Laws of 2012, Chapter 277, Article I, Section 88 Records Management; Legislative Report

Legislation passed in 2012 directed the Division of Enforcement to prepare a report for "…developing a records management in the Division of Enforcement. The report must include projected costs for planning, implementing , maintaining and administering a comprehensive records management system, associated technology and an assessment of long-term funding needs to fully implement, maintain, and administer the records management system" 2012, Ch. 277, art 1, s 88. In September of 2012 the Division of Enforcement hired an independent contractor to:

- assess and document its law enforcement records management needs and objectives;
- identify and evaluate alternative approaches for meeting those needs;
- help the Division of Enforcement select from among those approaches;
- define the scope of a project to select, acquire, and implement a records management system;
- estimate the costs of selecting, implementing, administering, and maintaining that system; and
- identify and document risks to the implementation project and propose mitigation strategies

Realizing the need to apply today's advanced technologies to resource protection activities the Division of Enforcement conducted a thorough research and evaluation study of current processes and the available technologies to improve efficiencies and capabilities. The study showed the need to apply modern technology to all activities related to the collection and processing of all information and evidence related to an event, as well as activities related to conducting investigations necessary to solve a natural resource crime or help prevent further crimes from being committed. These tools contained in this new technology will make each conservation officer more efficient by allowing them to collect relevant information, only once at the time and place of each incident, and then to build upon that data as the processing of the incident continues. Current systems in use by the Division of Enforcement are not capable, nor can they be modified to meet these needs.

This report is a synopsis of the study completed by the contractor. Complete copies of the needs assessment, project definition, and risk assessment can be found on the DNR Enforcement homepage.

The Minnesota Department of Natural Resources, Division of Enforcement, is responsible for ensuring public safety and compliance with state game and fish, recreational vehicle, environmental and natural resource commercial operations laws. The DNR Enforcement Division is the 5th largest law enforcement agency in the State of Minnesota. It has statewide jurisdiction with more than 200 employees located in Four (4) regional offices and conservation officers covering more than 90,000 square miles of land and water across the State of Minnesota. The scope and scale of the Division's diverse missions, and dispersed staffing, makes managing law enforcement records challenging.

According to a report published by the U.S. Department of Justice, Office of Justice Programs and the National Institute of Justice[1], a "law enforcement records management system" (RMS) is an agency-wide system that provides for the storage, retrieval, retention, manipulation, archiving, and viewing of information, records, documents, or files pertaining to law enforcement operations. RMS covers the entire life span of records development—from the initial generation to its completion. An effective RMS allows single entry of data, while supporting multiple reporting mechanisms.

Core Functions & Critical System Needs

DNR Enforcement's core business functions that would need to be incorporated into a new comprehensive RMS system include:

- Citations, Warnings and Civil Citations
- Computer Aided Dispatch (CAD)
- Revocations
- Evidence & Confiscation
- Permits
- Licensing and Registration
- Safety education Training
- Incident Reports

The contractor worked with Division Staff to identify critical system features a RMS must have to efficiently and effectively improve Division processes and communications with other DNR Divisions, local, county, state and federal law enforcement, Legislators and other elected officials, and stakeholders, to provide relevant and timely outcomes.

Critical system features included; **Auditability-**ability for management to audit users activity on the system, **Usability-**the RMS must be easy to input and access information in real-time, **E-filing**-electronic capture and transfer of violation data to courts and other interested parties, **Evidence**-ability to track and inventory all seized items in the Division's possession at any given time and across the state, **Computer Aided Dispatching (CAD)**- is used to initiate public safety calls for service, dispatch, and maintain the status of responding officers on duty, **Intelligence**- a person centric system that allows the ability to enter information that does not necessarily result in an arrest, citation, or ICR report, **GIS-**the use of Geographic Information System (GIS) to tie events to locations, unlike traditional law enforcement, Conservation officers work in remote areas or on lakes that do not have a 911 address, **Interoperability**-convenient and ready access to other electronic systems routinely referenced by Conservation Officers, **Forms**-the ability to capture and store data which can then be used to create electronic forms for increased efficiency and to eliminate redundant data entry, **Redaction Software**-for the purposes of securing non-public information contained in forms and reports, **Automated Workflow Capacity**- to route forms and improve efficiencies, **Reports**- reporting capabilities to document and

[1] Standard Functional Specifications for Law Enforcement Record Management Systems, Developed by the Law Enforcement Information Technology Standards Council (LEITSC) and published by the Bureau of Justice Assistance, Office of Justice Programs, U.S. Department of Justice, in collaboration with the Law Enforcement Information Technology Standards Council

communicate outcomes, **connectivity**-with internet connectivity issues in remote parts of the state a system that can be used both on-line and off-line, **Central Repository –** The DNR Enforcement Division as well as any other Minnesota law enforcement agency can issue citations or warnings for violations of natural resource statutes and the ability for all law enforcement to see all activity of other departments is critical.

Phased Approach

The approach recommended for DNR Enforcement Division is to pursue the purchase of a commercial off-the-shelf records management system to meet the business functions and critical system features as defined for the Division. This will be Phase I (figure 1) of the overall effort.

Phase II (figure 2) is the longer term vision to create a data "clearinghouse" for natural resource incident and offense data generated by the DNR Enforcement Division *as well as other law enforcement agencies statewide*. This clearinghouse will serve as a central source for all natural resource incidents and offenses to be interfaced with and accessed by all law enforcement agencies statewide, in order to provide a comprehensive and holistic view of natural resource incidents and offenses throughout the State of Minnesota.

Figure 1. (Phase I)

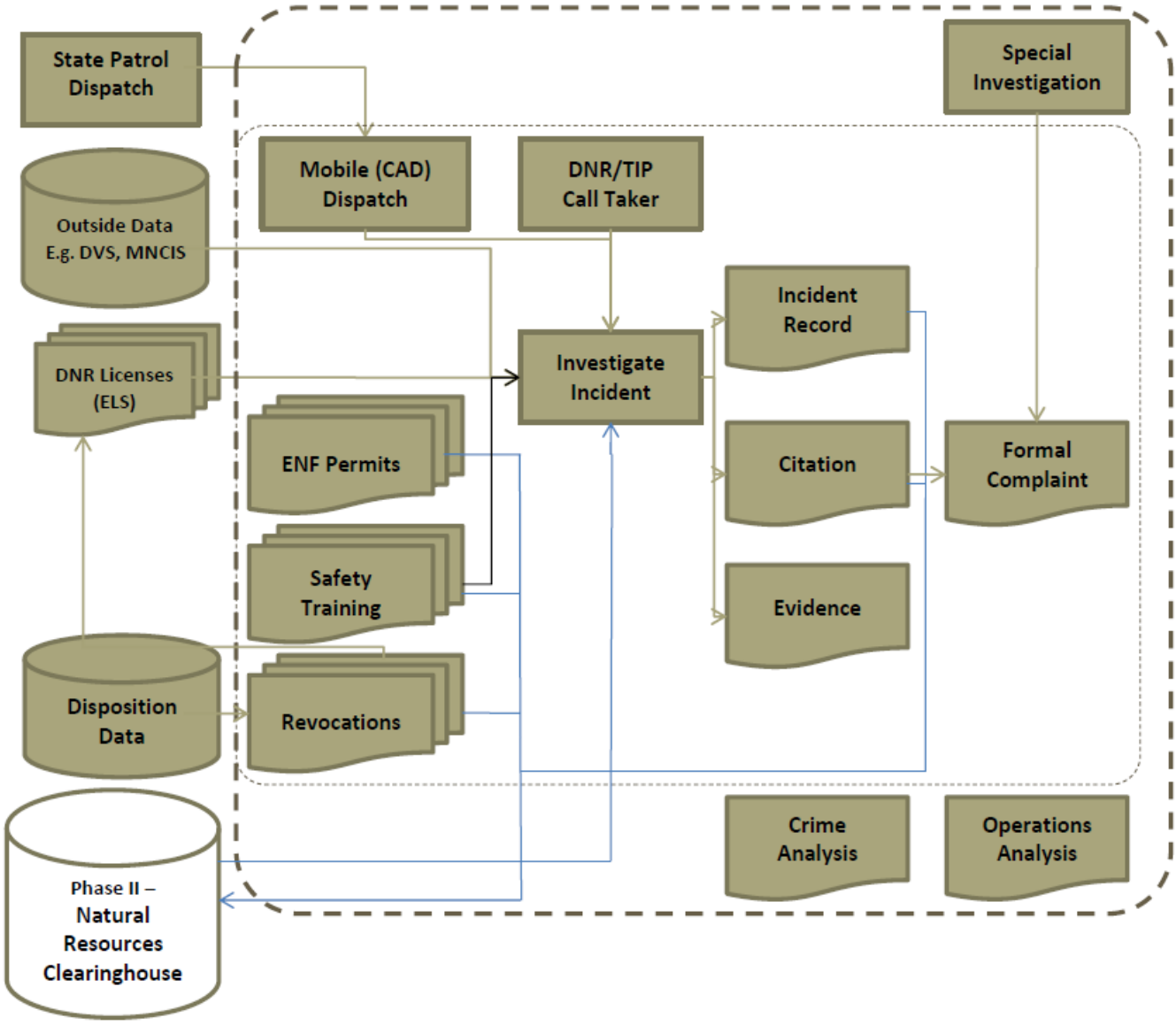
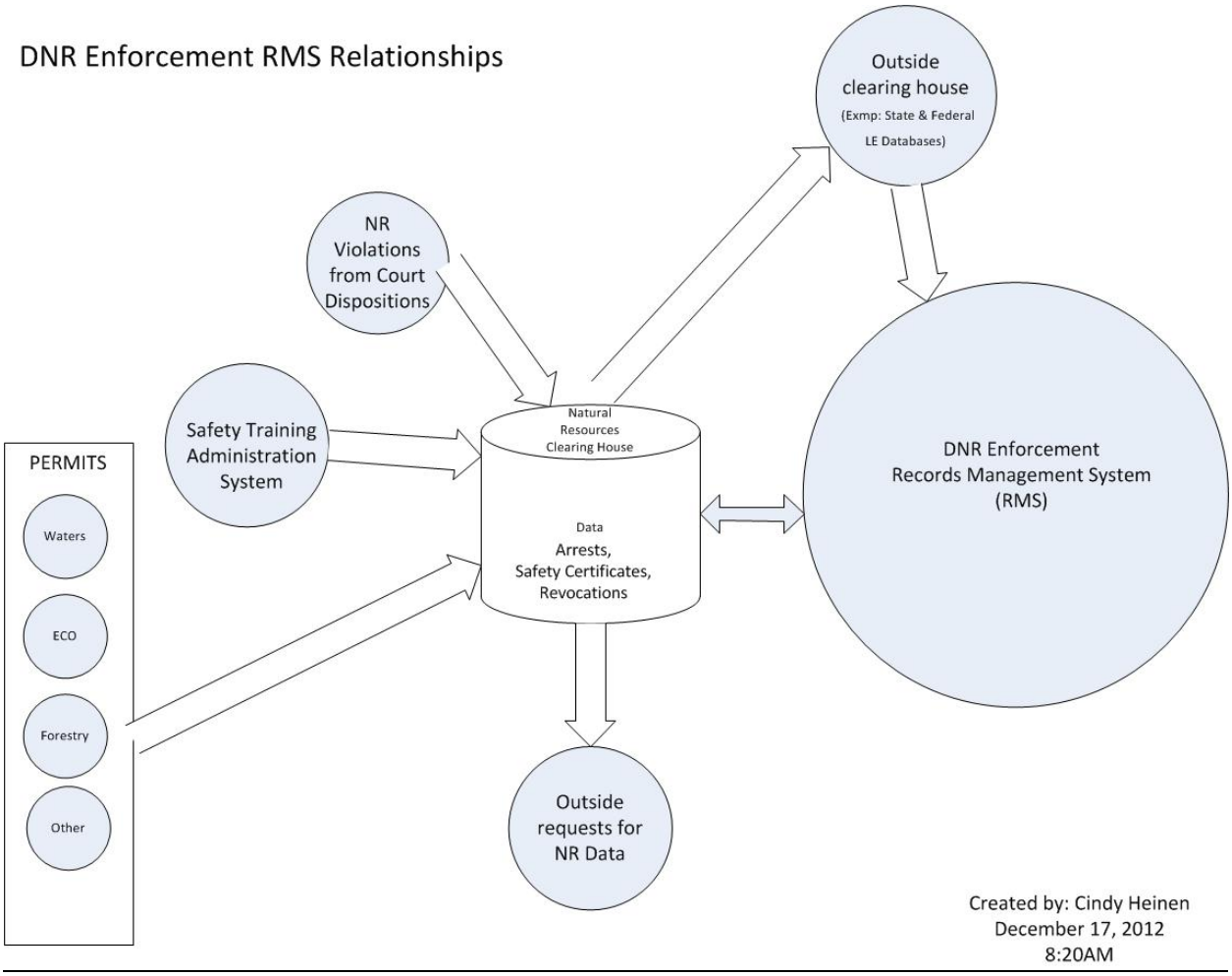


