



# Mission Manatee



Fort Myers, FL



# Mission Manatee

- Project History
- Implementation challenges
  - Habitat of the Region
- Solution
- Conclusion



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- Challenges
  - Habitat of the Region
    - Over 300 species of birds
    - Manatees
      - Approximately 3300 left in the US
      - About 50% live in Fort Myers
      - Low reproductive rate
      - Extensive development of costal lands and boating practices endanger manatees



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- Challenges
  - Visible flashes from cameras could dazzle wildlife, particularly at night





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- Solution
  - Infrared Cameras
    - Would an infrared solution be better for the manatees?



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- Dr. Ed Keith of the Oceanographic Center at Nova Southeastern University studied infrared-spectrum imaging apparatus at the behest of The Florida Marine Research Institute (FMRI), a division of the Florida Fish and Wildlife Conservation Commission (FWC).
- The goal of the project was to research technology for developing a vessel- or buoy-mounted manatee detection system.
- Dr. Keith tested thermal infrared, night-vision, and night-shot video cameras with infrared imaging. He found that most forms of infrared imaging did not penetrate water very well.
- The infrared cameras were tested using living captive manatees at the Lowry Park Zoo (LPZ). There was some concern that the light might disturb the manatees, but the infrared light emitted by the cameras appeared to elicit no alarm or aversion from the manatees.

Abstract from:  
DEVELOPMENT OF AN UNDERWATER  
INFRARED CAMERA TO DETECT MANATEES  
MANATEE AVOIDANCE TECHNOLOGY:  
CONTRACT #FWC 03/04-28



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- Solution





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- Mission Accomplished
  - The project improved the capacity of Lee County's bridges, maximizing existing infrastructure and reducing congestion – good for *ALL* of the environment.
  - The new system provides solid evidence for Toll Enforcement Officers to bring cases against toll violators.
  - The customized solution respects Lee County's unique environment and habitat resources, assisting in the conservation management plan of the area for future generations.



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- Thank you Team Florida and LeeWay

