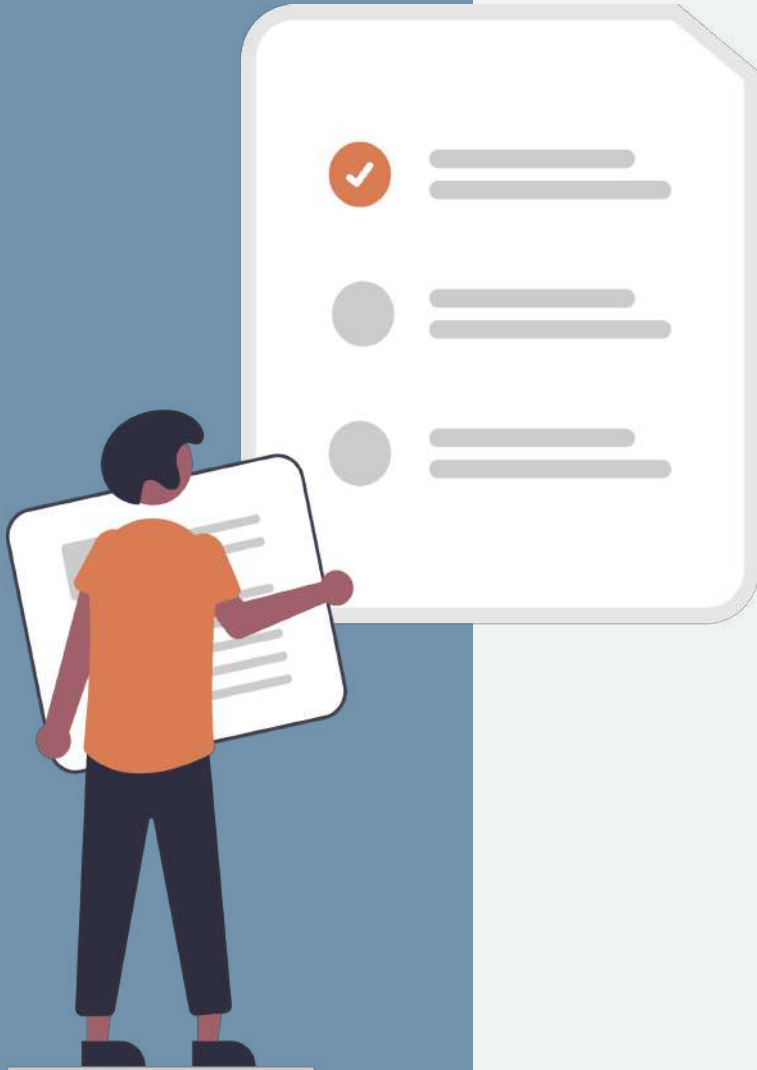# Usability Test Results

To start validating the usability of the app design, a test plan was generated to help keep track of the testing goal and objectives.

DETAILS

The testing goal focused on the learnability of new users interacting with the app and the established objectives concentrated on the usability of several core features.

Usability Test Plan

INTRODUCTION

Anglercast Moderated Remote Usability Test
UX Designer: Tiffany Ching
January 27, 2021

BACKGROUND

Anglercast is a mobile app used to provide current fishing conditions and weather forecasts geared toward the fishing community. The app is designed for anglers of all levels who need to check weather forecasts and news for safe fishing experiences and who want to connect with a local fishing community.

GOAL

The goal of this study is to assess the learnability and ease-of-use for new users interacting with the mobile application for the first time. We would like to observe and measure if users understand the app, it's value and if they can complete the 3 core features.

TEST OBJECTIVES

To determine the app's ease of navigation, intuitiveness, and usefulness of onboarding and 3 core features:

- Onboarding and creating an account as a new user
- Viewing Detailed Weather Forecasts
- Searching and Viewing Locations
- Setting up Custom Weather Alerts

METHODOLOGY

Moderated remote usability testing will be conducted and recorded over Zoom with 6 participants.

PARTICIPANTS

6 participants will be recruited through my personal network, Slack, and social media.
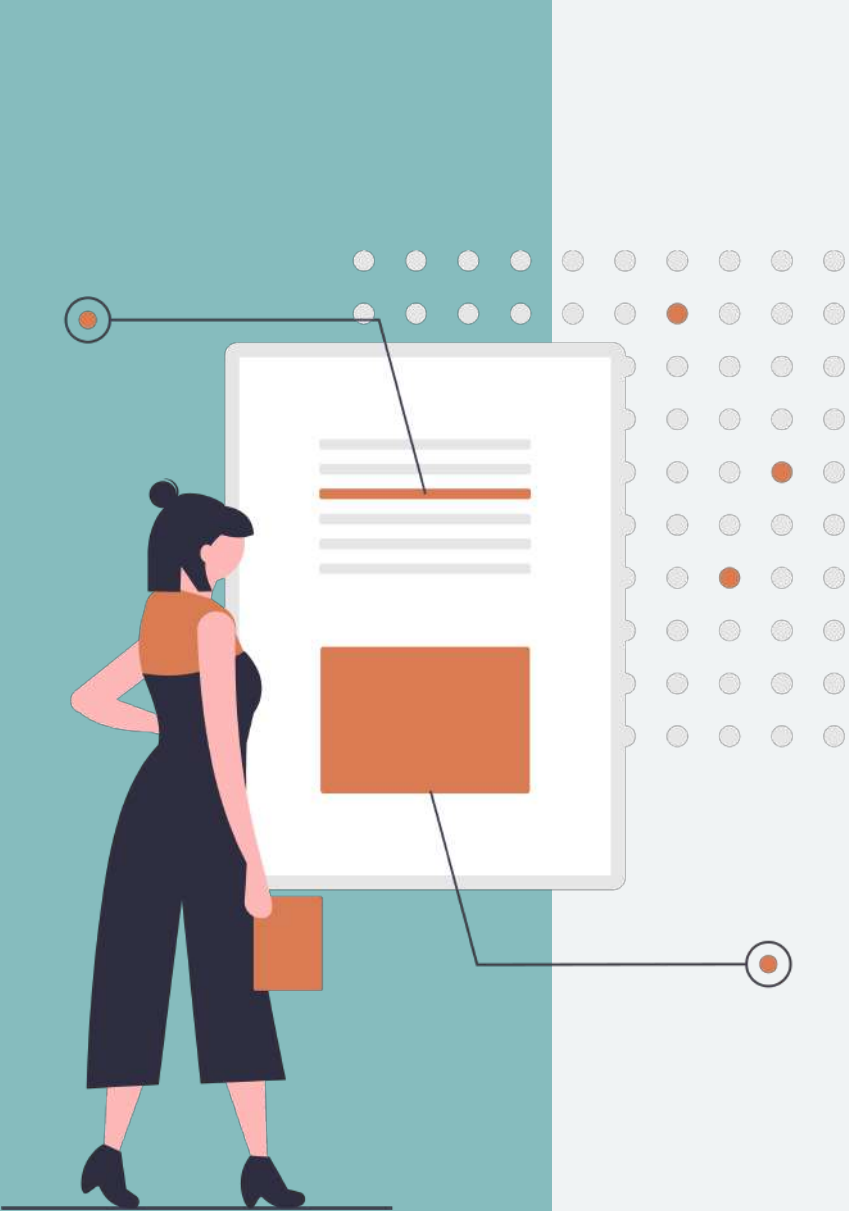
SCHEDULE & SESSIONS

Between February 11 – 13, 2021, remotely. Session duration will be 15-20 minutes.

