

Flood

1. **[H2-1 Visibility of Status]** It is unclear what happens to your data when you finish shopping. Is your shopping list saved somewhere? Does it just become that line on the bar graph. The app should say: "Your list has been archived". Or if it's not archived, that's another violation. A [3]
2. **[H2-2 Match between system and real world]** The buttons to confirm an alternative food are colored green like the finish shopping icon, but elsewhere in the app, you simply click on the bold black name of the item. I think this is a consistency issue that would be best addressed by adding the colored button to the research lists and elsewhere when you click on something to add it to the list. A [1]
3. **[H2-2 Match between system and real world]** "Finish Shopping" sounds like the app is going to place your order. A better phrase might be "Done shopping". A [1]
4. **[H2-3 User Control]** In the research task, if you search for some item and click enter, the search bar disappears, and there is no direct way back. It would be nice if searching was dynamic, meaning the search bar does not go away until you specifically navigate away from that page. Strange that every time you research something, you have to reset to research another thing. especially if you are adding multiple items in a row, you don't want to have to visit your shopping list after each item. A,B,C,D [2]
5. **[H2-3 User Control]** clicking the menu icon from the Almonds research page resets the search and you have to do the search again. I would add an icon to allow you to retrieve your previous search.A,C [2]
6. **[H2-4 Consistency]** What's the difference between researching an item and adding an item to your shopping list? right now that seems to be two names for the same thing. Change this by either adding more functionality to researching that is different from adding, or by integrating the two fully. A,B,D [3]
7. **[H2-4 Consistency]** Exceeding water use goal is red, but on final screen, "congratulations" text is similar in color. I would change the congratulations text from orange to green, like the finish button. A,B [1]

8. **[H2-4 Consistency]** The “carrot” on the left of each suggested alternative the research page suggests that you can see more info if you click on that alternative, because the Almonds option doesn’t have one (and almond’s additional information is already displayed). But if you click on either the Almonds or the alternative it just adds that to the cart. I think you should either have clicking on an alternative re-order the research list, so that it is displaying the alternative at the top, and then alternatives to that alternative, or you should ensure graphic consistency between all options on that screen. A [1]
9. **[H2-5 Error Prevention]** App does not prompt user to confirm that they are finished shopping before taking them to the next screen. It could do this with a message that reminds the user of what happens to their list once they confirm. A,C,D [2]
10. **[H2-6 Recognition not Recall]** gals/lb is not how you would talk about your water use in the real world. In the real world, you worry about your total water consumption, not just a rate of water consumption. I would add an option to see different metrics for water consumption: gals/cart, gals/cal, gals/serving. Another way would be to use units related to other water consumption such as minutes of a shower or average household water use / day. A,B,D [2]
11. **[H2-6 Recognition not Recall]** To set your goal, you have to go into settings first. You should change this so that, on the water conservation graph, you can click on the number indicating your goal, and edit your goal. A,D [2]
12. **[H2-6 Recognition not Recall]** Without familiarity with the app, it is unclear what the maximum number of drops is. Is three the most? Maybe turn drops red, when their number is too high or add transparent drops to make it clear that there is an “out of three scale”. A,B [1]
13. **[H2-7 Efficiency of Use]** How does an experienced user add an item to their shopping list directly, do they still go through the whole process of searching for an item, and then adding it to their list, or can they recall previous lists? Experienced users know which normal foods are good on water consumption, so I would add a quick add functionality. A [3]
14. **[H2-9 Aesthetic and minimalist design]** Shopping list does not make it perfectly obvious that exceeding a target is an error. It would be nice if the water usage bar turned a different color (red) after it passed the personal goal. Clicking

on the bar could bring up a list of substitutions to make, if there are many to make by scrolling through your list. A, B, C [1]

