

BUREAU OF LAND MANAGEMENT
WYOMING
YEAR 2000 MANAGEMENT PLAN

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UNITED STATES DEPARTMENT OF INTERIOR
BUREAU OF LAND MANAGEMENT
WYOMING STATE OFFICE
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Introduction

The Year 2000 (Y2K) computer problem presents a serious threat to computer and information systems. Preventing a Year 2000 problem is one of Secretary Babbitt's highest priorities and similarly Bureau of Land Management Director Pat Shea's. It follows that it is also State Director Al Pierson's highest priority.

The Office of Management and Budget (OMB) is requiring that Year 2000 repairs are completed by the end of March 1999.

Y2K can potentially affect every system in operation today. Y2k has a deadline of January 1, 2000. The affects of Y2K must be identified and a sound economical strategy developed to resolve the problem, and the problem must be resolved prior to the turn of the century, (1 year and 4 months away).

GOAL

The goal is to have a seamless transition through Year 2000. Information technology accurately processes date/time data, from, into, and between the twentieth and twenty-first centuries, and the years 1999 and 2000 and leap year calculations, and information technologies properly exchange data/time information. It is the intent that no interruptions of critical government services occur as a result of the century date change.

OBJECTIVE

The objective include identifying, modifying, replacing, or discontinuing the use of Hardware, Software, and applications which are not Y2K compliant.

Purpose and Scope of this Plan

This document is Wyoming BLM's Year 2000 plan and serves to guide the efforts for meeting Year 2000 compliance. The plan applies to the Information Technology (IT), embedded systems telecommunications systems, and Data Sharing. This plan describes Wyoming's Y2K compliance program.

Computer systems include all computer hardware, state applications software, custom applications software, COTS software, operating systems, database management systems, and network service systems.

These systems are referred to as the (IT) program. The IT Y2K compliance program is a subset to the Y2K compliance program.

The Telecommunications program, due to its unique nature, is a reportable area that cuts across bureau and office lines, and shares many characteristics with the IT program, it also has the data networks including voice, digital data, video, networks, and services components. It like the IT program is a subset of the Y2K

compliance program.

The third program area which is also a subset of the Y2K compliance program is that of the embedded Micro-chip. In this program area are the equipment and processes which are date dependent due to the use of an embedded micro-chip that calculates maintenance schedule etc.

The fourth and final program area which is a subset to the Y2K compliance program is the data sharing-related information with other Federal, State, county/local, Tribal Foreign governments and private sector entities. In reality this is a part of the IT program, but, due to its unique application (normally separate from IRM) will need to be treated as a separate program area.

The following steps outline the overall process we are following to achieve, document, and report our Y2K compliance.

Awareness Phase

Step 1: Assemble State Y2K Task Force. Task force will consist of State POC, Statewide Coordinator, Statewide technical lead and individuals representing Telecommunications, IT, Embedded Micro-Chips, Data Sharing, and Field Office Management.

Actions Required:

- ! Identify State Y2K coordinator as full time position dedicated to the coordination and implementation of Y2K.
- ! Sign memo from State Director appointing individuals to Y2K Task Force (*include in Y2K documentation*)
- ! Ensure Y2K compliance statement is included in Employee Performance and Position Review (EPPR)

Step 2: Have Y2K compliance Task Force kickoff meeting and regular subsequent meetings for information sharing.

Actions Required:

- ! Define purpose of the Y2K contingency team and each member's role and responsibility
- ! Bring Task Force members up to speed regarding Y2K issues, definitions of Y2K compliance, and what they should look for. Raise awareness levels within the organization.
- ! Identify goals, determine a preliminary schedule, and plan to meet regularly to review Y2K progress.
- ! Define reporting requirements and format for each area of planning (IT, Telecommunications, Embedded Chip and Data Sharing) .
- ! Sample of format and project reporting schedule are an appendix to this Action Plan.

Step 3: Raise level of Y2K awareness in all offices. Identify Points (POCs) of contact in each office and division to serve as a communication link. Provide background information to the POCs, and keep them informed on a regular basis as to activities taking place and to get their input on proposed activities. Provide a single source for information relative to Y2K.

Actions Required:

- ! Send e-mail to all managers requesting the designation of a POC.
- ! Identify POCs for each office in BLM Wyoming and establish an e-mail list for information transfer.
- ! Bring POCs for Wyoming up to speed regarding Y2K issues and activities, Raise awareness levels within each office by direct and regular contact with POCs.
- ! Establish a hot link on the Wyoming home page of the Intranet for Y2K.

Assessment Phase (Complete Phase by 12-31-1998)

Step 4: Inventory Do a inventory of the technical infrastructure in the state. This includes items in the categories of IT, Embedded Chips, and Data Sharing. The Assessment Phase for Telecommunications has already been done.

Actions Required:

- ! Hold an Assessment Scoping/Planning Meeting attended by the Task Force and others with a stake in the inventory.
- ! Decide on Inventory forms, instructions and methods.
- ! Do the inventory

Step 5: Assessment Assess Risks and Prioritize affected systems based on the need to accomplish mission or business functions.

Actions Required:

- ! For each item inventoried, assess the effects on the capability to accomplish mission and business functions, if the item were to malfunction.
- ! Assign each item to one of the three following Priority Categories

Priority Categories

- ! **Mission critical:** Malfunction of the component or system would jeopardies the safety or health of employees, visitors, contractor and the public, to include adjacent communities which could be effected by our decisions.

Threat to life or property. Loss of core capability.

! **Non-mission critical** Important but not critical to the our business operations.