EQUIPMENT

Participants and moderator will need a laptop/desktop, internet, and Zoom.

METRICS

Errors will be measured using Jakob Neilson's Severity Rating Scale for Usability Problems.

After the test plan, a test script was developed to provide testing consistency and generate reliable results from test participants.

DETAILS

The Anglercast test script started with a moderator introduction, explanation and reasoning of the test, and expectations for participants. The script then moved to capturing demographic and background info from each participant, to help determine the potential audience and how they would interact with the app. Finally, a combination of scenario-based tasks and open-ended questions were conducted to observe and assess the usability of the core features and to gather participants' thoughts.

Usability Test Script

Hi _____! Thank you for taking the time to participate in this study. My name is Tiffany, the designer working on this project.

Before we begin, I'd like to give you a brief overview of what we will be doing today so you'll know exactly what to expect. Today, I'll be asking you to try out a new fishing weather app called Anglercast. I'd like to understand what works well about the app, as well as what doesn't work well. This session should take approximately 20 minutes.

First, I'll start by asking you a few general background questions to get you know you. Then move onto some activities using the Anglercast app. I'll be giving you several broad tasks to complete and then ask questions as we go along. I'll also give you some context behind each task, such as why you might be doing it and what you hope to achieve.

It's important to know that I'm only testing the app and not you! You can't do or say anything wrong here—I simply want to hear your honest thoughts and opinions. Please feel free to let me know at any time if there's something you like, dislike, if you're confused, etc. You won't hurt my feelings.

Also, when you're looking at the app, I'd like encourage you to "think out loud" as much as possible to let me know what you're thinking and feeling as you explore the app. For example, you might let me know if you were expecting to find a particular piece of information after clicking on a link but the information provided was different than what you were expecting.

If at any time you find yourself unsure as to what you're supposed to be doing, have any questions or need a break, don't hesitate to let me know.

Finally, before we get started, would it be okay if we were to record your screen and voice during this testing session? The recording will only be used by me to help understand where I need to improve the app and won't be shared. Is that okay?

Do you have any questions so far?
Okay! Let's get started. I'll start recording now.

Usability Test Script

DEMOGRAPHIC QUESTIONS

1. **What is your age range?**
   - 18 to 24
   - 25 to 34
   - 35 to 44
   - 45 to 54
   - 55+

2. **What is your current occupation?**

3. **Where do you live?**

BACKGROUND QUESTIONS

Before we look at the app, I have a couple of questions to help me understand how you might use something like it:

1. **What type of technological device do you prefer using? i.e., desktop, mobile, tablet?**

2. **What do you mostly spend time doing when you're on your device?**

3. **What is your experience with fishing? Have you ever gone fishing?**
   - If yes, what skill level would you say you are?
   - If no, are you interested in learning? If you are, what would help you start?

4. **If you go fishing, do you use any apps or websites to check weather conditions?**
   - If yes, which ones?
   - If no, which apps or websites do you check general weather conditions?

Usability Test Script

OPEN-ENDED QUESTIONS

Thank you for those answers! Now, let's get started by looking at the prototype. Please open the link I sent you via the Zoom chat window.

On the Home Screen

Spend some time looking over this screen. You can scroll if you want, but please don't click or tap on anything yet. Please let me know when you're ready.

- Can you tell me your first impressions? What do you think this app is for?
- What would you do first from here?
- Where do you think you can find your Profile and Setting information?

On the Custom Weather Alert Feature

- Where do you expect this feature to be placed? Or accessed from?
- What do you think of its current placement?

Follow up Question on All Tasks

- How was your experience with that process? Where there parts of that process that were easy or difficult?

Usability Test Script

SCENARIO & TASKS

Great! Now I'll provide some scenarios for you and ask you to complete some activities using the app. Feel free to think aloud and tell me what you're thinking and feeling as you navigate through the app.

TASK 1: Onboarding Process

You've just downloaded the Anglercast app to help you get weather forecasts specific to fishing. You open the app and arrive at this splash page. From the splash page, complete the onboarding process as a new user in order to start using the application.

TASK 2: View Detailed Weather Forecasts

Imagine you are planning a fishing trip for later in the day, and you'd like to know if it will be raining then. From the home screen, find out if it will be raining at 7pm at the current location.

TASK 3: Search for a New Location

You decide to take your family on a fishing trip and would like to find lakes near you. Can you search and filter for lake locations near San Diego?

TASK 4: Viewing Location Details

Using the same scenario as before, you find a lake that interests you and would like to find the lake address and hours. Using the app, find the lake address and hours for Lake Miramar.

TASK 5: Setting Up Custom Weather Alerts

Imagine you're dream fish is in season. You'd like to be alerted when the marine weather at your fishing location meets your preferences. Using the app, set a custom weather notification for La Jolla Station.

