Office Of Information Technology

IT Disaster Recovery Plan

September, 2013

Prepared by The Cavan Group

THE CAVAN GROUP

Revision History

VERSION	DATE APPROVED	MODIFIED BY	DESCRIPTION OF CHANGES MADE
Original 1.0		Wim Bood	First release
Version 1.1		Wim Bood	Updated after review with the team
Version 1.2		Wim Bood	Third Pass
Version 1.3		Wim Bood	Updated Call Tree
Version 1.4		Wim Bood, Paul Lawton	Final Review

Office Of Information Technology

Table of Contents

I. INTRODUCTION 4
A. Definition of a Disaster 4
B. Purpose of DRP 4
C. Definitions 4
D. Scope of DRP 5
II. ASSUMPTIONS 6
A. Policy Assumptions 6
B. Technology Assumptions 6
C. Exemptions 7
III. DR TEAMS & RESPONSABILITIES 8
A. Emergency Response Team (ERT) 8
B. IT Disaster Recovery Executive Management Team (REMT) 8
i. REMT Members 8
ii. Roles & Responsibilities 8
C. Disaster Recovery Team (DRT) 9
i. Roles & Responsibilities 9
ii. Disaster Recovery Team Members 10
iii. Application Expert Team Members 11
D. Disaster Recovery Call Tree 12
i. Key Personnel Contact Information 13
E. Vendor Contact List 13
IV. STATE OF MAINE - FACILITIES 16
A. Sewall DC - Production Site 16
B. CMCC DC – Production/ DR Site 16
V. COMMUNICATION DURING A DISASTER 18
A. Communication with Employees 18
B. Communication with Vendors 19
VI. DEALING WITH A DISASTER 20
A. Overall Workflow 20
VII. DISASTER ACTIVATION PHASE 21
A. Disaster Identification 21
B. Severity Level Assessment 21
C. Disaster Impact Assessment 22
D. Emergency Alert, Escalation and DRP Activation 23
VIII. DISASTER EXECUTION PHASE 24
A. Disaster Recovery Process Flow 24
B. Tier 0 Validation – Disaster Procedure 25
C. Tape Recovery 26
D. Data Storage & Backup Strategy 28
E. Tier 1 Application Restore Priorities 29
F. Application Run-book Template 30
IX. DISASTER RECONSTRUCTION PHASE 31
X. PLAN TESTING & MAINTENANCE 31
A. DRP Maintenance 31
B. DRP Change Log 32
C. DRP Documentation Storage 32
APPENDIX A - KEY PERSONNEL CONTACT INFORMATION 35
APPENDIX B - KEY DEPARTMENT CONTACT INFORMATION 35

Office Of Information Technology

I. INTRODUCTION

A. Definition of a Disaster

For the purposes of this contracted work, a disaster is defined as a significant data center event that disables the functioning of the SSDC Data Center or CMCC Data Center or significant portions of either data center for a time estimated to exceed the operational RTO target of Tier 1 services housed at these data centers.

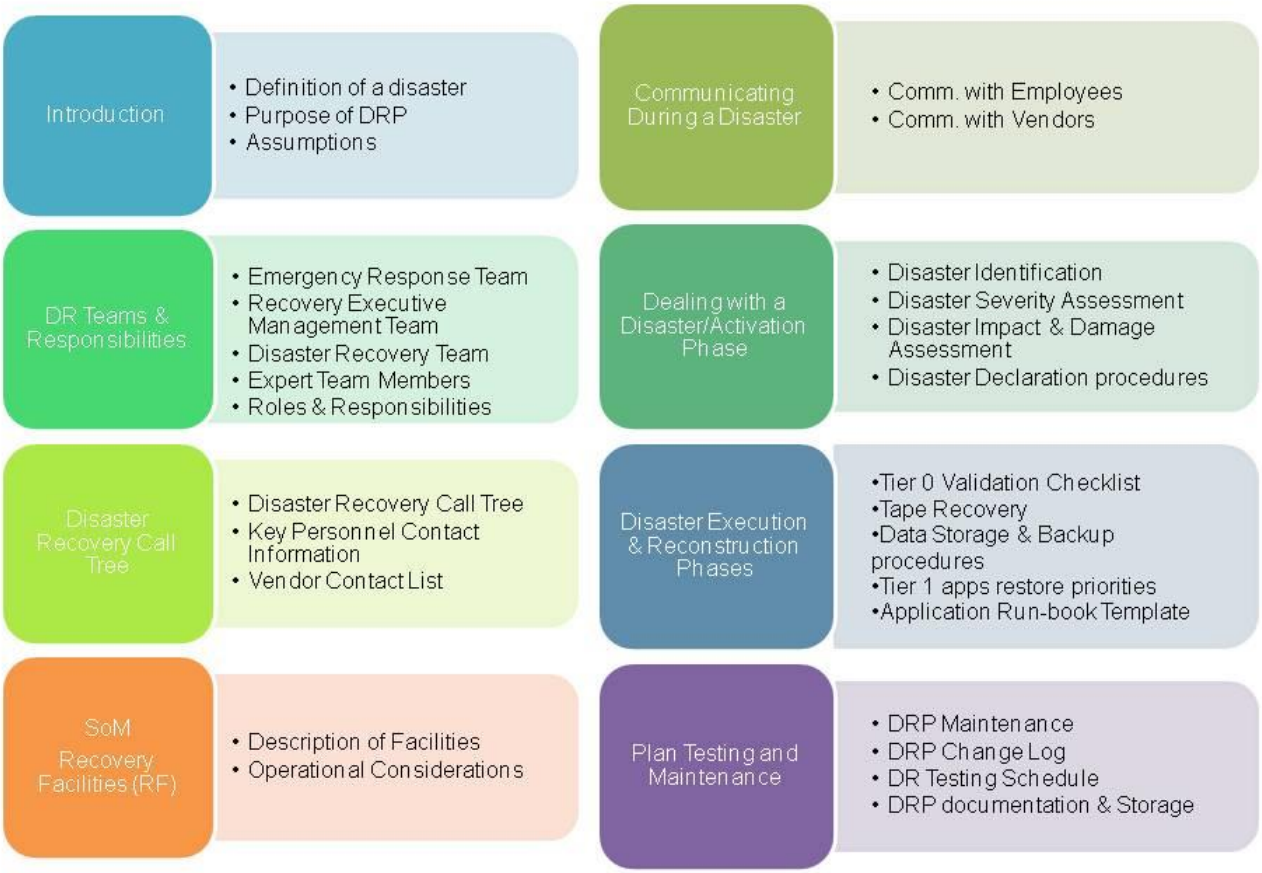
B. Purpose of DRP

This document details State of Maine's policies and procedures for technology disaster recovery, as well as process-level plans and recommended procedures for recovering critical technology platforms and the telecommunications infrastructure. After the event of an actual emergency situation, this document will need to be updated accordingly to ensure system uptime information accuracy, data integrity and availability, and business continuity.

