

August 9, 2018

Fish*PASS*: building a user-friendly web tool for prioritizing barrier remediation

Jocelyn Tutak



AGENDA

Background **01**

Processes **02**

Wireframes **03**

Timeline **04**

01 *Background*

ECOTRUST

We are a regional organization working to restore the environment, build social equity, and develop a new economy guided by nature.

We work in fisheries, forestry, food & farms.



ECOTRUST | Knowledge Systems

We focus on middle ground solutions to address resource management issues:

- stakeholder engagement
- economic analysis
- decision support tools

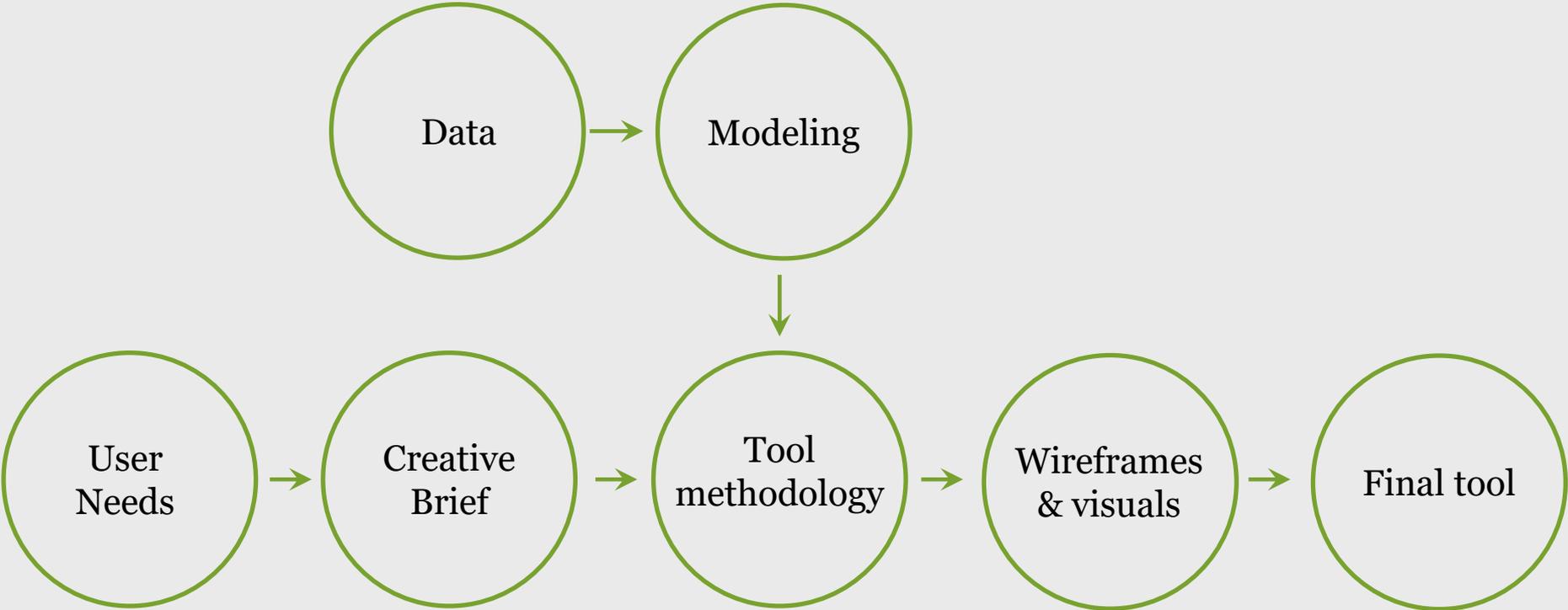


GOAL

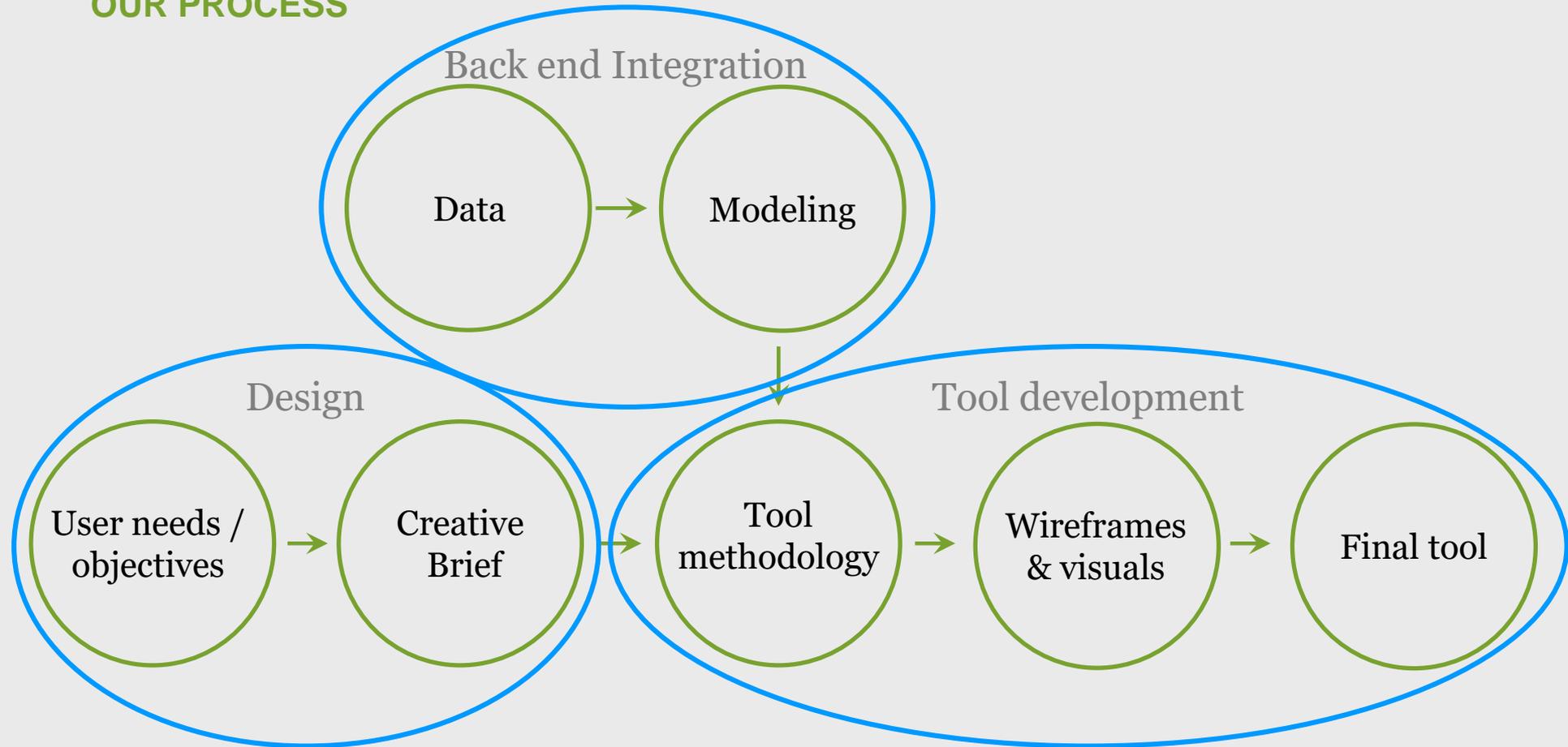
Develop a user-friendly web-based interface for Fish*PASS*, a fish barrier remediation prioritization decision support tool.

