

14 CFR Part 150 Noise Compatibility Study Update

Greater Rockford
Airport Authority
(GRAA)

Advisory Committee Meeting | November 2022



Agenda



- Future 2027 Noise Compatibility Program (NCP) Noise Contour
- Elements of a Noise Compatibility Program
- Previously Approved Noise Abatement Measures
- Noise Abatement Screening & Recommendations
- Previously Approved Land Use Mitigation Measures
 - Remedial / Corrective
 - Preventative
- Land Use Mitigation Screening, Recommendations & Cost
- Previously Approved Program Management Measures
- Program Management Screening, Recommendations & Cost
- Next Steps

Future 2027 NCP Noise Contour

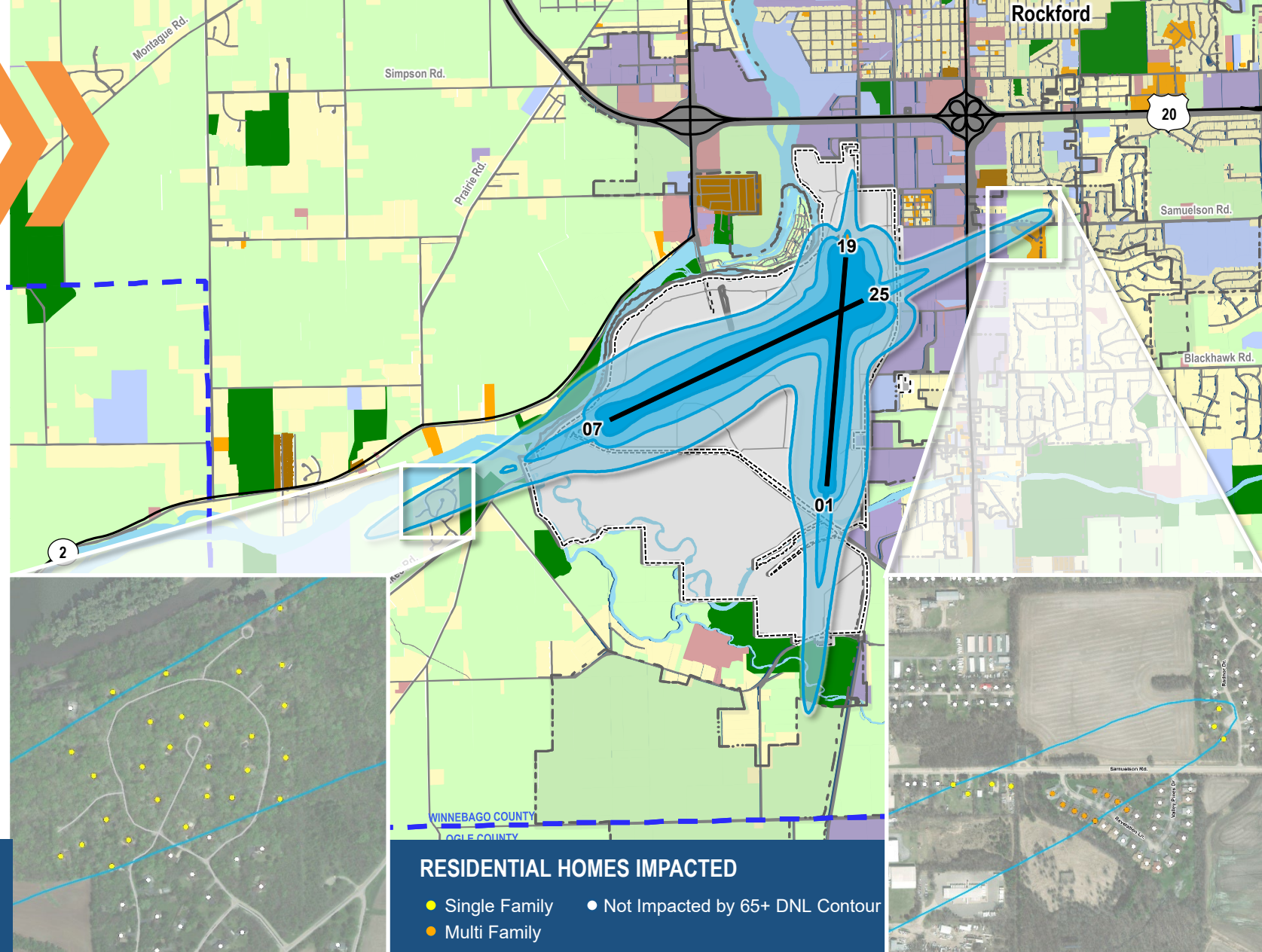
NEMs Subject to FAA Review & Approval

Land Use Incompatibilities

RESIDENTIAL IMPACTS

	75+ DNL	70-75 DNL	65-70 DNL	65+ DNL
Single Family Units	0	0	34	34
Multi-Family Units	0	0	18	18
Total Housing Units	0	0	52	52
Estimated Population	0	0	138	138

Single-Family Residential	Water	Arterial Roads
Multi-Family Residential	Agricultural / Open Space / Vacant	Interstate/Major Roads
Manufactured Housing	Commercial	Airport Property Boundary
Park / Recreation	Industrial	County Boundaries
Institutional	ROW/Utility	Municipal Boundaries



Elements of a Noise Compatibility Program



1. Noise Abatement Measures

Purpose: To abate noise levels in surrounding communities

2. Land Use Mitigation Measures

Purpose: To mitigate noise levels in surrounding communities

3. Program Management Measures

Purpose: To provide administrative and management actions to allow the airport to maintain land use compatibility in surrounding communities

Elements of a Noise Compatibility Program



Types Of NCP Measures:

- **Noise Abatement**
 - Flight Track Location
 - Runway Use
 - Flight Management
 - Ground Activity Restrictions
 - Facility Modification
- **Land Use Mitigation**
 - Preventive
 - Remedial / Corrective
- **Program Management**
 - Noise Complaint Protocols
 - Management of Noise Program
 - Updates to NEM/NCP

Previously Approved Noise Abatement Measures

Measure	Description	Responsible Party	2003 Status	Current Status	2022 NCP Recommendation
Approved Noise Abatement Measures					
NA-1	Maintain existing noise abatement procedures per Tower Order of June 15, 1984.	Air Traffic Control Tower (ATCT), Airlines, GRAA	Approved as Voluntary	Implemented as Conditions Allow	Recommended to be withdrawn
NA-2	Aircraft in excess of 12,500 pounds departing Runway 25 should be directed to turn 20 degrees to the right of left as soon as practicable after takeoff.	Previously withdrawn in the 1994 NCP			
NA-3	All aircraft departing on Runway 7 should be fanned along three departure tracks: Left, Right, and Center.	ATCT, Airlines, GRAA	Approved as Voluntary	Implemented as Conditions Allow	Recommended to be continued
NA-4	Direct pilots of C-130s to turn as tightly as practicable when training on Runway 19.	ATCT, Airlines, GRAA	Approved as Voluntary	Not Applicable	Recommended to be withdrawn
NA-5	Direct pilots of air carrier jets, when training on Runway 01, to begin turning to downwind leg after four Distance Measuring Equipment (DME) from localizer and establishing the downwind leg at five DME.	Previously withdrawn in the 1994 NCP			
NA-6	Establishment of an informal preferential runway use plan, weather and operating requirements permitting, as follows for aircraft weighing more than 12,500 pounds, using a five-knot tailwind and 15-knot crosswind component for runway assignment.	Previously withdrawn in the 2003 NCP (Replaced by NA-10)			

Previously Approved Noise Abatement Measures

Measure	Description	Responsible Party	2003 Status	Current Status	2022 NCP Recommendation
Approved Noise Abatement Measures					
NA-7	During nighttime hours (10:00 p.m. to 7:00 a.m.) all aircraft over 12,500 pounds departing Runway 25 having departure courses of 250 degrees clockwise through 069 degrees inclusive turn right on course to the Dubuque (DBQ) or the Nodine (ODI) navigational fix as soon as practicable.	ATCT, Airlines, GRAA	Approved as Voluntary	Implemented as Conditions Allow	Recommended to be continued with modifications
NA-8	During daytime hours (7:00 a.m. to 10:00 p.m.) all aircraft over 12,500 pounds departing Runway 25 having departure courses 070 degrees clockwise through 249 degrees inclusive retain 20-degree left turn and maintain heading until reaching 3,000 feet mean sea level (MSL).	ATCT, Airlines, GRAA	Approved as Voluntary	Implemented as Conditions Allow	Recommended to be continued with modifications
NA-9	During nighttime hours (10:00 p.m. to 7:00 a.m.) all aircraft over 12,500 pounds departing Runway 19 having departure courses of 0 degrees clockwise through 190 degrees maintain runway heading until reaching 3,000 feet MSL before turning on course.	ATCT, Airlines, GRAA	Approved as Voluntary	Implemented as Conditions Allow	Recommended to be continued with modifications
NA-10	Establish an informal preferential runway use plan for all daytime and nighttime operations after Runway 7/25 is extended.	ATCT, Airlines, GRAA	Approved as Voluntary	Implemented as Conditions Allow	Recommended to be continued
NA-11	For all aircraft requiring more than 8,000 feet certified takeoff length, Runway 25 preferred.	ATCT, Airlines, GRAA	Approved as Voluntary	Implemented as Conditions Allow	Recommended to be continued

