Title 17

LAND USE AND DEVELOPMENT

Chapters:

[...]

17.69 Public Use Airport

[...]

17.88 AO *Public Use* Airport *Safety and Compatibility* Overlay District

Create a new chapter:

Chapter 17.69

PUA PUBLIC USE AIRPORT

Sections:

17.69.010 Purpose. ***The purpose of the Public Use Airport zone is to encourage and support the continued operation and vitality of the Scappoose Industrial Airpark by allowing certain airport-related commercial, manufacturing and recreational uses in accordance with state law.***

17.69.020 Conformance with Public Use Airport Safety and Compatibility Overlay. ***All uses, activities, facilities and structures allowed in the Public Use Airport (PUA) zone shall comply with the requirements of the Public Use Airport Safety and Compatibility Overlay (Chapter 17.88). In the event of a conflict between the requirements of this zone and those of the Public Use Airport Safety and Compatibility Overlay, the requirements of the overlay shall control.***

17.69.030 Definitions.

A. "Aircraft" includes airplanes and helicopters, but not hot air balloons or ultralights.

B. "Airport Sponsor" is the owner, manager, person or entity designated to represent the interests of an airport.

C. "Airport Compatible Light Industrial Uses" are light manufacturing activities that do not create safety hazards or otherwise interfere with customary and usual aviation-related activities.

17.69.040. Permitted Uses. The following uses and activities are permitted outright in the PUA zone:

A. Customary and usual aviation-related activities, including but not limited to takeoffs and landings; aircraft hangars and tie-downs; construction and maintenance of airport facilities; fixed based operator facilities; a residence for an airport caretaker or security officer; and other activities incidental to the normal operation of an airport. Except as provided in this ordinance, "customary and usual aviation-related activities" do not include residential, commercial, industrial, manufacturing and other uses;

B. Air passenger and air freight services and facilities, at levels consistent with the classification and needs identified in the Oregon Department of Aviation Airport System Plan;

C. Emergency medical flight services, including activities, aircraft, accessory structures, and other facilities necessary to support emergency transportation for medical purposes. Emergency medical flight services do not include hospitals, medical offices, medical labs, medical equipment sales, and other similar uses;

D. Law enforcement and firefighting activities, including aircraft and ground-based activities, facilities and accessory structures necessary to support federal, state or local law enforcement or land management agencies engaged in law enforcement or firefighting activities. Law enforcement and firefighting activities include transport of personnel, aerial observation, and transport of equipment, water, fire retardant and supplies;

E. Search and rescue operations, including aircraft and ground based activities that promote the orderly and efficient conduct of search or rescue related activities.

F. Flight instruction, including activities, facilities, and accessory structures located at airport sites that provide education and training directly related to aeronautical activities. Flight instruction includes ground training and aeronautic skills training, but does not include schools for flight attendants, ticket agents or similar personnel;

G. Aircraft service, maintenance and training, including activities, facilities and accessory structures provided to teach aircraft service and maintenance skills and to maintain, service, refuel or repair aircraft or aircraft components. "Aircraft service, maintenance and training" includes the construction and assembly of aircraft and aircraft components for personal use, but does not include activities, structures or facilities for the manufacturing of aircraft or

ORDINANCE NO 726

An Ordinance relating to land use and amending the Scappoose Comprehensive Plan (pages 169 and 170); amending the Title 17 Index (page 191), adding a new chapter (17.69), amending Chapter 17.88 of Title 17 of the Scappoose Municipal Code; and, amending the Scappoose Zoning Map.

THE CITY OF SCAPPOOSE ORDAINS AS FOLLOWS:

Section 1. That the Scappoose Comprehensive Plan be amended as follows:

(Language to be omitted is ~~strikethrough~~, language additions are in **bold italics**)

POLICIES FOR THE INDUSTRIAL LAND USE DESIGNATION

It is the policy of the City of Scappoose to:

[…]

~~7) Encourage mining activities when they are compatible with surrounding etivities; mining is compatible with an airport when:~~

~~A) There are no permanent or mobile obstructions affecting airspace.~~

~~B) Any man-made lakes that result from mining are designed to limit bird hazards.~~

~~C) The operation does not produce dust that impairs visibility.~~

~~D) Man-made lakes that may result are so designed to limit glare which may impair visibility.~~

~~E) There are no electrical interferences with navigational signals or radio communications.~~

~~8) Zone the aggregate lands northeast of the Highway 30 and North Vernonia Road intersection as Surface Mining upon annexation to protect these resources for mining.~~

Section 2. That Scappoose Municipal Code Title 17 be amended as follows:

(Language to be omitted is ~~strikethrough~~, language additions are in **bold italics**)

Amend Title 17 LAND USE AND DEVELOPMENT (page 191) by adding the following:

aircraft-related products for sale to the public;

H. Aircraft rental, including activities, facilities and accessory structures that support the provision of aircraft for rent or lease to the public;

I. Aircraft sales and the sale of aeronautic equipment and supplies, including activities, facilities and accessory structures for the storage, display, demonstration and sales of aircraft and aeronautic equipment and supplies to the public but not including activities, facilities or structures for the manufacturing of aircraft or aircraft-related products for sale to the public;

J. Crop dusting activities, including activities, facilities and structures accessory to crop dusting operations. Crop dusting activities include, but are not limited to, aerial application of chemicals, seed, fertilizer, defoliant and other chemicals or products used in a commercial agricultural, forestry or rangeland management setting;

K. Agricultural and Forestry Activities, including activities, facilities and accessory structures that qualify as a "farm use" as defined in ORS 215.203 or "farming practice" as defined in ORS 30.930;

L. Manufacturing, assembly, processing, packaging, testing, treatment, repair, or distribution of aircraft or aircraft related components or products for sale to the public; and

M. Other airport compatible light industrial uses.

17.69.050 Uses Permitted Subject to the Acceptance of the Airport Sponsor. The following uses and activities and their associated facilities and accessory structures are permitted in the PUA zone upon demonstration of acceptance by the airport sponsor:

A. Aeronautic recreational and sporting activities, including activities, facilities and accessory structures at airports that support recreational usage of aircraft and sporting activities that require the use of aircraft or other devices used and intended for use in flight. Aeronautic recreation and sporting activities authorized under this paragraph include, but are not limited to, fly-ins; glider flights; ultralight aircraft flights; displays of aircraft; aeronautic flight skills contests; and gyrocopter flights, but do not include hot air ballooning, flights carrying parachutists or parachute drops (including all forms of skydiving).

17.69.060 Conditional Uses. The following uses and their accessory uses may be permitted when authorized by the Planning Commission in accordance with the requirements of Chapter 17.130 (Conditional Use) of the Scappoose Development Code, other relevant sections of this Title, and any conditions imposed by the Planning Commission:

A. Auto rental agencies;

B. Cafeterias and restaurants;

C. Motels; and

D. Other commercial uses customarily located at public use airports.

17.69.070 Dimensional Requirements and Development Standards.

A. Lot size. There is no minimum lot size in the PUA zone.

B. Setbacks. No front, side or rear yard setbacks except on lots abutting a residential district, where the minimum setback is 50 feet on the side abutting or facing the residential district.

C. All outside storage areas require buffering and screening as defined in Chapter 17.100 (Landscaping) of the Scappoose Development Code.

D. Uses shall be developed and located in a manner consistent with the most recent federally approved airport layout plan.

E. Additional requirements shall include any applicable section of this Title.

Amend and replace Chapter 17.88:

Chapter 17.88

AO ***PUBLIC USE*** AIRPORT ***SAFETY AND COMPATIBILITY*** OVERLAY ~~DISTRICT~~

Sections:

~~17.88.010 Purpose.~~
~~17.88.020 Compliance.~~
~~17.88.030 Special definitions.~~
~~17.88.040 Permitted uses within the runway protection zone.~~
~~17.88.050 Permitted uses within the airport approach safety zone.~~
~~17.88.060 Conditional uses.~~
~~17.88.070 Approval of conditional uses.~~
~~17.88.080 Approval of uses allowed in the underlying zones.~~

~~Sections: (Continued)~~

~~17.88.090 Limitations.~~
~~17.88.100 Variances.~~

~~17.88.010 Purpose. The purpose of this overlay zone is to prevent airspace conflicts within the FAA Part 77 imaginary surfaces area which is utilized by aircraft arriving at and departing from the Scappoose Industrial Airport. This zone, as indicated on the map included in this chapter, includes all areas lying within the approach, departure, horizontal and conical zones of the airport facility as shown on the Scappoose Industrial Airport Master Plan Report and updates of this document and the zoning maps. Further, this overlay zone is intended to prevent the establishment of air space~~

~~obstructions in airport approaches and surrounding areas through height restrictions and other land use controls as deemed essential to protect the health, safety and welfare of the people of the city. (Ord. 634 §1 Exh. A (part), 1995)~~

~~17.88.020 Compliance. In addition to complying with the provision of the primary zone, uses and activities shall comply with the provisions of this overlay zone. In the event of any conflict between any provision of this overlay zone and the primary zone, the more restrictive provision shall apply. (Ord. 634 §1 Exh. A (part), 1995)~~

~~17.88.030 Special definitions. As used in this chapter:~~

~~"Airport" means Scappoose Industrial Airpark.~~

~~"Airport approach/departure and safety zone" means a surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of the primary surface. The inner edge of the approach surface is the same width as the primary surface and extends to a width of three thousand five hundred feet for the Scappoose Industrial Airpark, a nonprecision instrument runway having visibility minimums as low as three-fourths statute mile.~~

~~The airport approach surface extends for a horizontal distance ten thousand feet at a slope of thirty-four feet outward for each one foot upward (34:1) for the Scappoose Industrial Airpark then slopes upward forty feet outward for each foot upwards (40:1) an additional distance of forty thousand feet.~~

~~"Airport elevation" means the highest point of an airport's usable runway expressed in feet above mean sea level.~~

~~"Airport hazard" means any structure, tree or use of land which exceeds height limits established by the airport imaginary surfaces.~~

~~"Airport imaginary surfaces" means those imaginary areas in space which are defined by the airport approach~~
~~safety zone, transitional zones, horizontal zone, runway protection zone (RPZ) and conical surface and in which any object extending above these imaginary surfaces is an obstruction.~~

~~"Conical Surface" extends twenty feet outward for each one foot upward (20:1) for four thousand feet beginning at the edge of the horizontal surface (ten thousand feet from the center of each end of the Primary Surface of each runway at one hundred fifty feet above the airport elevation) and upward extending to a height of three hundred fifty feet above the airport elevation.~~

~~"Conical zone" is established as the area that commences at the periphery of the horizontal zone and extends outward and upward at 20:1 therefrom for a horizontal distance of four thousand feet.~~

~~"General utility Stage I airport" means an airport designed and maintained to serve airplanes having approach speeds less than one hundred twenty-one knots and wing spans of seventy-nine feet or less.~~

~~"Hazard to air navigation" means an obstruction determined to have a substantial adverse effect on the safe and efficient utilization of the navigable airspace.~~

~~"Height" means the highest point of an object measured from mean sea level.~~

~~"Horizontal surface" means a horizontal plane one hundred fifty feet above the~~

established airport elevation, the perimeter of which is constructed by swinging arcs of ten thousand feet from the center of each end of the primary surface of each runway and connecting the adjacent arcs by lines tangent to those arcs.

"Horizontal zone" means the horizontal zone is established by swinging arcs of ten thousand feet radii from the center of each end of the primary surface of each visual or utility runway and connecting the adjacent arcs by drawing lines tangent to those arcs. The horizontal zone does not include the approach and departure zones.

"Noise sensitive areas" means areas within one thousand five hundred feet of an airport or within established noise contour boundaries exceeding fifty-five Ldn.

"Nonconforming use" means any pre-existing (i.e., established prior to the effective date of this title) structure, object of natural growth, or use of land which is inconsistent with the provisions of this title or an amendment thereto.

"Obstruction" means any structure, growth or other object, including a mobile object, which exceeds a limiting height set forth in this title.

"Place of public assembly" means a structure or place which the public may enter for such purposes as deliberation, education, worship, shopping, entertainment, amusement, awaiting transportation or similar activity.

"Primary surface" means a surface longitudinally centered on a runway. When the runway has a specially prepared hard surface, the primary surface extends two hundred feet beyond each end of that runway. When the runway has no special prepared hard surface, or planned hard surface, the primary surface ends at each end of that runway. The width of the primary surface is two hundred fifty feet for utility runways having only visual approaches, five hundred feet for utility runways having nonprecision instrument approaches, five hundred feet for other than utility runways and one thousand feet for nonprecision instrument runways with visibility minimums of three-fourths of a mile or less and for precision instrument runways.

"Runway" means a defined area on an airport prepared for landing and takeoff of aircraft along its length.

"Runway protection zone" extends from the primary surface to a point where the approach surface is fifty feet above the runway end elevation.

"Structure" means an object, including a mobile object, constructed or installed by persons, including, but without limitation, buildings, towers, cranes, smokestacks, earth formations and overhead transmission lines.

"Transitional zones" extend seven feet outward for each one foot upward (7:1) beginning on each side of the primary surface which point is the same elevation as the runway surface, and from the sides of the approach surfaces thence extending upward to a height of one hundred fifty feet above the airport elevation (horizontal surface).

"Tree" means any object of natural growth. (Ord. 634 §1 Exh. A (part), 1995)

17.88.040 Permitted uses within the runway protection zone. While it is desirable to clear all objects from the RPZ, some uses are permitted, provided they do not attract wildlife, are below the approach surface and do not interfere with navigational aids:

A. Agricultural operations (other than forestry or livestock farms);

B. Golf courses (but not club houses);

C. Automobile parking facilities (but not buildings or signs). (Ord. 634 §1 Exh.

A (part), 1995)

17.88.050 Permitted uses within the airport approach safety zone. A. Aircraft landing field including accessory uses which are clearly subordinate to the primary use and which comply with all other provisions of this title;

B. Farm use, excluding the raising and feeding of animals which would be adversely affected by aircraft passing overhead;

C. Landscape nursery, cemetery or recreation areas which do not include building or structures;

D. Roadways, parking areas and storage areas located in such a manner that vehicle lights will not make it difficult for pilots to distinguish between landing lights and vehicle lights or result in glare, or in any way impair visibility in the vicinity of the landing approach. Approach surfaces must clear these by a minimum of fifteen feet;

E. Pipeline;

F. Underground utility wire;

G. Single-family dwellings when permitted in the underlying zone, provided the landowner signs and records in the deed and mortgage records of Columbia County a hold harmless agreement and aviation and hazard easement and submits them to the airport sponsor and Scappoose planning department. Ord. 634 §1 Exh. A (part), 1995)

17.88.060 Conditional uses. The following uses and their accessory uses may be permitted when authorized by the planning commission in accordance with the requirements of Chapter 17.130, other relevant sections of this title and any conditions imposed by the planning commission:

A. Residential uses not specifically identified as permitted in Section 17.88.050, but permitted by the underlying zone which do not conflict with the other provisions of this title;

B. Commercial and industrial uses, when authorized in the underlying zone provided the use does not result in the following:

1. Creating electrical interference with navigational signals or radio communication between the airport and aircraft,

2. Difficulty for pilots in distinguishing between airport lights or others,

3. Impairing visibility,

4. Creating bird strike hazards,

5. Endangering or interfering with the landing, taking off or maneuvering of aircraft intending to use the airport,

6. Attracting large numbers of people;

C. Buildings and uses of a public works, public service or public utility nature. (Ord. 634 §1 Exh. A (part), 1995)

17.88.070 Approval of conditional uses. A. An applicant seeking a conditional use under Section 17.88.060 shall follow procedures set forth in Chapter 17.130.

