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## FAR Part 150 Noise Exposure Map Checklist

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<b>I. IDENTIFICATION AND SUBMISSION OF MAP DOCUMENT:</b>	<b>Page Number</b>
A. Is this submittal appropriately identified as one of the following, submitted under FAR Part 150:	Cover, Cover Letter
1. A NEM only	Yes
2. A NEM and NCP	No
3. A revision to NEMs which have previously been determined by FAA to be in compliance with Part 150?	Yes
B. Is the airport name and the qualified airport operator identified?	Cover
C. Is there a dated cover letter from the airport operator which indicates the documents are submitted under Part 150 for appropriate FAA determination?	Yes
<b>II. CONSULTATION: [150.21 (b), A150.(a)]</b>	
A. Is there a narrative description of the consultation accomplished, including opportunities for public review and comment during map development?	22-24, Appendix
B. Identification:	
1. Are the consulted parties identified?	22-24, Appendix
2. Do they include all those required by 150.21 (b) and A150.105 (a)?	Yes, 22-24, Appendix
C. Does the documentation include the airport operator's certification, and evidence to support it, that interested persons have been afforded adequate opportunity to submit their view, data, and comments during map development and in accordance with 150.21 (b)?	Cover Letter, 22-24, Appendix
D. Does the document indicate whether written comments	

were received during consultation and, if there were comments, that they are on file with the FAA region?

22-24, Appendix

**III. GENERAL REQUIREMENTS: [150.21]**

A. Are there two maps, each clearly labeled on the face with year (existing condition year and 5-year)? 19-20

**B. Map currency:**

1. Does the existing condition map year match the year on the airport operator's submittal letter? Yes, 19

2. Is the 5-year map based on reasonable forecasts and other planning assumptions and is it for the fifth calendar year after the year of submission? Yes, 20

3. If the answer to 1 and 2 above is no, has the airport operator verified in writing that data in the documentation are representative of existing condition and 5-year forecast conditions as of the date of submission? N/A

**C. If the NEM and NCP are submitted together:**

1. Has the airport operator indicated whether the 5-year map is based on 5-year contours without the program vs. contours if the program is implemented? Cover Letter

2. If the 5-year map is based on program implementation:  
a. are the specific program measures which are reflected on the map identified? No

b. does the documentation specifically describe how these measures affect land use compatibilities depicted on the map? No

3. If the 5-year NEM does not incorporate program implementation, has the airport operator included an additional NEM for FAA determination after the program is approved which show program implementation conditions and which is intended to replace the 5-year NEM as the new official 5-year map? N/A

**IV. MAP SCALE, GRAPHICS, AND DATA REQUIREMENTS:  
[A150.101, A150.105, 150.21 (a)]**

A. Are the maps of sufficient scale to be clear and readable (they must not be less than 1" to 8,000') and is the scale indicated on the maps? Yes, 19-20

- B. Is the quality of the graphics such that required information is clear and readable? Yes, 19-20
- C. Depiction of the airport and its environs.
1. Is the following graphically depicted to scale on both the existing condition and 5-year maps:
    - a. Airport boundaries Yes, 19-20
    - b. Runway configurations with runway end numbers No
  2. Does the depiction of the off-airport data include:
    - a. A land use base map depicting streets and other identifiable geographic features Yes
    - b. The area within the 65 Ldn (or beyond, at local discretion) Yes
    - c. Clear delineation of geographic boundaries and the names of all jurisdictions with the 65 Ldn (or beyond, at local discretion) Yes
- D. 1. Continuous contours for at least the Ldn 65, 70, and 75? Yes, 19-20
2. Based on current airport and operational data for the existing condition year NEM, and forecast data for the 5-year NEM? 9, 19-20
- E. Flight tracks for the existing condition and 5-year forecast time frames (these may be on supplemental graphics which must use the same land use base map as the existing conditioned and 5-year NEM), which are numbered to correspond to accompanying narrative? 10, 12
- F. Locations of any noise monitoring sites (these may be on supplemental graphics which must use the same land use base map as the official NEMs) Yes, 11
- G. Noncompatible land use identification:
1. Are noncompatible land uses within at least the 65 Ldn depicted on the maps? Yes, 19-20
  2. Are noise sensitive public buildings identified? Yes
  3. Are the noncompatible uses and noise sensitive public buildings readily identifiable and explained on the map legend? Yes
  4. Are compatible land uses, which would normally be

considered noncompatible, explained in the accompanying narrative? N/A

V. **NARRATIVE SUPPORT OF MAP DATA:**  
[150.21 (a), A150.1, A150.103]

- A. 1. Are the technical data, including data sources, on which the NEMs are based adequately described in the narrative? Yes
- 2. Are the underlying technical data and planning assumptions reasonable? Yes

B. Calculation of Noise Contours:

- 1. Is the methodology indicated?
  - a. Is it FAA approved? Yes, 9
  - b. Was the same model used for both maps? Yes
  - c. Has AEE approval been obtained for use of a model other than those which have previous blanket FAA approval? N/A
- 2. Correct use of noise models:
  - a. Does the documentation indicate the airport operator has adjusted or calibrated FAA-approved noise models or substituted one aircraft type for another? No
  - b. If so, does this have written approval from AEE? N/A
- 3. If noise monitoring was used, does the narrative indicate that Part 150 guidelines were followed? Permanent Monitors
- 4. For noise contours below 65 Ldn, does the supporting documentation include explanation of local reasons? (Narrative explanation is highly desirable but not required by the Rule.) Cover Letter

C. Noncompatible Land Use Information:

- 1. Does the narrative give estimates of the number of people residing in each of the contours (Ldn 65, 70 and 75, at a minimum) for both the existing condition and 5-year maps? Yes, 21
- 2. Does the documentation indicate whether Table 1 of Part 150 was used by the airport operator? Cover Letter, 21
  - a. If a local variation to Table 1 was used:
    - (1) does the narrative clearly indicate which adjustments were made and the local

- |   |       |
|---|-------|
| reasons for doing so?   | N/A   |
| (2) does the narrative include the airport operator's complete substitution for Table 1?  | N/A   |
| 3. Does the narrative include information of self-generated or ambient noise where compatible/noncompatible land use identifications consider non-airport/aircraft sources?     | N/A   |
| 4. Where normally noncompatible land uses are not depicted as such on the NEMs, does the narrative satisfactorily explain why, with reference to the specific geographic areas? | N/A   |
| 5. Does the narrative describe how forecasts will affect land use compatibility?  | 8, 21 |

