
AFRRCS Agency Handbook

Section: Design and Configuration

Contents

1. Default Minimum Service Levels
2. Agency Connectivity (Planned)
3. Subscriber and PSAP IP Addressing (Planned)
4. Extenders - DAS in building repeaters (Planned)

HANDBOOK REVISION HISTORY

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AFRRCS

Default Minimum

Service Levels

Section: AFRRCS Default Minimum
Service Levels

DOCUMENT REVISION HISTORY

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1 GENERAL OVERVIEW

This document covers the minimum service levels for [AFRRCS](#).

These minimum service levels remain valid until revised, and will be reviewed annually, with further discretionary reviews in the case of chronic failure to meet the minimum service levels. There is a section for agreeing to and controlling changes within the agreement. Please see the [Controlled Change](#) section for more information.

1.1 SERVICE LEVEL GOALS

The goals of the minimum service levels are:

1. Promote communication between those that use AFRRCS and those that operate AFRRCS as a shared service;
2. Manage expectations for planning and response purposes;
3. Reduce conflict and misunderstanding regarding occurrences and severity as well as provide a suitable means for resolution when conflict does occur;
4. Acknowledge that service modifications are anticipated as capabilities, funding, and mandates evolve; and
5. Gauge shared service effectiveness.

2 DESCRIPTION OF SERVICES

AFRRCS consists of radio repeaters, trunking equipment, physical infrastructure (such as shelters and towers), radio controller equipment, computer hardware and software, and interconnecting commercial network equipment and services. Agencies using AFRRCS supply their own radios and equipment and AFRRCS supplies end-to-end network services for PTT voice communications and dispatch services as well as data services in support of voice and the agency's dispatch services.

3 SERVICE HOURS AND SUPPORT HOURS

AFRRCS delivers PTT voice radio services and associated services to enable dispatch services 24 hours a day, every day.

Agencies can report issues and troubles 24 hours a day 7 days a week through the published contact numbers, email, and by phone. Issues and troubles are managed as described in Appendix A – Performance Tracking and Reporting.

Additionally, Block Time is the hours of 7:00 AM to 11:00 AM on the first and third Wednesday of every month are reserved for system maintenance, and prior notification (one week or more) will occur if the PTT voice radio services and/or associated dispatch enablement services will be disrupted during those times.

If these service hours are found to be unacceptable, Agencies may request adjustment to the minimum service levels or by utilizing the process described in the [Controlled Change](#) section.

4 TECHNICAL SUPPORT

Radio users within each Agency are to send all requests for support through their Agency's radio support team. The Agency's radio support team may be in-house or a contractor or a combination.

The Agency's radio support team can contact AFRRCS by logging a work order, phone, and email:

- Work Order: placed via the Problem/Service Management System

- Phone: (587) 982-3710
- Email: afrrcs.operations@gov.ab.ca

All three will be monitored outside of technical support hours (8:15 am to 4:30 pm Monday to Friday, except holidays) for requests requiring immediate attention.

5 CONTROLLED CHANGE

Minimum service levels will require modification as:

- Workloads adjust;
- Metrics, measurement tools and processes improve;
- AFRRCS and other technical environments change and mature;
- Agency's mandates evolve;
- Technical capabilities are added and removed from the AFRRCS technical environment; and
- Lessons are learned and action is required to implement improvements.

Anticipating that the service levels will require adjustment and change, and that controlled adjustments and changes are positive events, the controlled change process will be activated routinely every two years (bi-annual) for each Agency utilizing AFRRCS. Bi-annual controlled change events may be postponed or called off indefinitely if mutually agreed by the Agency and AFRRCS.

If either AFRRCS or the Agency requires a decision on a requested change or modification in advance of the bi-annual process, either may propose modifications to the minimum service level earlier. Modifications will be negotiated and agreed to according to the following outlined procedures.

5.1 PROPOSED CONTROLLED CHANGES

To propose a modification to the minimum service levels, either AFRRCS or the Agency must submit a Proposed Controlled Change Recommendation accompanied by supporting documentation specifying the recommended modification. The Proposed Controlled Change Recommendation should include:

1. Which minimum service level is impacted or if a new minimum service level is being requested;
2. Recommendations for how to carry out the modification if it is accepted;
3. Other minimum service levels that may be impacted;
4. Other Agencies using AFRRCS that would benefit from the modification;
5. A timeline for testing, implementing, and finalizing the modification; and
6. External drivers for requesting the modification.

The submitted Proposed Controlled Change Recommendation should be in the form of a letter and addressed to the appropriate designated officials. See the section [Designated Officials](#) for more information.

Any and all modifications to minimum service levels, requires mutual agreement by both AFRRCS and the Agency. AFRRCS will strive to acknowledge all Agency Proposed Controlled Change within 7 calendar days. The same is expected for Proposed Controlled Change Recommendations submitted by AFRRCS to the Agency.

AFRRCS will attempt to agree to Proposed Controlled Change Recommendations but may not be able if the proposed modification:

AFRRCS Policies and Procedures - Default Minimum Service Levels

1. Is technically not possible;
2. Will negatively impact other Agencies using AFRRCS;
3. Is prohibitively expensive to establish and/or maintain; and/or
4. Is unlawful or against established GoA policy.

6 MINIMUM SERVICE LEVEL OVERVIEW

Minimum service level specifics are in [Appendix A – Performance Tracking and Reporting](#).

Reference	Service Level Title	Critical Priority	Service Level Measurement Reporting Frequency
SL 1.	AFRRCS Grade of Service	Yes	Quarterly
SL 2.	Scheduled Reports	No	Monthly
SL 3.	Changes to Scheduled Reports	No	Quarterly
SL 4.	Ad Hoc Reports	No	Quarterly
SL 5.	Activation of End User Permitted Radio	No	Quarterly
SL 6.	Disable an Agency Radio on AFRRCS	Yes	Quarterly
SL 7.	Updating the Permitted Radio List	No	Yearly
SL 8.	Approve The Design And Changes To Agency Radio Templates	No	Quarterly
SL 9.	Report Security Incidents To Appropriate Law Enforcement Agency	Yes	Quarterly
SL 10.	Acknowledge Agency Requests	Yes	Quarterly
SL 11.	Respond to AFRRCS network problems	Yes	Quarterly
SL 12.	Deploy SOWs	Yes	Yearly

Reference	Service Level Title	Critical Priority	Service Level Measurement Reporting Frequency
SL 13.	Radio Service Availability	Yes	Quarterly
CC 14.	Coverage Commitment	Yes	Yearly

7 AFRRCS AND USER AGENCY RESPONSIBILITIES

Responsibilities for individual minimum service levels are listed in [Appendix A – Performance Tracking and Reporting](#).

8 TEMPORARY ADJUSTMENT DURING AND AFTER DISASTER RESPONSES

The minimum service levels in this document are primarily for day-to-day operations. How AFRRCS continues to provide services during and immediately following disaster responses will require realignment during and immediately following disaster responses.

Agencies will be advised of temporary adjustments or suspension of minimum service levels after the level of response has been assessed.

To avoid missed expectations and confusion each agency must include AFRRCS in its emergency management response plans and other emergency management response plans where the agency has a role and include AFRRCS in emergency and disaster management planning and training.

9 SECURITY AND ACCESS TO INFORMATION AND PRIVACY

Minimum service level reporting will follow the security requirements of Agencies and the GoA identified in the Agency’s agreement.

10 DESIGNATED OFFICIALS

AFRRCS designated officials with the responsibility to work with the Agency to update minimum service levels:

1. Director AFRRCS OMS
2. AFRRCS Operations Manager
3. AFRRCS Manager of Finance and Records (may change after position is classified)

The AFFRCS Operations Manager will maintain a list of all Authorized End Users and Agency Designated Officials. Additions, and changes to this list must be forwarded in writing to the AFFRCS Operations Manager.

11 DEFINITIONS

In this document, except where a contrary meaning is clearly intended, the following expressions have the following meanings (and where applicable their plurals have corresponding meanings).

Acknowledgment Means the initial acknowledgment of an Agency Request by an OMS Technician.

Acknowledgment Time Means the clock time when the OMS first acknowledges the request and

supplies a troubleshooting plan and timeline.

AFRRCS Participation Agreement

Means a formal agreement between and Agency or entity and the JSG, defining the terms and conditions for the use of AFRRCS.

AFRRCS

Alberta First Responders Radio Communications System; specifically the Alberta wide emergency response radio system, services, and processes for public safety agencies.

AFRRCS Permitted Radio List

Means End User Radios that have passed a test, to be agreed upon in writing by the GOA and the Vendor, for harmonious function with AFRRCS.

Agency

Means the Agency or entity that has completed and signed an AFRRCS Participation Agreement.

Authorized End User

Means a representative of an agency that has received training appropriate to their role and function and OMS operations, and is authorized to act as an agency contact point.