Previously Approved Noise Abatement Measures

Measure	Description	Responsible Party	2003 Status	Current Status	2022 NCP Recommendation
Approved Noise Abatement Measures					
NA-12	During daytime hours (7:00 a.m. to 10:00 p.m.) all aircraft over 12,500 pounds departing Runway 25 having departure courses of 250 degrees clockwise through 069 degrees inclusive turn right on course to the Dubuque (DBQ) or the Nodine (ODI) navigational fix as soon as practicable.	ATCT, Airlines, GRAA	Approved as Voluntary	Implemented as Conditions Allow	Recommended to be continued with modifications
NA-13	During nighttime hours (10:00 p.m. to 7:00 a.m.) all aircraft over 12,500 pounds departing Runway 25 having departure courses 070 degrees clockwise through 249 degrees inclusive turn to a heading of 20 degrees as soon as practicable and maintain heading until reaching 3,000 feet MSL.	ATCT, Airlines, GRAA	Approved as Voluntary	Implemented as Conditions Allow	Recommended to be continued with modifications
NA-14	Aircraft weighing more than 12,500 pounds conduct touch and go and low approach training activity on the south side of the airport when using Runways 7 or 25.	ATCT, Airlines, GRAA	Approved as Voluntary	Implemented as Conditions Allow	Recommended to be continued with modifications
NA-15	During nighttime hours (10:00 p.m. to 7:00 a.m.) all aircraft over 12,500 pounds departing Runway 1, maintain runway heading until reaching 3,000 feet MSL before turning on course.	ATCT, Airlines, GRAA	Approved as Voluntary	Implemented as Conditions Allow	Recommended to be continued
NA-16	Encourage the use of noise attenuating construction standards for all new on-airport structures/facilities and use those structures as noise barriers/buffers to adjacent off-airport land uses.	ATCT, Airlines, GRAA	Approved as Voluntary	Implemented as Conditions Allow	Recommended to be continued

Current Noise Abatement Measures



Noise Abatement Screening Analysis

Description	Benefits	Drawbacks	Evaluation And Recommendation
Flight Track Modifications			
Modify arrival and departure flight tracks to reduce noise within the 65 DNL noise contour	In some circumstances may reduce noise within the 65+ DNL contour	<p>Impacted areas northeast of Runway End 25 are primarily impacted by arrival operations on final approach. These flight track locations can not be adjusted. ATC currently disperses departure operations with left and right turns based on destination.</p> <p>Areas to the southwest of Runway End 7, are impacted by both arrival and departure operations. The arrival tracks could not be modified as the aircraft are on final approach near the impacted homes. Departures are currently dispersed with left and right turns as soon as practical.</p>	<p>Due to the inability to provide benefits to the homes impacted within the 65+ DNL noise contour this alternative is NOT RECOMMENDED for further analysis.</p> <p>Several currently approved voluntary measures address departure flight track dispersion and turn locations and are recommended to be continued. (NA-1, NA-3, NA-4, NA-7, NA-8, NA-9, NA-12, NA-13, NA-14 and NA-15)</p>
Runway Use Modifications			
Increase usage of Runway 01/19	Could reduce noise levels for the areas within the 65+ DNL noise contour to the northeast and southwest of Runway 07/25.	<p>Based on the RFD fleet, the majority of operations will require the use of Runway 7/25 due to the length of the runway. The amount of traffic required to provide substantial noise reduction benefits in impacted areas would not be achievable based on current wind, weather and operational necessities to operate aircraft safely.</p> <p>Increasing the arrivals to Runway End 1 and Departures from Runway End 19 could potentially impact areas in dense urban areas, offsetting any benefits in the reduction of homes in the 65+ DNL to the northeast and southwest of the airport.</p>	<p>Due to the inability to provide benefits to the homes impacted within the 65+ DNL noise contour this alternative is NOT RECOMMENDED for further analysis.</p>

Noise Abatement Screening Analysis

Description	Benefits	Drawbacks	Evaluation And Recommendation
Aircraft Operational Procedure Modifications			
Optimized Profile Descent Approach procedure	Optimized Profile Descent (OPD) procedures (previously known as continuous descent approach [CDA]) have been used at some airports to reduce approach noise at a distance from the airport. Generally, their most notable effect relates to reduced fuel burn and corresponding air emissions.	Potential noise reduction benefits would be limited to areas outside DNL 65+ noise contour. Due to the impacted homes location, implementing OPD's would have no significant noise benefit for impacted homes.	Due to the inability to provide benefits to the homes impacted within the 65+ DNL noise contour this alternative is NOT RECOMMENDED for further analysis.
Implement Distant Noise Abatement Departure Profiles (NADP)	Implementing Distant NADPs can potentially reduce noise for areas further away from the runway end (greater than three miles).	Distant NADPs can potentially increase noise for areas closer to the runway end. Due to the impacted homes location, implementing NADP's would have no significant noise benefit for impacted homes.	Due to the inability to provide benefits to the homes impacted within the 65+ DNL noise contour this alternative is NOT RECOMMENDED for further analysis.
Implement Close-in Noise Abatement Departure Profiles (NADP)	Implementing Close-in NADPs can potentially reduce noise for areas in close proximity to the runway end (less than three miles).	Close-in NADPs can potentially increase noise for areas farther away from the runway end. Due to the fleet mix at RFD many of the aircraft would not have the capabilities to execute Close-in NADP's.	Due to the inability to provide benefits to the homes impacted within the 65+ DNL noise contour this alternative is NOT RECOMMENDED for further analysis.
Moderate Reverse Thrust on Landing	Reduces the amount of noise from the application of reverse thrust after landing.	Reverse thrust can not be eliminated altogether and would be up to the discretion of the pilot. Due to the location of the homes and the anticipated participation, significant reductions to the number of impacted homes in the 65+ DNL are unlikely.	Due to the inability to provide benefits to the homes impacted within the 65+ DNL noise contour this alternative is NOT RECOMMENDED for further analysis.

Noise Abatement Screening Analysis

Description	Benefits	Drawbacks	Evaluation And Recommendation
Airport Facility Modifications			
Extend Runway 1/19	Additional aircraft in the RFD fleet mix would be able utilize Runway 1/19, potentially reducing the utilization of Runway 7/25.	New residential areas to the north and south of the airport could be impacted by increasing utilization of Runway 1/19. Existing buildings and roadways to the north and the Kishwaukee River and existing railroad to the south limit the potential length of Runway 1/19. The cost benefit of such a project is not practical.	Due to the cost of this measure and limitations to the final runway length this alternative is NOT RECOMMENDED to be continued for further analysis.
Ground Run-up Enclosures (GRE)	Can reduce jet run-up noise levels by up to 20 dB.	Currently there are no significant jet aircraft maintenance activities that would justify the cost-benefit of constructing GRE's.	Due to the inability to provide benefits to the homes impacted within the 65+ DNL noise contour this alternative is NOT RECOMMENDED for further analysis.
Airport Facility Restrictions			
Implement Airport Operational Restrictions (Part 161 Restrictions) such as: noise-/time-based landing fees, airport capacity restrictions based on relative "noisiness", aircraft type restrictions based on "noisiness"	Can resolve noise annoyance issues with certain loud aircraft events or aircraft types operating at RFD.	Such restrictions would be subject to the costly and time-consuming analytical requirements under Federal Aviation Regulations Part 161. The FAA has never officially approved such measures. Would have severe financial ramifications both to the Airport and the region.	Restrictions on access to an airport are measures of last resort for use in the most extreme cases of noise impact. This alternative is NOT RECOMMENDED for further analysis.

Noise Abatement Recommendations



The currently implemented noise abatement measures reduce noise impacts within the 65+ DNL noise contour to the fullest extent possible

Existing Noise Abatement Measures

Five (5) measures recommended to continue

Six (6) measures recommended to continue with modifications

Two (2) measures recommended to be withdrawn

Previously Approved Land Use Mitigation Measures

Measure	Description	Responsible Party	2003 Status	Current Status	2022 NCP Recommendation
Approved Land Use Measures					
LU-1	Rezoning of land south of US Route 20 Bypass and west of 20 th Street from agricultural to medium density	Previously withdrawn in the 1994 NCP			
LU-2	Adopt noise overlay zoning prohibiting development of selected noise-sensitive land uses within the 60-65 DNL noise contour (AC-2), high occupancy uses in the “double-clear zone” area (AC-3), and residential uses in the 65+ DNL noise contour (AC-1) of the 2008 Noise Exposure Map (NEM)/Noise Compatibility Program (NCP) within the “double-clear zone” area	GRAA, City of Rockford, Winnebago County, Ogle County	Approved	To date only Ogle County zoning ordinances have incorporated the RFD NCP, these ordinances were updated in 2021 but continue to reference the 1994 NCP.	Recommended to be continued with modification to include the new 2022/2027 NEMs
LU-3	Amend local comprehensive plans to show planned industrial and commercial uses at interchanges of US 20 Bypass and South Main Street	Previously withdrawn in the 1994 NCP			
LU-4	Amend local comprehensive plans by adopting the updated Part 150 NCP as their noise compatibility elements for the City of Rockford and Ogle and Winnebago Counties.	GRAA, City of Rockford, Winnebago County, Ogle County	Approved	To date only Ogle County Comprehensive Plans have incorporated the RFD NCP, however this language is no longer included in the 2012 Comprehensive Plan. Language related to continuing an active presence in RFD activities is included.	Recommended to be continued with modification to include the new 2022/2027 NEMs.