02 *Process*

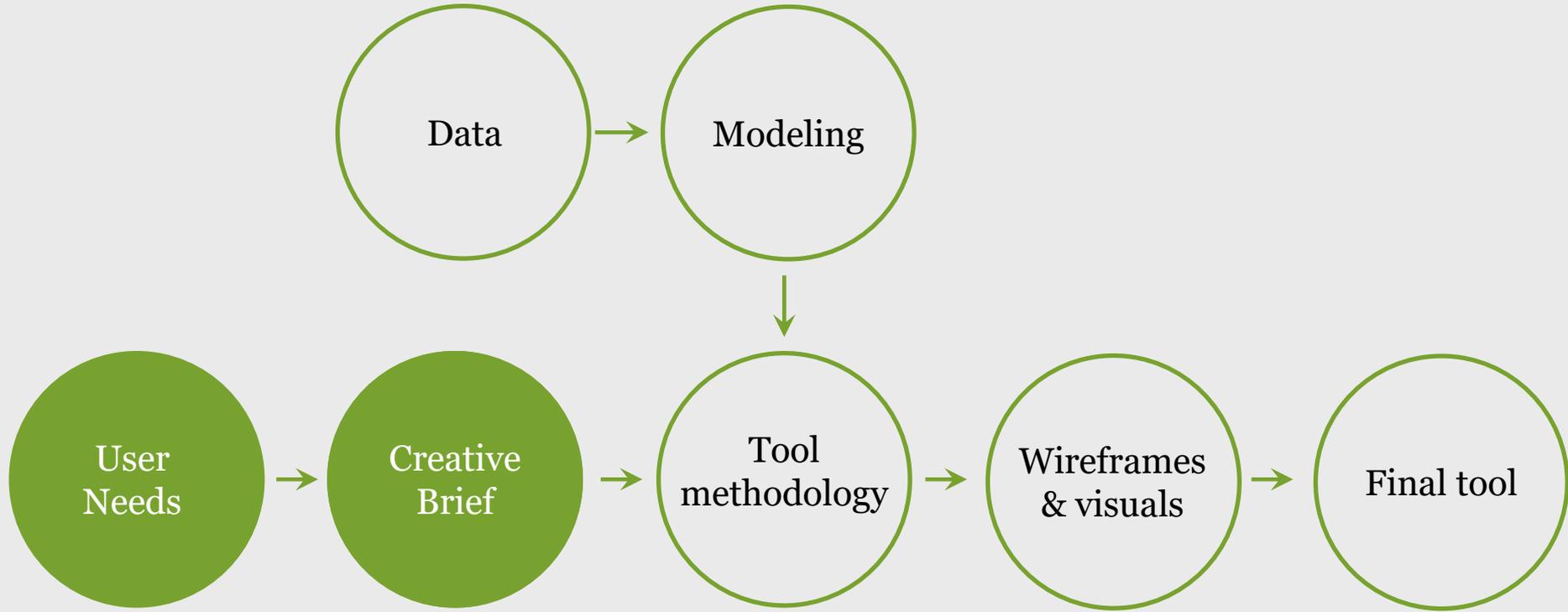
OUR PROCESS



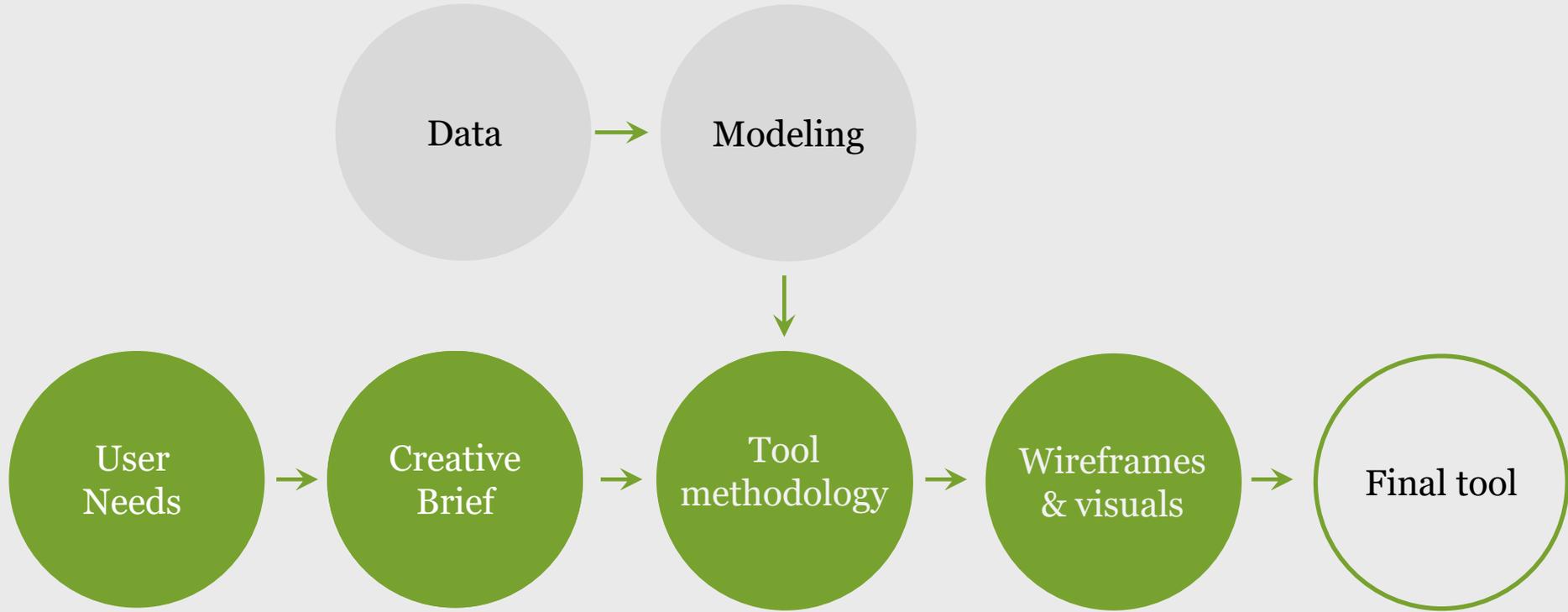
OUR PROCESS



LAST UPDATE

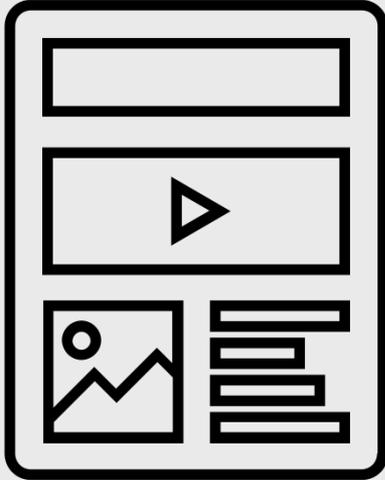


CURRENT STATUS



03 *Wireframes*

What is a wireframe?



A set of images which display only the functional elements of a