15. **[H2-10 Documentation]** Help section is not filled out. It would be nice if help could toggle information callouts on each screen so that you could hover over icons to learn more about how to use them. A,C [2]
16. **[H2-8 Aesthetic & Minimalist Design]** When the user enters the 'Shopping' screen for the first time and finds an empty list, the bottom of the screen displays what will be the bar chart of their water usage and their water usage goal. This graph is irrelevant at the moment, because the list is empty. The numbers and line are just floating in space, and this impacts the aesthetics of the page negatively. The font size is also quite small. I think it should only appear once the user enters an item, and you should make the font larger. B,C [1]
17. **[H2-5 Error Prevention]** After I click the water droplets in the 'Shopping' screen, I can see a couple of the top alternative items. When I clicked 'Walnuts', I expected to be taken to a screen where I could see more about walnuts (such as their water footprint and nutrition facts). Rather, I was surprised to find that they immediately replaced almonds in my list. Also, there is no way for me to undo this action. Add a small pop-up that displays deeper information about each of the top choices (whichever one I click on) and give me the option to undo the change. C [3]
18. **[H2-7 Flexibility and efficiency of use]** There is no way for me to remove items from my list. Add a swipe gesture on each of the items that allows me to swipe right on the item to display a 'delete' button. C [2]
19. **[H2-7 Flexibility and efficiency of use]** If I were researching an item manually or by scanning the barcode, I am taken to a screen displaying all of its stats, as well as its top alternatives. However, if I suddenly decided to go to a different screen (profile, for example), and then come back to the research screen, I would expect my most recent search to be there – this is not the case. Rather, the screen is blank, forcing me to do the search again. This may be a flaw just because it is a wire-frame mockup, but the app should remember my most recent search. C [2]
20. **[H2-8 Aesthetic and Minimalist Design]** After I finish shopping, I am directed to a screen that displays my entire profile – my photo, location, water goal, and a

graph of my past purchases. I think the personal info clutters the screen a bit here, and is irrelevant to what the user wants. This screen should just display the user's water usage goal and graph tracking past water usage. C [2]

21. **[H2-8 Aesthetic & Minimalist Design]** As a user, I would expect the 'Finish Shopping' button to be at the very bottom of the screen, as that is how it is in many other common e-commerce platforms. However, I understand that because the bar graph displaying water consumption is dynamic, it would be awkward to put the 'Finish Shopping' button under the graph. I propose that we create the feeling that the bottom of the screen is at the 'Finish Shopping' button, and that the graph should not be clicked, by changing the color of the background behind the graph. C,D [3]
22. **[H2-8 Aesthetic & Minimalist Design]** I don't think the hamburger menu is the best choice for this kind of app. One of the main issues with the hamburger menu is that it is less efficient (requires more clicking). In most large apps (such as Facebook and Twitter) hamburger menus have been replaced with a bar of buttons along the bottom. Because your app has relatively few options hidden in the hamburger menu, I recommend following that strategy. C [2]
23. **[H2-8 Aesthetic & Minimalist Design]** I think the profile screen is cluttered with the profile information (e.g. name, photo, location). I understand that you want to introduce a social portion to the app (Facebook and Google+ integration), but those integrations seem to make the profile within the app irrelevant and space consuming. I suggest removing the 'profile' feature altogether. C [1]
24. **[H2-8 Aesthetic & Minimalist Design]** I appreciate that the starting Shopping screen (with the empty list) is clean and minimalist. However, I believe that the page is actually too minimalist. When users look at the page, they might expect some animation to happen automatically, or wait for some prompt to help them proceed. I would place some message in the page that prompts the user to add an item. C [1]
25. **[H2-8 Aesthetic & Minimalist Design]** Within the 'Settings' page, I think that the 'Water saving goal' and 'Goal' entry bars are set too low on the screen. Looking at apps on my iPhone, and moving my thumb around to see where is the most comfortable place to reach with my thumb, I conclude that the optimal place for the bars is actually slightly higher than the middle. Look at Settings->Battery on the iPhone for a better placement. C [2]