B. The use shall conform to the requirements of the underlying zone.

C. The Oregon Department of Transportation, Aeronautics Section shall certify in

writing that the proposed use will not interfere with the operation of the aircraft landing field.

D. The conditional use permit shall be processed in accordance with Chapter 17.130.

E. Information accompanying the application shall also include the following:

1. Property boundary lines as they relate to the airport imaginary surfaces;

2. Location and height of all existing and proposed buildings, structures utility lines and roads; and

3. A statement from the Oregon Department of Transportation, Aeronautics Section indicating that the proposed use will not interfere with operation of the landing facility. (Ord. 634 §1 Exh. A (part), 1995)

17.88.080 Approval of uses allowed in the underlying zones. The designated approval authority may approve any request that complies with the underlying zone when it can be shown that the proposed use or structure:

A. Will not be located within the runway protection zone;

B. Will not exceed the height limitations established in Federal Aviation Regulations, Part 77. Applications for structures with questionable height shall be forwarded to the Oregon Department of Transportation, Aeronautics Section for review and comment;

C. Will not create electrical interference with navigational signals or radio communications between airport and aircraft;

D. City standards for lighting can be met without creating confusion between airport lights and the development;

E. Will not create glare;

F. Will not impair visibility;

G. Will not create bird/aircraft conflicts. (Ord. 636 §1(part), 1996: Ord. 634 §1 Exh. A (part), 1995)

17.88.090 Limitations. A. To meet the standards and reporting requirements established in FAA Regulations, Part 77, and OAR Chapter 738 Division 70, no structure shall penetrate into the airport imaginary surface.

B. No place of public assembly shall be permitted in the airport approach safety zone.

C. No structure or building shall be allowed within the runway protection zone.

D. Whenever there is a conflict in height limitations prescribed by this overlay zone and the primary zoning district, the lowest height limitations here imposed shall not apply to such structures customarily employed for aeronautical purposes.

E. No glare-producing materials shall be used on the exterior of any structure located within the airport approach safety zone.

F. In noise sensitive areas (within one thousand five hundred feet of an airport or within established noise contour boundaries of fifty-five Ldn and above for identified airports where noise levels are a concern, a declaration of anticipated noise levels shall be attached to any development permit or development approval. In areas where the noise level is anticipated to be fifty-five Ldn and above, prior to issuance of a development

~~permit for construction of noise sensitive land use (real property normally used for sleeping or normally used as schools, churches, hospitals or public libraries) the permit applicant shall be required to demonstrate that a noise abatement strategy will be incorporated into the building design which will achieve an indoor noise level equal to or less than forty-five ldn. The planning and building department will review development permits for noise sensitive developments.~~

~~G. No sanitary landfills, sewage lagoons, sewage sludge disposal, open water impoundment's and other potential bird attractants shall be permitted closer than ten thousand feet to the airport runway. (Ord. 634 §1 Exh. A (part), 1995)~~

~~17.88.100 Variances. Any variance from the height and/or use requirements of this overlay zone shall be considered a major variance and shall be process in accordance with Chapter 17.134. In addition to the findings required by Chapter 17.134, the Oregon Department of Transportation, Aeronautics Section shall certify that the requested variance will not interfere with the operation of air navigation facilities and the safe, efficient use of navigable airspace. (Ord. 634 §1 Exh. A (part), 1995)~~

17.88.010 Purpose. The purpose of this overlay zone is to encourage and support the continued operation and vitality of the Scappoose Industrial Airpark by establishing compatibility and safety standards to promote air navigational safety at the Airpark and to reduce potential safety hazards for persons living, working or recreating near the Airpark.

17.88.020 Definitions.

A. "Airpark" means the Scappoose Industrial Airpark. The Airpark utilizes a non-precision instrument runway, other than utility, that currently has visibility minimums greater than three-fourths statute mile. Over the planning period, it is possible that the visibility minimums could be reduced to three-fourths statute mile.

B. "Airport" is the strip of land used for taking off and landing aircraft, together with all adjacent land used in connection with the aircraft landing or taking off from the strip of land, including but not limited to land used for existing airport uses.

C. "Airport Direct Impact Area" means the area located within 5,000 feet of an airport runway, excluding lands within the runway protection zone and approach surface.

D. "Airport Elevation" is the highest point of an airport's usable runway, measured in feet above mean sea level.

E. "Airport Imaginary Surfaces" are the imaginary areas in space and on the ground that are established in relation to the airport and its runways. Imaginary areas are defined by the primary surface, runway protection zone, approach surface, horizontal surface, conical surface and transitional surface.

F. "Airport Noise Impact Boundary" means areas located within 1,500 feet of an airport runway or within established noise contour boundaries exceeding 55 Ldn.

G. "Airport Secondary Impact Area" is the area located between 5,000 and 10,000 feet from an airport runway.

H. "Airport Sponsor" means the owner, manager, or other person or entity designated to represent the interests of an airport.

I. "Approach Surface" is a surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of the primary surfaces. For the Scappoose Industrial Airpark:

1. The inner edge of the approach surface is the same width as the primary surface and it expands uniformly to a width of 3,500 feet. If visibility minimums are reduced to three-fourths statute mile, then the approach surface would expand uniformly to a width of 4,000 feet;

2. The approach surface extends for a horizontal distance of 10,000 feet at a slope of 34 feet outward for each foot upward; and

3. The outer width of an approach surface is 3,500 feet at a distance of 10,000 feet from the end of the primary surface. If visibility minimums are reduced to three-fourths statute mile, then the outer width of the approach surface would be 4,000 feet at a distance of 10,000 feet from the end of the primary surface.

J. "Conical Surface" means a surface extending outward and upward from the periphery of the horizontal surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet.

K. "Department of Aviation" is the Oregon Department of Aviation, formerly the Aeronautics Division of the Oregon Department of Transportation.

L. "FAA" is the Federal Aviation Administration.

M. "FAA's Technical Representative" means (as used in this ordinance), the federal agency providing the FAA with expertise on wildlife and bird strike hazards as they relate to airports. This may include, but is not limited to, the USDA-APHIS-Wildlife Services.

N. "Height" is the highest point of a structure or tree, plant or other object of natural growth, measured from mean sea level.

O. "Horizontal Surface" is a horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by swinging arcs of specified radii from the center of each end of the primary surface of each runway and connecting to adjacent arcs by lines tangent to those arcs. For the Scappoose Industrial Airpark, the radius of each arc is 10,000 feet.

P. "Non-precision Instrument Runway" means a runway having an existing instrument approach procedure utilizing air navigation facilities with only horizontal guidance, or area type navigation equipment, for which a straight-in non-precision instrument approach has been approved, or planned, and for which no precision approach facilities are planned or indicated on an FAA-approved airport layout plan or other FAA planning document.

Q. "Obstruction" means any structure or tree, plant or other object of natural growth that penetrates an imaginary surface.

R. "Other than Utility Runway" is a runway that is constructed for and intended to be used by turbine-driven aircraft or by propeller-driven aircraft exceeding 12,500 pounds gross weight.

S. "Precision Instrument Runway" is a runway having an existing instrument approach procedure utilizing air navigation facilities that provide both horizontal and vertical guidance, such as an Instrument Landing System (ILS) or Precision Approach Radar (PAR). It also means a runway for which a precision approach system is planned and is so indicated by an FAA-approved airport layout plan or other FAA planning document.

T. "Primary Surface" means a surface longitudinally centered on a runway. When a runway has a specially prepared hard surface, the primary surface extends 200 feet beyond each end of that runway. When a runway has no specially prepared hard surface, or planned hard surface, the primary surface ends at each end of that runway. The elevation of any point on the primary surface is the same as the elevation of the nearest point on the runway centerline. For the Scappoose Industrial Airpark, the width of the primary surface is 500 feet. If visibility minimums are reduced to three-fourths statute mile, then the width of the primary surface would be 1,000 feet.

U. "Public Assembly Facility" is a permanent or temporary structure or facility, place or activity where concentrations of people gather in reasonably close quarters for purposes such as deliberation, education, worship, shopping,

employment, entertainment, recreation, sporting events, or similar activities. Public assembly facilities include, but are not limited to, schools, churches, conference or convention facilities, employment and shopping centers, arenas, athletic fields, stadiums, clubhouses, museums, and similar facilities and places, but do not include parks, golf courses or similar facilities unless used in a manner where people are concentrated in reasonably close quarters. Public assembly facilities also do not include air shows, structures or uses approved by the FAA in an adopted airport master plan, or places where people congregate for short periods of time such as parking lots or bus stops.

V. "Runway" is a defined area on an airport prepared for landing and takeoff of aircraft along its length.

W. "Runway Protection Zone (RPZ)" means an area off the runway end used to enhance the protection of people and property on the ground. The RPZ is trapezoidal in shape and centered about the extended runway centerline. The inner width of the RPZ is the same as the width of the primary surface. The outer width of the RPZ is a function of the type of aircraft and specified approach visibility minimum associated with the runway end. For the Scappoose Industrial Airpark, the RPZ extends from each end of the primary surface for a horizontal distance of 1,000 feet. If visibility minimums are reduced to three-fourths statute mile, then the RPZ would extend from each end of the primary surface for a horizontal distance of 1,700 feet.

X. "Significant" means (as it relates to bird strike hazards), a level of increased flight activity by birds across an approach surface or runway that is more than incidental or occasional, considering the existing ambient level of flight activity by birds in the vicinity.

Y. "Structure" is any constructed or erected object which requires location on the ground or is attached to something located on the ground. Structures include but are not limited to buildings, decks, fences, signs, towers, cranes, flagpoles, antennas, smokestacks, earth formations and overhead transmission lines. Structures do not include paved areas.

Z. "Transitional Surface" means those surfaces that extend upward and outward at 90 degree angles to the runway centerline and the runway centerline extended at a slope of seven (7) feet horizontally for each foot vertically from the sides of the primary and approach surfaces to the point of intersection with the horizontal and conical surfaces. Transitional surfaces for those portions of the precision approach surfaces which project through and beyond the limits of the conical surface, extend a distance of 5,000 feet measured horizontally from the edge of the approach surface and at a 90 degree angle to the extended runway centerline.

AA. "Utility Runway" is a runway that is constructed for, and intended to be used by, propeller driven aircraft of 12,500 pounds maximum gross weight or less.

BB. "Visual Runway" is a runway intended solely for the operation of aircraft using visual approach procedures, where no straight-in instrument approach procedures or instrument designations have been approved or planned, or are indicated on an FAA-approved airport layout plan or any other

FAA planning document.

CC. "Water Impoundment" includes wastewater treatment settling ponds, surface mining ponds, detention and retention ponds, artificial lakes and ponds, and similar water features. A new water impoundment includes an expansion of an existing water impoundment except where such expansion was previously authorized by land use action approved prior to the effective date of this ordinance.

17.88.030 Imaginary Surface and Noise Impact Boundary Delineation. The airport elevation, the airport noise impact boundary, the airport direct impact boundary, the airport secondary impact boundary, and the location and dimensions of the runway, primary surface, runway protection zone, approach surface, horizontal surface, conical surface and transitional surface shall be delineated for the Scappoose Industrial Airpark and shall be made part of the Official Zoning Map. All lands, waters and airspace, or portions thereof, that are located within these boundaries or surfaces, and are located within the city limits shall be subject to the requirements of this overlay zone.

17.88.040 Notice of Land Use and Permit Applications within Overlay Zone Area. Except as otherwise provided herein, written notice of applications for land use or limited land use decisions, including comprehensive plan or zoning amendments, in an area within this overlay zone, shall be provided to the airport sponsor and the Department of Aviation in the same manner as notice is provided to property owners entitled by law to written notice of land use or limited land use applications.

A. Notice shall be provided to the airport sponsor and the Department of Aviation when the property, or a portion thereof, that is subject to the land use or limited land use application is located within the Scappoose city limits and within 5,000 feet of the sides or ends of a runway.

B. Notice of land use and limited land use applications shall be provided within the following timelines:

1. Notice of land use or limited land use applications involving public hearings shall be provided prior to the public hearing at the same time that written notice of such applications is provided to property owners entitled to such notice; and

2. Notice of land use or limited land use applications not involving public hearings shall be provided at least 20 days prior to entry of the initial decision on the land use or limited land use application.

C. Notice of the decision on a land use or limited land use application shall be provided to the airport sponsor and the Department of Aviation within the same timelines that such notice is provided to parties to a land use or limited land use proceeding.

D. Notices required under paragraphs A-C of this section need not be provided to the airport sponsor or the Department of Aviation where the land use or limited land use application meets all of the following criteria:

1. Would only allow structures of less than 35 feet in height;

2. Involves property located outside the approach and transition surfaces;

3. Does not involve industrial, mining or similar uses that emit smoke, dust or steam; sanitary landfills or water impoundments; or radio, radio, telephone, television or similar transmission facilities or electrical transmission lines; and

4. Does not involve wetland mitigation, enhancement, restoration or creation.

17.88.050 Height Limitations on Allowed Uses in Underlying Zones. All uses permitted by the underlying zone shall comply with the height limitations in this Section. When height limitations of the underlying zone are more restrictive than those of this overlay zone, the underlying zone height limitations shall control.

A. Except as provided in subsections B and C of this Section, no structure or tree, plant or other object of natural growth shall penetrate an airport imaginary surface.

B. For areas within airport imaginary surfaces but outside the approach and transition surfaces, where the terrain is at higher elevations than the airport runway surfaces such that existing structures and permitted development penetrate or would penetrate the airport imaginary surfaces, a local government may authorize structures up to 35 feet in height.

C. Other height exceptions or variances may be permitted when supported in writing by the airport sponsor, the Department of Aviation and the FAA. Applications for height variances shall follow the procedures for other variances and shall be subject to such conditions and terms as recommended by the Department of Aviation and the FAA.

17.88.060 Procedures. An applicant seeking a land use or limited land use approval in an area within this overlay zone shall provide the following information in addition to any other applications or requirements as listed within the Scappoose Development Code:

A. A map or drawing showing the location of the property in relation to the airport imaginary surfaces. The Planning Department shall provide the applicant with appropriate base maps upon which to locate the property.

B. Elevation profiles and a site plan, both drawn to scale, including the location and height of all existing and proposed structures, measured in feet above mean sea level.

C. If a height variance is requested, letters of support from the airport sponsor, the Department of Aviation and the FAA.

17.88.070 Land Use Compatibility Requirements. Applications for land use or building permits for properties within the boundaries of this overlay zone shall comply with the requirements of this chapter as provided herein.

A. Noise. Within airport noise impact boundaries, land uses shall be established consistent with the levels identified in OAR 660, Division 13, Exhibit 5. A declaration of anticipated noise levels shall be attached to any subdivision or partition approval or other land use approval or building permit affecting land within airport noise impact boundaries. In habitable areas where

the noise level is anticipated to be at or above 45 Ldn, prior to issuance of a building permit for construction of a noise sensitive land use (real property normally used for sleeping or as a school, church, hospital, public library or similar use), the permit applicant shall be required to demonstrate that a noise abatement strategy will be incorporated into the building design that will achieve an indoor noise level equal to or less than 45 Ldn.