Block Time

Means the hours between 7:00 AM to 11:00 AM on the first and third Wednesday of every month that are reserved for system maintenance.

Cumulative Availability Duration

Means the sum number of decimal hours a site or regional switch service has not been Available during a calendar year.

Grade of Service

Grade of Service or GoS means queuing statistics calculated quarterly to represent what percentage of calls were queued

Monthly MTTR

Means the cumulative length of system problems divided by the total number of system problems per month.

MTTR

Means mean time to respond and is the average time to respond to a system outage for all submitted trouble tickets, technical failures or performance issues.

Roadway

Means any street, road, avenue and freeway that the public is entitled to use for the passage of vehicles, excluding any segments that are covered or enclosed.

System Problem

Means a problem with AFRRCS that affects end user access or functionality.

System Problem Start Time

Means the earlier of:

- the time a problem is reported to the OMS by an Authorized End User, or
- the timestamp of the first OMS monitored alert that clearly indicates a System Problem.

OMS

Means the JSG Agency that has responsibility for monitoring, operating, managing and administering the AFRRCS Common Infrastructure.

P25 CAP

Means a voluntary program that allows manufacturers to formally demonstrate their products' compliance to P25 standards. Compliance testing is a formal, independent process that concludes with official summary test reports and suppliers' declaration of compliance documents.

AFRRCS Policies and Procedures - Default Minimum Service Levels

Problem/Service Management System	Means one or more software applications, or manual processes that will be used to record and track incoming Requests.
PTT	Means Push-To-Talk, also known as Press-to-Transmit, which is a method of having conversations or talking on two-way voice radio systems, using a momentary button to switch from voice reception mode to transmit mode.
Radio Service Availability	Means a series of metrics that express the percentage of time that critical AFRRCS components are operational.
Remote Site	Means AFRRCS repeater sites that require extraordinary travel arrangements.
Report Package	Means a set collection of reports that will be delivered to an agency.
Request	Means a phone call, email notification, or entry into the Problem Management system, made by an Authorized End User that requires action or response on the part of the OMS.
Request Interval	Means the length of time, measured in minutes, between the Request Time and the Response Time
Request Time	Means the clock time that indicates when a Request is received by the OMS.
Resolution	Means that the identified problem is resolved in entirety, and a final solution or operating condition has been put in place.
Resolution Time	Means the length when Resolution is achieved.
Response	Means the initial acknowledgement of an End User Request by an OMS Technician.
Response Interval	Means the length of time, measured in minutes, between the Request Time and the Response Time.
Response Time	Means the clock time that indicates when a response is sent by the OMS.
Restoration	Means the negative symptoms of the identified problem have been eliminated and AFRRCS is providing the required end user services.
Restoration Time	Means the time when a service is operational after a period where it is not available.
Service Level	Means documented services with delivery success parameters described in qualitative terms.
Site	Means an AFRRCS radio communication system repeater location.
Technical Support Hours	Means Monday to Friday, from 8:00 AM to 5:00 PM, excepting general holidays, when AFRRCS will provide technical support.

12 APPENDIX A - PERFORMANCE TRACKING AND REPORTING

12.1 SL 1 – AFRRCS GRADE OF SERVICE

12.1.1 DEFINITION

The Grade of Service (GoS) Minimum service level is to have no more than 3% of calls queued during the busiest hour of a calendar quarter.

The target Minimum Service Level is reported as a percentage.

AFRRCS Grade of Service (GOS) Minimum Service Level is a measurement used to help quantify system loading. It represents as a percentage, a radio user's ability to access the system considering existing radio traffic volume. The percentage represents the probability of being "delayed" access due to the unavailability of radio channels to support the call.

12.1.2 TIMEFRAME

Active system monitoring by OMS personnel will take place 24 hours a day, 365 days per year.

Reporting of the GoS Service Level will take place on site by site basis over a calendar quarter.

12.1.3 CONSTRAINTS

GoS Minimum Service Level constraints include:

1. Unexpected or unplanned temporary increases in radio usage.
2. Poor or inconsistent radio discipline within Agencies.
3. Radio features that consume more air time than traditional PTT voice traffic flows.

12.1.4 RESPONSIBILITIES

The AFRRCS OMS will:

1. Adjust capacity based on the use of AFRRCS.
2. Routinely compile predictive GOS calculations to predict outcomes by using estimated quantities and employing mathematical probability functions. Archived historical data and real time traffic data as well as subscriber quantities are used with "Erlang C" to examine system GOS future states.
3. Maintain the management and reporting facilities required to collect and store GoS data.
4. Rank the AFRRCS sites to determine when and where capacity adjustments are to be implemented.
5. If AFRRCS is unable to consistently achieve the 3% GOS, OMS will implement one or more of the following solutions:
 - a) Add channels,
 - b) Slow down Agency membership,
 - c) Modify tower access profiles, and/or
 - d) Advise Agencies that the GoS Minimum service level will not be routinely obtainable until a permanent solution is implemented.

The Agency shall:

1. Train its radio users and enforce radio discipline standards.
2. Attempt to provide advance warning to AFRRCS OMS when events may put the GoS Minimum Service Level at risk.

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3. Limit or restrict non-voice service that impacts GoS.
4. Report to AFRRCS OMS when GoS is perceived to not be achieved.

12.1.5 MEASUREMENT FORMULA

On a site by site basis, the GOS Minimum Service Level is calculated as follows:

$$\text{GOS} = \left(\frac{\text{The total number of Queued Calls in the busiest hour of the calendar quarter}}{\text{the total number of Talkgroup calls in the busiest hour of the calendar quarter}} \right) * 100$$

Where:

A Queued Call is an unconfirmed talkgroup call originating at a site with a reported queue duration of >0sec, and

A Talkgroup call is an unconfirmed talkgroup call originating at a site.

12.1.6 MEASUREMENT REPORTING PERIOD

The reporting periods for the above measures are grouped:

- Quarterly for call delay statistics during a calendar quarter, and
- Annually for call delay statics during a calendar year.

12.1.7 DATA SOURCES

The data sources / tools and services required are:

- Problem/Service Management System
- AFRRCS Regional Network Managers (RNM)
- AFRRCS Central Network Manager (CNM)
- AFRRCS Manager of Managers (MoM)

12.1.8 ESCALATION

Agencies can escalate to the Operations Team Lead and then the Operations Manager. Beyond those escalation, is to the Director of AFRRCS.

12.1.9 KEY PERFORMANCE INDICATORS

Key performance indicators include:

1. Number of radios in active use on AFRRCS per hour.
2. The average and maximum call duration per hour.
3. Number of radios roaming on AFRRCS per hour.

12.1.10 EXCEPTIONS

Exceptions for this Minimum Service Level include:

- disaster responses in area will cause temporary suspension of GoS Minimum service level until disaster response has ended,
- This service level will apply to unconfirmed talkgroup calls only. Confirmed Calls, ICalls and PSTN calls are excluded from the calculations.
- This service level applies to sites with more than one channel. Single channel sites are excluded from this service level.

12.2 SL 2 –SCHEDULED REPORTS

12.2.1 DEFINITION

This Service Level is used to measure the timely and accurate distribution of information to an Agency.

Two Report Packages will be created to provide information collected during quarterly and annual reporting periods.

Quarterly Package

This package will contain:

- The Package Checklist Report
 - o This report will contain a checklist of the provided reports in this package
- The Quarterly Status Report.
 - o This will be a short narrative describing pertinent events and actions as they pertain to the agency. It will also contain any planned system outages or operational events, known to the OMS at the time of report creation that may impact the Agency.
- The Quarterly Service Level Report
 - o This report will contain the service level performance for any minimum service levels that are measured and reported on a quarterly basis
- The Quarterly Service Report
 - o This will be a quarterly summary of any trouble or service events reported to the OMS by the agency, the current status and resolution.
 - AFRRCS trouble conditions or problems reported to the OMS by the agency
 - Any service requests made by the agency to the OMS and the associated status, including:
 - Report changes;
 - Ad hoc report;
 - Activation / deactivation of Permitted Radios;
 - Agency Radio template design or changes;
 - Fleetmap changes;
 - Security Incident Support / Notification; and
 - SOW deployment.
- The Quarterly Performance and Utilization Report
 - o This will contain the details of the Agencies usage of AFRRCS and at a minimum provide
 - Agency Call volumes
 - Distribution of calls by time of day
 - Calls by End user device

- Talkgroup Usage
- Usage by Call Type
- Single Site Channel usage

Annual Package

This report will contain

- The Report Package Checklist
- The Annual Status Report
 - This will be a short narrative describing pertinent events and actions as they pertain to AFRRCS
- The Annual Service Level Report
 - This report will contain the service level performance for any minimum service levels that are measured and reported on an annual basis
- The Annual Service Report.
 - This will be a numerical summary of all events reported to the OMS and will not include status or resolution status of each request or problem report
- The Annual Performance and Utilization Report
 - This report will contain Performance and Utilization Reports for the AFRRCS system with information summarized over the preceding year.