Previously Approved Land Use Mitigation Measures

Measure	Description	Responsible Party	2003 Status	Current Status	2022 NCP Recommendation
Approved Land Use Measures					
LU-5	Adopt guidelines for discretionary review of development projects for the City of Rockford, Winnebago County, Ogle County, and the GRAA	GRAA, City of Rockford, Winnebago County, Ogle County	Approved	Implemented as Needed	Recommended to be continued with modification to include the new 2022/2027 NEMs.
LU-6	Acquire homes off the approach end of Runway 19	Previously withdrawn in the 1994 NCP			
LU-7	Encourage Forest Preserve District to consider acquisition of land adjacent to the existing Forest Preserves south of the airport	Previously withdrawn in the 1994 NCP			
LU-8	Voluntary acquisition of single-family residences on Blackhawk Island in the 2008 NEM/NCP 65 DNL noise contour	GRAA	Approved	Fully Implemented	Recommended to be withdrawn from NCP
LU-9	Redevelop airport-owned land parcels located along Kishwaukee Street south of Research Parkway	GRAA	Approved	The implementation of this is measure pending; dependent upon the interest of a potential developer and the availability of funding.	Recommended to be continued
LU-10	Consideration of transfer of GRAA land of high natural value along Kishwaukee River to Forest Preserve or park district to be maintained as natural area and airport noise buffer	Previously withdrawn in the 2003 NCP			

Previously Approved Land Use Mitigation Measures

Measure	Description	Responsible Party	2003 Status	Current Status	2022 NCP Recommendation
Approved Land Use Measures					
LU-11	Acquire development and overflight rights via purchase of land use and avigation easement over undeveloped parcel in Runway 07L approach area on south side of Kishwaukee River.	GRAA	Approved	Fully Implemented	Recommended to be withdrawn from NCP
LU-12	Offer options of voluntary sale to GRAA or sound insulation to owner of one (1) single-family residence south of the airport in the 65 DNL contour of the 1993 NCP.	GRAA	Approved	This measure was implemented with the voluntary sale of one (1) single-family home.	Recommended to be withdrawn as acquisition of the single-family home was completed.
LU-13	Encourage the City of Rockford and Winnebago County to require plat notes on new subdivision plats and to record the notes on deeds for new subdivisions within the Airport Noise Overlay Zones AC-1 and AC-2.	GRAA, City of Rockford, Winnebago County	Approved	To date, the airport noise contours are not referenced in any local subdivision ordinance.	Recommended to be continued with modification to include the new 2022/2027 NEMs.
LU-14	Encourage Winnebago County, the City of Rockford, the Village of New Milford, and the Village of Davis Junction not to allow an increase in the residential density in the Agricultural Priority (AG) or Rural Residential (RR) zoning districts (Winnebago County) in the 2008 NEM/NCP 60+ DNL noise contour.	GRAA, City of Rockford, Winnebago County, Ogle County and Villages of New Milford and Davis Junction	Approved	To date based on zoning ordinances the allowable residential densities allowed in these zones has been increased	Recommended to be continued with modification to include the new 2022/2027 NEMs.

Land Use Mitigation Recommendations

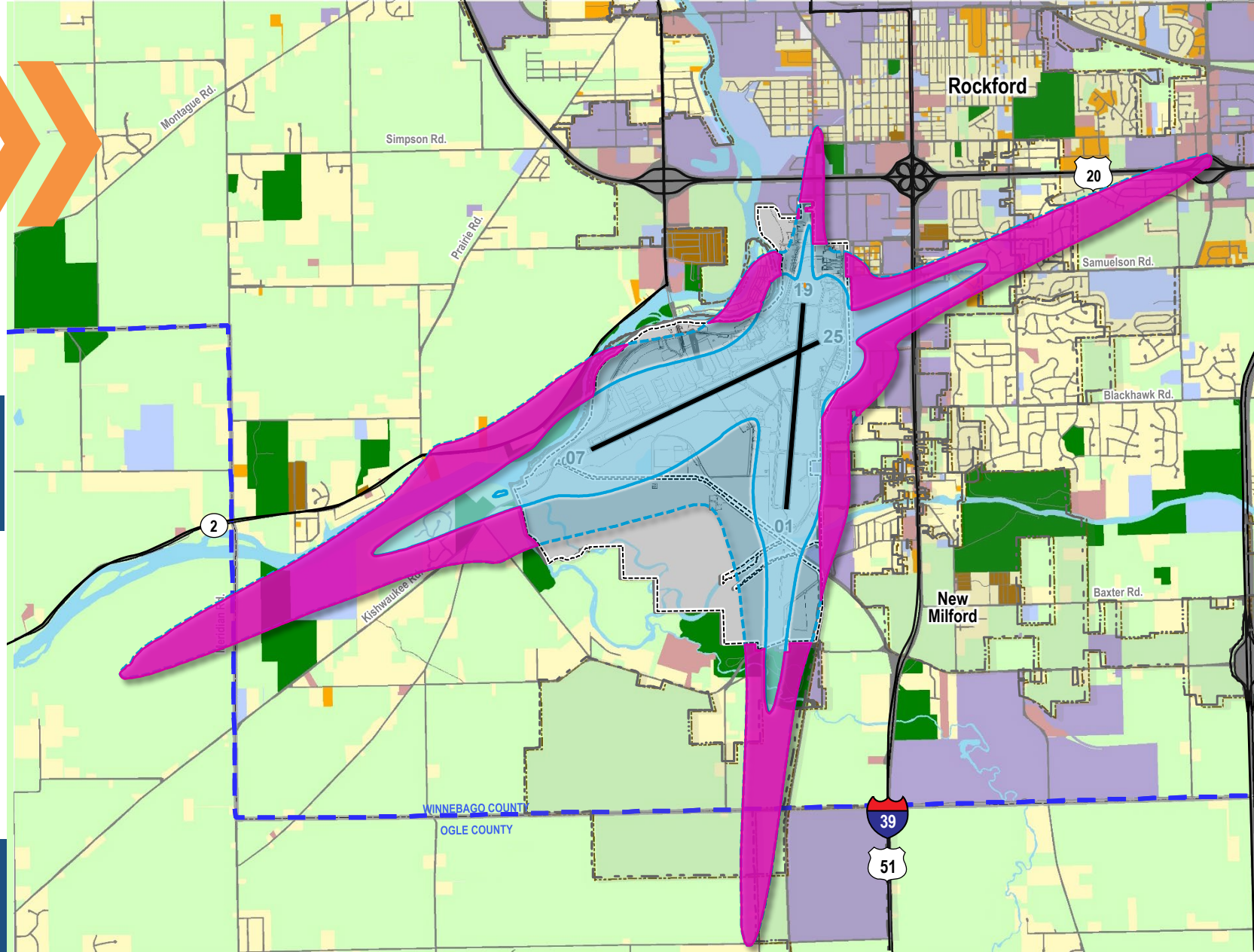
Zone AC-1 Prohibited Land Uses

Recommended Land Use Restrictions

Mobile Homes
Hospitals and Nursing Homes
Outdoor Music Shells and Amphitheaters
Resorts and Group Camps

60 DNL 65 DNL Zone AC-1

Single-Family Residential	Water	Arterial Roads
Multi-Family Residential	Agricultural / Open Space / Vacant	Interstate/Major Roads
Manufactured Housing	Commercial	Airport Property Boundary
Park / Recreation	Industrial	County Boundaries
Institutional	ROW/Utility	Municipal Boundaries



