

## Sea Level Rise in the Florida Keys

**SURG** | Social Sciences and Journalism (SSJ) | *Tags: Journalistic Output, Creative Output, Interviews*

*This cover page is meant to focus your reading of the sample proposal, summarizing important aspects of proposal writing that the author did well or could have improved. **Review the following sections before reading the sample.** The proposal is also annotated throughout to highlight key elements of the proposal's structure and content.*



Proposal Strengths	Areas for Improvement
The researcher explicitly identifies gaps in knowledge and makes claims for why it is important to fill these gaps using evidence from past research to support their assertions.	If you do not have all the sources you plan to interview, you will need to explicitly state the steps you will take to recruit more participants/subjects and the criteria of selection you will use.
The background draws on related creative works as relevant background.	
The methods and, specifically, the creative process are justified in terms of how they help to answer the research question/address the gap in knowledge.	In the methods section where the first and second podcast episodes are described, the creative and journalistic output is explained but not connected well back to the research question. You should make sure all components of your output relate to the research question.
The methods for data collection are justified and described in terms of how they help to answer the research question.	



Other Key Features to Take Note Of
Projects deemed to be within the field of journalism are exempt from IRB review.

The focus of the project is clear within the first

Climate change causes sea level rise (SLR), the impacts of which will be especially significant in the Florida Keys. I would like to produce three thirty-minute episodes of a podcast, accompanied by photographs, investigating the impacts of SLR in the Keys. With the help of grant funding, I will interview experts, residents, and tourists about the effects of SLR, what is being done about it, and how people feel about it in the Florida Keys.

As climate change causes melting glaciers and thermal expansion of oceans, sea levels could rise between eight inches and six-and-a-half feet by 2100 according to NOAA (Lindsey). Some other estimates are even higher. SLR can cause high tide flooding that undermines infrastructure and creates inconvenience – this is happening already – but in the future some parts of the world will be underwater, and not just during temporary flooding (Lindsey).

According to a study by the Union of Concerned Scientists, the state that will lose the most homes to chronic flooding this century is Florida. Florida will experience the third highest cost due to property damage from SLR (Garfield). New Jersey will experience the highest dollar amount of property damage, but it has around 300,000 people at “elevated risk of inland flooding” and 352,000 people “at risk of coastal flooding,” while Florida has over 1.5 million people threatened by inland flooding and 3.5 million people threatened by coastal flooding (“Is Your State at Risk?”). Florida “is the only state in the continental United States with extensive shallow coral reef formations near its coasts” which will also be harmed by SLR and climate change (“Florida’s Coral Reefs”). Florida’s Monroe County, which is comprised of the Keys, is one of three counties in the state with the highest level of risk from just over 11 inches of SLR (Emrich et al.). There are significant environmental risks to the Keys, as well. Many animal species in the Keys, including the Lower Keys marsh rabbit, the Key deer, and others, are not found anywhere else, and their habitats may be impacted by SLR (“Florida Keys - Wildlife”).

While there is information out there about the basics of SLR, my work will dig deeper into the topics, especially focusing on personal stories and what SLR looks and feels like in the Keys. I will follow up on some stories that have been told already, such as Harris’s piece in the Miami Herald on elevating Keys roads to avoid flooding, and dig deeper into them for my long-form pieces. I want to share the most current status of how the Keys are addressing rising sea levels and experiencing its impacts, and I want to tell the abstract story of climate change through personal stories and imagery to make SLR a more accessible and meaningful concept for everybody, whether or not one lives near the coast. Data and statistics are important, but people more fully understand information when it is presented through narratives, personal stories, and images. Much of the journalism that already exists about climate change is presented in writing. I want to paint a picture of SLR in the Keys through audio and photographic storytelling. The number of podcast listeners has grown continuously since 2014, and it is expected to continue growing in the future (“Number of Podcast Listeners”). Presenting my research in podcast format will make it accessible to a wide audience, and photographs will contribute to the stories’ immediacy to audiences.

A handful of podcasts that look at climate change already exist, but by including interviews with both experts and ordinary Florida residents and by delving deeper into a range of topics related to SLR in one location in three longer pieces of audio journalism, my work will paint a cohesive picture of one community’s experience of SLR in a unique way. Some existing podcasts about SLR include Sea Level Rise and Speak Up for the Ocean Blue, but these are only narrator commentary and do not include any interviews. CoastLine is another podcast dealing with SLR, but unlike my work, it is a live show that interviews experts and callers – my interviews will be conducted first, then later edited into the episodes of my podcast so that I can include other music and recorded sound, as well as pictures, to fully develop and depict my stories. Audio content on SLR published by BBC or NPR is more similar to the work I will do, but unlike much of the work from those outlets, mine will include interviews with both expert sources (such as business officials or scientists) and “everyday people.” NPR has released several short stories on SLR (under 10 minutes), so by creating longer podcast episodes I will be able to