WRAP-UP

Great! That's the end of the session! Thank you for participating and helping me better understand how I can improve Anglercast app. Before you go, do you have any other questions or feedback for me?
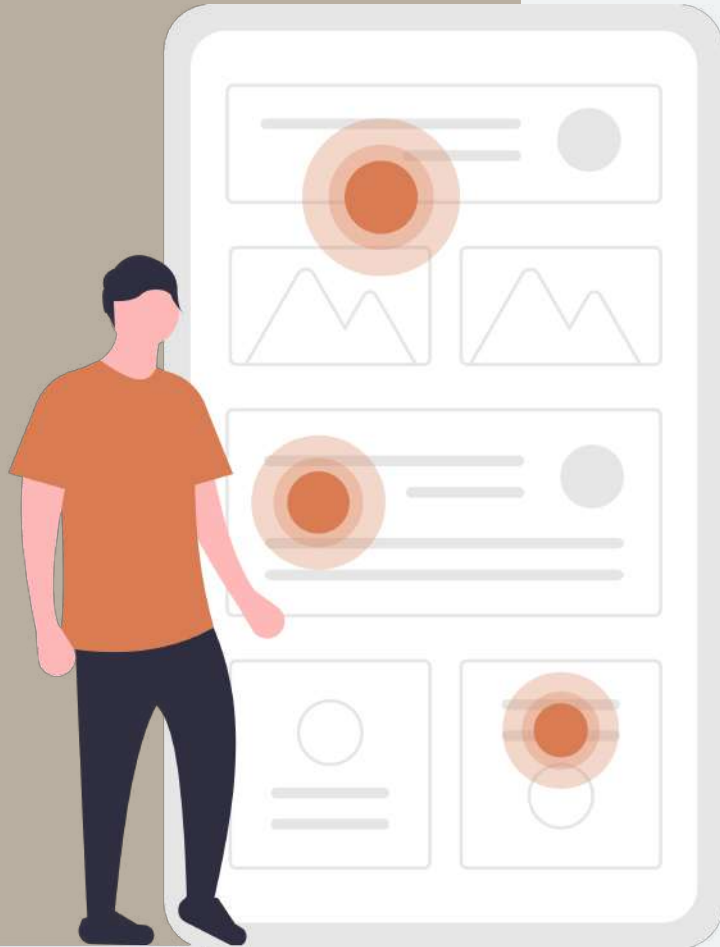
After conducting 6 usability tests, usability issues that participants faced were recorded. This data was analyzed to identify and prioritize major usability issues for future app improvements.

DETAILS

The observations from the usability tests were organized through an **Affinity Map**, which helped cluster the data into four categories: Observations, Errors, Positive Quotes and Negative Quotes. From there the usability issues were **ranked by severity in a rainbow spreadsheet** with possible solutions.

After analyzing the frequency and severity of errors, **the top 5 major severity usability issues were prioritized** and used to update the prototype.

Participants

P1 **JW,** 35-44, California

P2 **AD,** 35-44, Washington

P3 **KC,** 25-34, Pennsylvania

P4 **RW,** 35-44, California

P5 **CW,** 35-44, Indiana

P6 **HH,** 35-44, California

AFFINITY MAPPING

Observations – Feeling

Confused by "Current Storage" meaning on Lake Details

TASK 4

Confused by the meaning between Gov't Issued Alerts vs. Custom Weather Alerts.

TASK 5

Felt bothered by "Enable Location Services"

TASK 1

Feels comfortable with Apple Sign Up option because of protection of privacy.

TASK 1

Was surprised by the Pressure metric

TASK 2

Nor sure what some of the hour-by-hour graph icons mean.

TASK 2

Confused by "Download Forecast" button; doesn't know if it saves or where it saves PDF onto device.

TASK 2

Was surprised that search results could be filtered by buoys.

TASK 3

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Observations — Doing

P1 P2 P3 P4 P5 P6

Read all onboarding screens throughly.
TASK 1

Clicked the "Do Not Allow" link for Enable Fishing Location screen.
TASK 1

Quickly clicked through onboarding screens.
TASK 1

Scrolls through homepage to familiarize.
HOME

Navigated through Task 2 and found precipitation quickly.
TASK 2

Scrolls through homepage first trying to look for precipitation.
TASK 2

Small hesitation to click on Weather card on Homepage to find precipitation.
TASK 2

Expected to get weather info if click on a search result location.
TASK 3

Utilizes search icon from home page.
TASK 3

Utilized search feature from detailed weather page.
TASK 3

Clicked on Filter icon before typing in Search Location.
TASK 3

Navigated to detailed location page quickly and easily.
TASK 4

Clicks on "Edit" button for La Jolla Station to create custom weather alert.
TASK 5

Clicks on "Add New Alert" button
TASK 5

First reads all menu items to see where to set custom weather alert.
TASK 5

Second, scrolls homepage to see where to set custom weather alert.
TASK 5

First clicked on search bar to try and find La Jolla Station to create custom weather
TASK 5

miro

Observations — Thinking

P1 P2 P3 P4 P5 P6

Would like to be able to "skip" the onboarding screens.
TASK 1

Would never use Google or Facebook Login/Signup because of privacy and tracking.
TASK 1

Expects Login page to be able to Create Account from Login page.
TASK 1

Would want to use the app without having to log in and create a profile.
TASK 1

Wants to know when high/low tide times are
HOME

Would want to check out Learn menu first.
HOME

Would like to see an indication that this location is for ocean, or lake, etc. on the homepage.
HOME

Based on the weather data shown on homepage, he knew that it was for saltwater location.
HOME

Would like the hour-by-hour graph to display all conditions at once, to lessen click count.
TASK 2

Thinks rain forecast should be shown on the Forecasts page.
TASK 2

Assumes there might be another tile listed for snow for areas with snow in detailed weather page.
TASK 2

Thinks revising the content on homepage might make it easier to find precipitation.
TASK 2

Expects to see current weather conditions after clicking on search result name.
TASK 3

Knew to filter to Body of Water when looking for a lake location
TASK 3

Expects a map to pop up after clicking Current Location button under Search bar
TASK 3

Found the search filter tab colors hard to see.
TASK 3

Wants to know exact location of fishing spots, boat ramps.
TASK 4

Wants to see map marker at exact location of address listed.
TASK 4

Would like to be able to purchase permits directly from app.
TASK 4

Expects direction icon to open up a map to get directions.
TASK 4

Would like to be able to set certain fish species in custom weather alert.
TASK 5

Expects alerts to be saved and listed on Notification page so that he can manage them.
TASK 5

Wonders how she will be alerted after set alert (email, text, etc.)
TASK 5

Expects to see a little button to set custom weather alert on La Jolla Station homepage.
TASK 5

miro

Positive & Negative Quotes

P1 P2 P3 P4 P5 P6

POSITIVE

"it looks so good. And it just like, it feels like a real app. Like I you know, everything just like, flows and feels like really, really good."

"I like how it's really clean. Everything, all these tiles, you've really thought out, how it all fits together. I think that's really nice.

"It gets you captivated from the very beginning."
TASK 1

"Like how you have these three tab based filters and like how that's laid out. I think that's really cool."
TASK 3

"Nice having amenities, fish species and permits and fees. Very useful."
TASK 4

"So hard to get this kind of information...I really like that the information is laid out so concisely here and yeah, so this is great."
TASK 4

"Good flow...and the info how you put it, it just gives you step-by-step."
TASK 5

"Nice that the custom weather alert was so customizable."
TASK 5

"I just hope that you will develop this app, because it's great."