C. Definitions

- **DRP –** Disaster Recovery Plan is a set of well defined procedures established to help the IT department get an organization's IT infrastructure back to business as usual in the event of a disaster.
- **RTO –** Recovery Time Objective (downtime) defines the length of time it will take to recover all the infrastructure carrying the target RTO attribute; RTO is typically expressed in seconds, minutes, hours, days.
- **RPO –** Recovery Point Objective (data loss) defines the point in time to which data can be recovered for the entire infrastructure in that RPO attribute; RPO effectively defines tolerance for data loss and is typically expressed in minutes, hours or days of data loss.

D. Scope of DRP



II. ASSUMPTIONS

A. Policy Assumptions

The following DRP has been developed based on the following explicit assumptions:

- The expectation is that applications that must not have an interruption will be identified for failover/HA between the primary facility and the secondary facility.
- For the purpose of the work for this contract, we will be able to identify the equipment in the SSDC and the CMCC facilities and can rank the applications on that equipment in criticality recovery order.
- Recovery order will be able to be identified for particular timeframes of criticality: Weekday, Weekend, EOW, EOM, seasonal, etc.
- For any applications that are needed to be recovered ASAP, State of Maine will have the ability to identify the applications running on the servers in any given facility and can rank them according to the most important of those applications to recover first to last.
- State of Maine will not recover support environments until there are recovered Production environments. Support environments (Dev, Test, Stage, Training, etc.) will be recovered in the order specified in the "playbook" or in the order of the Production recovery.
- State of Maine will look to cloud situations for recovery rather than to repurpose what we have for development or test environments unless the "playbook" specifically designates the repurposing.
- Sufficient operating staff will be available to implement the recovery plan.
- DRP and application run-books are stored in a safe location and accessible during a disaster. "Team needs to identify the safe location"
- The incident will not result in situations where employees get injured or hospitalized.
- All staff listed in the hereunder documentation must be made aware of the Disaster Recovery Plan and their own respective roles.
- The Disaster Recovery Plan is to be kept up to date to take into account changes in data recovery and backup procedures.

B. Technology Assumptions

- The DR site will provide foundation infrastructure (Tier Zero) insulated from disaster events and/or capable of quick recovery.

- Tier Zero functions are configured for near zero RPO/RTO. To be validated and requires management decision to remediate the GAPS!

- Tier 1 Mission critical applications may experience significant decrease in response times until the infrastructure can be built out.

- Recovery tapes will be physically retrievable in target time frames.

- Business agrees to target already agreed upon RPO's and RTO's.

- Network of sufficient bandwidth is in place between State of Maine sites..

C. Exemptions

The following legacy applications will not be included in the DRP as they are subject to be retired. Recovery of these applications in the mean time will be best effort.

List of legacy applications:

- IBM Mainframe
- Externally hosted Applications and websites that will be covered under separate BCDR planning efforts
- There are apps with internal & external components with networks. These external sites are not included.
    - Advantage
    - MOLINA

III. DR TEAMS & RESPONSABILITIES

The DR plan will rely principally on key members of management and staff who will provide the technical and management skills necessary to achieve a smooth technology and business recovery.

A. Emergency Response Team (ERT)

In case of a disaster, the person identifying the incident must contact the Customer Support Staff (Help Desk and describe the incident. The Help Desk will then call the resources on call for each one of the following IT disciplines:

- Operations Management
- Site Facilities
- Site Security
- Systems
- Network services

The ERT at any time of a disaster consists of the resources scheduled to be on call. These have the responsibility of informing the IT Disaster Recovery Executive Management Team (REMT) defined below.

B. IT Disaster Recovery Executive Management Team (REMT)

i. REMT Members

The State of Maine directors listed below represent the IT Disaster Recovery Executive Management Team (REMT) and have the authority and responsibility to execute the specific processes within this plan.

MANAGER/DIRECTOR	AREA OF RESPONSIBILITY	CONTACT INFO
Jim Smith	Chief Information Officer	**Cell:** 215-2939 **Office:** 624-7568 **Email:** jim.smith@maine.gov
Greg McNeal	Chief Technology Officer	**Cell:** 649-7849 **Office:** 624-9471 **Email:** greg.mcneal@maine.gov
Paul Sandlin	Associate CIO Applications	**Cell:** 619-2244 **Office:** 624-9427 **Email:**paul.sandlin@maine.gov
Vacant (Greg McNeal Acting)	Associate CIO Infrastructure	**Cell:** 649-7849 **Office:** 624-9471 **Email:** greg.mcneal@maine.gov
Mary Silva	Manager Application Hosting	**Cell:** 899-8289 **Office:** 624-7574 **Email:**mary.silva@maine.gov
Jon Richard	Manager Client Technologies and Enterprise Operations& Monitoring	**Cell:** 441-8676 **Office:** 441-8676 **Email:** jon.richard@maine.gov

ii. Roles & Responsibilities

The IT Disaster Executive Management Team (REMT) will be responsible for performing the following:

- Final decision on structural integrity and space occupancy;
- Deciding whether to activate the plan based on presented damage assessment;
- Alerting and mobilizing all Disaster Recovery Team leaders (DRT);
- Making an initial report to senior management;
- Alerting the internal business;
- Calling a first meeting with the DRT leaders which has for mission to:
    - define the causing problem, the extent of the disruption, its consequences and the probable implications for the foreseeable future;
    - review each team's objectives for the next [*x number of hours*] hours;
    - set up a second meeting for [*x number of hours]* hours later;
    - report to senior management on the content of the meeting and the actions being taken;
- Calling follow up meetings accordingly with the DRT leaders and keeping senior management informed of the actions being taken;
- Identify key technical personnel who may be required to travel to the recovery site or be called to assist in the recovery.

C. Disaster Recovery Team (DRT)

i. Roles & Responsibilities

The Disaster Recovery Team consists of each IT discipline's team manager and their respective expert members.

