Over the past six months, the Lake Elmo Airport environmental review project team has been busy collecting and analyzing data to determine the environmental effects of the changes (shifting the primary runway and extending it to 3,500 feet) compared to a no-change scenario (what the Federal Aviation Administration, or FAA, calls a “no-action” alternative). Their work has included field surveys of wetlands, wildlife, plant species, historical structures, archaeological resources and hazardous material sites on and surrounding the airport. It also included detailed analysis of changes in aircraft noise exposure, operational and construction emissions, ground (or roadway) transportation, and other research and analysis. As required under the National Environmental Policy Act (NEPA), this environmental evaluation determines whether any potential environmental effects associated with the proposed changes are significant enough to necessitate a greater level of environmental analysis.

How are environmental effects evaluated?
The FAA establishes thresholds of significant effects for many of the environmental categories. Projects funded fully or in part by the FAA that result in effects at or above these thresholds must either reduce effects below threshold levels or be evaluated further. Since thresholds do not exist for all environmental categories, the FAA has also established factors that should be considered when evaluating the context and intensity of potential environmental effects. For example, the FAA has specific quantitative criteria establishing whether noise effects associated with a project are considered significant (a threshold), while visual effects are evaluated more qualitatively based on the degree to which the project would create annoyance, interfere with normal activities, and affect the visual character of the area (a factor). After all relevant thresholds and factors have been considered, the FAA is responsible for taking action on the environmental document and determining whether the proposed changes to the airport would lead to significant environmental effects.

It is important to note that only environmental effects that meet the FAA’s definition of a significant impact would require further action.
**Environmental Effects Evaluation Process**

1. **Is the environmental category relevant to the proposed development?**
   - [ ] Yes
   - [ ] No
   - [X] No Further Analysis Required

2. **Are effects “significant” based on FAA-established thresholds and factors?**
   - [ ] Yes
   - [X] No
   - [X] No Further Analysis Required

**Significant Effects Considering FAA Evaluation**
- Federal Aviation Administration (FAA) Conducts Environmental Impact Statement (EIS)

**What environmental categories have been evaluated?**

The National Environmental Policy Act (NEPA), which governs this evaluation process, covers 14 environmental categories, including:

- Air Quality
- Biological Resources (including fish, wildlife, and plants)
- Climate
- Coastal Resources
- Department of Transportation Act, Section 4(f)
- Farmlands
- Hazardous Materials, Solid Waste, and Pollution Prevention
- Historic, Architectural, Archeological, and Cultural Resources
- Land Use
- Natural Resources and Energy Supply
- Noise and Compatible Land Use
- Socioeconomics, Environmental Justice, and Children’s Environmental Health and Safety
- Visual Effects (including light emissions)
- Water Resources (including wetlands, floodplains, surface waters, groundwater, and wild and scenic rivers)

Of these 14 categories, five required minimal review based on FAA guidance and therefore will not be evaluated in detail. The environmental review document will include a detailed analysis for the remaining nine categories.

Thus far, members of the public have expressed concerns related to Land Use, Noise, Visual Effects (including airfield lighting) and Water Resources. Following is a summary of the environmental review results within these areas. Results for the remaining categories will be included in the draft environmental review document, which will be published in early 2018 for public comment.

**Land Use**

The primary concerns surrounding land use include residential, ground transportation and wildlife attractants. The FAA has not established thresholds or factors of significance to consider for land use impacts. The FAA typically looks to the results of other related categories to determine whether there is a significant impact within the Land Use category. For instance, effects to public parks, historical sites and farmlands are established under other environmental categories, but may also be considered effects within the general land use category.

**Residential Land Uses**

The State of Minnesota has established model safety zones for land surrounding airports. The intent is to restrict land uses that could be hazardous to airport operations and to protect the safety and property of people on the ground. While zoning regulations are not currently in effect at Lake Elmo Airport, the Minnesota Department of Transportation (MnDOT) recommends they be adopted by communities within close proximity to an airport. The Metropolitan Airports Commission (MAC) will convene a Joint Airport Zoning Board (JAZB) prior to completion of the environmental process consistent with Minnesota state statutes. The process will consider public input during development of an airport zoning ordinance. This process could result in a zoning ordinance recommendation to the MnDOT Office of Aeronautics that deviates from the state’s model zoning ordinance.

Until then, the environmental document will use the state’s model zoning ordinance to evaluate the environmental effects. There are two safety zones in the state’s model ordinance: Safety Zone A generally prevents the erection of new structures while Safety Zone B generally prevents high-density residential development. When considering the airport’s proposed development, five houses would end up in the state’s model Zone A and 20 houses in the state’s model Zone B.

**Ground Transportation Land Uses**

The project team also completed a focused study on the realignment of 30th Street North to determine if the proposed changes would have adverse impacts to traffic safety and efficiency, as well as emergency response. This included reviewing existing traffic data and emergency routes, analyzing traffic counts and forecasts, and computing and documenting emergency response times. The project team then explored alternate roadway configurations meant to minimize travel time and maximize safety — two concerns identified by the community as important factors when evaluating alternatives.