B. Outdoor lighting. No new or expanded industrial, commercial or recreational use shall project lighting directly onto an existing runway or taxiway or into existing airport approach surfaces except where necessary for safe and convenient air travel. Lighting for these uses shall incorporate shielding in their designs to reflect light away from airport approach surfaces. No use shall imitate airport lighting or impede the ability of pilots to distinguish between airport lighting and other lighting.

C. Glare. No glare producing material, including but not limited to unpainted metal or reflective glass, shall be used on the exterior of structures located within an approach surface or on nearby lands where glare could impede a pilot's vision.

D. Industrial emissions. No new industrial, mining or similar use, or expansion of an existing industrial, mining or similar use, shall, as part of its regular operations, cause emissions of smoke, dust or steam that could obscure visibility within airport approach surfaces, except upon demonstration, supported by substantial evidence, that mitigation measures imposed as approval conditions will reduce the potential for safety risk or incompatibility with airport operations to an insignificant level. The review authority shall impose such conditions as necessary to ensure that the use does not obscure visibility.

E. Communications Facilities and Electrical Interference. No use shall cause or create electrical interference with navigational signals or radio communications between an airport and aircraft. Proposals for the location of new or expanded radio, radiotelephone, and television transmission facilities and electrical transmission lines within this overlay zone shall be coordinated with the Department of Aviation and the FAA prior to approval. Approval of cellular and other telephone or radio communication towers on leased property located within airport imaginary surfaces shall be conditioned to require their removal within 90 days following the expiration of the lease agreement. A bond or other security shall be required to ensure this result.

F. Limitations and Restrictions on Allowed Uses in the RPZ, Approach Surface, and Airport Direct and Secondary Impact Areas. The land uses identified in the Table below, and their accessory uses, are permitted (P); permitted under limited circumstances (L); or prohibited in the manner therein described (N). In the event of conflict with the underlying zone, the more restrictive provisions shall control. As used in this section, a limited use means a use that is allowed subject to special standards specific to that use. All regulation of uses within the RPZ, Approach Surface, and Airport Direct and Secondary Impact Areas are limited to land areas within the city limits of Scappoose. Direct and Secondary Impact Areas located outside of the city limits are regulated by the codes and ordinances of Columbia County.

Location	Public Airport	Residential	Commercial	Industrial	Institutional	Farm Use	Roads/Parking	Utilities	Parks & Open Space	Golf Courses	Athletic Fields	Sanitary Landfills	Surface Mining	Water Impoundment	Wetland Mitigation
RPZ1	L2	N	N	N	N	P3	L4	L5	L6	L7	N	N	N	N	N
Approach Surface8	L9	L10	L[9]	L[9]	L[9]	P[3]	P	L[5]	P	L[7/9]	L[9]	N	L11	N/L12	L13
Direct Impact Areas	P	L14	L15	P	L15	P[3]	P	L[5]	P	L[7]	L14	N16	L[11]	L[12]	L[13]

1 No structures shall be allowed within the Runway Protection Zone. Exceptions shall be made only for structures accessory to airport operations whose location within the RPZ has been approved by the Federal Aviation Administration.

2 In the RPZ, public airport uses are restricted to those uses and facilities that require location in the RPZ.

3 Farming practices that minimize wildlife attractants are encouraged.

4 Roads and parking areas are permitted in the RPZ only upon demonstration that there are no practicable alternatives. Lights, guardrails and related accessory structures are prohibited. Cost may be considered in determining whether practicable alternatives exist.

5 In the RPZ, utilities, powerlines and pipelines must be underground. In approach surfaces and in airport direct and secondary impact areas, the proposed height of utilities shall be coordinated with the airport sponsor and the Department of Aviation.

6 Public assembly facilities are prohibited within the RPZ.

7 Golf courses may be permitted only upon demonstration, supported by substantial evidence, that management techniques will be utilized to reduce existing wildlife attractants and avoid the creation of new wildlife attractants. Such techniques shall be required as conditions of approval. Structures are not permitted within the RPZ. For purposes of this Chapter, tee markers, tee signs, pin cups and pins are not considered to be structures.

8 Within 10,000 feet from the end of the primary surface of a non-precision instrument runway, and within 50,000 feet from the end of the primary surface of a precision instrument runway.

9 Public assembly facilities may be allowed in an approach surface only if the potential danger to public safety is minimal. In determining whether a proposed use is appropriate, consideration shall be given to: proximity to the RPZ; density of people per acre; frequency of use; level of activity at the airport; and other factors relevant to public safety. In general, high density uses should not be permitted within airport approach surfaces, and non-residential structures should be located outside approach surfaces unless no practicable alternatives exist.

10 Residential densities within approach surfaces should not exceed the following densities:

(A) Within 500 feet of the outer edge of the RPZ, 1 unit/acre;

(B) Within 500 to 1,500 feet of the outer edge of the RPZ, 2 units/acre;

(C) Within 1,500 to 3,000 feet of the outer edge of the RPZ, 4 units/acre.

Note: Distances located outside of the city limits of the City of Scappoose are regulated by Columbia County.

11 Mining operations involving the creation or expansion of water impoundments shall comply with the requirements of this Chapter regulating water impoundments (see Section 17.88.080).

12 Water impoundments are prohibited within 5,000 feet from the end or edge of a runway within the city limits of the City of Scappoose (areas within 5,000 feet that are located outside of the city limits are regulated by Columbia County). See Section 17.88.080.

13 Wetland mitigation required for projects located within an approach surface or airport direct impact area shall be authorized only upon demonstration, supported by substantial evidence, that it is impracticable to provide mitigation outside of these areas. Proposals for wetland mitigation shall be coordinated with the airport sponsor, the Department of Aviation, the FAA, and wetland permitting agencies prior to the issuance of required permits. Wetland mitigation shall be designed and located to avoid creating a wildlife hazard or increasing hazardous movements of birds across runways and approach surfaces. Conditions shall be imposed as are appropriate and necessary to prevent in perpetuity an increase in hazardous bird movements across runways and approach surfaces. See Section 17.88.090 for best management practices for airports located near significant wetlands or wildlife habitat areas.

14 Within the transition surface, residential uses and athletic fields are not permitted.

15 Within the transition surface, overnight accommodations, such as hotels, motels, hospitals and dormitories, are not permitted.

16 Sanitary landfills are prohibited within 10,000 feet of the end or edge of a runway. Lands within 10,000 feet of a runway that are not located within the city limits are regulated by Columbia County.

17.88.080 Water Impoundments within Approach Surfaces and Airport Direct Impact Boundaries. Any use or activity that would result in the establishment or expansion of a water impoundment shall comply with the requirements of this section.

A. No new or expanded water impoundments greater than or equal to one-quarter (1/4) acre in size, individually or cumulatively, are permitted:

1. Within an approach surface or any lands located in the city limits that are within 5,000 feet from the end or edge of a runway (areas within 5,000 feet that are located outside of the city limits are regulated by Columbia County); or

2. On land owned by the airport sponsor that is necessary for airport operations.

17.88.090 Wetland Mitigation, Creation, Enhancement and Restoration within Approach Surfaces and Airport Direct Impact Boundaries.

A. Notwithstanding the requirements of Section 17.88.080, wetland mitigation, creation, enhancement or restoration projects located within areas regulated under Section 17.88.080 shall be allowed upon demonstration of compliance with the requirements of this Section.

B. Wetland mitigation, creation, enhancement or restoration projects existing or approved on the effective date of this ordinance and located within areas regulated under Section 17.88.080 are recognized as lawfully existing uses.

C. To help avoid increasing safety hazards to air navigation near public use airports, the establishment of wetland mitigation banks in the vicinity of such airports but outside approach surfaces on areas regulated under Section 17.88.080 is encouraged.

D. Applications to expand wetland mitigation projects in existence as of the effective date of this ordinance, and new wetland mitigation projects, that are proposed within areas regulated under Section 17.88.080 shall be considered utilizing the review process applied to applications for conditional use permits and shall be permitted upon demonstration that:

1. It is not practicable to provide off-site mitigation; or

2. The affected wetlands provide unique ecological functions, such as critical habitat for threatened or endangered species or ground water discharge, and the area proposed for mitigation is located outside an approach surface.

E. Wetland mitigation permitted under subsection D (above) of this Section shall be designed and located to avoid creating a wildlife hazard or increasing hazardous movements of birds across runways or approach surfaces.

F. Applications to create, enhance or restore wetlands that are proposed to be located within approach surfaces or within areas regulated under Section 17.88.080, and that would result in the creation of a new water impoundment or the expansion of an existing water impoundment, shall be considered utilizing the review process applied to applications for conditional use permits and shall be permitted upon demonstration that:

1. The affected wetlands provide unique ecological functions, such as critical habitat for threatened or endangered species or ground water discharge; and

2. The wetland creation, enhancement or restoration is designed and will be maintained in perpetuity in a manner that will not increase hazardous movements of birds feeding, watering or roosting in areas across runways or approach surfaces.

G. Proposals for new or expanded wetland mitigation, creation, enhancement or restoration projects regulated under this Section shall be coordinated with the airport sponsor, the Department of Aviation, the FAA and FAA's technical representative, the Oregon Department of Fish & Wildlife (ODFW), the Oregon Division of State Lands (DSL), the US Fish & Wildlife Service (USFWS), and the US Army Corps of Engineers (Corps) as part of the permit application.

H. A decision approving an application under this Section shall require, as conditions of approval, measures and conditions deemed appropriate and necessary to prevent in perpetuity an increase in hazardous bird movements across runways and approach surfaces.

17.88.100 Nonconforming Uses.

A. These regulations shall not be construed to require the removal, lowering or alteration of any structure not conforming to these regulations. These regulations shall not require any change in the construction, alteration or intended use of any structure, the construction or alteration of which was begun prior to the effective date of this overlay zone.

B. Notwithstanding subsection A. of this section, the owner of any existing structure that has an adverse effect on air navigational safety as determined by the Department of Aviation shall install or allow the installation of obstruction markers as deemed necessary by the Department of Aviation, so that the structures become more visible to pilots.

C. No land use or limited land use approval or other permit shall be granted that would allow a nonconforming use or structure to become a greater hazard to air navigation than it was on the effective date of this overlay zone.

17.88.110 Avigation Easement. Within this overlay zone, the owners of properties that are the subjects of applications for land use or limited land use decisions, for building permits for new residential, commercial, industrial, institutional or recreational buildings or structures intended for inhabitation or occupancy by humans or animals, or for expansions of such buildings or structures by the lesser of 50% or 1000 square feet, shall, as a condition of obtaining such approval or permits, dedicate an avigation easement to the airport sponsor. The avigation easement shall be in a form acceptable to the airport sponsor and shall be signed and recorded in the deed records of Columbia County. The avigation easement shall allow unobstructed passage for aircraft and ensure safety and use of the airport for the public. Property owners or their representatives are responsible for providing the recorded instrument prior to issuance of building permits.

Section 3. The property described in the City of Scappoose Staff Report dated July 25, 2002 that is attached hereto and incorporated herein, is hereby re-zoned from Light Industrial (LI) to Public Use Airport (PUA).

Section 4. The City Manager is directed to conform the City Zoning Map to the provisions of this Ordinance.

Section 5. In support of the proposed Zone Change, the City Council hereby adopts the recommendations of the Scappoose Planning Commission and the findings included in the staff report dated July 25, 2002, regarding the affected properties.

PASSED AND ADOPTED by the City Council this16 day of September, 2002, and signed by me in authentication of its passage.

CITY OF SCAPPOOSE, OREGON

Glenn E. Dorschler, Mayor

First Reading: September 3, 2002

Second Reading: September 16, 2002

Attest:
Susan Pentecost, City Recorder

FINDINGS OF FACT AND REASONS TO SUPPORT THE ADOPTION OF A PUBLIC USE AIRPORT ZONE AND PUBLIC USE AIRPORT SAFETY AND COMPATIBILITY OVERLAY

EXHIBITS:

1. Illustration delineating 5,000-foot radius from the Scappoose Industrial Airpark runway.
2. U.S. Department of Transportation Federal Aviation Administration Advisory Circular.
3. Wildlife Management Plan Review of a Lone Star Mining Expansion Project authored by the U.S. Department of Agriculture Animal and Plant Health Inspection Service (APHIS).
4. Letter from Mark J. Greenfield, Attorney at Law to Thomas Hoffman dated June 6, 1996.
5. Letter from Thomas Hoffman, State Director - USDA-APHIS, dated June 17, 1996.
6. Letter from Ronald L. Merritt, BASH Program Manager, dated August 25, 1999.
7. Letter from James E. Laird, Aviation Safety Program Manager - U.S. Department of Transportation Federal Aviation Administration, dated July 31, 1995.
8. Letter from Rod Probst dated November 22, 1996.
9. Letter from James E. Moran, Jr., President - Oregon Pilots Association, not dated.
10. Letter from Joseph A. Maser, Ph.D., General Manager - SRI/Shapiro Incorporated.
11. Letter from J. Wade Bryant, Manager - U.S. Department of Transportation Federal Aviation Administration, dated September 1, 1992.
12. Letter from Harold N. Handke, Airport Certification Safety Inspector, Airports Division, NW Mountain Region, dated October 30, 1991.
13. Letter from David B. Heal, A.A.F., Senior Consultant - Shutt Moen Associates, dated May 29, 1996.

INTRODUCTION

In complying with requirements of Work Task II of the City's Periodic Review Work Program, the listed task is to conform with "OAR 660, Division 13 (Airport Planning) and ORS 836.000 through 836.630" and further to "Amend the Scappoose Development Code to be in general alignment with the requirements of Columbia County and OAR 660-013-0080(1)(f)." Staff notes that the specific language of ORS Chapter 836.623 (Local compatibility and safety requirements may be more stringent than state requirements; criteria; water impoundments; report to federal agency; application to certain activities) includes the following subsection:

"[...]
(b) A local government may adopt regulations that limit the establishment of new water impoundments of one-quarter acre or larger for areas outside an approach corridor and within 5,000 feet of a runway only where the local government adopts findings of fact, supported by substantial evidence in the whole record, that the impoundments are likely to result in a significant increase in hazardous movements of birds feeding, watering, or roosting in areas

across the runways or approach corridors. The local government shall consider the effects of mitigation measures or conditions that could reduce safety risks and incompatibility;"

In developing said findings, the City of Scappoose is endeavoring to mirror the findings and supporting documentation relied on by the Columbia County Board of Commissioners in their adoption of Columbia County Ordinance No. 2000-04 (an ordinance amending the Columbia County Comprehensive Plan and the Columbia County Zoning Ordinance regarding the implementation of Statewide Goal 5 and OAR 660-023-0180, and ORS 836.623). The goal being that through this process, the City and County regulations regarding open water impoundments in the vicinity of the Scappoose Industrial Airpark will be consistent. This is of particular importance given that in drawing a 5,000-foot radius around the Airpark, such a geographic distance will encumber lands within both jurisdictions (see Exhibit 1).

FINDING

The City of Scappoose finds that prohibiting open water impoundments of equal to or greater than one-quarter acre in size (individually or cumulatively) within 5,000 feet of the end or edge of an airport runway is a distance for which ORS 836.623(2)(b) authorizes a local government to adopt regulations. Staff notes that the above exhibits contain substantial evidence indicating that open water impoundments within 5,000 feet of a runway are not just likely to significantly increase hazardous movements of birds feeding, watering or roosting in areas across Airpark runways or approach corridors.