Land Use Mitigation Recommendations

Zone AC-2 Prohibited Land Uses

Recommended Land Use Restrictions

Residential (SF & MF) units if also in Zone AC-3
















Education Services

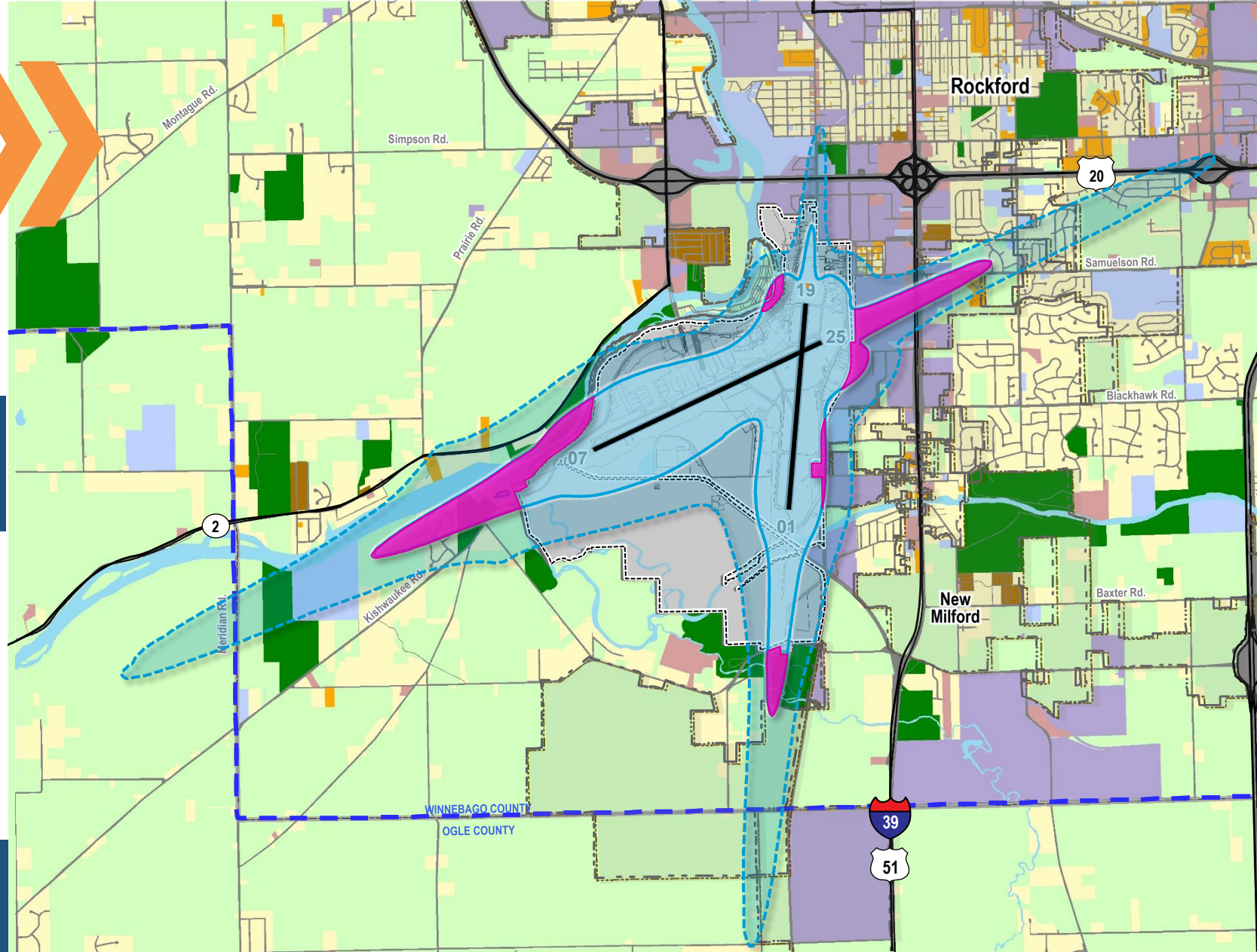
Medical Facilities (other than hospitals & nursing homes)

Cultural Activities Including Churches

Auditoriums, Concert Halls

 60 DNL  65 DNL  Zone AC-2

 Single-Family Residential	 Water	 Arterial Roads
 Multi-Family Residential	 Agricultural / Open Space / Vacant	 Interstate/Major Roads
 Manufactured Housing	 Commercial	 Airport Property Boundary
 Park / Recreation	 Industrial	 County Boundaries
 Institutional	 ROW/Utility	 Municipal Boundaries



Land Use Mitigation Recommendations

Zone AC-3 Prohibited Land Uses

Recommended Land Use Restrictions

Residential (SF & MF) Units

Education Institutions

Hotels & Motels

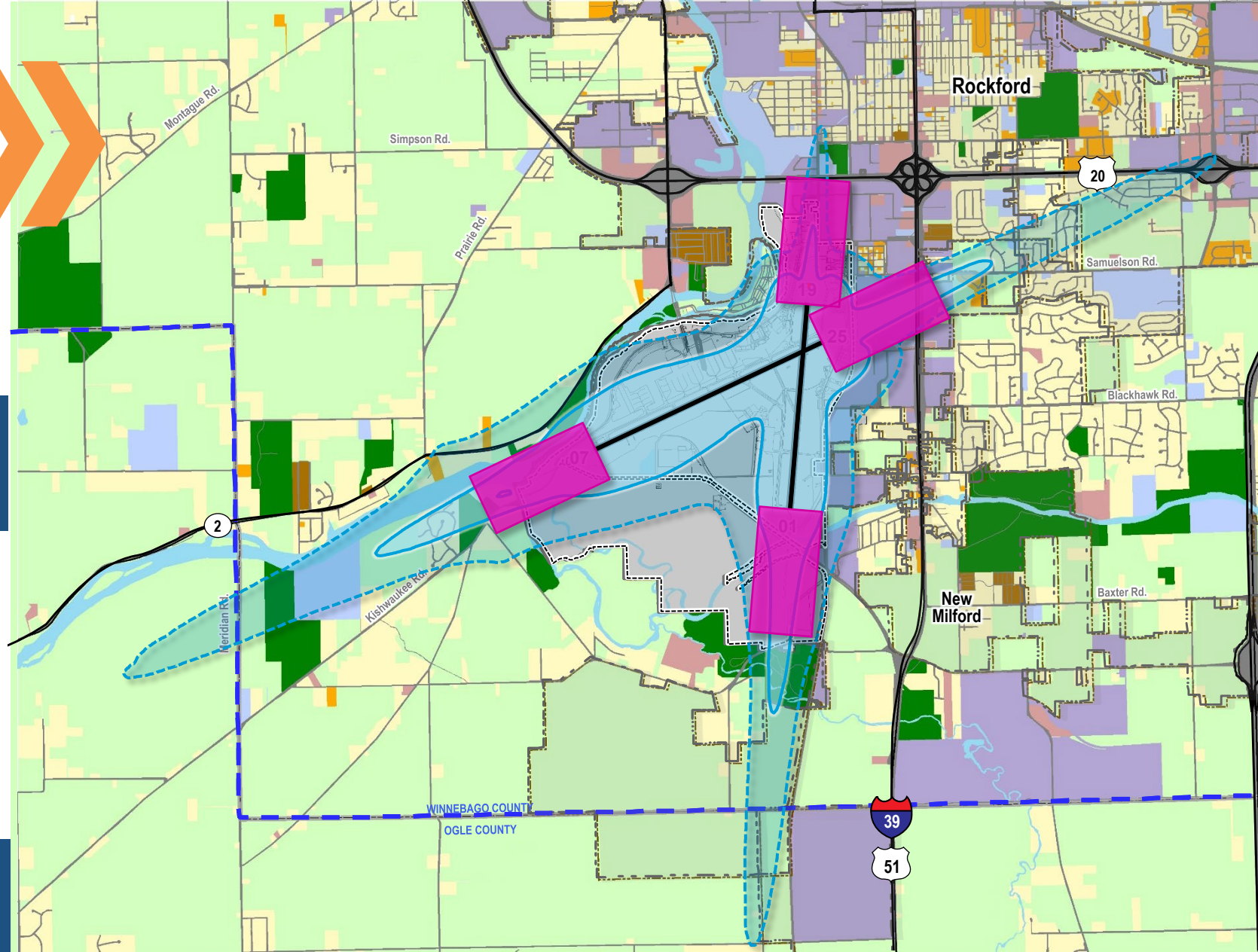
Libraries, Museums, Art Galleries or Similar Use

Sports & Amusement Arenas | Parks

Indoor And Outdoor

60 DNL 65 DNL Zone AC-3

Single-Family Residential	Water	Arterial Roads
Multi-Family Residential	Agricultural / Open Space / Vacant	Interstate/Major Roads
Manufactured Housing	Commercial	Airport Property Boundary
Park / Recreation	Industrial	County Boundaries
Institutional	ROW/Utility	Municipal Boundaries



Land Use Mitigation Screening Analysis



Description	Benefits	Drawbacks	Evaluation & Recommendation
Corrective			
Offer Residential Sound Insulation Program for Single- and Multi-Family Homes within the 65+ DNL Noise Contour and in the defined Block Rounding Areas Outside of the 65+ DNL Noise Contour.	Would reduce interior noise levels for the homes impacted within the 65+ DNL contour and in the block rounding area outside of the 65+ DNL noise contour.	Final eligibility for each property would have to be determined. Final cost would still have to be determined based on participation rates and local costs to implement.	This measure has the ability to provide benefits to the homes impacted by the 65+ DNL noise contour and in the block rounding area outside the 65+ DNL noise contour. Therefore, this alternative is RECOMMENDED for inclusion in the NCP.
Offer Avigation Easements to Owner-Occupied Single- and Multi-Family Homes if Sound Insulation is declined by property owner.	Has the potential to convert owner-occupied residential housing units into compatible uses. Properties would remain as taxable land.	Final eligibility for each property would have to be determined. Final cost dependent on participants that decline sound insulation.	This measure has the ability to convert impacted properties to compatible uses. Therefore, this alternative is RECOMMENDED for inclusion in the NCP.