Figure 1. Key: -------- = primary core business functions that must be included in Phase I RMS solution
- - - - - = business needs supported by primary core business function data- in scope

Figure 2 (Phase II)



Project Timeline

The project approach has been designed to ensure vendor selection and sufficient planning is completed before implementation processes begin. The work of the project has been divided into four high level stages as outlined below.

Current estimates indicate the vendor selection; pre-implementation planning and implementation activities will take a minimum of 2 years to complete before the incremental regional training and go-live on the new system occurs. The plan as envisioned has the training and go-live processes occurring by region. The cutover of each region is expected to occur separately but in rapid succession and take a minimum of 6 months to complete statewide.

Pricing Estimates

A Request for Information (RFI) was sent to commercial vendors of law enforcement RMS and the following is a collective estimate of cost by those responding. A result of the RFI identified options for obtaining an RMS: 1) Perpetual, where the department would purchase the RMS from a vendor 'upfront' and pay annual licensing and maintenance costs, 2) subscription based, or 'software as a service', where the department would not invest a large amount of capital upfront to purchase the system, rather the department would pay an annual subscription fee along with maintenance and licensing. The following charts differentiate between the two pricing models.

One-Time Implementation Cost Estimates:

Item or Service	Perpetual Pricing Model	Subscription Based Pricing
Vended Software and License	$1,500,000	$300,000
Hardware (Client) • Field devices • portable printers • printers and barcode scanners -2 sets @ 6 locations	$377,850	$377,850
MN.IT • • Server/server operating system =$50,000 • .5 FTE Infrastructure Configuration =$62,000 • .5 FTE Interface Construction= $62,000 • .5 FTE Data Conversion =$62,000	$236,000	$236,000
Contract Integration Development -external support (1000 hours x $165/hr.)	$165,000	$165,000
Project Management & Business Analyst Support[2]	$250,000	$250,000
Contract Conversion Support Services -external support (1000 hours x $165/hr.)	$165,000	$165,000
TOTAL	**$2,693,850**	**$1,493,850**

[2] Business Analyst Support FTE may be a repurposed existing FTE in the Division

Overall Cost Estimate Breakdown by Project Stage:

Project Phase	Cost Estimate per Phase	
	Perpetual Pricing Model	**Subscription Pricing Model**
Prep Activities	$14,286	$14,286
Stage 1 – Vendor Selection	$814,286	$214,286
Stage 2- Implementation Planning	$199,356	$199,356
Stage 3 – Implementation	$826,564	$826,564
Stage 4 – Training and Go-Live	$839,358	$239,358
TOTAL	**$2,693,850**	**$1,493,850**

Please see "***Appendix A"*** attached for a detailed breakdown of costs by project stage and pricing model.

Annual On-Going Cost Estimates:

Item	Perpetual Pricing Model	Subscription Pricing Model
Annual System License, Services, Maintenance & Support	$200,000	$300,000
MN.IT FTE Support & Fees (.75 FTE)	$95,000	$95,000
2 FTE: Project Manager & Business Analyst[3]	$250,000	$250,000
Equipment Replacement Planning[4]	$225,000	$225,000
TOTAL ESTIMATED ANNUAL COSTS:	**$770,000**	**$870,000**

Conclusions

To meet the business needs of the DNR Division of Enforcement, and its various partners and stakeholders, the report recommends the purchase of an 'off the shelf', or existing law enforcement records management system. The Division will need to work with the selected vendor to modify the system to meet its core business functions and critical system needs. Implementation will need to be done in two phases: 1) an RMS for the Division of Enforcement, 2) a clearinghouse for all natural resource violations to provide interoperability with other law enforcement agencies. The project timeline will take a minimum of two years to fully implement. There are pricing options available with vendors to procure a system.

[3] Business Analyst Support FTE may be a repurposed existing FTE in the Division

[4] This figure includes funding in the event that exiting officer computers need to be replaced with 'ruggedized' machines.

Appendix A: Detailed Breakdown of Costs by Project Stage and Pricing Model

Project Stage	Activity	Estimated Duration
Prep Activities	Project Preparation Activities	2 months
Stage 1	Vendor Selection	9 months
Stage 2	Implementation Planning	6 months
Stage 3	Project Plan Execution	12 months
Stage 4	Training and Go-Live	6 months
Total Estimated Project Duration:		**35 months**

Implementation Staffing Needs- Breakdown of Costs				
Project Role	**Stages Needed:**	**Estimated Cost:**	**Cost per Stage:**	
DNR Project Manager	Prep thru Stage 4 Total: 35 months	$125,000 $3571 /mo.	Prep:	$7,143
			Stage 1:	$32,143
			Stage 2:	$21,428
			Stage 3:	$42,857
			Stage 4:	$21,429
DNR Business Analyst	Prep thru Stage 4 Total: 35 months	$125,000 $3571/mo.	Prep:	$7,143
			Stage 1:	$32,143
			Stage 2:	$21,428
			Stage 3:	$42,857
			Stage 4:	$21,429
MN.IT Staff: • .5 FTE Infrastructure Configuration • .5 FTE Interface Construction • .5 FTE Data Conversion	Stages 2, 3 & 4 Total: 24 months	$186,000 $7,750/mo.	Stage 2:	$46,500
			Stage 3:	$93,000
			Stage 4:	$46,500
External support- Integration Development	Stages 2 & 3 Total: 18 months	$165,000 $9167/mo.	Stage 2:	$55,000
			Stage 3:	$110,00
External Support – Conversion Support Services	Stage 2 & 3 Total: 18 months	$165,000 $9167/mo.	Stage 2:	$55,000
			Stage 3:	$110,000

Staffing formula for breakdown by stage = total estimated one-time cost per role/total # stages (months) role is needed = estimated cost per month x # of months per stage

Other (Non-Staff) Costs Breakdown by Project Stage				
	Perpetual Pricing Model		**Subscription Pricing Model**	
Software/ License **(½ in stage 1 and ½ in stage 4)**	Stage 1:	$750,000	Stage 1:	$150,000
	Stage 4:	$750,000	Stage 4:	$150,000
Hardware and Server Costs	Stage 3:	$427,850	Stage 3:	$427,850
Other Costs Subtotals:		$1,927,850		$727,850

Grand Totals (All Costs) by Project Stage		
	Perpetual Pricing Model	**Subscription Pricing Model**
Prep Stage:	$14,286	$14,286
Stage 1:	$814,286	$214,286
Stage 2:	$199,356	$199,356
Stage 3:	$826,564	$826,564
Stage 4:	$839,358	$239,358
Grand Total Estimated Costs:	**$2,693,850**	**1,493,850**

Needs Assessment Report

The needs assessment report is a result of a records management system (RMS) analysis commissioned by the Minnesota Department of Natural Resources, Enforcement Division to determine and document business needs and critical system features as well as to identify and evaluate available approaches for a RMS solution to meet those needs.

December 2012

Overview

The Minnesota Department of Natural Resources, Division of Enforcement, is responsible for ensuring public safety and compliance with state game and fish, recreational vehicle, environmental and natural resource commercial operations laws. The DNR Enforcement Division is the 5th largest law enforcement agency in the State of Minnesota. It has statewide jurisdiction with more than 200 employees located in Five (5) regional offices and conservation officers covering more than 90,000 square miles of land and water across the State of Minnesota.