Background draws on work from other relevant fields with clear logic flow

Identifies gap in knowledge

Justifies why gap should be filled

Identifies gap in knowledge

Identifies gap in knowledge

Justifies why gap should be filled

Justifies method/creative work with background on similar works

Justifies why gap should be filled

Background leads to specific goals of 8-week project

Should expand on recruitment strategies with concrete steps that will be taken

delve further into topics and focus less on the basic information about SLR. Additionally, much of the podcast content of SLR in Florida centers on Miami, so by looking at the Keys, I can focus on another side of the story. Ultimately, my work will answer three questions, one per podcast episode: What does SLR look like in the Florida Keys (for people and for the environment), how does it impact the Keys' economy, and what is the response of Keys residents and visitors?

To create my podcasts, I will visit the Keys for about three weeks at the beginning of the summer to conduct interviews and take photos. I have reached out to several sources, including the Florida Keys Aqueduct Authority, Chris Bergh of The Nature Conservancy, and Rhonda Haag, Monroe County Sustainability Director, about setting up interviews. I am especially excited by Bergh's offer to show me around and indicate some locations that will be impacted by SLR. Several sources I reached out to have suggested other people and organizations for me to contact, and I am reaching out to them, as well. For this project, though, I will largely be finding sources to interview after I am in the Keys, as I am going to interview residents and tourists and work to find some stories that haven't made their way into mainstream media yet. I know I will be able to do this because I have experience approaching people in this way for other journalism coursework I have done. After conducting my interviews, I will return to Pennsylvania to edit my podcasts and photos, which will ultimately be presented on SoundCloud and in website format.

The first podcast episode I will produce will focus on what SLR looks like in the Florida Keys and how it is being addressed. One solution to flooding that is being implemented in the Keys is elevating roads (Harris). Saltwater brought in from rising sea levels has the potential to contaminate aquifers – another problem the Keys must address. The Florida Keys Aqueduct Authority released a plan in 2017 to deal with this saltwater intrusion. I would like to know how successful the plan has been, and if there have been any problems with saltwater contamination recently. SLR does not only affect people. I would like to investigate how plants, animals, and ecosystems in the Keys will be impacted by rising sea levels. While environments may be harmed by SLR, manipulation of the environment can potentially be used to mitigate flooding (Frohlich and Sauter). I am curious to investigate any attempts in the Keys to use methods such as levees and manufactured wetlands to prevent flooding, and what impacts these methods are having or may have on the environment. In damaging housing and infrastructure, preventing human habitation, and potentially deterring tourism, SLR has economic impacts, and I would like to investigate these further in my second podcast episode. After the destruction from Hurricane Irma, the Florida Keys Community Land Trust was established to help build affordable homes in Monroe County. I want to find out where they are being built and if they are likely to be affected by flooding from SLR. I will also look at how SLR will affect tourism to the Keys, and how this will impact the area's economy. To delve further into the human perspective of SLR and climate change in general, I will focus the third episode of my podcast on interviewing Keys residents and tourists about impacts they are noticing and what they care about most.

I have taken numerous journalism and environmental courses for my journalism major and environmental policy and culture minor that have prepared me to conduct this research. Notably, in fall quarter I took Journalism 301: The Golden Age of Podcasting, in which I worked with two teammates to put together an episode of a podcast about climate change in Chicago. I am proficient in Adobe Audition and Adobe Photoshop. I interned at WITF, an NPR-affiliated radio station in Pennsylvania, last summer. Additionally, I am the executive producer for WNUR News, for which I also produce audio stories, and I designed and edit the webpage for the digital student news publication Catnip. I hope to conduct this summer research to further my understanding of the effects of climate change and hone my interviewing skills, which will be important for my future career in journalism and my continuing studies at Northwestern.

