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What is the year 2000 (Y2K) problem?

Many computer circuits and programs simplified dates by assuming the century and recording only the last two digits of the year. These circuits and programs will interpret the "double zero" on January 1, 2000 not as 2000 but as 1900.

This error could cause them to malfunction or to generate false data. Other problems may be created by people choosing to hoard supplies and other necessities in anticipation of possible problems. People identify the problem as "Y2K" and the "millennium bug."

How will Y2K affect Oregonians?

There will be problems, but the scope and severity are uncertain. Some related problems have already surfaced such as the rejection of credit cards when businesses first tried to verify cards with expiration dates of "00" or "01."

Given the number of interactions that bring many of our products to market and the international nature of production and trade, there are many points of potential vulnerability. This leads some to conclude that the impact will be serious and long-lasting. Others believe that the impacts will be relatively minor and short-lived.

Regardless of the outcome, potential negative impacts will be minimized if businesses and individuals assess and correct potential problems before they actually appear.

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How widespread is the problem?

Due to reliance on computers and automated systems, all U.S. economic sectors are vulnerable. Problems are most likely in systems that use time and date functions such as tracking of orders and recordkeeping needed for taxes and employee payroll. Other examples include automated feeding and milking equipment used by farmers and ranchers; computer-controlled production and billing systems used by food processors; and machines used by food retailers for ordering, inventorying, refrigerating, and registering sales.

Is Y2K a problem without a solution?

No. The technical "fix" is straightforward, but the complexity of many of our systems and their interactions with each other can make it time-consuming and expensive to implement. Fortunately, we have been aware of the "Y2K problem" for some time, and most large corporations and municipalities are assuring us they are or soon will be Y2K compliant.

What is a computer "chip" and where is it located?

Small computer chips, many of which include a time-calculating function, control computers and some common appliances, machines, and tools. Because embedded chips are programmed at the factory, people are not certain they will work correctly when the clock passes midnight on December 31, 1999.

How can I tell if my computer and software are "Y2K compliant"?

Computers and automated equipment can be checked in two ways. One is to contact the manufacturer. The second is to run a "Y2K compliance program." Programs to help check computers are available free on the Web (see *For more information*). Your local county office of the OSU Extension Service also has a "Y2K compliance program" available at no charge (bring a disk).

These programs only check your computer hardware. More problems are expected in software than hardware. Some commercial programs are available that check software, or you can check with the software manufacturer.

How can I tell whether things I own contain small computers or chips?

In most cases, you can't tell for sure. There is a chance that products requiring some kind of time tracking might have a chip or small computer that could affect performance. Manufacturers of the products you own and use should be able to tell you whether the item will function without adjusting for Y2K. Most manufacturers have Web sites, and all have phone numbers. Be prepared to provide the make and model information when you call for specific information.

What might be affected?

Home. Telephones, answering machines, microwaves, VCRs, TV systems, cameras, camcorders.

Safety systems. Burglar and fire alarms, security cameras and systems, fire control systems.

Office equipment. Copy machines, postage machines, time clocks, calculators, fax machines, telephones.

Building systems. Air conditioning, climate control systems, building management systems, door locks, elevators and escalators, lighting systems, programmable thermostats, sprinkler systems, heating and ventilating systems.

Farms. "On-board" computers, GPS units, large pumps, frost or disease protection systems relying on computer models, and units with timesensitive controls or digital readings such as watering equipment, temperature controls, milking systems, and incubators.

What should I do now?

- 1. Check your computer systems and critical suppliers for Y2K compliance. Maintain a current backup of all your files. Check critical software programs, especially those with a date function that may fail or give erroneous data.
- 2. Survey your home or farm for other systems that might have time-keeping microchips. If any of these provide critical service, check to see whether they are Y2K compliant (contact the manufacturer) before December 1999; replace or provide backup support for those that are not.

Most likely you will not have a problem (only 2–3 chips out of 1,000 failed during simulated year-2000 turnovers). Affected chips often can be replaced, but don't wait until they fail to take appropriate action. Do it now!

- 3. Be prepared for power, phone, and other service disruptions. Whether it's the "millennium bug" or disruptions caused by severe weather or natural disaster, it's a good idea to be "self reliant" with water, food, health supplies, and heat for at least 3 days.
- 4. Connect with others. Share ideas and concerns with other people in your community. Government and business leaders alone cannot fully control or address these issues. By working together, we can successfully meet the challenge.

For more information

A Web site developed by the Oregon State University Extension Service provides helpful suggestions and links to other sites for information on Y2K.

The Extension Service also offers publications available to help you prepare for emergencies (http://osu.orst.edu/extension/y2k/). If you don't have Web access, visit your local county office of the OSU Extension Service listed below:



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