website, and used to plan a site's structure and functionality.

Welcome!

Fish Pass is a tool designed to help filter and optimize fish barrier removal in accordance with chosen goals.

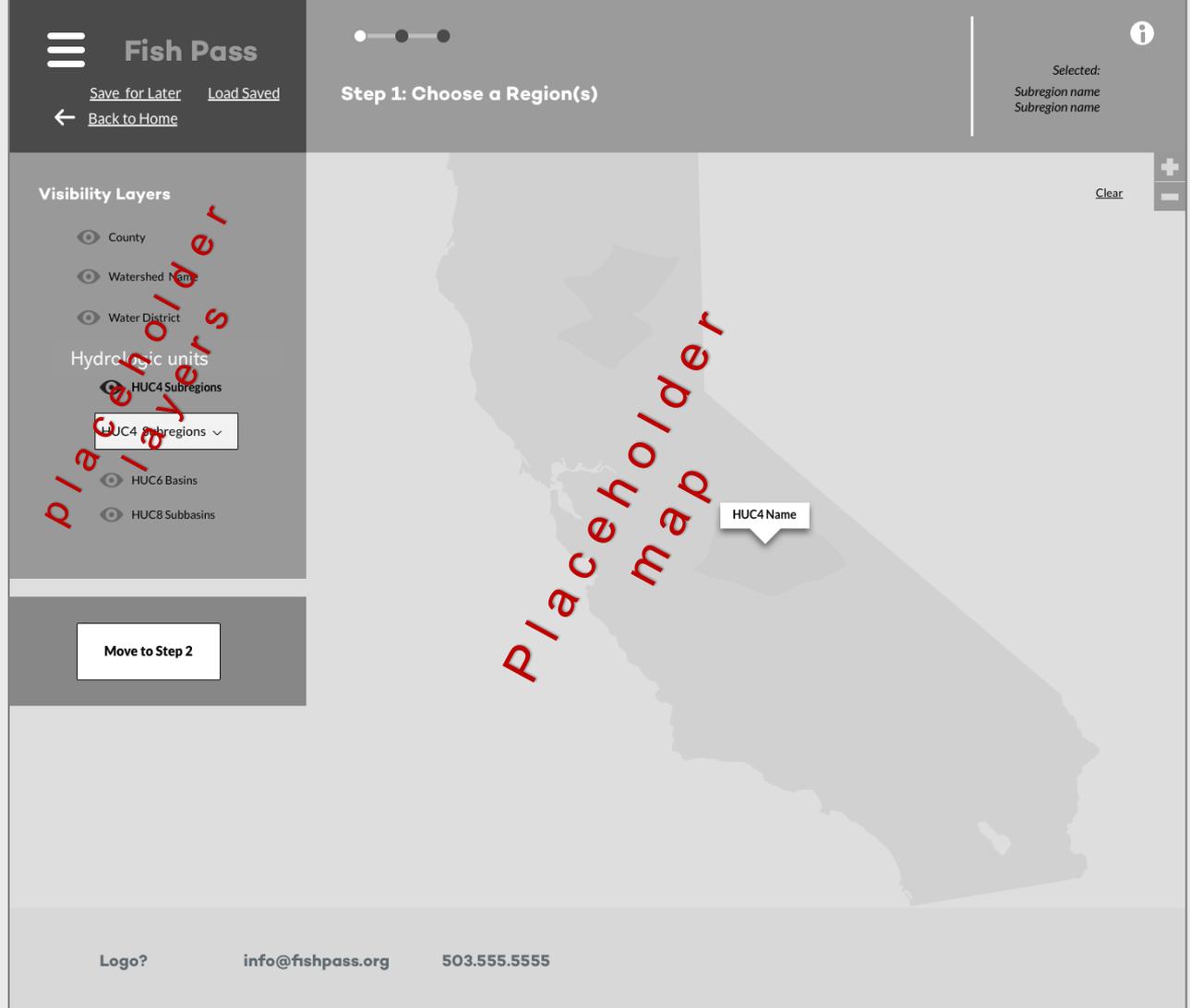
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Step 1: Choose a Region

