USER GUIDE FOR THE LPC-RWP ESTIMATOR TOOLS

INTRODUCTION

The Lesser Prairie-Chicken (LPC) Estimation Toolbox was created as a means for users to calculate estimates of potential impact costs to LPC habitat. The impact areas and cost calculations reflect those defined in the LPC Range Wide Plan developed by the five LPC States in coordination with WAFWA. *These are cost estimates to assist in project pre-planning, all final mitigation costs will require and be calculated from verified field observations.*

The Lesser Prairie-Chicken (LPC) Estimation Toolbox consists of two unique processes depending on the project to be assessed (points or lines). There are two methods of using the estimator tools: 1) utilize the published geoprocessing tool in ArcGIS (recommended) or 2) by using the online SCP CHAT map service by manually plotting new impacts.

CONNECTING TO LPC-RWP LAYERS IN ArcGIS

For users who wish to view LPC-RWP related layers in their ArcGIS environment.

1. Open ArcCatalog window within your ArcMap session
2. Expand the GIS servers folder, double click ‘AddArcGIS Server’
3. Select the ‘Use GIS Service’ option (default) and then select ‘Next’
4. Paste the following URL address into the ‘Server URL’ text box:  
   https://services.kars.ku.edu/arcgis
5. Click ‘Finish’ (leaving the User Name and Password boxes empty)
6. A new server connection will be listed as ‘arcgis on services.kars.ku.edu (user)’. You may rename service however you wish.
7. Click to expand the service and again for the ‘Sgpchat’ folder.

*Figure 1 How to add an ArcGIS Server connection.*
IMPACT ESTIMATES WITHIN ArcGIS

For users with ArcGIS who wish to use the estimator tools to estimate a shapefile of points or lines.

1. Open ArcCatalog window within your ArcMap session
2. Expand the GIS servers folder, double click ‘AddArcGIS Server’ (Figure 1)
3. Select the ‘Use GIS Service’ option (default) and then select ‘Next’
4. Paste the following URL address into the ‘Server URL’ text box (Figure 1):
   https://wct.wafwa.org/webadaptor
5. Click ‘Finish’ (leaving the User Name and Password boxes empty)
6. A new server connection will be listed as ‘webadaptor on wct.wafwa.org (user)’; you may rename service however you wish
7. Click to expand the service and again for the ‘SGP_CHAT’ folder
8. Expand the appropriate toolbox for your proposed impact and double click the tool to define your inputs.
   a. Load your input file to be assessed.
   b. Set the appropriate buffer distance listed in the LPC-RWP for your proposed impact.
      Note: Click the ‘Show Help’ button for a quick reference on buffer distances.
9. Click ‘Ok’ on the tool dialogue box to run the tool.

The process will take several minutes to run especially for large projects. When finished four layers will load into your ArcMap Session:

   1) Output Project Impact Estimation
   2) Output Evaluation Units Estimation
   3) Output Project Survey Region and
   4) Output Buffered Infrastructure.

It is recommended that you export these layers as they will not be available once you remove them from your view. The attributes listed in each layer are described in the ESTIMATE OUTPUT RESULTS section below.

Figure 2 Folder structure of the SGP CHAT tools
Figure 3 SGP CHAT Point Estimator dialog box

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IMPACT ESTIMATES USING SGP CHAT WEBSITE

For users who would like to use the SGP CHAT website to estimate a drawn point or line.

1. Open your web browser and navigate to http://kars.ku.edu/maps/sgpchat/
2. Agree to the site disclaimer shown on your screen.
3. Zoom/pan to the area of your proposed project.
   Click the ‘Layers’ button to turn on/off reference layers.
4. When ready to draw you proposed impact, hover over the tool icons (blue boxes with a gear on it).
   Click the appropriate tool for point or line.
5. In the new dialogue box, click the icon to initiate the drawing session and digitize the proposed project on the screen.
6. Set the appropriate buffer distance listed in the LPC-RWP for your proposed impact.
7. Click ‘Submit’ on the tool dialogue box to run the tool.

The process will take several minutes to run especially for large projects. When finished four layers will load into on the screen:

   1) Output Project Impact Estimation
   2) Output Evaluation Units Estimation
   3) Output Project Survey Region and
   4) Output Buffered Infrastructure.

Click the table icon to show the attributes of each visible layer. Please note that if you close the tool dialogue box the results of the estimates will no longer be visible. You may view them again in this session by opening the tool dialoged box again. The attributes listed in each layer are described in the ESTIMATE OUTPUT RESULTS section below.
ESTIMATE OUTPUT RESULTS

Whether you use the estimator tools in ArcGIS or through the web app the results will be the same. Four layers will load into your: 1) Output Project Impact Estimation 2) Output Evaluation Units Estimation 3) Output Project Survey Region and 4) Output Buffered Infrastructure. Below is a summary of each layer and their attributes.

Output Project Impact Estimation
This layer contains a summary of the proposed impact(s). If multiple impacts were submitted then each will be listed. If the purpose impact is a linear feature and it crosses an ecoregion, focal area, or connectivity zone, then the project will be listed twice with the full value estimate listed for both.

WAFWA_ID Unique ID for each submitted impact in the estimator run.
Ecoregions The ecoregion that the submitted impact resides in.
FACZ_Class Indication of ‘Focal Area’, ‘Connectivity Zone’, or ‘Non-FACZ’
Percent_Im Percent impacted of the FACZ Class, 0 if FACZ is blank. No new impacts are allowed if a Connectivity Zone is >= 60% impacted or a Focal Area is >= 30% impacted.
LPC_Survey Percent in area that is surveyed within 1.25 miles of your submitted project.
LekNear Yes/No response to if a known active lek is within 1.25 miles of your submitted project. If yes, your project is subject to the breeding season restrictions.
NewImpact Total new impact acres.
CHATscore The majority CHAT region that is impacted by the submitted impact.
PctSuit The mean Percent Suitable of the submitted impact.
EstCost The estimated impact cost of the submitted impact.
EstUnits The estimated annual offset units of the submitted impact.

Output Evaluation Units Estimation
This layer contains the approximated evaluation units used in the estimation calculations for the submitted project. Each evaluation unit will have the following information.

WAFWA_ID Unique ID for each submitted impact in the estimator run.
Ecoregions The ecoregion that the submitted impact resides in.
Cover Land Cover Type (Estimated): Crop or Non-Crop
Acres Total acres of the evaluation unit
EvalNum Evaluation unit number
CHAT1 CHAT1 new impact acres
CHAT2 CHAT2 new impact acres
CHAT3 CHAT3 new impact acres
CHAT4 CHAT4 new impact acres
NewImpact Total new impact acres across all CHAT categories.
ESD LPC-RWP soil value for the evaluation unit.
PrcSuit Mean percent suitable
EstCost Estimated evaluation unit mitigation cost
EstUnits Estimated evaluation unit annual impact acres
Output Project Survey Region
This layer consists of a 1.25 mile buffer around the submitted impact. For display purposes only, no relevant attributes within this layer.

Output Buffered Infrastructure
This layer consist a polygon depicting known existing infrastructure and their buffer region. For display purposes only, no relevant attributes within this layer. Existing infrastructure will be reviewed for each project and features will be added, removed, and/or adjusted as needed before the final impact cost is calculated.

For questions or comments regarding the Lesser Prairie-Chicken (LPC) Estimation Toolbox, please contact:

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