12.2.2 TIMEFRAME

Reports will be prepared and made available as per the following schedule:

Quarterly Package – to be produced at the end of each calendar quarter and published on an AFRRCS provided repository within 10 business days of the end of the calendar quarter

Annual Package, to be produced on an annual basis and published on an AFRRCS provided repository within 20 business days of the end of the calendar year.

12.2.3 CONSTRAINTS

The OMS will not provide hard copies of the report packages

The report packages will be published on a secure AFRRCS repository and may be downloaded by authorized agency representatives

12.2.4 RESPONSIBILITIES

The OMS will:

- Provide and maintain a secure repository
- prepare and publish the Report Packages on the AFRRCS provided repository
- maintain a historical archive of report packages of up to 3 years.

The Agency will:

- access and download report packages from the AFRRCS provided repository
- be responsible for distribution of the Report Package within the Agency.
- Review Report Packages for accuracy and completeness and notify the OMS of any discrepancies

- Provide feedback to the OMS identifying usefulness and suggested modifications to the packages.

12.2.5 MEASUREMENT FORMULA

The measurement of this Service level shall be based on the following.

A report package shall be considered to be a Successful Report Package if,

- 1) It is published prior to
 - o 5:00pm on the 10th business day following the end of a calendar quarter in the case of Quarterly Packages, or
 - o 5:00pm on the 20th business day following the end of a calendar year in the case of Annual Packages, and
- 2) contains all required reports
- 3) the receiving agency does not notify the OMS of any errors or discrepancies within 5 days of publication

Each reporting package shall be considered delivered once it has been published on the AFRRCS repository and the timestamp of the last published report in a report package shall be used to determine delivery time.

Any report package that does not meet condition 1) or 2) or 3) above, will be an Unsuccessful Report Package.

The success or failure of each package shall be recorded on a monthly basis.

The calculation of the Service Level shall be as follows:

Schedule Report Success = # of Successful report Packages provided within the calendar year / (# of Unsuccessful Report Packages + # Successful Report Packages provided in the calendar year)

12.2.6 MEASUREMENT REPORTING PERIOD

This Service Level should be measured on a monthly basis and reported on an annual basis.

12.2.7 DATA SOURCES

The data sources / tools and services required are:

- Problem/Service Management System
- AFRRCS Regional Network Managers (RNM)
- AFRRCS Central Network Manager (CNM)
- AFRRCS Manager of Managers (MoM)

12.2.8 ESCALATION

No escalation process is anticipated for the Service Level. If the Minimum Service Level is missed, resolution could be accomplished by ad hoc report creation or a call from the agency to obtain the necessary information.

12.2.9 KEY PERFORMANCE INDICATORS

Key performance indicators for this Service Level may be:

AFRRCS Policies and Procedures - Default Minimum Service Levels

- Number of Ad Hoc service requests. If an inordinate number of Ad Hoc requests are being generated it could indicate a deficiency in the report templates and canned reports as well as impacting the ability to deliver standard report packages in a timely fashion.
- Frequency of Ad Hoc requests. If standard reports are requested more frequently than the set schedule, it may indicate a need for increased access to operational and performance information
- Amount of agency/ OMS email traffic or service requests. These could be similar to Ad Hoc report requests, however if significant email traffic between the OMS and the Agency is identified, it could indicate the need for additional or supplementary reports.
- Direct agency feedback. On a regular basis agencies should be queried to determine how reports are used and if the information provided is being reviewed or of operational value. Feedback should be utilized to tailor report standard report packages to minimize work effort if information is not being reviewed or driving operational decisions.

12.2.10 EXCEPTIONS

As no performance thresholds have been identified for this Service Level, no exceptions are indicated at this time.

12.3 SL 3 – CHANGES TO SCHEDULED REPORTS

12.3.1 DEFINITION

Modifications requested by Agencies to default scheduled reports are expected. Agencies will request changes to reports through one of their Designated Officials.

The Agency's Designated Official will supply the AFRRCS OMS with the change parameters, success criteria, and other supporting information.

The target Minimum Service Level is to respond to the Agency's request to change a scheduled report within 21 calendar days with an estimate of how long it will take to implement the change, potential cost to the Agency, and other considerations.

12.3.2 TIMEFRAME

The information required to measure the Service Level is collected for each request and averaged over a calendar year period for individual Agencies.

12.3.3 CONSTRAINTS

Requests to change scheduled reports are subject to the following constraints.

1. All requests to change scheduled reports are automatically non-urgent S4 – Low for OMS severity and SL 11 Minimum service level apply for acknowledging Agency Requests.
2. Some requests to change scheduled reports will not be technically possible. Alerting the Agency of this finding will serve as completing the request.
3. Some requests to change scheduled reports will not be advisable due to negative impacts to capacity, data retention, or resource availability. Alerting the Agency of this finding will serve as completing the request.

When the request for change cannot be honored, in cases where security policies allow it, the Agency may be sent a copy of source (raw) data to determine if they can devise their own means to modify the scheduled report. If the Agency is successful, AFRRCS will review the means for potential adoption.

12.3.4 RESPONSIBILITIES

The OMS will:

1. Respond to requests to modify scheduled reports.
2. Maintain and steward the raw data used for report generation.
3. Share scheduled report changes with other Agencies if beneficial.

The Agency will:

1. Submit requests for changes to the scheduled reports by phone, email, or directly into the Problem/Service Management System.
2. Ensure each request contains parameters and success criteria to aid OMS in determining the viability of the change.
3. Fund the work to invoke the change to the scheduled reports if mutually agreeable.
4. Respond to OMS' requests for clarification and suggestions during the change estimation process.

12.3.5 MEASUREMENT FORMULA

The Service Level for responding to requests to change scheduled reports is a percentage.

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% request for change response on-time = (# of responses to Agency is less than 30,240 minutes / # of requests received) *100

12.3.6 MEASUREMENT REPORTING PERIOD

SL 3 is calculated and reported annually.

12.3.7 DATA SOURCES

Multiple data sources are utilized.

Agencies will request changes to the scheduled reports by:

- Work Order: placed via the Problem/Service Management System
- Phone: (587) 982-3710
- Email: afrrcs.operations@gov.ab.ca

12.3.8 ESCALATION

Agencies can escalate to the Operations Team Lead and then the Operations Manager. Beyond those escalation, is to the Director of AFRRCS.

After a baseline is established, Agencies that are observed to regularly fall above the baseline will be requested to speak to inconsistencies and may cause modification to the service level.

12.3.9 KEY PERFORMANCE INDICATORS

Key performance indicators for this SL include:

1. Measure how often OMS successfully deploys a change to the scheduled reports within the original time estimate.
2. The volume of request for changes.

12.3.10 EXCEPTIONS

Changes requested because of an Agency migration project to AFRRCS are excluded.

12.4 SL 4 – AD HOC REPORTS

12.4.1 DEFINITION

Specialized reports to meet specific Agency requirements are ad hoc reports. Agencies are responsible for funding ad hoc report drafting and generation.

Agencies request ad hoc reports through one of their Designated Officials.

The Agency's Designated Official will supply the AFRRCS OMS with the ad hoc report parameters, success criteria, and other supporting information.

The target Minimum Service Level is to respond to the Agency's request for an ad hoc report within 21 calendar days with an estimate of how long it will take to implement the change, potential cost to the Agency, and other considerations.

12.4.2 TIMEFRAME

The information required to measure the Service Level is collected for each request and averaged over a calendar year period for individual Agencies.

12.4.3 CONSTRAINTS

Requests for ad hoc reports are subject to the following constraints.

1. All requests for ad hoc reports are automatically non-urgent S4 – Low for OMS severity and SL 11 Minimum service level apply for acknowledging Agency Requests.
2. Some requests for ad hoc reports will not be technically possible. Alerting the Agency of this finding will serve as completing the request.
3. Some requests for ad hoc reports will not be advisable due to negative impacts to capacity, data retention, or resource availability. Alerting the Agency of this finding will serve as completing the request.

When the Agency's request cannot be honored, for cases where security policies allow it, the Agency may be sent a copy of source (raw) data to determine if the Agency can devise their own means to generate the ad hoc report. If the Agency is successful, AFRRCS will review the means for potential adoption.

12.4.4 RESPONSIBILITIES

The OMS will:

1. Respond to requests for ad hoc reports.
2. Maintain and steward the raw data used for report generation.
3. Share ad hoc report formats with other Agencies if beneficial.

The Agency will:

1. Submit requests for ad hoc reports by phone, email, or directly into the Problem/Service Management System.
2. Ensure each request contains parameters and success criteria to aid OMS in determining the viability of the change.
3. Fund the work for the ad hoc report if mutually agreeable.
4. Respond to OMS' requests for clarification and suggestions during the change estimation process

12.4.5 MEASUREMENT FORMULA

The Service Level for ad hoc report creation is a percentage.

