

Introduction

Why Wiki?

Many wiki software only require basic programming skills and have easy text formatting, doc linking, and navigation tools. These features make them easy to learn, use, and maintain. With a variety of user roles, the structure allows for different types of members to create, edit, approve, and access articles, documents, and other media independently--administrative access to sourcing website are not required. While the most common well-known wiki--Wikipedia--serves a function as an article database, along with others like Citizendium, a wiki is any software that allows for collaborative editing, encyclopedic or otherwise. Wiki are crucial for organizing and coordinating group input, [as described in this video](#).

For the All Things Trout database, using a wiki software is a great approach to building a structure for the collaborative editing and release of articles and other resources. Having a wiki as a foundation for collaborative writing process necessitates less structure-building for group processes and much of the functions and roles have already been designed. The following report describes several viable wiki software options as well as suggests how such software will interact with group processes. By evaluating this intersection, the adoption of the most affective wiki software for the National Trout Center's needs will be achieved.

Wiki Considerations

Selection between several features is necessary to determine which wiki is appropriate to meet an organization's needs.

Wiki Features

- **History Page:** history pages track editing changes; crucial for publicly editable wikis, especially when editors are separated temporally or spatially
- **WYSIWYG vs. markup code tags:** WYSIWYG (What You See is What You Get) is an input method that displays text formatting like it would appear when published--very user friendly for most of the population. Markup code tags require user to know the programming language
- **Professional support:** some software companies or designers provide professional support for the software, generally at a cost. However, many free user support forums are available online for most softwares.
- **Localization:** alters language based on country of origin
- **Database-based wikis vs data storage in file system:** this features deals with how the information is stored. Data-based wikis may require extra server space and are necessary for wikis over 10,000 pages. Data storage in file system stores wiki pages in rich text files instead of in a database.
- **Programming language:** the type of programming language involved in wiki software may be an important consideration if it means training staff an unfamiliar language.

- **Layout:** wikis have a variety of different options when it comes to layout, formatting, and design. If maintaining a particular aesthetic is crucial for an organization's wiki, checking to make sure the software can support a specific branding policy is important. Sometimes design features require a cost-upgrade.
- **Software vs. hosted:** Software-based wikis are downloaded onto the maintainer's computer (not every user). Software must be updated, but this option is more likely to be free. Hosted wikis are self-contained online, but there can be a cost associated with the service. However, wordpress-derived wikis may not have an associated yearly or monthly cost if hosted and housed under the same domain name and server.

NTC's Considerations

The "All Things Trout" wiki has some additional needs:

- Encyclopedic database about trout, trout habitats, and related information
 - Biology, aquatic entomology, limnology, ecology, trout fisheries and management--best scientific information available
 - Arts, crafts, culture of fishing
- Must be available through NTC website (i.e. compatible with Wordpress)
- Serves a regional outreach function: not just articles but also study guides, school curriculum, information about clinics and workshops (i.e. multiple types of media may need to be integrated)
- Collaborative editing is to be subject to rigorous technical and editorial review by NTC before appearing on the website
 - soliciting articles from conservation professionals in government agencies, academics, professional societies
 - Volunteer Editorial Board to revise and vet
- Searchable by subject, maybe author or date
- No advertisements
- Easily accessible to update

Available Software and Integration in Wordpress

A variety of wikis are available currently (over 150). Many are available via public domain and are self-contained software. Others are housed online. More are plugins of popular web software, like Wordpress. While public domain software is free, it is a good practice to make a small donation (often annually) to the wiki developers.

Plugins

Plugins are add-ons available for Wordpress. Using a Wordpress Plugin may be the best option for wiki creation and maintenance because they are designed to integrate with the National Trout Center's existing website. Use of a Plugin, depending on the Plugin selected, would not require increased investment in learning additional software or increasing domain hosting or server space. Below are a few Plugins that may be good choices for "All Things Trout"

[Wiki lite](#)

Completely functional but limited version of Wiki Plugin for Wordpress. Compatibility less certain for newer versions of Wordpress. Turns page, site, or section into a functional wiki. Only Wordpress users can edit wiki, however a common account could be created for adopted editors (or see Alternative Structures below). Worth downloading and trying out.

