



Web Tool Criteria and Feasibility Study for The Water Research Foundation Project Deliverables

Web tools are web- and software-based interactive tools that help professionals consume, understand, and apply research results. Web tools are applications that come in a variety of forms, for example, spreadsheets, databases, websites, and calculators. Web tools can provide enhanced access to research, but only certain projects justify the development of these products. There are many factors that need to be considered before developing a web tool. The researcher must submit a full Feasibility Study to The Water Research Foundation (WRF) to provide a clear road map for the web tool. The Feasibility Study should address the questions on page 3 of this document and must comply with the product requirements below. Completed Feasibility Studies should be emailed to the WRF Research Program Manager (RPM) managing the project.

Expectations

Before developing any web tool, the following items should be discussed with the WRF Research Program Manager and Communications and Marketing team, and will be considered on a case-by-case basis:

- The type of tool the research team would like to develop.
- Data hosting and ownership, including the location, provider, and ongoing data management (including backup/recovery).
 - WRF prefers that web tools not require user login/credentials or authentication.
 - Domain names and ownership of domain names are subject to discussion with, and approval by, WRF.
- Whether data entered by users would be saved and how that data would be secured.
 - WRF prefers that web tools not require user login/credentials or authentication.

Once a web tool has been approved, ongoing communication with the Research Program Manager and Communications and Marketing team should be conducted to successfully launch the tool.

General Requirements

- Web tools must provide features and functionality that cannot be delivered in any other way.
- All technology and ongoing maintenance costs associated with a web tool must be cost-justified (i.e., the benefit provided outweighs the costs).
- Web tools should utilize commonly available technologies to the extent feasible and follow current security best practices.

- If a web tool will be hosted by WRF, it **must** use common technology that does not require licensing. WRF does not provide maintenance of web tools, nor does it provide third parties with administrator access to the WRF hosting platform.
- Web tools should be designed such that only minimal ongoing maintenance is needed by the research team (WRF does not provide maintenance).
- Web tools should not require end users to install third-party software, aside from commonly found enterprise software applications such as MS Office or Adobe Acrobat Reader.
- Web tools must comply with applicable data privacy regulations (CCPA, GDPR, PIPEDA, etc.).
- Web tools must comply with the WRF [End User License Agreement](#).
- Web tools should be designed to ensure ease of use for end-users and follow current best practices for user experience and/or website development.
- Applicable source code must be documented with in-line comments.
- Any encryption passwords should be provided to WRF.
- End user documentation such as technology requirements, a user guide, or FAQs must be provided in addition to the web tool. Web tools should include self-guided end-user training or support; individualized end-user training and support should not be required.
- All web tools should reflect our visual identity standards by adhering to WRF's [Brand Guidelines](#).
- The tool must acknowledge WRF and additional co-sponsors when applicable (see next section for specific details).

Acknowledgment of WRF

- The product must mention the WRF project title and project number, and link back to the main project page on the WRF website.
- The WRF logo, sponsorship, and copyright information should be prominently displayed in the web tool, for example on the title screen/page or footer.

Sponsored by:
The Water Research Foundation

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by
The Water Research Foundation
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- Include the standard disclaimer from the WRF [Research Report Template](#).
- If the project has co-funding organizations, their logos should be included alongside WRF's, and their names included under "Sponsored by" and in the disclaimer.
- Contact the Communications and Marketing team (cm@waterrf.org) to obtain the WRF logo and logos of any co-funding organizations. Please specify how the logo is intended to be used and your preferred file format. For more information about proper use of the WRF logo, refer to WRF's [Brand Guidelines](#).
- If the web tool is not hosted on WRF's website, it must include a link back to www.waterrf.org.

Feasibility Study Questions

The Feasibility Study will be used by WRF staff, researchers, and the Project Advisory Committee to determine whether the proposed web tool is an appropriate fit for the project. Once a project team is chosen, the successful proposer should answer the following Feasibility Study questions:

1. Detail the proposed features and functionality that can't be delivered in any other way.
2. Choose the type of tool that will be created:
MS Excel Spreadsheet (or similar)
Interactive PDF
Video
Website
Other, please describe:
3. Provide a brief cost-benefit analysis of the proposed tool and consider these questions: Does the research team have the equipment, time, availability, and budget to create and test the web tool? What are the anticipated level of effort, timeline, and cost for tool development?
4. What will the web tool's useful life be? What are the limiting factors for the web tool's lifespan? Will the tool need content updates during the life of the tool? If yes, the research team should be prepared to host the tool as access to WRF's web host will not be available and WRF staff are not able to perform updates to the tool. Review Webtool Deliverables - [Exhibit G](#) for hosting obligations of the research team.
5. Who is the intended audience for the web tool, i.e., is it intended for WRF subscribers only or for the public?
6. Describe what the tool will do. Is it primarily a data repository? Will user interactions lead to a decision or an analysis?
7. Have you considered the degree of technical expertise the user will need to use the tool? Will the users need guidance to use the tool? If so, what are you creating to meet that need? (e.g., FAQs, User Guide)