VI. **MAP CERTIFICATIONS:** [150.21 (b), 150.21 (e)]

- |   |                            |
|---|----------------------------|
| A. Has the operator certified in writing that interested persons have been afforded adequate opportunity to submit views, data, and comments concerning the correctness and adequacy of the draft maps and forecasts? | Cover Letter, 22           |
| B. Has the operator certified in writing that each map and description of consultation and opportunity for public comment are true and complete?  | Cover Letter, 22, Appendix |

# **Snohomish County Airport/Paine Field Part 150 Noise Exposure Maps Update**

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## **Introduction**

The noise exposure maps for Paine Field were originally prepared as a component of a Part 150 Noise and Land Use Compatibility Study that was adopted by Snohomish County in July 1995. Those noise exposure maps, with a five-year planning horizon, are now out of date and the adopted forecasts contained in the 2002 Master Plan Update for Paine Field have been used as a basis to formulate updated Noise Exposure Maps.

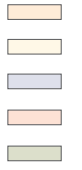
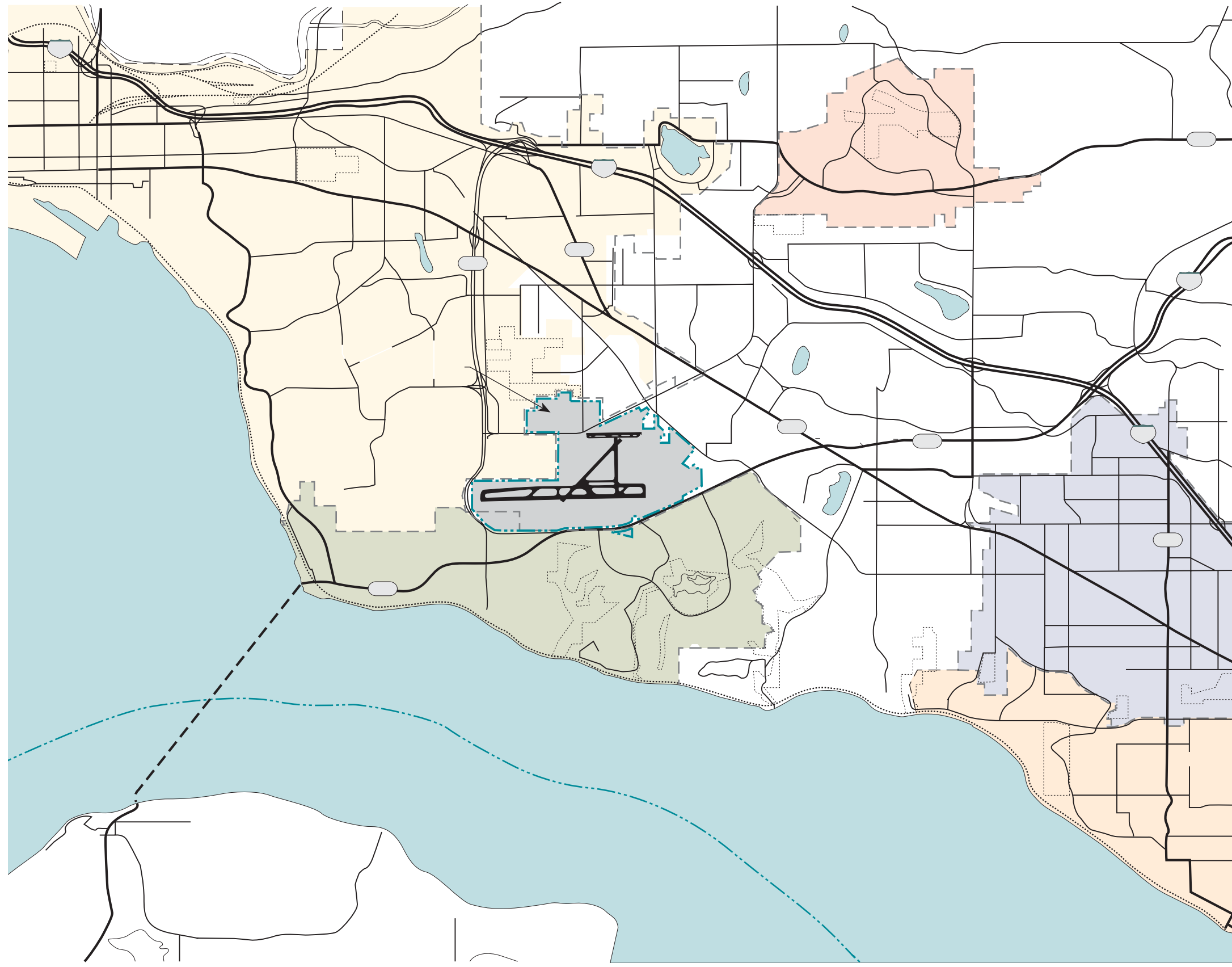
The need to update the noise exposure maps was identified as a result of the public meetings and process used in the preparation of the 2002 Master Plan Update. Aircraft operation numbers and types of aircraft have changed since the preparation of the last Noise Exposure Maps, especially with the removal of military helicopter operations from the airport. The Noise Compatibility Recommendations contained in the previous Part 150 Study have not been amended and are still current.

## **Inventory**

Paine Field is located in an unincorporated area of Snohomish County. The northern and eastern portion of airport property abuts the City of Everett, while the western portion of airport property abuts the City of Mukilteo. The corporate boundaries of the cities of Lynnwood and Edmonds are approximately three miles to the south of airport property. The relationship of Paine Field to the surrounding cities is illustrated in the following figure, entitled *AIRPORT ENVIRONS MAP*.

The following narrative provides a general description of the existing land uses, land use zoning, and future land uses in the area surrounding Paine Field.





## Existing Zoning

Generalized existing zoning within the vicinity of Paine Field is illustrated in following figure, entitled *GENERALIZED EXISTING ZONING*, reflecting the zoning designations of the cities of Everett and Mukilteo, along with those for the unincorporated areas of Snohomish County. For purposes here, zoning is categorized into the following types: residential, commercial (including office), industrial, and open/parks. The airport itself is zoned light industrial.