- Has WYSIWYG and HTML
- Revision History
- Links--could be used to link to publicly available articles
- Opportunity to integrate other media
- Requires Wordpress 3.0.1 or higher and compatible up to 3.3.2
- Free version has limited settings
- [Click here for appearance](#)

[Wiki Pro](#) costs \$19 and has more features, including diversified user categories and more design features. The cost of an upgrade and use of the full version of the Wordpress wiki software would likely be offset by staff time spent installing, mastering, and integrating an external wiki platform.

[WordPress Wiki That Doesn't Suck](#)

Has a more simple markup code than mediawiki (see below) but has less support. As the developer says, it is not necessarily designed to be collaborative, though this is not necessarily difficult to overcome.

[Mediawiki Bridge](#)

The Mediawiki Bridge plugin more easily integrates Mediawiki into Wordpress sites. Mediawiki is one of the most popular open-source wiki applications (powers Wikipedia and Citizendium). For more on Mediawiki, see below.

External Wikis

[Mediawiki](#)

Mediawiki is one of the most popular wiki software available--well-documented and well-supported. Written in PHP, Mediawiki can be downloaded onto a user's computer, as long as they also have PHP 5.3.2+ and either [MySQL](#) 5.0.2+, [PostgreSQL](#), or [SQLite](#). The markup coding for Mediawiki is not WYSIWYG, so the installer, dominant editors, coordinator, or co-chair must know PHP, a general purpose programming language. However, there are downloadable extension available to bring WYSIWYG to the Mediawiki, perhaps for longer-term use (and as number of volunteer editors increase). Mediawiki has been called "top-heavy," so there is some installation work to be done for a fairly simple functionality. However, because Mediawiki is so widely used, there are a lot of free support forums available for the software, which will likely continue into the future. Using the Mediawiki Plugin for Wordpress, Mediawiki can be easily integrated.

[DokuWiki](#)

DokuWiki is a simple, open source software with the following features:

- Simple syntax
- Unlimited page revisions
- Section Editing allows editing of small parts of a page
- Easy navigation through breadcrumbs
- Automatic table of contents generation
- Locking to avoid edit conflicts
- Simple support for read only pages
- Extended Access Control Lists
- Spam blacklist
- Delayed Indexing
- Mail address obfuscation and rel=nofollow support
- Pagecaching for quicker rendering
- Ajax-enhanced interface
- No database required, uses plain text files

DokuWiki is specifically well-designed for documentation and is frequently used by organizations, businesses, or groups to establish best practices or other common operating procedures. DokuWiki may be easier to use than MediaWiki, especially initially, because it is more simple, however it may be difficult to integrate. While the "All Things Trout" section could be easily linked to the wiki, there may be some external costs associated with web hosting.

[TWiki](#)

TWiki is another popular open source wiki that has a simple functionality, a variety of thematic options, and is well supported by a large community. The application is designed to be an enterprise wiki, so it is mainly used by organizations as intranets and as part of the development of projects. Despite this specialty, TWiki can serve as a powerful and organized knowledge base. To integrate TWiki into the National Trout Center website, the "All Things Trout" page would need to be linked to the wiki. This may have external hosting costs.

[XWiki](#)

Much like TWiki, XWiki Enterprise has a lot of standard features including simple page editing, a WYSIWYG editor, and other word processing abilities. Documents are stored in a database instead of as rich text files (database acquisition may incur an additional cost).

Alternative Encyclopedic Models

Developing a Structure

Perhaps one of the low-tech, low-cost options out there is not investing in a wiki software at all. Wikis are especially designed to act as intranets for organizations or as collaborative tools for large groups of people spread across many time zones. They are designed so that any user has

the ability to upload content. However, if the aim of the “All Things Trout” section is to be an encyclopedic database, this goal could be achieved using the existing Wordpress software.

As described above, wikis are designed to provide a structure for organization and communication, one that is real-time (versus reliance on email correspondence). However, because of the user-inclusive nature of wikis, they lend themselves to less top-down control, with flexibility and public accessibility as a default. If more control over editing processes and content ownership are desired, a wiki software might not be the appropriate investment. Rather, investing in a structure for group editing and article adoption may be a more efficient use of time.