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% request for ad hoc report on-time = (# of responses to Agency is less than 30,240 minutes / # of requests received) *100

12.4.6 MEASUREMENT REPORTING PERIOD

SL 4 is calculated and reported annually.

12.4.7 DATA SOURCES

Multiple data sources are utilized. Agencies will request changes to the scheduled reports by:

- Work Order: placed via the Problem/Service Management System
- Phone: (587) 982-3710
- Email: afrrcs.operations@gov.ab.ca

12.4.8 ESCALATION

Agencies can escalate to the Operations Team Lead and then the Operations Manager. Beyond those escalation, is to the Director of AFRRCS.

After a baseline is established, Agencies that are observed to regularly fall above the baseline will be requested to speak to inconsistencies and may cause modification to the service level.

12.4.9 KEY PERFORMANCE INDICATORS

Key performance indicators for this SL include:

Measure how often OMS successfully deploys an ad hoc report within the original time estimate.

Volume of requests for ad hoc reports.

12.4.10 EXCEPTIONS

Ad-hoc report requests because of an Agency migration project to AFRRCS are excluded.

12.5 SL 5 – ACTIVATION OF AGENCY PERMITTED RADIOS

12.5.1 DEFINITION

Radios must be activated to function on AFRRCS. Activating Agency radios is an Agency responsibility. However, when an Agency cannot activate an Agency radio due to unforeseen circumstance, AFRRCS OMS will work with the agency to activate the radio rapidly as best effort.

12.6 SL 6 - DISABLE AN AGENCY RADIO ON AFRRCS

12.6.1 DEFINITION

Radios must be enabled to function on AFRRCS. When a radio must be disabled, and the Agency does not have sufficient access to AFRRCS to disable the radio, the Agency may request that AFRRCS operations disable the radio.

If a request is received during Technical Support Hours, the radio will be disabled within 15 minutes of logging the request if there is a high negative security risk as deemed by the Agency. If the risk is not high, the radio will be disabled within 8 hours.

If a request is received outside of Technical Support Hours, the radio will be disabled within 30 minutes of logging the request if there is a high negative security risk as deemed by the Agency. If the risk is not high, the radio will be disabled within 8 hours.

Requests for disabling end user radios will be received by phone, email, and by direct entry into the Problem/Service Management System.

12.6.2 TIMEFRAME

SL 6 is reported quarterly.

12.6.3 CONSTRAINTS

Not applicable.

12.6.4 RESPONSIBILITIES

Agencies are to ensure their subscriber units are secure and accounted for. When an Agency determines that a subscriber unit is no longer within their control, the Agency must disable the radio or request it be disabled immediately.

Requests to disable a radio must be submitted by an Authorized End User and include:

- 1 The radio's Unit ID
- 2 The radio's Unit IP address; and
- 3 The radio's Subscriber Unit Electronic Serial Number

Not supplying the necessary information will slow down disabling the radio.

12.6.5 MEASUREMENT FORMULA

Disabling radios during and outside of Technical Support Hours are expressed as two separate percentages.

During Technical Support Hours

% disabled on time during Technical Support Hours = (# where radios disabled within 15 minutes / # of requests received) *100

Outside of Technical Support Hours

% disabled on time outside Technical Support Hours = (# where radios disabled within 2 hours / # of requests received) *100

12.6.6 MEASUREMENT REPORTING PERIOD

SL 6 is calculated and reported quarterly.

12.6.7 DATA SOURCES

Minimum Service Level measurements for SL 6 are sourced from the Problem/Service Management System.

12.6.8 ESCALATION

Agencies can escalate to the Operations Team Lead and then the Operations Manager. Beyond those escalation, is to the Director of AFRRCS.

After a baseline is established, Agencies that are observed to regularly fall above the baseline will be requested to speak to inconsistencies and may cause modification to the service level.

12.6.9 KEY PERFORMANCE INDICATORS

Key performance indicators include:

- How many radios are active on the system during the reporting period.
- How many requests for disabling radios from all Agencies were completed during the reporting period.

12.6.10 EXCEPTIONS

Exceptions include:

- Disabling radios used in training exercises fall outside of this service level. Disabling radios used in training exercises must be arranged separately.
- Disabling radios used in disaster response fall outside of this service level. Disabling radios used for disaster response must be arranged separately.

12.7 SL 7 - UPDATING THE AFRRCS PERMITTED RADIO LIST

12.7.1 DEFINITION

Prior to being permitted to operate on AFRRCS, all handheld and mobile radio models must successfully pass AFRRCS Permitted Radio testing and be included on the Permitted Radio List.

Manufacturers submit a request for testing of new products by submitting the radio models to be tested and documentation to confirm P25 CAP testing against Harris infrastructure as posted on the FEMA Responder Knowledge Base at <https://www.rkb.us/>.

AFRRCS conducts the specified tests and awards a pass or fail. A pass places that model on the Permitted List.

The target Minimum Service Level is 100% per quarter.

12.7.2 TIMEFRAME

Submitted radios are tested and added to the Permitted list on a quarterly basis.

Testing of a new product can be accelerated if initiated by a written request from the Agency, stating the time constraints on their acquisition process. Testing timeframe would then be negotiated between the Agency and AFRRCS.

12.7.3 CONSTRAINTS

Testing requires access to the lab facilities and for the manufacturer vendor to participate.

All requests to update the AFRRCS Permitted Radio List are automatically non-urgent S4 – Low for OMS severity and SL 11 Minimum service level apply for acknowledging Agency Requests.

12.7.4 RESPONSIBILITIES

Manufacturers must submit the proposed radios, programming software, cables, and P25 CAP test results.

AFRRCS must test the submitted radios and add the radios which pass the specified tests to the AFRRCS Permitted Radio List.

12.7.5 MEASUREMENT FORMULA

Updating the AFRRCS Permitted Radio List is expressed as a percentage.

Percent Complete = (# of radios tested in a quarter / # of Requests in quarter)*100

12.7.6 MEASUREMENT REPORTING PERIOD

Reports on testing progress will be reported quarterly.

12.7.7 DATA SOURCES

Minimum Service Level measurements will be sourced from the Problem/Service Management System.

12.7.8 ESCALATION

Not applicable.

12.7.9 KEY PERFORMANCE INDICATORS

Key performance indicators include:

- Quarterly increases to the number of devices added to the AFRRCS Permitted Radio List.
- Yearly increases to the number of manufacturers added to the AFRRCS Permitted Radio List.

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- All tests for radios targeted for a quarter complete as planned.

12.7.10 EXCEPTIONS

Accelerated tests requested by Agencies are not part of the Minimum Service Level.

Updates requested because of an Agency migration project to AFRRCS are excluded.

12.8 SL 8 - APPROVE THE DESIGN AND CHANGES TO AGENCY RADIO TEMPLATES

12.8.1 DEFINITION

AFRRCS OMS will approve or send back for further revision, changes to design and templates for Agency radios. AFRRCS OMS will review changes based on:

1. Security requirements.
2. Capacity management.
3. Naming conventions.
4. Policy alignment.

When a requested change to design and/or templates for Agency radios is sent back to an Agency for further revision, the Agency must resubmit a new request for design and changes to Agency radio templates.

The target Minimum Service Level is to respond to the Agency's request for Agency template changes within 14 calendar days with either a rejection or acceptance of the requested change.

12.8.2 TIMEFRAME

The information required to measure the Service Level is collected for each request and averaged over a calendar quarter for individual Agencies.

12.8.3 CONSTRAINTS

Requests for approving Agency radio design and template changes are subject to the following constraints.

1. All requests to approve changes to Agency radio templates and designs are automatically non-urgent S4 – Low for OMS severity and SL 11 Minimum service level apply for acknowledging Agency Requests.
2. Some design and template changes will not be technically possible. Alerting the Agency of this finding will serve as completing the request.
3. Some design and template changes will not be advisable due to negative impacts to capacity, AFRRCS security, or policy violation. Alerting the Agency of this finding will serve as completing the request.

12.8.4 RESPONSIBILITIES

The OMS will:

1. Maintain records of previously approved templates and designs.
2. Approve or reject requested changes to design and radio templates.
3. Communicate to the Agency the reason(s) for the rejection as well as suggestions for attaining the same effect by different means.

The Agency will:

1. Allow for sufficient time to process requests.
2. Develop disaster response templates for activation when daily use templates are counterproductive.
3. Ensure submissions for changing radio templates and design contain sufficient information for assessing impact to AFRRCS.
4. Implement approved changes to Agency radios.