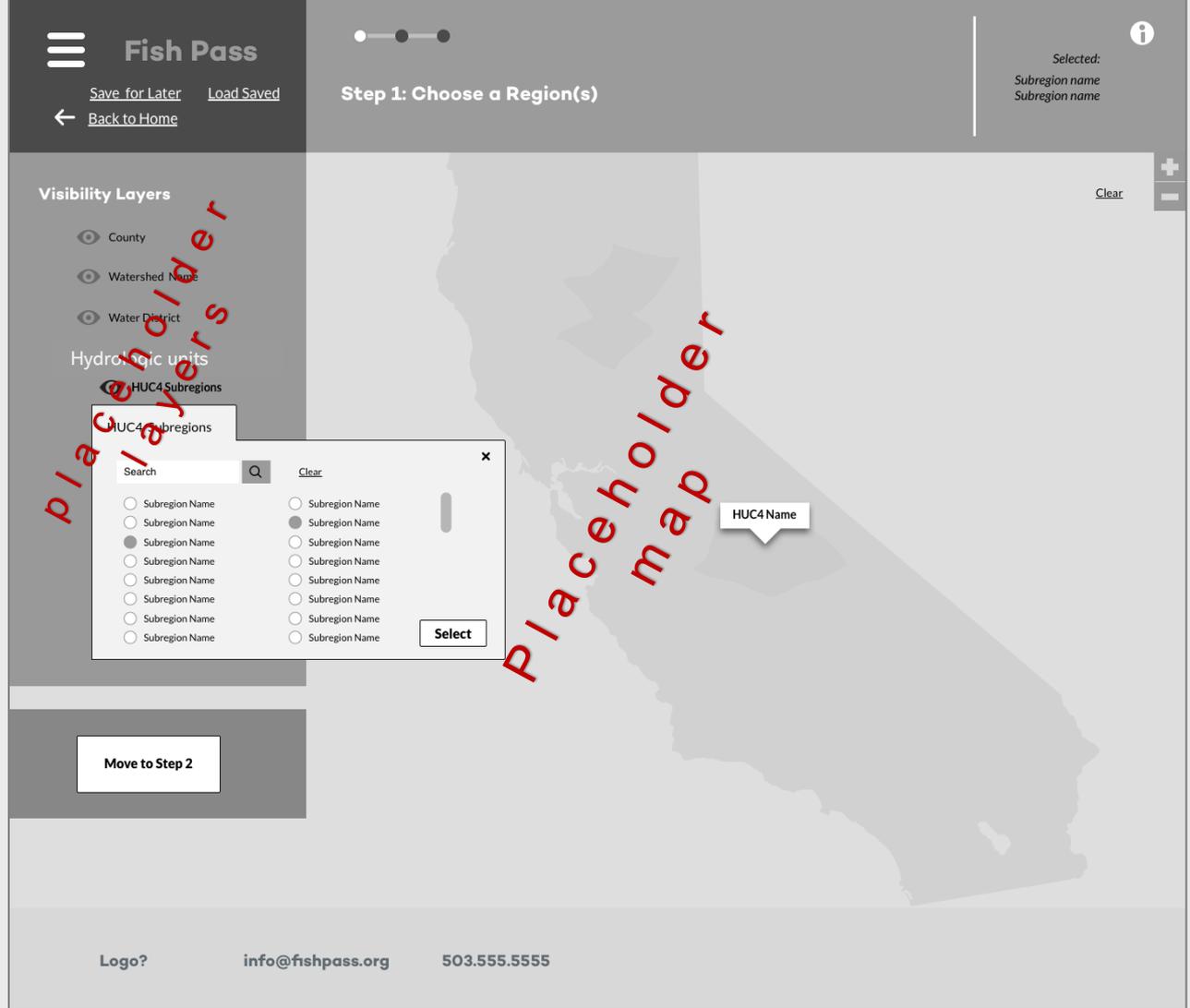
Start

[Load Saved](#)

