

# U.S. HISTORY

## Slough Perception: Appreciation, Destruction & Protection of the Local Wetlands

By James Evans  
Pajaro Valley High School

## **SLOUGH PERCEPTION:**

### **Appreciation, Destruction & Protection of the Local Wetlands**

#### **Summary:**

A description of impacts on the Pajaro Valley is given from three perspectives:

1. Appearance of humans about 10,000 years ago who are recognized as native indigenous people lasting until Europeans arrived in 1769;
2. Occupation of the Valley by Spanish through Mexican independence; and,
3. Americanization after statehood with affects of southern and eastern European immigrants.

The natives valued the wetlands as a source of food and building materials. The Spanish and Mexicans saw them both as a source of water and as an obstacle to the raising of cattle. The Americans valued the water, yet wanted the land for farming, and wanted to control the direction and volume of water flow. They also viewed the wetlands as breeding areas for mosquitoes and disease that could be eliminated. Today the wetlands are increasingly appreciated again as an ecologically-essential habitat for birds, mammals, fish, insects and plants.

**Subject Area(s):** U.S. History

**Grade level(s):** 11<sup>th</sup> grade

**Lesson Duration:** 3-5 class periods

#### **CA Content Standards:**

- 11.3 Students analyze the relationship among the rise of industrialization, large-scale rural-to-urban migration, and massive immigration from Southern and Eastern Europe.

#### **Assessment:**

Teacher assessment of student work to include:

- Slough graphic with identified names of sloughs, and water bodies (past and present);
- Graphic organizer for human expansion theory and related vocabulary;
- Student perception (written or illustration/cartoon) about human impact on Pajaro Valley.

#### **Learning Objectives:**

- Inform students about how different cultures have reacted to Pajaro Valley wetlands.
- Provide students with a basis for understanding the impact humans have had on the Valley landscape.
- Develop students' perception of effects human impact has had on their local environment.

**Equipment, Materials, and Resources:**

1. Power point presentation of scenes from The Ohlone Way: Indian Life in the San Francisco-Monterey Bay Area by Malcolm Margolin, pp. 10, 17, 39, 54. These scenes illustrate the amount of water present following the last ice age 15,000 years ago to European arrival.
2. White graphics depicting the sloughs and the existing and former lakes in the area. Colored pencils or crayons.
3. The Flood of 1995, video of new footage following the breach of a Pajaro River levee.

**Lesson Narrative/ Procedure:**Background Information

Humans appeared in the Pajaro Valley about 10,000 years ago. Rather than try to tame the annual fresh water lakes and sloughs, the natives embraced the liquid deluge by learning to be amphibious. They lived in a water world that was shallow yet extensive for much of the year. They also used fire to control brush and grass, which created an environment conducive to the growth of redwood, oak and pine forests, which covered the valleys and the now barren highlands used for agriculture and construction of industry and homes. Creatures large and small, from grizzly bears, elk, deer and antelope to birds, lizards and fish were plentiful. It was a wild, wet and bountiful environment. The Pajaro River basin remained unrestrained until Europeans arrived in 1769.

Although first the Spanish, and then the Mexicans, did not aggressively alter the landscape, they regarded the wetlands as impediments to cattle and sheep grazing. The Spanish and Mexicans were not agriculturists, and preferred ranching to tilling the soil, so they drained wetlands only when it was practical. Their permanent settlements and pastoral economy ended the natives' relationship with the region, and largely drove away the animals that had served as their diet. A larger impact was on the native population was their succumbing to European diseases and virtual enslavement in the missions. Introduced plants, both intentional and incidental, replaced native grasses and vegetation that thrived in the wetlands.

When the Americans took over in 1848, changes to the landscape came fast and furiously. The Americans were very aggressive in a desire both to siphon water for human use and to control flooding to benefit farming, ranching, homes and other development. Americans regarded the environment as something to be exploited. The wetlands, rather than being a habitat for native creatures and an essential element in the health of the region, were seen as barriers to expanded economic activity. By the 20th Century the wetlands also were regarded as eyesores and breeding grounds for mosquitoes and other nuisance insects. Various drainage and flood control projects were completed, including the current Pajaro River levee system in 1949. By the 1980s nearly 90 percent of Pajaro Valley wetlands had vanished, and the remaining small percentage, including the sloughs, were generally viewed with disdain. Local environmentalists and preservationists then stepped in and saved the sloughs, and have been altering the public's perception through persistence and education.