! **Third Priority:** System owner or Office/Division Manager determines that the item does not pose a risk to life, safety, nor to the important capabilities of the Office/Division

Step 6: Compliance Check. Determine the Y2K compliance status of each mission critical and non-mission critical (second Priority) inventory item.

Actions Required:

! All mission critical items that can be tested must be tested.
! For mission critical items that cannot be tested and for Second Priority items, vendor certification of Y2K compliance is adequate. (Letters from the vendor, statements of compliance on vendor web sites, or the list of compliant items compiled by the bureau may be used as proof of compliance.)
! See appendices for more on compliance checking
! Third Priority items need to be documented and justification prepared for Management certification for no need for compliance.

Step 7: Determine Compliance Strategy. The Deadline to have all items compliant is March 31, 1999. A contingency plan must be developed for each item that does not meet this deadline.

Actions Required:

! For each non-compliant item, determine whether it will be replaced, repaired or retired from use.
! For those items where assuring compliance is complex, develop a project plan.
! Based on priority, develop an over-all schedule for bringing each item into compliance.
! See appendices
! Provide assessment as input into Continuity of Operations Plan.

Step 8: Determine Y2K compliance budget.

Action Required:

- ! Develop costs and resource estimates for fixing the affected systems.
- / Office/Division and State Management signs-off on Compliance Strategy and budget.

Renovation Phase

Step 9: Begin Y2K remediation.

Action Required:

- ! Identify *renovations* teams and make assignments.
- ! Obtain needed replacement hardware and equipment, COTS upgrades, Operating system and software patches, programming and testing tools, contractors.
- ! Develop test plans for Custom Applications
- ! Repair, Replace and retire according to the plan. Includes installation of compliant COT, Computer hardware, and Embedded Chip equipment.
- ! Contact Data Sharing Partners
- ! See appendices
- ! Create contingency plans for all mission critical systems, in case that our fixes didn't work.
- ! Create contingency plans for priority two items that will not be compliant by March 31, 1999.
- ! Provide contingency plans as input into State Continuity of Operations Plan.

Validation Phase

Step 10: Carry out testing. Test the repaired or replaced systems for Y2K compliance and for function according to requirements.

Actions Required:

- ! See appendices for each category for how-to details
- ! Get sign-off from systems owners that the systems meet requirements.
- ! Get sign-off from validators that systems are Y2K compliant
- ! see appendices

Step 11: Validate Contingency Plans

Actions Required:

- ! Test contingency plans
- ! Where it is not possible to test contingency plans, have to get an independent review

IV & V Phase

Step 12:(Independent Validation and Verification)
Verification by someone who had no part in the renovation or replacement that the Validation that should be done has been done.

- ! Mission Critical must have IV&V.
- ! See appendices

Implementation Phase (Complete all phases by 3-31-1999)

Step 13: System Deployment and follow up. For Custom applications that have been repaired or replaced.

Actions Required:

- ! Get CMB approval
- ! Install application
- ! Training on new systems
- ! parallel systems testing. (where appropriate)

Step 14: Acceptance and Sign off of compliance .

Actions Required

- ! Get a sign off from the Y2K Task Force and Office/Division management that Office/Division is Y2K compliant.
- ! Final memorandum from State Director to WO Y2K Coordinator certifying state Y2K compliance.

Appendix A --Time Line, Reporting Requirements, Documentation Requirements

Time Line:

Awareness Phase	October/November 1998
Assessment Phase	November/December 1998
Renovation Phase (Include equipment acquisition)	January/February 1999
Validation Phase	January/February 1999
Implementation	February/March 1999

Reporting Requirements - Monthly starting October 1998. See the following reporting forms:

Wyoming Mission Critical Embedded Micro-chip Systems Inventory
Year 2000 Monthly Report (Date: _____)

Y2K POC: BobHenry/JohnNaylor
Phone: (307) 775-6236/6120

System or Component Name or Acronym	Brief Description	Contact	Method	Renovation Scheduled	Validation Scheduled	IV&V SCHEDULED	Implement Scheduled	Date Certified Compliant	Estimated Cost for Compliance	Actual Cost for Compliance
				(Actual date completed or % completed)						
										\$0

Wyoming Non-Mission Critical Embedded Micro-chip Systems Inventory
Year 2000 Monthly Report (Date: _____)

Y2K POC: BobHenry/JohnNaylor
Phone: (307) 775-6236/6120

System or Component Name or Acronym	Brief Description	Contact	Method	Renovation Scheduled	Validation Scheduled	IV&V SCHEDULED	Implement Scheduled	Date Certified Compliant	Estimated Cost for Compliance	Actual Cost for Compliance
				(Actual date completed or % completed)						
										\$0

**Wyoming Mission Critical IT Systems Inventory
Year 2000 Monthly Report (Date: _____)**

**Y2K POC: BobHenry/JohnNaylor
Phone: (307) 775-6236/6120**

System or Component Name or Acronym	Brief Description	Contact	Method	Renovation Scheduled	Validation Scheduled	IV&V SCHEDULED	Implement Scheduled	Date Certified Compliant	Estimated Cost for Compliance	Actual Cost for Compliance
				(Actual date completed or % completed)						
										\$0

**Wyoming Non-Mission Critical IT Systems Inventory
Year 2000 Monthly Report (Date: _____)**

Y2K POC: BobHenry/JohnNaylor
Phone: (307) 775-6236/6120

System or Component Name or Acronym	Brief Description	Contact	Method	Renovation Scheduled	Validation Scheduled	IV&V SCHEDULED	Implement Scheduled	Date Certified Compliant	Estimated Cost for Compliance	Actual Cost for Compliance
				(Actual date completed or % completed)						
										\$0

