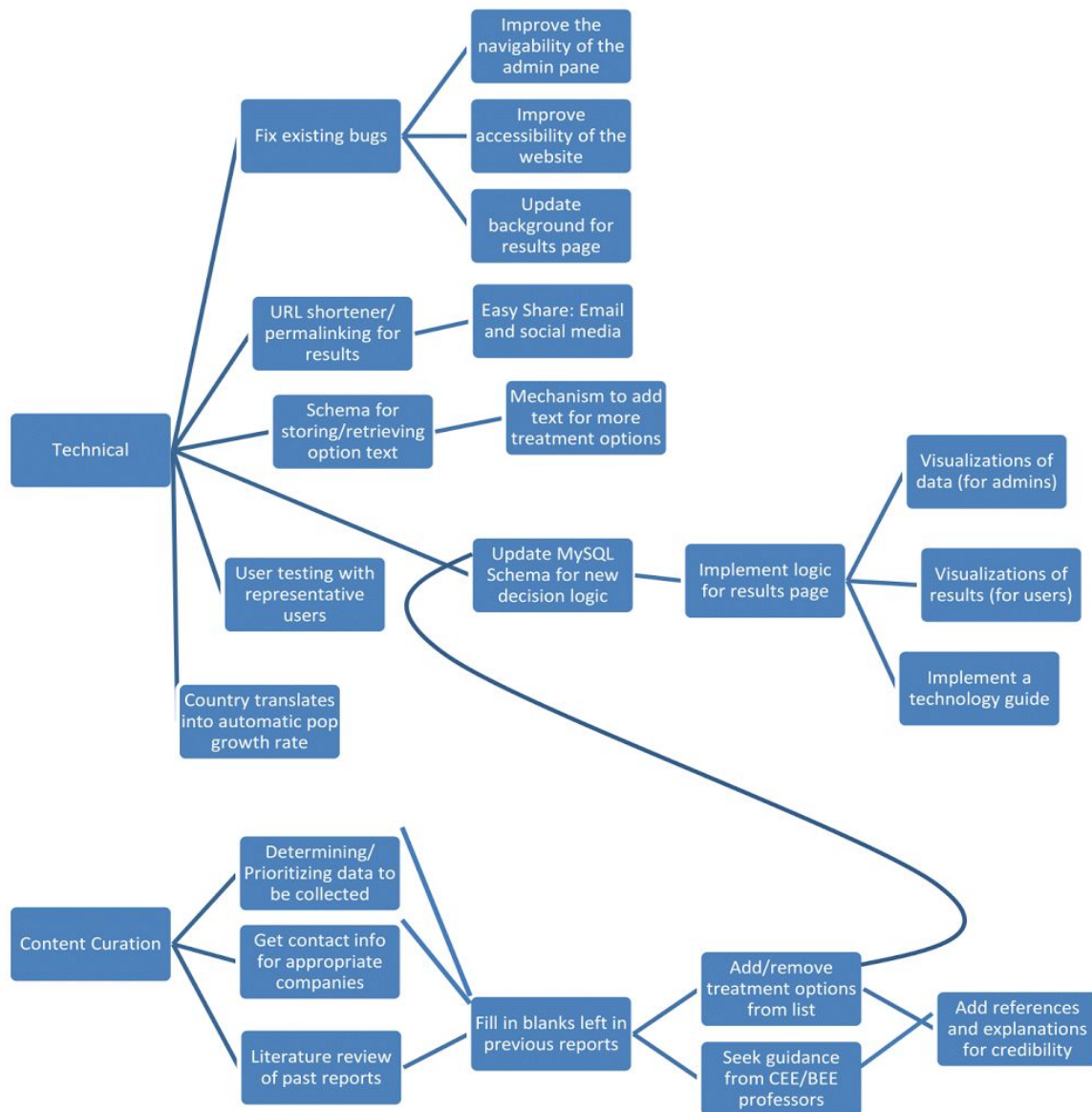# Water Treatment Technology Selection Guide
Fall 2015

Sarah Sinclair, Anthony Arce

11 September 2015

Task List
Task Map

Data Collection Side
- **Literature Review - Past**
  - **Date:** September 17, 2015
  - **Individual Responsible:** Anthony Arce
  - **Explanation:** Digging through past WTTSG reports + Spring 2015 Conditional Responses Sheet and obtaining references for data obtained for the guide can provide insight on what research needs to be continued/started from scratch.
- **Determine/prioritize what data still needs to be collected and how to obtain it more robustly**
  - **Date:** September 24, 2015
  - **Individual Responsible:** Anthony Arce
  - **Explanation:** Obtaining guidance and advice from Monroe/team members about what information will be important, as well as figuring out how to obtain/research the information more effectively, will help tremendously in research/data collection
- **Contacting/Acquiring contact information with companies/organizations that provide water treatment technologies**
  - **Date:** October 1, 2015
  - **Individual Responsible:** Anthony Arce
  - **Explanation:** Plenty of data for the guide is needed, sources of information from companies/organizations that produce water treatment types can yield information more directly and possibly provide suggestions for moving forward
- **Collaborate/Seek Guidance from BEE/CEE professors/(graduate students?) that are well versed in water treatment/modeling/etc.**
  - **Date:** October 14th, 2015
  - **Individual Responsible:** Anthony Arce
  - **Explanation:** Using valuable sources of information here on campus in the field of water treatment/modeling is filled with large potential for the overall research portion of this subteam
- **Research - Updating Water Treatment Options**
  - **Date:** November 15, 2015
  - **Individual Responsible:** Anthony Arce
  - **Explanation:** Essentially adding new water technology options to the selection as well as (possibly) removing some that could perhaps be less optimal in the vast majority of conditions.
- **Literature Review - Filling in the Blanks**
  - **Date:** November 30, 2015
  - **Individual Responsible:** Anthony Arce
  - **Explanation:** During Spring 2015, a Conditional Responses Sheet was created, comprised of a multitude of water technology options and currently has plenty of missing information on factors for each of them including ranges of population they can serve, contaminants that aren't treated, etc. It may be worth attempting

to fill this document in to provide a single source of information compiling all 'valuable' information.