Wireframes: Step 1



Wireframes: Step 1



Wireframes: Step 2

Fish Pass

Step 2: Filter

Save for Later | Load Saved | Back to Step 1

Legend

- Total Barriers
- Partial Barriers
- Non Barriers
- Tribal
- Private
- Public

Selected: Sacramento River Watershed
Subregion name
Subregion name
Basin Name

Visibility Layers

Filter

- Roads
- Rivers
- Land Ownership
- Species Distribution

Select Species

Move to Step 3

Hydesville

Petrolia

West

Myers Flat

Mir

0123

Partial Barrier

Culvert

11 Barriers Downstream

Land Ownership: Private

Barrier Ownership: Private

Placeholder layers

Placeholder map

Logo? | info@fishpass.org | 503.555.5555

Wireframes: Step 2

Fish Pass

Step 2: Filter

Save for Later | Load Saved | Back to Step 1

Legend

- Total Barriers
- Partial Barriers
- Non Barriers

Selected: Sacramento River Watershed
Subregion name
Basin Name

Visibility Layers | Filter

Barrier Status: Full Barrier

Fish Passability: 0% - 100%

Blockage Type: Dam

Treatment of Barriers Downstream: Non-Adjustable

Ownership Type: Private

Reset

Placeholder map

0123

Partial Barrier

Culvert

11 Barriers Downstream

Land Ownership: Private

Barrier Ownership: Private

Hydesville

Petrolia

Westt

Myers Flat

Mir

Move to Step 3

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Wireframes: Step 3

Fish Pass

[Save for Later](#) [Load Saved](#)

[← Back to Step 2](#)

Step 3: Budget & Habitat Considerations

Selected: Sacramento River Watershed
Subregion name
Subregion name
Basin Name

Budget Consideration

Specific Dollar Value

\$

OR

Budget Range

0 \$100,000

\$2,000 \$80,000

Increment

\$

i Habitat Consideration

Consider quality habitat

Would resemble the Habitat Quantification option



Wireframes: Results

☰ Fish Pass 1

Save Results Load Saved
← Back to Step 2 Start River

The optimization shows the barrier that minimizes cost and maximizes benefits.

Viability Layers

- ☐ Roads
- ☐ Rivers
- ☑ Land Ownership
- ☐ Species Distribution
Select Species
- ☐ County
- ☐ Watershed Name
- ☐ Water District
- ☐ HUC8 Subregions
- ☐ HUC8 Basins
- ☐ HUC8 Subbasins

Download Results

Chosen Barrier
0123
Sacramento River

Action Taken: Full Removal
Current Status: Total Barrier
Culvert
11 Barriers Downstream
Land Ownership: Private
Barrier Ownership: Private
30 Habitat River Miles Gained
80% Habitat Improved
\$24,000 Estimated Cost (40% of budget)

Myths Fish

Aggregate Results

- 9 Total Barriers
- 4 Partial Barriers
- 2 Non Barriers

Total Cost
\$60,000

Actions Taken:
Full Removal, Partial Removal

Total Barriers Downstream
55

Land Ownership
Tribal, Private

Barrier Ownership
Tribal, Private

Type of Barriers:
Culverts, Log Debris Accumulation, Dam, Road Crossings

Total Habitat River Miles Gained
14

Total Habitat Improved
80%

Individual Barriers

0123 >

0124

0125

0126

Action Taken: Full Removal
Current Status: Total Barrier
Culvert
11 Barriers Downstream
Land Ownership: Private
Barrier Ownership: Private
30 Habitat River Miles Gained
80% Habitat Improved
\$24,000 Estimated Cost (40% of budget)

Download Results

Logo? info@fishpass.org 503.555.5555

Wireframes: Results

Fish Pass

[Save Results](#) [Load Saved](#)
[Back to Step 3](#) [Startover](#)

Visibility Layers

- Roads
- Rivers
- Land Ownership
- Species Distribution
- Select Species
- County
- Watershed Name
- Water District
- HUC4 Subregions
- HUC6 Basins
- HUC8 Subbasins

[Download Results](#)

The optimization shows the barrier that minimizes cost and maximizes benefits.

