

## Karner Blue Pond

Adapted from Project WILD  
& Saratoga Springs Open Space Project

Karner Blue Pond is an activity investigating land use and its effects on a wetland and a pond. Students will design a community, keeping the health of the pond and wetland at heart.

### Objectives-

- ✓ Evaluate the effects of different land uses on wetlands
- ✓ Discuss lifestyle and land use changes that will minimize damaging effects on wetlands
- ✓ Introduce students to the struggles to arrange overlapping interests and uses regarding responsible land management decisions

### Estimated Time-

- ✓ 2- 3 hours



### Materials-

- ✓ Scissors
- ✓ Masking tape
- ✓ Paste or glue
- ✓ Sets of land use cutouts
- ✓ Karner Blue Pond cutouts
- ✓ Large pieces of paper to attach the cutouts to

### Background Discussion-

Human land use affects wildlife habitat in both positive and negative ways. The choices humans make toward land use are a reflection of their priorities and lifestyles. Some people believe that untouched natural areas should be preserved regardless of human needs, while some believe that undeveloped areas merely consist of raw materials for human consumption. Others believe that a balance between economic growth, and a healthy, vigorous natural environment should be found.

Growth is at the core of land use issues. In natural areas, growth is limited by the need for balance of energy between all parts of the natural system. Energy in a natural system is defined by food, water, shelter and space for survival; meaning that natural systems have the ability to be self-regulating. This capacity to self-regulate means that all members of an ecosystem are able to live in harmony and must be equally considered.

Human usage often disturbs the harmony and self-regulation. Water is used for irrigation and removed from its natural path. Wetlands are seen as useless swamps when they are actually nurseries for hundreds of plant and animal species.

The challenge presented to humans is to be responsible in our development. How can we develop the skills, knowledge, awareness, and commitment that are needed to make responsible decisions regarding the remaining areas of natural wildlife habitat?

