#) | [Site Discharge](#) | [Attachment](#)

Section 1 - General

BMP	Deficiency Noted	In Compliance?	Comments	Remedial Action Required
Is the ESC Permit site sign placed at the primary site entrance or site office?		<input type="text"/>	<input type="text"/>	<input type="text"/>
Have all changes to the ESC plan been recorded and signed off by the designer?		<input type="text"/>	<input type="text"/>	<input type="text"/>
Has construction been restricted to the area defined in the ESC Plan?		<input type="text"/>	<input type="text"/>	<input type="text"/>
Have all temporary ESC measures that are no longer required been removed?		<input type="text"/>	<input type="text"/>	<input type="text"/>
Based on construction, are all BMP's implemented as specified on the plan phase?		<input type="text"/>	<input type="text"/>	<input type="text"/>
Are there any off-site areas being used that need to be managed?		<input type="text"/>	<input type="text"/>	<input type="text"/>

CANCEL SAVE WORK-IN-PROGRESS SUBMIT FINAL REPORT

Explanation of the BMP's

BMP 1 – The by-law requires the permit holder to post the permit sign at the site entrance. Another option that is considered valid is if the permit sign is posted in visible location at the site trailer.

There are some exemptions to the posting of the permit sign; these being when the project is linear with no defined main entrance i.e. dyking project, or a Land Development related project that is classified as being On-Maintenance when the primary lot has been subdivided.

BMP 2 – While it is acknowledged that ESC Plans are dynamic in nature; it is a requirement of all issued ESC Permits that all changes to the ESC Plan are signed off by the Plan Designer the designed the original ESC treatment train and signed/sealed the designs performance.

If the BMP has been moved on the site to accommodate the site operations then minor changes can be made by the ESC Supervisor and denoted on the construction set of the ESC Plan. Should the BMP treatment train be altered or the BMP specifications be altered from the original specifications then the original designer is expected to sign-off on the proposed changes and submit an amended ESC Plan to the City reflecting the changes.

BMP 3 – The overall site construction must be restricted to the area denoted in the scope of the original ESC Plan. Should the area of construction spread to adjacent properties or a City Right of Way that are not included in the scope of works under the ESC Plan then the ESC Plan must be amended. The ESC Plan Designer must review the expanded scope, identify the required BMP's and submit a revised ESC Plan accordingly.

BMP 4 – Once the erodible areas upstream of a BMP have been stabilized to the point that the BMP is no longer required, then that BMP should be decommissioned and removed. This is of particular concern when the BMP's are inhibiting drainage inlets such as Lawn basins, Catch basins, and headwalls.

BMP 5 – The monitor should ensure that all the BMP's that are noted in the ESC Plan for a specific stage of construction are implement ahead of when they are needed. It is an observed common occurrence that BMP's are not being installed ahead of time which is leading to site discharge violations. Monitors are required to verify that the BMP's implementation schedule is proactive rather than reactive.

BMP 6 – Monitors should check to ensure that if areas off of the site are being used to stage trucking or being used for trade parking etc, that these areas are being managed. It has been noted on numerous projects that these areas are considerable sediment sources but are being overlooked. These areas are considered under the scope of the project and the permit holders is liable for all damages and poor water quality that occurs from all areas that are affected by the construction activities relating to their project.

8.2.3. BMP Reporting Tabs

These tabs are controlled by the BMP detail that has been entered into the report template for each permit.

These reporting tabs differ from the general BMP tab by the fact that there is an added reporting requirement column. The monitor is required to ensure that not only are BMP's implemented on the site in accordance with the ESC Plan; they are required to inspect the condition of the BMP to ensure they have been maintained and are meeting the objectives for which they were installed.

By indicating 'Y' under the column "Installed as per the ESC Plan" the monitor is certifying that:

- The BMP has been installed/implemented as denoted on the ESC Plan
- The BMP has been constructed based on the specifications in the ESC Plan, &
- Should the BMP utilise a manufactured product, it has be used in accordance with the manufactures recommendations.