Land Use Mitigation Screening Analysis

Description	Benefits	Drawbacks	Evaluation & Recommendation
Preventative			
Adopt Improved Building Codes	This alternative would recommend updating existing building codes to ensure that new residential construction meets current FAA criteria for sound insulation within AC-1 and AC-2 zones.	This alternative would likely increase the overall cost of residential construction	This measure will require potential builders to use higher quality materials during construction to reduce noise within residential structures within the 60+ DNL noise contours. Therefore, this alternative is RECOMMENDED for inclusion in the NCP.
Develop a Voluntary Fair Disclosure Program for Resale Properties	Will disclose through regulations on the seller or their representatives at the time of sale that an existing property could be subjected to aircraft noise. Potential buyers will be made aware before they purchase the property that it is within AC-1 and AC-2 zones.	Will need to seek cooperation from the City of Rockford and Winnebago County along with the local Rockford realtors to participate.	This measure will notify potential buyers that they may be subjected to aircraft noise within the 60+ DNL noise contour. This alternative is RECOMMENDED for inclusion in the NCP.
Re-zoning of parcels within AC-1 and AC-2 zones	This measure would attempt to prevent future non-compatible development and land uses within AC-1 and AC-2 zones.	Potential loss of tax-base dependent on future zoning designation. Based on local land use regulations and ordinances, residential and other incompatible land uses are permitted within compatible zoning such as commercial and industrial.	This measure fails to meet FAA guidance for effectively preventing incompatible land use due to local land use guidelines. Therefore, this alternative is NOT RECOMMENDED for inclusion in the NCP.

Land Use Mitigation Recommendations



- *Nine (9) previously approved Land Use Mitigation Measures are recommended for continuation*
- *Eight (8) Measures are recommended for continuation with modification*
- *One (1) Measure is recommended for continuation*
- *Three (3) Measures are recommended to be withdrawn*
- *Four (4) new Measures are recommended for inclusion in the 2022 NCP*

New Remedial Land Use Mitigation Recommendations



- Two (2) new remedial land use mitigation measures are recommended

LU-15: Sound Insulation of residential properties is recommended within defined boundaries known as Noise Mitigation Program Area's (NMPA)

- Not all properties will meet eligibility requirements for sound insulation, based on interior sound level reduction tests performed during the program.

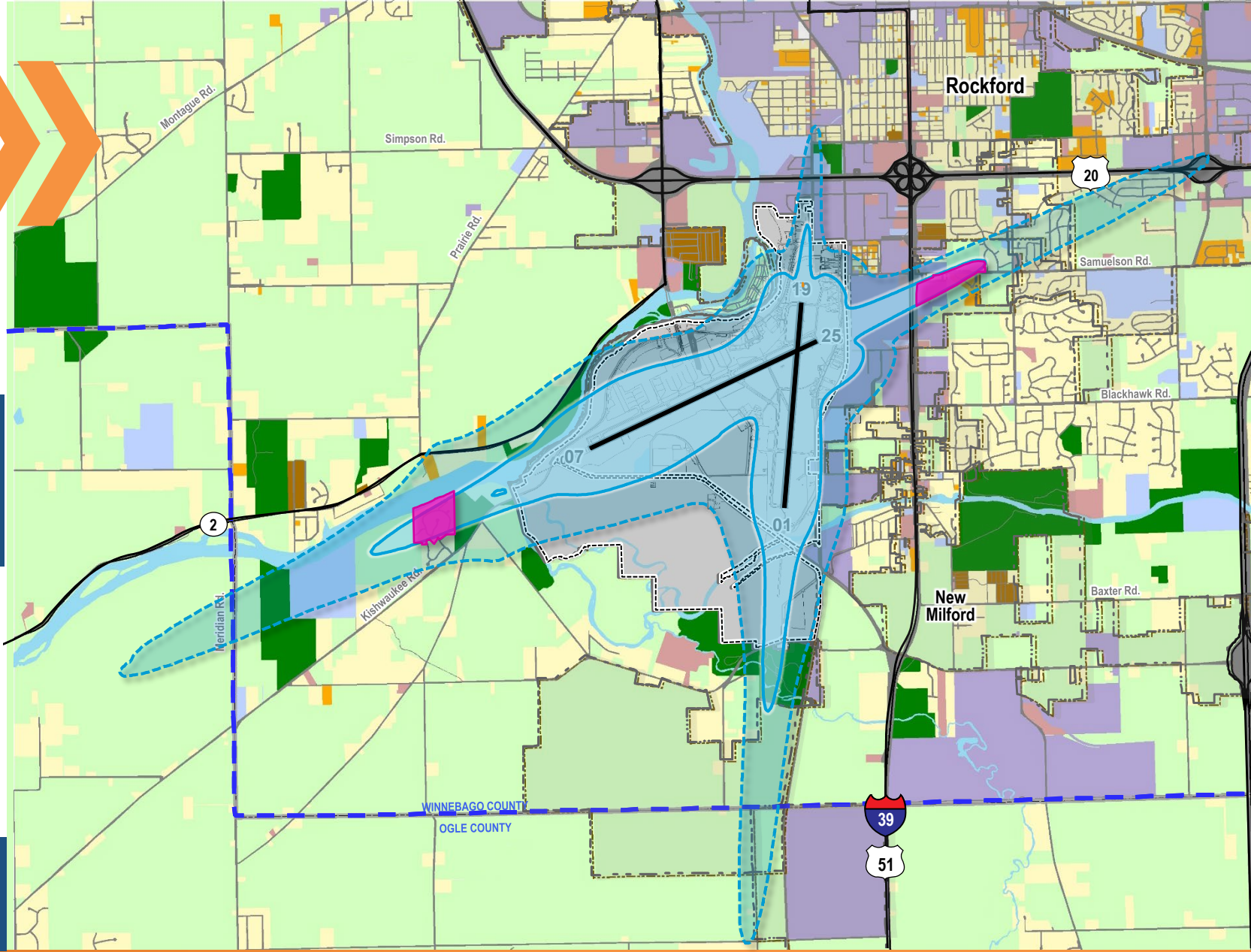
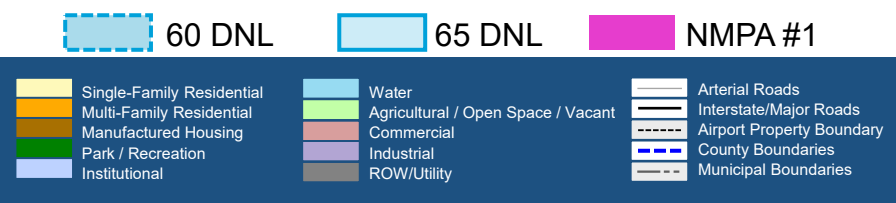
LU-16: Offer Avigation Easements to owner-occupied single- and multi-family homes within NMPA #1 if sound insulation is declined and or eligibility requirements are not met.