12.8.5 MEASUREMENT FORMULA

The Service Level for responding to Agency radio template and design changes is a percentage.
% request for change to template = (# of responses to Agency is less than 20,160 minutes / # of requests received) *100

12.8.6 MEASUREMENT REPORTING PERIOD

SL 8 is calculated and reported by calendar quarter.

12.8.7 DATA SOURCES

Multiple data sources are utilized. Agencies will request changes to the scheduled reports by:

- Work Order: placed via the Problem/Service Management System
- Phone: (587) 982-3710
- Email: afrrcs.operations@gov.ab.ca

12.8.8 ESCALATION

Agencies can escalate to the Operations Team Lead and then the Operations Manager. Beyond those escalation, is to the Director of AFRRCS.

After a baseline is established, Agencies that are observed to regularly fall above the baseline will be requested to speak to inconsistencies and may cause modification to the service level.

12.8.9 KEY PERFORMANCE INDICATORS

Key performance indicators for this service level include:

1. Number of requests that are rejected.
2. Number of requests that are accepted on the second try and the third try.
3. Number of Agencies that have pre-approved disaster response radio templates ready.

12.8.10 EXCEPTIONS

Exceptions for this service level include:

1. Changes for disaster response and force majeure events are excluded.
2. Changes necessitated and/or requested by AFRRCS OMS are excluded.
3. Changes requested because of an Agency migration project to AFRRCS are excluded.

12.9 SL 9 - REPORT SECURITY INCIDENTS TO THE APPROPRIATE LAW ENFORCEMENT AGENCY

12.9.1 DEFINITION

This service level measures and reports the duration between becoming aware of a potential security incident and reporting it to the appropriate authorities.

The Minimum Service Level is to report potential security incidents within 1 hour of becoming aware 100% of the time.

Subsequently, potential security incidents are reported to the Agencies based on conditions documented in the Agency's specific agreement.

This service level will report on all potential security incidents and not just those that impact the Agency.

12.9.2 TIMEFRAME

SL 9 is reported quarterly.

12.9.3 CONSTRAINTS

Constraints include:

- If an incident results in an investigation, AFRRCS may not be able to share details with Agencies. The police file number will be shared with Agencies.
- Reporting details of security incidents will follow AFRRCS policies and agreements with Agencies.

12.9.4 RESPONSIBILITIES

AFRRCS responsibilities include:

- Actively monitoring logs and reports for security incidents and warnings.
- Incrementally improve AFRRCS' security stance.
- Report security incidents to appropriate authorities.
- Supply appropriate updates and details to Agencies.

Agency responsibilities include:

- Reporting suspected security incidents to AFRRCS immediately, upon becoming aware.
- Reporting to AFRRCS suspected security weaknesses.

12.9.5 MEASUREMENT FORMULA

Reporting the suspected security incidents minimum service level is expressed as a percentage.

Percent Reported On Time = (# of suspected security incidents in quarter reported in under 1 hour / # of suspected security incidents in quarter)*100

12.9.6 MEASUREMENT REPORTING PERIOD

Reports will be supplied to Agencies quarterly.

12.9.7 DATA SOURCES

Multiple data sources are utilized.

Agencies will request changes to the scheduled reports by:

- Work Order: placed via the Problem/Service Management System

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- Phone: (587) 982-3710
- Email: afrrcs.operations@gov.ab.ca

AFRRCS staff will monitor the following for potential security incidents:

- Device and service logs include syslog;
- Intrusion detection logs and alerts;
- Firewall logs and alerts;
- Account tracking logs and alerts; and
- Anti-virus logs and alerts.

Timing for status changes will come from the Problem/Service Management System.

12.9.8 ESCALATION

All reported security incidents are treated as either S2 – Major or S1 – Critical depending on the judgment of the AFRRCS resource taking the call or noticing the alert.

If an Agency is not satisfied with the ranking of S2 – Major or the timeliness of the response, after discussing it with the AFRRCS Ops Manager, the Agency can escalate to the Operations Team Manager, and then the Team Director of AFRRCS.

12.9.9 KEY PERFORMANCE INDICATORS

Key performance indicators include:

- Number of suspected security incidents per quarter.
- Number of suspected security incidents where no threat is found.
- Number of security incidents associated with specific elements or AFRRCS personnel.
- Number of improvements in response to security incidents.

12.9.10 EXCEPTIONS

Not applicable.

12.10 SL 10 - ACKNOWLEDGE AGENCY REQUESTS

12.10.1 DEFINITION

This Service Level measures the OMS’s ability to Acknowledge Authorized End User Requests in response to system problems based on urgency determined by the Authorized End User and actual Severity as defined by the OMS, as per in the following table:

Agency Urgency	OMS Severity	Definition	Call Acknowledge Time
Urgent	S1-Critical	Causing loss of service to a large number of users/ sites or an Emergency Fault (as defined below), including failure of a system switching element and or service offering that has a critical impact on End users (Emergency not working on radios)- Immediate action is required. Resources may be allocated immediately.	15 Minutes
	S2-Major	Single site failure. Severely affecting some users across the system/ Site specific, or impacting upon a large number of users within a site, including severe degradation of the system; any fault that causes a negative impact on End-User’s	30 Minutes
Non-Urgent	S3- Minor	Capacity affecting. No severe impact, most operations remain functional, but rectification cannot be deferred beyond the maintenance release.	2 Business Hours
	S4- Low	Non service impacting. there is little or no impact to End-User’s	8 Business Hours

This Service Level will measure the time for the OMS to Acknowledge Authorized End User Requests received from one of three sources during Technical Support Hours:

- Work Order: placed via the Problem/Service Management System
- Phone: (587) 982-3710
- Email: afrrcs.operations@gov.ab.ca

The Authorized End User placing the request will provide an indication of the level of urgency with the request. This urgency level will be used to perform an initial analysis and subsequent Severity rating by OMS personnel. It will be the OMS determined Severity rating that will be used to measure the Service Level.

12.10.2 TIMEFRAME

The information required to measure the Service Level will be collected on an individual call / request basis and will be averaged over a calendar quarter period for calls from all AFRRCS Agencies.

12.10.3 CONSTRAINTS

The volume of calls made to the OMS by a single agency is expected to be very low and may not provide useful information when assessing overall OMS performance. It is suggested that all calls from all agencies be averaged over a calendar quarter to provide an accurate assessment of the service.

To provide reporting flexibility and ensure Acknowledgments are tracked accurately, three methods for receiving Requests will be provided. They are:

- Work Order: placed via the Problem/Service Management System
- Phone: (587) 982-3710
- Email: afrrcs.operations@gov.ab.ca

The Acknowledgment Interval calculated for this Service Level will only apply for the first acknowledgment to a Request. Subsequent calls made to resolve a Request may be tracked in the Problem/Service Management System, but will not be used for the Service Level calculation.

12.10.4 RESPONSIBILITIES

The Authorized End User shall:

Place calls or requests to one of the three communications paths

(Email / Phone / Problem/Service Management System web Interface)

For Email Requests or phone requests that go to Voicemail, the Agency shall provide the following information:

- Caller name
- Caller Agency
- Caller contact information:
 - Current phone number(s)
 - A secondary contact name and phone number(s) if available
 - Email address
 - *Radio contact detail if available or applicable*
- User opinion of the Severity (*may be impossible for users to determine difference between Critical and Major. Could reflect Critical / Major / Minor / Low*)
 - Urgent – A service impacting outage or problem that affects more than one user
 - Non-Urgent – A problem that has limited impact on one or more users, or a request for Service.
- A summary of the situation, including known impact.

For situations that the Agency End User feels are urgent, they will:

- In the case of Email messages - set the message priority to urgent in the email system, and include the word URGENT in the message header.

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- In the case of Voicemail messages use the phone system to set the priority to Urgent using the phone mail options.

The Severity will be determined by the OMS Technician and will be recorded in the Problem or Service Ticket record.

The OMS will:

- Assess the call detail and assign Severity:
 - In the case of an Urgent call, within 10 minutes.
 - In the case of an Non-Urgent call, within 1 Business Hour
- If the Request was not entered directly into Problem/Service Management System, an OMS Technician will create a Problem or Service Ticket and record the time a call was received.
- The time the call was received will be:
 - In the case of email messages: based on the email timestamp included in the email message
 - In the case of voicemail, the voicemail timestamp as reported by the voicemail system
 - In the case of a phone call to the OMS, and directly answered by an OMS Technician, the clock time as recorded by the OMS Technician.

Once assessed by an OMS Technician, the OMS Technician will then acknowledge the request within the designated timeframes as determined by the OMS Severity classification.

In the case of a voicemail Request, the time Acknowledge Time will be the clock time actual contact with the Request originator or designated alternate. Voicemail messages will not be considered Acknowledgements except in the case of Minor or Low Severity calls.

12.10.5 MEASUREMENT FORMULA

Measurement for this Service Level will be as follows:

For each form of communication (email / voicemail / Problem/Service Management System web interface) the Acknowledge Time will be measured as follows:

For email requests:

- Acknowledge Time will be the send time of the email message, as recorded in the email timestamp.