Wyoming Mission Critical Telecommunications Systems Inventory Year 2000 Monthly Report (Date: _____)								Y2K POC: BobHenry/JohnNaylor Phone: (307) 775-6236/6120		
System or Component Name or Acronym	Brief Description	Contact	Method	Renovation Scheduled	Validation Scheduled	IV&V SCHEDULED	Implement Scheduled	Date Certified Compliant	Estimated Cost for Compliance	Actual Cost for Compliance
				(Actual date completed or % completed)						
WY WAN										\$0
WY Field Office Networks										

Wyoming Non-Mission Critical Telecommunications Systems Inventory
Year 2000 Monthly Report (Date: _____)

Y2K POC: BobHenry/JohnNaylor
Phone: (307) 775-6236/6120

System or Component Name or Acronym	Brief Description	Contact	Method	Renovation Scheduled	Validation Scheduled	IV&V SCHEDULED	Implement Scheduled	Date Certified Compliant	Estimated Cost for Compliance	Actual Cost for Compliance
				(Actual date completed or % completed)						
WY WAN										\$0
WY Field Office Networks										

System Documentation Requirements

-

- ! Minutes from meetings
- ! memos
- ! All inventory items should have the following documentation where applicable. Items may be documented by groups.

- Risk Assessment and Priority
- Signed waiver for third priority items.
- Compliance Check Process and Result (compliance determined through web page statements should have printout, date and url).
- Compliance Strategy.
- Record of actions taken and costs incurred to make compliant.
- Validation test plan and results
- IV&V plan and results.
- Contingency Plan

Appendix B - Information Technology (IT)

Y2K Compliance Checking

PC's

Contrary to what many may have heard, few if any, PC's will stop working at year 2000. What will happen is that PCs' internal clocks which only have two digits for the year will contain the value 00. The problem is that older PCs will not be able to interpret 00 as 2000. Instead the year is interpreted as 1900 or 1980 (the earliest year DOS thinks it can be). PC Y2K compliance then, means that the PC maintains the proper date in the year 2000. For those who would like to learn more, there are many magazine articles and web sites which explain this in more detail.

Many of our PC's will be OK, but we still need to assess each PC to determine what action is required. Some known PC compliance information will help with this:

- Gateway Pentiums are Y2K compliant.
- Almost all Pentiums are Y2K compliant.
- Most 486's built after 1996 are Y2K compliant
- PC's running NT 4.0 are Y2K compliant with minor problems

There are a number of free of charge software tools for checking the Y2K compliance of PC's. The Y2K Task Force will select and support the use of one of these tools for statewide use.

A factor in determining what action needs to be taken in regard to a PC is the function for which it is used. The following kinds of systems (not a complete list) should be checked to be certain that the PC they are running on is Y2K compliant:

- Firewalls
- Mail Servers
- Network Servers
- LAN products
- Communications Servers
- Database servers
- Voice Messaging Systems
- Software license servers
- Systems where user logins expire
- Systems running backups on a schedule
- Systems with calendars, alarms, or notify programs

On the other hand, many computers which are not Y2K compliant will continue work for purposes which are not date critical. These

computers can be used for functions which do not use the system date. Some non-compliant PC's only need to have the system date manually reset one time and will then maintain the correct date, others will need to have the date manually reset each time they are rebooted.

Records need to be kept on the details of how compliance for each PC was checked and the results.

Use the following form to document your inventory and assessment:

PCs Assessment Form

Y2K Assessment Form for PCs, Servers and non-Modernization Workstations:

FA Number:			
User:			
Form Prepared by:			
Date Prepared:			
1) Will the machine be replaced before December 31, 1999?		yes	no
If so, when?			
2) The machine processes work or provides service that is:	Mission Critical	Non-Mission Critical	Priority Three
3) Is the machine Y2K compliant?		yes	no
	Rollover Compliant?	yes	no
	Reboot Compliant?	yes	no
	Leap Year Compliant?	yes	no
	How do you know?		
4) Does the machine process work or provide service that is date sensitive?		yes	no
5) What would the effect be on your office's business if the machine were to fail or provide incorrect results due to Y2K problems?			
6) What actions are planned to make the machine Y2K compliant?			
	How much do you expect this will cost?		
7) When will this machine be made Y2K compliant?			

8) Who is responsible to make this machine Y2K compliant?	
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PC Assessment Instructions

Y2K Assessment Form instructions for PCs, Servers and non-Modernization Workstations:

Make sure the inventory spreadsheet is correct. Add, correct and delete information from the spreadsheet as needed.

FA Number: Also known as the property number. This is the key by which the machine will be identified for our inventory.

User: The principle user of the machine, or for servers, the person responsible.

Form Prepared by: Self Explanatory.

Date Prepared: Self Explanatory.

1) **Will the machine be replaced before December 31, 1999?**
(Yes/No) If so when? If the machine will be replaced before the year 2000, there is no need to answer the rest of the questions on this form. Do complete forms for each COTS package and application on this machine because the user will still need to be able to do the same job and need the some software on the new machine.

2) **The machine processes work or provides service that is Mission Critical, Non-Mission Critical, or Priority Three?**

The priority is dependant upon the function for which an item is used rather than the type of item it is. The Priority Criteria are:

Mission Critical (Priority One): Those systems for which degraded capabilities result in loss to the organization of a core capability or a threat to life or property or affect the safety and health of employees, contractors, visitors, and the public including adjacent communities. Core capabilities (essential business functions) are those such as are required in the Continuity of Operations Plans. Examples include financial payment and collection systems.

Non-Mission Critical (Priority Two): Important but of secondary priority. Examples include E-mail software, servers, and PC's not in direct support of mission critical systems.