Remedial Land Use Mitigation Analysis Recommendations



NMPA #1 Residential Sound Insulation Program

37 Single-Family Units
16 Multi-Family Units



Proposed Primary NMPA #1a



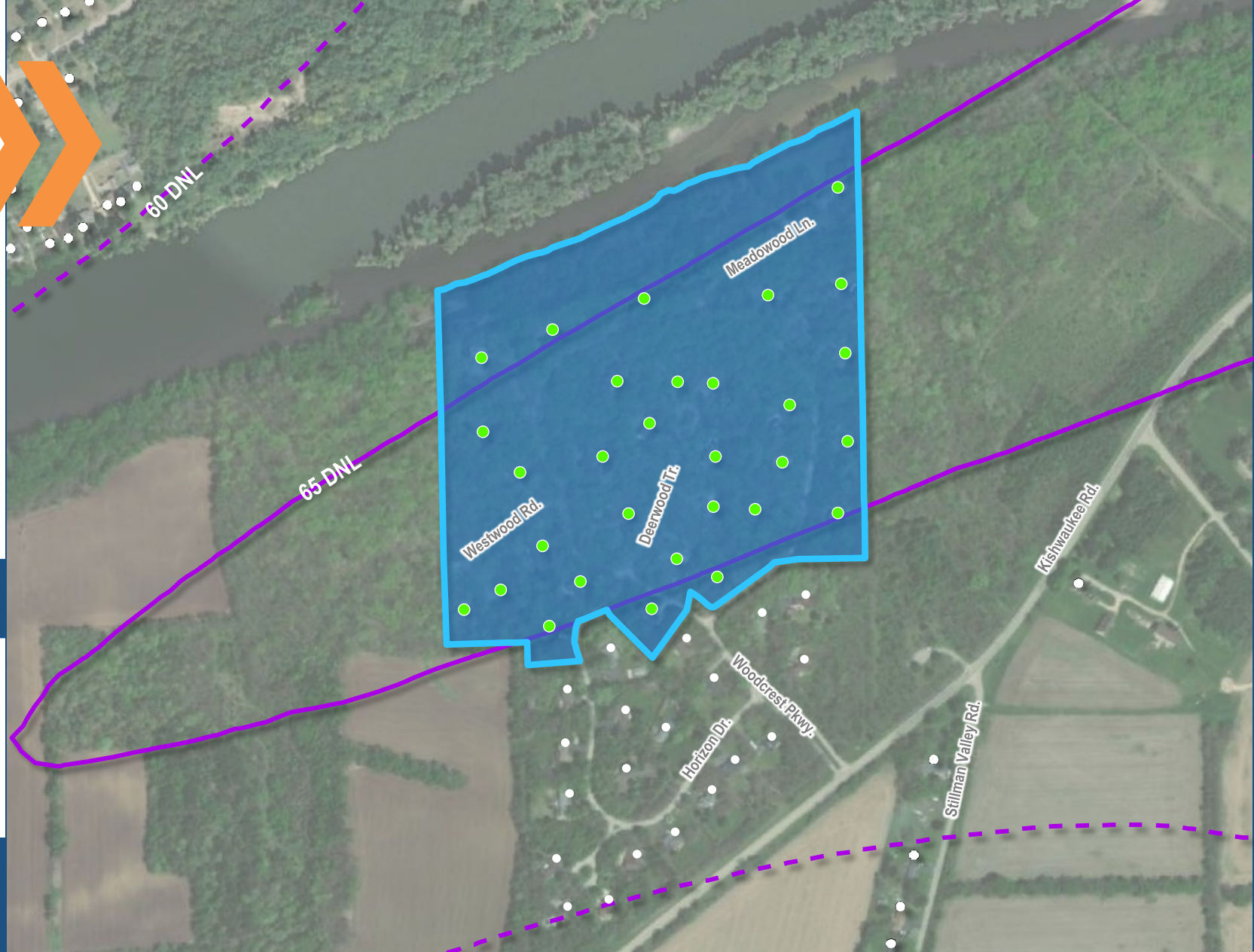
NMPA Subject to FAA Review & Approval

NMPA #1a | 30 SF Units

Based on AIP Handbook

Section R-6, Eligible Noise Contour Threshold
(a) DNL 65 dB Noise Contour

-  NMPA 1a
-  Residential Units in NMPA 1a
-  Residential Units outside NMPA 1a
-  Future (2027) 60 DNL Noise Exposure Contour
-  Future (2027) 65 DNL Noise Exposure Contour
-  Airport Property Boundary



Proposed Primary NMPA #1b



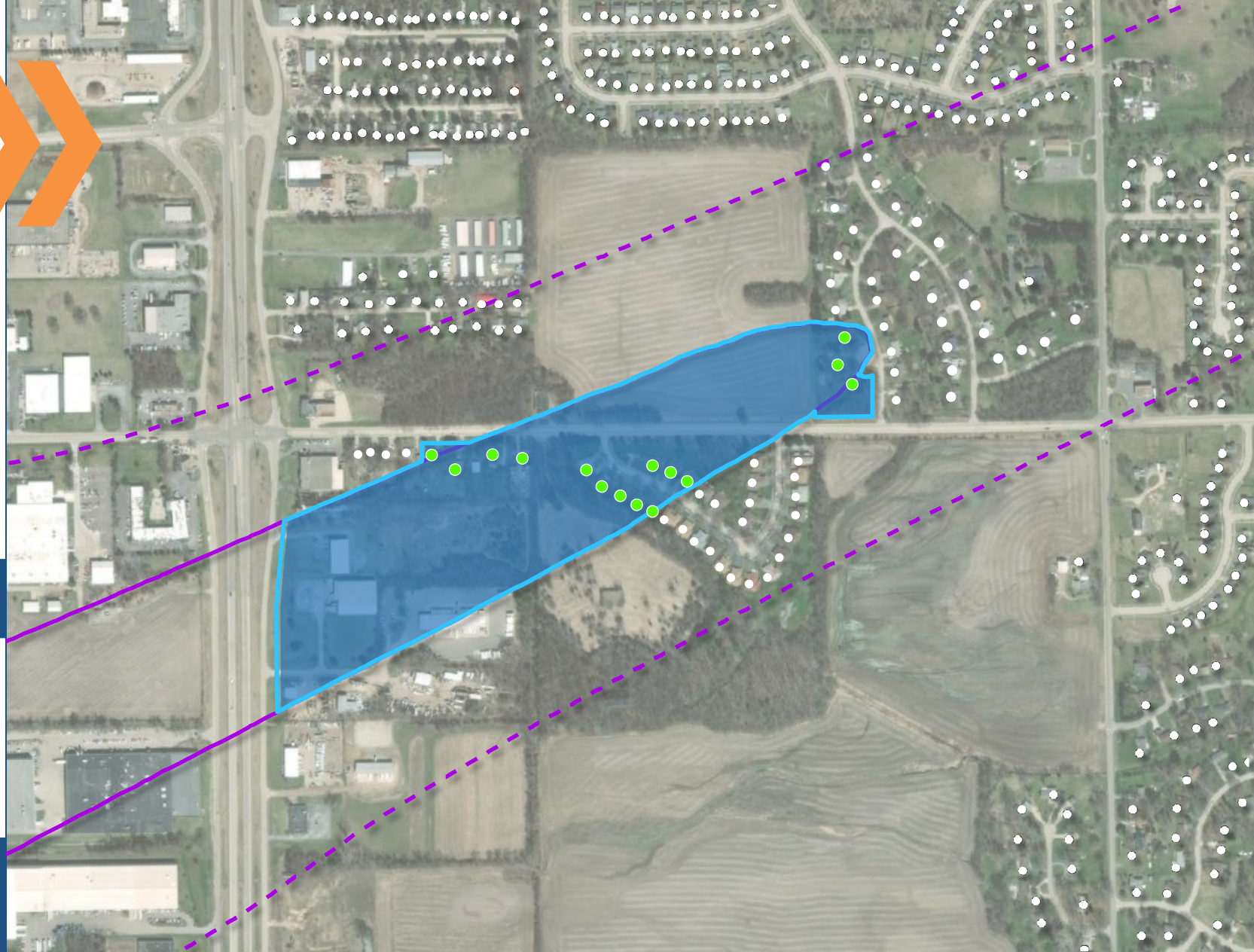
NMPA Subject to FAA Review & Approval

NMPA #1b | 7 SF Unit | 16 MF Units

Based on AIP Handbook

Section R-6, Eligible Noise Contour Threshold
(a) DNL 65 dB Noise Contour

-  NMPA 1b
-  Residential Units in NMPA 1a
-  Residential Units outside NMPA 1a
-  Future (2027) 60+ DNL Noise Exposure Contour
-  Future (2027) 65+ DNL Noise Exposure Contour
-  Airport Property Boundary



Remedial Land Use Mitigation Analysis Recommendations



NMPA #2 Residential Sound Insulation Program

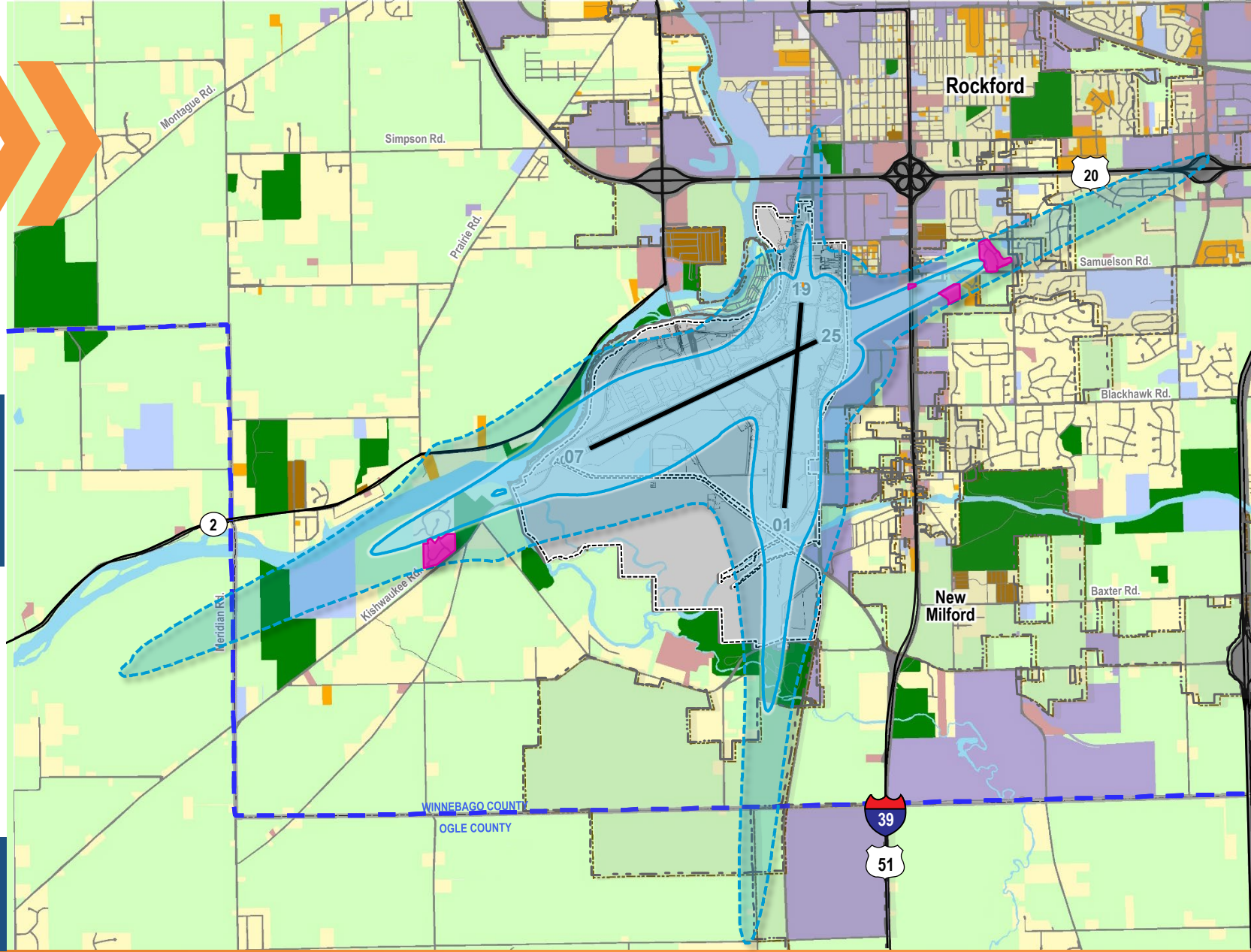
Block Rounding Area Subject to FAA Review & Approval