The DRT has for responsibility to:

- Assess the extent of the disaster and its impact on the business, data center, etc.;
- Notifying Iron Mountain for media retrieval;
- Ensure employees are notified and allocate responsibilities and activities as required;
- Activate restoration functions as required;
- Contact vendors and request an on-site representative;
- Restore key services within RTO defined for each one of the critical business applications;
- Document and log recovery efforts for future disasters;
- Coordinate move of salvageable equipment to backup facility;
- Determine need to order equipment and make request through REMT;
- Coordinate installation and testing of equipment;
- Decide which elements of the DR Plan should be activated;

ii. Disaster Recovery Team Members

	MANAGER	GROUP LEAD	IT EXPERT
Unix/Linux	Sharon Horne	Dave Johnson	Resource on Call
Data Center	Jon Richard	Bill Hart	Resource on Call
Windows	Dawnna Pease	Bill Barreto	Resource on Call
Storage	Sharon Horne	Peter Bouchard	Resource on Call
Virtualization	Dawnna Pease	Bill Barreto	Resource on Call
Network	Dave Rodrigue	Jeff Welsh	Resource on Call
Network Security	Dave Rodrigue	Chad Perkins	Resource on Call
File and Print Servers	Dawnna Pease	Terry Kenniston	Resource on Call
Radio Operations	Craig Hitchhings	John Covert	Resource on Call
Oracle Platform	Sharon Horne	John Hawkes	Resource on Call
Client Technologies & Desktop Support	Nick Marquis	Sue Donovan	Resource on Call
Backup & Recovery	Jon Richard	Ed Lincoln	Resource on Call

