



Chapter 17 Environmental Health

Hlth 2 Health and Wellness
Dr. Tomita




Learning Objectives

1. Define the following terms: environmental health, heavy metal, polychlorinated biphenyl (PCB), sanitary landfill, air quality index, fossil fuels, smog, temperature inversion, greenhouse effect, global warming, ozone layer, asbestosis, asbestos, pesticides, decibel.
2. Describe the methods used to deal with the classic environmental concerns of clean water and waste disposal.
3. Discuss the effects of rapid increases in human population and list factors that may limit or slow world population growth.
4. Describe short- and long-term effects of air, chemical, and noise pollution and exposure to radiation.
5. Outline strategies that individuals, communities, and nations can take to preserve and restore the environment.




Environmental Health Concerns

- Clean water
- Waste disposal
- Food inspection
- Insect and rodent control




Clean Water

- Water contamination and treatment
- Water shortages
- What you can do to protect the water supply



Protecting the Water Supply

- Take showers instead of baths
- Install faucet aerators and water-efficient shower heads
- Purchase a water-saver toilet
- Fix any leaky faucets
- Use organic rather than chemical fertilizers
- Don't pour toxic materials down the drain
- Replant your lawn and garden with plants requiring less water



Waste Disposal

- Sewage
- Solid waste
 - What's in our garbage?
 - Disposing of solid waste
- What you can do to reduce garbage

Strategies for Reducing Garbage

- Buy products with the least amount of packing you can or buy products in bulk
- Buy recycled and recyclables; avoid disposables
- Avoid disposable plates, cups, and stirrers
- Store food in reusable glass or plastic containers
- Recycle your newspapers, glass, cans, paper, and other recyclables
- Start a compost pile for your organic garbage
- Stop junk mail

Food Inspections and Insect and Rodent Control

- Food inspection
- Insect and rodent control

Pollution

- Air
- Chemical
- Radiation
- Noise

Air Pollution

- Air quality and smog
- The greenhouse effect and global warming
- Thinning ozone layer
- Acid precipitation
- Energy use
- Indoor air pollution
- What you can do to prevent air pollution

Chemical Pollution

- Asbestos
- Lead
- Pesticides
- Mercury
- What you can do to prevent chemical pollution

Radiation

- Nuclear weapons and nuclear energy
- Medical uses of radiation
- Radiation in the home and workplace
- What you can do to avoid radiation

Noise Pollution

- Hearing loss
- Stress
- What you can do to avoid noise pollution

City of Chico Noise Ordinance

"Unreasonable noise" means noise produced by human voice, machine, animal, or device, or any combination thereof, that is so loud, unnecessary, excessive, or unusual that it unreasonably disturbs the peace and quiet of any neighborhood, unreasonably impinges upon the quiet enjoyment of property, or unreasonably causes discomfort or annoyance to any reasonable person of normal sensitivity residing or working in the area.

Chico Residential Noise

9.38.030 Residential property noise limits.

A. No person shall produce, suffer or allow to be produced by human voice, machine, animal, or device, or any combination of same, on residential property, a noise level at any point outside of the property plane that exceeds, at any point outside of the property plane, seventy (70) dBA between the hours of seven a.m. and nine p.m. or sixty (60) dBA between the hours of nine p.m. and seven a.m.

Chico- Noise Ordinance Violation- From Apts/Houses

9.38.054 Violation - Residential property limits, public property limits, or general noise regulations.

- A. WRITTEN WARNING
- B. CITATION- Within 18 hours more complaints
- C. ANOTHER CITATION

Chico- Noise Ordinance Violations: From Vehicles

9.38.056 Noise from vehicles.

1. STEREO'S ON PUBLIC PROPERTY- No more than 50 feet
2. STEREO'S ON PRIVATE PROPERTY- No more than 25 feet

Patterns of Unreasonable Noise in Neighborhoods Surrounding the Chico State Campus

Mark Tomita

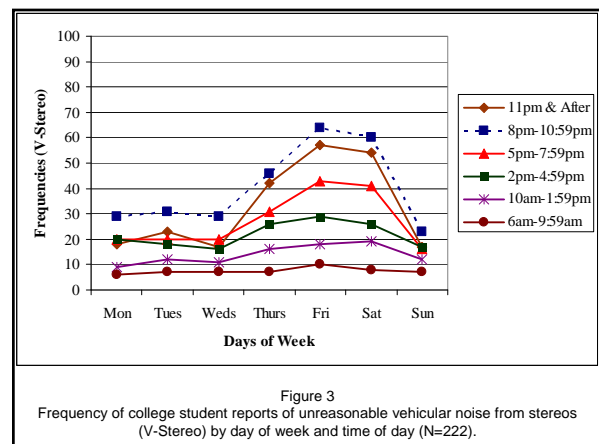
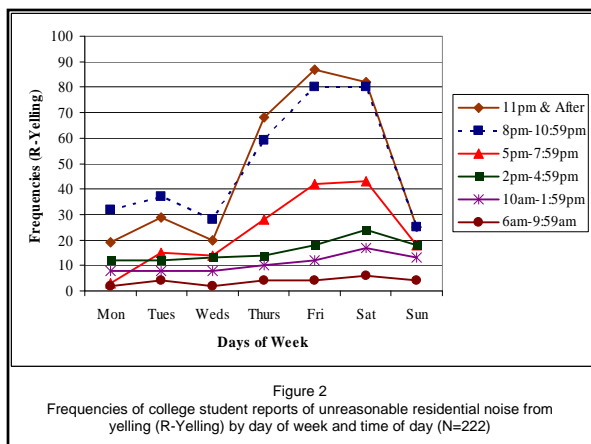
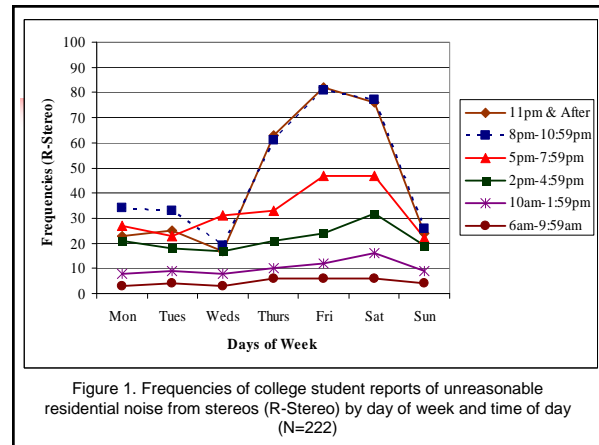
Objectives