NEGATIVE

"It's too many clicks to go everywhere."

"If you could consolidate some things for me to not have to click around from screen to screen, that would make my user experience better."

"I don't want to let them know where I'm at. I don't want it to track me."
TASK 1

RE: Finding Precipitation: "I'm not really sure where to see them."
TASK 2

"I wouldn't feel like I would know where to find lakes, I just start clicking around until I found some lakes."
TASK 3

"I didn't see these search filter tabs, probably because they're kind of...it's hard to see them right now."
TASK 3

Errors

P1 P2 P3 P4 P5 P6

ERROR: Unable to see Learn page. Would want to check out Learn menu first.

HOME

ERROR: Scrolled through Temp graph to find Precipitation. Found precipitation right after.

TASK 2

ERROR: Doesn't know where to go to find rain forecast.

TASK 2

ERROR: Scrolled through Temp graph to find Precipitation.

TASK 2

ERROR: Clicks on location name on homepage to try and find precipitation.

TASK 2

ERROR: Unable to see pressure and humidity graphs.

TASK 2

ERROR: Unable to click"previous" and "next" buttons.

TASK 2

ERROR: Clicked San Diego from Favorites list to search for lakes.

TASK 3

ERROR [1st attempt]: Clicked on Current Location on Search page.

TASK 3

ERROR: Tries to type in lakes in the search bar, before clicking on "Body of Water" filter tab.

TASK 3

ERROR: Her instinct is to click on location name to find address and hours.

TASK 4

ERROR: Unable to filter from filter icon next to Search bar.

TASK 3

ERROR: Clicks on "Lake Miramar" name to find address and hours.

TASK 4

ERROR: Expects to be able to set custom weather alert under location name on homepage.

TASK 5

ERROR: Navigated to detailed weather page to see if can set custom weather

TASK 5

ERROR: Doesn't find custom weather alert on homepage, so clicks on More in menu.

TASK 5

ERROR [2nd attempt]: To add custom weather alert, expected to search for fish species.

TASK 5

ERROR: Was looking for way to set alert in navigation first.

TASK 5

ERROR: Scrolls through La Jolla Station weather page to try and set alert.

TASK 5

ERROR: Clicks on "App Preferences" in More to try and set alert.

TASK 5

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Rainbow Spreadsheet

MOBILE USABILITY TEST	P1	P2	P3	P4	P5	P6	TOTAL	POSSIBLE SOLUTIONS & NEXT STEPS
Errors								
[4]: Could not find Set Custom Weather Alert feature	■		■	■	■	■	5	Add another access point for custom weather alert feature - requires more testing
[4]: Unable to see humidity and pressure graphs on Weather detail page.						■	1	Add functionality and graphs for Humidity and Pressure.
[3]: Didn't know where to find precipitation forecast					■		2	Changing the "Weather" tile name to "Weather Forecasts" could help Or adding a precipitation forecast on the tile on the homepage.
[3]: Scrolled through temperature graph looking for precipitation first	■		■	■			4	Graph icons may need labels and color to for extra visability - requires more testing
[3]: Unable to filter from search bar filter.		■	■				3	Add secondary filtering functionality. Re-evaluate filtering feature, combining primary and secondary filters for one robust filter.
[3]: Unable to tap Location name on home page.		■				■	2	Add functionality to location name. Drop down menu appears with favorited loc listed.

MOBILE USABILITY TEST	P1	P2	P3	P4	P5	P6	TOTAL	POSSIBLE SOLUTIONS & NEXT STEPS
Negative Quotes								
"I just don't like apps tracking me ever."	■				■		2	See Observation 3
"I didn't see these search filter tabs, probably because they're kind of... it's hard to see them right now."				■			1	Will add color to prototype which will most likely alleviate this issue, as it's currently grayscale
"It's too many clicks to go everywhere."					■		1	Reevaluate flows. Also add bottom menu bar to every screen for ease of access.
Positive Quotes								
""I like the richness of the data...it's definitely a value add to a regular weather app."	■						1	
"I just hope that you will develop this app, because it's great."		■					1	
"it looks so good. And it just like, it feels like a real app. Like I you know, everything just like, flows and feels like really, really good."			■				1	
"I like how it's really clean. Everything, all these tiles, you've really thought out, how it all fits together. I think that's really nice."						■	1	

Rainbow Spreadsheet (cont.)

MOBILE USABILITY TEST	P1	P2	P3	P4	P5	P6	TOTAL	POSSIBLE SOLUTIONS & NEXT STEPS
Observations								
Observation 1: Quickly clicked through onboarding screens without much reading.	■			■	■	■	5	Add a "Skip" button to onboarding screens.
[4]: Could not find "Set Custom" Weather Alert feature					■			Add another access point for custom weather alert feature - requires more testing
Observation 2: Wants to use the app without having to log in and create a profile.					■		1	
[4]: Unable to see humidity and pressure graphs on Weather detail page.								Add functionality and graphs for Humidity and Pressure.
								Add option to "Enable Location Services while using the app"
Observation 3: Felt bothered by "Enabling Location Services". Clicked on "Do Not Allow"	■				■		2	Changing the "Weather" tile name to "Weather Forecasts" could help
[3]: Didn't know where to find precipitation forecast.								Add Privacy and Security option in Settings for users to manage.
location services through temperature graph looking for precipitation first					■		1	Or adding a precipitation forecast on the tile on the homepage.
[3]: Scrolled through temperature graph looking for precipitation first							4	Re-evaluate home screen content for users that do not enable location services
Observation 4: Would want to tap on Fishing Indicator tile to find out more info.			■			■	3	Graph icons may need labels and color to for extra visability - requires more testing
[3]: Unable to filter from search bar filter.			■			■		Add more metric info for fishing indicator. Tile could flip once tapped and provide additional hourly fishing forecast.
Observation 5: Wants to know high/low tide times on homescreen.	■						1	Add secondary filtering functionality. Re-evaluate filtering feature, combining primary and secondary filters for one robust filter.
[3]: Unable to tap Location name on Home page.	■					■	2	Could add to homescreen or detailed Tide Forecast page.
Observation 6: Wants to know what type of location (ocean, river, etc.) on the homescreen	■					■	1	Add functionality to location name. Drop down menu appears with favorited loc listed.
								Add an icon or indicator next to location name as to what type of location is listed.
Observation 7: Questioned the meaning of some weather condition metrics.	■		■	■		■	4	Add a "?" icon next to weather metrics. A modal will pop up with an explanation of how that type of weather condition affects fishing.
Observation 8: Would like to click less on the hour-by-hour graph display.					■		1	Could display all weather condition graphs at once. User can check/uncheck which conditions they want to see.
Observation 9: Confused by what some of the hour-by-hour graph icons mean.		■	■			■	3	Graph icons may need labels and color to for extra visability - requires more testing
Observation 10: Confused by what happens after click "Download Forecast" button.					■		1	Change button name to "Save Forecast". Could also add couch mark letting first time users know that saved forecasts can be accessed in Settings.
Observation 11: Expects the "Previous" and "Next" buttons to toggle through days.			■			■	2	Change link names to next weather conditions (i.e., "Fish Forecast") to be more clear.
Observation 12: Tries to click and drag the graph highlight to the right.		■		■			2	Add additional interactivity for a scrolling graph highlight.
Observation 13: Expects weather and location info to be on one page.					■	■	2	Evaluate combining location detail page with weather page. Or add buttons on each page so user can toggle back and forth.
Observation 14: Tries to click on filter icon in search bar to filer Body of Water results more.			■		■	■	3	Add secondary filtering functionality. Re-evaluate filtering feature, combining primary and secondary filters for one robust filter.
Observation 15: Wants to know exact location of parking, entrance, fishing spots, boat ramps, etc.	■	■					2	Add additional markers to map for the exact locations. Allow user to expand map full screen for better visability and zooming.
Observation 16: Would like to know if fishing license and permits are needed at location.		■			■	■	3	Add license & permit requirements for locations and where they can buy them from. Possible Future functionality: Purchase license and permits directly from app.
Observation 17: Wants to know more details about location amenities, fish species and busy times.					■	■	2	Add additional information to amenities. Once user taps on tile, more information is offered on the flip side or a modal pops up.
Observation 18: Participants expectations of how they would be notified after they set custom weather alerts were all different.			■	■	■	■	4	Allow users to choose what type of notification they want (push, in app, text, email, etc.)
Observation 19: Wants the option to not set a weather condition in the custom alert dialog.			■				1	Use color to denote inactive conditions. Inactive conditions will be default gray. Once user moves toggle, will become colored (active).