When the monitor indicates 'Y' under the column "Maintained Properly" they certify that:

- The BMP has not been damaged or tampered with
- The BMP has not deteriorated and still meets the plan specifications to which it was designed, &
- The product is free of accumulated sediment or debris that will impede performance

Should the above statements not be satisfied when inspecting the BMP's, the user should flag the BMP as being deficient by indicating 'N' against the appropriate column.

The following Form Validation rules are built into the BMP monitoring pages:

- 1) If the user does not input a 'Y/N' value under a column, the system will require that the user enters an explanation under the Comments column as to why a response was skipped
- 2) If there is a value entered into either the "Installed as per the ESC Plan" or "Maintained properly" column; the user is required to answer both columns i.e. you can't maintain something that hasn't been built/implemented and if something is implemented/built then it has to be maintained.
- 3) If the user enters an 'N' value under a BMP then the System will require that an explanation is provided under the comments column along with remedial comments that provide direction to the client as to what needs to occur to rectify the deficiency.
- 4) If there is a Deficiency date noted the user will be required to respond with a 'Y/N' response under the "In Compliance" column. Once a deficiency has been flagged it must be denoted as being addressed (i.e. 'Y' result) before it is cleared.

Please be aware that the inspection report should include adequate information too clearly convey the issue to the permit holder and what needs to be done to address the issue.

8.2.4. Site Discharge Tab

Under the site discharge tab the monitor can report on up to five (5) site discharge location. While these discharge locations are preset on the report template, for flexibility, they can also be altered on this tab while entering the results. Should the monitor alter the monitoring locations while under the create report function, these changes will only show against that particular report. If you would like to permanently alter the monitoring locations for future reporting templates you will need to make this change on the edit report template feature.

The system is geared to allow the user to submit the in-situ NTU readings taken on the day of inspection; with the TSS results to follow if needed.

Should the user enter a NTU that exceeds the field trigger set for the permit, the system will notify the ESC Supervisor of the requirement for TSS analysis. As it takes a number of days for the results to be returned from the Lab the system does not require that the TSS results be submitted in the initial report submission; this requirement is triggered once the report is submitted

When a report is submitted with a NTU value that has exceeded the field trigger, therefore requiring the submission of TSS results, the system will keep the report open under the Active Permit section of the ESC Supervisors home page. Reports that are waiting on TSS results are indicated by the report status shows as Submit TSS Results under the 'Active Report Submission' column.

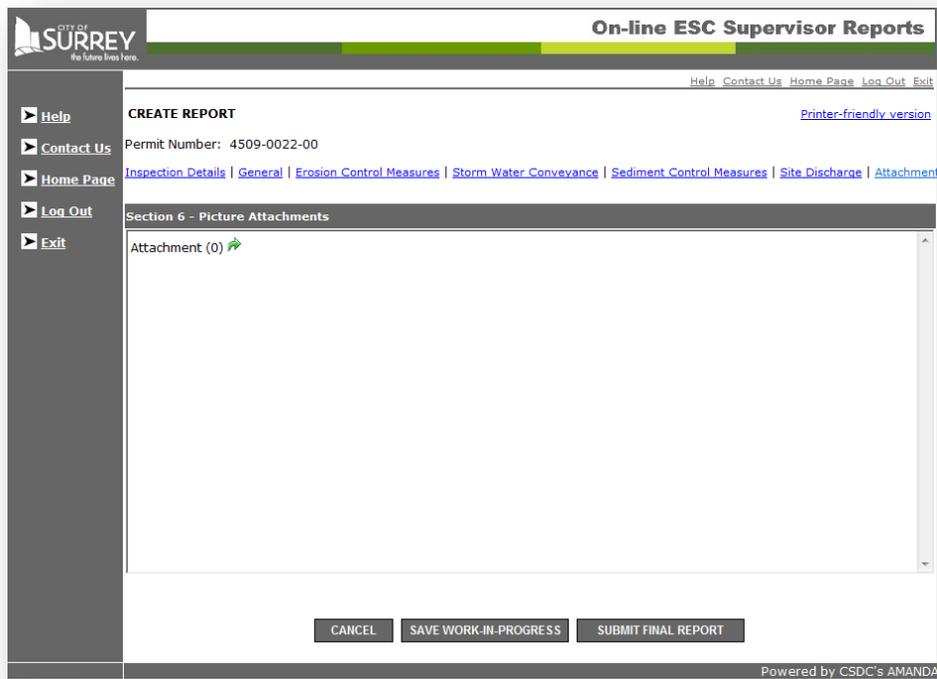
When the user opens a report to enter the TSS results they will see that all the reporting line items are locked except for the lines for the TSS results. Once values have been entered against each corresponding NTU that exceed the trigger value, the system will allow the user to submit the completed report.