Office Of Information Technology

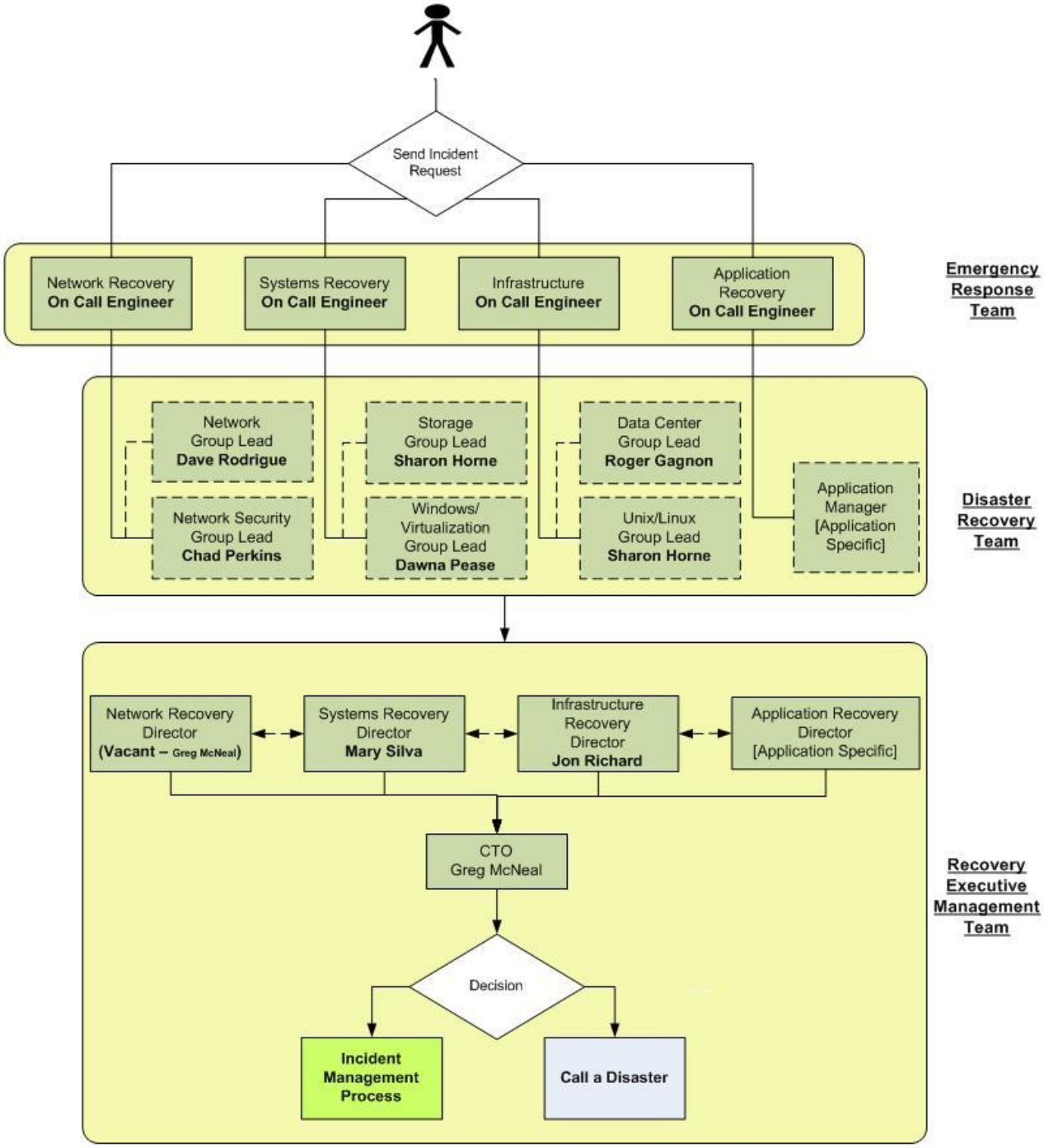
iii. Application Expert Team Members

TIER 1 APPLICATIONS			MANAGER	IT EXPERT
Agency/Group	Dept.	Application System		
Public Safety	DOC	Corrections Information System (CORIS) (hosted at Corrections data center)	Martin Murphy	
	DPS	Criminal History Records Information System (CHRIS)	Henry Quintal	
		Computer Aided Dispatch (CAD)	Henry Quintal	
		Sex Offender Registry	Henry Quintal	
		Crash Reporting System (CRS)	Henry Quintal	
		NetMotion	Henry Quintal	
	DOT	DOT systems - road repairs (hosted at DOT data center)	Tom Lynch	
Public Health	DHHS	IMMPACT2 - Maine CDC Systems	Ray Venzel	
		Child Welfare Case Worker Database	Rick Hayward	
	DEP	Environmental Facility Information System (EFIS) and other DEP systems	Karen Curtis/ vacant	
Financial Services to Citizens	DAFS	Advantage - central accounting system (externally hosted)	Cathy Harrison	
	DHHS	Automated Client Eligibility System (ACES) - screening for MaineCare, Food Stamps, etc.	Rick Hayward	
		* Medicaid Payments (Molina) (externally hosted)	Hazel Stevenson	
		DHHS DataHub	Hazel Stevenson	
		Child Support Enforcement for Maine (CSEME)	Dale Irish	
		Women, Infants & Children (WIC) subsidies	Dale Irish	
	DOL	Unemployment Insurance (UIPROD)	David Poulin	
	DOL	Benefits - unemployment compensation	David Poulin	
	DOL	DOL Interactive Voice Response (IVR)	David Poulin	
Financial Services to Providers and Internal Financial Management	DAFS	Advantage - central accounting system (externally hosted) - also listed above	Cathy Harrison	
	DAFS	Budget and Financial Management System (BFMS)	Cathy Harrison	
Revenue Generating	MRS	Maine Revenue IntegratedTax System (MERITS)	Karin Peterson	
		On-line Tax Filing (I-File and E-File)	Karin Peterson	
	MRS	Tax and Revenue Image Processing System (TRIPS)	Karin Peterson	
	MRS	MRS Interactive Voice Response (IVR)	Karin Peterson	
	IF&W	Maine Online Sportsman Enterprise System (MOSES) - hunting and fishing Licenses	Karen Curtis/ vacant	
	DECD	Business One-Stop (web-based) - Governor's focus	Cathy Harrison	
Regulatory	ACF, IFW, DMR	Natural Resources Agencies - key systems for them	Karen Curtis/ vacant	
Other	DOE	Infinite Campus (externally hosted)	Charlotte Ellis	
	DOE	Maine Education Data Mangement Systems (MEDMS) - financial tracking	Charlotte Ellis	
	PFR	Agency License Management System (ALMS)	Dorene Gerrish	

1. Methodology to be determined which Apps should be failed over to which DC

D. Disaster Recovery Call Tree

The resource observing the disaster has the responsibility of informing the on-call engineer(s) immediately. The incident will then be assessed and escalated accordingly to the appropriate manager and director depending on the incident criticality level.



i. Key Personnel Contact Information

Please refer to Appendix A for a list of key personnel contact information. All contact information must be kept up to date in the above mentioned appendix.

E. Vendor Contact List

This section lists all key IT vendors who may need to be contacted following a disaster. Each team has responsibility to review and update this list [*timeframe*].

i. Server and Computer Equipment Suppliers

- **Unix Team**

Solution Name	Contact Option	Contact Name	Phone Number	Account Number	Web\email Contact
HP					
SUN					
IBM					
Oracle					

- **Windows/Virtualization Team**

Solution Name	Contact Option	Contact Name	Phone Number	Account Number	Web\email Contact
VMWare					
SQL Server					

- **Data Storage Equipment Suppliers**

Solution Name	Contact Option	Contact Name	Phone Number	Account Number	Web\email contact
Ironmountain					
NetApp					
Brocade					
CommVault					
Quantom					
EMC					

ii. Network & Security Hardware Vendors & Resellers

Solution Name	Contact Option	Contact Name	Phone Number	Account Number	Web\email Contact
Nortel (IPC)					
Juniper (JunOS)					
Cisco (Presidio)					
Fujitsu					
Infoblox					
Akibia					
Elteon					
Radware					

iii. Network Carriers

Company Name	Contact Option	Contact Name	Phone Number	Account Number	Web\email Contact
Verizon					
Oxford					
Fairpoint					

iv. Data Center

- ***Vendors***

Company Name	Primary Support Number	Secondary Support Number	Contact Name	Web\email Contact
SCS (Structured cabling)	(207) 458-9190		Dana Saunders	scsinc@fairpoint.net
MS Electric (Electrical)	(207) 582- 6223	(207) 462-2115	Ben Sirois	ben@mselectricinc.ocm
Southworth Miller (Generators)	(207) 883-9586	(207) 885-8035	Kyle Morgan	kyle_morgan@miltoncat.com
BGS (Facility)	(207) 287-4154	(207) 287-4153	Gary Lafreniere	Building.control@maine.gov

Office Of Information Technology

v. In-Scope Applications Vendor's Contact Information

This section will be completed when executing the DR test for each one of the applications below.

TIER 1 APPLICATIONS			Vendor Name	Contact Name	Support Number
Agency/Group	**Dept.**	**Application System**			
Public Safety	DOC	Corrections Information System (CORIS) (hosted at Corrections data center)			
	DPS	Criminal History Records Information System (CHRIS)			
		Computer Aided Dispatch (CAD)			
		Sex Offender Registry			
		Crash Reporting System (CRS)			
		NetMotion			
	DOT	DOT systems - road repairs (hosted at DOT data center)			
Public Health	DHHS	IMMPACT2 - Maine CDC Systems			
		Child Welfare Case Worker Database			
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	DHHS	Automated Client Eligibility System (ACES) - screening for MaineCare, Food Stamps, etc.			
		* Medicaid Payments (Molina) (externally hosted)			
		DHHS DataHub			
		Child Support Enforcement for Maine (CSEME)			
		Women, Infants & Children (WIC) subsidies			
	DOL	Unemployment Insurance (UIPROD)			
	DOL	Benefits - unemployment compensation			
	DOL	DOL Interactive Voice Response (IVR)			
Financial Services to Providers and Internal Financial Management	DAFS	Advantage - central accounting system (externally hosted) - also listed above			
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Revenue Generating	MRS	Maine Revenue IntegratedTax System (MERITS)			
		On-line Tax Filing (I-File and E-File)			
	MRS	Tax and Revenue Image Processing System (TRIPS)			
	MRS	MRS Interactive Voice Response (IVR)			
	IF&W	Maine Online Sportsman Enterprise System (MOSES) - hunting and fishing Licenses			
	DECD	Business One-Stop (web-based) - Governor's focus			
Regulatory	ACF, IFW, DMR	Natural Resources Agencies - key systems for them			
Other	DOE	Infinite Campus (externally hosted)			
	DOE	Maine Education Data Mangement Systems (MEDMS) - financial tracking			
	PFR	Agency License Management System (ALMS)			

IV. STATE OF MAINE - FACILITIES

A. Sewall DC - Production Site

Location	28 Sewall Street, Augusta, ME
Key contact person	Jon Richard
Contact info	Jon.Richard@maine.gov
Alternative contact 1	Bill Hart
Contact info	Bill.Hart@maine.gov
Alternative contact 2	Roger Gagnon
Contact info	Roger.Gagnon@maine.gov
BGS Security	Building Control main # : 207 287 4154 Bill Black, Bill.Black@maine.gov, 287-6502

i. Operational Considerations

Only employees and vendors with appropriate access privileges are allowed into the building. State of Maine will continue relying on the same policies currently in place during a disaster.

ii. Assembly Points

Where the premises need to be evacuated, the DRP invocation plan identifies two assembly points:

- Primary – t.b.d.
- Alternate – t.b.d.