- **Text accompanying treatment options + References for Credibility**
  - **Date:** November 30, 2015
  - **Individual Responsible:** Anthony Arce
  - **Explanation:** Writing out explanation/reasoning for each treatment option based on parameter entry and providing sources to back up claims/reasoning will be inherently valuable to anyone seeking to obtain water treatment for their designated community location.

Technical Side

- **Fix outstanding bugs (COMPLETE!)**
  - **Date:** September 3, 2015
  - **Individual Responsible:** Sarah Sinclair
  - **Explanation:** Some of the editable fields on the results page are non-functional due to technical bugs. These were resolved so all of the fields can be edited and saved.
- **Improve the navigability of admin pane (COMPLETE!)**
  - **Date:** September 14, 2015
  - **Individual Responsible:** Sarah Sinclair
  - **Explanation:** Improve the CSS of the admin pane to make its navigation structure more clear. Add explanatory text on the landing page to introduce to new users to the functionalities available (vs. existing text which simply prompts users to "choose a table.")
- **URL shortener/permalinking results (COMPLETE!)**
  - **Date:** September 23, 2015
  - **Individual Responsible:** Sarah Sinclair
  - **Explanation:** As the first step to making the results page saveable and shareable, create a permalinked version of the site so a user can reference their specific results again based on a session id.
- **Update MySQL schema to add/delete fields for decision logic**
  - **Date:** September 30, 2015
  - **Individual Responsible:** Sarah Sinclair
  - **Explanation:** As literature review and research continue, the team anticipates some changes to the table schema may be necessary (for example, storing values as ranges rather than static values). These changes must be made to the database. (Note: changes are contingent on the successful completion of the literature review)
- **Schema for storing/retrieving text about options**
  - **Date:** October 7, 2015
  - **Individual Responsible:** Sarah Sinclair

- ○ **Explanation:** Information describing the qualities and merits of various treatment options should be stored in a database so it can be programmatically displayed on the results page. A sensible schema should be developed so that this information has a place to go.
- **User testing with representative users**
  - ○ **Date:** October 12, 2015
  - ○ **Individual Responsible:** Sarah Sinclair
  - ○ **Explanation:** Get users on the ground in Honduras or India to use the tool and provide their feedback. Changes will be made to reflect cultural/usability/design issues.
- **Easy share feature: email and social media**
  - ○ **Date:** October 14, 2015
  - ○ **Individual Responsible:** Sarah Sinclair
  - ○ **Explanation:** Create pop-ups on the site that enables the results page link to be shared on social media (Facebook and Twitter) and email (so that it can easily be forwarded to other interested parties
- **Implement logic for results page**
  - ○ **Date:** October 21, 2015
  - ○ **Individual Responsible:** Sarah Sinclair
  - ○ **Explanation:** Using decision data stored in MySQL database, implement logic that will choose the best result. Progress here depends on having good decision data in MySQL so test procedures will actually make sense.
- **Improve accessibility of the website**
  - ○ **Date:** October 26, 2015
  - ○ **Individual Responsible:** Sarah Sinclair
  - ○ **Explanation:** Tweak CSS to improve the clarity and contrast of features in the tool. Users have consistently found the tool to be somewhat challenging to read; this should be addressed while maintaining the pleasing aesthetic of the design.
- **Update the background for the results page**
  - ○ **Date:** October 26, 2015
  - ○ **Individual Responsible:** Sarah Sinclair
  - ○ **Explanation:** The current page background has an unattractive stretch of brown-ish gradient. Updating the page to house a new image will improve the aesthetic quality of the page, and will provide an opportunity to conceptually link different regions of page content.
- **Mechanism to add text for new treatment options**
  - ○ **Date:** November 4, 2015
  - ○ **Individual Responsible:** Sarah Sinclair
  - ○ **Explanation:** Our current setup is highly scalable and allows new treatment options to be easily added. There must be an option to add text describing each treatment option so that this information may be displayed as a result. (Stretch goal: investigate the automatic generation of this text)
- **Country translates to automatic population growth rate**

- ○ **Date:** November 16, 2015
- ○ **Individual Responsible:** Sarah Sinclair
- ○ **Explanation:** Users may not know their population growth rate is offhand. A webcrawler that prepopulates a sensible default based on the country supplied will be useful to these users.
- **Visualizations of user data (for admins)**
  - ○ **Date:** November 26, 2015
  - ○ **Individual Responsible:** Sarah Sinclair
  - ○ **Explanation:** Help admins understand who has visited the page and what they have in common by providing ways to view and analyze input user data.
- **(Stretch) Visualizations of data (for users)**
  - ○ **Date:** December 3, 2015
  - ○ **Individual Responsible:** Sarah Sinclair
  - ○ **Explanation:** (Stretch) Help the users make sense of their results by visualizing (e.g.) their plant cost, the size footprint of their plant, etc.
- **(Stretch) Implement a technology guide**
  - ○ **Date:** December 3, 2015
  - ○ **Individual Responsible:** Sarah Sinclair
  - ○ **Explanation:** The Spring 2014 WTTSG team conceptualized a separate page of the tool dedicated to explicating various water treatment technologies, including technical diagrams and descriptions of the underlying mechanics. The team should evaluate whether this would be helpful, and work to implement it if so.

Team Coordinator: Sarah Sinclair
Report Proofreader: Sarah Sinclair