Of particular note is the August 25, 1999 letter from the former Chief of the Pentagon's Bird Aircraft Strike Team, Ronal Merritt (see Exhibit 6), concluding that new open water impoundments resulting from mining within 5,000 feet of the runway at the Scappoose Industrial Airpark would "very likely result in a significant increase in bird strike hazards in the approach corridors and the middle of the airfield compared to the current level of hazard." The City agrees with the Board in their assessment of Mr. Merritt as a bird strike expert of national caliber, and finds his conclusions to be credible and convincing. Further evidentiary support is provided by other bird strike experts, including USDA Wildlife Services officials (see Exhibits 3-5), the Federal Aviation Administration (FAA) Circular (Exhibit 2), and letters from FAA officials (see Exhibits 7, 11 and 12), and is supplemented by opinions and information submitted by other public and private parties (see Exhibits 8, 9, 10 and 13).

Although it is true that many of the findings and conclusions addressed in the above exhibits are specifically geared toward an evaluation of the previously proposed "wet mining" of the land area locally known as the "Meier Property," we find that such deliberations have been found to hold true for any open water impoundment greater than or equal to one-quarter acre in size, without regard to whether such water impoundment might be associated with surface mining activities, and that this conclusion is supported by the language contained in ORS Chapter 836.

The City further concurs with the Board that the evidence in the record supports the notion that the likelihood of a significant increase in bird strike hazards results even when taking into account mitigation measures and conditions. As discussed within Exhibits 3-5, a new water impoundment would require a full range of active wildlife mitigation measures in perpetuity, scare devices such as pyrotechnics and noisemakers, visual and audio detractants and physical barriers such as cables or netting and chemical applications onto the water, and implementation of an ongoing and aggressive integrated bird management and hazing program including human patrols and the ability to use lethal control of specific bird species. The City agrees with the conclusions found by the Board that the costs of employing such techniques in perpetuity would be prohibitively expensive, that noise-makers, exploders, pyrotechnics and chemical retardants on the water are not acceptable when located within sight and sound of an UGB, that using lethal control techniques could endanger migratory species protected under federal law, and that the presence of netting or wires immediately under flight path areas could themselves ensnare aircraft in emergency situations.

In conclusion, the City finds that the standards in ORS 836.623(2)(b) allowing it to prohibit new water impoundments greater than or equal to one-quarter acre in size within 5,000 feet of an airport runway are met.

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of a runway end should notify the airport and the appropriate FAA Airports office so as to provide an opportunity to review and comment on the site in accordance with guidance contained in this AC.

b. The operation of a disposal site located beyond the areas described in paragraph 5 should be properly supervised to insure compatibility with the airport.

c. If at any time the disposal site, by virtue of its location or operation, presents a potential hazard to aircraft operations, the owner of the disposal site should take action to correct the situation or terminate operation of the facility. If the owner of the airport also owns or controls the disposal facility and is subject to Federal obligations to protect compatibility of land uses around the airport, failure to take corrective action could place the airport owner in noncompliance with its commitments to the Federal government. The appropriate FAA Airports office will evaluate the situation to determine compliance with Federal agreements and take such action as may be warranted.

(1) Airport owners should be encouraged to make periodic inspections of current operations of existing disposal sites near a federally obligated airport where potential bird hazard problems have been reported.

d. At airports certificated under Federal Aviation Regulations Part 139, the airport certification manual/specifications should require disposal site inspections at appropriate intervals for those operations meeting the criteria of paragraph 5 that cannot be closed. These inspections are necessary to assure that bird populations are not increasing and that appropriate control procedures are being established and followed.

e. When proposing a disposal site, operators should make their plans available to the appropriate state regulatory agencies. Many states have criteria concerning siting requirements specific to their jurisdictions.

f. Additional information on waste disposal, bird hazard and related problems may be obtained from the following agencies:

U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20406

U.S. Department of Health and Human Services
200 Independence Avenue, SW
Washington, DC 20201

U.S. Department of Agriculture
Animal Plant Health Inspection Service
P.O. Box 96464
Animal Damage Control Program
Room 1624 South Agriculture Building
Washington, DC 20090-6464

U.S. Department of Interior Fish and
Wildlife Service
18th and C Streets, NW
Washington, DC 20240

5. CRITERIA. Disposal sites are considered as incompatible if located within areas established for the airport through the application of the following criteria:

a. Waste disposal sites located within 10,000 feet of any runway end used or planned to be used by turbine powered aircraft.

b. Waste disposal sites located within 5,000 feet of any runway end used only by piston powered aircraft.

sewer treatment

c. Any waste disposal site located within a 5-mile radius of a runway end that attracts or sustains hazardous bird movements from feeding, watering or roosting areas into, or across the runways and/or approach and departure patterns of aircraft.

6. QUESTIONS AND COMMENTS. If you have questions about this AC, write or call the Federal Aviation Administration, Office of Airport Safety and Standards, Airport Safety and Operations Division, AAS-300, 800 Independence Avenue, SW., Washington, DC 20591; telephone (202) 267-3085 or FTS 267-3085. Comments and suggestions for change or improvement of this AC may be submitted similarly, although written material is preferred.

Leonard E. Mudd
Director, Office of Airport Safety and Standards

U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20406

U.S. Department of Health and Human Services
200 Independence Avenue, SW
Washington, DC 20201

7. CRITERIA. Disposal sites will be considered as incompatible if located within areas established for the airport through the application of the following criteria:

a. Waste disposal sites located within 10,000 feet of any runway end used or planned to be used by turbine powered aircraft.

b. Waste disposal sites located within 5,000 feet of any runway end used only by piston powered aircraft.

c. Any waste disposal site located within a 5 mile radius of a runway end that attracts or sustains hazardous bird movements from feeding, water or roosting areas into, or across the runways and/or approach and departure patterns of aircraft.

Leonard E. Mudd
Director, Office of Airport Safety and Standards

United States Department of Agriculture

Animal and Plant Health Inspection Service

Animal Damage Control

2600
Port
Tele
FAX: (503) 231-2291

EXHIBIT 3 tabbies

WILDLIFE MANAGEMENT PLAN REVIEW FOR LONE STAR MINING EXPANSION PROJECT SCAPPOOSE, OREGON

EXECUTIVE SUMMARY

Current agricultural, aggregate mining and other land use practices combined with historical migratory bird use around Scappoose Industrial Airpark (SIA) have created a potential bird/aircraft safety hazard.

There will be an overall decrease in the quality of wildlife habitat during the 20-year expansion phase of the project. After the site is completed, a potential exists for birds to use the open water impoundment without effective and consistent habitat management and hazing techniques.

Hazards to aviation currently exist at SIA. The development of an additional 360 areas of mining ponds could increase the wildlife hazard potential. Development of cell 7 is the most critical aspect of this project due to the proximity of the lake shoreline to the runway.

Mitigation measures must be implemented immediately after commencement of the initial expansion phase. In order for hazing to be effective, an active program must be pursued by Lone Star to include an integrated approach. This could include the use of various scare devices, visual and audio detractants and physical barriers. The development of phase 7 will place the edge of the lake to within 500 feet of the runway. In order for mitigation to be effective, especially after phase 7, it is critical that an on-going and aggressive integrated bird management and hazing program be implemented and occur at the site in perpetuity. The Plan indicates that Lone Star will only support mitigation up to 3 years after completion.

Recommendations

- Lone Star should implement a bird hazing program on Pit B and D ponds to evaluate mitigation effectiveness for the development of phases 1-3. This should be made a condition for project approval. We are not aware of plans by Lone Star to implement a wildlife management plan on Pit B and D ponds. These ponds could serve as

effective controls for monitoring and evaluating future conditions on Pit E.

- Lone Star initiate a long term ecological assessment of Pit B and D ponds. Assuming Pit B and D ponds will be completed prior to Pit E, these ponds could serve as a control for monitoring long-term ecological effects on plant and animal life and potential environmental recovery of Pit E.

- Immediately after project approval, Lone Star should organize the Wildlife Review Committee as described in the Plan.

- As a condition of project approval, the Proposed Mine Implementation Plan as described in the Wildlife Management Plan must be adhered to. Phase 1 should be the first cell mined, then phase 2 and so forth. Mining phase 7 first would void much of the proposed monitoring plan.

- If the anticipated results are not achieved as outlined in the Plan after phase 3, excavation into phase 4 should not proceed without the Wildlife Review Committee's review and evaluation of the Plan. This could be a condition of the permit.

- If the anticipated results are not achieved as outlined in the Plan after phase 6, excavation into phase 7 should not proceed without the Wildlife Review Committee's review and evaluation of the Plan. This could be a condition of the permit.

- Alternative crops, such as hybrid poplars, could be planted on the site on cells 4-7 and grown during the excavation of cells 1-3. This would limit bird use on the site.

- The Plan should incorporate additional safeguards to ensure that each compliance bond be monetarily sufficient to maintain a bird management and hazing program in perpetuity and that the bond(s) be transferable upon sale of the site.

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
ANIMAL DAMAGE CONTROL (APHIS-ADC)

WILDLIFE MANAGEMENT PLAN REVIEW
FOR
LONE STAR MINING EXPANSION PROJECT
SCAPPOOSE, OREGON

PREPARED FOR
FEDERAL AVIATION ADMINISTRATION
NORTHWEST MOUNTAIN REGION

I. Introduction

Lone Star Northwest's proposal to expand its aggregate and sand mining operation at their Santosh Quarry operation has been evaluated by local, state and federal agencies. In response to wildlife concerns raised by these agencies and the public, Lone Star Northwest contracted with EnviroScience, Inc. to conduct an ecological study of the project area. This study included 1) a detailed assessment of wildlife in and adjacent to the area, 2) an evaluation of impacts anticipated from the project proposal and 3) a wildlife management plan to mitigate concerns regarding aircraft safety around the adjacent Scappoose Industrial Airpark (SIA).

In a July 30, 1996 letter, the Northwest Mountain Region, Federal Aviation Administration (FAA) requested APHIS-ADC to conduct a formal review of the wildlife management plan developed by EnviroScience, Inc. for Lone Star's mining expansion. APHIS-ADC and the FAA cooperate under specific terms of the Memorandum of Understanding (MOU) dated April 13, 1989 which authorizes APHIS-ADC to assist the FAA in evaluating wildlife hazards at or near airports.

The most significant issues surrounding the Lone Star Expansion Project are:

1. The potential attraction of waterfowl and other wildlife to the mining ponds created by the development.

2. Potential hazards to aviation utilizing the SIA associated with the development of a 360 acre mining pond near the airport.

3. The effectiveness, adequacy and public acceptability of proposed short and long-term mitigation measures proposed by Lone Star.

II. Methods

The review of the Lone Star Wildlife Management Plan was conducted by ADC wildlife biologist Rod Krischke and myself using information provided by the Port of St. Helens, EnviroScience, Inc., APHIS-ADC and FAA. The following information was utilized for our review of the Plan:

1. Airport Layout Plan Update of SIA.

2. The Wildlife Evaluation and Impact Assessment developed by EnviroScience, Inc. (Referred to as the Site Study)

3. Wildlife Deterrent Evaluation Report developed by EnviroScience, Inc.

4. APHIS-ADC Airport Safety Manual and Guidelines for conducting biological assessments.

5. APHIS-ADC field and historical wildlife depredation reports for Columbia County.

6. The MOU between FAA and APHIS-ADC, Federal Aviation Regulation (FAR) Part 139, and FAA Advisory Circular No. 150/5200-5A.

A thorough review of the existing biological information presented in Wildlife Evaluation and Impact Assessment (Site Study) was necessary in order to effectively evaluate anticipated impacts and the proposed mitigations. In order to facilitate the review, a field visit to the site was conducted on September 10, 1996 to reappraise the project site, study area and Scappoose Industrial Airpark and to familiarize ourselves with the methodology utilized by EnviroScience biologists to conduct their wildlife evaluation of the project area. In order to effectively

evaluate their survey techniques, we were accompanied by Ms Jennifer Horn, wildlife biologist employed by EnviroScience. Wildlife survey techniques were demonstrated along with a complete tour of the study area.

III. Results and Discussion

Overview of the Site Study

A General Wildlife Survey and an Aquatic Wildlife Survey conducted at the site incorporated commonly used wildlife survey techniques. Another survey used to evaluate bird/aircraft use within the approach zones incorporated a method of sampling designed to calculate bird/aircraft altitude in relation to the airspace within the approach zones.

The general habitat types within each survey area were identified and evaluated with each survey. These evaluations identified resident and migratory birds using the areas during all four seasons of the year. These surveys gathered data relative to:

- Daily and seasonal bird activity patterns.
- Bird use of airspace within the SIA aircraft approach zones.
- Habitat preferences with terrestrial and aquatic habitats.
- Bird use within the existing mining pond habitat.
- Bird use of the habitats within the proposed mining site.

A General Wildlife Survey was used to record bird use within all habitat types in the area. The results of this survey present specific species data according to bird abundance, seasonal variability and utilization of habitat. The European starling and the Canada goose were identified as the most abundant species, followed by a variety of other passerine species such as robins, sparrows and chickadees. Results of this survey are consistent with similar surveys conducted by the Audubon Society and local Oregon Department of Fish and Wildlife (ODFW) and U.S. Fish and Wildlife Service (FWS) biologists.

The wildlife evaluation also identified bird distribution among habitat types, species and seasons of the year. This data suggests that of the eight habitat types, bottom lands, pastures and agricultural lands supported the highest bird densities and mining ponds and cottonwoods/hybrid poplars have the lowest

densities of birds. The data also suggests that habitat types varied in maintaining bird densities during different seasons, while others maintained consistent numbers. This type of habitat use by various bird species is common throughout the region.

A survey was conducted that also analyzed the wildlife use on the proposed mining site and compared these data with data from the General Wildlife Survey. The expansion site consists of 400 acres of pasture and crop land. Specie abundance and seasonal usage by various bird species was recorded. Comparison of data from the General Wildlife Survey and that of the proposed mining site demonstrates a reduction in bird use by some species and an increase by others. Canada goose numbers decreased in comparison due to the change in available habitat, while gull numbers appeared to increase. This data suggests that Canada geese prefer other habitat types over that in the proposed mining area and that gulls and starlings utilized these croplands/pasture lands quite frequently.

Wildlife use data was also collected within a diverse range of aquatic habitats, such as irrigation channels, active and inactive mining ponds, local creeks and other wetland areas. Not surprising, their findings reflect typical bird usage and habitat preference for the geographic area. Reported seasonal trends in abundance for waterfowl appear to be very similar with other available survey data. Waterfowl (ducks and geese) were the predominant species, especially during the fall, winter and spring months. Many migratory waterfowl species utilized the bottom lands, old shallow mining ponds and Jackson Creek while the least number of birds utilized the active mining ponds and the less productive irrigation channels.

To evaluate how the airspace was being used by both birds and aircraft, the study sampled bird and aircraft activity within the airspace above the runway and approach zones at SIA. Review of Flight Corridor Survey data illustrates the potential bird hazards to aircraft at SIA. The information presented in the study highlights the attractiveness of certain habitat types within and adjacent to the approach zones. Runway #33's 10,000' approach zone is currently dominated by agricultural areas, bottom lands and pasture which attracts a variety of birds year around. Numbers and occurrences of specific bird species appear to be greater along the approach zone of Runway #33 than Runway

#15. This is largely due to the difference in general habitat types, with Runway #15's approach zone characterized by residential, pasture and woodlands. The potential for bird/aircraft conflicts should decrease with distance from the runway. However, the study's data demonstrates that the potential for bird/aircraft hazards remain constant throughout the approach zones for both runways.