55 Single-Family Units

40 Multi-Family Units

60 DNL 65 DNL NMPA #2

- | | | |
|---------------------------|------------------------------------|---------------------------|
| Single-Family Residential | Water | Arterial Roads |
| Multi-Family Residential | Agricultural / Open Space / Vacant | Interstate/Major Roads |
| Manufactured Housing | Commercial | Airport Property Boundary |
| Park / Recreation | Industrial | County Boundaries |
| Institutional | ROW/Utility | Municipal Boundaries |



Proposed Block Rounding NMPA #2a



NMPA Subject to FAA Review & Approval

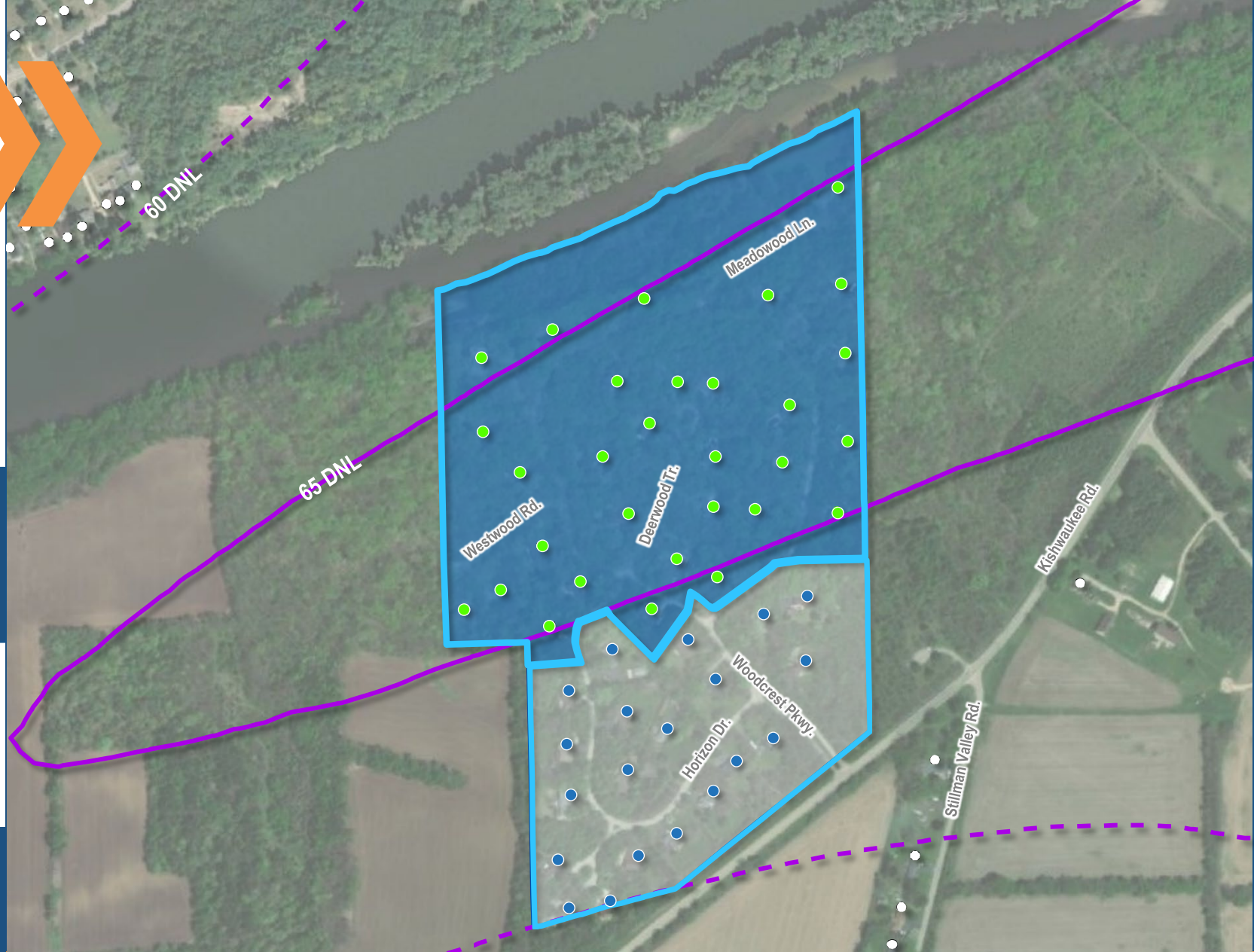
NMPA #2a | 20 SF Units

Block rounding area #2a includes SF Units outside the 65+ DNL noise contour in Woodcrest Estates subdivision south to Kishwaukee Road

Based on AIP Handbook

**Table R-2, Block Rounding Requirements |
(e) Logical Breakpoint**

Neighborhood Boundary | Significant Arterial Surface Street



Proposed Block Rounding NMPA #2b, 2c, 2d

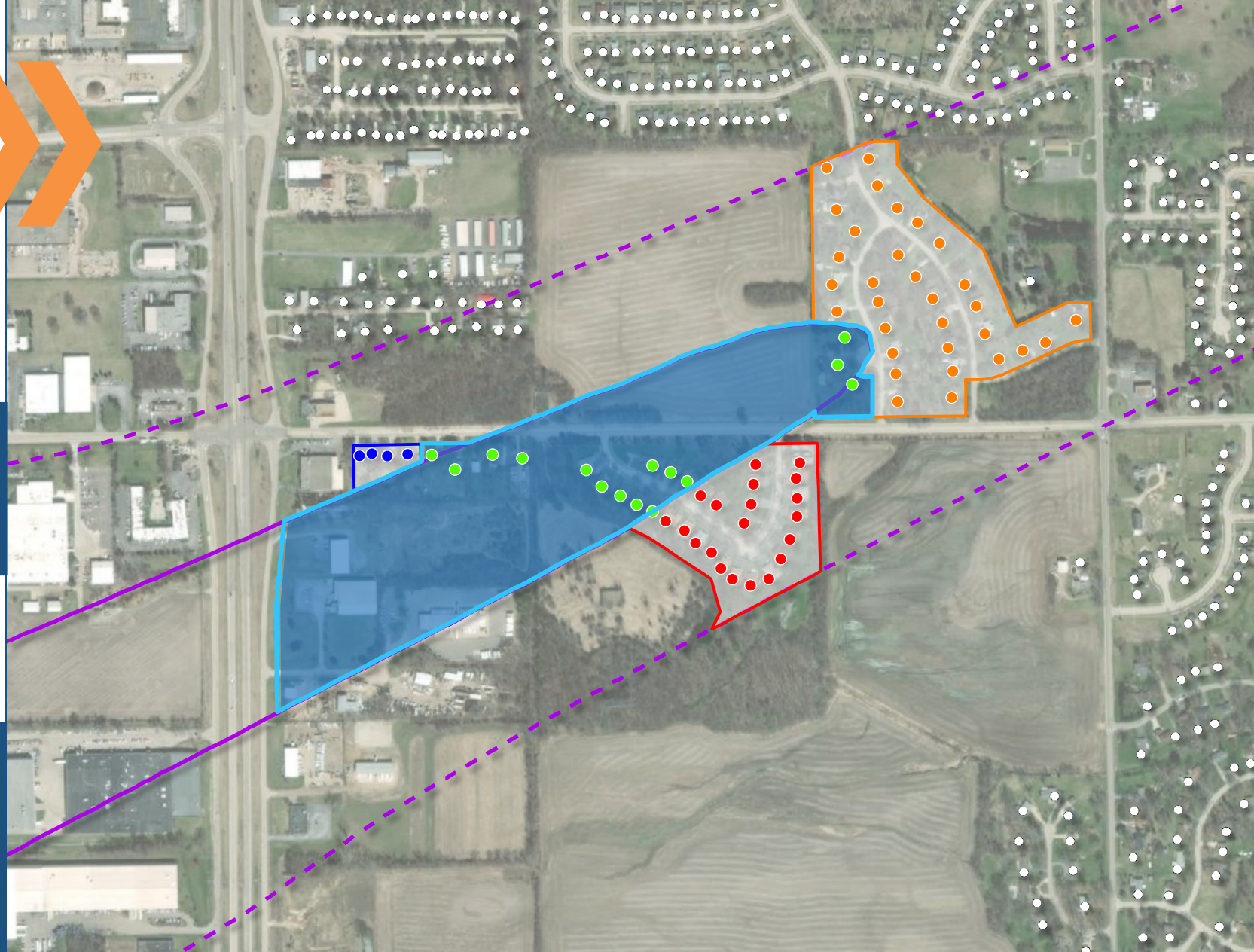
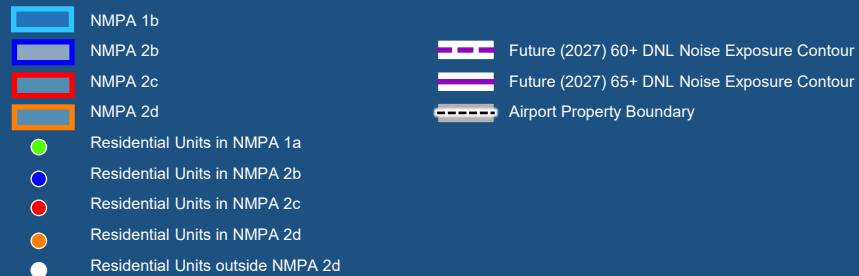