For example, instead of allowing public users to upload articles to a wiki (would not be visible until after editorial board review), articles could be submitted directly to the chair or coordinator of the volunteer editorial board. Adopted articles could be uploaded to a “All Things Trout” google docs database to be collaboratively edited. Completed articles would then be posted to the “All Things Trout” page via Wordpress.

Integrating in Wordpress

Integration of text files into Wordpress, under its current structure, could get hard to manage as number of articles. There are Wordpress plugins that work to help organize a large number of posts. Both [Table of Contents Plus](#) and [Simple TOC](#) plugins create wiki-like, navigable indexes for posts.

Author and Article Acquisition

The National Trout Center already has existing Authorship Guidelines for receiving articles. From the [National Trout Center website](#) (see below). Having clear authorship standards helps welcome outsiders into the collaborative community created by the “All Things Trout” section.

General and Non-Fiction

Articles proposed for publication on the National Trout Center (NTC) website must be truthful, tastefully written, devoid of defamatory, malicious, or obscene language or imagery, and must not have been published elsewhere on the internet, or in print or other media unless the author holds legal copyright to the material. Authors may use their real name or a pseudonym in connection with their article, but their real name must be known and verifiable to the editorial staff of the NTC. The NTC reserves the right to use any material, whole or in part, accepted for publication on the NTC website for redistribution consistent with the program and mission of the NTC. In re-publishing material voluntarily contributed to the NTC, a good-faith effort will be made to attribute to the original author, the content or ideas intrinsic to the material. The NTC further reserves the right to subject contributed articles to copy-editing in order to meet space or other requirements of the publication medium.

Time-dependency

Articles such as travelogues, which describe conditions encountered at specified locations, should contain an explicit reference to the time, season or year being described. Similarly, authors should take care to note special conditions or regulations that apply to the location(s) being described.

Proposal for "All Things Trout" Wiki Software
Lindsay Guthrie, 8 June 2013 - *Funding for this research project provided by the
U of M Extension SE Regional Sustainable Development Partnership*

Technical Articles

Articles relating to findings in the natural or social sciences may contain explicit citations, bibliographies, footnotes or suggestions for further reading. In describing a crafting process or "How To" procedure, please provide complete information about suppliers and sources, being respectful of trademarks, but without explicitly advertising or endorsing commercial products.

Fiction and Fine Arts

Authors and artists engaged in the fine arts are encouraged to submit material for review with the understanding that the work may be quoted, abstracted, or otherwise referenced by the reviewer, and that any such reviews will be the property of the National Trout Center. Fiction and fantasy articles, including prose, verse and music, must relate to the mission or program of the National Trout Center.

Blog and Opinion Pieces

The National Trout Center reserves the right to reject, edit, or otherwise limit the exposition of personal opinions, political commentary or advocacy in accordance with the rules specified for compliance of 501(c)(3) non-profit, charitable organizations.

Submitting an Article

For commentary on blog articles, or, to contribute a blog article, please see the blog page on this website for further instructions. Send all other contributed articles as Rich Text Format (.rtf), plain text (.txt), or word processor documents (.doc), to the contact email address at this link, or, at the "Contact Us" link on the NTC home page. Illustrations, figures, photos or other images should be in JPEG format. Please do not send PDF files. Be sure that your images will be readable (especially if they contain text) at a maximum window width of 640 pixels, and expect to see some reduction in image size when your article is published. Audio files should be in MP3 format, and video files should be in MPEG-4, or a format convertible to MPEG-4.

When it comes to acquiring authors and volunteer editors, other organizations offer some feedback on the process. In the realm of non-profit collaboration, most resources surrounding authorship and wiki technology have to do with software buy-in. Most nonprofits use wikis for other means instead of encyclopedias. Uses include opening new chapters, company intranets, project management, and outreach:

- Buy-in for new software is important for authors and editors as it will be the primary means of communication between parties during the drafting and revision process.
- Provide trainings and make expectations clear.
- Understand your audience needs by clearly defining user roles and make sure the functionality of each user category is appropriate for the user's needs.
- To encourage authorship from new sources, even without solicitation, use your site's RSS feeds to monitor when a new wiki has been uploaded.
- While NTC oversight is necessary, allow room for other public users to develop the space and innovate.

User Categories and Editorial Board Structure

User Categories

Public User

Any public user is able to see approved articles and navigate database. Any public user can contact editorial board to propose article or to submit curriculum or workshop materials, however editorial board will give final approval on articles. Approval from an editorial board of experts is important to promote and protect quality and consistency between articles.