Priority Three: Has no Year 2000 impact or there is no risk of

interruption of essential government services. The Office/Division Management is aware of the item and accepts the responsibility of the determination of "no risk".

The user makes a priority recommendation that is recorded on the assessment form. The Office/Division management is responsible to make final, priority decisions.

3) Is the machine Y2K compliant? Yes, No

Rollover Compliant? Yes, No
Reboot Compliant? Yes, No
Leap Year Compliant? Yes, No
How do you know?

For PC's, this can be determined either by using the YMARK 2000 compliance testing tool, from the Wyoming list of compliant systems, or a manufacturers statement of compliance on their web site.

You should have already received instructions on obtaining YMARK 2000. If you haven't contact Darrell Tolley (307) 775-6154.

To test a PC. Reboot from the floppy with the copy of 2000.exe. Execute 2000.exe from the A: prompt. The test results will display on the monitor.

This program will verify the real-time progression from 12-31-1999 to 01-01-2000 (roll-over compliance). If the real-time progression fails, then the ability to set the date manually, and retain the date over a reboot, (reboot compliance) is checked. Additionally, the ability of the BIOS to recognize and support leap years from 2000 through 2009 (leap year compliance) is verified.

If the test recommends a manual reboot test, set the year to 2000, reboot (from the floppy) and check to see if the PC maintains the year 2000; this confirms reboot compliance. To return the PC back to normal operation, remove the bootable floppy, set the year back to the correct year, and reboot.

Label the machine with its Y2K compliance information.

- 4) Does the machine process work or provide service that is date sensitive?** This question can only be answered after the assessment of the COTS and Applications is completed. (see COTS Forms question 12, and Applications Forms question 9) If it is certain that the answer is no, then it is not important that the machine be Y2K compliant.
- 5) What would the effect be on your office's business if the machine were to fail or provide incorrect results due to Y2K**

problems? The answer to this question documents the reasons for the priority assigned to this machine and assists in planning what action needs to be taken.

- 6) **What actions are planned to make the machine Y2K compliant? How much do you expect this will cost?** This question applies only if the machine is not compliant. Options are: replace it, obtain and apply a fix (BIOS upgrade) from the manufacturer. For machines which are reboot compliant but not rollover compliant, it is an option to reset the date manually in the year 2000.

Microsoft operating systems (Except Window 98) will need to be upgraded to be made as Y2K compliant as possible. During the renovation phase PC's will need to have their operating system upgraded with patches available from Microsoft.

- 7) **When will this machine be made Y2K compliant?** Self Explanatory
- 8) **Who is responsible to make this machine Y2K compliant?** Self Explanatory.

PC COTS Software

Y2K Compliance or non-compliance of software is based on the way the software inputs, outputs, stores, manipulates and displays years in dates. The most straightforward way for software to be compliant is to always use four digits.

Some software packages allow either two or four digits to be used for the year. Some can be set to allow only four digits years to be used, making them compliant.

Although it is not the preferred method, software using two digit years can be compliant if it can use an explicit, consistent rule for inferring the century from the two digit year.

Each office cannot be expected to test the Y2K compliance of the COTS they use. Offices can use Y2K compliance information from vendor Web sites and other sources. A list of useful web sites follows.

<http://www.vendor2000.com>

<http://www.y2k.policyworks.gov/srch/y2ksrch1.cfm>

<http://www.microsoft.com/technet/topics/year2k/product/product.htm>

http://www.mitre.org/research/cots/COMPLIANCE_CAT.html

http://www.mitre.org/research/cots/VENDOR_LIST.html

NIRMC has compiled a list of PC COTS software used in the bureau and the compliance status of each. This list is Appendix D in the Bureau of Land Management Year 2000 Management Plan. It will be distributed and used during our state Y2K assessment.

For each COTS package, keep a record of how Y2K compliance was determined. When a web site is used to show compliance a printout with date and url should be kept.

See following form for recording Inventory Information:

COTS

Y2K Assessment form for COTS (Commercial Off The Shelf) packages on PCs, Servers, and Non-Modernization Workstations.

Fill one form out for each COTS, shareware, and freeware package on each machine.

FA Number of the machine on which the package is installed:				
User of the package:				
Form Prepared by:				
Date Prepared:				
1) Name of COTS Package:				
2) Manufacturer:				
3) Version:				
40	Select one	COTS	Shareware	Freeware
5) Function/Purpose:				
6) Maintenance Agreement in Place?				
7) Will this package still be in use after 12/31/99?		yes	no	
8) The package processes work or provides service that is:		Mission Critical	Non-Mission Critical	Priority Three
9) Is this package Y2K Compliant		yes	no	unknown
10) How do you know whether the package is compliant?				

11) In what way is the package not Y2K compliant?		
12) As used on this machine, does the package process work or provide service that is date sensitive?	yes	no
13) What would the effect be on your office's business if the package were to fail or provide incorrect results due to Y2K problems?		
14) What actions are planned to make this installation of the package Y2K compliant? How much do you expect this will cost?		
15) When will this installation be made Y2K compliant?		
16) Who is responsible to make this installation Y2K compliant?		

COTS Assessment Instructions

Y2K Assessment form instructions for COTS (Commercial Off The Shelf) packages on PCs, Servers, and Non-Modernization Workstations.

Keep in mind that the purpose here is to identify the packages used to get our work done. To assist you in seeing what is installed on the machine print out a listing of the top level directories. At the DOS prompt enter "DIR /AD > PRN" or to list subdirectories also "DIR /AD /S > PRN". This is not a foolproof method of listing what software is on the machine but it should act as a reminder. On the printout, cross out the directories corresponding to the software that is not used and fill out a form for each COTS, shareware, and freeware package in use on the machine. Use the Applications Forms for applications in use on the machine.