If the proposed type of tool is either a Website or Other, please answer these additional questions:

8. Which technology platforms, programming languages, and/or systems will the web tool utilize (please also include any third-party tools used to develop the tool, if applicable)?
9. If your answer to question 1 above includes any uncommon technology or tools, the research team may need to host the tool. Are you able to provide hosting, updating, and any maintenance? Review Webtool Deliverables - [Exhibit G](#) for hosting obligations of the research team.

10. Do you have a process for debugging, testing, and user testing during development?
Yes
No
If not, a plan will need to be discussed and agreed upon between the research team and WRF
11. Will users need to enter any data into the tool? If so, how will this data be secured and protected?
12. If you feel the tool will need frequent updates, the research team may need to host the tool. This entails keeping the web tool current with software patches and/or maintenance. What is the projected maintenance plan and cost? Please include all expected costs over the expected life, including, but not limited to the following:
 - a. Website hosting
 - b. Domain registration
 - c. SSL certificates
 - d. Up-front software licenses and annual maintenance OR annual subscriptions
 - e. Hardware and any other technology platforms required
 - f. Ongoing maintenance, patching, security updates, and backup/recovery
13. For web tools hosted by the research team, what is the plan to secure the web tool over its expected life?
14. For web tools hosted by the research team, how will the web tool be managed to ensure compatibility over its expected life with the latest and at least one previous version of major browsers, plug-ins, or third-party software?

Development Requirements

MS Excel Spreadsheet (or similar)

- Avoid use of Macros
- Any passwords protecting sheets and/or cells should be provided to WRF

Interactive PDF

- Any passwords for security should be provided to WRF
- Any form functionality must enable the “Extend Features to Reader” users, i.e., the tool must not require users to purchase the full version of Adobe Acrobat

Video

- If the video is longer than three minutes, chapters should be built in to enable users to pause and/or resume where they left off
- Provide a format as either .mp4 or .mov for delivery on YouTube

Website

Folders and Filenames:

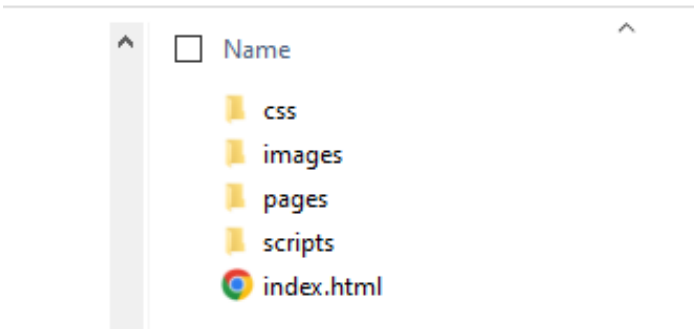
- All folders and filenames should be lowercase
- Use hyphens between words (instead-of-spaces)
- Avoid special characters (.!@#\$\$%*)
- Shorter names reflecting the content of the page, such as "about-us", "faqs", etc., are generally better for user experience
- For images, use a name that reflects picture and be sure to include an "alt" tag describing the image for the visually impaired

Structure of Files:

All WRF-hosted, web-based web tools become subsites on our web hosting environment.

- For ease of delivery to WRF for hosting, it is highly recommended that you build your web tool with a structure as depicted in the image below for the different file types (Note: your tool may not have all these file types).

WRF-WEBTOOLS-SAMPLE-STRUCTURE > Webtool-1234 >



- WRF asks you to zip your files and provide that compressed file to your Research Program Manager. WRF will unzip your files and place into a root folder that is often the project number.
- An "index.html" or "index.htm" page **is required** to be placed in your web tool's root folder so it will be accessible from the web at webtools.waterrf.org/xxxx/. This will become your homepage. It may be an introductory page for the web tool, or it may be the first page of your tool.

Footer or Header:

Your tool should include the WRF logo, adhere to our Brand Guidelines, and link back to WRF's website in either your tool's header or footer.

Other

Detailed and frequent conversations will ensure that other types of tools comply with requirements.