Water - Wireframe & frontend plan to Design-Think

build awareness - where is the water and what plants and animals are there (as quality indicators), a

- Problem: Water filtration and flood mitigation are supported by small, localized wetlands. But those are often unmapped and under-monitored.
- Solution: A website application that allows "citizen scientists" to contribute map-ready data in less than a minute. This pilot proves that lightweight, community-driven observations can provide actionable GIS data for municipal and conservation planning. "

Good — now we're tightening the concept.

Below is a **succinct design-application table** grounded in your stated problem and solution, with awareness of **where water is** and **which plants/animals signal quality** built directly into the UX.

Design Thinking Applied to the Wetland Citizen Science App

Classic Pattern	Core Insight	Apply to Wetland Problem	What the User Sees (≤ 1 min action)	Planning Value Generated
iPhone – Radical Simplicity	Remove complexity	Don't show GIS layers first	One screen: "Is there water here?" → Yes/No	Clean geotagged presence data
Google – One Clear Action	One input, one output	Map as entry point	Tap location → Select: standing H2O, drainage ditch, seasonal wetland	Mappable water body points
Netflix – Personalization	Reduce overload	Show ecological indicators nearby	"Common indicators nearby: cattails, frogs, dragonflies." AI to ID (or Quick tap to confirm sighting)	Species-linked water health clues
Uber – Reduce Uncertainty	Visibility reduces anxiety	Show why small wetlands matter	"This site absorbs ~X gallons during storms." "Nearest storm drain: 200 ft." Species-linked water health clues	Flood mitigation context
Duolingo – Micro-Engagement	Small actions build habits	Make reporting fast + rewarding	30–60 sec flow: Photo → Water present? → Indicator species? → Submit	High-frequency, lightweight data

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Awareness Layer (Built Into UX)

Instead of abstract "water quality," users learn by observation:

Water Presence

- Standing / flowing / saturated soil
- Seasonal vs persistent

- Algae
- Turbidity - Suspended matter

Plant Indicators

- Cattails
- Bald cypress
- Irises
- Sedges
- Water-loving grasses

Animal Indicators

- Frogs / tadpoles
- Dragonflies
- Wading birds
- Crayfish

Users aren't analyzing chemistry.
They're answering: *What do I see right now?*

System Flow (Diagram Style)

User (60 seconds)
→ Upload optional photo
→ Submit

→ photo metadata Location from (Tap map location)
→ Confirm water presence
→ Select visible plants/animals

System
→ Auto-geotags
→ Categorizes by indicator type
→ Flags clusters
→ Feeds municipal GIS

Strategic Positioning Shift

This is not:
"Track water quality."

It is:
"Help your city see the invisible wetlands protecting you."

That framing builds civic pride and participation — not just data collection.

If you want next-level refinement, we can:

- Define a 5–7 field minimum viable data schema
- Design the literal one-minute submission wireframe
- Or map how this pilot scales into grant-ready municipal partnerships

Which direction are we building toward?

Common Themes in Design-Thinking Examples (especially related to iPhone, Netflix, Google Search, Uber, and Duolingo)

1. Deep user empathy
2. Obsession with friction
3. Rapid prototyping
4. Iteration based on behavior
5. Simplification over feature bloat

Unfortunately, most "design thinking" fails because teams jump to solutions before deeply defining the problem.
apply these patterns to my water app project - Don't need a "water app."

Need a friction-reducing behavior engine for water awareness.

Current concept leans towards education & is policy-driven. If you want traction, shift the app's "emotional target" from:

"We provide water education."

to

"We reduce daily uncertainty about water safety and infrastructure."

Think about "building the iPhone version first" - Phase 1 should only do:

1. Location-based risk indicator
2. One clear recommended action
3. One simple reporting feature

built for tired humans - Most civic-tech apps fail because: built for funders.

apply these patterns to my water app project - Don't need a "water app." Need a *friction-reducing behavior engine* for water awareness.

1 iPhone Pattern → Radical Simplicity

Lesson: Remove complexity. Design for fingers. Make tech disappear.

Application to Your Water App

Problem in most civic apps:
They're dashboards. Dense. Data-heavy. Intimidating.

Instead:

- One primary screen.

- One core question:
  👉 “Is my water safe today?”

Tap your location → instant visual status.

If someone has to think, you’ve already lost them.

2️⃣ Google Search Pattern → One Clear Action

Lesson: One input. One result. No clutter.

Application

Home screen:

🔍 “Enter your address or tap to detect location.”

Output:

- Simple risk level (Green / Yellow / Red)
- 1–2 plain-language explanations
- One recommended action

That’s it.

Advanced analytics? Hide them under “Learn More.”

