



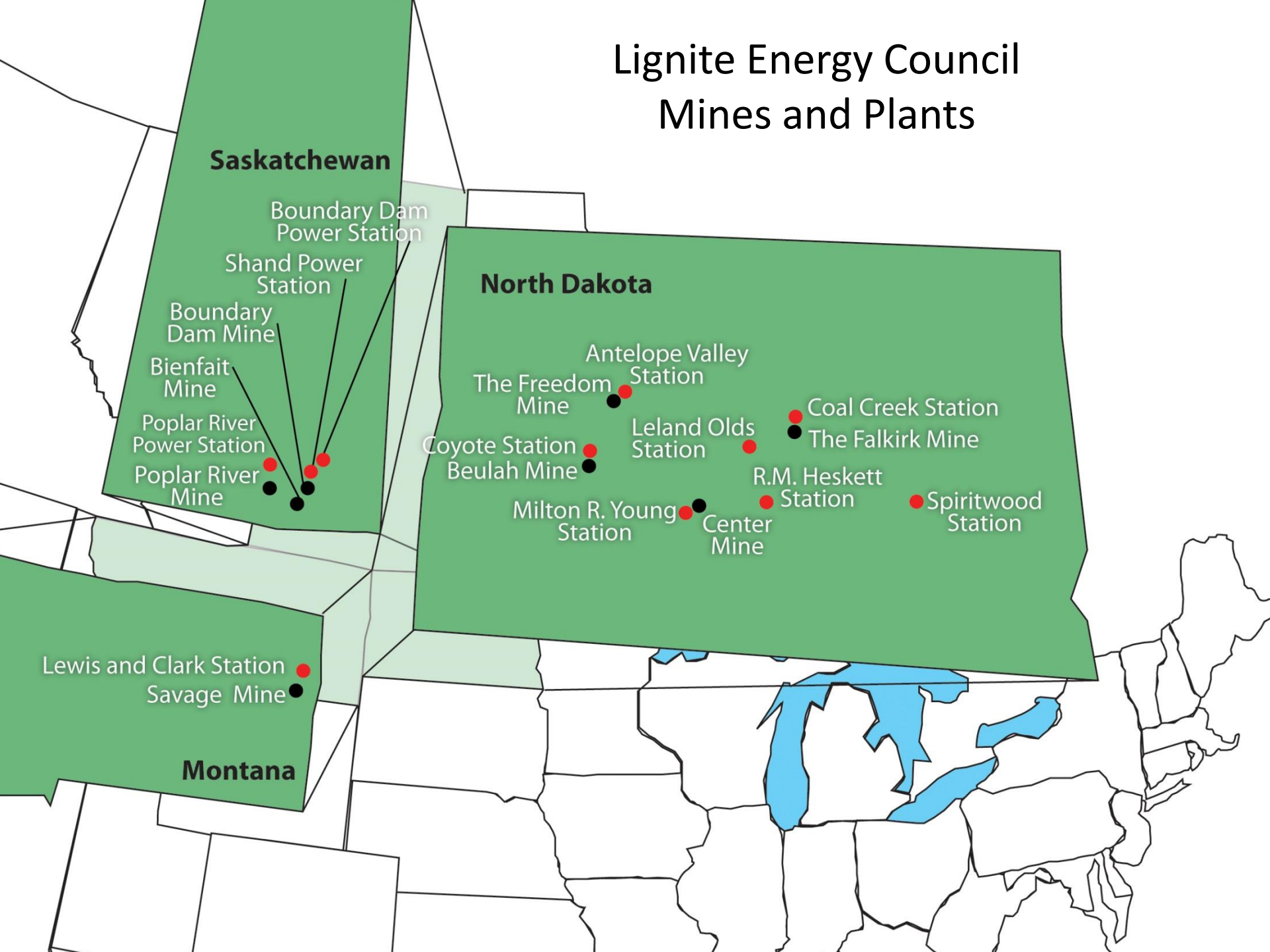
# Lignite Energy Council's Cookie Mining Activity

Kay LaCoe

# Let's learn about mining

- **What is lignite**
- **North Dakota lignite mines produce about 30 million tons of lignite yearly**
- **How many mines in North Dakota**
- **How many power plants**
- **What's reclamation**

# Lignite Energy Council Mines and Plants



# Objective

- **A simple mining exercise about mining, reclamation and economics**
- **Learn about income, expenses and profits**
- **You make decisions that will ultimately lead to your success or failure in the Chocolate Chip Mining Industry**

# Here's Your Mine



# Expenses

- **Cookies**
  - **Chocolate Chip cookie - \$6**
- **Mining Equipment**
  - **Round toothpick - \$1**
  - **Paper clip - \$3**
- **How many toothpicks and papers clips will you need?**
  - **Broken equipment must be replaced**



# Time Costs

- **The average miner in ND makes \$70,000 to \$80,000 annually so time is money**
- **At the cookie mine, each minute costs \$2**
- **You will have five minutes at a cost of \$10 to complete the mining activity**



# Reclamation Costs

- In North Dakota, mined land must be reclaimed to a state that is as good or better than before mining
- It really does “pay” to be neat.... Before completing mining, all “cookie waste” on the paper needs to be returned to the cookie or a reclamation penalty of \$1 per grid square will be assessed





# How about Income?

- **By using the mining equipment, carefully extract as many chocolate chips as you can – each chip is worth \$2 (broken chips can be combined to make one chip)**
- **No fingers allowed to touch the “coal” but you can hold the cookie down with your hand**

# Any Questions?

**Okay....BEGIN....**

# Tally Sheet - Expenses

- **Cookie** **\$6.00**
- **Time – 5 minutes** **\$10.00**
- **Mining equipment**
  - **Round Toothpick** **\$1.00**
  - **Paper Clip** **\$3.00**
- **Reclamation waste** **\$1.00**
  - **Per square**

# Tally Sheet - Income

- **Chocolate Chips**                      **\$2.00 apiece**
  - **Broken chips can be combined to make one whole chip**

# Profit or Loss

- **By subtracting the expenses from the income, you can determine your profit or loss**

# What did you discover?

- **Who broke “mining tools”?**
- **Did it get harder to “mine” the chocolate chips as the time went on? Why?**
- **Was five minutes the correct length of time?**
- **Who took a “penalty” for cookie waste**
- **Who made a profit?**

# Questions?