In the area north of the airport, there is a large manufacturing/industrial and office zoning tract associated with the Boeing facilities. The area north of the airport and adjacent to Possession Sound is primarily zoned residential. Some commercial zoning does exist north of the airport associated with the ferry landing and at the intersection of Mukilteo Speedway and Mukilteo Boulevard.

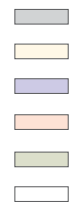
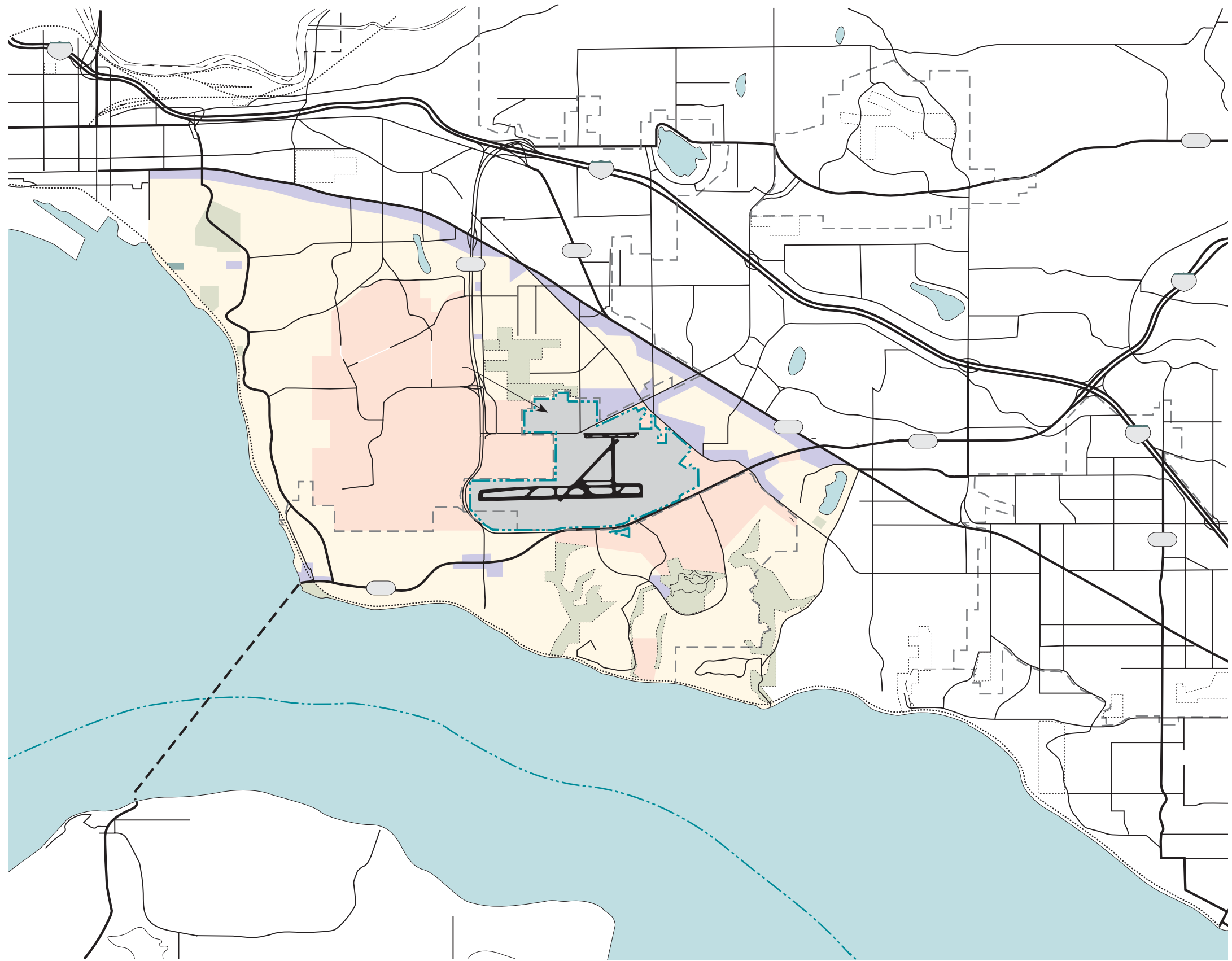
The area east of the airport is characterized by residential zoning with strips of commercial zoning along the major roadways, i.e., SR 99 and Airport Road. In addition, Kasch Park and Walter E. Hall Golf Course are located directly east of airport property, south of Casino Road.

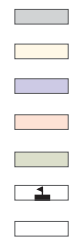
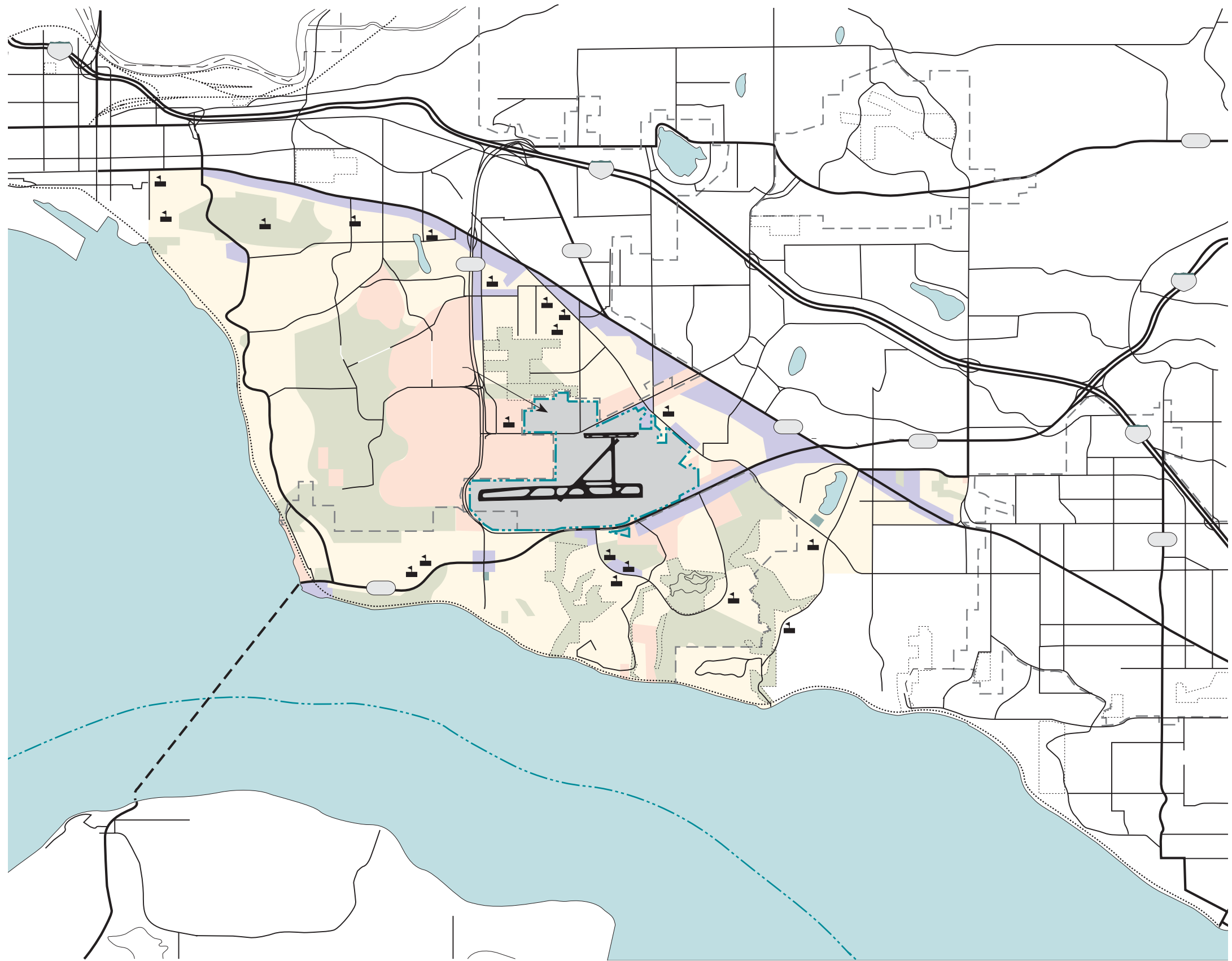
The area directly southeast of the airport is dominated by business park and residential zoning, while southwest of the airport, zoning uses along Mukilteo Speedway are characterized by a combination of general commercial, community business, industrial, and manufacturing. General commercial and community business zoning extend laterally along SR99. The area south of the airport is dominated by various residential uses, with dispersed areas of commercial and industrial zoning.

Within Mukilteo, west of the airport, lies the Harbour Pointe Community zoned primarily for residential uses, with several areas of park/open space and community business. In the northwest portion of Mukilteo, zoning consists of residential uses, waterfront mixed use and downtown business district.

## Existing Land Use

As illustrated in Figure 3, entitled *GENERALIZED EXISTING LAND USE*, land use basically reflects existing zoning. In the area directly adjacent to the airport, industrial and commercial uses prevail; one notable exception is the residential area west of Paine Field Boulevard. Commercial uses are found along major arterials and at the intersections of these arterials. Densities of residential use vary in the area, but generally reflect single-family, suburban development with areas of open space. Additionally, significant clusters of multi-family development exist laterally along Casino Road, between Airport Road and SR99; along 112<sup>th</sup> St. SW, between SR99 and I-5; and along





128<sup>th</sup> St. SW, between SR99 and I-5. The waters of Possession Sound are located approximately one and one-half miles west of the airport property and approximately two miles north of the airport. In addition, it should be noted that there is a substantial amount of land which is undeveloped or dedicated to parks/open space in the vicinity of the airport.

Several large tracts of undeveloped land exist within the environs on the airport. Some of these are associated with parks, or areas with limited development potential because of steep slopes or drainage features. There are two large open spaces near the airport; the west side of airport property and the area directly north and west of The Boeing Company plant.

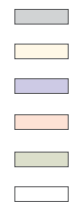
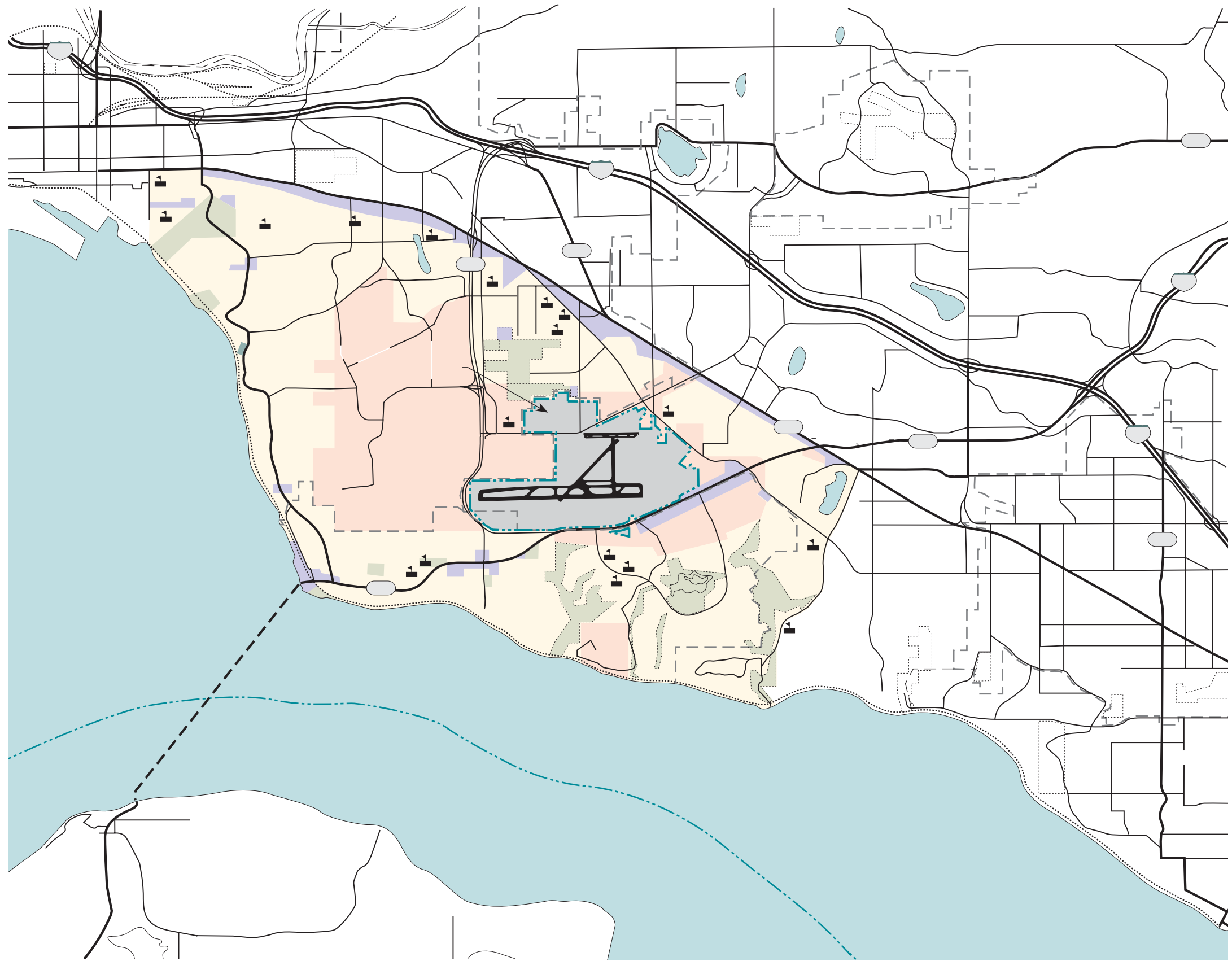
### Future Land Use

Generalized future land use within the vicinity of Paine Field is illustrated in Figure 4, entitled *GENERALIZED FUTURE LAND USE*. Information supplied by Snohomish County shows that Paine Field has been designated as urban industrial. Urban Commercial is adjacent to SR99, on both the east and west portions, extending from 112<sup>th</sup> St. SW to 164<sup>th</sup> St. SW. Situated between SR99 and Beverly Park Road, urban medium density residential is the dominant classification, with a small pocket of urban high density residential. South and east of SR99, various densities of residential use make up future land uses. Several “Centers Designations” have been established at various locations in and around Paine Field. These centers represent the focal point of commercial and employment activity and include: Paine Field Airport, the intersection of Airport Road and SR99, the converging point of Mukilteo Speedway, SR99, and SR525, the intersection of 128<sup>th</sup> St. SW and Interstate 5 (I-5), and the intersection of Interstate 5 (I-5) and 164<sup>th</sup> St. SW.

Southwest/west of Paine Field, an approximately 1/3 to 1/2 mile band of commercial and light industrial tracts parallel Mukilteo Speedway. Further west, extending down toward Puget Sound is the Harbour Pointe Golf Course, multi-family and single family residential land uses. West and northwest of Paine Field, land uses consist mostly of single family residential with small pockets of commercial and parks/open space.

### Existing Noise Abatement Procedures

The airport has established noise abatement procedures. A copy of the noise abatement procedure pamphlet is in the Appendix.



## Aircraft Operations Forecasts Summary

As stated previously, the aircraft operations forecasts were developed as part of the recently completed Airport Master Plan Update. These forecasts are summarized below. Paine Field will continue to be the primary general aviation and industrial aviation airport serving Snohomish County and the northern portion of the Seattle Metropolitan area. In addition, the forecasts indicate that, to some degree, there is unconstrained demand for commercial passenger service at an airport in the vicinity of Paine Field.

The following table, entitled *SUMMARY OF OPERATIONS DEMAND FORECAST BY AIRCRAFT TYPE*, summarizes the activity for current (calendar year 2002) and expected future (calendar year 2008) aircraft operational activity. Although the forecasts are based on "unconstrained demand", without regard to site-specific physical or environmental constraints, it is realized that conditions on the airport and in the area surrounding the airport will influence the type and quantity of aviation activity which can be reasonably accommodated. The forecasts are consistent with the 1978-79 Mediated Role Determination defined for Paine Field.

It should be noted that 2002 data provided in the following table includes an estimate of aircraft operations that occur during hours when the ATCT is closed (9:00 pm to 7:00 am), which were not included in the 2002 Master Plan Update documentation. This estimate of operations during the time of ATCT closure was critical for the Noise Exposure Map Update because nighttime aircraft operations (those occurring between 10:00 pm and 7:00 am) receive a penalty in the computerized noise model that is used to generate noise contours (see additional explanation in the *Aircraft Operations Data and Flight Tracks* section below). Because the Noise Exposure Maps are the "official" maps used for land use planning in the vicinity of the airport, an estimate of nighttime operations is necessary to most accurately depict noise contours. The 2008 forecast numbers provided in the table below also includes consideration of aircraft operations that occur during nighttime hours.

It is also important to point out that although the future (2008) forecast of aircraft operations used for this INM update is extrapolated from of the adopted forecast numbers provided in the 2002 Master Plan Update; the 2008 number incorporates some recalibration related to recent historic events and trends (the events of September 11, 2001 and subsequent economic downturn effects on general aviation) and the inclusion of nighttime aircraft activity estimates.

Table 1  
**SUMMARY OF OPERATIONS DEMAND FORECAST BY AIRCRAFT TYPE**  
*Paine Field Noise Exposure Map Update*

<b>Operations By Type<sup>1</sup></b>	<b>2002 Day</b>	<b>2002 Night</b>	<b>2008 Day</b>	<b>2008 Night</b>
<i>Industrial Aviation Air Carrier</i>				
Jet	<b>3,545</b>	<b>71</b>	<b>6,060</b>	<b>121</b>
<i>Military</i>				
	<b>1,295</b>	<b>44</b>	<b>2,020</b>	<b>70</b>
<i>General Aviation</i>				
Single Engine Piston	168,210	6,393	230,523	8,760
Multi-Engine Piston	15,832	475	21,685	650
Turboprop	5,937	178	9,605	288
Business Jet	5,937	178	9,605	288
Helicopter	1,978	59	3,020	91
<i>Passenger Air Carrier/Commuter</i>				
Jet	---	---	<b>10,619</b>	<b>212</b>
Turboprop	---	---	3,716	74
	---	---	6,903	138
<b>TOTAL ANNUAL OPERATIONS</b>	<b>202,734</b>	<b>7,398</b>	<b>293,137</b>	<b>10,480</b>

Source: Barnard Dunkelberg & Co.

<sup>1</sup> Existing – ATCT Counts During Hours of Operation (7:00 am to 9:00 pm) Plus Airport Staff Estimate for Hours When ATCT is closed.

## Noise Contour Development

### Noise Monitoring

No noise monitoring was done specifically for this NEM Update; however, the airport's noise monitoring system was used to help evaluate the noise contours.

### Noise Contours Development Explanation

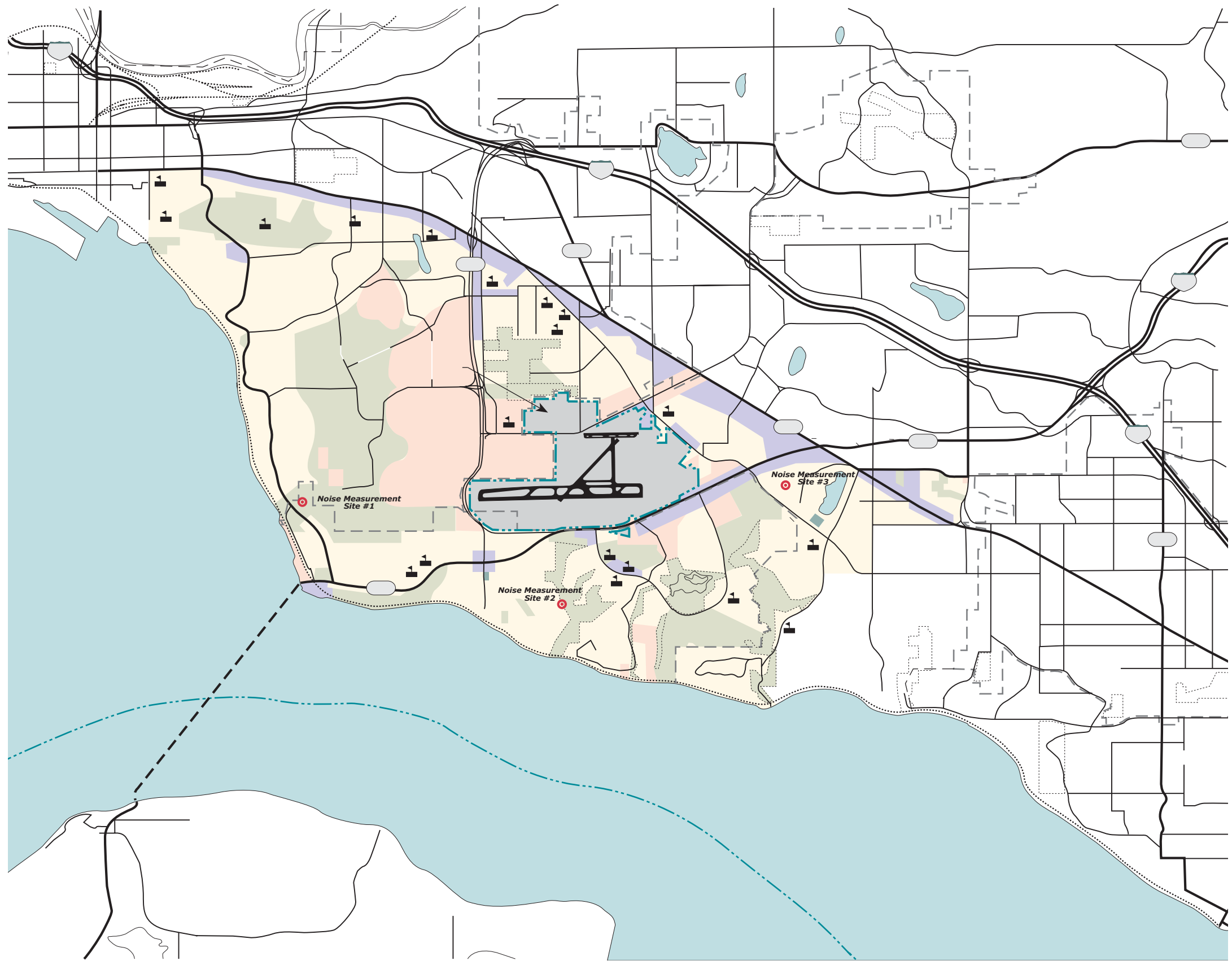
The DNL noise contours were generated using the Integrated Noise Model (INM) Version 6.0c, which is the most current computer program developed by the Federal Aviation Administration specifically for modeling the noise environment at airports. The INM program requires the input of the physical and operational characteristics of the airport. Physical characteristics include runway end coordinates, displaced thresholds, airport altitude, topography, and temperature. Operational characteristics include aircraft mix and flight tracks. Optional data that can be incorporated in the model includes approach and departure profiles, approach and departure procedures, and aircraft noise



curves. Data from Paine Field's Aircraft Flight Tracking and Environmental Monitoring System (AFTEMS) was used to calculate the INM flight tracks and noise levels.

### Aircraft Operations Data and Flight Tracks

The percent of aircraft operations that occur during the nighttime is also presented in the previously presented table entitled, *SUMMARY OF OPERATIONS DEMAND FORECAST BY AIRCRAFT TYPE*. In the DNL metric, aircraft operations that occur after 10 pm and before 7 am are considered more intrusive and receive a 10 dBA penalty. As there is not a twenty-four hour tower at Paine Field, the nighttime operations are an estimate, and may reflect a "worst case" scenario for such operations. Aircraft flight tracks, runway utilizations and profiles were obtained by observations during on-site visits; review of Air Route traffic radar plots, discussion with the Air Traffic Control personnel, discussion with airport management, data provided in the 1995 FAR Part 150 Study, and data from the airport's Aircraft Flight Tracking and Environmental Monitoring System (AFTEMS). The flight tracks are shown in the following figure, entitled *FLIGHT TRACKS WITH EXISTING LAND USE*, which is a computer plot of the actual flight tracks used in the INM. It must be remembered that these are generalized average flight tracks and are not intended to illustrate the exact location that aircraft fly on each track. Flight tracks are the same for both the existing and future conditions.



- Grey rectangle
- Yellow rectangle
- Purple rectangle
- Orange rectangle
- Green rectangle
- Black house icon
- White rectangle
- Red circle with white center





An additional important factor in developing the noise contours is the percent of time each runway is utilized. The runway that is utilized by an aircraft is dictated by the speed and direction of the wind. From a safety and stability standpoint, it is desirable, and at times necessary, to arrive and depart an aircraft toward the direction of the wind. When the wind direction changes, the aircraft operational activity will shift to the runway that favors the new wind direction. The runway utilization and percent of use of each flight track is presented in the following tables entitled *EXISTING AND FUTURE FLIGHT TRACK UTILIZATION – DEPARTURES*, *EXISTING AND FUTURE FLIGHT TRACK UTILIZATION PERCENTAGE – ARRIVALS* and *EXISTING AND FUTURE FLIGHT TRACK UTILIZATION PERCENTAGE – TOUCH AND GO*. In addition, the utilization of the runways broken down by day and night is provided in Table 5, entitled *EXISTING AND FUTURE RUNWAY UTILIZATION PERCENTAGE*. The contours also reflect the engine run-ups (trims) that the Boeing Company and Goodrich, Inc. perform.





Table 3

**EXISTING AND FUTURE FLIGHT TRACK UTILIZATION PERCENTAGE – ARRIVALS***Paine Field Noise Exposure Map Update*

Aircraft	Existing (ops/day)	Future (ops/day)	Flight Tracks Use By Percentage								
			16LZ	34LZ	16LZ	34RZ	11Z	29Z	HPNZ	HPSZ	HPWZ
GASEPF	89.0793	122.1914	26	21	27	23	1	2			
GASEPV	22.1208	30.3154	41	34	13	10	1	1			
BEC58P	15.1811	20.7935	41	34	13	10	1	1			
CNA441	6.5770	10.6368	55	45							
CL600	0.6556	1.0604	55	45							
G II	0.5911	0.2456	55	45							
CNA500	1.3287	1.4385	55	45							
G IV	0.8839	2.1403	55	45							
CNA750	3.8340	6.9119	55	45							
B206L	2.8523	4.3582							40	40	20
DHC830	0.0000	9.4566	55	45							
CL601	0.0000	5.0901	55	45							
737-300	0.1701	0.3556	55	45							
737-400	0.1168	0.2441	55	45							
737-500	0.0330	0.0690	55	45							
737-700	0.2437	0.5095	55	45							
747-200	0.0178	0.0371	55	45							
747-400	0.3945	0.8247	55	45							
767-300	0.3448	0.7207	55	45							
767-400	0.4123	0.8618	55	45							
777-200	0.7215	1.5082	55	45							
777-300	0.1066	0.2229	55	45							
757PW	0.4544	0.9499	55	45							
757RR	0.2412	0.5041	55	45							
767JT9	0.1315	0.2749	55	45							
MD-81	0.0869	0.1491	55	45							
C-130	0.0174	0.0271	55	45							
727EM1	0.1157		55	45							
727EM2	0.3329		55	45							
727QF	0.0718		55	45							
DC9Q7	0.0071		55	45							
DC9Q9	0.0569		55	45							
DC-10/40	0.0107		55	45							
737N17	0.1848		55	45							
737QN	0.0498		55	45							
<b>TOTAL</b>	<b>147.426</b>	<b>221.8974</b>									

Table 4

**EXISTING AND FUTURE FLIGHT TRACK UTILIZATION PERCENTAGE – TOUCH AND GO***Paine Field Noise Exposure Map Update*

Aircraft	Existing (ops/day)	Future (ops/day)	Flight Tracks Use By Percentage									
			16R1	16R2	16R3	16R4	34L1	34L2	34L3	34L4	16L1	34R1
GASEPF	193.0051	264.7480	10	10	5		8	8	4		31	24
GASEPV	47.9285	65.6834	9	17	17		7	14	14		12	10
BEC58P	13.0124	17.8230	9	17	17		7	14	14		12	10
CNA441	3.2885	5.3184			15	40				10	35	
CL600	0.3278	0.5302				55					45	
G-II	0.1314	0.0546				55					45	
CNA500	1.1473	1.8556				55					45	
G-IV	0.1964	0.4756				55					45	
737-300	0.1458	0.3048				55					45	
737-400	0.1001	0.2092				55					45	
737-500	0.2372	0.4958				55					45	
747-200	0.0007	0.0015				55					45	
747-400	0.0161	0.0337				55					45	
767-300	0.0647	0.1352				55					45	
757PW	0.3895	0.8142				55					45	
757RR	0.2067	0.4321				55					45	
767JT9	0.0054	0.0112				55					45	
MD81	0.0035	0.0061				55					45	
C-130	0.0007	0.0011				55					45	
F-18	0.0709	0.1107				55					45	
L188	0.1774	0.2767				55					45	
727EM1	0.0257					55					45	
727EM2	0.0740					55					45	
727QF	0.0160					55					45	
DC9Q7	0.0003					55					45	
DC9Q9	0.0023					55					45	
DC10-40	0.0004					55					45	
737N17	0.0075					55					45	
737QN	0.0020					55					45	
<b>TOTAL</b>	<b>260.5844</b>	<b>359.3212</b>										



Table 5  
**EXISTING AND FUTURE RUNWAY UTILIZATION PERCENTAGE**  
*Paine Field Noise Exposure Map Update*

Runway	Arrivals Day	Departures Day	Arrivals Night	Departures Night
16R	33.5	33.0	56.4	53.6
34L	27.3	27.2	43.6	46.4
16L	20.0	20.8		
34R	16.8	17.1		
11	0.9	0.6		
29	1.5	1.2		
Total	100	100	100	100

### Noise Exposure Maps

The existing and forecast aircraft operation numbers presented earlier, along with the data and methodology presented above, noise exposure maps for existing and future conditions have been prepared and are graphically depicted in the following illustrations entitled *EXISTING (2002) NOISE EXPOSURE MAP WITH EXISTING LAND USE* and *FUTURE (2008) NOISE EXPOSURE MAP WITH EXISTING LAND USE*. The 55, 60, 65, 70, and 75 DNL noise contours are illustrated on each map.





## Land Use Within Contours

**Existing Noise Exposure Map.** The existing Noise Exposure Map contours encompass various land uses. The Federal Aviation Administration considers residential and other noise sensitive land uses within the 65 or greater DNL contours as being incompatible. The 75 DNL noise contour is the smallest contour and the 55 DNL noise contour is the largest contour generated. The existing 75 DNL noise contour contains approximately 140 acres, all within airport/Boeing Company property. The 70 DNL noise contour contains approximately 342 acres, also all contained within airport/Boeing Company property. The 65 DNL encompasses roughly 591 acres, all of which is contained on airport/Boeing Company property. The 60 DNL noise contour contains approximately 1,130 acres, while the existing 55 DNL contour contains approximately 2,510 acres. The 60 DNL noise contour extends off of airport property to the south of both parallel runways and to the north of the main runway. The 55 DNL noise contour extends off of airport property in all directions. ***There are no residential or other noise sensitive land uses within the 65 or greater DNL noise contours associated with the Existing Noise Exposure Map.***

For comparison purposes, perhaps it is important to note that the future 65 DNL noise contour (1999) illustrated in the 1995 *Paine Field FAR Part 150* contained 832 acres and was based on a forecast of 237,700 annual aircraft operations. The actual number of aircraft operations recorded in calendar year 2000 (used as the base year in this Master Plan Update) was 213,371. The new noise contours created with INM Version 6.0c provide a more accurate depiction of noise generated at the airport by aircraft engine run-ups at Goodrich and Boeing, and better account for the effects of topography than the earlier version of the INM used in the 1995 Part 150 Study.

**Future Noise Exposure Map.** Like the Existing (2002) Noise Exposure Map, the Future (2008) Noise Exposure Map noise contours encompass various types of land uses. Again, the 75 DNL is the smallest noise contour and the 55 DNL is the largest noise contour. The future 75 DNL noise contour encompasses some 147 acres, while the 70 DNL contains approximately 364 acres, both of which are contained entirely within airport/Boeing Company property. The future 65 DNL noise contour contains approximately 644 acres, all of which is contained on airport/Boeing Company property. The future 60 DNL noise contour contains approximately 1,322 acres and extends off of airport property to the south of both parallel runways and to the north of the main runway. The 55 DNL noise contour encompasses approximately 2,889 acres and extends off of airport property to the north, south, east, and west. ***There are no residential or other noise sensitive land uses within the 65 or greater DNL noise contours associated with the Future Noise Exposure Map.*** It should be noted that reference to Table 1 from the Part 150 was used to identify land use compatibility issues for the existing and future conditions.

## **Consultation**

### **Introduction**

The development of the Paine Field Master Plan Update involved an extensive public participation process. As stated previously, the need to update the noise exposure maps was identified as a result of the public meetings and process used in the preparation of the 2002 Master Plan Update. An inclusive tone was set by Snohomish County from the very beginning by establishing a 25-member Study Advisory Committee membership that was broadly representative of all stakeholders.

The elements of the public involvement process were:

- Comprehensive Public Involvement Program
- Five Study Advisory Committee Meetings
- Five Open House/Public Meetings
- Meetings with Individual Citizens
- Project Information Brochure
- Airport Website Publications
- Numerous Working Papers
- Project Workbooks
- Public Hearing

### **Study Advisory Committee**

A key component of the Master Plan Update's public involvement process was the establishment of a Study Advisory Committee. Composition of the Study Advisory Committee (SAC) was developed to include representatives from neighborhoods surrounding the Airport, business interests, and local government representatives.

All meetings of the SAC were advertised and open to the public.

### **Project Brochure**

An introductory brochure was published and made available at all public meetings that explained the purpose and process of the study, outlined the schedule and named the participants and sponsors.

### **Open Houses/Public Information Meetings**

Five Open House/Public Information Meetings were held during the Study where members of the public were able to interact directly with Airport and consulting staff on their noise related concerns. Display boards were available to present information being discussed among the SAC. At each Open House, members of the public were afforded the opportunity to have their questions answered and provide written comments. Public input from these Open Houses was influential in prioritizing issues during the Study.

The locations for the Open Houses were publicly advertised in local newspapers and announced on the Airport's Website.

### Project Notebooks

Notebooks were provided to each SAC members for the organization of materials that were distributed throughout the preparation process. In addition, copies of the notebook were provided to local libraries. The project materials in the library notebooks were kept up to date throughout the preparation process.

### Website

The airport's web site was used extensively during the preparation of the Master Plan Update to enable broad access to technical data, meeting summaries, schedules, meeting agendas and other pertinent information.

### Working Documents/Draft Report

A working document was prepared and presented to airport staff and the public before the Draft Report recommendations were formulated. In addition, the Draft Report's recommendations were presented to and adopted by the Snohomish County Council in public hearing on December 4, 2002. At this initial public hearing a review of the process was presented and one Study Advisory Committee member eloquently requested that the County provide noise information to surrounding school districts so that adequate consideration on noise attenuating design features can be incorporated into the districts' capital improvement programs for affected school facilities. Following this adoption, at the suggestion of the FAA, the base year 2002 aircraft operational data and INM inputs were refined, which resulted in new 2002 and 2008 NEM contours and this Revised Draft Report. The Revised Draft Report has been circulated for public review to the Master Plan Update Study Advisory Committee members and the public through local public libraries and the Airport's webpage.

### Public Hearing

As stated above the Revised Draft Report was circulated to the public through the Study Advisory Committee, as well as the public libraries, the airport's webpage, and in the

airport administrative office. Notice of the public hearing was distributed with each copy of the Revised Draft Report, on the airport's webpage, along with being published in the following newspapers (see proof of publication in the Appendix):

- Seattle Times
- Mukilteo Beacon
- Everett Herald
- Mukilteo Tribune

The public hearing was held on June 30, 2003 at the Public Works Transportation Committee meeting of the Snohomish County Council. Airport staff briefed the committee. One written comment (see appendix) and no verbal comments were received. The County Council continued the Public Hearing to its legislative session on July 1, 2003. No further comments were received during the July 1 hearing and the County Council adopted the Noise Exposure Maps with the attached motion (see appendix).