NMPA Subject to FAA Review & Approval

NMPA #2b | 4 SF Units
NMPA #2c | 40 MF Units
NMPA #2d | 31 SF Units

Based on AIP Handbook
Table R-2, Block Rounding Requirements
(e) Logical Breakpoint

Neighborhood Boundary | Significant Arterial Surface Street



NMPA Housing Units and Population Counts

Land Use	NMPA #1		NMPA #2		Total	
	Total Housing Units	Population	Total Housing Units	Population	Total Housing Units	Population
Runway 7 Approach End – Southwest of Airport						
SF Residential	30	76	20	51	50	127
MF Residential	0	0	0	0	0	0
Runway 25 Approach End – Northeast of Airport						
SF Residential	7	19	35	97	42	116
MF Residential	16	44	40	110	56	154
Total	53	139	95	258	148	397

Corrective Land Use Mitigation Estimated Cost

Measure Id	Type Of Measure	Direct Cost (Total)	Direct Cost To FAA (80% Share)	Direct Cost To Airport (20% Share)
Residential Sound Insulation Program				
LU-15 ⁽¹⁾	Offer Residential Sound Insulation to 53 Residential Units within the 65 DNL Noise Contour (NMPA 1a & 1b) and 95 Residential Units outside the 65 DNL Noise Contour (NMPA 2a, 2b, 2c, & 2d)	\$9,187,500 ⁽²⁾ (\$62,500 per home)	\$7,350,000	\$1,837,500

Notes:

(1) Property owners who decline sound insulation would be offered aviation easements as part of measure LU-16. Estimated costs of aviation easements \$3,000 per home.

(2) Total cost for LU-15 mitigation measure is the maximum possible mitigation cost and assumes 100 percent participation in program by eligible property owners. Property owners participating would also have to ensure they meet both the eligibility requirements for interior noise levels and the year the property was built. In addition, some property owners may choose one measure over another which would reduce overall costs. All costs are based on 2020 cost projections.

NMPA	Housing Counts	Direct Cost (Total)	Direct Cost To FAA (80% Share)	Direct Cost To Airport (20% Share)
1a/1b	Residential Units inside 65 DNL– 53 SF & MF units	\$3,312,500	\$2,650,000	\$662,500
2a	Residential Units outside 65 DNL – 20 SF units	\$1,250,000	\$1,000,000	\$250,000
2b	Residential Units outside 65 DNL – 4 SF units	\$250,000	\$200,000	\$50,000
2c	Residential Units outside 65 DNL – 40 MF units	\$2,500,000	\$2,000,000	\$500,000
2d	Residential Units outside 65 DNL – 30 SF units	\$1,875,000	\$1,500,000	\$375,000

New Preventative Land Use Mitigation Recommendations



- Two (2) new preventative land use mitigation measures are recommended

LU17: Improved Building Codes

- Update existing building codes to meet current sound insulation guidelines
- Reduces interior noise levels
- For new development or major remodeling

LU-18: Voluntary Fair Disclosure Program

- Property sales subjected to notification
- Probability of safety or aircraft noise impacts
- Formal measure would require recording of a notice at time of sale
- Informal measure could be mailings of disclosure notices within community

Preventative Land Use Mitigation Estimated Costs

Type Of Measure	Direct Cost (Total)	Direct Cost To FAA (80% Share)	Direct Cost To Airport (20% Share)	Direct Cost To Local Government	Direct Cost To Users
Mitigation Measures (Preventative)					
Adopt Improved Building Codes	\$25,000	\$20,000	\$5,000	Minimal	None
Develop A Voluntary Fair Disclosure Program	\$25,000	--	\$25,000	Minimal	None
Subtotal	\$50,000 Plus Administrative Costs	\$20,000 Plus Administrative Costs	\$30,000 Plus Administrative Costs	Minimal Administrative Costs; Plus Potential Loss Of Tax Base	None

Previously Approved Program Management Measures

Measure	Description	Responsible Party	2003 Status	Current Status	2022 NCP Recommendation
Approved Program Management Measures					
OM-1	Monitoring compliance with recommended Noise Abatement Measures, contour updating (five-year cycle), and land use implementation assistance.	Greater Rockford Airport Authority (GRAA)	Approved	Implemented	Recommended to be continued
OM-2	Noise complaint response system and computer database.	GRAA	Approved	Partially Implemented	Recommended to be continued with modifications
OM-3	Plan review and evaluation. GRAA staff periodically review the NCP and consider revisions and refinements, as necessary.	GRAA	Approved	Implemented	Recommended to be continued
OM-4	Establish a Pilot/Community Awareness Program.	GRAA	Approved	Not Implemented	Recommended to be continued
OM-5	Publication of Instrument Departure Procedures for Runways 1, 19, and 25.	GRAA	Approved	Not Implemented	Recommended to be continued
OM-6	Update airport information in the Airport Facilities Directory.	GRAA	Approved	Implemented	Recommended to be continued

Program Management Screening Analysis

Description	Benefits	Drawbacks	Evaluation & Recommendation
Formal logging of noise complaints	This measure would provide airport staff with data on potential or emerging noise issues around the airport.	Costs for staff to maintain website, respond to telephone complaints and/or logging complaints in a formal manner.	Airport staff should continue to receive noise complaints on an as-required basis. Due to the low level of noise complaints, acquiring a noise complaint system is not recommended. However, a more formal system of complaint logging should be used by airport staff and the information used as a basis for future meetings. As a result, it is RECOMMENDED that the present system of logging noise complaints be continued with modification and should be included in the NCP. Modification to OM-2
Initiate noise monitoring program	This measure would provide the airport with information regarding aircraft noise levels to the public.	Costs to purchase, run, and maintain permanent noise monitoring system or portable noise monitors including staff costs to run the system and to analyze the data.	Due to the low level of noise complaints and the cost to implement and maintain a noise monitoring system/program, this alternative is NOT RECOMMENDED for further analysis.

Program Management Recommendations



- *Five (5) previously approved Program Management Measures are recommended for continuation*
- *One (1) Measure is recommended for continuation with modification*

Program Management Estimated Costs

Type Of Measure	Direct Cost (Total)	Direct Cost To FAA (80% Share)	Direct Cost To Airport (20% Share)	Direct Cost To Local Government	Direct Cost To Users
Program Management Measures					
Continue Logging of Noise Complaints	Minimal Administrative Costs	None	Minimal Administrative Costs	None	None
Initiate Community Roundtable or Noise Abatement Committee	Minimal Administrative Costs	None	Minimal Administrative Costs	None	None
Perform Regular Updates to the NEMs and Review of NCP					
Update NEM ONLY	\$350,000 to \$400,000	\$280,000 to \$320,000	\$70,000 to \$80,000	None	None
Or					
Update NEM & NCP	\$650,000 to \$750,000	\$520,000 to \$600,000	\$130,000 to \$150,000		
Subtotal	\$350,000 to \$750,000 plus administrative costs	\$280,000 to \$600,000 plus administrative costs	\$70,000 to \$150,000 plus administrative costs	None	None

Next Steps



- **Gather Input and Acceptance of Noise Abatement, Land Use Mitigation, Program Management Measures**
 - Gather input from advisory committee
 - Gather input from public
 - Gather input from GRAA
 - Gather input from ATC / FAA
 - GRAA acceptance of NCP recommendations
- **Prepare Materials for Next AC meeting and Public Hearing/Workshop**
- **Prepare Draft NEM and NCP documentation**
- **Gather Comments on Preliminary Draft documentation**