For phone requests:

- For voicemail Requests, the Acknowledge Time will be the timestamp of the recording as produced by the voicemail system.
- For phone calls that are made directly to the OMS and answered directly by a Technician, the Acknowledge Time will be the clock time as recorded by the OMS technician.

The Acknowledge Time is measured as follows:

- For Phone Acknowledgments, the OMS Technician will record the actual contact time in the Problem Ticket when person to person contact is established.
- For Email Acknowledgments, the OMS Technician will record the send time of the email acknowledgment in the Problem/Service Ticket.

For Urgent Requests, an OMS Technician will contact the Agency by phone unless the Agency indicates an Email acknowledgment is desired.

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On a Calendar quarter basis, the following values will be computed:

- 1) Critical Call Acknowledge Interval = Average of (Acknowledge Time – Request Time in minutes) for every Critical Request received in the quarter.
- 2) Major Acknowledge Interval = Average of (Acknowledge Time – Request Time in minutes) for every Urgent Request received in the quarter.
- 3) Minor Acknowledge Interval = Average of ((Acknowledge Time – Request Time in minutes) for every Minor Request received in the quarter.
- 4) Low Acknowledge Interval = Average of (Acknowledge Time – Request Time in minutes) for every Low Request received in the quarter.
- 5) Average Acknowledge Interval = Average of (Acknowledge Time – Request Time in minutes) for every Request received in the quarter.

In addition, the above values will be recomputed for all Requests received within a calendar year, following the end of a calendar year.

12.10.6 MEASUREMENT REPORTING PERIOD

The reporting period for the above measures will be:

- Quarterly for all Requests received during a calendar quarter, and
- Annually for all Requests received during a calendar year.

12.10.7 DATA SOURCES

Multiple data sources are utilized.

Agencies will request changes to the scheduled reports by:

- Work Order: placed via the Problem/Service Management System
- Phone: (587) 982-3710
- Email: afrrcs.operations@gov.ab.ca

12.10.8 ESCALATION

An emergency contact escalation tree would provide for direct person to person contact in the event that calls are not responded to in accordance with the service level.

Requests entered into the Problem/Service Management System that have not been responded to within 8 hours will automatically be assigned to the OMS Manager.

12.10.9 KEY PERFORMANCE INDICATORS

Key Performance indicators for this Service Level should include:

- Quarter over quarter trending to indicate staffing issues or process improvement needs.
- The number of calls received on a single problem issue to identify requirements for mass notification messages and reduce OMS activity levels during significant calls
- Analysis of the four various Acknowledgment Interval metrics to indicate the overall OMS needs / staffing (i.e. very quick / slow Low Acknowledgment Intervals could indicate over staffing conditions on one shift or another, ... multiple analysis metrics available here)
- Calls by Severity and Agency to identify potential problem areas or need for User Representative Training

12.10.10 EXCEPTIONS

Requests arriving at the OMS from a source other than the three recommended, should not be rejected but should be entered in the Problem/Service Management on a best effort basis by an

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OMS Technician. Request Times may not have a well-defined determination method and will be estimated by the OMS Technician based on the best available information. In all cases the time used by the OMS Technician should reflect the time the Request was received at the OMS.

12.11 SL 11 – RESPOND TO AFRRCS SYSTEM PROBLEMS

12.11.1 DEFINITION

This Service Level measures the Response Time of OMS to respond to reported trouble or an identified issue and initiate an action toward the resolution of the trouble or issue.

The following Severity definitions and target Response Times are for the purposes of measuring this Service Level.

Severity	Definition	Example	Mean Time to Respond
S1-Critical	Causing loss of service to a large number of users/ sites or an Emergency Fault (as defined below), including failure of a network switching element and or service offering that has a critical impact on Agency (Emergency not working on radios)- Immediate action is required. Resources may be allocated immediately.	Regional Switch down, Multiple sites with no visibility, Unable to place calls in Region 90, No Calls North of Edmonton	2.5 hours
S2-Major	Single site failure. Severely affecting some users across the system/ Site specific, or impacting upon a large number of users within a site, including severe degradation of the system; any fault that causes a negative impact on Agencies.	Single site outage, Both back-haul failure, Site not processing calls	4 hours
S3- Minor	Capacity affecting. No severe impact, most operations remain functional, but rectification cannot be deferred beyond the maintenance release.	One traffic controller OOS, Backhaul failure (Redundant is up), Backup power outage, Battery on discharge, Generator related alarm	8 hours
S4- Low	Non service impacting. there is little or no impact to End-User's	Rectifier Minor, minor Battery alarm, AC Power outage (Site on generator), Temp alarm, HVAC failure alarm	24 business hours

12.11.2 TIMEFRAME

Active system monitoring by OMS personnel will take place 24 hours a day, 365 days per year.

Monitoring of the OMS phone line, email, and the Problem/System Management system will take place 24 hours a day, 365 days per year.

Reporting of the Service Level will take place on a calendar quarter and annual basis.

12.11.3 CONSTRAINTS

This Service Level is intended to measure response intervals for those problems that have an impact on end user or Agency operation. Other problems with the system may occur that will be tracked and reported on but will not be part of the Service Level calculations.

12.11.4 RESPONSIBILITIES

The OMS will:

- Continuously monitor the system using available tools
- Monitor alert conditions reported by the available monitoring tools and services
- Assess each alert for an indication of a System Problem
- If the OMS detects a System Problem, or receives notification of a System Problem from an Authorized End User, the OMS will
 - If not already done so by an Authorized End User, Create a ticket in the Problem/Service Management System,
 - Include the System Problem Start Time in the ticket if not already provided.
 - assess the severity of the problem condition and develop a plan of action that will:
 - identify the scope and impact of the event
 - notify any impacted agencies or external support organizations of the problem condition
 - mitigate the impact of the event
 - resolve the event
 - restore the system to normal operations
 - review the root cause of the event and develop future improvement and mitigation strategies
 - communicate with and dispatch Field Operations personnel as required
 - coordinate system problem resolution activities with internal (OMS) and external service providers including TELUS, Axia, SRD, and others as required
 - provide timely notification to Agencies that may be impacted by the System Problem
 - Provide a problem condition notification on the phone system
 - Share with Agencies the troubleshooting plan and associated timeline.
 - Provide status updates during resolution and restoration activities. Timing for the status updates will depend on the operational situation but should be:
 - Every 60 minutes for Critical problems
 - Every 90 minutes for Major problems or adjusted with agreement from OMS and impacted agency(s)
 - Every 4 hours, or as required, or when the situation has been resolved for Minor problems
 - No status reporting required for Low problems
 - Status updates should be made available to

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- Affected Agencies
- OMS management
- Affected external service providers
- Field operations personnel
- collect and assemble final resolution details from external providers
- conduct post problem analysis and develop of performance improvement / problem avoidance strategies.
- document all restoration and resolution activities in the Problem/Service Management System

The Agency will:

- Report the system problems to the OMS using the provided communications channels, when detected.
- Assist the OMS with diagnostic, Restoration, and Resolution activities as time and resources permit.
- Provide status updates if and when symptoms of the System Problem change.
- Provide status updates to the User Agency personnel during Restoration activities.
- Support OMS personnel, as time and resources permit, in any post mortem analysis.

12.11.5 MEASUREMENT FORMULA

The measurement process for this Service Level shall be as follows:

The System Problem Start time shall be the earliest of:

- End user notification of the problem condition as determined by the Request Time recorded in the Problem/Service Management System (see [SL 11 – Acknowledge Agency Requests](#)), or
- The timestamp of the first alert condition that clearly identifies System Problem, presented to the OMS via the available monitoring tools. This is a highly subjective measure as innocuous warning messages may provide the first problem indications. For the purpose of this time measurement the alert or alert conditions must clearly indicate a service affecting problem. E.g. critical component failure either by indicating a failure or outage, by inordinately high numbers of warning messages, or some other identifiable condition that shows an abnormal operating condition.

The System Problem Response Time shall be

- The clock time when the OMS Technician leading the resolution effort communicates to the originating Authorized End User and other impacted Agencies the troubleshooting plan and timeliness.

Trouble shooting plan response may include a permanent solution or temporary mitigation. Restoration occurs when the symptoms of the System Problem experienced by radio users have been eliminated.

On a Calendar quarter basis, the following values will be computed:

- 1) Critical System Problem Response Interval = Average of (System Problem Response Time – System Problem Start Time in decimal hours) for every Critical System Problem Restored in the quarter.