B. CMCC DC – Production/ DR Site

Location	45 Commerce Drive, Augusta ME, 04330
Key contact person	Jon Richard
Contact info	Jon.Richard@maine.gov
Alternative contact 1	Bill Hart

Contact info	Bill.Hart@maine.gov
Alternative contact 2	Roger Gagnon
Contact info	Roger.Gagnon@maine.gov
BGS Security	Building Control main # : 207 287 4154 Bill Black, Bill.Black@maine.gov, 287-6502

V. COMMUNICATION DURING A DISASTER

Procedures have been established to ensure that in the event of a disaster or crisis, personnel will have a clear understanding of who should be contacted and that communications can be quickly established.

A. Communication within OIT

While managers will serve as the focal points for their own departments, assigned resources will be responsible for contacting all resources in their call list to discuss the disaster level and plan for any immediate measures. Members of the management team must make sure to keep a hard copy of the names and contact numbers of each employee in their departments.

The Technology Business Consultants (TBC) are the communications liaisons to the State agencies. An overview of the TBCs can be found in Appendix A.

i. Conference Bridge

A conference bridge number bellow will be reserved specifically for the disaster in order to have conference calls with employees, key contacts and vendors to evaluate disaster damage and to make recovery decisions.

DR Bridge Number	Conference ID	Host Code
877-455-0244	244239863#	*7016

ii. Text Messaging

Resources are encouraged to use text messaging as a primary means of communication during a disaster.

iii. Notification

The Helpdesk will update the OIT Customer Support Status page at:
http://inet.state.me.us/oit/customer_service/dailystatus/index.html

Notices should cover:

- What is the Major Incident or Disaster (plain English, from a user perspective)
- What is the impact on agency, operations or citizen services
- What actions will be taken
- When is the service expected to be restored

During a disaster the updates should be every 2 hours.

iv. Backup Staff

If a manager or staff member designated to contact other staff members is unavailable, s/he is advised to call the second person on call.

B. Communication outside OIT

Generally, the following key groups will be notified about a Major Incident or Disaster, as soon as possible after awareness of the disaster. The communication will be handled by the CIO or CTO.

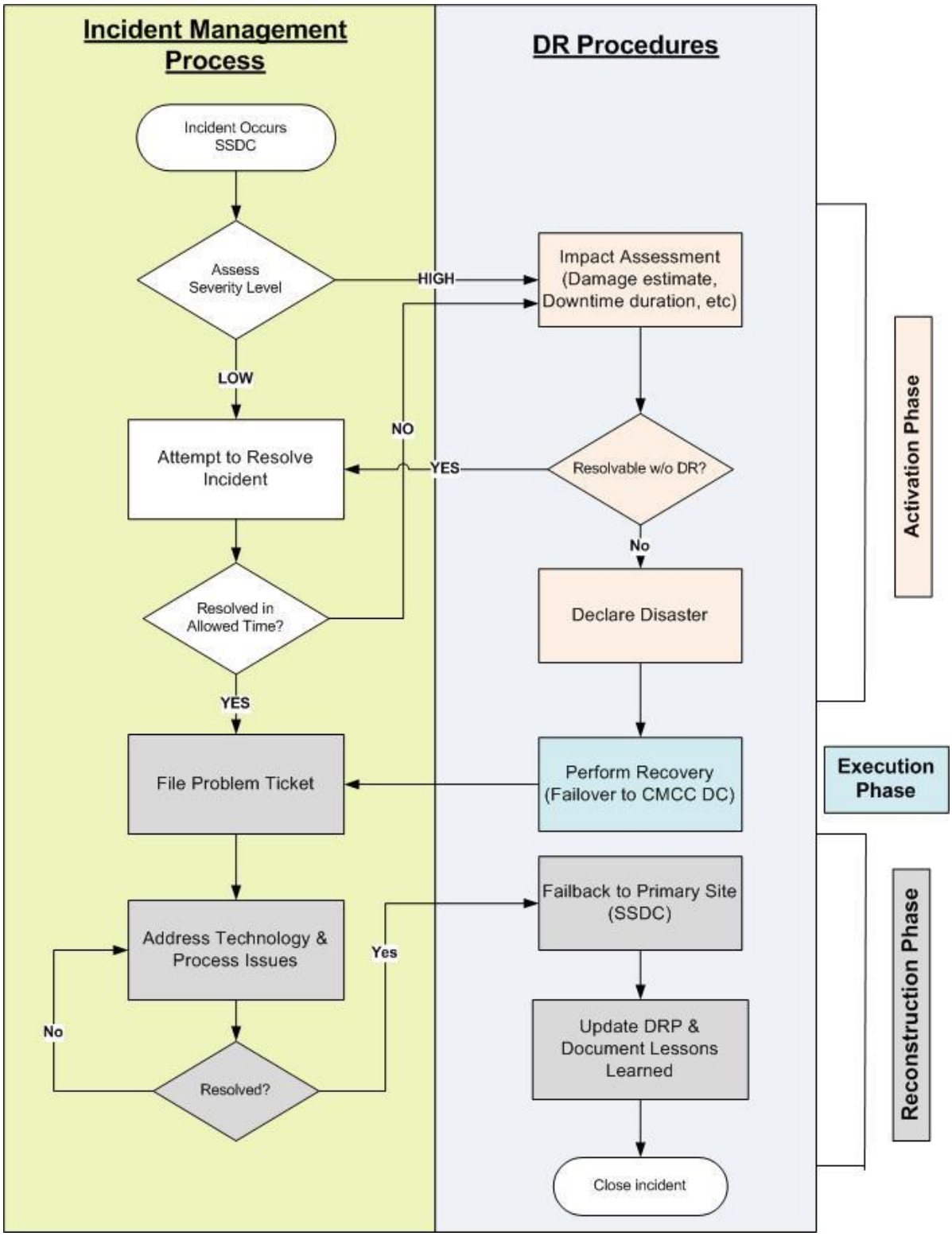
- Commissioner and Deputy Commissioner of the Department of Administrative and Financial Services (DAFS)
- Selected State Agency Commissioners and key agency contacts
- Governor's Office (for every Disaster and selective for Major Incidents)
- Press release through the Governor's Office (if impacting citizen services on a long-term basis)

C. Communication with Vendors

Vendors will be informed of the disasters on a per need basis.