Author

An author is a public user whose article has been adopted by an editor from the board. Author will have increased access to the wiki, specifically editing capacity on the article in question.

Editor

Editors must be experts in their field, which is recognized and/or formally respected by members in the field and editorial board (e.g. degree in field). Editors can adopt articles they deem high-quality to supervise during the revision process. Editors must also enforce the Authorship Guidelines and any other established style or content guidelines. Editorial board has access to all editing and approval privileges.

Chair of Editorial Board

One member of the editorial board must serve as chair. This member can also serve as an editor, if an expert in a field, but expert status is not necessary. Chair largely coordinates discussion between editors and facilitates editorial board meetings. Chair of board also has all editing and approval privileges, and may also have access/update wiki software. If you chair is does not maintain wiki software, another staff role will have to be developed.

Editorial Board Structure: the Article Approval Process

1. Article Adoption: an article can be adopted via public user submission or by editorial board solicitation. A member of the editorial board, who is an expert in the associated field, must adopt the article for initial review. A second editor must be requisitioned, either an editorial board member (assigned or volunteered) or a expert in the field recruited externally).
2. Article Review: the two editors adopting the article work with the author through any necessary revisions. Edits can be made in wiki interface.
3. Article Approval: after revision process, article will be taken to editorial board for final approval, at which time the Chair will make article accessible (view-only) to public user.

Staffing Costs for Building and Maintenance

Building the Wiki

Building and implementing the Wiki software will have a start-up staffing cost. A staff-member or consultant both versed in Wordpress and the adopted wiki software must be recognized.

Roles of these staff member include:

- Installing wiki software (if not web based)
- Working with National Trout Center and Editorial Board Chair (see below) to establish settings and roles
- Integrating wiki with Wordpress site, including appropriate themes
- Training staff-member (if external consultant) and/or Editorial Board to use software on an ongoing basis and to add media

Predicted Time: 1 hour for installation, 2 to 5 hours for setup, 30min to 1 hour per training

Maintaining the Wiki

Because wikis are self-contained, limited upkeep is required. However, a staff person involved in the wiki process may need to check for updates to the software to make sure it remains functional.

Predicted Time: Short term--1-3 hours per week for personalization updates; Long term--1-3 hours per month to check for software updates

Using the Wiki

Daily use of wiki should accrue minimal staffing costs as the Editorial Board is Volunteer. However, depending on the influx of articles to edit, it might be the most efficient to support a paid editorial chair or coordinator position. Responsibilities could include:

- Facilitating editing conversations
- Assuring correct permissions on the website
- Overseeing approval of edits
- Publishing articles

Predicted Time: varies depending on number of articles being vetted.

Next Steps

1. Design scope and structure map for wiki including "themes," "working groups," or "tags"
2. Start recruiting volunteer editor board and draft group processes
3. Identify staff to implement wiki. The "All Things Trout" database is a relatively simple project, so most wiki softwares should be sufficient. Thus, start with the path that requires the least additional training first to get a sense of how wikis operate. Ultimately editorial board and staff responsible maintenance should convene to discuss which software is preferred. Many of those proposed above do not initially require a lot of time or financial commitment. Consider downloading and installing several versions to see which works best for your organization. Suggestions:

Proposal for "All Things Trout" Wiki Software

Lindsay Guthrie, 8 June 2013 - *Funding for this research project provided by the U of M Extension SE Regional Sustainable Development Partnership*

- a. Since Wordpress site is already functional, consider downloading and trying out Wordpress plugins first.
 - i. If the NTC is set on a traditional wiki software, try Wiki Lite and A Wordpress Wiki That Doesn't Suck first.
 - ii. If the NTC is open to alternative organization and communication structures, try Table of Contents or Simple of TOC first
- b. If the NTC finds these wikis limiting and desire more features, consider:
 - i. Purchasing Wiki Pro, if Wordpress integration is a high priority
 - ii. Download and install MediaWiki as it is well developed and supported. Make sure MediaWiki Bridge plugin integration functions in a desirable form for the website.
- c. If MediaWiki proves too "top-heavy," too complicated for simple processes, download and install DokuWiki, TWiki, or XWiki.