Hydesville

Petrolia

Myers Flat

Chosen Barrier

0123

Sacramento River

Action Taken: Full Removal

Current Status: Total Barrier

Culvert

11 Barriers Downstream

Land Ownership: Private

Barrier Ownership: Private

30 Habitat River Miles Gained

80% Habitat Improved

\$24,000 Estimated Cost (40% of budget)

Aggregate Results

<ul style="list-style-type: none">9 Total Barriers4 Partial Barriers2 Non Barriers	<p>Actions Taken: Full Removal, Partial Removal</p>	<p>Type of Barriers: Culverts, Log Debris Accumulation, Dam, Road Crossings,</p>
<p>Total Cost \$60,000</p>	<p>Total Barriers Downstream 55</p>	<p>Total Habitat River Miles Gained 14</p>
<p>Land Ownership</p>		

Aggregate Results

- 9 Total Barriers
- 4 Partial Barriers
- 2 Non Barriers

Total Cost
\$60,000

Actions Taken:
Full Removal, Partial Removal

Total Barriers Downstream
55

Land Ownership
Tribal, Private

Barrier Ownership
Tribal, Private

Type of Barriers:
*Culverts, Log Debris Accumulation,
Dam, Road Crossings,*

Total Habitat River Miles Gained
14

Total Habitat Improved
80%

Individual Barriers

0123 >

0124

0125

0126

Action Taken: Full Removal

Current Status: Total Barrier

Culvert

11 Barriers Downstream

Land Ownership: *Private*

Barrier Ownership: *Private*

30 Habitat River Miles Gained

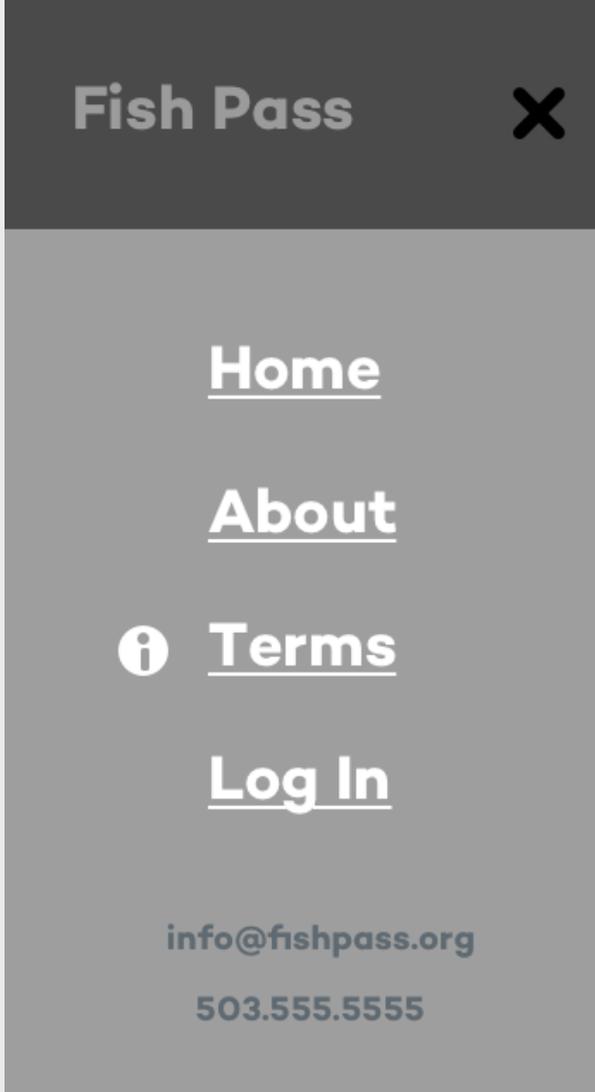
80% Habitat Improved

\$24,000 Estimated Cost (40% of budget)



Download Results

Wireframes: functions





I'm a New User.

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do

first name

last name

email

password

repeat password

Set up an Account

Wireframes: functions



Log In to save current project.

email

password

Log In

[I forgot my password.](#)

04 *Timeline*

Thank you

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