Usability Test Report Overview

SUMMARY

From the six mobile usability tests, major and minor issues were discovered. The **five main issues with high/medium severity** experienced by the participants are listed below.

ISSUE #1

[High Severity]: Cannot find Set Custom Weather Alert feature.

ISSUE #2

[High Severity]: Participants scrolled through temperature graph first before precipitation graph.

ISSUE #3

[Medium Severity]: Unable to filter "Body of Water" search results further.

ISSUE #4

[Medium Severity]: Confused by the meaning of some weather condition metrics.

ISSUE #5

[Medium Severity]: Different expectations on notification type after setting a custom weather alert.

Issue #1

[High]: Cannot find Set Custom Weather Alert feature.

SUGGESTED CHANGE

Add a "Set Custom Alert" button to the location weather page for an additional access point.

EVIDENCE

- 5/6 participants could not initially find the set custom alert feature in Settings. They first looked on the location weather page, before going to Settings.

- The original Settings location will still be kept, so users can manage the notification.

BEFORE
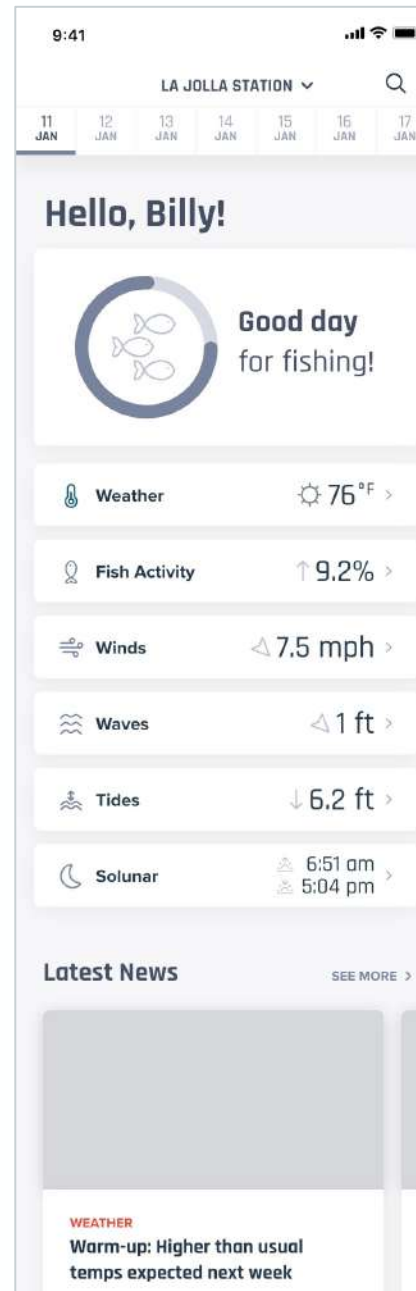
AFTER
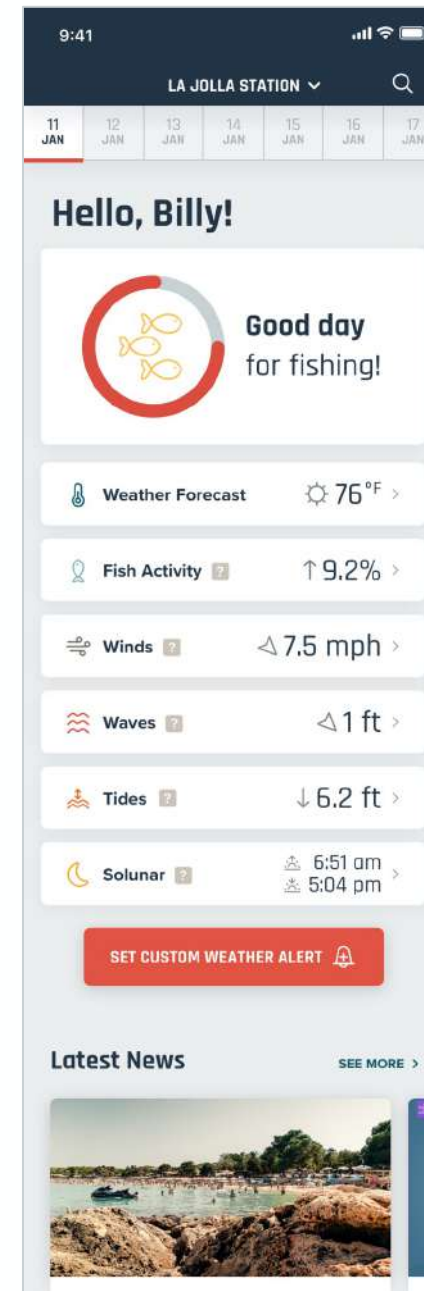
Issue #2

[High]: Participants scrolled through temperature graph first before precipitation graph.