If your first screen looks like a grant proposal, users will bounce.

3️⃣ Netflix Pattern → Personalization Over Data Dumps

Lesson: The problem isn’t information. It’s overload.

Water quality affects:

- Retired walkers
- Nurses
- Parents
- Farmers
- Industry

- Government

Each persona should see different priorities.

Example:

👴 Retired Walker

- “Recent pipe break 0.4 miles from your walking route.”
- “Air humidity + standing water risk this week.”

👩‍⚕️ Nurse

- “Increase in GI complaints in this zip code.”
- “Possible skin irritation indicators.”

👨‍🌾 Agriculture

- “Runoff risk index rising.”
- “Wetland buffer stress score.”

Same data. Different framing.

That’s personalization.

4️⃣ Uber Pattern → Reduce Anxiety Through Visibility

Lesson: The stress isn’t the event. It’s uncertainty.

In water systems:
People feel powerless.

Scrape Waze for weather issues and construction, especially flooding

So give them:

- Real-time status indicators.
- “Last tested 2 days ago.”

- “City response time average: 18 hours.”
- “Infrastructure age: 68 years.”

Even if nothing changes, visibility reduces fear.

Also:
Show progress tracking.

“Pipe replacement scheduled: March 2027.”
That builds civic trust.

5️⃣ Duolingo Pattern → Behavior Through Micro-Actions

Lesson: Motivation beats information.

Your app shouldn’t just inform.

It should:

- Give micro-actions.
- Reward engagement.
- Build streaks.

  Examples:

  “Log today’s water clarity.”
  “Report standing water.”
  “Photograph storm drain.”

Gamify lightly:

- Neighborhood water score
- Citizen scientist badge
- 7-day reporting streak

But keep it subtle.
This is civic engagement, not Candy Crush.

The Real Design Shift

Right now your concept leans educational and policy-driven.

If you want traction, shift from:

“We provide water education.”

to

“We reduce daily uncertainty about water safety and infrastructure.”

That’s a different emotional target.

What This Means for Your MVP

If I forced you to strip it down:

Version 1 should only do:

4. Location-based risk indicator
5. One clear recommended action
6. One simple reporting feature

No giant dashboards.
No multi-tab complexity.
No 30 metrics.

Build the iPhone version first.

Tough Love Moment

Most civic-tech apps fail because:

- They’re built for funders.
- They’re not built for tired humans.

Design for:

- The nurse on a 12-hour shift.
- The retiree on a slow walk.
- The parent between dinner and homework.

If it works for them, it works for everyone.

If you want, next step we can:

- Design the actual home screen layout
- Define a “water safety score” formula
- Or map the emotional journey of a first-time user

Water/Wetland Website — SMART Goal Versions alternative overall goals, each followed by a SMART table. These are written to work well for education, conservation, and grant-facing contexts. **Overall goals**:

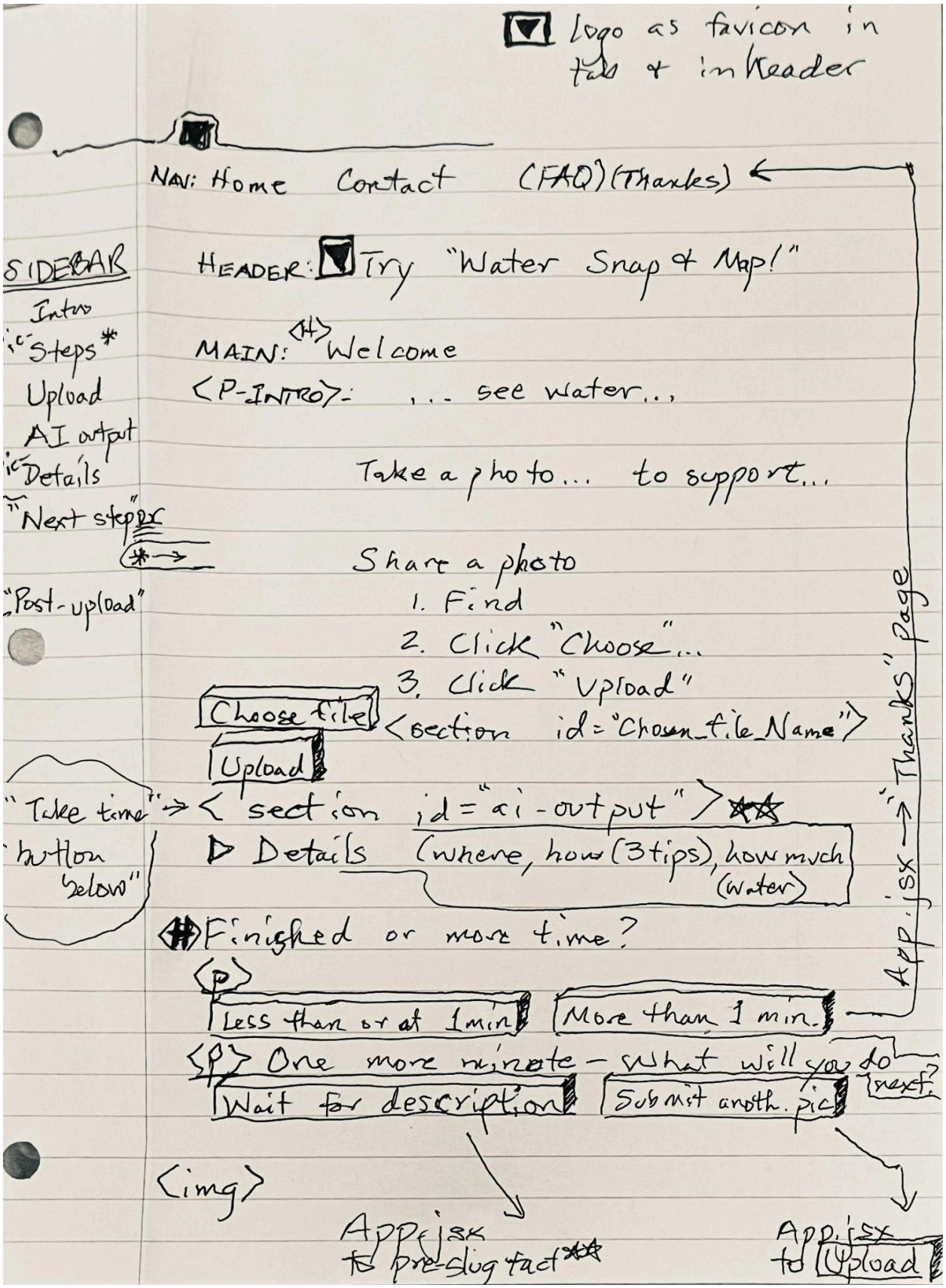
- Domain name? More than one? _.org;
- Web host?
- See “Process” at top - Where to store:
    - Pictures? (What setup is best for future researchers? Are pictures part of database?)
    - Database tables?
- Survey page: Have you visited before? **If yes, did you**:
    - Learn or read __? …submit a picture?
    - Everyone: Did you see a fact? How did you hear about WSMap? List partners, LinkedIn, Other (event, person, organization, (news___)
- Mobile app
- Accessibility (with both formats - mobile and website)
- Sidebar moves with scroll
- Footer
- Contributions - Volunteer to code, (anyone can submit pictures)

Slides 27 & 29 - See next 2 ”Wireframe “ images…

Notes for me from my wireframe creation and classmate reviews:

1. Goal of 15-second skim and to fit key parts on 8-inch tablet-screen
    a. Sidebar (Add “Action” page for “Upload” and add 2 more” - activities with River Conservancy(s), calendar to take monthly photo of same spot; find another place to photograph with “Map” page)
    b. Hiding most of the “AI Output” section
2. Add note to AI-output section about taking 1-2 minutes
3. Add 2-5 words to “Details” label
4. Rewrite 4-button section’s header &/or question
5. AI: Phase 1 only description (Delay focus of identification on one aspect of image, offer options, and user selection to Phase 2

Wireframe - Stage 1 (based on my repo's index.html and App.jsx files): Hand-drawn (some function and coding are shown)