The Division is in need of a modern and comprehensive law enforcement records management and incident management system to support the efficient and effective operation of its core functions as well as to share information with other local law enforcement agencies, criminal justice agencies, government units and their information systems. As a law enforcement agency, the DNR Enforcement Division has certain business functions and records management system needs similar to that of other Minnesota law enforcement agencies. *In addition*, as a conservation law enforcement agency with statewide jurisdiction, the DNR Enforcement Division also has unique and specialized business functions and responsibilities which result in a distinctive and broad set of critical system feature needs.

This document defines "law enforcement records management system and describes the core business functions and critical system features of the Division as defined by the DNR Records Management System Analysis project team. It also summarizes approach options and discusses the experiences of select state and local law enforcement agencies as well as other state conservation law enforcement agencies in this regard and includes a recommended RMS approach for the Minnesota DNR, Enforcement Division. Finally, it includes the recommended approach for the implementation of a records management system solution for the Minnesota DNR, Enforcement Division.

Law Enforcement Records Management System (RMS) Defined

According to a report published by the U.S. Department of Justice, Office of Justice Programs and the National Institute of Justice[1], a "law enforcement records management system" (RMS) is an agency-wide system that provides for the storage, retrieval, retention, manipulation, archiving, and viewing of information, records, documents, or files pertaining to law enforcement operations. RMS covers the entire life span of records development—from the initial generation to its completion. An effective RMS allows single entry of data, while supporting multiple reporting mechanisms. Such records include incident and accident reports, arrests, citations, warrants, case management, field contacts, and other operations-oriented records. RMS does not address the general business functions of a law enforcement agency, such as budget, finance, payroll, purchasing, and human resources functions. However, because of operational needs, such as the maintenance of a duty roster, law enforcement personnel records and vehicle fleet maintenance records are included within an RMS. In addition, RMS should provide the user with the ability to reuse and/or import data returned from external sources to eliminate redundant data entry. RMS also should provide the capability to electronically forward RMS data to external data sources, either automatically or upon the user's request (i.e., based on agency rules embedded within RMS)."

Depending on the specific agency, their size, purpose and needs; an RMS can include a range of system features and functions as described above. Most modern records management systems offer core functions as well as other supporting "modules" which can be made available to agencies whose responsibilities require additional features. "A module is an independent portion of an RMS software application which provides specific functionality, e.g., Arrest and Booking. Each module performs those procedures related to a specific process within a software package. Modules are normally separately compiled and linked together to build a software system. Single modules within the application can normally be modified without requiring change to other modules, so long as requisite inputs and outputs of the modified module are maintained." (OJP, 2006)

[1] Standard Functional Specifications for Law Enforcement Record Management Systems, Developed by the Law Enforcement Information Technology Standards Council (LEITSC) and published by the Bureau of Justice Assistance, Office of Justice Programs, U.S. Department of Justice, in collaboration with the Law Enforcement Information Technology Standards Council

Objectives and Needs

The primary objectives of the DNR Enforcement Division leadership in pursuing an RMS are to leverage automation to increase efficiencies and effectiveness of division operations and to share data electronically. Current processes are manual which result in delayed and incomplete records as well as create an inability to reliably report on division data or effectively share data with other state and local agencies.

The vision of the Division leadership is to increase public safety, improve law enforcement and conservation enforcement efforts and increase customer service through information and electronic data sharing information using an automated system. This is expected to positively impact internal operations and interaction with others in a number of ways.

Bringing the DNR Enforcement Division into the electronic age through implementation of an RMS will:

- Ensure that data regarding officer contacts with the public, conservation and other violations and warnings issued as well as any evidence confiscated are visible in the system and available to all conservation officers and employees statewide to assist them in making more informed decisions while performing their duties
- Make DNR Enforcement data available to be shared electronically with other state and local agencies
- Provide opportunities for the Division to proactively plan and respond strategically to:
    - resource needs
    - officer training needs
    - public safety concerns
    - conservation issues
- Provide access to violation and trend data
    - statewide, by region or specific location
    - to a variety internal and external business partners and stakeholder groups
        - types of violations (e.g. species, animal, recreational activity)
        - recreational safety issues
        - Legislative inquiries
        - Public interest data

In order to effectively understand and document the core business functions of the Division and determine the critical system features needed to meet the objectives as stated above, a records

management system analysis was conducted. The following represents the findings and recommendations of the DNR Enforcement Division RMS Analysis team.

Core Business Functions:

Core business functions refer to the primary business activities and responsibilities of the DNR Enforcement Division. They include:

Incident Reports: Incident Reports (ICR) are required to be completed for certain types of contacts made by DNR conservation officers. This includes calls for service, field reports, complaints and physical arrest. The primary officer completes an incident report and any other officer involved would each complete supplemental report, all using the same ICR# so they can be related as same incident. The ICR number is received from state patrol dispatch today. ICR's are sent to the officer's supervisor upon completion and other copies are disseminated. This is envisioned for inclusion in the RMS as an electronic process for the creation and dissemination of required Incident Reports (including electronic workflow for routing) as well as storage and retrieval.

Citations, Warnings & Civil Citations: The DNR uses the statewide standard citation as its primary document to charge a person with an offense. This can include a violation of a conservation statute or any other state statute or ordinance. Citations are filed with the local court and any fine payments or restitution collected as a result of a conviction is paid at the court. Warnings are issued using another type of form and are not filed with the court. Civil Citations are also issued for violations of certain statutes and are not filed with the court. Payments on civil citations are made directly to the DNR (Office of Management and Budget Services). Civil Citations can be appealed to the Office of Administrative Hearings (OAH).

Copies of citations and warnings issued by conservation officers are sent to central office for data entry into the AS400. A variety of data from the citation is captured and recorded including violator name and address, activity and species codes, violation code, officer and station code. The AS400 associates a single violation to a single citation number. Each violation is kept separate today for purposes of tracking repeat violations for license revocation. Other law enforcement agencies can also issue citations for conservation related offenses. When this occurs, the other law enforcement agency is to send a copy to the citation issued to the DNR central office. It is not known how consistently citations issued by other law enforcement agencies are received for data entry into the DNR mainframe. Disposition and sentence information for DNR citations is received from courts in an overnight data pass to the AS400. If there is conviction data received but no ticket was ever sent to the central office for

data entry, the record is not maintained at the central office. If an offense is charged by formal complaint, the officer is still required to complete a citation and send it to the central office for data entry purposes.

Recreational DWI's – requires completion of a forms packet. A copy of the paperwork is sent to the central office and to DVS after blood or urine results are received. The same packet of forms is used for hunting while intoxicated violations. DWI records are entered into an Access database which includes name, DOB, violation, vehicle type, date of revocation of license. License revocation is manually entered into the Electronic Record System (ELS) today.

Juvenile citations – the AS400 calculates date of birth and automatically changes name and address as "unidentifiable".

Revenue: All fine revenue transmitted by the courts (including wildlife restitution) is deposited with the DNR Office of Management and Budget (OMB). Funds collected for confiscated items sold are also deposited with OMB.

Computer Aided Dispatch (CAD): As a law enforcement agency, the DNR Enforcement Division has a business need for Computer Aided Dispatch (CAD). This is currently provided through a contract with the State Patrol (IMobile) for dispatch and radio services. This application is used today for three key functions: mandatory officer status checking (when an officer reports for duty and when they sign off duty so that others know who is available and where) as well as for creating field events, which is not mandatory, and use of GPS maps. It also serves as the gateway to the Minnesota Justice Information Services (MNJIS) where a number of criminal justice records can be accessed as well as includes instant messaging capabilities.

Revocations: The DNR Enforcement Division has the responsibility to monitor for multiple violations (convictions) received by an individual which would qualify for revocation of a DNR issued license. This is accomplished today by running a query from the AS400 about once a month to manually check for multiple convictions. There is a known information gap in finding convictions for conservation offenses written by other law enforcement agencies due to lack of violation system code in the current system. If qualification for revocation is determined, a letter is sent (Word form) by certified mail to the individual. There is no appeal option for license revocation. The revocation period depends on the

offense and can be for between 1 and 5 years. Minnesota participates in the Wildlife Violator Compact where revocation information from 30 + states is sent to a shared database. A revocation in a compact state will make a person ineligible for obtaining that license in Minnesota. An administrative appeal is available for this process. Reinstatements are automatic.

Evidence & Confiscation: Items used by individuals while committing conservation related offenses can be seized by DNR conservation officers. Items under $1,000 involved in a violation can be seized immediately and through completion of a form. This includes items such as bow and arrow, firearms, fish houses, Balsam boughs, etc. If an item involved in an offense is valued at more than $1,000 (such as certain firearms, recreational vehicles and other vehicles) a formal complaint is needed and is drafted by the prosecutor's office. The DNR officer must complete the paperwork to send to the prosecutor's office in order to begin the confiscation and seizure process on items of higher value. Contraband or anything taken illegally automatically becomes state property.

Items seized are kept as evidence until the case is disposed and are required to be tagged and tracked. The conservation officer sends in a seizure receipt (top of form) indicating where the seized property is located or what was otherwise done with it. For example, fish taken illegally can be released back into the water or destroyed. A seized item is tagged and brought in to the office. Items can be kept in gun lockers at the regional offices until they can be delivered to the central office. There is currently no visibility as to what is located at the regional offices. The tag stays with the item until it is returned or another determination for its disposal is made. There is a signature process (audit trail) all the way through to disposal. Seized items can be sold, destroyed, used by the agency or returned.
Pictures and videos taken as evidence are currently stored on the individual officer's State home computer.