- Characterize noise patterns by time, place, and person variables
- Obtain student perceptions about who should stop and prevent noise

Noise Survey

Source of Unreasonable Noises	6-9:59a	10a-1:59p	2-4:59p	5-7:59p	8-10:59p	11pm & After
Source of Apt/House/Dorm Noises: (Check Not Applicable or All That Apply for Each Time Period)						
Not Applicable (No noise for each time period)						
From Stereos?						
From Yelling?						
Other Source?						

RESULTS



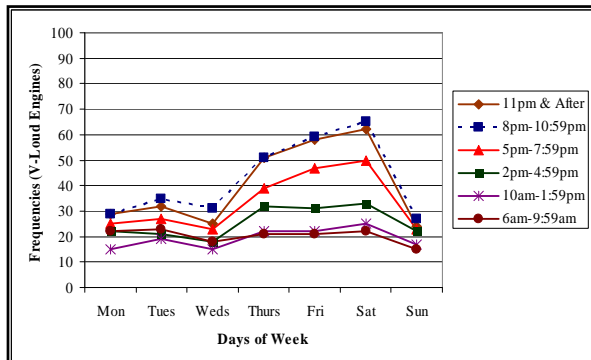


Figure 4
Frequency of college student reports of unreasonable vehicular noise from loud engines (V-Loud Engines) by day of week and time of day (N=222).

Correlations: Noise With Health Factors

Factors:

- lower grades than expected ($\tau=.129, p=.021$)
- stress ($\tau=.256, p<.001$)
- anger ($\tau=.238, p<.001$)
- more colds than usual or other infections ($\tau=.141, p=.014$)
- I avoid my apartment/ house/ dorm ($\tau=.219, p<.001$)
- I avoid my roommates/ housemates ($\tau=.172, p=.002$)

Not significant:

depression, anxiety, upset stomach

Correlations: Alcohol Consumption (% of Noise Makers)

Time	Thursday	Friday	Saturday
5-7:59pm	70	59.6	61.7
8-10:59pm	72.1	71.6	72.7
11pm & After	77.8	79.3	80.3

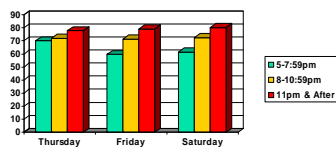


Table 1. Percent of students responding to the question, "Who do you think should be responsible for STOPPING unreasonable noise as it is happening?" (N=722).


	On Campus Noise	Off Campus Noise	Vehicle Noise
Individual (s) Making Unreasonable Noise	51.1	62.3	51.1
Residents Living in Dorm/Neighborhood	25.6	20.2	9.9
Resident Advisor (RA)	38.1		
Parents of the Unreasonable Noise Makers	10.3	12.1	7.6
Landlords		34.5	8.1
College/University Administration	16.6	3.6	2.2
College/University Student Groups	13.5	3.1	2.7
Campus Health Educator	6.7	2.2	1.3
Campus Police	40.8	11.2	13.9
City/Municipal Police Officers	11.7	43.5	37.7
County Health Department	3.1	5.8	2.7
Other	5.8	5.4	6.3

Table 2. Percent of students responding to the question, "Who do you think should be responsible for PREVENTING FUTURE unreasonable noise?" (N=222)

	On Campus	Off Campus	Vehicles
Individual(s) Making Unreasonable Noise	50.7	59.6	50.2
Residents Living in Dorm/Neighborhood	29.6	20.6	13.0
Resident Advisor (RA)	31.8		
Parents of the Unreasonable Noise Makers	11.7	13.9	8.1
Landlords		34.5	9.4
College/University Administration	14.3	4.0	2.2
College/University Student Groups	11.7	4.5	2.2
Campus Health Educator	5.8	3.6	2.2
Campus Police	31.8	11.7	10.3
City/Municipal Police Officers	9.9	38.1	30.0
County Health Department	4.0	8.1	5.4
Other	5.4	5.4	4.9

Healing The Environment

- Share what you learn about environmental issues with your family and friends
- Join, support, or volunteer with organizations working on environmental causes that are important to you
- Contact your elected representatives and communicate your concerns



Environmental Group Exercise (GP 10)

1. Break up into groups of 3-4 students.
2. Complete the assigned exercise.
3. Present your findings to the class.
4. Hand in the worksheets.