Identifies gap in knowledge

Justifies why gap should be filled

Should reference proof of contact in appendix

Methods should include not just content but process for creating these episodes

Clear output given

## Appendix A: Citations

- Crosby, Michael P. "Climate Change Is a Natural Part of the Earth's Evolution." *FL Keys News*, 10 June 2017, [www.flkeysnews.com/opinion/opn-columns-blogs/article155471859.html](http://www.flkeysnews.com/opinion/opn-columns-blogs/article155471859.html).
- Emrich, Christopher T, et al. *Climate-Sensitive Hazards in Florida*. [www.floridahealth.gov/environmental-health/climate-and-health/\\_documents/climate-sensitive-hazards-in-florida-final-report.pdf](http://www.floridahealth.gov/environmental-health/climate-and-health/_documents/climate-sensitive-hazards-in-florida-final-report.pdf).
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- Frohlich, Thomas C, and Michael B Sauter. "30 US Cities That Could Be Underwater by 2060." *Business Insider*, 3 Oct. 2018, [www.businessinsider.com/30-us-cities-that-could-be-underwater-soon-2018-10](http://www.businessinsider.com/30-us-cities-that-could-be-underwater-soon-2018-10).
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- "Key Largo Community Swamp." *Facebook*, [www.facebook.com/pg/ShawDrFlooding/posts/?ref=page\\_internal](http://www.facebook.com/pg/ShawDrFlooding/posts/?ref=page_internal).
- Lindsey, Rebecca. "Climate Change: Global Sea Level." *NOAA Climate.gov*, 1 Aug. 2018, [www.climate.gov/news-features/understanding-climate/climate-change-global-sea-level](http://www.climate.gov/news-features/understanding-climate/climate-change-global-sea-level).
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- "Number of Podcast Listeners in the United States from 2014 to 2022 (in Millions)." *Statista*, 2019, [www.statista.com/statistics/786826/podcast-listeners-in-the-us/](http://www.statista.com/statistics/786826/podcast-listeners-in-the-us/).
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- Union of Concerned Scientists. *Underwater: Rising Seas, Chronic Floods, and the Implications for US Coastal Real Estate*. June 2018, [www.ucsusa.org/sites/default/files/attach/2018/06/underwater-analysis-full-report.pdf](http://www.ucsusa.org/sites/default/files/attach/2018/06/underwater-analysis-full-report.pdf).
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## Appendix B: Podcast Plan

### Episode 1: What SLR Looks Like for the Keys

- High tide flooding
  - What it looks like now
  - How often it happens
  - How recently it has happened
  - What places it impacts

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- I would like to talk to someone who manages the Key Largo Community Swamp [Facebook page](#)
- Elevated roads
  - This is one solution being attempted to deal with flooding
  - Intended duration of this solution
  - Time to enact solution
  - How and where it is done
  - How the project is coming along
  - This was supposed to be very expensive (Harris) – how much has it cost so far and what are the anticipated future costs?
- Saltwater contaminating aquifers
  - The Florida Keys Aqueduct Authority released a plan in 2017 to deal with this
  - Success of the plan
  - Any problems with saltwater contamination recently
    - If so, can I talk to impacted residents
- Environmental impacts
  - How plants, animals, and ecosystems will be affected
  - SLR impacts coral reefs near Keys coasts
  - Some species only exist in the Keys
    - Effects on their habitats
    - What will they do if their habitats are harmed?
  - Chris Bergh can show me spots “where SLR impacts on natural areas are very evident” (see email in Appendix D)
- Manipulation of the environment (levees, manufactured wetlands) can help mitigate flooding – are any techniques like this being used?

### Episode 2: Economic Impacts

- SLR leads to flooding which can damage housing and infrastructure
- Florida Keys Community Land Trust has been working to rebuild homes while maintain affordable housing after Hurricane Irma
  - Where they are being built
  - The purpose of rebuilding in an area that may not be inhabitable in the same way for much longer
  - Precautions being taken to prevent future damage to these houses
  - Efforts to build sustainable houses to mitigate their future impact on climate change which leads to SLR
- Tourism
  - SLR effects on tourism
  - Why tourists come to the Keys
  - How the Keys will cope with lost money from decreases in tourism
  - Any plans to develop new ways to attract tourists to the Keys
  - Changes in tourism already being seen, if any
- Dr. Michael Crosby of Mote Marine Laboratory wrote in an opinion article, “If coral reefs go extinct ... the state of Florida will lose more than 70,000 jobs and the foundation of a \$6 billion annual economy” – what are all these jobs and where does all this money come from?
  - Plans to prevent harm to coral reefs due to SLR
  - Plans to make up for this economic loss if it does happen

### Episode 3: The People

- Talk to residents
- Talk to tourists who visit repeatedly

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- Impacts people are noticing in their daily lives
- What impacts of SLR people care about most
- Are people concerned about SLR?
- Significant sites (historical, environmental, personal) that people do not want to see disappear from SLR
  - Why those places are important
  - How they would feel if those sites were harmed
  - What would they be willing to do to prevent those sites from being harmed?
- Florida voted republican in 2016 – how residents feel about Trump's policies regarding climate change, do they believe climate change is a problem