SUGGESTED CHANGE

Add graph icon labels and color to the hour-by-hour graph icon tabs. This will provide extra visibility and clarity.

EVIDENCE

- 4/6 participants scrolled through temperature graph first, before clicking on precipitation as called for in task.

- 3/6 participants were confused by what some of the hour-by-hour graph icons tabs meant.

BEFORE

AFTER
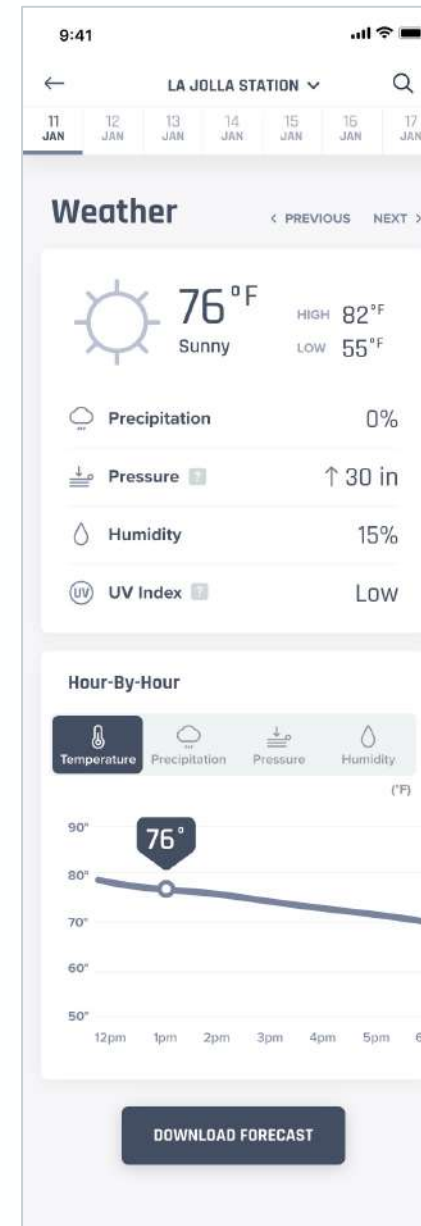
Issue #3

[Medium]: Unable to filter "Body of Water" search results further.

SUGGESTED CHANGE

Combine primary & secondary filters to create a more specific and robust filter.

EVIDENCE

3/6 participants wanted to filter the "Body of Water" search results further into lakes, rivers, creeks, etc.

BEFORE

AFTER 1

AFTER 2
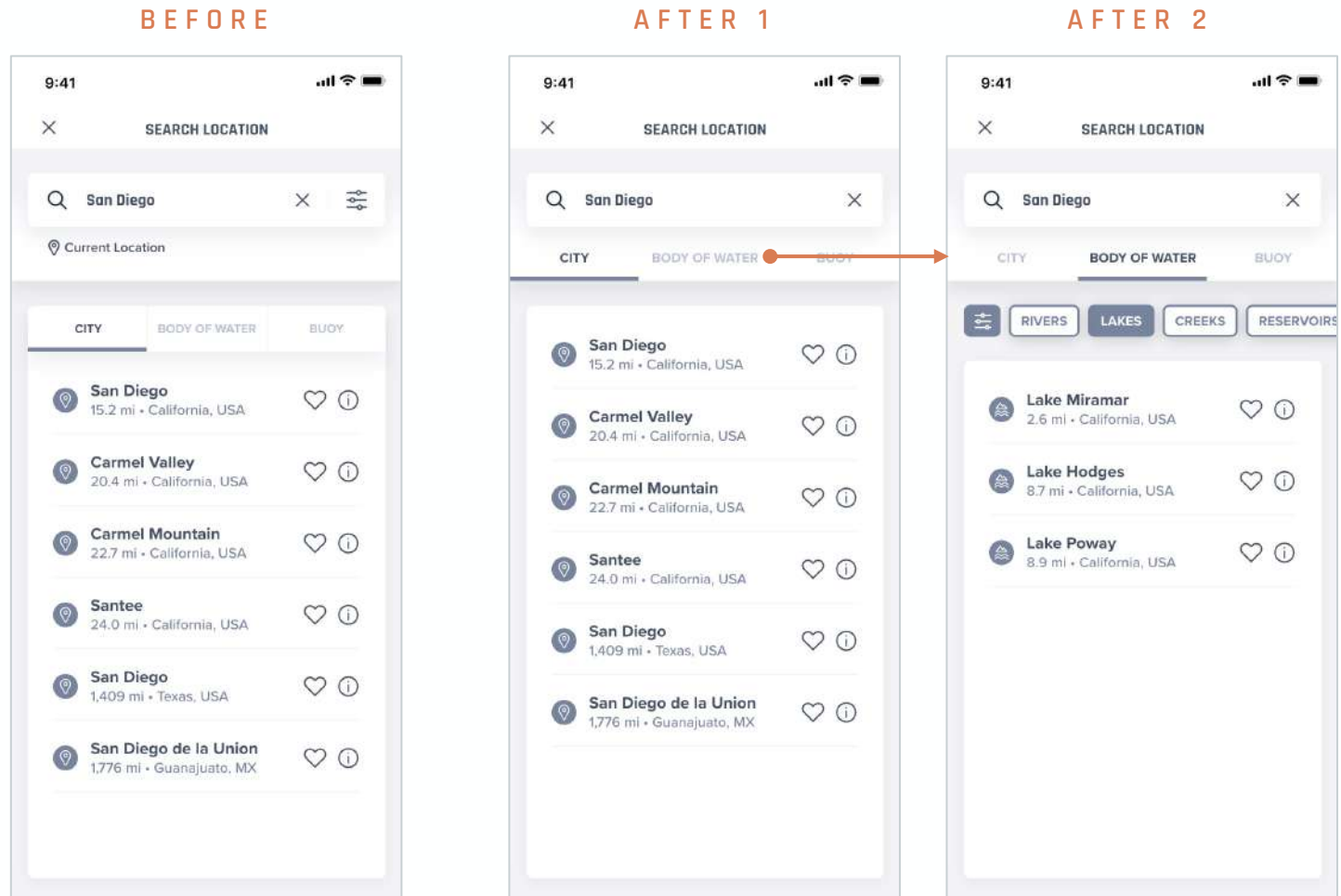
Issue #4

[Medium]: Confused by the meaning of some weather condition metrics.