APHIS-ADC field observations support the discussion in the Plan regarding wildlife use around SIA. Birds, especially ducks, Canada geese, gulls and starlings/blackbirds and raptors migrate and winter in the area in large numbers. Agricultural damage by geese is common during the winter and spring months and has been documented by APHIS-ADC. Numerous permanent, summer and winter species of migratory birds were identified during the wildlife assessment conducted by EnviroScience. The numbers reported throughout the study can be supported by recent wildlife surveys by the ODFW and the FWS.

Review of the Site Study identified the following potential impacts from the development of the mining area:

Removal of pasture and crop lands.

There will be a gradual reduction of the existing habitat on the 400 acre expansion site due to the time line for phasing in each mine cell development. Canada geese, starlings, and gulls will be displaced onto adjacent habitat. We believe that the impact will be minimal due to the abundance of similar habitat within the surrounding area.

Development of mining ponds.

The mining implementation plan calls for the phasing of the first ponds farthest from the airport. During the 20-year development period, a small lake (360 acres) will be created. In an attempt to estimate changes in bird numbers on the site due to the habitat transition, the study compared the survey results from the existing mining ponds and the proposed mining area. The data suggests that there would a 28% reduction in the species using the site. We believe that the alteration of the existing pasture and fields to active mining ponds would result in an immediate reduction of bird densities, primarily Canada geese, gulls and

starlings. However, these birds could continue to use the area during the transition and development. It is impossible to determine the attractiveness of the mining ponds years after development. Natural improvement of the water quality will eventually enhance these ponds, allowing plant and animal life to slowly recover.

Impacts to adjacent habitats and wildlife

We agree with the statement in the study that suggests the species currently using the proposed site for feeding/loafing would be displaced to adjacent habitats and the effects of this transition would be gradual and present minimal impacts to the area. We also concur with the study in that the transition from the existing habitat to mining pond habitat will likely result in a reduction of wildlife on the site and that fields and pastures should have a consistently higher bird density than mining ponds.

Impacts to the flight safety approach zones.

The study states that "the displacement of feeding habitat for the species which currently use the proposed mining area is not expected to represent a significant impact to the existing use of the flight corridor or represent a higher risk to airport operations." Evaluation of flight patterns of dominant species indicate that the majority of bird flights occur to the south, east and north of the approach zones. Existing habitat west of SIA limits bird movement across the approach zones. However, the study clearly describes frequent bird use within these zones for Runways #33 and #15. We do not totally agree with the above statement and believe that the data presented indicates displaced birds (waterfowl, gulls and starlings) from the proposed mining area could utilize those habitats within the approach zones.

Overview of the Wildlife Management Plan

The Wildlife Management Plan for the Lone Star Mining Expansion Project follows FAA guidelines for wildlife hazard management plans. The basic purpose of the Plan is to mitigate the concerns relative to the development of the mining expansion site and potential impacts to aircraft using SIA. The Plan includes a

discussion of the existing biological conditions and impacts associated with the proposed site expansion.

A. Mitigations

Habitat Manipulation

The Plan discusses the implementation of habitat management actions to reduce the attractiveness of the newly-developed mining ponds and the existing pastures and fields within the proposed mining area. It outlines an approach to modifying the existing habitat conditions on the proposed mining site. Plans call for developing the shoreline of newly created ponds that will discourage vegetation growth and waterfowl access. The control and removal of vegetation periodically along shorelines will discourage the development of habitat preferred by many species of birds and mammals.

The open water of active mining ponds provide minimal habitat for waterfowl and other birds. Turbidity, absence of vegetative and animal production and frequent disturbance make these areas less attractive to waterfowl. During the development phase, existing pastures and fields in the proposed mining area are planned to be managed to exclude bird use. The existing croplands adjacent to SIA would be converted to alternative crops less attractive to wildlife. The Plan also recommends that grass heights be kept constant on and around the airport and fertilization be eliminated where possible to discourage invertebrate-eating birds such as gulls and starlings.

Wildlife control techniques

Wildlife control techniques including human patrols equipped with scare devices, noise-making devices, wires and netting and chemical modification techniques are proposed in the Plan. Vehicles, boats and foot patrols are recommended to disperse waterfowl using the open water. Propane exploders, various pyrotechnics and bioacoustics (natural bird distress calls) are planned to be implemented.

The application of ReJex-it (Methyl anthranilate), a chemical developed to repel gulls and waterfowl, is proposed for use on the mining ponds. The current label and use instructions

approved by the Environmental Protection Agency (EPA) suggest ReJex-it could be applied to the surface water of the mining pond. However, certain restrictions would have to be adhered to in order for the application to be safe to the environment.

After each development phase, physical barriers such as overhead wires, netting, floats, and other deterrents are planned to be integrated and monitored on the active mining pond. Grid systems with suspended wires at various heights over the water are planned to be implemented and maintained throughout the various phases of the project.

B. Implementation and Monitoring

Implementation and monitoring of the Plan is proposed to be conducted during the three phases of mine development: pre-operational, operational, and post-operational.

Pre-operational phase

The pre-operational phase was designed to test the effectiveness of the proposed wildlife control techniques on the existing mining ponds. Habitat management and wildlife dispersal techniques were implemented and evaluated to determine efficacy of preventing waterfowl use of the open water habitat during active mining operations. These tests were conducted on Pond C within mining Pit B. A Wildlife Deterrent Evaluation Report was published in January 1996 to fulfill the requirements of the Pre-operational phase as outlined in the Plan.

Operational phase

This phase is designed to establish a project review (advisory) committee that would provide oversight and review of the Plan's effectiveness in accomplishing the identified objectives. The advisory committee consists of adequate representation to assist in the oversight function of monitoring the operational phase. The wildlife committee would evaluate the implementation of the Plan and identify problems over the course of the project.

Post-operational phase

This phase is designed to ensure that the long-term risk to SIA is mitigated after completion of the project expansion. This phase considers both situations in which SIA is operational and non-operational. Given the SIA's updated Layout Plan and projected growth, the plan to minimize bird use would most likely be implemented. The long-term plan includes the use of overhead wires and net grid system integrated with floating devices. Lone Star would acquire a compliance bond to ensure implementation of this post-operational phase.

IV. Recommendations and Conclusions

There are valid concerns for aircraft and passenger safety at SIA:

1. The SIA is located in prime waterfowl habitat bordered by the Columbia River, Sauvie Island State Wildlife Area, Ridgefield National Wildlife Refuge, private wetland areas and abundant agricultural lands. This area is subject to seasonal flooding, providing additional aquatic habitat that enhances migratory bird activity.

2. The Port of St. Helens' Airport Layout Plan Update clearly defines anticipated aircraft operation growth within the next 20 years. The number of based aircraft, take offs and landings and the number and types of critical aircraft utilizing the SIA is expected to increase in the future.

3. The Lone Star Expansion Project would increase its operation on an additional 400 acres located adjacent to the SIA, of which approximately 360 acres of agriculture/pasture lands would be converted to an aquatic mining pond habitat within close proximity of SIA.

Issue Mitigation

Issue 1. The potential attraction of waterfowl and other wildlife to the mining ponds created by the development.

The Wildlife Evaluation and Impact Assessment (Site Study) demonstrates the significance of SIA's location in relation to the regional and local area wildlife habitat. Current land use patterns and habitat types on the lower Columbia River and surrounding SIA make the area extremely attractive to large waterfowl populations. The study concludes that waterfowl use will decrease on the proposed expansion mining site. We believe that most waterfowl, gulls, starlings and other birds will be displaced and forced to utilize other suitable adjacent habitat.

The wildlife use (habitat) values of the mining ponds will be very low during the development and early post-operational stages as compared to surrounding habitat. However, the attractiveness of abandoned deep pit aggregate mines to wildlife could likely increase overtime if water quality improved and aquatic vegetation and animal life became established. We believe that an additional monitoring objective could be incorporated into the Plan that would evaluate recovery of existing Lone Star mining ponds. Mining ponds within pits B and D, for example), could be used as a control for evaluating natural succession of plant and animal recovery and effectiveness of habitat and wildlife control techniques.

Bodies of water around airports are generally considered a negative influence to aircraft safety because they attract birds and other wildlife, especially in areas where water is a limiting factor for wildlife. However, we believe that in the area of SIA, the lake that will be created from existing agricultural lands constitutes a tradeoff between the limited agricultural lands used for feeding and the abundant water habitat. Because of changing agricultural crop practices, ie pasture lands being converted to hybrid poplars, quality feed is a limiting factor in the area, especially to Canada geese and other waterfowl. After each development phase, physical barriers such as overhead wires, netting, floats, and other deterrents are planned to be integrated and monitored on the active mining pond.

Issue 2. Potential hazards to aviation utilizing Scappoose Industrial Airpark associated with the development of a 360 acre mining pond.

A simple definition of a "potential wildlife hazard" is any instance when a bird or mammal enters an airports' approach

safety zone. Based on the information presented in the Site Study, migratory bird historical use patterns on and around SIA, and projected airport and surrounding land use strategies, the potential wildlife hazard around SIA will increase. Given the close proximity of the new lake to SIA after full-development, effective mitigation measures are critical in reducing bird use and alleviating potential bird/aircraft conflicts.

Issue 3. The effectiveness, adequacy and public acceptability of proposed short and long-term mitigation measures proposed by Lone Star.

Immediately after project approval, Lone Star should organize the Wildlife Review Committee described in the Plan. The Committee should then meet with Lone Star and review all details of the Plan prior to phase 1 implementation.

The phasing of pond construction is planned to proceed from Phase 1 through Phase 7, with Phase 1-3 farthest away from the airport. The development of these first 3 phases will create the least amount of impacts to the airport because the edge of the mining pond to the runway will be approximately 2,300 feet. Also, smaller size bodies of water are easier to implement effective mitigation measures. The Plan calls for the Wildlife Review Committee to evaluate bird deterrents being used and how effective the overall Plan is working. This evaluation is proposed to occur simultaneously with the mining operation during the first three phases. If the anticipated results are not achieved as outlined in the Plan, then the Wildlife Review Committee should thoroughly review and evaluate the Plan. Provisions in the permit from Columbia County could require Lone Star to implement changes in the Plan prior to allowing further excavation into Phase 4.

Site development of Phases 4-6 will expand the lake closer to the airport (approximately 1,700 feet from the runway). The mining plan calls for setbacks or buffer sections from the proposed excavation area of 200 feet from residential property and 50 feet from all other property types after the completion of Phase 7. The Plan indicates that these buffer areas will maintain existing habitat conditions. We believe that all setbacks must be managed in such a manner that is least attractive to wildlife. Wildlife control techniques (hazing) generally becomes less effective as

the size of the body of water increases. If the anticipated results are not achieved as outlined in the Plan after Phase 6, then the Wildlife Review Committee should again review and evaluate the Plan with approval required prior to permitting excavation into Phase 7.

The combination of a habitat manipulation plan and use of an integrated approach with various wildlife control techniques is a sound wildlife damage management strategy for reducing the attractiveness of the area to wildlife. The wildlife damage control scientific literature suggests that large bodies of water can be effectively excluded from birds if done properly. Namely, overhead wires and netting have been successfully evaluated in similar situations, but due to the size of lake that will be created after phase 7, it is very important that a combination of techniques be implemented and maintained in perpetuity to ensure that bird use is kept to a minimum. Additional techniques, such as overhead wires, floating netting systems with balloons and the use of various pyrotechnics could be demonstrated at the existing site to determine mining operation acceptance, efficacy and public acceptability.

During the development phase of the project, alternative crops could be planted on the site which are less attractive to waterfowl. Hybrid poplars, Christmas trees or nursery stock are examples of economically feasible crops that are alternatives to those currently being cultivated.

Post-operational performance as outlined in the Plan does not guarantee any mitigation monitoring past three years. A compliance bond would be established to ensure deterrents are maintained. We believe that the Plan should incorporate additional safeguards to ensure that each bond will be monetarily sufficient to ensure Lone Star or future owners will maintain an operational hazing program and site monitoring and mitigations in perpetuity, and there are requirements for the compliance bond to be transferrable upon sale of the site.

V. Summary

The Wildlife Evaluation and Impact Assessment (Site Study) completed by EnviroScience, Inc. for the proposed expansion for Lone ~~Star~~ Northwest's aggregate and sand mining operation

documented a variety of wildlife habitat types conducive to attracting and supporting a variety of wildlife species. The Wildlife Management Plan submitted by Lone Star Northwest to mitigate this project provides a basis for addressing many concerns and issues.

The location of the project site is in a traditionally high use migratory bird migration corridor. The geographic location of the area is extremely attractive to large concentrations of birds, especially during spring, fall and winter as evidenced by the number and location of wildlife refuges and migratory bird hunting clubs.

The bird/aircraft hazard in the lower Columbia River corridor has been documented for many years. Local airports and aviators are well aware of the potential hazard wildlife present to aviation. The Scappoose Industrial Airpark's Layout Plan Update describes the current and growing use of the of the airport. The Scappoose Industrial Airpark is faced with an increasing wildlife/hazard problem due to current agricultural use adjacent to and surrounding the airport and with future aggregate mining expansion.

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EXHIBIT 1 tabbies

June 6, 1996

Thomas Hoffman
State Director
USDA - APHIS - Animal Damage Control
Centre 205 Building, Suite 110
2600 SE 98th Avenue
Portland, Oregon 97266

Subject: EnviroScience Wildlife Management Plan -- Lone Star Mining Expansion, Scappoose, Oregon

Dear Tom:

Thank you for meeting with me and representatives of the Port of St. Helens last Thursday. Having spoken with you on the phone several times, it was nice to finally meet you in person.

As you know, Lone Star Northwest wishes to expand its aggregate mining operations to include lands immediately adjoining the Port's Scappoose Industrial Airpark. More specifically, Lone Star is proposing to create over 300 acres of open water impoundments on over 400 acres all located within 5000 feet of the airport runway. This has the Port particularly concerned since open water impoundments attract or sustain wildlife and could thereby increase the potential for collisions between aircraft and wildlife.

The Port requested the meeting to share with you some specific concerns regarding Lone Star's proposed mining expansion and the EnviroScience Wildlife Management Plan, and to obtain the benefit of your expertise regarding the appropriateness and effectiveness of certain mitigation measures being proposed by EnviroScience Inc. This letter is intended to summarize the comments you made at the meeting, to ensure that we understood you correctly. *If my summary of your comments is correct, I would very much appreciate your acknowledging that either by signing a statement to that effect at the end of the letter and returning the letter to me, or by mailing me a separate responsive letter on your letterhead. If my summary contains inaccuracies, I would appreciate your correcting them as appropriate by noting corrections on the letter and returning it to me together with an acknowledgment on the letter or on separate ADC letterhead that the remainder is accurate.* To allow you to mark up one copy while retaining an original, I am enclosing both the original (for you to keep) and a copy of this letter.

To begin, you explained that EnviroScience, Inc. requested your office to review its proposed Wildlife Management Plan for the Lone Star expansion. As I understand it, the review was performed by you and Rod Krischke, ADC District Supervisor, who works under your supervision. You have provided me a copy of an April 28, 1994 letter to Rod Krischke from Jennifer Horn, a wildlife biologist for EnviroScience Inc., requesting Animal Damage Control's review of the Wildlife Management Plan, asking ADC to focus on the technical aspects of habitat management and wildlife management as they relate to airports and bodies of water. According to that letter, she requested a response from ADC by May 6, 1994, thereby giving you about a week's time for review and comment.

