
Environmental Resource Survey Area Process

Project and Program Delivery Manual
Chapter 7
Stakeholders and Environmental Stewardship
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Introduction

The Environmental Resource Survey Area (ERSA) designates the area where environmental data will be gathered for a proposed project. This area will be inclusive of all design needs (i.e., the limits of construction, proposed land disturbance, new ROW, staging areas, utility relocations, and some detours).

The Location and Environment Bureau's (LEB's) resource managers (i.e., Cultural Resources, Protected Species and Natural Areas, Water Resources, Regulated Materials, Traffic Noise and Air Quality, and NEPA), will analyze and collect data in the survey area, but may evaluate a larger area if needed for compliance with regulatory agencies. If we need to seek avoidance (1) or to minimize impact to (2) areas discovered within this survey area during the environmental review, LEB will provide shapes called Project Environment Resource Layers (PERLs) for the designers to reference. LEB will work with the designers to discuss options regarding these identified areas.

Objectives

The purpose of the collaborative effort is to ensure everyone is aware of the design needs and the environmental review area of the project. If the environmental review is not inclusive of all design needs, additional analysis will be needed, which could cause schedule delays and increased costs for the project.

Keeping the ERSA updated throughout project development will ensure projects stay on time and will improve communication throughout the process.

When do ERSAs need to be created and reviewed?

The ERSA deliverables will be part of the draft and final concept with referencing to the MicroStation file and as an attached geographic information systems (GIS) format (KMZ, shapefile).

- Projects that include the following types of activities will require an ERSA to be created:
 - Access improvements
 - Blasting
 - Debris removal
 - Drainage improvements
 - Facilities (maintenance, rest areas and weigh stations)
 - Grade and pave
 - Grading
 - Intersection/Interchange improvement
 - Noise wall
 - Pipe/Culvert work
 - Revetment
 - ROW
 - Slide repair
 - Structure repair

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- Projects that include the following types of activities will require an ERSA to be created: (Cont.)
 - Structure replacement
 - Tree clearing and grubbing

It is the intent that the ERSA can be referenced in the CADD file during the design of a project. The designer will stay within the limits or will create a modified ERSA and provide it to LEB for additional environmental review.

At various stages of project development (aligned with the project schedule deliverables: D00, D02, D05, R01, DM5, etc. A full list is outlined in “How will ERSAs be monitored and tracked.”), the designer will reference the MicroStation ORD DGN containing the ERSA to ensure the proposed work does not extend beyond the ERSA boundary. This evaluation should be added to the checklist for the task.

Who will create an ERSA?

Initial ERSA Creation

- Creation of the ERSA will be the responsibility of the project concept writers whether done by themselves or delegated to others. During the process of drafting of the project concept, collaboration is encouraged between concept writers, project managers, designers, and representatives from LEB to create the ERSA.
- The initial limits and shape of the survey area will be created either at the concept review meeting or in a separate meeting before the concept is submitted. If time allows during the concept review meeting, the ERSA may be created then. The concept writer will schedule a meeting to develop the ERSA if necessary.
- The ERSA should encompass all design needs including: the limits of construction, proposed land disturbance, new ROW, staging areas, utility relocations, and some detours. Those creating an ERSA should be cognizant that the size of the ERSA boundary will have a direct impact on the time it takes to complete environmental review. Larger areas will take longer time and smaller areas less time (in most cases). A conservative approach to identifying what needs to be included and what doesn't is the best approach.
- The ERSA deliverables will be part of the final concept with referencing to the MicroStation file and as an attached geographic information systems REST service.
- The ERSA tool will automatically send out an email with a predetermined list of recipients to notify them of the creation or modification of an ERSA.