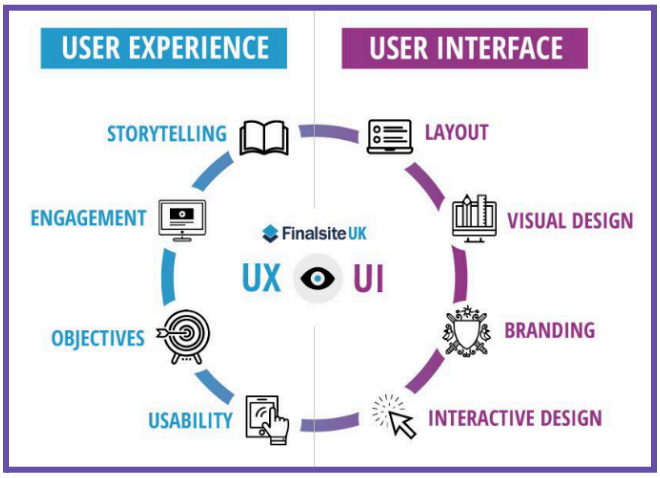


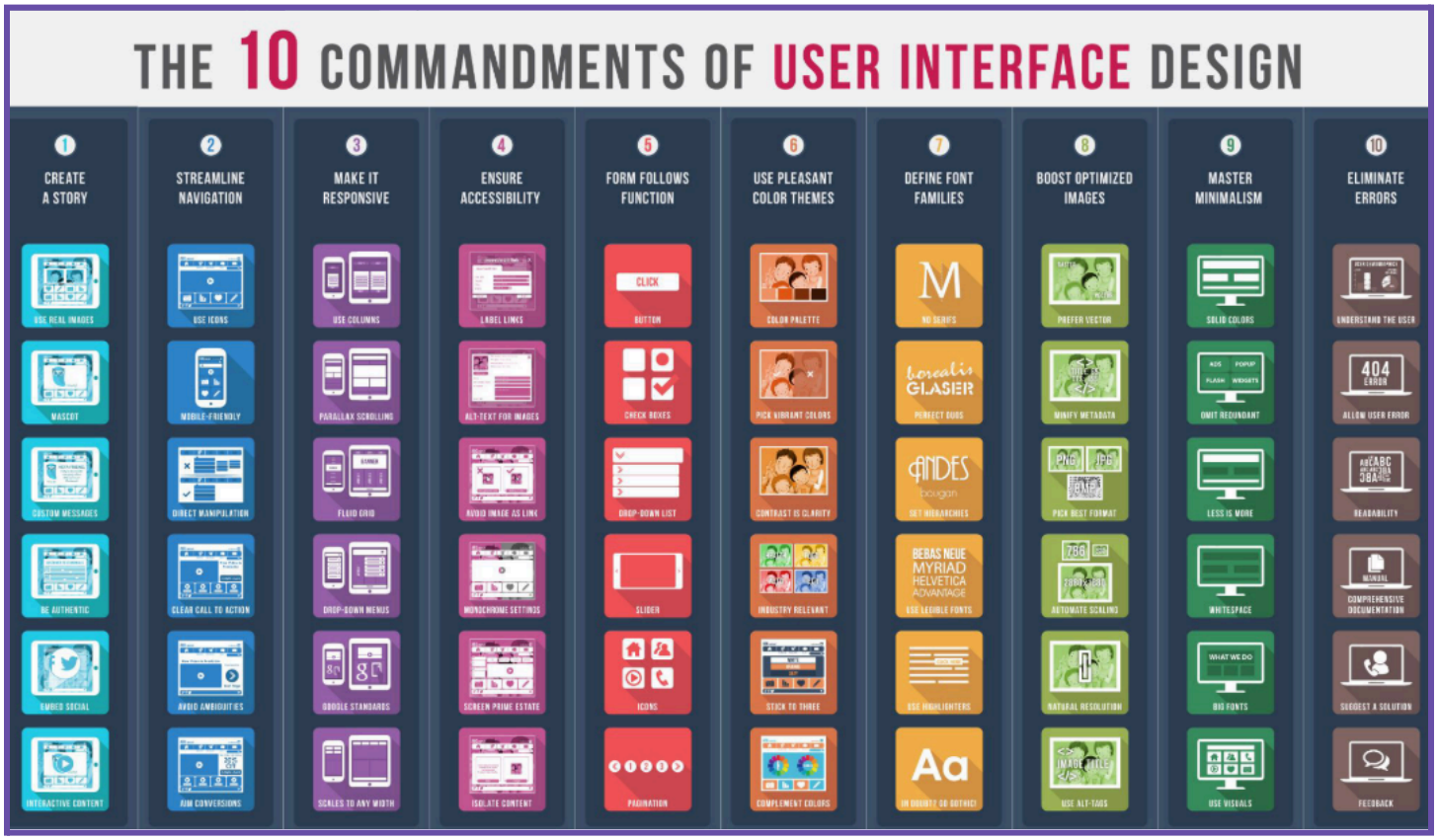
Wireframe - Stage 2

Gray font indicates something that won't show or may not trigger initially, including favicon in browser's tab, "Thanks" page, and "AI Output". Screenshot below (also https://wireframe.cc/uXDMOQ)

U4M4W1D1 - Web Pages

MC Notes from slides:

Content plan	Process	UX vs. UI
• Input • Output • FAQ &/or User Guide • About (Me)	☐ Domain name ☐ Web host ☐ Design layout ☐ Update content ☐ Marketing	




User Control & Freedom
Recognition Rather than Recall
Mental Model
Clarity
Simplicity & Aesthetic Integrity
Accuracy
Error Prevention & Handling
Consistency & Predictability
User Support
Forgiveness
Feedback
Accessibility Compliant
Usability Evaluation
1
2
3
4
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6
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8
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10
11
12