You also indicated that ADC responded to the request in about a week. Earlier you provided me a copy of a May 6, 1994 letter from Rod Krischke to Jennifer Horn supporting your statement. That letter indicates, among other things, that the proposed plan utilized an integrated approach toward controlling bird damage; that such techniques are widely used; and that "the key is to insist on the implementation of an integrated approach." It also states that while the expansion may not create a significant increase in geese activity in the area (because the area already has significant use by geese), "we would want to avoid anything that focuses utilization in a close proximity to the airport." Further, the letter indicates "full support of the portion of the plan that calls for a review of the situation prior to proceeding to phase 4. This is an important assurance and safeguard for the airport."

Moreover, you indicated that you visited the site; that you and Rod Krischke met with Jennifer Horn; and that the total correspondence between you and EnviroScience consists only of the three letters you earlier mailed to me. The third letter, from Jennifer Horn to Rod Krischke dated February 14, 1995, references a meeting with you and Rod Krischke held one week earlier. You explained that the meeting was held to discuss the hazing techniques aspect of the mitigation plan, as opposed to other aspects of that plan.

You emphasized two or three times that ADC's review of the report was done quickly and was not extensive or involved. I note that your comment finds support in Rod Krischke's May 6 letter, where he writes that he "was only able to give the plan a quick once over." You added that the review essentially focused on hazing and mitigation, and you did not find any severe problems with the proposed measures. You also said that given the lack of any detailed, extensive review by ADC, it is inappropriate for Lone Star or the Federal Aviation Administration to base support of Lone Star's application on your review. You emphasized that ADC was not as intimately involved in this matter as those letters would suggest, contrasting the level of review for this matter with a very detailed review of an ecological study that has been prepared for Portland International Airport.

You also noted there ~~there~~ was ~~no~~ little coordination between FAA and Animal Damage Control on this issue. In your words, you had "zero correspondence from the FAA" on this matter. You expressed surprise to learn that FAA had written letters to Lone Star and Columbia

County essentially signing off on Lone Star's proposal based on ADC's review of the EnviroScience report, and you thought this was wrong and inappropriate. Apparently FAA and ADC have a Memorandum of Understanding to work cooperatively, but on this matter, you were effectively left out. You said that had you known this level of significance would have been attached to your review, ADC would have spent much more time on the matter.

You told us that nobody at EnviroScience, Lone Star or FAA mentioned to you the Port's plans to expand the airport or discussed the role of the Scappoose Airport within a larger regional context. You noted that the Port of Portland might need this airport for relief as the metropolitan region grows.

Moreover, you told us that EnviroScience gave you the impression that both habitat management *and* wildlife control techniques would be continued in perpetuity under the proposed mitigation plan. You said you were completely unaware that Lone Star was intending to extend its post-operational phase of active hazing for only three years at most. *See* Wildlife Management Plan at page 22, top paragraph. You then stated that this approach is *not* acceptable and that for mitigation to work, active hazing must continue in perpetuity. You said a considerable effort will be needed, at considerable expense; explaining that mitigation is very manpower-intensive.

You further emphasized that ADC's support for the plan was *only for proposed Phases 1 through 3*, all of which are located no closer than 2300 feet from the airport. You said the map showing Phases 1 through 7 constitutes a "major change." You said that ADC did not support proceeding to Phase 4 without further evaluation following Phase 3. I note that this comment again finds support in Rod Krischke's May 6, 1994 letter. You also told us that it was ADC's understanding that Lone Star would be mining small ponds, not a large lake as depicted in a drawing we showed you that Lone Star is distributing to the public. You said the separation of cells is important for mitigation to work effectively. You also said that you would have a problem with mining beyond Phase 3 absent the continuation of hazing techniques in perpetuity.

Regarding the effectiveness of mitigation measures, you emphasized that to be effective, active wildlife control measures must continue in perpetuity. This is particularly imporant since ponds become much more attractive to wildlife after active mining has ceased and turbidity levels drop. You said that effective mitigation is possible, but it must be perpetual. Again, you were surprised and unaware that Lone Star intended to apply such techniques for, at most, three years. You also added that numerous devices must be used on a constant basis because birds get habituated to a single device.

You said that while Canada Geese are more attracted to agricultural fields than water, it is easier to manipulate land habitat than large water ponds. Regarding land habitat manipulation, you said agricultural lands can be made unattractive to birds and other wildlife by growing crops they find unattractive. In particular, you noted that hybrid poplars and cottonwoods are economically viable crops that can substantially reduce Canada Geese populations in the area.

Mark J. Greenfield, Attorney at Law, Suite 1080, 111 S.W. Columbia Street, Portland, Oregon 97201

Unlike winter wheat and pasture, hybrid poplars are not attractive to geese. You said this is an "ideal" crop near airports. It is also more aesthetically attractive than cables or netting.

In contrast, you said that if ponds are created in the area, birds will use them. Use by birds varies by species and by season. Because birds will use the ponds, there must be effective mitigation. You explained that hazing techniques can be effective. However, because different bird species react differently to those techniques, and because birds habituate to one or a few devices, it is necessary to employ a combination of techniques on a regular basis. Generally, these techniques become less effective as the size of the water body gets larger. You said that noise, shotgun and other techniques often are effective only over relatively short distances. Hence, the size of the impoundment is important.

You noted that some techniques may not be acceptable in the community due to adverse impacts. For example, noise from cannons or exploders might be unacceptable based on off-site impacts. Also, adding dyes or chemicals to water might create problems if the water affects wells used for drinking purposes. In particular, you said that Methyl Anthranilate, which is mentioned by Jennifer Horn in a letter, might not be authorized for use in impoundments as proposed by Lone Star. You recalled EPA regulations that might limit application of this chemical to standing, puddling water on runways and to turf in golf courses. You said you would check on the regulations. You also said that the chemical is expensive and quickly loses its repellency factors.

You explained that lethal shooting of birds can be highly effective when combined with other wildlife hazing techniques. I note your statement is supported by some of the studies you had earlier provided to me. Without a "kill" permit for target birds to supplement other noise devices, birds can grow accustomed to the noise. You said this is particularly true of Canada Geese and gulls. However, you noted that lethal killing of birds can be expensive and may be socially or politically unacceptable in an area. Furthermore, it might not be an available option where endangered or threatened species are present. You explained that endangered and threatened species cannot be "taken" under the Endangered Species Act. Moreover, it might not be possible even to get a permit to haze such species. You said that the dusky Canada Goose ~~is a~~ threatened species, and there are a lot of dusky Canada Geese in this area. They intermingle with other subspecies of Canada Goose. This might impede efforts at hazing in the area.

Finally, we discussed the effectiveness of cables and netting as mitigation techniques. You said these methods can be very effective, but only if used as part of a control system that employs a variety of hazing techniques. (EnviroScience does not propose the use of hazing techniques in conjunction with cables or netting; *see* Wildlife Management Plan at pages 21 (last paragraph) and 25.) You identified stainless steel wire as the wire of choice. You noted the birds can and do get caught in the wires, which can be hard to see. Again, this might create a problem if endangered species use the area. You added that steep slopes and deep ponds are important to make water impoundments less attractive to birds. Otherwise, wading birds will simply land on the edge of the impoundment and walk right into the water. You also questioned whether cables could be used effectively over large ponds as opposed to smaller cells.

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Tom, the Port and I very much appreciated this opportunity to meet and talk with you about this issue. We also very much appreciate your willingness to clarify the context within which ADC made its comments to EnviroScience. *This is particularly important since we learned just last week that Lone Star has filed an application with Columbia County to allow aggregate mining of the site adjoining the Scappoose airport.* As proposed, the mining ultimately would result in a single 360-acre pond adjoining the airport. As expected, Lone Star is asserting that (1) it developed its mitigation plan in coordination with Animal Damage Control, and (2) the FAA has "reviewed and accepted" EnviroScience's Wildlife Management Plan and "considers the plan effective in managing the identified bird impacts to the Scappoose Industrial Airpark operations." For your information, a copy of this page of the application is attached.

As noted earlier, I would greatly appreciate your confirmation of the facts stated in this letter, either through your notations and signature at the bottom of the enclosed copy of this letter or through a separate letter on ADC letterhead. If you have any questions prior to doing so, please feel free to give me a call.

Again, thank you so much for your assistance and cooperation.

Very truly yours,

Mark J. Greenfield

cc: Pete Williamson

Statement of Concurrence:

We, the undersigned, agree with above text as to what was stated during the subject May 30, 1996 meeting between the Port of St. Helens and Thomas R Hoffman, APHIS-ADC. We also concur with the general understanding of Mr. Greenfield of APHIS-ADCs involvement in the Lone Star Mining Expansion Project, Scappoose, Oregon.

Thomas R Hoffman — Date 6/17/96

Rod Krischke — Date 6-17-96

Mark J. Greenfield, Attorney at Law, Suite 1080, 111 S.W. Columbia Street, Portland, Oregon 97201

U.S. Department
of Transportation

Federal Aviation
Administration

Advisory Circular

Subject:

Date:
Initiated by: AAS-300

AC No: 150/5200-33
Change:

1. PURPOSE. This advisory circular (AC) provides guidance concerning the establishment, elimination or monitoring of landfills, open dumps, waste disposal sites compost operations or similarly titled facilities on or in the vicinity of airports.

2. FOCUS. This AC is not intended to resolve all related problems, but it is specifically directed toward eliminating incompatible waste disposal sites, landfills, compost operations and similarly titled facilities in the proximity of airports, thus providing a safer environment for aircraft operations.

3. BACKGROUND.

a. Landfills, garbage dumps, sewer or fish waste outfalls and other similarly licensed or titled facilities used for operations to process, bury, store or otherwise dispose of waste, trash and refuse may attract rodents and birds. Where the dump is ignited and produces smoke, an additional hazard is created. All of the above are undesirable and potential hazards to aviation since they erode the safety of the airport environment.

b. The Federal Aviation Administration (FAA) neither approves nor disapproves locations of the above facilities. Such action is the responsibility of the Environmental Protection Agency and/or the appropriate state and local agencies. The role of the FAA is to ensure that federally obligated airport owners and operators meet their contractual obligations to the United States Government regarding compatible land uses in the vicinity of the airport.

c. While the chance of an unforeseeable, random bird strike in flight will always exist, it is nevertheless possible to define conditions within fairly narrow limits where the risk is increased. Those high-risk conditions exist in the approach and departure patterns areas on and in the vicinity of airports. According to a recent FAA survey, 80 percent of all bird strikes occur on take-off, landing, and taxi operations.

d. The number of bird strikes reported on aircraft is a matter of continuing concern to the FAA and to airport management. Various observations support the conclusion that waste disposal sites attract birds. Accordingly, disposal sites located in the vicinity of an airport are potentially incompatible with safe flight operations and should be eliminated.

4. DISCUSSION.

a. Waste disposal sites located or proposed to be located within the areas established for an airport by the guidelines set forth in paragraph 5a, b, and c of this AC should not be allowed to operate. When airport owners receive a notice or proposal to construct a landfill near their facility, guidance may be required and the FAA must be in a position to assist. Some airports are not under the jurisdiction of the community or local governing body having control of land usage in the vicinity of the airport. In these cases, the airport owner should use its resources and exert its best efforts to close or control waste disposal operations within the general vicinity of the airport. If a waste disposal site is incompatible with an airport in accordance with guidelines of paragraph 5 and cannot be closed within a reasonable time, it should be operated in accordance with the criteria and instructions issued by Federal agencies, such as the Environmental Protection Agency and the Department of Health and Human Services, and other such regulatory bodies that may have applicable requirements. Airport owners or operators and waste disposal proponents should not locate, permit, or concur in the location of a landfill or similar facility on or in the vicinity of airports.

(1) Additionally, any operator proposing a new or expanded waste disposal site within 5 miles

EXHIBIT 2

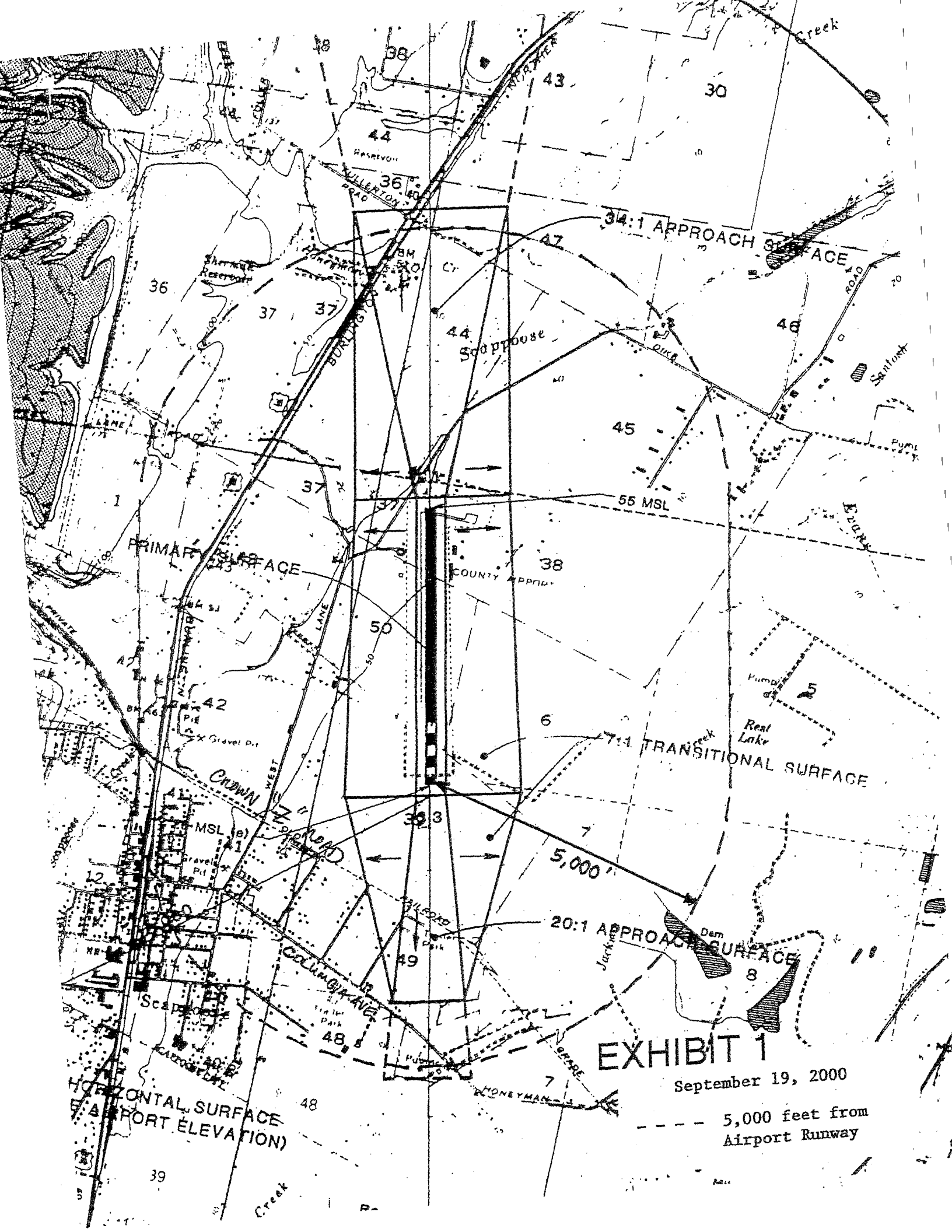

EXHIBIT 1

September 19, 2000

---- 5,000 feet from Airport Runway

EXHIBIT "A"
FINDINGS OF FACT AND CONCLUSIONARY FINDINGS FOR APPROVAL
ZC 3-02 (SCAPPOOSE INDUSTRIAL AIRPARK)

1. The applicant is requesting approval of an application for amendments to the Scappoose Zoning Map changing the existing zoning at the Scappoose Industrial Airpark (Port of St. Helens properties) and the Transwestern Aviation, Inc. site. The subject properties are located east of West Lane Road/Honeyman Road, south of Moore Road, west of Ring-a-ring Road, and north of the Crown Zellerbach Logging Road, and are further described as Columbia County Assessor Map Nos. 3106-020: Tax Lots 800, 1104, 1106 and 1200; 3106-000: Tax Lots 300, 503 and 600; and, 3107-000: Tax Lots 101 and 102.