The reporting parameters for pH and water temperature are only required as prescribed on page XX.

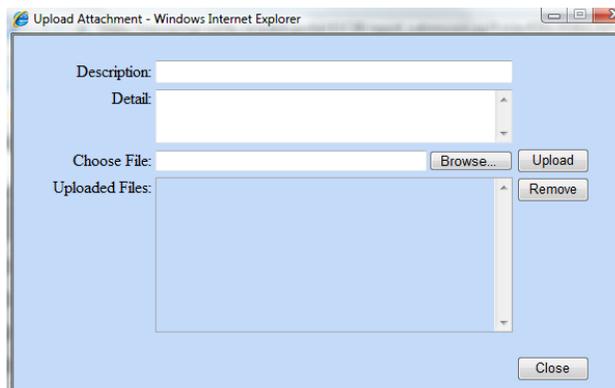
Under the reporting line item for the type of WQ meter used, the user can double click on the box for a drop down list of currently available meters on the market or they can manually enter a meter if it is not in the list. If there is a meter that you are using that isn't on the list please contact us with the meters information and it will be added to the list.

8.2.5. Attachments Tab

The attachments tab is available for the user to append photos or diagrams as part of the inspection. When the User opens this tab, click on the green arrow to attach the files to the system.



This will then open a window that will allow the User to select the file they want to upload. Users will be able to add a caption to the image or file to describe what is depicted in the file. Please note that the system will only allow files that are 1.3MB in size (3MP image on a digital camera).



8.3. SAVING WORK IN PROGRESS

Should the user start to enter their inspection results and need to switch to attend to something else, they are able to save the entered information and come back to it later. To save the work entered the user can simply click on the “Save Work-In-Progress” button at the bottom of the Create Report form that they are working on. The system will save all information that has been submitted under any of the Create Report tabs.

Once a user uses this function, upon returning to the user home page the system will show that the report submission has been started and saved as the report status will show as [Edit Report](#) under the ‘Active Report Submission’ column.

When the user returns to that particular permit to recommence working on the inspection report, they will click on the [Edit Report](#) to retrieve the data entered previously. The User should be aware that the report will still be classified as open unless it is submitted; therefore if the grace period lapses the saved progress will be lost and the report classed as a missed submission, refer to missed submission requirements on page ##.

The user should be aware that once you save a report submission that is in process, the user will no longer be able to modify the template.

The next time the user opens that particular the edit report template or the edit report all the information will be recovered. Be aware that until either a reporting template has been submitted via clicking on the Submit Final Template or the report in progress has been logged by clicking on the Submit Final Report button or the

This function is available when the user is making changes to either a report template or entering an inspection report.

8.4. MONITORING REPORT SUBMISSION

When the user is ready to submit the inspection report they can simply click on the Submit Final Report button on the bottom of the report submission form. The system will verify that you want to proceed to ensure that the user doesn’t accidentally submit the report.

The system will also check the report to ensure that all the required fields have been addressed as required. Should the system identify a field that hasn’t be addressed, the system will highlight the line items that need to be addressed.

8.5. VIEWING AND PRINTING SUBMITTED REPORTS

Users can view all the reports submitted against a permit by clicking on the [View](#) link under the Report History column. The system will display all reports in chronological order based on the date of the inspection. Clicking on an inspection date will open a web page that displays the submitted report.