FA Number of the machine on which the package is installed: see PC Instructions

User of the package: Self Explanatory

Form Prepared by: Self Explanatory

Date Prepared: Self Explanatory

- 1) **Name of Package:** Self Explanatory
- 2) **Manufacturer:** Self Explanatory
- 3) **Version:** Self Explanatory
- 4) **COTS, Shareware, or Freeware?** Self Explanatory
- 5) **Function/Purpose:** Describe the use made of the package by the user rather than giving a general description of the package.
- 6) **Maintenance Agreement in Place?** Maintenance agreements may provide Y2K compliant patches or upgrades.
- 7) **Will this package still be in use after 12/31/99?** If not, do not complete the rest of this form for this package.
- 8) **The software processes work or provides service that is Mission Critical, Non-Mission Critical, or Priority Three?**
See PC Instructions for priority instructions.
- 9) **Is this package Y2K Compliant (Yes/No/unknown)?** If the package is compliant continue only with question 10, do not

complete the rest of this form for this package.

- 10) **How do you know whether the package is compliant?** Compliance information for some COTS has been distributed to Office/Division Y2K POCs. Additional information will be distributed as it becomes known. If this is the source of compliance information, note that it is.

Offices can use Y2K compliance information from vendor Web sites and other sources. A list of useful web sites follows. If web site information is used, a printout should be made with date and url.

<http://www.vendor2000.com>

<http://www.y2k.policyworks.gov/srch/y2ksrch1.cfm>

<http://www.microsoft.com/technet/topics/year2k/product/product.htm>

http://www.mitre.org/research/cots/COMPLIANCE_CAT.html

http://www.mitre.org/research/cots/VENDOR_LIST.html

- 11) **In what way is the package not Y2K compliant?** Describe how the package fails to be compliant. In some instances, a package may have features that are not Y2K compliant, but these features are not used, and will have no effect on the office's business. (see question 13) Or, the package can be compliant if it is used and/or configured properly. If either of these cases apply, describe how.

- 12) **As used on this machine, does the package process work or provide service that is date sensitive?**

The following is a list (not complete) of systems that are date sensitive. If a package makes no use of dates at all it is Y2K compliant by definition.

- Firewalls
- Mail Servers
- Network Servers
- LAN products
- Communications Servers
- Database servers
- Voice Messaging Systems
- Software license servers
- Systems where user logins expire
- Systems running backups on a schedule
- Systems with calendars, alarms, or notify programs
- Systems that:
 - compare dates
 - Sort by dates
 - Do calculations involving dates
 - Do expiration by dates (logins, licenses, accounts, tape

backups)

- Do scheduling, planning, etc
- Are Financial/accounting software
- Make future projections
- Use dates as part of a key number (documents, transactions, contracts, serial numbers, etc)
- Have anything to do with: hours worked, Time and Attendance, workmonths, billing hours, service contracts, leases, royalties, due dates, a time stamp, land ownership, retirement, or payment schedules.
- Allow for date input

13) What would the effect be on your office's business if the package were to fail or provide incorrect results due to Y2K problems? The answer to this question documents the reasons for the priority assigned to this machine and assists in planning what action needs to be taken.

14) What actions are planned to make this installation of the package Y2K compliant? How much do you expect this will cost? This question applies only if the package is not Y2K compliant. Usually the action required is to upgrade to a newer, Y2K compliant version of the package, or to apply a fix (patch) available from the COTS developer.

15) When will this installation be made Y2K compliant? Self Explanatory

16) Who is responsible to make this installation Y2K compliant? Self Explanatory

Bureau Applications

The method we will use to determine the Y2K compliance of Bureau Developed Applications is to check it against the list being compiled by the Wyoming Y2K Task Force. Unfortunately our list of Bureau Applications is not complete. If the application in question is not on the list, the Task Force will coordinate with the Office/Division in raising the issue of assuring its compliance to the Bureau level.

Any information Offices/Divisions receive regarding the Y2K compliance of bureau applications should be forwarded the Y2K Task Force so it can be added to the list for statewide distribution and included in our official Y2K records.

Custom Applications

Custom Application are those systems developed in the state. They range from personal systems developed in a COTS package to state sponsored systems developed under contract. How they are checked for Y2K compliance and who performs the check will depend upon the nature of the application. The developer of an application will usually be the first choice for providing Y2K compliance information for that application.

The Bureau has provided some guidance on checking the Y2K compliance of custom applications and other systems in Information Bulletin No NI-97-4005. The same information is available at http://web.blm.gov/internal/wo-500/wo-520/YR_2000/CHECKLIS.HTM (there is no T in CHECKLIS.HTM). Applications to be particularly aware of in regard to the way they input, output, manipulate, and store date data include those that:

- Compare dates
- Sort by dates
- Do calculations involving dates
- Do expiration by dates (logins, licenses, accounts, tape backups)
- Do scheduling, planning, etc
- Are Financial/accounting software
- Make future projections
- Use dates as part of a key number (documents, transactions, contracts, serial numbers, etc)
- Have anything to do with: hours worked, Time and Attendance, workmonths, billing hours, service contracts, leases, royalties, due dates, a time stamp, land ownership, retirement, or payment schedules.
- Allow for date input

Applications

Y2K Assessment form for Bureau and Custom Applications on PCs, Servers, and Non-Modernization Workstations.

Fill one form out for each Application on each machine.

FA Number of the machine on which the application is installed:	
User of the application:	
Form Prepared by:	
Date Prepared:	

What applications including those developed in a COTS package are loaded on the Hard Drive of this computer?

