Region X
Endangered Species Act Tool

Presented by:
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Puget Sound

• Part of the Salish Sea
• Second Largest Estuary in the USA
• 122 Communities
• National Treasure
The BiOp

- September 22, 2008 – *Biological Opinion*

National Marine Fisheries Service (NMFS)

- Continued Implementation of NFIP adversely affects habitat of multiple species
- Suggested Changes to NFIP to comply with Endangered Species Act
- FEMA Region X developed Implementation Plan for communities based on BiOp to avoid impacts.
Existing Approach

- Region X wanted to help communities comply with requirements
- Created an MS Excel-based tool that was sent out to all communities
- Communities would fill in and send back
- MS Access-based tool would aggregate results into report tables.

Contact: Stephen.Bourne@AtkinsGlobal.com
Developing a New Solution

• Objectives:
  • Improve User Experience
    – Simpler, More in-line QC, Better Explained
    – For Communities and Region X
  • Reduce Errors
  • Work with Technology that is commonly available and already known
  • Cost Effective
Architecture Decision

Improve Current Approach

Less Expensive

More Central

Already Known

Higher IT Expertise

Scalable/Expansible in Future

Community Web App

Region X Dashboard

Services

Database
Agile Design

- Iterative Improvement with Prototypes
- Inclusive of Communities
- Warranty Period for In-Scope Improvements
The Community Tool

Previous Tool

New Tool

28 June 2016

Contact: Stephen.Bourne@AtkinsGlobal.com
The Community Tool: Getting Started

The purpose of the Endangered Species Act Tool is to help you enter data for floodplain development permits in the Special Flood Hazard Area (SFHA).

Before we begin, it may be helpful to have the following information:

- Permit numbers
- Site location information (lat/long, address)
- Habitat assessment information
- Including information on impervious area, tree removal, and SFHA restoration/fill
- Mitigation details
- Other information

When you're ready, choose one of the options below:

- Clear All Data and Start Over
- Add Permit Data
- Continue Where I Left Off
- Reload Existing Permit Info
The Community Tool: Process

FEMA Region X Endangered Species Act Tool

**Progress Pane**
- Welcome
  1. Save This File
  2. Contact Information
  3. Permit Number
  4. Habitat
  5. Mitigation
  6. Review

The purpose of the Endangered Species Act Tool is to help you enter data for floodplain development permits in the Special Flood Hazard Area (SFHA).

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- LOMC information

When you're ready, choose one of the options below:
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The Community Tool: Bulk Permit Entry

If you have permits, such as interior remodel or re-roofing, which had no effect on floodplain functions and did not involve actions to improve floodplain functions, you can enter these permits in bulk.

Would you like to enter multiple permits in bulk?

Yes  No

Please use the table below the buttons to enter permit information for permits which had no effect on floodplain functions and did not involve actions to improve floodplain functions.

You can either copy/paste, or enter information one-by-one.
The Community Tool: Habitat

FEMA Region X Endangered Species Act Tool

Progress Pane
Welcome
1. Save This File
2. Contact Information
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6. Review

Progress on 456789

Was a habitat assessment conducted?
Yes  No

Habitat Assessment Findings
- No Effect (NE)
- Not Likely to Adversely Affect (NLAA)
- Likely to Adversely Affect (LAA)
- In Process

Brief Habitat Description*
(Short grass riparian area)

*For projects with multiple species determinations, enter the determination for species subject to the Biological Opinion that is most affected.
The Community Tool: Impervious Area
The Community Tool: Improved SFHA

FEMA Region X Endangered Species Act Tool

Progress Pane
Welcome
1. Save This File
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Was any work performed to improve functions and values of the SFHA?
Yes
No

Progress on 456789
41%

Please enter the amount of area improved:

0.5
Floodplain area partially restored (acres)

Progress on 456789
47%

Save & Continue >>

<< Go Back
The Community Tool: Fill

Progress Pane
- Welcome
- 1. Save This File
- 2. Contact Information
- 3. Permit Number
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- 6. Review

Was any fill placed in the SFHA?

Yes  No

FEMA Region X Endangered Species Act Tool

What is the area covered by this fill:

Floodplain area that was filled

* This value is the land area covered by fill, regardless of where the fill came from (including on-site and off-site fill sources)

Save & Continue >>

Progress on 456789 53%
The Community Tool: Other Project Elements

FEMA Region X Endangered Species Act Tool

Progress Pane
- Welcome
  1. Save This File
  2. Contact Information
  3. Permit Number
  4. Habitat
- 5. Mitigation
- 6. Review
  Progress on 456789 65%

Which of the following are elements of the project?