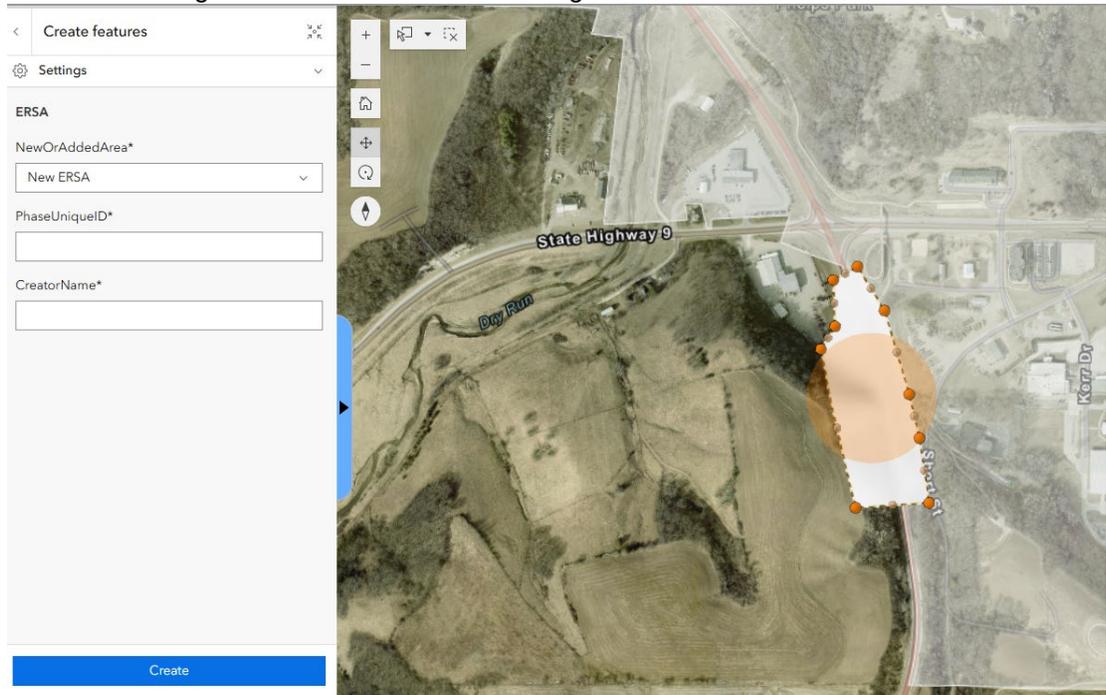
Access to Create or Modify an ERSA

- All creators/modifiers must have an ESRI account with Creator, Mobile Worker, or above.
- **Internal users**
 - Request access by emailing LEB.Support@iowadot.us.
- **External users (consultants)**
 - Request access through the Project Management Bureau.
 - Include in the request: name, account username, and email address for each user
 - External accounts must be visible to other organizations and able to join external groups.

ERSA Creation & Modification Tool

- LEB has created a 3D Scene (webmap) with an editable layer for the ERSA.
 - <https://experience.arcgis.com/experience/737a3b544a8849dcb405479a52cb17d3>
- Detailed Instructional Document:
 - <https://iowadot.gov/media/12099/download?inline>
- Instruction Overview:
 - To access and edit, users will need to have an ESRI AGOL account with creator role

- Concept writers and designers will create and modify polygons and fill out simple project information using the interface which is like Google Earth.



- When an ERSA is created, an automated email will be sent to a predetermined list.
- As the project progresses and the designer becomes aware that the project needs will extend beyond the survey limits, the boundary will be amended by the designer using the ERSA tool.
- When the ERSA is created or modified, the feature layer in AGOL and its REST service are automatically updated.
- **To create a new ERSA or add an additional area to an existing ERSA.**
 - Click on the Edit tool on the left side of the screen.
 - Select ERSA on the left side of the screen
 - Click on the map to add a vertex
 - Double-click to finish the polygon
 - Fill out Feature Data on the tab on the left side of the screen (New or Added Area, Unique Phase ID, and County).
 - Click Create at the bottom-left of the screen
- **To modify an existing ERSA after creation, (to be used to correct an error)**
 - Click on the Edit tool on the left side of the screen.
 - Click on the select tool in the pane
 - Click on the polygon to be modified.
 - Click on the polygon a second time to modify the shape.
 - Click on Update in the lower left of the pane.
- LEB Support Team will update a statewide DGN containing the ERSAs and Project Environmental Resource Layers (PERLs).
 - Location of the DGN in ProjectWise:
 - <pw:\NTPwint1.dot.int.lan:PWMain\Documents\Resources\ERSA/>
 - The REST service will be connected directly to a DGN using the Geospatial Context tools in ORD.
 - This single DGN will be used with all projects and will be updated daily.
 - The DGN level library will have levels matching the layer feature names from the REST service to include levels for ERSA and all PERLs to ensure consistency and standard symbology in the DGN.