Permit Management: Active Construction							
ESC Permit #	Address	Site Status	Inspection Type ?	Inspection Date	Active Report Submission ?	Report History ?	Report Template ?
4508-0064-00	5425 Production Blvd	Active	Regular	01-FEB-2012	Enter TSS	*** View ***	Edit
4508-0064-00	5425 Production Blvd	Active	Regular	08-FEB-2012	Create Report	View	Edit

To print the report, click on the Printer Friendly View link located in the top right corner of the report view to open a view that can be printed to a PDF.

8.6. TSS REPORTING FOR SUBMITTED MONITORING REPORTS

After submitting an inspection report that requires the submission of TSS results, the system will keep the inspection report open until the TSS results are submitted at a later date. The system will display these reports pending TSS results as another inspection entry on the ESC Supervisors home page, with “Enter TSS “ displayed under the Active Report Submission Heading as displayed below.

Permit Management: Active Construction							
ESC Permit #	Address	Site Status	Inspection Type ?	Inspection Date	Active Report Submission ?	Report History ?	Report Template ?
4508-0064-00	5425 Production Blvd	Active	Regular	01-FEB-2012	*** Enter TSS ***	View	Edit
4508-0064-00	5425 Production Blvd	Active	Regular	08-FEB-2012	Create Report	View	Edit

To assist in cross referencing the lab results to the associated report submission, the system will display the date the field inspection took place under the Inspection Date Column rather than the Scheduled Inspection Date.

To enter the TSS results, simply click on the Enter TSS link against the applicable report and the system will open the report. The system will lock all the previously submitted information, leaving only the TSS data fields available for data submission, under the Site Discharge Tab.


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Permit Number: 4508-0064-00

[Inspection Details](#) | [General](#) | [Erosion Control Measures](#) | [Storm Water Conveyance](#) | [Sediment Control Measures](#) | [Site Discharge](#) | [Attachment](#)

Section 5 - Site Discharge

	Monitoring location as per ESC plan	Turbidity(NTU)	TSS(mg/L)	pH	Temp(celsius)
MP1	Outfall from sediment pond before entry int	500			
MP2					
MP3					
MP4					
MP5					

NTU meter used:

pH:
The pH of site discharge is to be included in the monitoring schedule when either flocculants are used as part of the ESC treatment train or when any de-watering/discharge from site (as either surface or piped flow) has been in contact with raw or curing concrete.

Water Temperature:
Between the months of June to September inclusive, water temperature discharge is to be added to the monitoring from open sediment facilities that maintain large volumes of shallow standing water.

General comments:

CANCEL
SAVE WORK-IN-PROGRESS
SUBMIT FINAL REPORT

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Upon submitting the results the system will remove the report from the user home page.

9. Missed Monitoring Reports

If a report has not been submitted by the Report Submission Deadline, the system will deem that the inspection was missed; setting the report status as a “Missed Submission”. Please be aware that even if you start the report and save your progress, until you submit the report it is still deemed as “Open” and will be closed once the deadline has passed.

The system will track the frequency of missed submission against both an ESC Permit and the ESC Supervisor.

Once a permit has either two or more consecutive missed submissions or has a total of 20% of the scheduled inspections categorised as being missed; the permit will be deemed in non-compliance.

10. Ceasing Monitoring Reports

Once the project has reached completion and permanent surface protection established, rendering temporary ESC Facilities as no longer needed; the ESC Supervisor can submit a sign-off request.

The ESC Supervisor must submit a signed memo stating that the above criteria have been achieved for the site and that **all** Temporary ESC Facilities have been removed.

Once the City has received this request, a hold will be put on further monitoring inspections until the City has carried out a closure inspection. If the closure inspection identifies that all requirements have been met; remaining bonding will be returned and the permit closed. In the event that there are deficient items; the developer and consultant will be notified. Inspection notes are available under that final inspection process on the Permit Information webpage.