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- 2) Major System Problem Response Interval = Average of (System Problem Response Time – System Problem Start Time in decimal hours) for every Major System Problem Restored in the quarter.
- 3) Minor System Problem Response Interval = Average of (System Problem Response Time – System Problem Start Time in decimal hours) for every Minor System Problem Restored in the quarter.
- 4) Low System Problem Response Interval = Average of (System Problem Response Time – System Problem Start Time in decimal hours) for every Low System Problem Restored in the quarter.
- 5) Average System Problem Response Interval = Average of (System Problem Response Time – System Problem Start Time in decimal hours) for all System Problem Restored in the quarter.

In addition, the above values will be recomputed for all System Problems Resolved within a calendar year, following the end of a calendar year.

12.11.6 MEASUREMENT REPORTING PERIOD

The reporting period for the above measures will be:

- Quarterly for all System Problems Restored during a calendar quarter, and
- Annually for all System Problems Restored during a calendar year.

12.11.7 DATA SOURCES

The data sources / tools and services required are:

- Problem/Service Management System
- AFRRCS Regional Network Managers (RNM)
- AFRRCS Central Network Manager (CNM)
- AFRRCS Manager of Managers (MoM)

12.11.8 ESCALATION

An emergency contact escalation tree would provide for direct person to person contact in the event that calls are not responded to in accordance with the service level.

S1 – Critical Requests entered into the Problem/Service Management System that have not been responded to within 2.25 hours is flagged to the Operations Team Lead.

After 3 hours, the request will be flagged as a missed timing to the Operations Team Lead and the Operations Manager.

S2 – Major Requests entered into the Problem/Service Management System that have not been responded to within 3 hours is flagged to the Operations Team Lead.

After 4 hours, the request will be flagged as a missed timing to the Operations Team Lead and the Operations Manager.

S3-Minor Requests entered into the Problem/Service Management System that have not been responded to within 7 hours will be flagged to the Operations Team Lead and the Operations Manager.

After 9 hours, the request is flagged as a missed timing to the Operations Team Lead.

S4-Low Requests entered into the Problem/Service Management System that have not been responded to within 23 hours will be flagged to Operations Team Lead.

After 48 hours, the request is flagged as a missed timing to the Operations Team Lead and the Operations Manager.

12.11.9 KEY PERFORMANCE INDICATORS

Key Performance indicators for this Service Level include:

- Frequency of repetitive System Problems. This could indicate faulty design, configuration, or a need for long term improvement.
- Appropriate classification of each System Problem. This could indicate a need for retraining, or possibly a re-definition of the Severity levels.
- Volumes of each type Severity. Major and Critical problems should be low or non-existent. One problem in either of these categories on a quarterly or annual basis may indicate a need for improvement.
- Deviations from troubleshooting plan timelines and actual resolution timelines.

12.11.10 EXCEPTIONS

System problems involving sites that are classified as Remote Sites are exempted from this service level. Please see [Appendix B – Remote Sites](#) for a listing of the exempted sites. System problems for those locations will be best effort.

12.12 SL 12 – DEPLOY SOWS

12.12.1 DEFINITION

The Site on Wheels (SOW) capability consists of a fully featured 4 channel, 700 MHz P25 trunked SOW with satellite backhaul to the network core and provides quick deployment of portable communications coverage virtually anywhere in Alberta.

This service level includes any or four separate resources, alone or in combination including:

- Radio Cache 1 - 150 hand held radios
- Radio Cache 2 - 150 hand held radios
- Site on Wheels 1 - mobile four repeater site
- Site on Wheels 2 - mobile four repeater site

There are two service levels for deploying the SOWs:

1. In support of an emergency event response requiring augmentation of the communications available within a region or municipality.
 - a. The Minimum service level response time is 2 hours to finalize the AFRRCS Deployment Order after receiving the request from assistance form the Provincial Operations Centre (POC) or directly from an agency.
2. In support of a municipal or agency event or operation, that requires the augmentation of the present or existing communications capability.
 - a. The Minimum service level response time is 7 days to finalize the non-emergency AFRRCS Deployment Order after receiving from and agency or the POC.

12.12.2 TIMEFRAME

The information required to measure the Service Level is collected for each request and is averaged over a calendar year period for requests from all AFRRCS Agencies.

12.12.3 CONSTRAINTS

Both Minimum service levels have the following constraints:

1. There are two SOWs. There is no mechanism for expanding to 3 or more SOW's.
2. There are two radio caches. While the radio caches can be divided for more than two deployments, dividing the radio caches will be a matter of last resort.
3. AFRRCS SOW and radio cache responses to emergency AFRRCS Deployment Orders will be more effective if the requesting municipality include AFRRCS in its emergency management plan and training events.

12.12.4 RESPONSIBILITIES

The OMS will:

1. Maintain the SOWs and radio caches between deployments.
2. Replenish consumables.
3. Respond to and complete AFRRCS Deployment Orders.
4. Relocate, deploy, operate, and return SOWs and radio caches as documented within AFRRCS Deployment Orders.

The Agency will:

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1. Use unambiguous language and terms to initiate AFRRCS Deployment Orders.
2. Update AFRRCS OMS on potential emergency and planned deployments as new information is processed.
3. Include AFRRCS personnel in municipal emergency management plans and training.
4. Begin the AFRRCS Deployment Order process as soon as is warranted.
5. Ensuring that the radios are not lost or damaged through misuse or abuse when the radio cache is deployed.
6. Fund costs of the SOW and/or radio cache deployments. If the emergency situation is covered under the Disaster Relief Program (DRP) the organization could recover the cost of the AFRRCS deployment from the DRP. However the organization will be initially responsible for covering the cost of the AFRRCS deployment.
7. Replacement of lost or damaged radios not consistent with the normal operational use of portable radios.

12.12.5 MEASUREMENT FORMULA

SOW and/or radio cache deployments for emergency and non-emergency events are expressed as two separate percentages.

Deploying SOWs and/or Radio Caches for Emergency Events

Emergency AFRRCS Deployment Order response time is the duration between when the AFRRCS Deployment Order is received from the AEMA POC by the AFRRCS operations center and the AFRRCS Deployment Order is finalized and communicated back to the AEMA POC. The formula is:

$$\% \text{ emergency Deployment Order finalization on time} = (\# \text{ of emergency Deployment Orders finalized in less than 120 minutes} / \# \text{ of emergency Deployment Orders received}) * 100$$

Deploying SOWs and/or Radio Caches for Non-Emergency Events

Non-emergency AFRRCS Deployment Order response time is the duration between when the AFRRCS Deployment Order is received from the AEMA POC by the AFRRCS operations center and the AFRRCS Deployment Order is finalized and communicated back to the AEMA POC.

$$\% \text{ non-emergency Deployment Order finalization on time} = (\# \text{ of non-emergency Deployment Orders finalized in less than 10,080 minutes} / \# \text{ of non-emergency Deployment Orders received}) * 100$$

12.12.6 MEASUREMENT REPORTING PERIOD

SL 12 is reported annually.

12.12.7 DATA SOURCES

The primary data source is The Problem/Service Management System.

12.12.8 ESCALATION

An emergency contact escalation tree would provide for direct person to person contact in the event that calls are not responded to in accordance with the service level.

12.12.9 KEY PERFORMANCE INDICATORS

Key performance indicators include:

- Percent of deployments where SOW is deployed sooner than the target documented in AFRRCS Deployment Order.

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- Percentage of deployments where a radio cache is deployed sooner than the target documented in the AFRCS Deployment Order.

12.12.10 EXCEPTIONS

While SOWs and radio caches may be deployed to augment organizations that are not an Agency, this Minimum service level only applies to Agencies.

12.13 SL 13 – RADIO SERVICE AVAILABILITY

12.13.1 DEFINITION

Radio Service Availability

The Radio Service Availability consists of two individual metrics that express the percentage amount of time that Sites, and Regional Switch Service are operational and able to provide services to AFRRCS users.

Each individual metric measures, as a percentage the time, the identified component is operational versus the maximum possible time the component could be operational.

Site Availability –

The Radio Service Availability minimum for each site (including Remote Sites) is 99.9% per year.

A site will be considered to be Available if it has network connectivity to the Regional Switch and at least one channel at the site is available for voice communications.

Regional Switch Availability

The Radio Service Availability minimum for each regional switch service is 99.99% per year.

A Regional Switch service will be considered to be Available if it has network connectivity to available Sites and is capable of providing voice switching services for the available sites.

12.13.2 TIMEFRAME

Radio Service Availability monitoring will occur continuously 24 hours a day, 365 days per year with adjustments for leap years.

Reporting of the Service Level will take place on a calendar quarter and annual basis.

12.13.3 CONSTRAINTS

Not applicable

12.13.4 RESPONSIBILITIES

The OMS will:

1. Continuously monitor AFRRCS using available tools.
2. Monitor alert conditions reported by the available monitoring tools and services.
3. Assess each alert for an indication of a System Problem that may negatively impact Radio Service Availability.
4. Utilize the timings from Minimum service level 11 Response to AFRRCS System Problems to calculate Radio Service Availability.
5. Report and share Radio Service Availability to the Agency quarterly and yearly.