### Lesson Sequence and Procedure:

#### Day 1: (90 minutes)

1. Ask students to think about and briefly explain in writing their attitude about the Watsonville sloughs. On the same piece of paper, ask students to name the sloughs with the help of the person next to them. Ask them also to name the lakes in the area.
2. Distribute the graphic of the slough and lakes and help students identify them. Students then color the graphics.

**Meaningful Experience:** Assess students' knowledge and attitudes about a field site or event prior to the field visit to determine misconceptions and misgivings or fears, from NOAA California Bay Watershed Education and Training Program.

3. Direct Instruction: Present power point presentation "Geology and Cultural History of the Pajaro Valley Watershed" or overhead projection of scenes from The Ohlone Way by Malcolm Margolin
  - Discuss theories of human expansion into the Americas, including the Ohlone arriving in the Monterey Bay area about 10,000 years ago.
  - Talk about the Pajaro Valley before Europeans arrived, illustrating words with images from The Ohlone Way and The Flood of 1995 video.
  - Students use a graphic organizer to identify a theory for human expansion into the Americas and key words and or names which relate to locations in the Valley. (Students may complete their written description and vocabulary list as a homework assignment.)

#### Day 2: (90 minutes/ 10 min. transition & 80 min. engagement)

1. Provide students with a graphic of Pajaro Valley which identifies existing historical regions which may include:
  - Spanish land grant regions and existing "ranchos", e.g. Estrada Ranch at base of Mt. Madonna;
  - Pajaro River levee system, Pajaro Valley sloughs visible from Pajaro Valley campus, and agricultural regions or undeveloped lands;
  - Developed regions of the Valley, e.g. Landmark Shopping Center, West Beach St. (industrial), and the City of Watsonville buildings (downtown Civic Center).
2. Orient students to the Pajaro Valley graphic by using an overhead transparency of it or a PowerPoint frame illustrating the guide. (Allow 10 minutes for this orientation.)
3. Introduce a guest speaker (local historian or other specialist, e.g. City land use planner) who will lead students on a campus walk. (Allow 10 min. for guest to explain their role and walk.)
4. This graphic may serve as a field guide for an outdoor walk around the school campus. The "walk" would allow students to identify existing landmarks of the Valley and link these with human impact on the Valley. (Allow 40 minutes for an interpretive walk. (This

“walk” may be assisted by a City, Valley historian or other specialist, e.g. City land use planner).

- Provide field glasses for students to use during the campus walk.
- Allow time for a “question and answer” session upon concluding the guided walk.  
(Upon returning to the classroom or other enclosed area, use 20 min. for “Q & A”.)

Day 3: (90 or 70 minutes)

1. Provide an opportunity for students to complete their graphic of the slough and graphic organizer from Day #1. This will allow students to modify or add to these graphics based on information obtained from their field experiences. (20 minutes)
2. Direct instruction (30 minutes)
  - a. Discuss the arrival of the Spanish with the Portola expedition, the subsequent mission system and ranching lifestyle, Mexican takeover following independence, and then US control after 1848.
  - b. Discuss changes under US control, including the levee system and development and public disdain threatening remaining wetlands, the rise of environmentalism and eventual recognition by the city government that the sloughs are beneficial to the region.
3. Provide students with an opportunity to write about their perception of human impact on the Pajaro Valley. This written expression may be in response to a prompt or question relating Day 1-3. An alternative activity could be a creation of a cartoon or cartoon strip, which describe an impact made by humans on the Valley. (20-40 Minutes)

Lesson Outline:

1. Provide a description of the Pajaro Valley when humans appeared about 10,000 years ago.
2. Orient students to Europeans influences upon Native Americans in and after 1769.
3. Present illustrations of Native American life with graphics from The Ohlone Way and the video The Flood of 1995 (if available).
4. Develop student understanding through graphic illustrations, writing prompts, guest speaker presentations, and field activity walks to adjacent wetlands.

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