2. The subject site is designated as Industrial (I) on the comprehensive plan map, and is currently zoned Light Industrial (LI).

3. The Columbia County Board of Commissioners; Columbia County Department of Land Development Services; the Port of St. Helens; the Oregon Department of Aviation; the Scappoose Drainage Improvement Company, and Glacier NW, Inc. have been provided an opportunity to review the proposal. As of the date of this report, no comments in opposition to the request had been received.

4. The following sections of Title 17 of the Scappoose Municipal Code (Scappoose Development Code) are applicable to this request:

"17.22.030 Quasi-judicial amendments. Quasi-judicial amendments shall be in accordance with the procedures set forth in Chapter 17.162 and the following:
A. The commission shall make a recommendation to the Council to approve, approve with conditions or deny an application for a quasi-judicial comprehensive plan map amendment or zone changes based on the following:
1. The applicable comprehensive plan policies and map designation;
2. The change will not adversely affect the health, safety and welfare of the community;
3. The applicable standards of this title or other applicable implementing ordinances; and
4. Evidence of change in the neighborhood or community or a mistake or inconsistency with the comprehensive plan or zoning map as it relates to the subject property.
B. The council shall decide the applications on the record.
C. A quasi-judicial application may be approved, approved with conditions or denied."

Finding:

The proposed zone change (ZC 1-03) has been processed in accordance with the requirements of Chapter 17.162. The proposed zone change meets the goals and policies of the Comprehensive Plan, and is in conformance with the existing Comprehensive Plan

Map designation (Industrial). In addition, the proposed zone change will not adversely affect the greater health, safety and welfare of the community, but rather, as coupled with the proposed Public Use Airport Safety and Compatibility Overlay (AO) will provide an even greater level of protection and safety. Finally, the proposed zone change is part of the City's acknowledged Periodic Review Work Program (Work Task II). Therefore, the provisions of Section 17.22.030 are satisfied.

CONCURRENT LEGISLATVIVE ACTION

Concurrent to this quasi-judicial action proposing amendments to the Scappoose Zoning Map, the City of Scappoose is proposing legislative amendments (G 4-02), amending the Scappoose Development Code by creating the proposed PUA zone, as well as a Public Airport Safety and Compatibility Overlay.

PROPOSED ZONE CHANGE

As detailed within the accompanying G 4-02 report, the proposed zone change is necessary in order (in part) to comply with Work Task II (Airport Planning Rule) of the City's Periodic Review Work Program. The zone change is applicable to both the Port of St. Helens properties, being as they are the Airport Operator, and the Transwestern Aviation, Inc. site, as Transwestern is the Airpark's Fixed Base Operator (FBO).

Therefore, staff recommends that based on the findings of fact, the conclusionary findings for approval, and the material submitted by the applicant, that a recommendation of approval of ZC 3-02 be forwarded to the City Council.

CITY OF SCAPPOOSE STAFF REPORT

Request: Approval of an application for amendments to the Scappoose Zoning Map (ZC 3-02) changing the existing zoning at the Scappoose Industrial Airpark (Port of St. Helens properties) and the Transwestern Aviation, Inc. site. The proposed zone change is from the current zone of Light Industrial (LI) to Public Use Airport (PUA).

Location: The subject properties are located east of West Lane Road/Honeyman Road, south of Moore Road, west of Ring-a-ring Road, and north of the Crown Zellerbach Logging Road, and are further described as Columbia County Assessor Map Nos. 3106-020: Tax Lots 800, 1104, 1106 and 1200; 3106-000: Tax Lots 300 and 600; and, 3107-000: Tax Lots 101 and 102.

Applicant: City of Scappoose

EXHIBITS

1. Staff Report and Findings of Fact
2. Columbia County Assessor's Map delineating subject properties
3. Public Notice and Vicinity Map
4. Letter from Mark J. Greenfield, Esq. on behalf of the Port of St. Helens dated June 26, 2002
5. Letter from Transwestern Aviation, Inc. dated July 15, 2002.
6. By reference only: G 4-02

SUBJECT SITE

The subject site consists of buildings associated with the Scappoose Industrial Airpark, including the Transwestern Aviation, Inc. structure. The remainder of the land is developed by the runway and associated taxiways, and undeveloped industrial land containing a mixture of wild grasses, blackberries, various shrubbery, and a number of trees.

The site is bordered to the north by Moore Road, and beyond that, by mining operations; to the east by rural residential properties and resource (farm) land currently located within Columbia County; to the south by a combination of Columbia County resource and resource industrial land; and to the west by Columbia County resource land, West Lane/Honeyman Road, and a small RV park. The subject site is designated as Industrial (I) on the comprehensive plan map, and is currently zoned Light Industrial (LI). Adjacent zoning includes County Forest-Agriculture - 19-acre minimum lot size (FA-19) to the north; County Rural-Residential, five-acre minimum lot size (RR-5), Resource-Industrial Planned Development (RIPD), and Primary Agriculture - 38-acre minimum lot size (PA-38) to the east; PA-38 and RIPD to the south; and RIPD, PA-38, Heavy Industrial (HI), Airport Industrial (AI), and FA-19 to the west.

June 17, 1996

Mark J. Greenfield
Attorney at Law
111 S.W. Columbia St. Suite 1080
Portland, OR 97201

Subject: Lone Star Mining Expansion Project - May 30, 1996 meeting with Port of St. Helens Commissioners

Dear Mr. Greenfield:

This letter is in response to your correspondence dated June 6, 1996 requesting verification of my comments that were expressed at the subject meeting. This correspondence and the enclosed "comment copy" of your original letter will serve as a record of my comments made at the subject meeting.

I concur with your summary of my comments as stated in your letter. Below is a clarification of some of your comments.

Page 2.

Rod Krischke and I concur with your understanding of our review and comment of the EnviroScience Wildlife Management Plan. This review was a very quick "courtesy review". Because of the time constraints placed on us by EnviroScience, this Plan did not go through the standard technical editing and analysis procedure. We had no involvement in the writing, editing, data collection, data analysis or documentation of the report. Rod conducted a very superficial critique of the Plan and presented his comments in a May 6, 1996 letter to Jennifer Horn, a Wildlife Biologist employed by EnviroScience. This was the only involvement APHIS-ADC had in the development and coordination of the Plan.

You are correct in stating that it is inappropriate for Lone Star and FAA to base support of the application on our review. This is a concern with us, since APHIS-ADC has not been involved in this project. We did not believe that our brief review was going to constitute our approval of the Plan. Once again, it is inappropriate for FAA or Lone Star to assume that we were involved in the development and coordination of the Plan.

Page.2, last paragraph.

It is accurate to say that APHIS-ADC had "zero correspondence from the FAA". There is no record of us receiving any written correspondence from Lone Star, FAA or the Port. However, I did have several telephone conversations with Harold Henke, FAA, regarding aircraft safety at the Scappoose Airport and possible impacts that the proposed expansion might have on wildlife habitat, bird numbers, dispersal and mitigation efficacy.

Thank you for providing me the opportunity to respond to this issue. Please feel free to call on me or my staff if we can be of further assistance.

Sincerely,

Thomas R. Hoffman
State Director

Enclosure

cc: FAA, Harold Henke

GEO-MARINE

- Hazardous Materials
- Cultural Resources
- Energy Management
- Economics/Socioeconomics
- Geographic Information Systems

EXHIBIT
tabbies
6

August 25, 1999

John Helm
General Manager
Tanswestern Aviation
P.O. Box R
Scappoose, Oregon 97056

RE: New Water Impoundments Near the Scappoose Industrial Airpark

Dear Mr. Helm,

I have conducted a review of the documents you sent last week concerning the potential flight safety impacts of new water impoundments resulting from mining operations near the Scappoose Industrial Airpark. These documents included, but were not limited to: a Wildlife Evaluation and Impact Assessment (1994) and Wildlife Management Plan (1995) prepared by EnviroScience, Inc., for Lone Star Northwest, Inc.; and a Wildlife Management Plan Review for Lone Star Mining Expansion Project, Scappoose, Oregon, prepared by the USDA Animal Plant Health Inspection Service Animal Damage Control (APHIS-ADC).

I understand that Columbia County, Oregon, may soon be considering an ordinance that would regulate new water impoundments near airports as authorized by Oregon law. More specifically, I understand that an issue relevant to the adoption of that ordinance is whether the creation of new water impoundments near the Scappoose Industrial Airpark would be likely to result in a level of increased flight activity by birds across the approach corridors or runways that is greater than incidental or occasional, considering ambient levels of flight activity by birds in that vicinity.

Based on my review of the above-mentioned documents, and my experience in matters of this nature, including service as the Chief, of the United States Air Force, Bird Aircraft Strike Hazard (BASH) Team in the Environmental Engineering Division, Pentagon, Washington, D.C., and as a private consultant for numerous civilian and military airfields, I conclude that new open water impoundments resulting from mining within 10,000 feet of the runway at Scappoose Industrial Airpark would very likely result in a significant increase in bird strike hazards in the approach corridors and the middle of the airfield compared to the current level of hazard. My reasons for this conclusion, and my comments regarding the EnviroScience study, follow.

- While the EnviroScience Inc., surveys appear to be comprehensive and carefully documented, the study was conducted for only one year. This does not allow for meaningful statistical comparison of site survey data due to the influence of variable seasonal weather patterns and seasonal differences in crop rotations in agricultural fields. I agree with the general characterization of the relative densities of bird species associated with the various

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El Paso ■ San Antonio ■ Dallas-Ft. Worth ■ Panama City ■ Oak Ridge ■ Newport News

- land uses. However, the interaction among adjacent land uses is a critical in determination of bird movement patterns. Changing the proposed site from pasture/cropland to a 360 acre lake will likely result in a significant increase in the attractiveness of the surrounding habitats and alter bird movement patterns in the vicinity of the airport.

- Bird movement patterns were based on visual observations and are limited by line-of-sight. Observations were also focused on the approach and departure ends of the runway and did not evaluate bird movements across the middle of the runway, where the proposed mining site may have the greatest effect and where aircraft are generally at greater risk. Bird movement patterns are best evaluated using surveillance radar and vertical beam radar which are not limited to visual line-of-sight and low levels of light intensity. Many bird species migrate at night when visual observations are not possible.

- The proposed use of active control methods at water impoundments within 10,000 feet of Scappoose Industrial Airpark would reduce the number of birds at the impoundment site, but would likely significantly increase the number of birds in the air around the airport and in the traffic pattern, particularly when birds are being harassed from the impoundment site. To be effective, active harassment should be used immediately when birds are observed at the site. Immediate dispersal of birds within 10,000 feet of a runway, however, should always be coordinated with the airport. As the Scappoose Industrial Airpark is not controlled by air traffic controllers in a tower, there is no way to warn local pilots of dispersal activity. Active control activities at the impoundment site would very likely result in a significant increase in bird strike risk during the period of time immediately following the dispersal event.

- Bird populations, particularly Canada Geese, are increasing dramatically across North America. Birds that were once migratory are remaining resident year-round in many areas of the country. The population dynamics of these and other species present a serious long-term concern in establishing open water habitat near airports.

- The General Habitat Types map attached to the Wildlife Evaluation and Management Plan shows that much of the lands south, east, north, and northwest of the Scappoose Industrial Airpark are either agricultural lands or pasture. Virtually all of the proposed mining area immediately east of the airport falls within these categories. Agricultural and pasture lands provide excellent forage and are a significant attractant to birds for feeding and loafing. Should these lands be converted to open water, such as the proposed 360-acre Lone Star Lake, then it is reasonable to conclude that birds currently feeding at those sites will concentrate in nearby crop and pasture lands to forage, including those within and across the airport runway and approach corridor. This displacement will likely significantly increase the bird strike hazard to air navigation at the airpark.

Mining operations that create new water impoundments within 10,000 feet of the runway at Scappoose Industrial Airpark would very likely result in a significant increase in bird strike risk to aircraft operating in the area. The relatively high ambient level of potentially hazardous bird species in the area associated with the various land uses and the understood need for an integrated bird control program at the

proposed site provide a clear indication that the close proximity of the site to the airport has inherent risk. The removal of forage at the proposed site will displace and concentrate birds feeding at the site onto other nearby agricultural and pasture lands, including lands withon and across the airport approach, corridors and runway. Finally, lack of a communication system that would provide pilots flying in the traffic pattern of immediate control activities at the mining site would result in dispersed bird flocks moving in areas that may result in a catastrophic strike.

Please feel free to call me if you have any additional questions concerning my evaluation of the materials you provided.

Sincerely,

Ronald L. Merritt
BASH Program Manager

Enclosure
Resume

3160 Airport Road, Suite 22-A ,Panama City, Florida 32405 850-913-8003 Tel. 850-913-9582 Fax

El Paso ■ San Antonio ■ Dallas-Ft. Worth ■ Panama City ■ Oak Ridge ■ Newport News

Ronald L. Merritt

EDUCATION:
B.S. Zoology, University of Arkansas, 1975
M.S. Biology, North Texas State University, 1978
Graduate Studies, PhD-ABD, University of North Texas, 1987

SUMMARY OF EXPERIENCE:
Mr. Merritt is a retired Air Force officer with over 16 years of experience as scientist and senior staff biologist. He was an Assistant Professor of Biology at the United States Air Force Academy and the course director for the department's largest core course in general biology. As an officer assigned to the Air Force Institute of Technology, he conducted research in environmental physiology and aquatic toxicology. The last seven years of his Air Force career were spent as the Chief of the Bird Aircraft Strike Hazard (BASH) Team, Environmental Engineering Division, Pentagon, Washington D.C., and later at the Air Force Civil Engineering Support Agency, Tyndall AFB, Florida. He was responsible for providing on-site technical assistance to major commands and bases worldwide in reducing bird strike hazards on airfields and weapons ranges. Additionally, he assisted flying units in developing and scheduling operations on high speed low-level training routes to avoid hazardous bird concentrations. During this time he conducted on-site surveys of bird and wildlife hazards at over 85 airports in 12 countries. He provided technical assistance in the investigation of eleven aircraft mishaps. He was the Air Force expert witness in public hearings and legal proceedings concerning off base land use issues that posed bird and wildlife hazards to aircraft operations. Mr. Merritt has conducted research at many landfills and commercial airports to identify potential bird/wildlife hazards, develop comprehensive management plans, and conduct control training.