Permits: The DNR Enforcement Division issues a variety of permits for a number of very specific and limited purposes. Examples include: trapping beaver, handicap/shooting from a vehicle, etc. Permits are issued manually by officers today. Information regarding permits issued is currently entered into an Access database at the central office. Other divisions within the DNR also issue permits however, the existence of these are not visible to the Enforcement Division.
A Conservation Officer's need to issue Enforcement Division permits as well as check for valid permits is largely seasonal work (Spring and Fall) however during those times, this task comprises a large part of

the conservation officer's daily activities. Multiple divisions of the DNR (Fisheries, Forestry, Eco & Water) in addition to the Enforcement Division are responsible for issuing issue permits of many types, all which conservation officers have a duty to enforce. Therefore, the question of where permit information is best stored for field officer retrieval becomes an important consideration. For example, including only those permits issued by the Enforcement Division of the DNR in the (Enforcement Division) RMS would provide officers with a partial picture of the numerous permits issued by the DNR agency-wide. On the other hand, since Enforcement Division permits are all issued manually today and information about them is not convenient to retrieve, including only Enforcement Division permits might be an incremental step that adds some business value. Another alternative to having the permits of one division issued and accessed in the RMS might be for the DNR to pursue a separate application where permits issued agency-wide would be housed, for more comprehensive access when checking permits. If this option were to be pursued, similar to license information (ELS), the data in this type of system should be easily accessed through the RMS in order to best meet needs of the field officer. It was also noted that some officers feel strongly that it is the responsibility of the citizen to show any permits so the lengths that officers go to verify permits when a person claims to have one but cannot produce it (before issuing a warning or citation), may vary and could influence the priority placed on having electronic access to permit information over other types of information in the RMS.

Licensing and Registration: A variety of licenses are issued by the DNR across multiple divisions of the agency. Conservation related licenses issued include both individual and commercial licenses for a variety of specific uses and purposes. Licenses are issued using an automated system known as the Electronic Licensing System (ELS) which is a product licensed through an outside vendor. DNR Enforcement Division officers routinely access the ELS database for purposes of checking for valid licenses when encountering individuals in the course of their work. The ELS system is not anticipated to be replaced by a new RMS, rather an interface would be needed.

Safety Training: The DNR Enforcement Division provides citizen training for certain types of recreational activities which require certification such as firearm safety, snowmobile and ATV safety training. Citizen trainers are certified to be instructors who then teach classes and certify students across the state. Once training is successfully completed, the citizen receives a certification which signifies their qualification to participate in the activity. This information is recorded at the DNR central office (on AS400) and also sent to DVS for inclusion on the DL. In the course of their work, Conservation Officers have a need to

access this information when determining if a person has the proper credentials when participating in a recreational activity requiring certification. This information is not always available through DVS so there is a desire to make citizen training certification information available in the RMS for purposes of DNR certification verification.

All youth completing safety training are issued a Minnesota driver's license number upon completion even if they are not yet eligible for a driver's license. This number follows them for life and become their driver's license number later when they become eligible to obtain a DL.

Inventory Management, Policies & Directives, Permits and Safety Training : There are a number of written processes, agency polices and directives as well as other existing documents that need to be accessed by conservation officers and other DNR staff. There is a system need to house and store this type of information for fast and convenient retrieval. This may also include the issuance of and information regarding the permits and certifications issued by the DNR Enforcement Division.

Critical System Features:

The following critical system features were noted as most significant in terms of the needs of the DNR Enforcement Division in carrying out the duties and responsibilities of the Division. They are based on the cumulative information gathered from individual internal stakeholder interviews. Many of the critical system features described below include a description of the "vision" that individual stakeholders have for the efficient and effective use of an RMS in carrying out that particular function to improve processes and increase efficiency.

Usability – In terms of system usability, easy to enter and easy to find is the general theme. Several stakeholders expressed the need to be able to access information easily without having to key in basic data or re-key that same data into several systems, forms and documents. For example, having the ability to swipe a State issued license of an individual (driver's license, hunting license, etc.) in a device which would read and capture that person's name and address in the RMS and from that information, provide the officer the option to conduct a records search pulling data from the various locations routinely checked (DL history, license status, court convictions, etc.) was described as a key business benefit of a modern records management system. In addition, this same information would then be available to automatically populate any citations, warnings or forms that may need to be completed as a result of the contact. Ease of use and the ability to re-use information already available in the system was a common theme expressed by stakeholders as a measure of efficient and effective use of an RMS. Auto formatting on fields and a logical business flow (i.e. all person information together) of the user interface is also desired. The ability for the Enforcement Division RMS to issue an ICR number (24 x 7) was also noted as an opportunity to save time and increase efficiency. Today, the officer contacts the State Patrol dispatch for this information.

Efiling capability - The electronic capture and transfer of data is a critical feature for the Division RMS solution. Citations, warnings and civil citations will be issued using the RMS with data captured and stored in the system. In addition to being able to produce a citation to give to the defendant and capturing the citation data in the Enforcement Division RMS, the capability to issue eCitations that are filed electronically with the courts is also needed. There is a business need for the RMS to track the status of each citation, warning or civil citation, including appeals of the latter, to final disposition as well as produce statistical reports regarding the offenses, locations issued, species involved, issuing officer, etc.

Evidence - Items seized are kept as evidence until final disposition of the case. Seized items can ultimately be sold, destroyed, used by the agency or returned to the owner. The ability to track and inventory all seized items in the DNR's possession at any given time and across the state is needed, including the ability to distinguish those items stored at regional offices and those at the central office. Support for bar coding functionality is also anticipated. The RMS will need to be able to track all items, location and disposition (or date to be disposed) throughout the process as well as provide an audit trail and related statistical data and reporting capabilities.

Computer Aided Dispatch (CAD) - Computer Aided Dispatch is used to initiate public safety calls for service, dispatch, and maintain the status of responding officers on duty. CAD is a critical system need for the DNR Enforcement Division. It is desired that this feature be made available in the system utilizing a user interface consistent with the look and feel of the RMS, either as a component of the selected records management solution or through a seamless interface to another CAD system. Services provided by CAD technology may include call input, call dispatching, call status, event notes, officer status and tracking, as well as call resolution and disposition.

Intelligence - The need for a person centric system that allows the ability to enter information that does not necessarily result in an arrest, citation or ICR report to support investigations is also important to many of the stakeholders interviewed. This is referred to as "intelligence" or "intel" information that could be captured and retrieved about a person so that other officers statewide can be made aware that there has been previous contact and to log observations, something that was reported, anything odd noted or things to watch out for should another officer have contact with that person in the future. This is described useful data both in terms of background information as well as for officer safety. The ability to associate a person to other people or groups or geographical location(s) was also noted as an information need for officers in the field when responding to calls for service or when encountering a person in the course of conservation enforcement duties.

Any enforcement information that is entered into an RMS and easily retrievable would also benefit Special Investigations in the course of their work. If "intel" were to become a component of the RMS, it was noted that consistency would be needed as to when and how to add these types of contacts as part of an officer's regular duties and to strike the right balance in terms of entering enough information to be useful without creating an undue and additional data entry burden for officers.

GIS – The use of Geographic Information System (GIS) to integrate, store, analyze, share, and display geographical information was expressed as a critical system need by stakeholders interviewed. Examples of Enforcement Division business needs which would utilize GIS technologies include the ability to monitor, map and illustrate conservation and preservation related trends as well as to gather and present data to make informed business strategy decisions, including staffing and training needs.

Interoperability - More convenient and ready access to other systems routinely referenced is a system need mentioned by nearly every stakeholder interviewed. Conservation Officers routinely check the following:

- DVS record
- permit records
- license records (ELS)
- MNCIS – disposition and sentence information for conservation violations
- Citizen training records
- Statewide Supervision System
- BCA records for stolen items.
- Shared database for Compact states (this is checked less often due to access issues with this application).
- DNR AS400 (if still supported)

Ideally, a new system would have a "search menu" that would allow officers to enter a person's name and choose to include or exclude any type of information on that person regardless of whether the source data resides in the RMS or is available through an interface with another system. The concept of "one stop shopping" was mentioned by several stakeholders.

The need to maintain the current integration with Courts for disposition information and store that data in the RMS was also noted as an ongoing and important need.

Forms – The ability to capture and store data which can then be used to create electronic forms (integrated within the system) for increased efficiency and to eliminate redundant data entry was expressed as a high need by stakeholders. This includes the primary forms such as ICR and

supplemental forms and DWI forms (similar to what other agencies can do in the BCA's ECharging portal) as well as other forms, citations, warnings, confiscation tags completed on a routine basis.

Basic information that is entered once should populate all necessary forms generated as a part of an incident. The number and types of forms that need to be completed can vary by situation. Once created, the ability to store the form(s) in the system in a manner that they are easily retrieved is another area where a new system could offer significant process improvement. It is also important that forms creation is a user-defined system capability that does not require dependence on a product vendor in order to add a new form or change an existing form or its contents. It was noted that the scope of forms that are appropriate within the RMS should be evaluated as there many forms used in the division that are not law enforcement related.

Redaction Software - The inclusion of redaction software for purposes of securing non-public information contained in forms and documents subject to public inspection was also noted as a desired component of the RMS.

Automated Workflow Capability to route forms including notification that a document has been routed, from the officer to superiors the Central Office and others is an additional high priority business need with respect to the dissemination of forms once they have been created on the system. Access to electronic forms should be based on security levels as well as system rights and roles assigned to individuals. In addition, the acceptance of an electronic signature standard should be addressed in order to create true electronic workflow environment for the Enforcement Division.

Reports - The need to have robust system reporting capabilities was noted as another important system need. The data that goes into the RMS needs to be available in the form of report output for purposes of obtaining statistical information and trend data by user defined parameters such as data range, geographical location, types of offenses, types of species, activity, issuing officer, etc. This information is critical internally to anticipate such things as staffing and training needs, to define division business strategy and budgetary needs, and respond to legislative inquiries as well as for external stakeholders who are interested in information about the work of the DNR Enforcement Division.

Connectivity for Conservation Officers is a large concern in certain areas of the State. Although this may not be an issue that can be expected to be solved by an RMS, the implementation of an RMS would become the impetus for evaluating current connectivity issues as well as examining other options that may be available for those areas where reliable and consistent connectivity is currently problematic. While specific numbers were not available, it is understood that chronic connectivity issues impact a relatively small percentage of officers in the Enforcement Division but is a very significant problem for those affected. Given connectivity concerns for officers working in certain areas of the state, the need for a device that will store the data for upload later is anticipated.

Central Repository – The DNR Enforcement Division as well as any other Minnesota law enforcement agency can issue citations or warnings for violations of conservation statutes. The DNR Enforcement Division needs visibility to all conservation related citations and warnings in order to reliably carry out their responsibilities related to the revocation of a DNR license due to multiple convictions of certain statutes within a defined period of time. In addition, certain offenses carry increased penalties for subsequent offenses of the same type. There is a business need for the DNR as well as other law enforcement agencies to be aware of all conservation offenses regardless of the issuing agency.