1) Name of Application:			
2) Technical Contact Name:			
Phone #:			
3) Version:			
4) Function/Purpose:			
5) Will this application still be in use after 12/31/99?	yes	no	
6) The application processes work or provides service that is:	Mission Critical	Non-Mission Critical	Priority three
7) Is this application Y2K Compliant?	yes	no	unknown
8) How do you know whether this application is compliant?			
9) As used on this machine, does the application process work or provide service that is date sensitive?	yes	no	unknown
10) What would the effect be on your office's business if the			

application were to fail or provide incorrect results due to Y2K problems?	
11) Is this a Bureau Application or a custom application?	

If this is a custom application and is not known to be Y2K compliant, with the help of the technical contact fill out a "Y2K Custom Application Technical Information Form". Only one Technical Information Form needs to be filled out per

Applications Assessment Instructions

Y2K Assessment form instructions for Bureau and Custom Applications on PCs, Servers, and Non-Modernization Workstations.

Custom Application are those systems developed in the state. They range from personal systems developed in a COTS package to state sponsored systems developed under contract. How they are checked for Y2K compliance and who performs the check will depend upon the nature of the application. The developer of an application will usually be the first choice for providing Y2K compliance information for that application.

See the COTS instructions for information of printing out what is installed on the machine.

FA Number of the machine on which the application is installed:
see PC Instructions

User of the application: Self Explanatory

Form Prepared by: Self Explanatory

Date Prepared: Self Explanatory

What applications including those developed in a COTS package are loaded on the Hard Drive of this computer?

- 1) **Name of Application:** Self Explanatory
- 2) **Technical Contact (Name and Phone #):** This is the person to contact to provide the technical information for this application or can at least point us to the person who can.
- 3) **Version:** Self Explanatory
- 4) **Function/Purpose:** Describe the use made of the application by the user, rather than giving a general description of the application.
- 5) **Will this application still be in use after 12/31/99?** If not, do not complete the rest of this form for this application.
- 6) **The software processes work or provides service that is Mission Critical, Non-Mission Critical, or Priority Three?**
See PC Instructions for priority instructions.

- 7) **Is this application Y2K Compliant? (Yes/No/Unknown)** The Bureau has provided some guidance on checking the Y2K compliance of custom applications and other systems in Information Bulletin No NI-97-4005. The same information is available at http://web.blm.gov/internal/wo-500/wo-520/YR_2000/CHECKLIS.HTM (there is no T in CHECKLIS.HTM).
- 8) **How do you know whether this application is compliant?** For Bureau applications compliance information is and will be provided to the Office/Division Y2K POCs. For custom applications, compliance will have to be determined by the person(s) responsible for the applications
- 9) **As used on this machine, does the application process work or provide service that is date sensitive? (Yes/No/Unknown)**
- See COTS Instructions
- 10) **What would the effect be on your office's business if the application were to fail or provide incorrect results due to Y2K problems?** The answer to this question documents the reasons for the priority assigned to this machine and assists in planning what action needs to be taken.
- 11) **Is this a Bureau Application or a custom application?** Self Explanatory
- If this is a custom application and is not known to be Y2K compliant, fill out a "Y2K Custom Application Technical Information Form". Only one Technical Information Form needs to be filled out per application, **not** one for each machine on which it is installed.

Custom Application Technical

Y2K Assessment form for Custom Application Technical Information

Fill one sheet out for each application, **not** one for each machine on which it is installed.

Form Prepared by:			
Date Prepared:			
1) Name of application:			
2) Current version of application:			
3) Application Function/Purpose:			
4) Application Owner/Sponsor Name:			
Phone #:			
5) Application developer Name			
Phone #:			
6) Is this application Y2K compliant?	yes	no	
7) How do you know whether this application is compliant?			
8) In what way is the application not Y2K compliant?			
9) Are there date related problems which will occur earlier than 12/31/99? If so, when and what are they?			
10) Date the application was developed:			
11) Is the Source Code available? If so what are the location and filename(s)?			

12) What Languages or COTS packages are used?	
13) What development documentation is available?	
14) What DBMS is used?	
15) What Internal/External Interfaces are used?	

Custom Application Technical Instructions

Y2K Assessment form instructions for Custom Application Technical Information

Fill one sheet out for each application, **not** one for each machine on which it is installed. This should be filled out by the owner and/or developer of the application.

Form Prepared by: Self Explanatory

Date Prepared: Self Explanatory

- 1) **Name of application:** Self Explanatory
- 2) **Current version of application:** The version number, date, or other method of identification of the most recent version of the application
- 3) **Application Function/Purpose:** Give a general description of the purpose of the application.
- 4) **Application Owner/Sponsor (Name and Phone #):** This is the person who can make decisions about the application and the way it is used.
- 5) **Application developer (Name and Phone #):** The person or organization who developed the application. This is usually the person who can help determine if the application is Y2K compliant and how to fix it if it isn't compliant.
- 6) **Is this application Y2K compliant? (Yes/No)** Self Explanatory
- 7) **How do you know whether this application is compliant?** The Bureau has provided some guidance on checking the Y2K compliance of custom applications and other systems in Information Bulletin No NI-97-4005. The same information is available at http://web.blm.gov/internal/wo-500/wo-520/YR_2000/CHECKLIST.HTM (there is no T in CHECKLIST).

Applications that are not use dates in any way are Y2K compliant.
- 8) **In what way is the application not Y2K compliant?** This information will be used to determine what needs to be fixed, possible work-arounds, and the effects the non-compliance

might cause.