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- The DGN can be referenced to other DGNs with the Reference dialog Tools→Attach tool. ERSAs and PERLs will be stored in UTM 15N. The file will need to be attached using the Reproject option to match coordinate systems used by designers.

Project Environmental Resource Layers (PERLs)

- LEB staff will use the ERSA to gather information about environmental resources within the boundary.
- Environmental resources will be made available through a GIS REST service and attached to a single MicroStation ORD file that will contain statewide ERSAs and Resources.
- Resources will be attributed with one of the following priorities of effect
 - 1 – Avoid
 - 2 – Minimize (Contact LEB)
 - 3 – No Issue
- If Avoid (1) or Minimize (2) areas are discovered within this survey area during the environmental review, LEB will provide shapes within the MicroStation file for the designers to reference. This file will be regularly updated by LEB. If a designer has questions about these areas, they should contact LEB for coordination. LEB will work with the designers to discuss options regarding these identified areas.

How will ERSAs be monitored and tracked?

It is the intent that the ERSA will always be referenced into the working CADD files during the design of a project. The designer will stay within the limits or will create an additional area with the appropriate phase Unique ID for additional environmental review. LEB will also review the ERSA consistent with their event dates to verify there are no outstanding environmental resource impacts.

- Event Dates for ERSA and PERL reviews by the bureau/section responsible for the event.
 - B00 Bridge Office Concept
 - B01 Bridges and Structures Layout
 - B02 Drainage Design and Miscellaneous Layout to Office of Design
 - D00 Pre-Design Concept
 - D02 Design Field Exam
 - D03 Plans for Preliminary Bridge
 - D04 Design Plans for Bridge
 - D05 Plans to Right Of Way
 - DM5 Design Methods Turn-In
 - F01 Preliminary Regulated Materials Review
 - F02 Interim Regulated Materials Review
 - F03 Final Regulated Materials Review
 - F10 Regulated Materials Clearance
 - H00 Cultural Resources Assessment
 - H01 Phase I Archaeological Investigation
 - H02 Phase II Archaeological Evaluation
 - H03 Intensive Historical Evaluation
 - H05 Cultural Re-evaluation
 - N00 Prelim Noise Impact
 - N01 Completion of Noise Study
 - N02 Design Review
 - NE00 NEPA – OA
 - NE10 PCE
 - NE11 CE
 - P00 Planning Concept - Pre-Program
 - TE0 Desktop Review

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- Event Dates for ERSA and PERL reviews by the bureau/section responsible for the event. (Cont.)
 - TE1 Field Review/Field Work
 - TE2 Consultation with USFWS
 - TE3 Coordination with Iowa DNR
 - TE4 Minimization Measures
 - TE5 Mitigation Actions
 - TE6 Re-evaluation of Impacts
 - W00 Preliminary Wetland Review
 - W01 Wetland Design Review
 - W02 Wetland Field Work
 - W03 404 Permit Submittal

Chronology of Changes to Manual Section:

7.2.1 Environmental Resource Survey Area Process

11/07/2024	NEW
07/28/2025	Removed broken hyperlinks.
07/30/2025	Removed watermark.
09/03/2025	Removed Header on pages. Check Accessibility.
01/28/2026	Rewritten by Location and Environment