A type of central repository containing all conservation related citation information is a statewide data need identified through the DNR's RMS analysis. This would include data from the Enforcement Division RMS as well as conservation related violations and warning information from all other Minnesota law enforcement agencies. Conservation statutes can be defined as a finite number of offenses in sections of the Minnesota Statutes which, for violations and warnings in electronic format, could be retrievable from a central data source.

Other areas mentioned but not current critical system features include:

- Logs for overtime projects
- Expense report logs
- Policies, Rules and Directives
- Squad maintenance history information

RMS Approach Options:

A records management system solution which both meets the needs of the core business functions of the division as well as provides the critical system features discussed above can generally be obtained through one of two approaches - either through an internal system build approach or through the purchase of an existing, off-the-shelf software application. This type of "build or buy" analysis is a common part of the process for most large organizations contemplating the implementation of an automated system. Several factors such as cost, available time, and products available in the marketplace, skills sets of internal IT staff and the goals, objectives and preferences of both the internal IT organization as well as overall organization are common factors that influence such a decision.
As part of the RMS analysis, three key project activities provided input to the approach recommendation for the DNR Enforcement Division. These key project activities include:

- Discussions with DNR IT and MN IT technical staff
- Benchmark Partner interviews
- Responses from the RMS vendor community to a Request for Information (RFI)

Discussions with DNR and MN Information Technology staff:

The information technology professionals within the DNR generally prefer the purchase of a new system over internal development. However, it is generally recognized that most systems offered by vendors in this area are customizable to suit the unique needs of an agency. The DNR Information Technology team is prepared, if needed, to assist with customization and ongoing support of a new RMS system purchased from an outside vendor.

Benchmark Partner Interviews:

Benchmark partner interviews were conducted with nine (9) local and state agencies. These agency partners were identified by the project team as comparable to the MN DNR Enforcement Division for purposes of this analysis and were also an agency known to have recently embarked on RMS implementation initiative.

Many things were learned from the experiences of the agencies interviewed by the team. [2] One significant objective of the benchmark partner interview activity was to learn specifically about the approach (build or buy decision) that other law enforcement and conservation agencies have taken with respect to acquiring an RMS. Relevant information from the benchmark partner interviews revealed that:

- 4 law enforcement agencies (2 local and 2 state conservation agencies) had purchased and successfully implemented an off-the-shelf records management system
- 1 state conservation agency had opted to internally build a system but had not yet implemented it
- 3 other agencies were searching for an off-the-shelf solution but had not yet acquired one
- 1 other local law enforcement agency was contacted for the limited purposes of hardware selected however, was in the process of moving from an internally built system to a commercial off-the-shelf system

RFI Responses from RMS Vendor Community:

A Request for Information (RFI) was issued to the RMS vendor community as part of this analysis. The objective of this activity was to provide the RMS vendor community with information regarding the core business functions and critical system needs of the Enforcement Division and receive responses as to their ability to meet those needs as well as to obtain high level cost information from which to formulate a cost estimate. The turnaround time from posting of the RFI until the time vendor responses were due was very tight due to the short duration of the RMS analysis project. This undoubtedly impacted the number of responses received however; three very detailed and thorough responses were received from known RMS vendors. Analysis of these responses revealed that Enforcement Division expectations appear reasonable and viable solutions to meet expectations appear to exist in the off-the-shelf marketplace.

[2] Detailed notes from the Benchmark Partner interviews are incorporated by reference as appendices to this document

Conclusion:

In consideration of all of the above, the approach recommended by the DNR Enforcement Division RMS Analysis team is to pursue the purchase of a commercial off-the-shelf records management system to meet the business functions and critical system features as defined for the Division. This will be Phase I of the overall effort.

Phase II is the longer term vision to create a data "clearinghouse" for natural resource incident and offense data generated by the DNR Enforcement Division *as well as other law enforcement agencies statewide*. This clearinghouse will serve as a central source for all natural resource incidents and offenses to be interfaced with and accessed by all law enforcement agencies statewide, in order to provide a comprehensive and holistic view of natural resource incidents and offenses throughout the State of Minnesota.

A Project Definition will be prepared to define project objectives and scope relative to the approach recommended for Phase I – DNR Enforcement Division, RMS implementation.

Minnesota Department of Natural Resources Enforcement Division

Law Enforcement Records Management System (RMS)

Project Definition

December 2012

The project definition describes the attributes of the records management system (RMS) selection and implementation project. It is a result of a RMS analysis commissioned by the Minnesota Department of Natural Resourced, Enforcement Division

Minnesota Department of Natural Resources

Enforcement Division

Records Management System (RMS Analysis)

Project Definition

Background

The Department of Natural Resources (DNR), Enforcement Division is a large, geographically disbursed law enforcement agency with statewide jurisdiction. Its primary responsibilities include ensuring public safety and compliance with state game and fish, recreational vehicle, environmental and natural resource commercial operations laws.

Specifically, the DNR Enforcement Division is responsible for law enforcement, public safety, and education in the following areas: hunting and fishing seasons, methods of taking animals and fish, bag and possession limits; public safety, especially where it concerns alcohol use while hunting or operating recreational vehicles and watercraft; commercial use and possession of natural resources and products; the protection of the state's land, air, and water; and youth and adult safety training and hunter education classes. (MN DNR, 2005)

The Enforcement Division currently has no automated records management system to support these important responsibilities and consequently, is unable to effectively share data electronically with state and local business partners.

While it has been recognized as a vital need of the Enforcement Division for quite some time; the need for bringing automation to the DNR Enforcement Division was acknowledged and received preliminary support during the 2011 Legislative session. As a result, in late 2012, a Records Management System (RMS) analysis was commissioned to: identify and document the core business functions of DNR Enforcement Division, identify critical system features needed as well as to examine options and determine a recommended approach, cost estimate and risks associated with acquiring an automated records management system (RMS).

Minnesota Department of Natural Resources

Approach

This initiative will be approached in two major phases in order to achieve both the short term and long term vision for creation, collection, visibility and access to natural resources data statewide. The first phase (Phase I) is to acquire and implement an automated records management system to support the work of the DNR Enforcement Division. This phase of the effort is discussed in detail throughout this document.

The second phase (Phase II) is the longer term vision to create a data "clearinghouse" for natural resource incident and offense data generated by the DNR Enforcement Division *as well as other law enforcement agencies statewide*. This clearinghouse will serve as a central source for all natural resource incidents and offenses to be interfaced with and accessed by all law enforcement agencies statewide, in order to provide a comprehensive and holistic view of natural resource incidents and offenses throughout the State of Minnesota. The information in this clearinghouse will be queried for investigative purposes, analyzed for statewide trends and emerging issues and reported on to meet a variety of information needs that are unable to be fulfilled today due to the lack of electronic incident and offense data from DNR Enforcement and the inability to share natural resources data across law enforcement agencies. While this document focuses primarily on the details surrounding Phase I; the completion of both phases is necessary to achieve the ultimate goal and satisfy expectations to increase visibility to and raise awareness of natural resource incident and offense data statewide.

Objectives

The objective of Phase I of the project is to select an "off-the-shelf" records management systems solution which supports the core business functions and critical system features as identified by the DNR Enforcement Division, RMS Analysis team (See "*Needs Assessment Report*") and successfully implement it statewide across the Minnesota DNR Enforcement Division.

Minnesota Department of Natural Resources

Project Stakeholders

Organizations and individuals both internal and external to the DNR will be affected by the Enforcement Division's project to select and implement an automated records management system. Some impacts will be direct while others will be more indirect. It is anticipated that many will benefit from the DNR Enforcement Division's ability to create, collect, store, organize, retrieve, report on and share data electronically. Project stakeholders, both internal and external to the DNR Enforcement Division, have been identified as follows:

Internal Stakeholders

DNR Enforcement Division:

- Conservation officers
- Supervisory and Management staff
- Investigative staff
- Administrative staff
- Training staff

DNR Commissioner

MN IT technology professionals

Minnesota DNR Divisions:

- Fish & Wildlife Division
  - License Center
- Parks and Trails Division
- Forestry Division
- Ecological &Water Division
- Lands & Minerals Division
- Operations Support Division

External Stakeholders

Other Minnesota law enforcement agencies:

- Minnesota State Patrol
- County Sheriff's Departments

- Local City Police Departments
- Three Rivers Park District
- Tribal Wardens

U.S. Fish and Wildlife Service

U.S. Forest Service

Bordering Natural Resources Law Enforcement Agencies

Bureau of Criminal Apprehension (BCA)

Minnesota Legislature

Minnesota Department of Public Safety, Driver & Vehicle Services Division (DVS)

Minnesota Courts

Minnesota County Attorneys

Department of Homeland Security/Border Patrol

Recreational Vehicle Stakeholder Groups

Aquatic Invasive Species Groups

Hunting & Fishing User/Advocacy Groups

Turn In Poachers (TIP) Inc.

Members of the public

Compact Violator States

Phase I –Proposed Scope:

The aspects of the proposed project scope for the RMS Implementation project covered in this section include:

- Functional Overview of Proposed Phase I Project Scope
- Conceptual Diagram of a Natural Resources Clearinghouse (Phase II)
- Description of Proposed Phase I Scope by the Following Key Areas:
    - Business Process
    - External Information System Interfaces
    - External Information System Query Capabilities
    - Data Conversion

Figure 1. below pictorially describes the functional overview and overall scope of Phase I; the DNR Enforcement Division Records Management System (RMS) selection and implementation project. The breakdown of scope by key area is described by section in further detail.

