

Day 15 Activity

A Wetlands Public Hearing

Students will gain first-hand experience in understanding the complex nature of making land use decisions by analyzing and making recommendations for a planned residential development project which will involve the filling of wetlands as proposed.


You will need:

Copies of original site plan ** need to get from pdf**, background information sheet and student worksheets for each interest group; paper, pencils.

Day1

1. Break students into groups of approximately five per group, assigning a role for each - developers, conservation commissioners, etc. Hand out copies of the 'student worksheets' and the original site plan to all students.
2. Explain that each group will be role playing one of the participants in the proposed development scenario described on the 'Background Information' sheet. Have each student read through this information now.
3. Tell the students that their opinions on this project will be sought by the conservation commission during a public hearing. Direct them to analyze the site plan from the perspective of the role they are playing and to prepare to argue a case for whether the plan should be left unaltered or should be modified. Encourage students to make notations or draft changes on the site plan itself. A spokesperson should be elected from each group to present their recommendations to the entire class. Allow at least 15 - 20 minutes for individual group discussions.
4. Have each group's spokesperson present their recommendations during the public





hearing for why and how the site plan should or should not be changed. All students should take notes on each presentation for future reference.

Day2

1. Have each group revisit the original site plan and redesign it based on the alternatives brought up in the class discussion the previous day.
2. Have each group present their redesigned plans to the whole class then present the sample 'ideal' site plan and have the entire class nominate which of their plans would best incorporate the ecological, social, and economic concerns of all groups involved in the public hearing process.



Background Information Sheet

A developer in your community, Mr. Smith, owns a 10 hectare parcel of land that contains 1 hectare of a coolibah swamp. He has decided to build a housing development of 25 1/3 hectare lots on this property, but has planned to fill in 1/2 hectare of the wetland to put in an access road and accommodate additional housing lots. In order to begin construction, he needs the conservation commission and planning board to approve his plan.

There are, however, many groups of people in the community that have an interest in this project: several neighbors living near the parcel, a local watershed association, the conservation commission, and planning board. The conservation commission will review this project by seeking input from other people in the community, as well as making their own determination about how the land can be developed with the least amount of environmental impact.

Conservation Commission's Environmental Assessment of the Coolibah Swamp on Mr. Smith's property:

Plant species: coolibah, ironwood, whitwood, corkwood, wild passionfruit, eremophila, acacia victoriae, acetosa vescicaria*, cenchrus ciliaris*, convolvulus, enteropogon*, malvastrum americanum*, rutidosia helichysoides* (* Check for common names)

Wildlife habitat values: Coolibah swamps, with their abundance of woody and herbaceous vegetation, contain the three essentials for wildlife habitat: food, cover, and water. Direct or indirect evidence was found indicating the presence of the following species that use this wetland for habitat:

Birds: babblers, peewees, willy wagtails, Port Lincoln parrots, galahs, peaceful doves, kingfishers, brown falcons

Amphibians: burrowing frogs

Mammals: bats

Reptiles: skinks, tree pythons

Student Worksheet

Developer: Mr. Smith; his engineering consultant; and his financial supporters

Your role: You (Mr. Smith) have submitted an application to the conservation commission and planning board to develop a residential subdivision on a 10 hectare parcel of land in town. Of the 10 hectares of land, 1 hectare is wetland, 1/2 of which you have proposed to clear and fill to complete your project. You have hired a consultant to design the site plan, taking into consideration any environmental impacts to wetlands, drinking water supplies, traffic and safety issues.

Things to consider in your role:

- You expect to make a lot of money from this project and need to compensate those people who have provided financial assistance to complete the project.
- You want to maximize the number of lots you can sell on this parcel. You have proposed to put 25 x 1/3 hectare lots on 10 hectares of land, and need to be able to defend the need for this many houses.
- You have chosen to place the access road through the most narrow portion of the wetland to produce the least amount of impact.

