

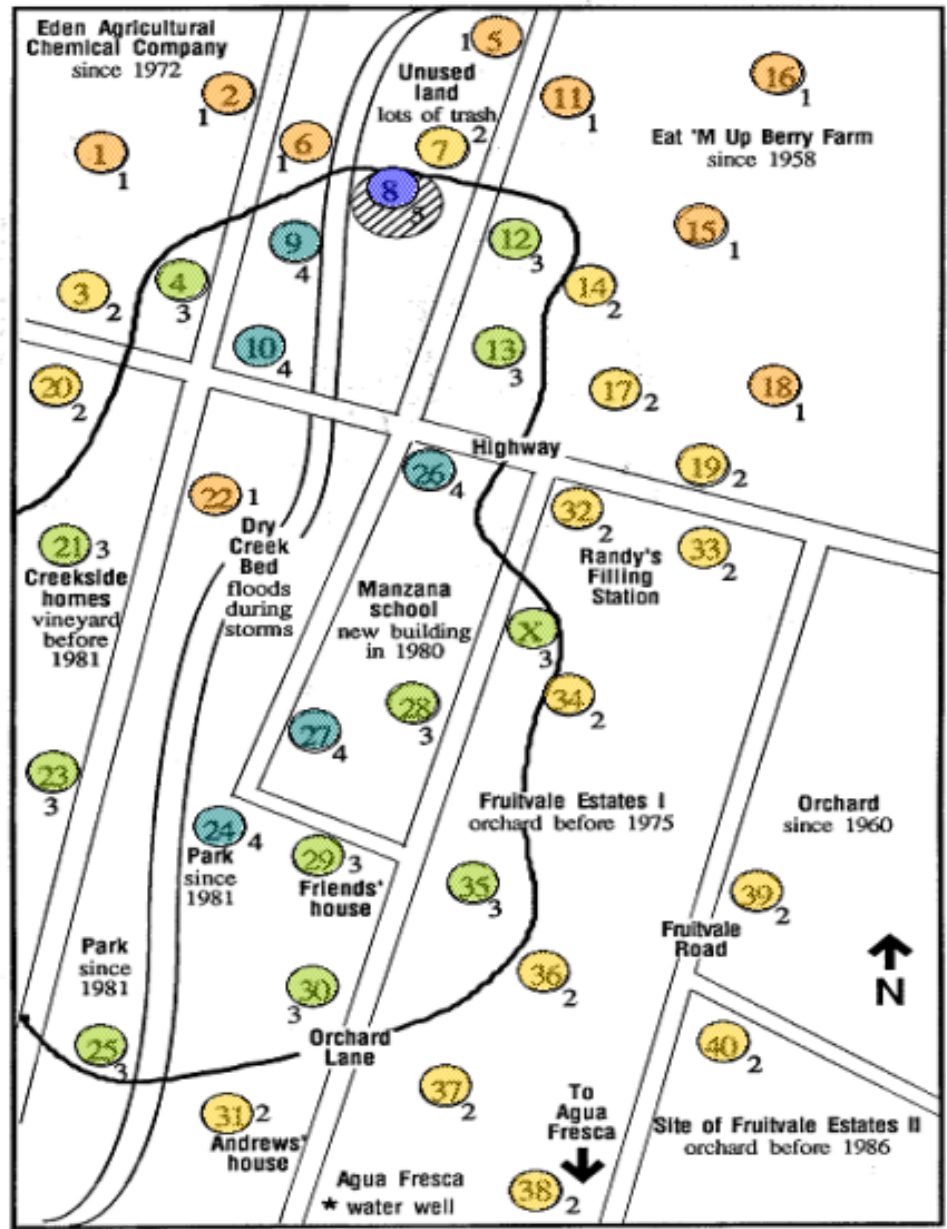
Welcome to Some Solutions (Instead of More Problems!)

Start by turning in Friday's "Rocky Flats" Webquest up at Smith's desk, and then pick up your graded lab from last week over on the lab tables at the side of the room.

Today's Agenda

- **Quick Post-Lab Discussion**
- **Lesson: Hydrogen and Fuel Cells**
- **HW: "Hydrogen and Fuel Cells" Worksheet, due Wed**
"Contaminant Research" (Moodle), due Wed

Heads-Up: Our Unit 3 Test is Next Monday
(Makeup Test for Absences is Tues After School)



Code

- 1
- 2
- 3
- 4
- 5

Key

- = source
- = 1 ppb line

Hydrogen as a Fuel

Some Hydrogen Review:

* H is most abundant element in universe.

* H atom: 1 proton, 1 electron

* On Earth, H found in compounds
(H_2O , CH_4 , H_2 gas)

Electrolysis:

Elemental Gas

* "Breaking Apart" of water molecules
into H_2 & O with electricity.

* Electrolysis can be powered w/solar, wind...

Other Ways of Producing H_2 :

* Some Algae "breathe out" H_2

* "Reform" CH_4 ← 95% is produced

Fuel Cells

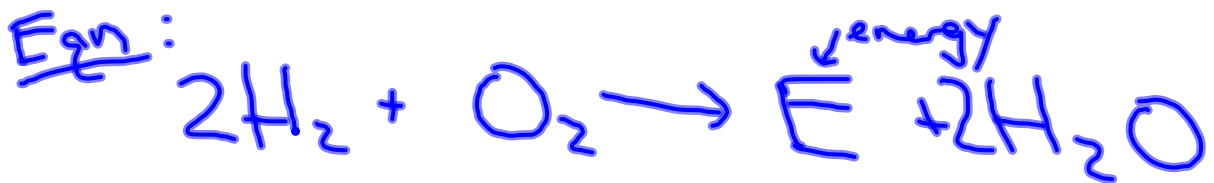
* Several Types of Fuel Cells
* 1 type ...

Inputs:

H_2 & O_2 gases
↑ in atmosphere

Outputs:

Energy (Elec.) & H_2O



The Basics of How They Work:

