

**DETROIT METROPOLITAN WAYNE COUNTY AIRPORT  
FAR PART 150 NOISE COMPATIBILITY STUDY UPDATE**



DETROIT METRO • WILLOW RUN  
WAYNE COUNTY AIRPORT AUTHORITY

**CHAPTER H  
POTENTIAL LAND USE &  
ADMINISTRATIVE ALTERNATIVES**

## Potential Land Use and Administrative Alternatives

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The previous chapters presented the evaluation and analysis of airport operational noise abatement procedures. Included in those documents were the evaluation of approach and departure procedures, runway use alternatives/other operational procedures, and facility modifications. Those chapters addressed measures that could reduce the number of people affected by noise by changing the operational characteristics of aircraft flying into and out of Detroit Metropolitan Wayne County International Airport.

This chapter presents the evaluation, analysis, and recommendations of land use alternatives as well as administrative alternatives. Land use alternatives represent mechanisms that local land use officials can undertake to improve the compatibility of areas exposed to various noise levels. The analysis includes several measures that arose as a result of the public outreach process and discussions that have taken place at the Study Advisory Committee (SAC) meetings (Appendix Five, Six & Seven).

### Summary of Land Use Alternatives

This alternatives analysis focuses on the evaluation of land use measures designed to reduce incompatible land use within specific noise exposure contours. Federal guidelines contained in FAR Part 150 indicate that residential development, along with other noise sensitive uses such as schools, religious facilities, hospitals, nursing homes, etc. should be discouraged from developing within areas exposed to 65 DNL and greater sound levels. These guidelines are recognized by the FAA and also by the Department of Housing and Urban Development, Department of Defense, and the Environmental Protection Agency, as well as numerous state and local agencies.

Land use compatibility actions can be placed in two groups:

- **Preventive:** prohibiting certain land uses from developing within the aircraft noise exposure contours. Preventive actions do not affect existing land uses but are targeted at preventing future noise sensitive uses. Preventive actions include zoning, building codes/subdivision regulation provisions, granting of avigation easements, sound attenuation requirements for new construction, buyer disclosure statements and comprehensive plan amendments.
- **Remedial or corrective:** Remedial or corrective actions are directed at correcting existing land use incompatibilities. Remedial actions may include sound insulation of single family structures, multi-family structures, sleeping portions of fire stations, hospitals, assisted living facilities, religious facilities, schools and libraries; purchase of non-compatible land uses within high noise contours; purchase of avigation easements; and sales assistance programs.

Preventative measures are within the authority of the local jurisdiction and usually of lesser concern to citizens living near the Airport because they apply only to new construction. Remedial measures are within the authority of the FAA to fund for existing homes inside the 65 DNL noise contour. Both types of land use alternatives were evaluated.

The Airport Authority (Appendix Nine) has been in the process of implementing remedial land use measures for the past several years, since the completion of the last Part 150 Study and the issuance of the Record of Approval in 1993. The Airport has sound attenuated approximately 2,510 houses at a cost of \$79,000,000 dollars. About \$5.4 million was spent to insulate schools. Homes most severely impacted (70 DNL and greater) were acquired -- about 275 homes in Romulus and Huron Township were acquired at a cost of about \$35.7 million. Thus, the Airport Authority spent about \$122 million from 1992-2007 to improve the compatibility of area land uses with aircraft noise exposure.

As was described in prior chapters, the following noise exposure impacts have been identified by this Part 150.

**Table H.1**  
Summary of Existing and Future Baseline Noise Exposure Impacts

	Baseline (2004)/No Action		Baseline (2011)/No Action	
	Population	Housing	Population	Housing
<b>65-70 DNL</b>				
Huron Township	160	60	90	40
Romulus	1,060	490	730	330
Taylor	10	10	0	0
Westland	<u>110</u>	<u>50</u>	<u>120</u>	<u>60</u>
Subtotal	1,340	610	940	430
<b>70-75 DNL</b>				
Romulus	<u>40</u>	<u>20</u>	<u>50</u>	<u>30</u>
Subtotal	40	20	50	30
<b>65 DNL &amp; Greater</b>				
Huron Township	160	60	90	40
Romulus	1,100	510	780	360
Taylor	10	10	0	0
Westland	<u>110</u>	<u>50</u>	<u>120</u>	<u>60</u>
Subtotal	1,380	630	990	460
Schools		1		0
Libraries		0		0
Nursing Homes		0		0
Hospitals		0		0
Churches		0		0

Source: 2000 US Census Numbers rounded to the nearest 10 – for digits less than 5, rounded to 10.

Note: no residential uses are located in the 75 DNL and greater contours. No other noise sensitive uses are located in the 70 DNL and greater contour.

All of the noise sensitive uses<sup>1</sup> within the 2004 (existing conditions) and future (2011) 65 DNL noise contours have either been sound attenuated or have been offered, but refused, sound attenuation. **Because all noise sensitive uses within the 65 DNL contour have been offered/insulated, the emphasis of this chapter will concentrate on the preventative land use measures** that can be implemented by the various jurisdictions surrounding the Airport with land use control authority. Each of these measures is described in greater detail in the following pages. Land use measures recommended and approved in the previous FAR Part 150 Study, but not yet adopted or implemented by the entities having jurisdiction, remain as recommendations.

### **Evaluation Method:**

**The existing noise contour (2004) is the largest noise contour generated by aircraft operating at Detroit Metropolitan Wayne County Airport (DTW). For this reason, the existing contour will be used to quantify the number of structures and people eligible for participation for each of the land use measures.**

For remedial land use measures (those eligible for Federal funding), the 65 DNL and greater contours will be used for evaluation. It is important to note that Federal policy precludes homes constructed after January 1998 within known noise contours from being eligible for Federal remedial land use funding associated with the recommendations. As previously noted, residential land use is considered compatible up to the 65 DNL and sometimes in higher contours, such as 70 DNL, if specific measures are taken such as additional sound insulation.

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<sup>1</sup> Noise sensitive uses include: residences, schools, nursing homes, libraries, hospitals, and churches.

**Land Use Alternative 1  
Voluntary Sound Insulation of Noise Sensitive Structures Such as Single Family Homes, Multi-family Homes, Assisted-care Facilities, and Schools and Religious Facilities**

**Goal:** To reduce the noise levels experienced inside noise sensitive uses. This would reduce aircraft-generated noise intrusion for sleeping, studying, and religious activities.

**Description:**

This alternative is a continuation of an existing program amended to include structures within the 65 DNL or greater noise levels of the 2004 contour. It proposes to voluntarily sound attenuate the habitable rooms in eligible structures to achieve an inside noise level of 45 dBA or less, with a minimum 5 dB reduction. The eligible structures include single family residences, multi-family residences, schools, and religious facilities. The sound attenuation costs would be borne by the FAA with Airport matching funds and would generally be an extension of the existing program. Previous sound attenuation work associated with Detroit Metro Airport has experienced costs upwards of \$40,000 per unit, with additional administrative costs of about \$10,000 per residential unit. To be eligible, the habitable rooms must currently be experiencing inside noise levels of 45 dBA or higher, and the house must have been constructed prior to 1998.

Based on the Existing Noise Exposure Map, there are approximately 630 housing units within the 65 DNL and greater noise contour and one school (Merriman Elementary). There are no hospitals or known religious facilities within the 65 DNL and greater noise contour. If sound insulation is determined to be a recommendation, then the feasible boundaries of such insulation must be identified. These boundaries are not necessarily required to follow the 65 DNL contour exactly, but can be determined by the closest **reasonable** physical boundary (major street, railroad track, highway, stream, etc.) beyond the contour so that neighborhoods are not separated, to the extent possible. This could slightly expand the number of housing units.

**Discussion:**

Sound insulation of specified units is eligible for Federal funding. However, the structure must be “brought up to code” prior to initiating sound insulation. Any structural changes or improvements required to bring the structure into compliance with existing codes is not eligible for Federal funding, and must be borne by the homeowner, or the local jurisdiction must waive the code requirements.

The implementation of this alternative is a continuation of the existing program that has been recently completed. As noted earlier, the Airport Authority has sound insulated 2,510 homes, and offered insulation to owners of 64 residences that declined participation. A

review of the homes in the 2004 65 DNL contour indicates that all homes have been insulated, except 10 of the homes, all of which declined to participate in the earlier program.

**Conclusions:**

This alternative is a continuation of measures 10, 12b, and 13a approved by FAA in the 1993 Part 150 Noise Compatibility Plan for Detroit Metro Record of Approval. In preparing this Part 150 Study, updated noise exposure contours were prepared, as discussed in prior pages. The updated noise contours encompass fewer homes than the noise contours generated by the last Part 150 due to the continued introduction of quieter aircraft. Based on the completion of the prior sound insulation program, all but 10 homes in the 65 DNL contour have been insulated by the Airport Authority (Appendix Nine); these 10 homes in the 65 DNL declined participation in the sound insulation program. FAA funding priority below 65 DNL is very low, therefore no further analysis was conducted for this option.

**Land Use Alternative 2  
Acquisition of Non-compatible Land Uses or Undeveloped Land Zoned for Residential Use**

**Goal:** To reduce the existence or potential of non-compatible land uses within the 65 DNL and greater noise contours.

**Description:**

This alternative would result in the voluntary purchase of non-compatible land uses within the 70 DNL contour, or the purchase of undeveloped property that is zoned (either existing or re-zoned in the future) for residential development within the 65 DNL or greater contour. This would be a continuation of the existing program at the airport, amended to include any additional areas within the new noise contours.

**Discussion:**

As noted earlier, the Airport Authority (Appendix Nine) acquired 275 homes in Romulus and Huron Township between 1997-2005 as part of the 1993 Part 150 Noise Compatibility Plan. As a result, there are no (0) noise sensitive land uses within the 75 DNL and greater noise contour and 20 homes within the 70-75 DNL existing baseline contour. All of the homes within the 70-75 DNL contour have been offered sound insulation. There are 610 homes in the 65-70 DNL contour, all of which have similarly been offered sound insulation (only 10 of the 610 homes have not been insulated, as these owners declined participation).

There are vacant residentially zoned properties that are within the 65 DNL and greater contours that could be developed into non-compatible land uses. Unless local jurisdictions put in place land use controls, land zoned for residential uses could eventually be developed for homes. The following table identifies the undeveloped land in the 2004 contour for DTW:

**Table H.2**  
Existing Noise Contours

<b>Existing Noise Contour</b>	<b>Acres</b>
65-70 DNL	
Total land within the contour	4,970
Undeveloped residentially zoned	490
70-75 DNL	
Total land within the contour	2,925
Undeveloped residentially zoned	0
Total 65 DNL and greater	
Total land within the contour	9,475
Undeveloped residentially zoned	490

Source: Barnard Dunkelberg & Company, July 2007.

At an estimated cost of \$70,000 per acre of undeveloped residentially developed land, the cost to acquire the area within the 65 DNL contour would be \$9.2 million.

**Conclusions:**

Because of the cost associated with this alternative, and because it would remove lands from the tax roles of the local communities, the consultants recommend that preventive land use controls be pursued to prevent future residential uses from developing on these lands.



**Land Use Alternative 3  
Voluntary Acquisition of Avigation or Noise Easements Over Non-compatible  
Land Uses**

**Goal:** To reduce the number of non-compatible land uses for residents wishing to remain in their homes but not participate in sound attenuation.

**Description:**

This alternative proposes to voluntarily purchase an avigation easement (right to fly over a property and make noise) from those owners of noise sensitive uses that do not desire to participate in the sound attenuation process.

**Discussion:**

The easement does not reduce or mitigate noise levels but does grant to the Airport the right of aircraft to fly over a particular piece of property and create noise or vibration. The purchase of an easement could be one of the options offered to the owner of a noise sensitive use in lieu of sound attenuation. The easement would be attached to the deed and “run with the land,” meaning that it would be attached to the property title if the owner sells the property in the future. Some people do not feel comfortable with sound insulation, which places construction contractors inside their homes, replacing doors, replacing windows, etc. Sometimes, these residents prefer selling an easement to the Airport. The cost of the easement is usually in the range of \$2,000 to \$4,000 and is determined based on fair market value as ascertained by the rules of appraisal.

Approximately 10 owners that were offered sound insulation from 1997-2005 that are currently located in the 65 DNL contour, elected to not participate in the sound insulation program. The cost to acquire easements from these homeowners could be as high as \$40,000.

**Conclusions:**

Because sound insulation is a more effective alternative to addressing noise in the 65 DNL contour, the consultants recommend that preventive land use controls not be pursued.

**Land Use Alternative 4  
Voluntary Sales Assistance (Assurance Program)**

**Goal:** To reduce the number of non-compatible land uses and to provide a means for homeowners to sell their homes for fair market value without the Airport taking ownership.

**Description:**

This voluntary alternative would continue the Sales Assistance Program as one option for owners of residential uses to participate in if they are eligible for sound insulation. Many times homeowners desire to sell their homes and feel that they cannot receive fair market value for a home due to its proximity to the Airport. This option helps alleviate that situation, but it does not require the Airport to actually purchase the home. As a result, if fair market could not be obtained, the Airport would compensate the current owner for a sale that is verified to be less than the current fair market or appraised value. The 1993 Part 150 Study Record of Approval included this action, in exchange for an aviation easement, for areas inside the 70 DNL contour (action 12c and 13b).

**Discussion:**

Under the Sales Assurance Program, the homeowner is guaranteed fair market value for the property. In this type of program, the airport operator does not take title to the property, but rather compensates the property owner for the difference between fair market, and the value offered by a verified purchaser. Should the property sell for less than the appraised value, the Airport operator would compensate the selling owner for the shortfall. Property is appraised at its current fair market value of the homeowners' interest "as is" subject to airport noise. The property is listed and sold, subject to the Airport's aviation easement that is conveyed to the Airport at sale of the property.

Simply stated, the home is placed on the market for fair market value. If the home does not sell within the average time that it takes a home to sell in the area, then the price is reduced. This continues until the home sells. At the time of the sale, the Airport Authority would pay the homeowner the difference between the selling price and the appraised value, with an aviation (noise) easement granted to the Airport at the time of sale. This option is most successful with single family, as opposed to multi-family structures, because the sales price of most multi-family structures are not sensitive to aircraft noise levels. Further, in most cases, the difference between the appraised value and the verified offer typically must exceed 10 percent for a property to be eligible for participation in a sales assistance program.

As noted earlier, sound insulation was offered to all of the owners of homes in the existing 65 DNL contour during the 1997-2005 period. Those participating in the program granted the Airport Authority an aviation easement. Therefore, this program would only be available to

the homeowners that chose to not participate in the prior program -- an estimated 10 homes.<sup>2</sup> Assuming an average house value of \$175,000 and a 15% purchase assurance value, the cost of this program would be approximately \$262,500 at \$26,500 per home.

**Conclusions:**

Because of the cost associated with this alternative, and because sound insulation is a more effective alternative to addressing noise in the 65 DNL contour, the consultants recommend that preventive land use controls be pursued.

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<sup>2</sup> 64 homeowners elected to not participate in the Residential Sound Insulation Program based on the last Part 150. 10 of these homes are located in the existing baseline 65 DNL and greater noise contour.

**Land Use Alternative 5  
Disclosure Statements/Buyer Notification**

**Goal:** To reduce the annoyance of aircraft noise intrusion to prospective residents by providing direct notice of the possibility of such intrusion prior to home purchase.

**Description:**

This alternative is intended to inform potential homeowners/renters that they are purchasing a home in an area where they might experience aircraft noise levels that could cause varying levels of annoyance. Notification of this type would allow the buyer/renter to make a conscious decision prior to purchasing/renting a home and reduce the resultant complaints of aircraft over flights.

**Discussion:**

There are generally two methods of providing buyer notification: 1) through the title search/analysis process and 2) at the disclosure/closing time of purchase. The title search method is effective with new home construction/subdivisions. As a condition to subdivision approval or the issuance of a building permit, such notice is placed on the subdivision plat or deed for each individual lot. Such notice is recorded on the deed and is identified in a title opinion or title insurance report, as are other similar notices. When using the disclosure method, the seller is required to disclose, on a standard disclosure form, if certain conditions exist. Conditions can include, 1) if the seller has ever been annoyed by aircraft noise, and 2) if the property is within a certain distance from an airport or within identified noise contours that have been officially adopted by the local jurisdiction. It is up to the local jurisdiction, which may require state enabling legislation, to require such buyer disclosure prior to closing a sale.

**Conclusions:**

Implementation of these two actions requires adoption at the local or state level, depending upon which method is implemented. The local jurisdictions have the authority to require notice to be placed on plats or deeds for new subdivisions or as a condition of building permit approval. This would be most effective for such approvals within the 60 DNL noise contour. This is similar to the types of notice required for other public health, safety and welfare issues such as severe terrain, underground conditions, historic district, and tax assessment districts. Seller disclosure statements generally require the passing of state enabling legislation and place the burden on the seller of the property. This is usually very difficult to implement.

This action was recommended during the 1993 Part 150 Study, but has not been implemented.

Land Use Alternative 5 – Disclosure Statements/Buyer Notification

The consultant team recommends that it be implemented.

**Land Use Alternative 6**  
**Building Code Requirements**

**Goal:** To reduce the number of future non-compatible land uses through mandatory sound attenuation requirements for new construction of noise sensitive uses.

**Description:**

This alternative is the first of the preventive land use controls. It would amend building code requirements to include sound attenuation standards for any new construction of noise sensitive uses within certain prescribed boundaries, such as the 65 DNL contour. This is not a remedial remedy, but a preventive remedy in that it requires noise reduction or sound attenuation for new construction. Prior to building permit or plat approval, noise sensitive uses would be required, through construction techniques, to achieve a pre-determined reduction in the amount of noise between outside noise levels and inside noise levels.

**Discussion:**

When modifying the building codes, the code would not specify the means to achieve this reduction only that such reduction is necessary and the builder is given the option of how to achieve such reduction. Normally, the plat or building plans are certified to provide for the necessary noise reduction. This certification by an engineer or architect licensed to practice in the State is typically required by the building official of a local jurisdiction prior to the issuance of a building permit. In most parts of the country, regular energy codes and modern construction techniques result in approximately 20 to 25 dB noise reduction. FAA guidelines suggest a 25 dB reduction within the 65 DNL, a 30 dB reduction within the 70 DNL, and a 35 dB reduction within the 75 DNL. However, aircraft noise annoyances are experienced at lower noise levels (beyond the 65 DNL) and it may be advisable to achieve higher levels of noise reduction than are suggested by Part 150 guidelines. Experience has shown that it may be desirable to achieve a 30 dB reduction within the 65 DNL and a 35 dB reduction within the 70 DNL contours. Noise sensitive land uses within the 75 DNL or greater contours should be prohibited as adequate internal sound attenuation is not possible.

Once enacted, building code requirements would result in a slight increase in the cost of construction, as homes are built with the appropriate insulation. At other airport sites, contractors have found that the cost of such insulation, performed at the time of construction is less than \$10,000 in comparison to the cost of retrofitting an already build home (estimated at \$30,000).

Building code requirements are implemented by the local jurisdiction having land use control authority. Such requirements do not change the outside noise levels but do require the inside noise levels of new noise sensitive structures to be reduced to a maximum of 45 dB, the same

as remedial sound attenuation requirements for existing structures. The requirements are based on some definable boundary, usually the DNL noise contours, and apply only to new construction within those contours. Such measures have been successful for many communities near airports in helping achieve compatibility where housing is at a premium. In addition, FAA policy is that any new noise sensitive use constructed after January 1998 within a published noise contour is not eligible for remedial sound attenuation. Therefore, if sound attenuation is to be achieved, it must be part of the initial construction process.

**Conclusions:**

As part of the 1993 Part 150 Noise Compatibility Plan, the Airport Authority (Appendix Nine) “encouraged the local jurisdictions to implement one or more” preventive land use controls, including building code modifications. The consultant team encourages that this alternative be retained and that a discussion occurs with the Study Advisory Committee (Appendix Five, Six & Seven) to identify ways to ensure that local jurisdictions (Huron Township, Romulus, Taylor and Westland) enact such requirements.

**Land Use Alternative 7  
Comprehensive Plan Amendments**

**Goal:** To prevent the introduction of new non-compatible land uses through the land use planning and development policy process.

**Description:**

Comprehensive Plans are prepared by local jurisdictions to 1) identify current conditions in a community, 2) identify community goals and policies, and 3) identify plans for that community to achieve the goals. This alternative proposes to amend existing adopted comprehensive plans to achieve long-term land use compatibility of the jurisdictions lands with aircraft noise exposure from Detroit Metropolitan Wayne County Airport.

Community comprehensive plans are policy guides for the future development of a particular jurisdiction. Plans provide guidance for future land use development and land use changes. These plans are particularly important in the area around the Airport that may experience noise levels that could impact certain types of residential structures or public buildings. It is desirable that each community develop its plans and policies to be compatible with existing and future aircraft noise levels. This approach will help ensure that compatible development occurs in the future, as it is much easier to avoid the creation of land use incompatibilities than it is to remedy incompatibilities in the future.

**Discussion:**

All of the jurisdictions with land use control around the Airport have comprehensive plans. Jurisdictions in the State of Michigan, including counties, townships, and cities, have authority, through multiple state acts, to develop and implement plans, policies, and programs for development activities, land uses, and zoning. However, counties, townships, and cities are in most instances not required to develop or update such plans. Many of the cities have developed planning programs and documents; however, many have not been updated in recent time (past 20 years) and few of the jurisdictions near the airport have developed planning, land use, or zoning guidelines specific to aviation or aviation noise. The following paragraphs describe each of the cities in the 65 DNL contour:

- **City of Romulus:** The City of Romulus has a City Master Plan which was adopted in 1989. An update to the city's master plan is currently underway. The adopted City Master Plan recognized the influence of the Detroit Metropolitan Wayne County Airport and identified how the city plans to accommodate and adapt to the changing characteristics of the Airport and its immediate surroundings. The City of Romulus has adopted zoning ordinances which were made effective in June 2002 with revisions periodically updated. The zoning ordinances and associated 20 zoning districts have been enacted for the entire city. The City of Romulus has specifically identified an Airport District; which is primarily comprised of airport



property; although, portions of airport property are zoned Light Industrial and General Industrial. The Airport District is designated to permit those uses, activities, facilities, and structures necessary for the safe and efficient operation of aircraft and for providing the services and facilities required to accommodate Airport patrons and employees. The zoning code outlines uses within the Airport district and details area, height, and placement requirements for all structures near the Airport. The zoning code also specifies that all structures permitted within the Airport District, within 700 feet of the district boundary, or within 700 feet of a major or secondary thoroughfare traversing the Airport District a site plan must be submitted to the Planning Commission for review.

- **Huron Township:** Huron Township has a zoning ordinance and master plan; however, there are no provisions related to the Airport or its operation.
- **City of Taylor:** The City of Taylor Code of Ordinances includes height restrictions for developments within the City, including a regulation that states that all building heights shall be subject to review and approval in relation to flight patterns at Detroit Metropolitan Wayne County Airport. Additionally, the regulations state that the City of Taylor reserves the right to submit development plans to the Airport for their review, comments, and approval. The City of Taylor has enacted zoning ordinances and City Master Plan to guide their development. Neither documents airport-specific uses.
- **Westland:** The City of Westland has a planning and zoning ordinances in place; however, there are no provisions related to the Airport or its operation.

In preparing the chapter 1, **Inventory**, land use characteristic of all communities were reviewed. Other communities, located in the 60 DNL were also reviewed: Dearborn Heights, Inkster, and Sumpter Township. Each of the jurisdictions in the 60 DNL contour have adopted zoning ordinances, and a comprehensive plan/master plan. However no provisions for airport influences were found in these plans/ordinances

### **Conclusions:**

As stated earlier, a comprehensive plan by itself does not reduce aircraft noise levels nor does it control the use of land, as it is just a policy statement of the intended future use of land. However, comprehensive plans do influence the development or change in use of any particular piece of property. They also serve as a guide for future development. One of the most influential uses of the comprehensive plan can be to officially adopt and present aircraft generated noise contours, and use those noise contours to help guide development.

As part of the 1993 Part 150 Noise Compatibility Plan, the Airport Authority (Appendix Nine) “encouraged the local jurisdictions to implement one or more” preventive land use controls, including building code modifications, compatible use zoning, noise overlay districts, and subdivision regulations. The consultant team encourages that this alternative be retained and that a discussion occur with the Study Advisory Committee (Appendix Five, Six & Seven) to identify ways to ensure that local jurisdictions enact such requirements.

**Land Use Alternative 8  
Zoning Code Changes**

**Goal:** To protect the health, safety, and welfare of the public through the prevention of new non-compatible land uses within the vicinity of the Airport.

**Description:**

This alternative involves changes to local jurisdiction zoning codes to guide compatible development. A zoning code has more regulatory authority than a comprehensive plan. All development within a zoning district must be consistent with the designation assigned for any specific property. In other words, residential development can take place only in a district zoned for residential uses. Thus, the zoning ordinance and map are just as important, if not more so, than a comprehensive plan. The zoning code also prescribes development standards that new development must meet. This can include sound attenuation, granting of an avigation (noise) easement, disclosure notification and other related standards.

**Discussion:**

Existing zoning for the most part is compatible for residential uses with the higher (louder) DNL noise contours within the Airport environs. However, residential and other noise sensitive uses are allowed in the outer or quieter noise contours, the 55 DNL and 60 DNL contours. As experience has shown, and made clear in this study, noise complaints and concerns are common in those areas outside the 65 DNL noise contour. Thus, consideration should be given to restricting residential and other noise sensitive uses between the 55 DNL and 65 DNL contours, and not just within the 65 DNL and greater contours.

One dilemma of contemporary land use planning results from the desire to integrate mixed use development, which introduces residential development into higher density commercial, office, and retail development. While the majority of an area may be non-residential, the introduction of residential units can result in noise concerns that were not as prevalent with non-residential uses. Zoning code amendments can stimulate some desired community development changes while at the same time introduce new citizen concerns.

All of the jurisdictions with land use control around the Airport have comprehensive plans. Jurisdictions in the State of Michigan, including counties, townships, and cities, have authority, through multiple state acts, to develop and implement plans, policies, and programs for development activities, land uses, and zoning. However, counties, townships, and cities are in most instances not required to develop or update such plans. Many of the cities have developed planning programs and documents; however, many not been updated in recent time (past 20 years) and few of the jurisdictions near the airport have developed

specific planning, land use, or zoning guidelines specific to aviation or aviation noise. The following paragraphs describe each of the cities in the 65 DNL contour:

- **City of Romulus:** The City of Romulus has adopted zoning ordinances which were made effective in June 2002 with revisions periodically updated. The zoning ordinances and associated 20 zoning districts have been enacted for the entire city. The City of Romulus has specifically identified an Airport District, which is primarily comprised of airport property; however, portions of airport property are zoned Light Industrial and General Industrial. The Airport District is designated to permit those uses, activities, facilities, and structures necessary for the safe and efficient operation of aircraft and for providing the services and facilities required to accommodate Airport patrons and employees. The zoning code outlines uses within the Airport district and details area, height, and placement requirements for all structures near the Airport. The zoning code also specifies that all structures permitted within the Airport District, within 700 feet of the district boundary, or within 700 feet of a major or secondary thoroughfare traversing the Airport District a site plan must be submitted to the Planning Commission for review.
- **Huron Township:** Huron Township has a zoning ordinance; however, there are no provisions related to the Airport or its operation.
- **City of Taylor:** The City of Taylor Code of Ordinances includes height restrictions for developments within the City, including a regulation that states that all building heights shall be subject to review and approval in relation to flight patterns at Detroit Metropolitan Wayne County Airport. Additionally, the regulations state that the City of Taylor reserves the right to submit development plans to the Airport for their review, comments, and approval. The City of Taylor has enacted zoning ordinances but does not document airport-specific uses.
- **Westland:** The City of Westland has planning and zoning ordinances in place; however, there are no provisions related to the Airport or its operation.

In preparing the first chapter, **Inventory**, land use characteristic of all communities were reviewed. Other communities located in the 60 DNL were also reviewed, including: Dearborn Heights, Inkster, and Sumpter Township. Each of the jurisdictions in the 60 DNL contour have adopted zoning ordinances. However no provisions for airport influences were found in the ordinances.

### **Conclusions:**

Zoning can be a very effective means of controlling land use development and is the most widely used land use control. However, since it is the result of a political process, it can be changed or amended. Zoning codes and accompanying zoning district maps are accepted means to guide and control development within the vicinity of an airport. The local jurisdiction must determine what uses within which contours are considered to be non-compatible and can then pass reasonable measures to restrict such land uses within those contours.

As part of the 1993 Part 150 Noise Compatibility Plan, the Airport Authority (Appendix Nine) “encouraged the local jurisdictions to implement one or more” preventive land use controls, including building code modifications, compatible use zoning, noise overlay

## Land Use Alternative 8 - Zoning Code Changes

districts, and subdivision regulations. The consultant team encourages that this alternative be retained and that a discussion occur with the Study Advisory Committee (Appendix Five, Six & Seven) to identify ways to ensure that local jurisdictions enact zoning requirements.

**The following summarizes the recommendations of the consultants and expands on the general discussion of potential land use measures just discussed. This discussion identifies first the recommendations for remedial actions, followed by preventive measures and administrative measures.**

### **Remedial Measures - Consultant Recommendations**

**Goal:** To provide remedial or corrective relief to those residents experiencing significant aircraft-related noise.

#### **Description:**

The Consultant's recommended remedial/corrective measures consist of the following:

- Disclosure statements/Buyer Notification.

As is noted, the Airport Authority has been in the process of implementing remedial land use measures for the past several years, since the completion of the last Part 150 Study and the issuance of the Record of Approval in 1993. The Airport has sound attenuated approximately 2,400 houses at a cost of \$75,927,000 dollars. About \$5.4 million was spent to insulate schools affected by 65 DNL. Homes most severely impacted (70 DNL and greater) were acquired -- about 275 homes in Romulus and Huron Township were acquired at a cost of about \$32 million. Thus, the Airport Authority spent about \$118 million between 1992-2005 to improve the compatibility of the area with aircraft noise exposure. All of the noise sensitive land uses in the 65 DNL contour have been offered participation in the sound insulation program.

**Land Use/Administrative Recommendation 1: Implement a Disclosure Statement/Buyer Notification Program within 60 DNL.** Implementation of these two actions requires adoption at the local or state level, depending upon which method is implemented. The local jurisdictions have the authority to require notice to be placed on plats or deeds for new subdivisions or as a condition of building permit approval. This would be most effective for such approvals within the 60 DNL noise contour. Seller disclosure statements generally require the passing of state enabling legislation and place the burden on the seller of the property.

#### **Conclusion:**

This **remedial** recommendation would not alter the number of existing noise sensitive uses within any contour, but could prevent additional incompatibilities and generate a buyer/renter awareness that the property is located in an area that could be exposed to annoying aircraft noise levels.

## Preventive Measures - Consultant Recommendations

### Goal:

To reduce the number of future/new non-compatible land uses within the 65 DNL and greater noise contours.

### Description:

Preventive land use measures are solely within the authority of the local land use jurisdictions to implement; the Airport Authority has no land use control authority. Therefore, implementation of the preventive land use controls will rest with the local jurisdictions. The Consultant Recommendations consist of:

**Land Use/Administrative Recommendation 2: Encourage the local jurisdictions to implement building code requirements.** Building code requirements are implemented by the local jurisdiction having land use control authority. Such requirements do not change the outside noise levels but require the inside noise levels of new noise sensitive structures to be reduced to a maximum of 45 dB. The requirements are based on some definable boundary, usually the 60 DNL noise contours, and apply only to new construction within those contours. FAA policy is that any new noise sensitive use constructed after January 1998 within a published noise contour is not eligible for remedial sound attenuation. Therefore, if sound attenuation is to be achieved, it must be part of the initial construction process, and is best if reflected in the building codes.

**Land Use/Administrative Recommendation 3: Encourage the local jurisdictions to implement Comprehensive Plan Amendments.** As stated earlier, a comprehensive plan by itself does not reduce aircraft noise levels nor does it *control* the use of land, as it is just a policy statement of the intended future use of land. However, comprehensive plans do influence the development or change in use of any particular piece of property. They also serve as a guide for future development. One of the most influential uses of the comprehensive plan can be to officially adopt and present aircraft generated noise contours, and use those noise contours to help guide development.

**Land Use/Administrative Recommendation 4: Encourage the local jurisdictions to implement compatible use zoning.** Zoning can be a very effective means of controlling land use development and is the most widely used land use control. However, since it is the result of a political process, it can be changed or amended. Zoning codes and accompanying zoning district maps are accepted means to guide and control development within the vicinity of an airport. The local jurisdiction must determine what uses within which contours are considered to be non-compatible and can then pass reasonable measures to restrict such land uses within those contours.

**Conclusion:**

This set of preventive land use recommendations will reduce the number of new non-compatible land uses within the 65 DNL and greater noise contours. The overall cost to implement each of the recommendations is estimated to be approximately \$30,000 in jurisdictional staff time through the normal plan and ordinance amendment process adopted by each jurisdiction. It is the responsibility of the local jurisdictions to develop and implement the recommendations. Airport Authority (Appendix Nine) staff can assist in the amendment process but the Airport Authority (Appendix Nine) has no authority to implement the recommendations.

## **Administrative Measures - Consultant Recommendations**

### **Goal:**

To assist in monitoring the success of the noise abatement recommendations, improve citizen liaison, promote citizen awareness and update the Part 150 Study when appropriate.

### **Description:**

Administrative measures are those that the Airport Authority (Appendix Nine) can implement, with or without FAA funding, that are solely within their discretion. These measures will not result in noise reduction (as can be expected from the implementation of the operational noise abatement procedures), but will enable the Airport Authority to monitor the success of the program and to provide enhanced community response to issues of concern. They are not dependent upon other measures to be implemented prior to their implementation.

**Land Use/Administrative Recommendation 5: Review and Update the Part 150 Study.** A FAR Part 150 Study is intended to be a “living document,” to be used as a tool to monitor and guide program development, and evaluate aircraft types and operations. The Study should be reviewed and updated as appropriate. The general guideline is whenever the actual operations are approximately 15% different from the forecast operations, the Noise Exposure Maps (NEMs) should be reviewed. In addition, anytime there are significant new non-compatible land uses within the 65 DNL or greater contours or if there are airport facility changes which may effect the contours, consideration should be given to reviewing the maps. At the end of the five-year study period (after date of Noise Compatibility Program [NCP] approval), the operations and mix should be re-evaluated to determine the extent to which they have changed and updated as appropriate.

In addition to the Recommendation to Review and Update the Part 150 Study, the following are Recommendations carried over from the last Working Paper that are Administrative in nature.

Option 16—Install Noise Monitoring/Radar Tracking System

Option 17—Fly Quiet Report Card and Pilot Awareness Program

Option 18—Continuation of the Study Advisory Committee (Appendix Five, Six & Seven)

### **Conclusion:**

These administrative recommendations will ensure that the Noise Compatibility Plan is adjusted as conditions in the environs of the Airport change over time.



## **Draft Airport Part 150 Recommendations**

The previous chapters presented the Consultants Draft Recommendations. After discussion with Airport Staff and Management, the following have been identified as the Draft Airport Recommendations. These may be refined subsequent to further study and public comment, but will be the basis for the Recommendations carried forward to public hearing. The Airport Authority will have final determination as to which Recommendations are presented to the FAA for approval as the Noise Compatibility Program.

### **Fight Track Recommendations**

- Option 3c—Runway 4R Departures-Concentrate a portion of South Turning Aircraft and Fan Others
- Option 3d—Runway 3L Departures—Concentrate a portion of South Turning Aircraft and Fan Others
- Option 1c—South Flow Option –Concentrate Noise Departures in South Flow Consideration of Dearborn Test (Similar to Option 2b)

### **Runway Use Recommendations**

- Continued South Flow Daytime
- Option 5a—Extend Hours of Contra-Flow at Night
- Option 6a—Off-set Approach to Runways 4L/22R

### **Arrival Descent/Departure Climb Recommendations**

- Option 8—Continuous Descent Approach

### **Airport Plans Recommendations**

- Option 9c—Further Study and Evaluate Extending Runway 3L/21 R South (or 9b-North)
- Option 10—1,000 foot Displaced Thresholds for 21L & 22R
- Option 12—Ground Run-up Procedures
- Option 13—Ground Run-up Enclosure
- Option 15—Nose Abatement Procedures for Use During Runway Maintenance

### **Noise Management Recommendations**

- Option 16—Install Noise Monitoring and/or Radar Tracking System
- Option 17—Fly Quiet Report Card and Pilot Awareness Program
- Option 18—Continuation of the Study Advisory Committee (Appendix Five, Six & Seven)

### **Land Use Recommendations**

- To be determined