The Agency will:

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1. Provide status updates if and when symptoms of Radio System Availability change.
2. Provide status updates to the User Agency personnel during Restoration activities.
3. Support OMS personnel, as time and resources permit, in any post mortem analysis.
4. Provide feedback to the OMS identifying usefulness and suggested modifications for monitoring and reporting Radio System Availability.

12.13.5 MEASUREMENT FORMULA

The measurement process for this Service Level is dependent on Minimum service level 11 – Respond to AFRRCS System Problem for determining when Radio Service Availability is affected.

Calculations are rounded to the nearest thousandth.

The System Problem Start Time is determined as described in Minimum service level 11 – Respond to AFRRCS System Problem.

See definitions for Block Time and Restoration Time for specifics.

Unavailability durations are calculated as below.

Unavailability duration = (Restoration Time – (System Problem Start Time in decimal hours))

Unavailability durations are calculated and recorded per site and per regional switch service for a calendar year and recorded as a Cumulative Unavailability Duration for each site and regional switch service.

On a calendar quarter basis, the following values are computed per site and per Regional switch service:

Percent Radio Service Availability Site X = ((Number of hours in ¼ calendar year – Cumulative Unavailability Duration) / Number of hours in ¼ calendar year)

Percent Radio Service Availability Regional Switching Service X = ((Number of hours in calendar year – Cumulative Unavailability Duration) / Number of hours in calendar year)

In addition, the above values will be reviewed and shared after the last quarter of the year as the yearly Radio Service Availability measures

12.13.6 MEASUREMENT REPORTING PERIOD

The reporting period for the above measures will be:

- Quarterly for Radio System Availability during a calendar quarter, and
- Annually for Radio System Availability during a calendar year.

12.13.7 DATA SOURCES

The data sources / tools and services required are:

- Problem/Service Management System
- AFRRCS Regional Network Managers (RNM)
- AFRRCS Central Network Manager (CNM)
- AFRRCS Manager of Managers (MoM)

12.13.8 ESCALATION

Refer to section 12.11.8 Respond to AFRRCS System Problems for escalation information.

12.13.9 KEY PERFORMANCE INDICATORS

Key performance indicators include:

- Number of events decreasing availability. An increase number of events may indicate areas where increased redundancy would be beneficial.
- Durations of events decreasing availability. Increased durations may indicate reaction constraints.
- Number of events where initial complaint from Agency is received before an alert from automatic monitoring mechanisms. If more events are being reported by Agency before the automatic monitoring mechanisms record the event, the monitoring mechanisms may be insufficient as configured or implemented.

12.13.10 EXCEPTIONS

There are no Radio Minimum service level for sites that are classified as Remote Sites. Please see [Appendix B – Remote Sites](#) for a listing of the exempted sites. Radio Service Availability for those locations is best effort.

Planned outages are not included in the Radio Service Availability Service Level.

12.14 CC 14 – COVERAGE COMMITMENT

12.14.1 DEFINITION

AFRRCS does not offer a minimum service level for coverage due to the inability to continuously measure coverage as required for service level verification.

AFRRCS does commit to deliver 95% outdoors portable coverage on Roadways within any community identified as being covered in the supplied portable coverage map; and, 95% mobile coverage for any existing primary or secondary road in the supplied mobile coverage map.

12.14.2 TIMEFRAME

Coverage is measured in advance of an agencies' migration and is detailed in an AFRRCS coverage map available at the time of migration.

12.14.3 CONSTRAINTS

Coverage testing is limited by the availability of funding, staff, vehicles, and equipment collectively necessary to perform and validate coverage testing.

Coverage testing resulting in objective measurements can only be accomplished with automated equipment

Coverage testing that utilizes subjective human interpretation of radio outputs has utility in verifying coverage performance.

12.14.4 RESPONSIBILITIES

The OMS will:

1. Produce and maintain coverage maps based on verified coverage changes.
2. Perform coverage testing as prioritized by Governance Council and AFRRCS OMS.
3. Expand coverage over time as AFRRCS coverage testing verifies a requirement for additional infrastructure to meet the coverage commitment
4. Record reports of chronic coverage lapses for planning and expansion priority setting and for reporting verified coverage lapses to agencies.

The Agency will:

1. Be responsible for ensuring the coverage provided meets their operational requirements
2. Be financially responsible for coverage enhancements related to meeting their operational requirements
3. Develop standard operating procedures for when coverage is unavailable for its radio users
4. Report to OMS locations that are perceived to experience chronic coverage lapses

12.14.5 MEASUREMENT FORMULA

AFRRCS coverage testing is based on the TSB 88 standard

12.14.6 MEASUREMENT REPORTING PERIOD

The coverage commitment is established at the time of an Agency's migration and changes in coverage will be released as updated by OMS.

12.14.7 DATA SOURCES

The coverage commitment as demonstrated by the coverage maps is derived from the interpretation of the data obtained during system wide coverage testing.

12.14.8 ESCALATION

Agencies may report outdoor locations of concern that are perceived to suffer from chronic coverage lapses to OMS and/or the AFRRCS service council.

Agencies may choose to validate their areas of concern in accordance with TSB 88 standard coverage testing.

Areas of concern will be prioritized by service council and recommendations for improvement will be provided to the AFRRCS Governance Council. Escalation is to the AFRRCS Governance Council

12.14.9 KEY PERFORMANCE INDICATORS

There is no persistent monitoring of coverage and consequently there are no key performance indicators.

12.14.10 EXCEPTIONS

Coverage provided by radio transmission is subject to environmental conditions beyond the control of any group or agency, therefore coverage may at times vary by location and environmental conditions.

13 APPENDIX B – REMOTES SITES

Site #	Site Name
0036	Burmis
0037	Beauvais Lake
0038	Leavitt
0043	Hill Spring
0045	Pincher Creek
0047	Brocket
0048	Cardston
0094	Cremona
0107	Eden Valley
0109	Longview
0111	Millarville
0115	Sundre
0116	Turner Valley
0156	Sunchild
0157	Blue Hills
0158	Marble Mtn
0159	Rocky
0160	Limestone
0161	Baseline
0162	Blackstone
0163	Chungo
0164	Falls
0165	Jackfish Lake
0167	Rocky Mt. House
0168	Shunda Mountain
0169	Caroline
0200	Lodgepole
0232	Lac La Biche
0233	Heart Lake
0238	Goodfish
0263	Lac La Biche 2
0269	Carrot Creek
0270	Obed Mtn Mine
0271	Athabasca Mtn
0272	Berland
0273	Wolf Creek
0274	Marlboro
0275	Hanlan Petrocan
0276	Yellowhead

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Site #	Site Name
0277	Cadomin
0278	Edson
0282	Whistler Mtn
0283	Banff 1
0284	Tangle Ridge
0285	Mt Wilson
0286	Mt Hector
0287	Mt Bourgeau
0288	Mt Indefatigable
0289	Mt Butte
0290	Cameron
0291	Hailstone Butte
0292	Porcupine Hills
0293	Mt Kidd
0294	Lake Louise 1
0295	Grotto Mtn
0296	Tent Ridge
0297	Thunder Mtn
0298	Canmore 1
0300	Exshaw
0302	William Watson Lodge
0305	Kananaskis
0306	Lake Louise 2
0307	Bellevue
0309	Conklin 1
0310	Stony Mtn
0312	Mildred Lake
0313	Cheecham
0316	Fort Mackay
0320	Fort Chipewyan
0321	Janvier
0322	Birch Mountain
0323	Fort Smith
0324	Chipewyan Lake
0325	Red Earth
0326	Nipisi
0331	Clear Hills
0337	Manning 1
0338	Hotchkiss
0339	Keg River 1
0340	Boyer River

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Site #	Site Name
0341	Watt Mtn
0342	Meander River 1
0343	Steen River
0344	Wabasca
0345	Sandy Lake
0346	Lubicon
0348	Slims Creek
0349	High Level
0350	Indian Cabins
0353	Pine Ridge
0354	Jean Dor Prairie 1
0355	Rainbow Lake 1
0356	Zama City 1
0357	Buffalo Creek
0358	Adair
0359	Whitemud
0360	Otter Lakes
0361	Ponton
0362	Talbot Lake
0363	Teepee Lake
0364	Bassett
0365	Chinchaga
0366	Fontas
0368	Faust
0370	Fort Vermilion
0375	La Crete
0377	Manning 2
0384	Tall Cree I.R. 173
0389	Chateh
0393	Valleyview 1
0394	Grande Cache 1
0395	Muskeg
0396	Smoky River
0399	Sulphur Ridge
0401	Bald Mtn
0403	Grande Mountain
0408	Codesa
0412	Falher
0418	Beaverlodge
0419	Peace River 2
0422	Wanham