VI. DEALING WITH A DISASTER

A. Overall Workflow



VII. DISASTER ACTIVATION PHASE

A. Disaster Identification

Many potential disruptive threats could occur at any time and could affect State of Maine's normal business operations. A wide range of potential threats taking place at either the SSDC or CMCC data centers that would lead to the activation of this DRP are:

- Total loss of all communications
- Total loss of power
- Flooding of the premises
- Loss of the building
- Environment Disaster
- Organized and / or Deliberate Disruption
- Equipment or System Failure
- Serious Information Security Incident
- Other events that could cause the building to be uninhabitable.

B. Severity Level Assessment

Each potential environmental disaster or emergency situation has been considered. The table below presents a breakdown of each one of the disasters, its probability rate as well as the level of business disruption which could arise from each disaster. The impact rating represents the disruption level and therefore severity level.

The severity level of each one of the disasters has been assessed as follow:

Note: To be assed with the State of Maine Security Team

Potential Disaster	Probability Rating	Impact Rating	Brief Description Of Potential Consequences & Remedial Actions
Flood	2	2	
Fire	3	1	.
Tornado	5	1	
Organized and/or Deliberate Disruption	3	2	
Data center infrastructure failure	4	2	
Network Infrastructure Failure	2	2	

Probability: 1=Very High, 5=Very Low Impact: 1=Total destruction, 5=Minor annoyance

C. Disaster Impact Assessment

The following describes damage assessment procedures for the different Disaster Recovery Teams.

These procedures will help measure the damage level and predict the time of system outage.

i. Data Center Team Equipment

#	Equipment		Condition	Salvage	Comments
1	Building	Interior			
2		Exterior			
3		Flooring			
4		Lighting			
5	Electrical Systems	UPS			
6		Power panel breakers			
7		Automatic transfer switches			
8		Generator			
9		Power distribution Unit			
10	HVAC System	Air Handler			
11		Glycol piping			
12		Glycol pumps			
13		Dry coolers			
14	Fire Control Systems	Sprinkler			
15		Local and remote alarms			
16		Fire extinguishers			
17	Other	Telephone Service			
18					
19					

ii. Platform Team

#	Equipment	Condition	Salvage	Comments
1	Servers			
2	Storage			
3	Tape Library			
4	Appliances			
5	Other			

iii. Network Team

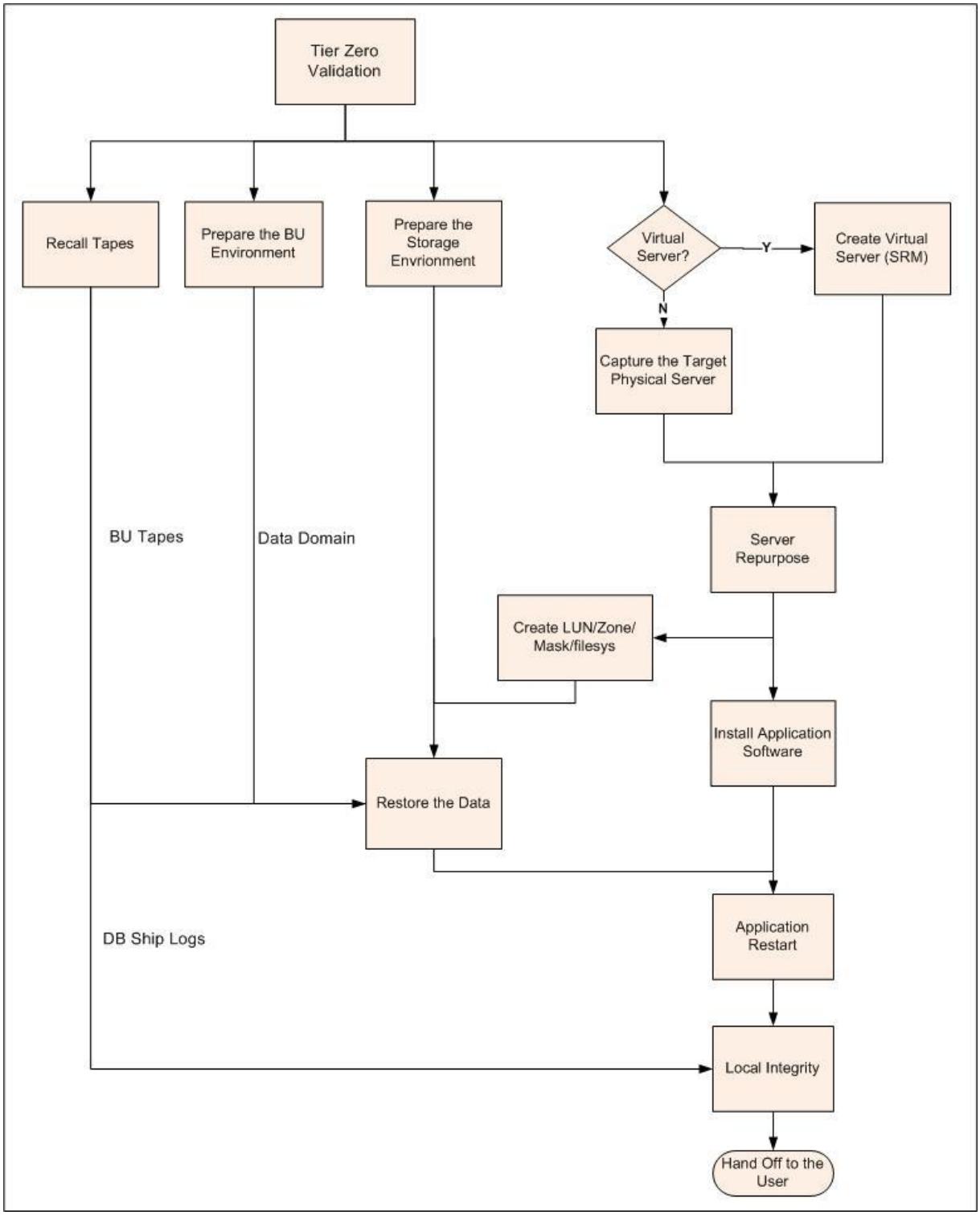
#	Equipment	Condition	Salvage	Comments
1	Communication circuits			
2	Firewalls/Load balancers			
3	Routers			
4	Switches			
5	Critical system products			
6	Appliances			
7	Telephone Service			
8	Other			

D. Emergency Alert, Escalation and DRP Activation

After a complete severity and damage assessment, the Disaster REMT will either activate the DRP or report an incident management process. In case of an incident management process, the team will follow the already defined processes to address the specific incident. In case of disaster invocation, all recovery teams will be activated. The DRT will decide the extent to which the DRP must be invoked.

