The following chart is an example of an elaborate rotational backup scheme providing for five separate daily, three weekly, four monthly, two quarterly, and a year-end backup solution. Your individual needs may vary.

| Media 1 | Monday |
|---------|-----------|
| Media 2 | Tuesday |
| Media 3 | Wednesday |
| Media 4 | Thursday |
| Media 5 | Friday |
| Media 6 | Week 1 |
| Media 7 | Week 2 |
| Media 8 | Week 3 |
| Media 9 | Month 1 |
| Media 10 | Month 2 |
| Media 11 | Month 3 |
| Media 12 | Month 4 |
| Media 13 | Quarter 2 |
| Media 14 | Quarter 3 |
| Media 15 | Year End |

If you need further assistance with identifying personal data and/or procuring the necessary equipment for backing up your data, please contact Information Systems.

helpdesk@nezperce.org 843-7307 x2692



## Customized Training Course Material
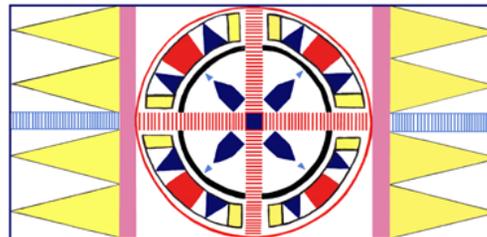


**NPIS**
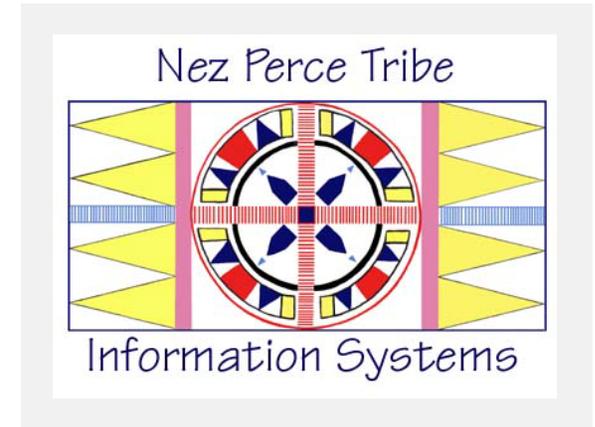
Nez Perce Information Systems

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# BACKUP!?

A data backup is (hopefully) an up-to-date copy of important data from your computer, which can be used in the event of the loss of the primary data storage unit (i.e. the computer.)

***Why Create Back-ups?*** Many users fail to create backups of important information, and when something happens to their carefully cultivated and cared-for data, they have to re-create it because they have no means to recover it. This can take many painstaking hours of work. Back-ups are important because they are a means of additional security. If something were to happen to important data or documents, back-ups could be easily used to recover them.

***What should be backed up?*** Ideally, all data on a computer should be backed up. But this can be a time consuming and expensive task. You only have to back up your own data files, such as word processing documents, spreadsheets, e-mail, contact lists, digital photos, graphics, etc. Basically, any files you've created or that were sent to you. (Most programs use the *My Documents* folder as default storage location.) Most programs/operating systems can be reinstalled from the disks/CDs, which were provided by the program vendor, but your data is irreplaceable. It cannot be recovered unless you keep copies of it.

***What could possibly happen to your data?*** There are many ways in which data-loss could occur. Here are some, but not all, possible scenarios:

- **Power surges.** (Avoid surges by using a high quality surge protector.)

- **Power loss.** (Avoid power loss by using a UPS.)

- **Hardware failure.** (On extremely rare occasions (about 1 in $1.00 \times 10^{12}$ chances,) your hard drive may fail to complete an operation properly which could result in damage to data.)

- **Theft.** (If your home/office is burglarized and your computer is stolen, your data will be stolen with it.)

- **Magnetic Exposure.** (If your computer is accidentally exposed to a strong magnetic device, bad things can happen. Hard drives use magnetic storage media. Therefore magnets will destroy the structure of all your data, if they are too close to your computer. The same is true with floppy and ZIP disks.)

- **User error.** (You or someone else may accidentally delete or overwrite some important files.)

- **Hackers/Virus.** (A malicious person may use illegal means to gain access to your computer files while you are on the Internet or connected to any type of network.)

***How Should You Go About Backing Up?*** There are a number of choices when backing up data. Here are a few:

- **Floppy disks.** For small amounts of data, this can be very convenient. For large amounts of data, it would be unwise to use floppies because it would take hundreds of them to do back-ups. These disks can sometimes be problematic because it is relatively easy for them to be damaged.

- **Iomega ZIP Disks.** These disks require a specific type of drive to be used. They hold from 250MB to 750MB each (depending on the model of drive and capacity of the disk (media) you are using) and are very durable. They are an excellent choice for low-medium data storage tasks and day-to-day backups. If you use data (such as purchasing records, invoices or accounting data) that changes from day to day, use one ZIP disk for each day of the week.

- **CD-R/DVD-R** These are recordable CDs, and will hold 650 MB of data each or more depending on the media format (CD,DVD, Dual layer DVD). They are excellent for archival (in computing, to store electronic information that you no longer need to use regularly.)

purposes because they hold a lot of data, and cannot be overwritten. Because CD-R's are not magnetic they are not susceptible to external electro-magnetic forces and they will not loose their data over time, which makes them the preferred Media for long term archiving (a copy of computer files kept, often in compressed form, on tape or disk for long-term storage.) CD's are susceptible to scratches, which can damage data image stored on the CD. When using CD's it is recommended that you make a master CD that is only used for making future copies.

- **Magnetic Tape.** Using magnetic tapes is an effective practice for backing up large amounts of data on a system. Using a tape to back up your computer can take several hours, so this may not be an ideal solution for day-to-day backups (depending on the amount of data generated in a day).

- **External USB Hard drives** Although backing up to CD or DVD is definitely an option, it is not ideal, since the cost of discs can add up, organizing and cataloging what is on each disc is time-consuming. The best option is to use an external hard drive, so your files are safe even if your computer goes Titanic.

- **USB Flash Drives.** These are becoming more popular by the day. They are extremely portable and can store anywhere from 128MB up to 4GB possibly more in the future. They are more expensive as compared to Floppy disks or Zip disks.

- **When backing up always;** Make a working copy and a master copy. To be extra safe make a copy of your Master!!! (Three total copies.)