- 9) **Are there date related problems which will occur earlier than 12/31/99? If so, when and what are they?** There are other dates that may cause problems for applications. Also, some applications use dates in the future, so they deal with the year 2000 before that year arrives.
- 10) **Date the application was developed:** Self Explanatory
- 11) **Is the Source Code available? If so what are the location and filename(s)?** Self Explanatory
- 12) **What Languages or COTS packages are used?** Self Explanatory
- 13) **What development documentation is available?** Self Explanatory
- 14) **What DBMS System is used?** If a Data Base Management System (DBMS) is used, what type is it, where is it located, what are the file or database names, etc?
- 15) **What Internal/External Interfaces are used?** If the application communicates or interacts with other applications, packages, COTS, etc, what are they?

Renovation Strategies for Custom Applications

See The Bureau of Land Management Year 2000 Management Plan Appendix F

Appendix C - Embedded Micro-chips

Embedded Micro-chip systems compliance is mostly based on analysis of vendor compliance information.

Assessment: -Inventory
 -Identify embedded components and associated systems.
 -Collect compliance information
 -Determine future plans for the components. (modernization, replacement, upgrade, retirement).
 -Collect information from vendors about Year 2000 compliance for each system.

Examples of systems which could contain embedded chips are: backup generators, scanners, calculators, copy machines, global positioning systems, wide area network switching equipment, telecommunications security, and encryption equipment, etc.

Use the following form for documenting the inventory process:

Year 2000 Affected Equipment (Embedded Microchips) Inventory Form

Office/Division:	
Equipment Type (Fax, Clock, etc)	
Description:	
Manufacturer :	
Model No. :	
Serial No. :	
Fixed Asset No. : (if applicable)	
Date of Purchase : (if known)	
Mission Critical? Y or N	
Non-Mission Critical? Y or N	
or Third Priority? Y or N	
Point of Contact/User :	

Use the area below for any additional information describing the equipment and its function. For example if the equipment is a component of an integrated system (i.e., water quality monitoring) please indicate that fact, or how the information is used (i.e., decision making, exchanged or shared with other entities who use it to make decisions etc.).

When inventory is completed summarize findings as shown below:

Office	equip type	# compliant	# not compliant	# to repair	# to be replaced	Cost \$

Renovation:

Upgrade, replace or retire. Prepare a schedule for bringing non-compliant equipment into compliance (See page 45 in the Bureau of Land Management Year 2000 Management Plan October, 1998).

Validation:

Ensure Manufacturers confirm that the repaired or replacement equipment is Y2K compliant.

Contingency Planning:

A brief contingency plan will be developed in each situation where the items cannot be tested and a vendor or manufacturer certification is not forthcoming. The contingency plan will provide an alternate way to do the essential service performed by the piece of equipment.

Appendix D Telecommunications:

The department and Bureau have broken out telecommunications Y2K compliance as a reportable area that cuts across Bureau and office lines. The Bureau's telecommunications Y2K Program Manager reports to the Y2K Coordinator and is a member of the Bureaus's Y2K Working Group and the Department's Telecommunications Y2K Compliance Program.

Assessment: Information collection

Quarterly reports

(Forms, instruction, and due dates, WO IM 98-4020 Appendix B.)

Field office and center analysis - B/C analysis for replacement or renovation; develop a renovation/replacement plan; develop a testing plan, develop an action schedule.

Renovation or Replacement phase: In progress

Validation Phase: Component and integration testing as described in the test plan will occur following Renovation or Replacement.

Implementation: See Bureau Directives to field offices on contingency plan requirements and reporting dates is provided in IM No. NI-98-4030.

Appendix E - Data Exchange/Data Sharing

Assessment: Inventory

- Collect information about data exchanges
 - Type of data
 - Involved entities
 - Programs data resides on
 - Equipment data resides on
 - Responsible entity for system function
 - Significance of data (mission Critical vs. non-mission critical)
- Collect compliance information

Use the following form for documenting the inventory process:

**DATA EXCHANGE/DATA SHARING
INVENTORY FORM**

1. Name of Office:		
2. Point of Contact:	Phone:	
\$ Do you share or exchange data:	Yes:	No:
IF THE ANSWER ABOVE IS NO, GO NO FURTHER! IF YES PROCEED WITH THE REST OF THIS FORM		
3. System Name/Application:		
4. System Owner:		
5. Partner(s) to exchange:		
6. Is Data incoming?	From:	
\$ Is Data outgoing?	To:	
\$ Is this data shared?		
\$ Is this data exchanged?		
7. Data Sharing Agreement Number:		
8. TYPE OF DATA:	YES	NO
\$ Is data used regularly? \$ Is it used in decision making? \$ Is the data part of an official Agency Record? \$ Does the data meet approved data standards?		
9. What is the purpose of the data exchange/sharing arrangement?	YES	NO
\$ General Information for Public use? \$ Specific information used to base management decisions on? \$ Specific information used for accounting purposes? \$ Specific information used for monitoring or compliance activities?		
Other:		
10: What would be the effect if the data exchange would not occur, or would be inaccurate? (circle one)		
a. Loss of a core capability or result in a threat to life		

<p>health or property (Mission Critical action stopped).</p> <p>b. Loss of ability to accomplish essential or very important tasks other than core responsibilities(Non-mission Critical action stopped).</p> <p>c. Loss of ability to accomplish desirable but not essential tasks(Priority 3 activity stopped).</p>		
<p>11. Are there plans for system retirement or replacement?</p> <p>If yes, what date?</p>	<p>YES</p>	<p>NO</p>
<p>12. What is the type and property number(s) of the equipment the data resides on, is transmitted by, and externally interfaces with?</p>		
Type of equipment on which data resides:		
Fixed Asset Number or serial number		
Type of equipment on which data is transmitted:		
Fixed Asset number or Serial number:		
Type of equipment data must interface with on receiving end:		
Fixed Asset number or serial number if BLM equipment. Ownership and contact if not BLM equipment:		
<p>13. What about the software?</p>		
COTS, Bureau, or Custom Applications on which data resides:		
What is the version of the software or is it a custom application? If custom, who is the Point of Contact?		