In August, the team presented several roadway design options to the Community Engagement Panel (CEP), all of which improved upon the safety and efficiency of the preferred alternative identified in the Long-Term Comprehensive Plan. Since the CEP did not unanimously support any of the alternate options, the original configuration has been retained and used for the environmental effects evaluation.

The proposed design of the realigned section of road can accommodate the forecasted number and type of vehicles. The realignment will slightly increase average travel time along 30th Street North — by approximately 46 seconds in either direction.

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**Anticipated EA/EAW Project Timeline**

- **MAC Adopted Lake Elmo LTCP (SEPTEMBER 2016)**
- **EA/EAW Process Begins (FEBRUARY 2017)**
- **Analysis of Impacts and Alternatives (SPRING FALL 2017)**
- **Draft EA/EAW Alternatives for MAC Determination (WINTER 2018)**
- **Final EA for FAA Determination (SPRING 2018)**

**Public Event**

- May 9, 2017
- August 17, 2017

**Public Hearing**

- November 6, 2017

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For more detail, see the Stakeholder Engagement Plan on the project website. Schedule is subject to change. Any significant schedule updates will be published on the project website and distributed to e-news subscribers, as appropriate.
**Wildlife Attractants**
Land uses that attract wildlife, such as refuges, landfills, and lakes, can present hazards to aircraft operations. The proposed development does not create any new wildlife attractants at Lake Elmo Airport. In fact, the reduction in agricultural farmland and the on-airport tree removal associated with the proposed development is expected to reduce wildlife attractants on the airport.

**Land Use Conclusion**
Based on the results of the analysis for this category, there are no FAA-defined significant land use effects associated with the proposed airport development; however, under the no-action alternative, 30th Street North, Manning Avenue and the railroad would remain in the primary runway’s protection zones, which would be considered incompatible by FAA design standards.

**Noise**
Noise contours delineate areas on and surrounding an airport that experience different average noise levels associated with an airport’s aircraft activity. These contours are based on an FAA-approved program that uses a myriad of data inputs to calculate the results. The contours, however, do not depict specific flight paths or the loudness of individual aircraft operations.

The process of calculating the average noise level is called “noise modeling.” The result is a metric that describes aircraft noise in annual Day-Night Average Sound Level (DNL). The FAA considers an increase of 1.5 DNL or above significant when applied to noise-sensitive areas—like residential homes—that are located within the 65 DNL contour. In the case of Lake Elmo Airport, the project team modeled the forecasted change in DNL that would result from implementing the proposed development at the airport and compared it with the noise levels that would occur if no development were to occur (the no-action alternative) for the same timeframe. Based on both existing and 2025 forecast operations, the results show that the 65 DNL contour is contained entirely on airport property in both scenarios. This means that there are no impacts—either now or in 2025—to noise-sensitive areas within the 65 DNL contour, and therefore no mitigation would be required. A 60 DNL contour was developed for informational purposes, but is also entirely contained on airport property in the 2025 proposed development scenario.

**Visual Effects (including airfield lighting)**
There are no federal standards that specifically define the significance of airfield lighting effects; however, according to the FAA, location and use of lighting systems should be considered in environmental reviews. The lighting components of the proposed development include relocating and extending the existing primary runway lights and installing new lights on the crosswind runway. Some of these lights will be closer to residential areas; however, they will only be activated at full brightness when pilots are approaching and departing the airport. This scenario would typically occur only during nighttime or inclement weather operations, which historically accounts for about 15 percent of aircraft operations. The project team is considering various strategies for shielding the lights from the airport’s neighbors.

**Water Resources**
Water resource effects associated with the proposed development include filling approximately two acres of wetlands on airport property (including less than one-tenth of an acre within a mapped floodplain), and adding a net increase of approximately 550,000 square feet of impervious surface at the airport as a result of the proposed runway, taxiway and road pavement. The team expects that the wetland effects will require the MAC to replace those acres elsewhere at a 2:1 ratio. It is most likely to take the form of credits purchased from a wetland bank (a site where wetlands are restored, created or enhanced for the purpose of providing compensatory mitigation for unavoidable impacts associated with projects located elsewhere) in the east central Minnesota region. At the airport, the stormwater effects will require site-specific drainage controls and implementation of best management practices. The groundwater beneath the airport is not expected to be affected or disturbed by the project since it is 50 feet underground.

**What does all this mean?**
The results of the environmental analysis indicate that there are no substantial effects in any single environmental category that cannot be mitigated. Neither permanent adverse nor significant environmental effects are expected with the proposed development at Lake Elmo Airport. That being said, efforts will be taken, where feasible, to avoid or reduce environmental effects. The next step in the process is to complete the draft environmental review document and publish it for public review. A public hearing will then be held in Spring 2018 to take public comments on the document. All comments received during the comment period will be included and responded to in the final environmental review document.