Conservation Commission

Your role: The conservation commission (also referred to as the 'con comm') is the group of local officials responsible for upholding the state wetland protection laws. You are currently reviewing the application submitted by Mr. Smith.

Things to consider in your role:

- the amount of wetlands to be filled. Is it really necessary to place the access road straight through the wetlands? Does there seem to be any other alternatives the developer can consider? See if you can come up with some suggestions for avoiding the wetlands fill altogether, or minimize the total number of hectares impacted.
- what are the values of this wetland? Should you deny the project based on the value of this particular site?
- if filling wetlands is unavoidable, you can require the developer to mitigate for the wetland loss, such as setting aside other wetlands for permanent conservation or 'creating' more wetlands on other land in the community. However, creating forested wetlands is technically very difficult, and often fails to replicate the same values of the wetland that was destroyed.
- how can the wetlands be least impacted during construction?

Drawing of
"Todd River"
By: Anthony
Age: 8



Neighbors #1

Your role: You have lived next to the proposed development site for a few years, but have never really wanted to go anywhere near it. The area looks wet, mucky and dark and has no appeal to you whatsoever. You actually encourage that this 'wasteland' be filled in for the reasons given below.

Things to consider in your role:

- You feel the area is probably breeding grounds for all the mosquitoes that invade your backyard barbeques during the summer.
- Some of you have little children that play outside, and you're concerned that they might come into contact with some animals living in the wetland, such as snakes

Neighbors #2

Your role: You have lived next to the proposed development site for many years and know the area well. You and other neighbors are fond of the songbirds that inhabit the area.

Things to consider in your role:

- you enjoy stocking your birdfeeder for the many songbirds that inhabit your neighborhood. The wetland seems to provide good breeding habitat for these birds and you fear the local populations will decline if this wetland is impacted.
- you moved to this part of town because of the natural beauty of the surrounding landscape with conservation land on one side of your property and the wetland on the other. For aesthetic reasons, the wetland is valuable as a last refuge of peace and quiet in a community that is quickly running out of open space.



Local Landcare Association

Your role: You work for a regional organization that advocates the protection of wetlands for many reasons eg water quality protection, flood storage and wildlife habitat. You are concerned about the impacts the project will have on the loss of habitat from this coolibah swamp, specifically the seasonal pools utilized by the burrowing frogs for breeding.

Things to consider in your role:

- Consider how Mr. Smith might be able to avoid filling wetlands in the first place.
- Using the following data to back you up, prepare an argument for why the filling of the wetland should be avoided to protect the habitat of the burrowing frog.

Importance of Protecting Seasonal Pool Habitat

Seasonal pools or waterholes are typically small, shallow depressions in the land that collect water from runoff or intercept a high groundwater table. Despite their small size, seasonal pools support a diverse community of species from microscopic organisms to amphibians and reptiles. Seasonal pools typically disappear during the long, dry spells and fill again after rains.

Due to this periodic lack of water, they cannot support fish populations. Since fish readily devour the eggs and larvae of most amphibians, the absence of fish is crucial to the successful breeding of many amphibians.

The burrowing frog is an example of a species that has come to depend on seasonal pools for breeding habitat because of the unpredictability of rain in the desert; the lack of fish may also assist their survival. During rainy spells, burrowing frogs emerge from their burrows to breed. However, when seasonal pools are filled or otherwise destroyed, local populations are in jeopardy unless other pools are present nearby to serve as new breeding sites.

Planning Board

Your role: The local planning board is responsible for reviewing plans for development projects and granting their approval or denial.

Things to consider in your role:

- examine the width (13m) of the proposed access road crossing the wetland. Does it really have to be that wide? What justification does Mr. Smith's consultant give for the width of the road? Does it comply with your town code?
- examine the size of the lots (1/3 hectare). Can you think of ways to reduce the amount of space on the site to build houses?

*** See pdf file for site plans ***

Pre-site Plan

Original Site Plan

Ideal Site Plan



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