VIII. DISASTER EXECUTION PHASE

A. Disaster Recovery Process Flow



B. Tier 0 Validation – Disaster Procedure

Tier Zero contains the necessary baseline infrastructure to support any recovery effort. The availability of Tier Zero should be validated before any recovery effort. Because the validation of Tier Zero is one time effort, the validation process is maintained in a separate document titled "SoM Guide to the MSDC".

i. Key Procedural Information

Before servers and applications can be recovered after a disaster, a member of the operations team must validate that all components of Tier Zero are up and running by following the Disaster Procedure.

Storage:	**Validation/Availability Test**
SAN	Connect through SAN storage utility software
	Connect through SAN storage utility software
WAN:	
NOC Software and server	Login and map network nodes
Firewall	Successful trial logins
Switches & Routers	Successful ping test
ISP	Ping alternate site server
	Log in from remote host
Data Recovery:	
NetBackup sw, server, catalog	Run a test restore
Tape libraries and drives	Backup Application device configuration is successful
Operations:	
Active Directory	Network login test
Password Portal	Service account passwords are provided
Domain Name Service	Ping test
Load Balancer Configurations	Login to LB and verify virtual IPs and health check status of real servers and Apps
Job Scheduler (Autosys)	Autosys services are enabled
Virtualization environment	Connect to vSphere interface
Repository:	
Key Management Environment (Quantum)	Access Key Manager software to validate key sets
DR Plans and documentation Software license keys Re-start scripts Re-sync scripts	Login and locate directories

C. Tape Recovery

Tapes needed for data recovery are stored at the Iron Mountain storage facility located in xxxx, ME. Once the BU Catalog has been recovered, relevant tapes can then be identified and ordered by phone from the offsite facility by following:

SOP Number: Data Center Operations PS042
SOP Name: Retrieving Media from Off-Site

i. Task Description Summary

When a file(s) need to be restored after a disaster, a member of the Storage team will request the tape(s) to be retrieved from off-site.

ii. Key Procedural Information

A VOLSER number for the requested tapes and an IM SecureSync user ID is required. Use the https://www3.securesync.com website.

- Production tapes are in account
- Non production tapes are in account

iii. Disaster Procedure

Emergency Tape Retrievals (Urgent/Rush 2-hour)

1. A member of the Storage Team will request a tape to be called back from off-site storage within two-hours. He/she should provide you with the completed request form containing:

   a. The VOLSER number on the tape
   b. The approximate date of the data on the tape
   c. The request form found in the Forms folder in the network OPER folder.
   Note: An emergency request may come in overnight via email or phone call to the Data Center. If it is by phone, ask the person to please send a follow up email with the appropriate form filled out.

2. Call the Iron Mountain Customer Service number 781-273-9500 and order a two-hour delivery of the requested tapes. If a tape needs to go to a different location than what is established for that particular account, mention this as part of the request (ex. A production tape that needs to go to the non-production Data Center).

3. When the tape arrives, notify the Storage Team member who requested this retrieval.

4. When the tape is ready to be returned to off-site storage, follow SOP P041, but use the same information from the original deposit slip. The Storage Team member does not need to submit another request form.

iv. Emergency Tape Retrieval - Resources

Name of resources who can request emergency tape retrievals:

Contact Person	Contact Information
	(Refer to Appendix A)
	(Refer to Appendix A)

	(Refer to Appendix A)
	(Refer to Appendix A)
	(Refer to Appendix A)
	(Refer to Appendix A)

v. Tape Recovery Site Information

Company Name	Address	Contact Name	Phone Number
Iron Mountain			

D. Data Storage & Backup Strategy

This table documents the backup strategy for each one of the Tier 1 applications. Applications which are fully mirrored at a second site make the recovery instantaneous by switching from the live site to the backup site.

TIER 1 APPLICATIONS			Location	Backup Strategy	Replication Strategy
Agency/Group	Dept.	Application System			
Public Safety	DOC	Corrections Information System (CORIS) (hosted at Corrections data center)			
	DPS	Criminal History Records Information System (CHRIS)			
		Computer Aided Dispatch (CAD)			
		Sex Offender Registry			
		Crash Reporting System (CRS)			
		NetMotion			
	DOT	DOT systems - road repairs (hosted at DOT data center)			
Public Health	DHHS	IMMPACT2 - Maine CDC Systems			
		Child Welfare Case Worker Database			
	DEP	Environmental Facility Information System (EFIS) and other DEP systems			
Financial Services to Citizens	DAFS	Advantage - central accounting system (externally hosted)			
	DHHS	Automated Client Eligibility System (ACES) - screening for MaineCare, Food Stamps, etc.			
		* Medicaid Payments (Molina) (externally hosted)			
		DHHS DataHub			
		Child Support Enforcement for Maine (CSEME)			
		Women, Infants & Children (WIC) subsidies			
	DOL	Unemployment Insurance (UIPROD)			
	DOL	Benefits - unemployment compensation			
	DOL	DOL Interactive Voice Response (IVR)			
Financial Services to Providers and Internal Financial Management	DAFS	Advantage - central accounting system (externally hosted) - also listed above			
	DAFS	Budget and Financial Management System (BFMS)			
Revenue Generating	MRS	Maine Revenue IntegratedTax System (MERITS)			
		On-line Tax Filing (I-File and E-File)			
	MRS	Tax and Revenue Image Processing System (TRIPS)			
	MRS	MRS Interactive Voice Response (IVR)			
	IF&W	Maine Online Sportsman Enterprise System (MOSES) - hunting and fishing Licenses			
	DECD	Business One-Stop (web-based) - Governor's focus			
Regulatory	ACF, IFW, DMR	Natural Resources Agencies - key systems for them			
Other	DOE	Infinite Campus (externally hosted)			
	DOE	Maine Education Data Mangement Systems (MEDMS) - financial tracking			
	PFR	Agency License Management System (ALMS)			

E. Tier 1 Application Restore Priorities

In the event of a disaster, each Tier 1 applications will need to be recovered within the agreed on RTOs.