What about other electronic equipment?	
What electronic equipment is used in collection, manipulating, transmitting data other than the described above?	
Is it BLM, other agency, third party?	
Who is the contact for the equipment?	

Instructions for filling out(Data Exchange)(Data Sharing) Form

A FORM SHOULD BE FILLED OUT FOR EACH INDIVIDUAL AT EACH SITE

The OMB and the GAO define the term "data exchange" as follows:

"An electronic data exchange is the transfer (sending or receiving) of a data set using electronic media. All revisions to data exchanges (for example, timing or format), require notifications and/or agreements with each exchange partner."

Differentiation Between Electronic Exchange and Data Sharing

Data Exchange refers to those transactions involving the transmission or receipt of data electronically with a result being an update or modification to another's automated data base. Should modification be made to either parties system, a corresponding change would have to be made to the other parties system or a bridge software would need to be used to allow seamless information transfer.

Data Sharing occurs when parties receive information from an other but do not provide any capability to update, or modify the database. Thus, the data sharing partners would only need to know the format that will be used to furnish the data. (It is anticipated that most of BLM Wyoming's data is shared rather than exchanged given the above descriptions.)

The 1283 Manual describes data in the glossary of Terms as being:

Symbols representing facts, ideas, or values which may be processed to produce information. There are basically two categories of data when referring to BLM data management: Alphanumeric and spatial. Alphanumeric data is that data which is represented by characters, numbers and symbols, normally in a database file. Spatial data is that data which is referenced geographically on the land surface. This type of data is normally portrayed in geographic information systems.

1. Name of office:

- *This is the name of the BLM office where the data exchange occurs.*

2. Point of Contact:

- *This is the person in BLM Wyoming that knows the details of the system.*

3. System Name/Application Name:

- *This is the name assigned to the application by the user/originator.*

4. System Owner:

- *This is the person or office that is responsible for the system's function and the Data to be exchanged.*

5. Partner(s) to the exchange:

- *This is the names of the other entities BLM Shares data with using this system.*

6. Is data incoming of out going?

- *Check one or the other, or both if appropriate, and indicate the name of the partners that either receives data from BLM or send Data to BLM.*
- *Indicate if data is shared or exchanged by checking the correct statement*

7. Data Sharing Agreement Number:

- *In order to share data with others, there must be an agreement in place to establish the procedures and to provides the authority for this data to be exchanged. Use the Wyoming Agreement number to fill the blank, or state none if none has been developed.*

8. Type of Data: Check all questions as yes or no.

The major factors to consider in completing this section of the form are data "shareability", frequency, and usability; i.e., is the data shared manually or electronically or both; is it used regularly; how is the data used, e.g., management decision-making; is the data a part of an Official Agency Record.

If the data is shared/exchanged, used on a recurring basis, or used in Management decision-making, then it must be Corporate and have approved data standards which comply with the Corporate Data Dictionary (CDD).

- * By definition we are not concerned about "Non-Corporate" data.

To be non-corporate data, it must meet the criteria given below:
Use will be internal and local in nature, usually restricted to one person or one office.

- Data is not regularly shared or exchanged with other BLM offices, other agencies, outside organizations, or the public.
- Data is not used in Management decision-making.
- Data is not part of an Official Agency Record.

NOTE: If in doubt, it is prudent to consider the data as "Corporate".

Since many applications eventually end up to be used, shared, and exchanged by more than one person/office, it is good data management strategy to consider the data as "Corporate". This increases data use flexibility and the life of the application.

Data Standards:

- If Corporate Data is involved, then either data standards existing within the CDD or in development for the CDD must be used. The Technical Specialist/Data Steward, as the person most skilled in the resource/program area of his/her expertise, is also the one person most qualified to verify that: 1) The data being collected accurately reflects the resource; 2) That the data comply with any established Corporate data standards as initialed and dated by the **Technical Specialist/Data Steward**, or if otherwise required by the Director or State Director.

10. Data exchange or Data share is: Mission Critical (Priority 1), Non-mission Critical (Priority 2), or System owner or Office/Division Manager determines that the item does not pose a risk to life, safety, nor to the important capabilities of the Office/Division (Priority 3).

- This refers to the significance of the data, and will help determine if the data exchange is mission critical, non-mission critical, or no big

thing,

11. What is the planned or actual date of system retirement or replacement?
If there are no plans to retire the system, so state, if it is expected that the system will have served its usefulness in a few months or years state when expected.
12. Interface with Hardware
13. Interface with Software
14. Interface with Embedded Microchip equipment.

Assessment (Cont.)

- Request certification from system Owner
- Determine future dispensation (modernization, replacement, upgrade, retirement).
- Prepare renovation plan and develop a schedule
- Notify involved entities of proposed actions
(**SEE PAGE 50 BLM Y2K MANAGEMENT PLAN OCT 1998**)
- Provide opportunity for partners to comment
- schedule meetings to ensure adjustments are compatible between entities.
- Review current agreements
- Prepare new agreements, or modify old if necessary
- Develop Action Plan

Renovate:

- Retire, Repair, or Replace

Validate: Testing of renovated system to ensure data share function is compliant.