

# Urban Growth's Effect on the Florida Everglades

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## What is urban growth? What harmful effects does urban growth have on the Everglades?

### Introduction

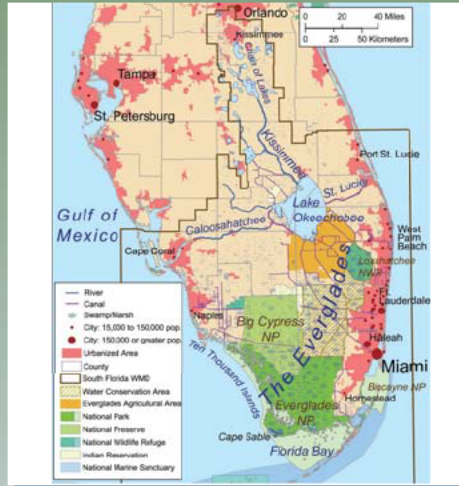
- Urban growth is the spreading of metropolitan growth that consumes natural areas.
- Urban growth has many harmful effects on the environment.
- Water pollution is one of the most harmful effects of urban growth on the Everglades.
- Water pollutants in the Everglades include:
  - Phosphorous
  - Sulfate
  - Lead
  - Mercury
- The main causes of the water pollution come directly from human activities including:
  - Urban runoff and water waste
  - Agriculture runoff (image below)



- A solution to this issue is placing limits on the chemicals that are polluting the water in the Everglades.

### Method

- A case study approach was used to:
  - Evaluate the effects of urban growth on the Everglades.
  - Examine how urban growth, specifically agriculture, contributes to water pollution
  - Examine political feasibility of a solution to the water pollution caused by urban growth.



Left image: Map shows proximity of large urbanized cities (i.e. Miami), as well as agricultural areas, to the Everglades National Park.

Image below: Polluted water pouring into the Everglades.

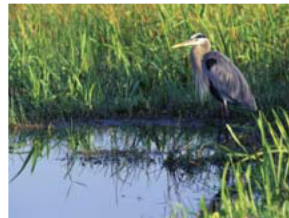


Photo above: Great Blue Heron  
Right photo: Endangered Florida Panther

Both of these animal species are natural to the Florida Everglades. Water pollution in their natural habitat harms them as well.



### Results

- The Florida Everglades has a delicate ecosystem that includes:
  - Sawgrass marshes and mangrove swamps
- Many species of animals including:
  - Endangered species:
    - Florida Panther
    - Crocodile
  - Birds
    - Great Blue Heron
    - Egret
- 23% of water pollution in the Everglades is due to urban runoff and water waste.
- 76% of water pollution in the Everglades is due to agriculture runoff.
  - Chemicals, such as, nitrogen and phosphorous, come from fertilizers used in agriculture

### Discussion

- Proposed solution:**
  - Set limits on amounts of chemicals used, specifically by agriculture (phosphorous, nitrogen, etc.)
  - Limits set by executive order by President
- Political feasibility of solution:
  - Recently, limits were set to reduce phosphorous loading into Lake Okeechobee
  - Limits should be able to be placed for the Everglades as well, especially since it is a National Park.

### References

- Kopp, Eric (2015) *Water Bill Easily Passes House; now headed to the Senate*
- Hubbard, Michael (2010) *Phosphorous Audubon Society of the Everglades*