Figure 1. (Phase I)

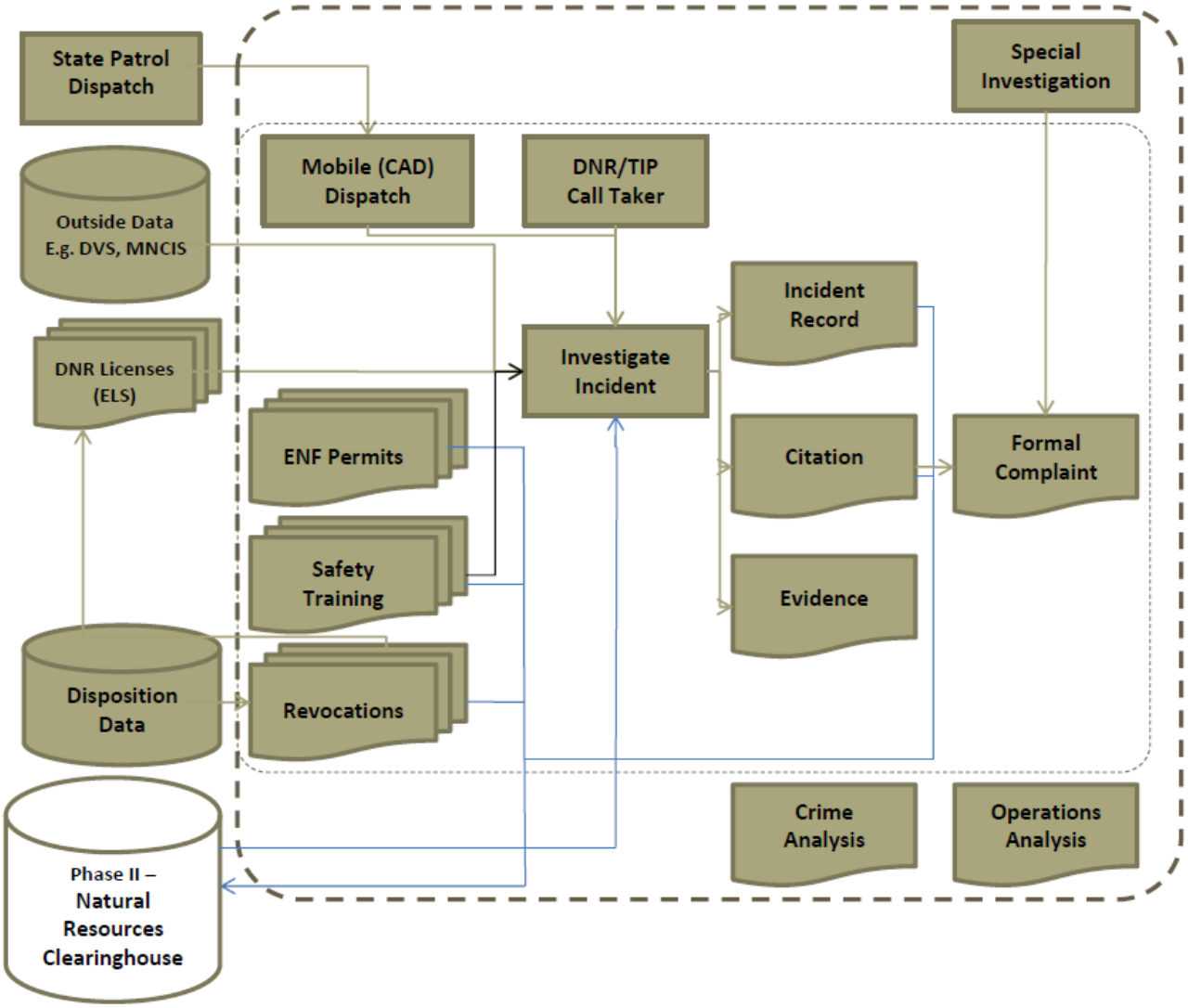
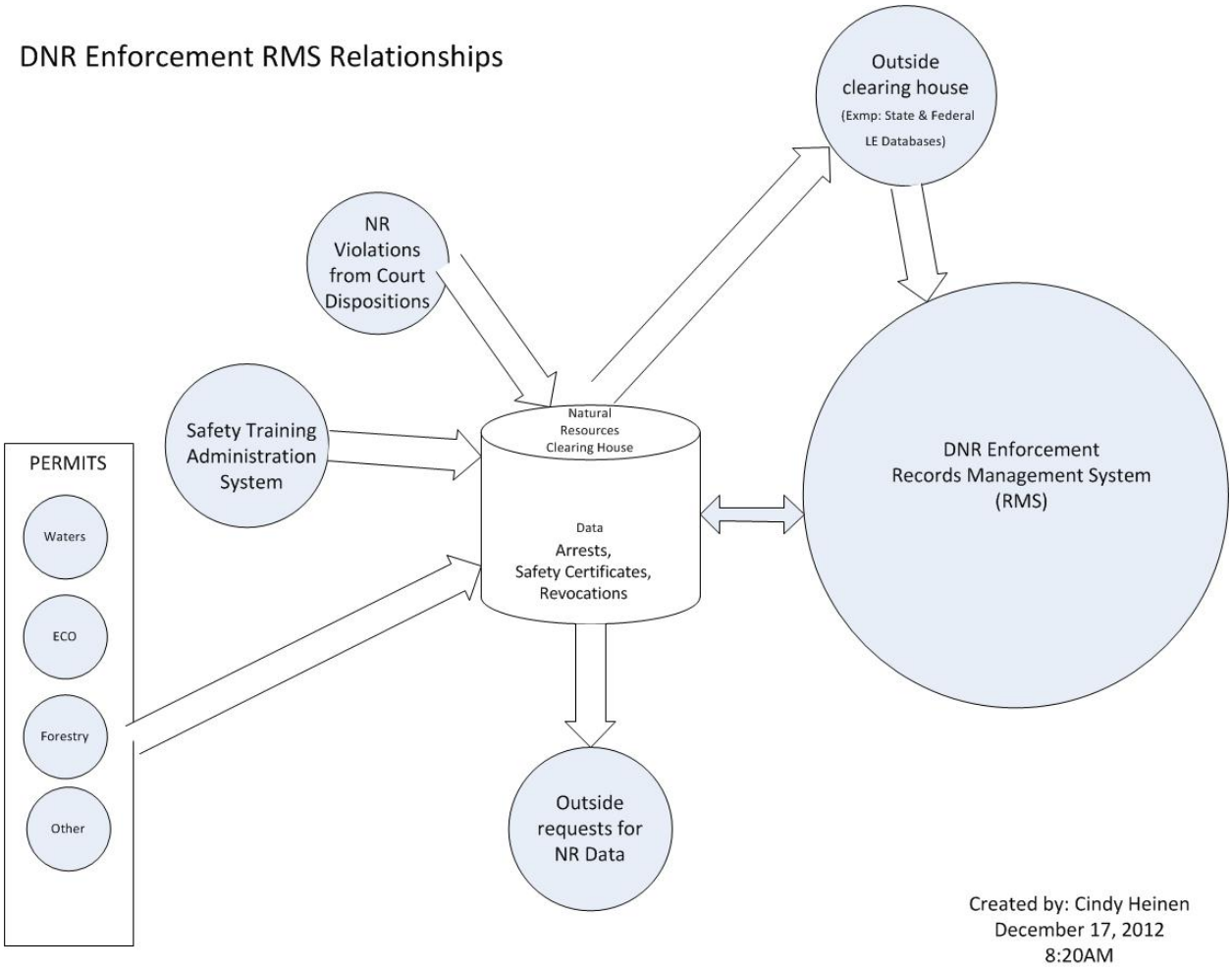


Figure 1. Key: -------- = primary core business functions that must be included in Phase I RMS solution
- - - - - = business needs supported by primary core business function data- in scope

Figure 2. below represents a conceptual design of the future state (Phase II) representing data shared among systems and accessible through the Natural Resources Clearinghouse. Here, the system depicted in Figure 1. (DNR Enforcement RMS) is represented as a primary data source for natural resources incident and offense data along with safety certification, permits and revocation data.

Figure 2. (Phase II)



Business Process Scope

The core business functions to be supported by the RMS solution include:

- Incident Reporting (ICR)
- Citations, Warnings, Civil Citations
- Computer Aided Dispatch (CAD)
- Revocations*
- Evidence and Confiscation Tracking
- Permits*
- Safety Training*

(* Indicates core business functions that may or may not be included in scope depending on the suitability of the selected vendor's product in meeting these specialized business needs.)

Scope of Data to be Captured and Maintained

The types of data that will be captured and maintained in the records management system include:

- Electronic citation, warnings and civil citation data, including court disposition data
- Incident report data
- Intelligence data for officer contacts including person & relationship data
- Data on calls taken at the central or in regional offices statewide (TIP calls)
- Evidence and confiscation data including inventory, tracking, status and location data
- Enforcement Division permit data
- License revocation data
- Safety training certification data
- Audit trail data

Tabular and unstructured data to be supported:

- Geographic Information System (GIS) data
- Image files
- Audio files
- Electronic documents

External Information Systems Interfaces

The external information systems which must electronically interface and exchange data with the selected RMS solution include:

External Systems	Data Exchanged	Direction of Data
DNR Electronic Licensing System	Recreational license information and status	Receive
IMobile (MSP CAD)	Incident information & calls for service	Receive
Minnesota Court Information System (MNCIS)	Court disposition data	Receive
Driver and Vehicle Services (DVS)	Driver license record data Safety certification records	Receive Send
Natural Resources Clearinghouse (Phase II)	Incident and citation data, safety certification records, permit records, revocation information	Send

Many of the system interfaces identified above currently exist with the DNR AS/400 and need to be built and supported through an electronic integration with the new RMS. Data received from these systems as noted above is expected to be captured and stored in the RMS solution.

External Information Systems - Query Capability

With the exception of the Natural Resources Clearinghouse (expected in Phase II), the following systems are routinely referenced by conservation officers today in the course of their daily work. It is expected that officers and other Enforcement Division staff will continue to have a need to query these systems. Due to the number of sources, types and dynamic nature of the data contained in these source systems, it is not expected that the Enforcement Division RMS would store data from these systems not captured or saved as part of the ICR. Officers will continue their current need to query these systems and have information returned in real-time and on demand in order to make informed decisions in the course of their conservation enforcement duties. The manner in which these systems are accessed for query purposes is anticipated to be streamlined and accessible from within the RMS without the need to leave the RMS to log into other systems.

External System Queried	Types of Records Queried
Minnesota Court Information System (MNCIS)	Inquiry for court filings, case history and status
Bureau of Criminal Apprehension (BCA) systems	Criminal History Repository, Statewide Supervision System, CJIS, etc.
Compact Violator Database	Violator revocation information
Natural Resources Clearinghouse	Inquiry for natural resource violations issued by other MN LE agencies

It is anticipated that a majority of the externally referenced systems as noted above will be accessible from within many of the off-the-shelf records management systems available in the marketplace today, particularly from those vendor products with current Minnesota law enforcement clients. The ability to access data from frequently referenced external systems (without leaving the RMS) is a feature specifically noted as critical by the DNR and one indicated as available from the vendors responding to the RFI.