### Appendix C: Interview Questions

#### Episode 1

- What is high tide flooding?
- What does high tide flooding look like?
- When was the last time the Keys experienced high tide flooding? How long did it last?
- What was the most significant high tide flooding event experienced in the Keys that people can remember? How did it affect daily life?
- Where does high tide flooding generally occur?
- What can be done about high tide flooding?
- How is the process of elevating roads in the Keys going?
- Which roads are being elevated? Why these/why not others?
- What happens with traffic while the road work is being done?
- Will these roads ever experience flooding as well, or are they above the expected area to be affected by SLR? If they will be affected by SLR, how long will it be until that happens?
- What challenges have been faced in elevating the roads? How have they been overcome? What challenges do you anticipate the project will face in the future?
- Where does the money come from to elevate the roads? How much has it cost so far? Are there any anticipated future costs?
- Is it harder to maintain the elevated roads once they have been built?
- What is the plan for preventing and addressing saltwater contamination of aquifers?
- How often does saltwater contamination happen?
- When was the last time saltwater contamination happened? How serious was it? How many people were affected? How did you deal with it?
- Do you anticipate problems with saltwater contamination to increase as sea levels continue to rise?
- How does saltwater contamination affect Keys residents? How does it affect businesses?
- What plants/animals/ecosystems are most at risk of harm from SLR? What harm does SLR pose to them?
- Are there any plans to try to protect Keys wildlife from harm?
- What species only exist on the Keys, and what will happen to them if their habitats are harmed by SLR? Could they survive anywhere else? Will they have to live in captivity only? Is there potential for them to adapt to SLR conditions?
- Elevating roads is a way of adapting to SLR-caused flooding. Is anything being done to mitigate this flooding? *Can* anything be done to mitigate it?



### Episode 2

- Does high tide flooding impact any businesses?
- Which businesses/industries are most affected by SLR in the Keys?
- Is there any damage to infrastructure from high tide flooding that we can see now? Will it be repaired, and if so, what will that process be like?
- Where are the Florida Keys Community Land Trust houses being built, and why are they being built there?
- What does building one of these Florida Keys Community Land Trust homes look like? How long does it take? How much does it cost? Is anything being done to make the houses sustainable and mitigate their effect of climate change which causes SLR?
- Why rebuild houses in a location that will continue to experience worse flooding and potentially other climate-change-related dangers like more severe storms? Is anything being done to build houses that will be less impacted by these threats?
- What attracts tourists to the Keys? How will these things be affected by SLR?
- Tourists contribute significantly to the Keys' economy (see [link](#)). If SLR leads to decreased tourism, how will the Keys make up for lost revenue?
- Have any changes in trends in Keys tourism been seen already?

### Episode 3

- What impacts are you noticing in your daily life?
- What impacts of SLR do you care about most (impacts on housing, wildlife, economy, etc.)?
- Are you concerned about SLR? Do you think it will impact you personally?
- What is a place in the Keys that you would not want to see disappear? Why is it important to you? How would you feel if SLR harmed that site? What would you be willing to do to prevent SLR from harming that site?
- Who did you vote for in 2016? How do you feel about Trump's policies and stances regarding climate change and the environment? Do you believe climate change is a problem?
- For tourists – How many times have you visited the Keys? Why do you come here? What is your favorite place to visit and why? Are you concerned that it might disappear to SLR?

### Appendix D: Confirmed Interview Sources

Florida Keys Aqueduct Authority  
Contacted: [info@fkaa.com](mailto:info@fkaa.com)

## SURG Application (Summer 2019): Journalism



to me ▾

Hello,

We would be interested in helping out. Please feel free to reach out to me when you are getting closer to setting up dates.

Regards,



Public Information Manager

Florida Keys Aqueduct Authority

P: (305) 295-2150 | C: (305) 814-7333

[Find us on Facebook](#) | [Follow us on Twitter](#)

[name] The Nature Conservancy

Contacted: [redacted]



to me ▾

3:19 PM (17 minutes ago) ★ ↩ ⋮

Hi,

I'm game. I have some neat spots I can show you where SLR impacts on natural areas are very evident and I can point to low streets and other trouble spots on the infrastructure front. I'll be out of town (I live on Big Pine Key) July 11-Aug 4, and a day here and there the rest of the summer, so you may want to plan around my big trip.

Monroe County Sustainability Director, Key West Sustainability Director, and Sea Level Rise lead for Florida Fish and Wildlife Conservation Commission are good local contacts. is dealing with road elevations and other issues. is dealing similar stuff is focused on wildlife.

Best,

[name] Monroe County Sustainability Director

Contacted:[redacted]



to me ▾

Wed, Mar 13, 8:24 AM (1 day ago)

Hi, I could help you out.... I just have a pretty busy schedule, so as long as you're flexible I'd be happy to help.


Monroe County BOCC  
102060 Overseas Hwy, Ste. 246  
Key Largo, FL 33037  
(305) 453-8774

The Florida Keys Community Land Trust

Contacted:[redacted]



## SURG Application (Summer 2019): Journalism

 **Redacted** IWPR Group via yahoo.com  
to Redacted me ▾

Yes, Redacted


We would be delighted to participate.

Once you've had a chance to do more fact finding, let us know next steps.

Best,

...

[name], Florida Fish and Wildlife Conservation Commission  
Contacted: [\[redacted\]](#)

 **Redacted**  
to me ▾

Sure, no problem. Just let me know when.

**Redacted**  
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