- None
- Bank Armoring
- Channel Straightening
- Construction Effects (e.g. noise, water turbidity)
- Vegetation Removal
- Habitat Isolation
- Reduced Flood Storage Capacity
- Degraded Water Quality

<< Go Back

Save & Continue >>
The Community Tool: Mitigation

FEMA Region X Endangered Species Act Tool

Progress Pane
Welcome
1. Save This File
2. Contact Information
3. Permit Number
4. Habitat
5. Mitigation
6. Review

Was mitigation performed to preserve habitat?
Yes  No

Progress Pane
Welcome
1. Save This File
2. Contact Information
3. Permit Number
4. Habitat
5. Mitigation
6. Review

Please choose the type of mitigation and whether it was successful
Mitigation type:
- Avoidance
- Restoration
- Minimization
- Other (specify)

Evaluation of mitigation success:
- Successful
- Unsuccessful
- Inconclusive

<< Go Back

Save & Continue >>

28 June 2016
The Community Tool: LOMC
The Community Tool: Permit Summary

FEMA
Region X Endangered Species Act Tool

Progress Pane
Welcome
1. Save This File
2. Contact Information
3. Permit Number
4. Habitat
5. Mitigation
6. Review

Here is a brief summary of the input data for the 456789 permit number.

<table>
<thead>
<tr>
<th>Permit Number</th>
<th>456789</th>
</tr>
</thead>
<tbody>
<tr>
<td>Habitat Assessment?</td>
<td>No</td>
</tr>
<tr>
<td>Impervious Increase?</td>
<td>Yes</td>
</tr>
<tr>
<td>Trees Removed?</td>
<td>Yes</td>
</tr>
<tr>
<td>SFHA Restored?</td>
<td>Yes</td>
</tr>
<tr>
<td>SFHA Filled?</td>
<td>Yes</td>
</tr>
<tr>
<td>Mitigation?</td>
<td>Yes</td>
</tr>
<tr>
<td>LOMC?</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Requested and Received

From here you can Add Next Permit, or Go to Final Review.

Permits Entered:
- 456789
  Outside of Puget Sound

<< Go Back     Add Next Permit     I'm Finished Entering Permits – Go to Final Review
The Community Tool: Completion

Congratulations on entering all the permits!

Use the buttons below to:
- Go Back
- See What Will Be Sent to FEMA (Table) - See all of the permit data you’ve entered in a single editable table
- Learn How to Submit Data - Instructions to send the permit data to FEMA via email

Additional Help
The Community Tool: To be Sent to FEMA

<table>
<thead>
<tr>
<th>Permit Number</th>
<th>Project Description</th>
<th>Project Date</th>
<th>Lat</th>
<th>Long</th>
<th>House Number</th>
<th>Street Name</th>
<th>City</th>
<th>State</th>
<th>Zip</th>
<th>Projected Area (acres)</th>
<th>Habitat Assessment (YN)</th>
<th>Habitat Findings</th>
<th>Habitat Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>Outside of Puget</td>
<td>N/A</td>
<td>47.612</td>
<td>122.41</td>
<td>1327 Fake St</td>
<td>Bellevue</td>
<td>WA 55564</td>
<td>N</td>
<td>N/A</td>
<td>N/A</td>
<td>N</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>N</td>
<td>New construction in SFHA</td>
<td>6/21/2016</td>
<td>47.612</td>
<td>122.41</td>
<td>234 Main</td>
<td>Bellevue</td>
<td>WA 98004</td>
<td>Y</td>
<td>N/A</td>
<td>N/A</td>
<td>N</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Aggregation & Dashboard Tool

Permit Analytics are reported here

Moved to Excel-based approach to normalize technology

Hotspots highlight communities with high/low reporting

Multiple Tools for Summary Reports and Permit Details

Google-like Search

Percentage of Communities Reporting in the selected year

As Communities Tools come in, they can be imported using this button

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Aggregation & Dashboard Tool

Community Summary

Reporting/NonReporting

Full Permit Table by Year

Search Results
Status & Next Steps

- Region X has accepted solution
- In Warranty Period
- Building Guide
- Deploy to Communities
- Will make improvements based on first year of deployment
- Consider moving to Web in the Future
Questions?