In addition, the Bureau of Criminal Apprehension (BCA) is currently working with Minnesota law enforcement vendors to accomplish access to the BCA's "Integrated Search Service" (ISS)[1] through external company products. As of this writing, the BCA reports working with three RMS vendors with Minnesota law enforcement clients, testing access to ISS through their products. Depending on the system ultimately selected, this is a possible approach for the DNR Enforcement Division to consider for further streamlined access to external criminal justice information systems.

[1] The BCA's "Integrated Search Service" (ISS) is an integrated interface that allows users to search multiple criminal justice data sources from a single location. Data sources currently include BCA products and services such as MN and NCIS Hot Files, CCH, MRAP, POR; also records from DVS, KOPS alerts & Gang Member records, MNCIS and the Statewide Supervision System are currently available through this service.

Conversion Scope

There are limited types of electronic records currently stored on the AS/400 and in Access databases within the DNR Enforcement Division. Although limited in terms of *types* of electronic records, there is an extensive *history* of certain electronic data records, particularly those records currently stored on the AS/400. A summary of current electronic records and where they are stored follows:

Data currently stored on AS/400 includes:

- Historical data for citations and warnings issued for conservation related offenses
    - issued by the DNR as well as other law enforcement agencies
        - 866,000 records dating back to 1984
        - 180,000 court disposition records for conservation related offenses/citations
- Civil citation data
    - generated by the DNR as well as other law enforcement agencies
- Data regarding confiscated and seized items
    - 55,000 records
- Safety Training data
    - 1,950,000 records dating back to the 1950's
    - data collected: name and other attendee data, dates, classes and certifications earned
        - student certification records
        - student & class rosters
        - instructor certification records

Data currently stored in Access databases includes:

- Historical data for recreational DWI's
    - issued by DNR Enforcement as well as other law enforcement agencies

  - includes DWI on all recreational vehicles excluding watercraft
  - Approximately 4,000 records dating back to the early 1990's exclusive of BWI's
- Information on appeal processes for civil citations
- Incident Report data

Other documents and items stored electronically include:

- Incident Reports
- Media Files (Video or Audio)

It is expected that much of the historical DNR generated data currently stored on the AS/400 will be converted into the new RMS during Phase I. The extent to which all DNR generated historical data is necessary to be converted (versus stored in another format for retrieval if needed) needs to be determined however, all types of data currently housed in the AS/400 as described above is included in the data conversion scope.

Phase I Conversion (In-Scope):

- Citation and warning data (DNR generated)
- Disposition data for DNR generated citations
- Civil citation data and appeals (DNR generated)
- Safety training data (to the extent the selected product can accommodate)
- Recreational DWI data (DNR generated)
- Incident Reports

The conversion of record of appeals (of DNR generated civil citations) currently stored in an Access database may be limited to those appeals pending at the time of system go-live. Historical appeals with a closed status may remain in the Access database for retrieval if needed.

ICR reports which currently reside on the network will ideally be programmatically converted and attached to the electronic record as a PDF. This may need to be revisited once the application and a specific conversion method are determined. For example, an alternative may

be that the RMS may include a pointer to the ICR file location. It is anticipated that videos and photos currently residing on officer laptops would be converted manually and attached to records in the RMS on an "as needed" basis.

Phase I Conversion (Out-of Scope):

Conversion of data generated by other law enforcement agencies and currently stored in the DNR's AS/400 is deemed out-of-scope for Phase I. Rather, this data will remain on the AS/400 which will continue to be supported and maintained and until such time the Natural Resources Clearinghouse (Phase II) is available.

The following data is out-of-scope for conversion to the new RMS:

- Citation and disposition data for non-DNR issued offenses
- Civil citation data generated by other law enforcement agencies
- Safety training data (if the selected product cannot accommodate)
- Recreational DWI data issued by other law enforcement agencies (non-DNR)
- Appeals of civil citations issued by other law enforcement agencies (non-DNR)
- Instructor certification records

During planning phase of the RMS implementation project, data conversion scope will be re-evaluated and further defined. This may result in adjustments to the scope as described above. For example, further analysis of data conversion methods may identify that manual conversion or "on-demand" conversion may be more effective for select data elements and documents.

Project Approach

The project approach has been designed to ensure vendor selection and sufficient planning is completed before implementation processes begin. The work of the project has been divided into four high level stages as outlined below.

It is recommended that a formal review of project outcomes be conducted at the close of each stage to ensure the original objectives of the project will be met. The objective of the review will be to confirm readiness to proceed to the subsequent stage of work.

Project Timeline

The activities necessary to complete the work of each stage are described below. Current estimates indicate the vendor selection; pre-implementation planning and implementation activities will take a minimum of 2 years to complete before the incremental regional training and go-live on the new system occurs. The plan as envisioned has the training and go-live processes occurring by region. The cutover of each region is expected to occur separately but in rapid succession and take a minimum of 6 months to complete statewide.

The project timeline assumes that the project will begin work on July 1, 2013.

High Level Project Activities:

Project Preparation Activities – 2 months

- Hire Project Manager
- Hire Business Analyst
- Mobilize project team

Stage I – Vendor Selection – 9 months

- Determine project governance structure
- Define new/desired processes and related business requirements for new system
- Draft and publish Request for Proposals (RFP)
- Determine evaluation processes
- Review RFP responses
- Narrow vendor preferences to short list of candidates
- Invite short list of vendors for product demonstrations
- Conduct site visits to customer sites
- Evaluate finalist vendors/products, score and rank
- Award contract
- Negotiate and finalize agreement
- Acquire product

Stage 2 – Implementation Planning – 6 months

- Determine overall project plan and milestones
- Determine project change control & escalation process
- Perform analysis between business needs and selected system functionality
    - Determine method of resolving differences
- Define system configuration tasks

- Define data conversion approach and tasks
- Confirm system interfaces needed and determine approach and tasks
- Create project communication and change management plan
- Determine system rollout approach
- Determine end-user training approach needs, location, equipment and approach
- Determine network and infrastructure needs
- Document current processes and identify business practice change candidates
- Determine test plan, testing resource needs and user acceptance criteria

Stage 3 – Project Plan Execution – 1 year

- System configuration
    - Confirm tasks and execute plan
- Interfaces
    - Build & test interfaces
- Data conversion
    - Execute conversion tasks, test converted data
- Project Communication and Change Management Plan
    - Execute project communication and change management tasks
- Business Process and Workflow Redesign
    - Approve, document and test redesigned business processes
- Technical Infrastructure
    - Perform any network upgrades
    - Purchase and configure server hardware and software
    - Purchase and configure desktop equipment
- System and Data Testing
    - Refine & execute test plan
- Determine go-live support needs

        - Draft go-live support plan
        - Determine post-implementation support and user requests for assistance
    - End User Training
        - Determine training locations and equipment needs
        - Secure training resources
        - Draft training materials
        - Finalize training schedule
        - Refine rollout schedule and confirm readiness

Stage 4 – Training and Go-Live – 6 months

- Confirm training locations and equipment needs
- Set up training facility
- Finalize training materials
- Conduct supervisor overview training
- Execute conversion plan
    - Validate production data
- Execute end-user training plan
- Distribute desktop hardware and install application
- Execute go-live support plan
- Monitor system and processes
- Determine if follow-up training is needed

Project Resource Requirements

- **Project Steering Committee** : Governance group empowered to make directional and policy decisions, supports the project as well as removes project obstacles and barriers
- **Project Sponsor-** Executive leader who advocates the project both internally and externally, championing the project, obtaining budgets for the project, accepting responsibility for problems escalated from the project manager, signing off documents, and supporting the project manager in managing the project.
- **DNR Project Manager** - leads the overall work of the project by establishing expectations, providing ongoing guidance and review, facilitating information sharing and coordination, managing overall project issues, risks and the overall project plan and budget
- **Vendor Project Manager** – works closely with the DNR project manager and serves as the liaison between the customer and the vendor to assist in establishing and executing the project plan, provide guidance and review, managing overall project issues, risks and overall project plan and budget
- **System Configuration Analyst** - internal analyst works with business resources and vendor to determine system user-defined items such as system table values, user rights and roles, etc. to prepare the system for use
- **Integration Developer** – contract staff responsible for designing and building interfaces between external systems and the selected RMS
- **Integration Analyst** – internal staff working with the integration developer and business analysts to determine data to be exchanged between business entities
- **Conversion Analysts** – contract staff responsible for the analysis of the selected RMS and how it can be used to store converted data
- **Technical Analyst** – internal technology professional responsible for working with the project team on network, infrastructure and hardware needs

- **Training Coordinator** – internal training staff responsible for defining and executing the end-user training plan working closely with business analysts to understand the training concepts and develop and deliver training for users prior to implementation
- **Communication and Change Management resources** – internal staff responsible for defining and executing the project communication and change management plan
- **Business Analyst** – internal staff members who will be involved in many critical aspects of the project including the design and testing of new system, the development of training and support materials and the design and implementation of business processes
- **Site Leads** – designated leads at each regional location who will serve as liaisons between the regional office and project team to ensure that task are completed on schedule and business needs are met

Project Cost Estimates

One-Time Implementation Cost Estimates:

Item or Service	Perpetual Pricing Model	Subscription Based Pricing
Vended Software and License	$1,500,000	$300,000
Hardware (Client) • Field devices • portable printers • printers and barcode scanners -2 sets @ 6 locations	$377,850	$377,850
MN.IT • • Server/server operating system =$50,000 • .5 FTE Infrastructure Configuration =$62,000 • .5 FTE Interface Construction= $62,000 • .5 FTE Data Conversion =$62,000	$236,000	$236,000
Contract Integration Development -external support (1000 hours x $165/hr.)	$165,000	$165,000
Project Management & Business Analyst Support[2]	$250,000	$250,000
Contract Conversion Support Services -external support (1000 hours x $165/hr.)	$165,000	$165,000
TOTAL	**$2,693,850**	**$1,493,850**

[2] Business Analyst Support FTE may be a repurposed existing FTE in the Division

Overall Cost Estimate Breakdown by Project Stage:

Project Phase	Cost Estimate per Phase	
	Perpetual Pricing Model	**Subscription Pricing Model**
Prep Activities	$14,286	$14,286
Stage 1 – Vendor Selection	$814,286	$214,286
Stage 2- Implementation Planning	$199,356	$199,356
Stage 3 – Implementation	$826,564	$826,564
Stage 4 – Training and Go-Live	$839,358	$239,358
TOTAL	**$2,693,850**	**$1,493,850**

Please see "***Appendix A"*** attached for a detailed breakdown of costs by project stage and pricing model.