SUGGESTED CHANGE

Add "?" icons next to weather condition names. Once tapped a tooltip will pop up explaining how that weather condition affects fishing.

EVIDENCE

4/6 participants questioned the meaning of some weather condition metrics and how they related to fishing, such as Tides (rising & falling), Pressure and Fish Activity.

BEFORE
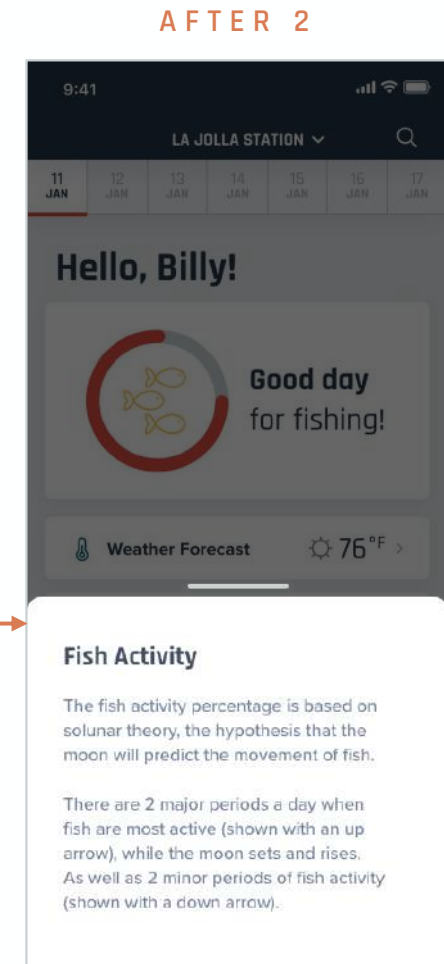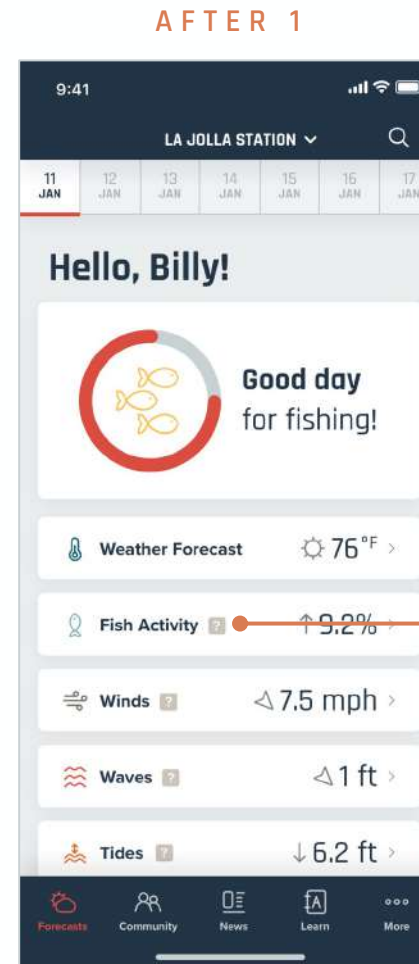
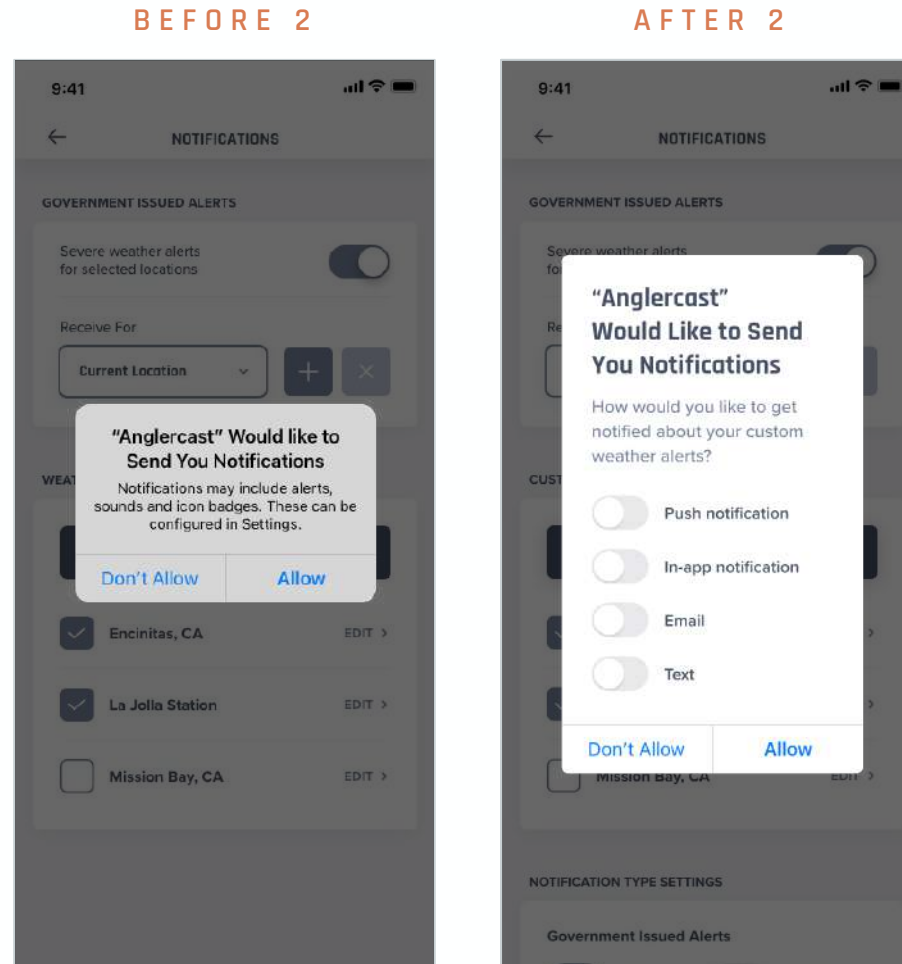AFTER 1

AFTER 2

Issue #5

[Medium]: Different expectations on notification type after setting a custom weather alert.

SUGGESTED CHANGE

- Ask users how they want to be alerted (i.e., in app, push, email, text), so they can choose on the "Allow Notification" modal
- Add Preferences for Notification Settings, so users can manage.