26. **[H2-4 Consistency & Standards]** On the shopping screen, if the user clicks the water droplets, a drop-down menu appears, displaying a message showing how much water the almonds use, and then 2 suggestions below it. If the user clicks the message, he is taken to a research screen that shows the almonds and its suggestions in detail. However, if the user clicks one of the two suggestions in the dropdown menu, that item automatically replaces the almonds in the shopping list. This is a bit of inconsistency that should be fixed. I think they should all go to the research screen, where the user can then confirm their selection. B, C [3]
27. **[H2-4 Consistency & Standards]** -Screen The menu font is slightly smaller than the font used throughout the other screens. This is not consistent, and there is no apparent reason why this is the case. This can be fixed by making the font in the menu be the same as the font used in the other screens throughout the app. B, C [1]
28. **[H2-2 Match between system and the real world]** In the shopping screen, different items have different number of water drops. It is clear that the drops are trying to convey how much water they use relative to the other items. However, it is not clear what a water drop means in terms of real world numbers. Is there a specific range of gal/lb that a single drop of water represents? This can be fixed by providing documentation, a tutorial, or legend that quantifies how much a water drop means. For example, the app can display information such as: one drop = 1-50 gal/lb. B [3]
29. **[H2-3 User Control & Freedom]** In the shopping screen, after pressing the water drops, two alternatives are shown. However, while the alternatives are present, after pressing the scan button, the alternatives disappear, and the user is taken back to the shopping screen instead of taking the user to the scan screen. The user should be able to scan right away. This can be fixed by having the scan button immediately take the user to the scan screen. B [2]
30. **[H2-4 Consistency & Standards]** In the shopping screen, a current progress bar is accompanied by an actual number label, in this example: 1223 gal/lb for both chicken and almonds. However, when the user clicks on the water drops and the alternatives box is shown, the number label "1223 gal/lb" moves down by a few pixels. Thus, not consistent. This can be fixed by letting the number label stay in the right place. B [0/1]

31. **[H2-4 Consistency & Standards]** In the shopping screen, after clicking on the water drops, the alternatives are shown, and a useful dialog says “Almonds use over 1900 gal/lb.” However, users may question why it is not consistent with the research screen that displays an actual number of 1,929 gal/lb. Try to maintain the consistent numbers so that users don’t have to actually go to the research screen to find the actual water usage. B [1]

32. **[H2-4 Consistency and standards]** When going to the research screen from the menu, there is an option to type the name of the product. However, the functionality to scan an item is not present. Thus, this is not consistent with the shopping list screen functionality of being able to scan an item. Fix this by including the scanning barcode functionality to the research screen. B [3]

33. **[H2-7 Aesthetic & Minimalist Design]** — The default profile icon in the profile screen may be confusing to users. It is not aesthetically pleasing, and appears to be a keyhole. Fix this by changing the icon to better represent an anonymous person. B [1]

34. **[H2-5: Error Prevention]** The barcode scanner function might be slightly confusing for users. Since this is a shopping list app, the list would presumably be made prior to going to the store. The barcode scanner would therefore be helpful for users who want to purchase more of what they already own (for example, if I really like a certain cheese I may keep the wrapper and then scan the barcode to add it to my list for my next trip). I think that many users may feel like they need to scan the barcodes of items in the list after arriving to the store, which is not the case. This can be fixed by adding the word “or” in between the button and the barcode scanner button, or by removing the scanner button completely from the shopping list and moving it within the screen that the plus button brings one to. D [3]

35. **[H2-2: Match Sys & World]** There should be some way to allow users to differentiate water intensity across brands. I acknowledge that this is an early prototype and not everything has been implemented yet, however there is no indication in the prototype that such a function will exist or not. For example, the prototype has “chicken” as one item. This is extremely generic, as chicken can come from many different places. I assume the statistics shown are an average. A user might find him or herself deciding between multiple brands of chicken. One brand might come from a farm that uses much less water than another

brand's farm. A function to either search the brand or scan the barcode would therefore be useful. This can be implemented by adding a button to do so for each item (for example, once at the store I could click on "chicken" in my list and then have an option to further specify brand). D [3]

36. **[H2-4: Consistency & Standards]** In the profile tab, there is a message at the bottom that reads, "you achieved your goal and used less than 1100 gal/lb!" I assume this is referring to "today," because the goal was achieved on "today" as shown in the graph above. The issue is the graph also shows the previous week, so it is slightly confusing what the message applies to. This can be fixed by simply adding the word "today" to the end of the message or by using a different message that better relates to the entirety of the graph above it. D [1]