Annual On-Going Cost Estimates:

Item	Perpetual Pricing Model	Subscription Pricing Model
Annual System License, Services, Maintenance & Support	$200,000	$300,000
MN.IT FTE Support & Fees (.75 FTE)	$95,000	$95,000
2 FTE: Project Manager & Business Analyst[3]	$250,000	$250,000
Equipment Replacement Planning[4]	$225,000	$225,000
TOTAL ESTIMATED ANNUAL COSTS:	**$770,000**	**$870,000**

[3] Business Analyst Support FTE may be a repurposed existing FTE in the Division

[4] This figure includes funding in the event that exiting officer computers need to be replaced with 'ruggedized' machines.

Major Decisions and Challenges

A number of major decisions and challenges for the DNR Enforcement Division associated with the Records Management System implementation are anticipated and include:

- A major challenge will be to secure the funding necessary to purchase and install an automated records management system solution and associated technologies.
- There will be a need to refine the project data conversion scope once final system selection has been made.
- There will be a need to further analyze and determine the most appropriate and effective conversion approach for various records from each of the existing data sources (e.g. AS/400, Access databases) to best meet ongoing business needs related to historical data once working in the new system.
- This project definition suggests a minimum of a 2.5 + year process from the vendor selection to completion of statewide rollout.
- In purchasing an "off-the shelf" software application, the Division will need to fit existing business processes into a largely non-customized software solution (where flexibility through system configuration is not available) resulting in business practice changes.
- The Division may be challenged to assign sufficient internal resources as recommended to ensure system setup and conversion ultimately meets business needs, if new staff resources are not approved and funded.

Assumptions

Several important assumptions were made in completing this project definition and developing the related timeline and high-level project activities. The following are the most significant of these assumptions:

- Phase I as depicted in Figure 1. (page 5 of this document) will be funded and completed first which sets the stage for Phase II. A Natural Resources Clearinghouse (Figure 2. page 6) is anticipated as Phase II of the overall effort.
- Vendor estimates for an RMS solution provided in responses to the RFI issued do not significantly increase from the time they were provided to the RFP stage of the implementation project.
- The selected vendor will provide products and deliverables as expected.
- Hardware and software necessary for the agency's disaster recovery plan are not included in this estimate and are accounted for in another area of the IT budget.
- Limited system customization of the selected product will be needed before go-live in order to meet the core business needs of the DNR Enforcement Division
- Interfaces identified which involve other agency resources will be accommodated.
- Conversion of DNR generated data currently stored in the AS/400 and Access databases is included in the conversion scope assuming reasonable corresponding fields to store the converted data are available in the selected system solution. If not, the decision whether to convert this data or maintain the Access database will need to be revisited.

Minnesota Department of Natural Resources

Appendix A: Detailed Breakdown of Costs by Project Stage and Pricing Model

Project Stage	Activity	Estimated Duration
Prep Activities	Project Preparation Activities	2 months
Stage 1	Vendor Selection	9 months
Stage 2	Implementation Planning	6 months
Stage 3	Project Plan Execution	12 months
Stage 4	Training and Go-Live	6 months
Total Estimated Project Duration:		**35 months**

Implementation Staffing Needs- Breakdown of Costs				
Project Role	Stages Needed:	Estimated Cost:	Cost per Stage:	
DNR Project Manager	Prep thru Stage 4 Total: 35 months	$125,000 $3571 /mo.	Prep: Stage 1: Stage 2: Stage 3: Stage 4:	$7,143 $32,143 $21,428 $42,857 $21,429
DNR Business Analyst	Prep thru Stage 4 Total: 35 months	$125,000 $3571/mo.	Prep: Stage 1: Stage 2: Stage 3: Stage 4:	$7,143 $32,143 $21,428 $42,857 $21,429
MN.IT Staff: • .5 FTE Infrastructure Configuration • .5 FTE Interface Construction • .5 FTE Data Conversion	Stages 2, 3 & 4 Total: 24 months	$186,000 $7,750/mo.	Stage 2: Stage 3: Stage 4:	$46,500 $93,000 $46,500
External support- Integration Development	Stages 2 & 3 Total: 18 months	$165,000 $9167/mo.	Stage 2: Stage 3:	$55,000 $110,00
External Support – Conversion Support Services	Stage 2 & 3 Total: 18 months	$165,000 $9167/mo.	Stage 2: Stage 3:	$55,000 $110,000

Staffing formula for breakdown by stage = total estimated one-time cost per role/total # stages (months) role is needed = estimated cost per month x # of months per stage

Other (Non-Staff) Costs Breakdown by Project Stage				
Stage Description	Perpetual Pricing Model		Subscription Pricing Model	
Software/ License **(½ in stage 1 and ½ in stage 4)**	Stage 1:	$750,000	Stage 1:	$150,000
	Stage 4:	$750,000	Stage 4:	$150,000
Hardware and Server Costs	Stage 3:	$427,850	Stage 3:	$427,850
Other Costs Subtotals:		$1,927,850		$727,850

Grand Totals (All Costs) by Project Stage		
Stage	Perpetual Pricing Model	Subscription Pricing Model
Prep Stage:	$14,286	$14,286
Stage 1:	$814,286	$214,286
Stage 2:	$199,356	$199,356
Stage 3:	$826,564	$826,564
Stage 4:	$839,358	$239,358
Grand Total Estimated Costs:	**$2,693,850**	**1,493,850**

Minnesota Department of Natural Resources, Enforcement Division
RMS Analysis RIsk Assessment

No.		Likelihood of Occurrence (High/Med/Low)	Impact if It Occurs (High/Med/Low)	Consolidated Rank	Method of Control	Responsibility
1	The system will not meet our needs and expectations.	Medium	High	Med	Draft detailed RFP Complete field visits to other vendor clients to see how system is used. Willingness to adapt practices to match system functionality Complete process definition and business requirements in advance of issuing RFP.	Steering Committee, DNR Project Manager Selection Committee Project Manager, Division Management Team Project Manager
2	The converted data will not make sense in the new system	Low	Med	Med	Define conversion-specific tests and complete prior to implementation Involve subject matter experts from business to ensure converted data approach is effective. Understand vendor approach for conversion when selecting a vendor. Ensure end users participate in testing of converted data.	Conversion Analyst, Project Manager, Subject Matter Experts Project Sponsor Selection Committee Project Manager
3	We will experience unreliable remote access while even more tasks are expected to be performed on line.	High	High	High	Select system that allows both off and online use. Participate in first net initiative to enhance connectivity	Steering Committee Statewide Radio Board, Department Liaison
4	The vendor promises us something they can't deliver or don't understand	High	High	High	Complete site visits of other vendor clients prior to selection. Script scenarios for vendor to demonstrate in selection interviews and demonstrations. Include process documentation as appendix to RFP following up with questions during the vendor interview to ensure they have read and reviewed. Include subject matter experts in the vendor selection process.	Selection Committee Selection Committee Steering Committee
5	We don't understand how to use the system after it has been implemented	Low	Low	Low	Provide periodic refresher training to reinforce more complicated training concepts. - Iterative approach. Establish a peer user group to allow for knowledge sharing. Use process documents as a starting point to define training requirements. Ensure all training requirements are addressed in training program. Evaluate ability to tailor Vendor's on-line help to include organization-specific instructions.	Standards and Training Manager Standards and Training Manager Standards and Training Manager Selection Committee
6	We will experience disruptions to mission critical work caused by a system that is cumbersome or slow.	Medium	High	Med	Select system that allows both off and online use. Participate in first net initiative to enhance connectivity Establish plan for completing mission-critical work without system assistance. Train users on plan and when to put it into action.	Selection Committee SRB, Department Liaison Project Sponsor Standards and Training Manager

Minnesota Department of Natural Resources, Enforcement Division
RMS Analysis RIsk Assessment

7	Officer buy in prevents effective use of the new system.	Medium	Med	Med	Ensure system selected meets requirements for functionality and usability. Establish user and test groups to involve field level staff to enhance buy in. Execute communication program to inform users of pending change.	Selection Committee Project Manager Project Manager
8	Leadership (DNR and External) support is inadequate for successful implementation.	High	High	High	Provide updates to stakeholders through course of the project to ensure project is valued even if leaders change in external community. Use project report and other resources to communicate the initial and long term vision.	Division Legislative Liaison Division Legislative liaison
9	Slow-downs in the process of getting the new system occur due to funding issues.	High	High	High	Ensure method of documentation is in place to capture key decisions made and resolution to complex problems. Ensure project funding requests are realistic and complete to ensure no additional cost requests are needed after the fact.	DNR Project Manager Steering Committee
10	The equipment will be unable to withstand our type of field conditions.	Medium	High	Med	Complete testing of equipment in real-life conditions. Allow flexibility in approach to ensure issues are resolved Investigate equipment strategy in organizations with comparable conditions and challenges.	Equipment Committee Steering Committee Equipment Committee
11	RMS system is successfully implemented but funding, sponsorship or other barriers prevents completion of the natural resources clearinghouse as envisioned	High	High	High	Ensure funding request clearly lays out that both steps are required to realize the vision. Maintain current systems as required to ensure viable alternative should clearinghouse not be completed.	Steering Committee MN.IT@DNR
12	Staff expectations vary considerably. Requirements for system and equipment may not be agreed to by all.	High	Med	Med	Regular project updates to users to ensure users know what to expect and what not to expect. Involve users in requirements and selection process.	Project Manager Project Manager
13	System auditability is not sufficient	Medium	High	Med	Include an auditability description in the RFP. Validate auditability funtionality during site visits. Train supervisors and Managers how to use audit functions. Create policy to ensure state and federal laws are upheld in Department practices.	Selection Team, Steering Committee, Project Sponsor Selection team Project Sponsor Project Sponsor