EVIDENCE

3/6 participants expected push notifications. 1/6 participant expected an in-app notification. 1/6 participant wondered how she would be alerted.
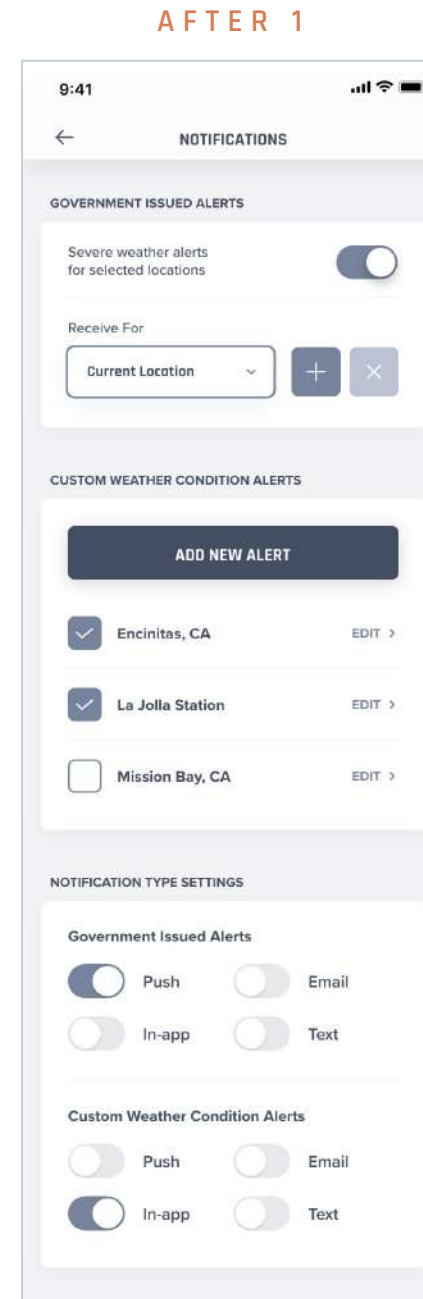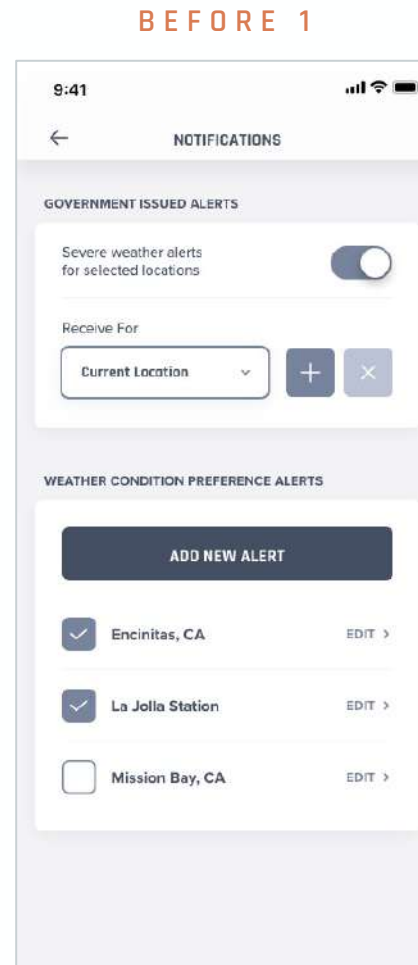
Issue #5 (cont.)

[Medium]: Different expectations on notification type after setting a custom weather alert.

SUGGESTED CHANGE

- Ask users how they want to be alerted (i.e., in app, push, email, text), so they can choose on the "Allow Notification" modal
- Add Preferences for Notification Settings, so users can manage.

EVIDENCE

3/6 participants expected push notifications. 1/6 participant expected an in-app notification. 1/6 participant wondered how she would be alerted.

PREFERENCE TEST

After improving the app via usability testing, preference testing was conducted to get quantitative feedback on the design of the splash screen.

DETAILS

The test objective for the preference test was to determine which accent color (red/orange vs. aqua) performed better on the splash screen. Since red/orange color is typically associated with danger or alert, I wanted to see if it could work in this case.

The preference test was conducted on UsabilityHub.com, because of it's ease of use and clear reporting of results. Participants were recruited from my personal network and fellow colleagues from CareerFoundry.

Splash Screen

TEST OBJECTIVE

To find out which accent color users prefer. Since the color red is typically associated with danger or an alert, I wanted to see if it could work in this case. Design A is original, design B is updated.

PARTICIPANTS

- Test was conducted through UsabilityHub.com.
- Participants recruited through personal network and CF students via Slack.
- Total of 21 participants from U.S., Germany, Canada, and Latvia.

DESIGN A

DESIGN B

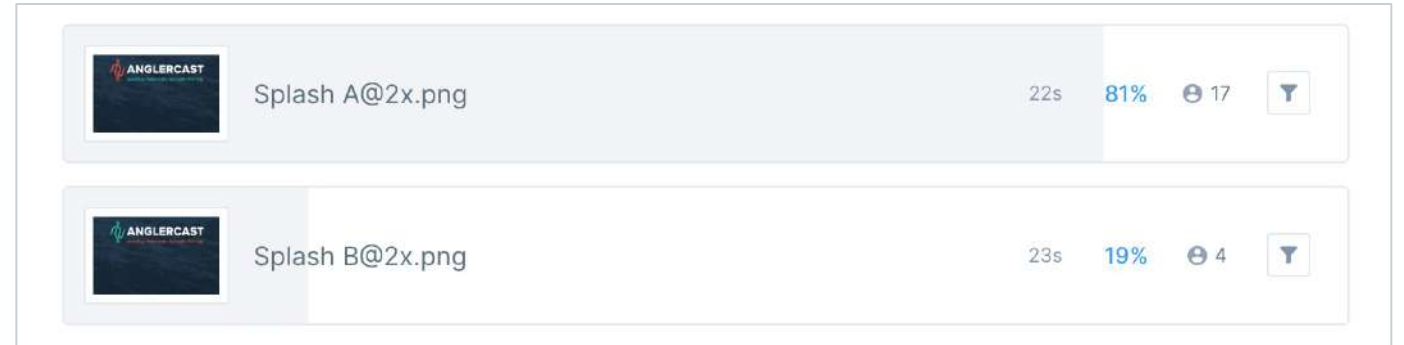# Splash Screen

RESULTS

81% of participants chose Design A over Design B.

A follow up question asked why they made their choice. Based on the word cloud of responses for Design A, **participants felt the red/orange color gave more contrast and stands out more** over the aqua.

CONCLUSION

Based on these results, **red/orange** will be kept as an accent color on the splash screen and carry throughout the app.

RESULT METRIC

ANGLERCAST	Splash A@2x.png	22s	81%	17
ANGLERCAST	Splash B@2x.png	23s	19%	4

DESIGN A COMMENTS – WORD CLOUD