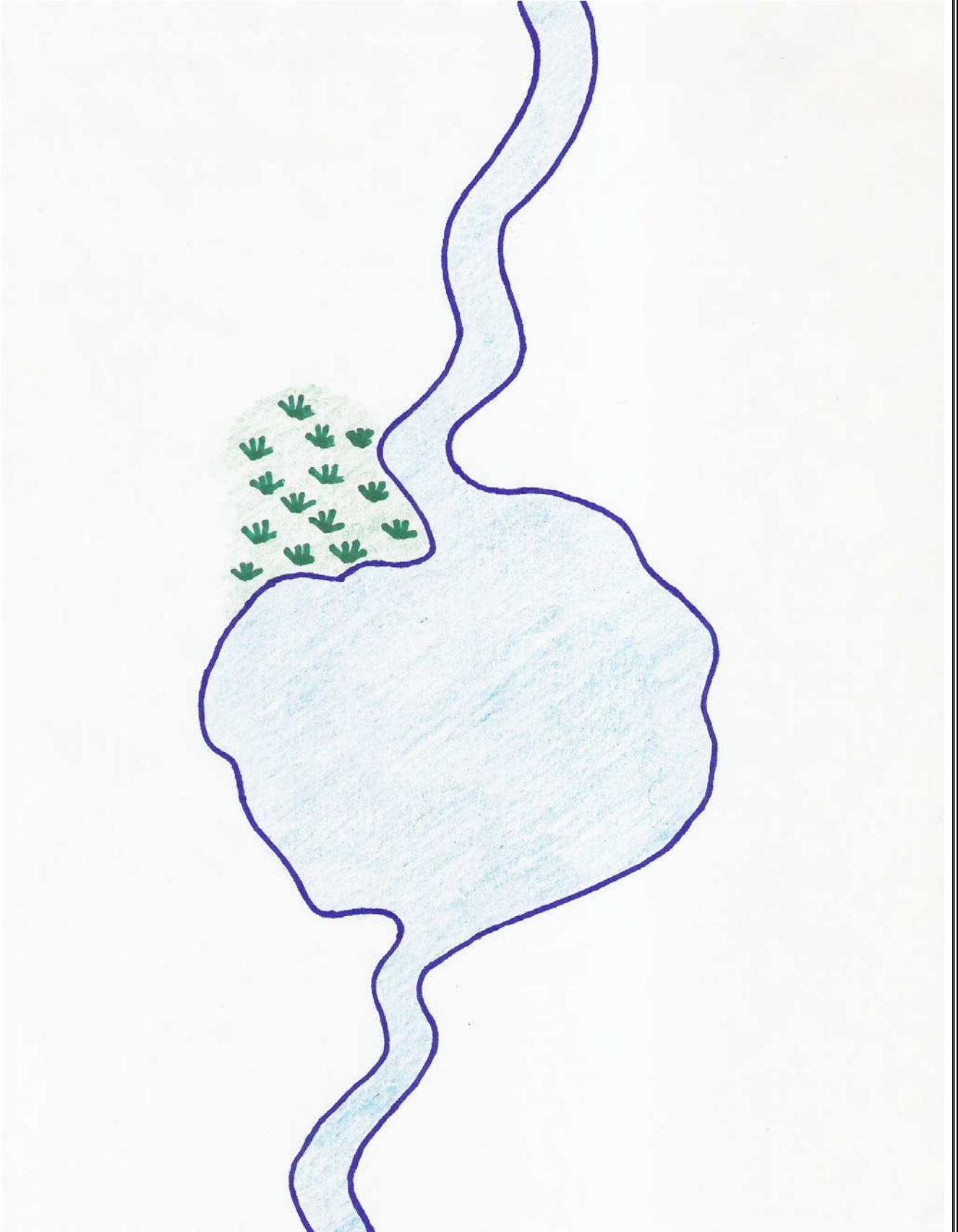
Procedure-

- 1) Prepare copies of the two cutout sheets in advance. Explain to students that they will be responsible for arranging the pattern of land use around Karner Blue Pond in a manner that will best preserve the area.
- 2) Divide the class into group of three to five students. Assign each group an interest group to represent. Possible interest groups are:
  - a. Residents- who want to live in the area.
  - b. Farmers- who want to use the land to raise food and livestock.
  - c. Business interests- want to use the land for commerce and economic growth.
  - d. Gas station owners- want to make a living servicing and repairing cars.
  - e. Parks department- want people to have places for recreation.
  - f. Highway department- want to maintain access to the area.
  - g. Racetrack representative- want to preserve jobs and commerce.
- 3) Distribute the land use materials. Have students cut apart the land use options and Karner Blue Pond. Explain that ALL pieces must be used. The park and farmland tiles may be cut into smaller pieces. Parts may touch, but not overlap. The students can also create more land use options of their choosing. Suggest that students use loops of tape to attach their land use pieces, so that they can change their minds if necessary.
- 4) Before making land use decisions, have students create a list of the pros and cons of each land use on the blackboard. Here is an example of the pros and cons of farmland:
  - a. Pros

- i. Produce food
    - ii. Economic value
    - iii. Provide jobs through seasonal employment
    - iv. Preserve rural views
  - b. Cons
    - i. Use pesticides
    - ii. Source of natural soil erosion
    - iii. Sometimes drain wetlands for farm land
    - iv. Use chemical fertilizers that can damage water supply
- 5) Allow students to develop Karner Blue Pond keeping the desires of their assigned interest group in mind.
- 6) When students have had ample time to grapple with the assignment, invite each group to display their development plan and describe their choices. Hold classroom discussion that emphasizes that:
  - a. No land use can be excluded
  - b. Wildlife habitat must be preserved
  - c. Everyone in the group must agree

Be sure to explain that there are often no-win situations when it comes to wildlife preservation, tell students to merely try to minimize threats, not eliminate them.

- 7) Allow students additional time to work on their development plans. Display the final plans in the front of the room for everyone to see. Analyze and discuss the advantages and disadvantages of each plan while being sensitive to the students' frustration. Explain that although the plan may not be perfect, they can reduce negative impacts to Karner Blue Pond.
- 8) Ask students what the people in charge of the various land uses can do to reduce effect on Karner Blue Pond. Have students create a list of things they personally can do to reduce the damaging effect of their lifestyle on the environment.



Grocery Store	Gas Station	Toy Store	Restaurant
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Farm Feed Lot	House	House	House
	House	House	House

Farm Cornfield	Racetrack	Paper Mill
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Park	Fire House
	Condominiums