Below is the sequence of recovery events in case of a disaster. The RTOs and RPOs for each one of the Tier 1 applications is also documented and should remain up to date:

TIER 1 APPLICATIONS			RTO	RPO
Agency/Group	Dept.	Application System		
Public Safety	DOC	Corrections Information System (CORIS) (hosted at Corrections data center)	TBD	TBD
	DPS	Criminal History Records Information System (CHRIS)	TBD	TBD
		Computer Aided Dispatch (CAD)	TBD	TBD
		Sex Offender Registry	TBD	TBD
		Crash Reporting System (CRS)	TBD	TBD
		NetMotion	TBD	TBD
	DOT	DOT systems - road repairs (hosted at DOT data center)	TBD	TBD
Public Health	DHHS	IMMPACT2 - Maine CDC Systems	TBD	TBD
		Child Welfare Case Worker Database	TBD	TBD
	DEP	Environmental Facility Information System (EFIS) and other DEP systems	TBD	TBD
Financial Services to Citizens	DAFS	Advantage - central accounting system (externally hosted)	TBD	TBD
	DHHS	Automated Client Eligibility System (ACES) - screening for MaineCare, Food Stamps, etc.	TBD	TBD
		* Medicaid Payments (Molina) (externally hosted)	TBD	TBD
		DHHS DataHub	TBD	TBD
		Child Support Enforcement for Maine (CSEME)	TBD	TBD
		Women, Infants & Children (WIC) subsidies	TBD	TBD
	DOL	Unemployment Insurance (UIPROD)	TBD	TBD
	DOL	Benefits - unemployment compensation	TBD	TBD
	DOL	DOL Interactive Voice Response (IVR)	TBD	TBD
Financial Services to Providers and Internal Financial Management	DAFS	Advantage - central accounting system (externally hosted) - also listed above	TBD	TBD
	DAFS	Budget and Financial Management System (BFMS)	TBD	TBD
Revenue Generating	MRS	Maine Revenue IntegratedTax System (MERITS)	TBD	TBD
		On-line Tax Filing (I-File and E-File)	TBD	TBD
	MRS	Tax and Revenue Image Processing System (TRIPS)	TBD	TBD
	MRS	MRS Interactive Voice Response (IVR)	TBD	TBD
	IF&W	Maine Online Sportsman Enterprise System (MOSES) - hunting and fishing Licenses	TBD	TBD
	DECD	Business One-Stop (web-based) - Governor's focus	TBD	TBD
Regulatory	ACF, IFW, DMR	Natural Resources Agencies - key systems for them	TBD	TBD
Other	DOE	Infinite Campus (externally hosted)	TBD	TBD
	DOE	Maine Education Data Mangement Systems (MEDMS) - financial tracking	TBD	TBD
	PFR	Agency License Management System (ALMS)	TBD	TBD

F. Application Run-book Template

Refer to the disaster recovery run-book per application

IX. DISASTER RECONSTRUCTION PHASE

Part of the reconstruction phase is to ensure that all operations are transferred back to the original site SSDC and that the CMCC DC is fulfilling its day to day operations. Depending on the disaster and the damage level, the reconstruction phase can last from one to multiple days.

The following are activities that must occur before falling back to the original production site:

- Continuously monitor the site or facility's health for reoccupation
- Ensure that there are no further threats and that the site is clear from all disaster aftereffects
- Provision and install all needed systems and hardware to ensure operational environment
- Ensure that all infrastructure services are fully functional (power, telecommunication, security, …)
- Ensure all business applications are fully functional

X. PLAN TESTING & MAINTENANCE

The DRP document must be kept up to date with the organization environment. It must be revised periodically [timeframe] and executed in a simulated environment on an [*timeframe*] basis. Testing will ensure that it can be implemented in emergency situations and that the staff and management clearly understand their roles and responsibilities in the event of a disaster.

A. DRP Maintenance

Modification to this plan will be based on both scheduled and unscheduled events:

- *Periodic Maintenance*

System Updates: The information covered by the plan will change over time. Changes to the core infrastructure, systems, facilities, business applications, resource information must be captured in the plan to ensure accuracy. For this reasons, the DRP document must be revised periodically *[timeframe/quarterly].* A meeting should be scheduled by the REMT to cross reference between periodic updates to the environment and the DRP document.

[Review Schedule – semi annually (months A, B)]
[Attendees]

Periodic Mock Drills: Scheduled mock drills must be executed in order to identify and correct any flaws in the plan and also ensure that the emergency and recovery teams are familiar with their assignments and, more importantly, are confident even under extreme pressure.

State of Maine commits to testing the DR plan [semi-annually/annually/quarterly].

[Mock Drills schedule]

[Mock Drills Results/Appendix]

Target Date	Responsible	Status	Comments

- *Experience Maintenance*

Lessons learned from an actual disaster experience are of great value to the plan. These should be captured thoroughly in the document to improve recovery readiness and possibly avoid future system downtime.

B. DRP Change Log

It is critical that the process of updating the DRP be well structured and controlled. Whenever changes are made to the plan they are to be fully tested and appropriate enhancements should be made to the training materials.

[Name of Resources/Department] will be responsible of keeping the DRP document up to date to ensure accuracy. All changes must be recorded in the change log table below.

Date	Responsible	Type of Change	Application/System Affected	Section #/Comments

C. DRP Documentation Storage

An electronic version of the DRP document must be stored at both the xx storage facility located xx, ME as well as on the DR OIT intranet site.

[Link to the DR OIT intranet site to be provided]

The documents listed below should be available at any time on the DR OIT intranet site.

Sewall Street Data Center related documentation:
- Cage Layout
- Cabinet/Rack Elevations
- Server Inventory
- Inventory of all telecommunication carriers

CMCC Data Center related documentation:
- Cage Layout
- Cabinet/Rack Elevations
- Server Inventory
- Inventory of all telecommunication carriers

Shared documentation
- Application run-books
- Monthly on-call resource schedule

APPENDICE A & B

Key Personnel Contact Information
&
Other Key State of Maine Departments

APPENDIX A - KEY PERSONNEL CONTACT INFORMATION

Note that resource names are ordered alphabetically.

Name, Title	Contact Option	Contact Number

APPENDIX B - TBC State Agencies CONTACT INFORMATION

Note that department names are ordered alphabetically.

Name	Cabinet Department	Other Agencies
Sandy Saunders	Director for Technology Business Consultants	
Sheldon Bird	DOE, DOL, PFR and affiliate boards, MRS (part of DAFS)	PUC, WCB
Mark Kemmerle	DHHS	MHDO
Cassandra Perkins	ACF, Corrections, DEP, DMR, DOT, DPS, DVEM/MEMA, IF&W	Baxter State Park
Howard Clary (acting capacity)	Governor's Office, DAFS (excluding MRS), DECD	Dirigo Health, Ethics, Commission, Human Rights Commission, Indigent Legal Services, Maine Arts Commission, Maine State Library, Maine State Musuem, Maine Historic Preservation Commission, Public Advocate, State Auditor, Treasury

Office Of Information Technology

APPENDICES C-G

Vendor Support Instructions