His experience in aircraft operations as well as academic and technical aspects of biological sciences have allowed Mr. Merritt to gain a sound background in biological issues that pertain to aviation safety and the associated federal, state, and military regulations concerning these issues. This knowledge has been enhanced by extensive worldwide field experience in airfield evaluations, investigations, and classroom instruction and training. He has given lectures on bird strike hazards and related topics at international conferences in Spain, Germany, England, Finland, Belgium, Israel, New Zealand, Panama, and Chile. Mr. Merritt's areas of expertise include:

- Airport Bird Hazard Assessments
- Landfill Demonstration Projects
- Bird/Wildlife Management Plans
- Military Low-Level Airspace Hazard Evaluations
- Bird/Wildlife Control Training
- Expert Testimony
- Protected Species Surveys

SELECTED EXPERIENCE:

NATURAL RESOURCES PROJECTS:
Mr. Merritt has supervised the bird/wildlife hazard assessments of over 100 airports worldwide. He has visited over 100 landfills and conducted multi-year studies at several large facilities to assess hazards and determine appropriate bird control measures. Relevant natural resource projects associated with bird and wildlife hazards to aviation are listed below.

Program Manager. Avian Hazard Advisory System (AHAS). Contract No., _____ Delivery Order No. _____. Mr. Merritt was the program manager for the development of an innovative methodology for

providing bird strike risk assessments for low-level, military flight operations. The Avian Hazard Assessment System (AHAS) was the result of over ten years of research into the possibility of using the nationwide network of Doppler weather radar (WSR 88-D) as the basis for bird hazard identification. AHAS combined traditional risk prediction from the USAF Bird Avoidance Model (BAM) with sophisticated weather forecasting models as a basis for refining periods of time when migration intensities would be greatest. AHAS provided daily forecasts of hazardous conditions along specified low-level routes and ranges as well as hourly updates based upon radar observations. Mr. Merritt provided logistical support for the program and assisted directly in providing hazard advisories during the test period which required 24 hour a day support. The overwhelming success of this initial investigation resulted in the expansion of the project into other geographic regions. The AHAS concept is now under consideration for development in other regions of the world including Europe and the Middle East.

Project Manager. Daytona Beach International Airport BASH Plan. Contract No. _____, Delivery Order _____. Mr. Merritt conducted field surveys of bird movement patterns and on-site assessments of potential bird attractants at the Daytona Beach International Airport, Daytona International Speedway, and the Volusia County Landfill. These three facilities are owned by the county and became the target for concern following a serious gull strike to a commercial air carrier. Mr. Merritt developed a draft integrated plan that addresses concerns at each facility within the framework of current environmental concerns for endangered species and other protected species. The draft plan was widely accepted and will be finalized following the summer and fall surveys.

Program Manager. Moody Bird Avoidance Model, Moody Air Force Base, GA. Contract No. DACA63-93-D-0014, Delivery Order No. 214. This three-year project used small scale radar, thermal imagery, radio and satellite telemetry, and bird vocalization monitoring to determine bird activity in the vicinity of Moody AFB and the Grand Bay Bombing Range. The predictive models were based on historical data which calculates risk of a damaging bird/aircraft strike over time and space. The final product for this project included a BAM for both the Grand Bay Bombing Range and a BAM for the airfield at Moody AFB. The airfield BAM represents a new concept in bird avoidance modeling. The airfield BAM operates on a 24 hour a day schedule and provides relative risk assessment for the two runways at the installation. The program is critical in the determination of local Bird Hazard Advisories that result in restrictions of flight operations.

Project Manager. Bird/Wildlife Hazard Assessment, Dallas-Fort Worth International Airport. Contract No. 1550-129. Mr. Merritt is leading a team of biologists and aviation safety specialists in the assessment of bird and wildlife hazards on this 18,000 acre facility. The project includes determining best land management practices, habitat modification, active control procedures and training requirements.

Project Manager. Air National Guard BASH Plans. Contract No. 3080-001. This project includes the on-site assessment of twenty Air National Guard facilities and the development of an integrated Bird Aircraft Strike Hazard (BASH) plan required under AFI 91-202. The effort includes coordination with commercial airport operators at joint use facilities and development of management plans that comply with both military and FAA requirements. Installations completed to date include: Burlington, VT; Fort Smith, AR; Smoky Hill Bombing Range, KS; Townsend Bombing Range, GA; Phoenix, AZ, Tucson, AZ, New Orleans Naval Air Station; Meridian, MS; San Juan, Puerto Rico; Duluth, MN; Baltimore, MD; Birmingham, MS, and Port Hueneme, CA.

Project Manager. Bird/Wildlife Hazard Assessment, Nashville International Airport. Contract No. Mr. Merritt is leading a team of biologists and aviation safety specialists in the assessment of bird and wildlife hazards at this busy hub airport. The team is making recommendations on habitat management and active bird control measures as well as developing documentation systems for tracking bird control efforts and strike reports.

Project Manager. Covel Gardens Landfill, San Antonio, TX. Contract No. 1998-001. Mr. Merritt collected two years of field data on bird movement patterns in the San Antonio region. He developed a comprehensive bird management plan and conducted semi-annual training for operations staff at this large landfill owned and operated by Waste Management of Texas.

Project Manager. Airport/Landfill Assessment of the Town of Tao, NM. Contract No. TAT-85-120. Mr. Merritt collected field data on bird movement patterns associated with the landfill and airport in response to

plans to expand both facilities. The final report included details on bird movements associated with the landfill and other surrounding areas and provided guidelines for future landfill development in the area. The final report received approval from the FAA and enabled community planners to continue site selection and development of both facilities.

Expert Witness. State of Georgia, Environmental Protection Division, Landfill Site Assessment, Long County, Georgia. Contract No. This project included site assessment of several locations in the vicinity of a proposed landfill site near the Townsend Bombing Range in Georgia. The project included data collection and analysis as well as expert testimony in an administrative hearing in support of the EPD's denial of an operational permit for the landfill. The denial was upheld based upon the data and testimony.

Expert Witness. Air France vs. John F. Kennedy International Airport. Following a serious bird strike to an Air France Concorde, Mr. Merritt was retained by the counsel for Air France in an effort to recoup expenses associated with the strike. Mr. Merritt reviewed bird strike data, management plans, and depositions taken from airport staff and provided assistance to attorneys for preparation of additional questions for trial. Mr. Merritt drew on his personal experiences at the airport along with other documentation to prepare a report that detailed the aspects of the airport's bird and wildlife control efforts. The Port Authority of New York and New Jersey opted to settle this case out of court for over $5 million.

Expert Witness. City of Del Rio, Texas vs. Adobe Environmental. Mr. Merritt is providing expert witness services to the City of Del Rio, Texas, in support of their efforts to block the development of a municipal solid waste landfill facility near the US Air Force auxiliary airfield near Spofford, Texas. The auxiliary airfield is critical to flight operations at Laughlin AFB, and degradation of the facility due to reduced safety from potential bird strikes may threaten the installation in future base closure actions. The auxiliary field was built in the early 1990's when landfill operations at the old facility created uncontrollable hazards. Expert services include on-site site assessment, data collection, technical reports, and court testimony if needed.

U.S. Department
of Transportation
Federal Aviation
Administration

FLIGHT STANDARDS DISTRICT
1800 N.E. 25Th Avenue
Suite 15
Hillsboro, Oregon 97124
(503) 681-5529, Fax: (503) 681-5555
800-84703606

EXHIBIT
7

July 31, 1996

Columbia County Planning Commission
Columbia County Courthouse
St. Helens, Oregon 97051

Subject: Scappoose Industrial Airpark

Dear Commissioners:

It has come to my attention that there is a proposal to establish an aggregate mine on a 400+ acre site directly adjacent to the Scappoose Industrial Airpark, and when mining is completed in the future, the site will become a permanent lake.

As the Aviation Safety Program Manager for the Federal Aviation Administration's Portland Flight Standards District Office I am responsible to educate airman to the safety hazards associated with flying in an effort to prevent aircraft accidents. My piloting experience spans over three decades in all kinds of fixed and rotor wing aircraft. It is this experience and concern for aviation safety that prompts me to write to you today.

The Scappoose Industrial Airpark is an extremely important component in the Northwest's airport system. Portland International Airport is the fastest growing airport in the United States at this time. With the continuing growth of commercial aviation at Portland comes the need for improved reliever airports in the Portland area. Scappoose has exceeded both State and Federal estimates for based aircraft and number of operations, become the home of new aviation business, and continues to grow and expand at a phenomenal rate. That's good!!

What is not good is the intentional creation of a hazard that could affect the safe operation of aircraft to and from Scappoose Airpark. Open bodies of water attract water foul. Many of these birds are large and can cause substantial damage to aircraft should they collide or be ingested into a jet engine. NTSB records show a number of serious, even fatal aircraft accidents caused by bird strikes.

The creation of a 40 acre body of water next to the airport presents a significant hazard in the way of potential aircraft bird strikes, creating a hazard to aircraft and to persons or property on the surface.

I urge the Commissioners to seriously consider the safety aspects of the proposed aggregate mine and reject the application.

Sincerely,

James E. Laird

JAMES E. LAIRD
Aviation Safety Program Manager

EXHIBIT 8

November 22, 1996

Rod Propst
1473 North Evergreen Avenue
Stayton, Oregon 97383

Columbia County Planning Commission
Columbia County Courthouse
St. Helens, Oregon 97051

Gentlemen:

I am writing to you regarding the issue of water impoundments located within the environs of an airport.

I believe that this issue is of serious concern to you. I additionally understand that there have been representations made to you using the Salem Municipal Airport as an acceptable and safe example of water impoundments surrounding an airport. I am obligated to categorically state that the Salem Municipal Airport is not such an example.

Until August 23, 1996, I was the Airport Superintendent for the Salem Municipal Airport and had been in that position since 1993. I accepted another airport manager's position as of September 3, 1996.

The Salem Municipal Airport has at least nine open water impoundments within 7,000 feet of the runways (some much closer), of which the majority were the result of aggregate mining operations.

The Salem Municipal Airport is geographically located at the center of perhaps the largest grass seed farming area of the state.

Given the large amount of open water near the airport and the abundance of grass fields, migratory waterfowl and other birds present a potentially serious safety of flight hazard, as they transit between the open bodies of water and their feeding areas.

Let me assure you that nothing is further from the truth than stating or implying that the situation regarding water impoundments surrounding the Salem Municipal Airport is acceptable.

As far back as November 21, 1975, during an Airport Inspection by the FAA, it was found and documented that a potentially hazardous bird problem existed. Excerpts of the Certification Inspector's comments detail duck strikes by two Army National Guard aircraft during night ILS approaches to Runway 31.

There have been numerous reported bird strikes since 1975, with the most significant being a Cessna 172 hitting a Canadian goose.

Since 1993, at the Salem Municipal Airport, there have been three reported and documented cases of bird strikes. Due to this significant safety hazard, the FAA has required the Salem Municipal Airport to have an ecological study conducted for the airport, in compliance with FAR 139.337. Upon completion of the ecological study the Salem Airport will implement a Wildlife Management Plan to alleviate wildlife hazards.

It should be noted that in all the current Fight Information Publications for the Salem Municipal Airport, there is a caution about heavy concentrations of waterfowl in the airport operations area.

Perhaps the most significant Safety of Flight hazard for the Salem Municipal Airport, is currently being implemented in the form of an 80 acre water impoundment resulting from aggregate mining operations. This "lake" is sited directly under the ILS corridor, inside the Outer Marker. In layman's terms this water impoundment could not have been placed in a more detrimental position to affect aircraft in flight. The aircraft passing over this "lake" will be in the final landing phase of flight, at reduced power settings with the landing gear and flaps extended, and most likely operating with no visual reference to the terrain. The outcome of an aircraft hitting a bird in this configuration could be catastrophic and could cause an aircraft accident with fatal results.

I hope I have been able to shed some light on the subject of open water impoundments surrounding the Salem Municipal Airport and that they cause a serious safety of flight hazard to aircraft utilizing the Salem Airport.

Sincerely,

Rod Propst

Rod Propst

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OPA OREGON PILOTS ASSOCIATION

Columbia County Board of Commissioners
Columbia County Courthouse
St. Helens, OR 97051

Dear Commissioners:

The Oregon Pilots Association (OPA) and its 1,000 members strongly oppose the land use proposal to mine 420 acres immediately adjacent to the Scappoose Industrial Airpark. This issue was discussed at the most recent OPA Board Meeting and a motion to oppose the proposal was unanimously passed. We are gravely concerned about: 1) the negative impact on airport safety that this mining development would cause; and 2) the resultant significant changes to the character of the airport causing a substantial loss of value and subsequent loss of local revenue.

Pilots flying in and out of Scappoose are concerned with the existing water impoundments to the north of the airport. Adding another 400 plus acre impoundment will greatly increase this flying hazard. Standing water attracts wildlife which represents one of the greatest hazards to aviation. Even small birds can bring down an aircraft, its pilot and passengers.

Scappoose Industrial Airpark is one of the best general aviation airports in the region, and it is one of the fastest growing airports in the State. The general aviation industry is also growing nationally and Scappoose Industrial Airpark and Columbia County stand to gain significantly in the immediate future. Another huge body of water will do nothing but harm the airport.

For those of you who have lived in the area for the past twenty years or so, you may recall what Hillsboro Airport looked like then and what it looks like now. Scappoose Industrial Airpark could very well be even more significant in terms of jobs and economic activity in the very near future. The Scappoose airport is a tremendous asset and worthy of protection from mining in such close proximity.

The OPA sincerely hopes you will be able to successfully oppose this mining proposal.

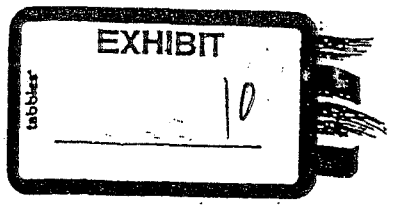
Sincerely,

James E. Moran

James E. Moran, Jr.
President
Oregon Pilots Association

971 NW Cypress
Corvallis, OR 97330

cc: Columbia County Planning Commission



SRI/SHAPIRO
INCORPORAT

September 5, 1995

John Helm
Transwestern Aviation
P.O. Box R
Scappoose, Oregon 97056

Dear John:

As per your request, I have reviewed the following: the Wildlife Evaluation and Impact Assessment, Lone Star Mining Expansion, Scappoose, Oregon (EnviroScience, April 1994); the Field Data Appendix, Wildlife Evaluation and Impact Assessment, Lone Star Mining Expansion, Scappoose, Oregon (EnviroScience, April 1994); and Section 5.0, Implementation and Monitoring Plan of a untitled report submitted to me by Ron Rathburn of EnviroScience, Inc., July 28, 1995.

Data Collection and Analysis Methods

Some of the issues discussed in my May 19, 1995 review of the Wildlife Management Plan, and the Report Summary, Wildlife Evaluation and Impact Assessment, (EnviroScience, April 1994) have been resolved by examination of the detailed methodologies and results. A question still remains over the calculation of density. It appears that density was calculated by adding the number of birds seen over time (30 to 40 times of observation) for all sampling points in a given habitat (1 to 7 sampling points/habitat) divided by the number of times of observation divided by the acres of that given habitat.

This methodology does not account for the fact that the observer may be counting the same birds more than once. For example, on June 2, 1992 an observer counted 56 European Starlings at sampling point 24 and at 7:44am and 45 European Starlings at sampling point 25 at 8:14am. These may have been the same birds counted twice.

Furthermore, the methodology used to calculate density does not take into account the different acreages observed in each habitat. For example, it appears that 7 sampling points were used to estimate the density of birds occurring on the proposed mining area. There is no estimate of the area covered by these sampling points, rather the number of birds was simply added to arrive at a total number of birds occurring in the proposed mining area. It is apparent that if 10 sampling points were chosen rather than 7, more birds would have been counted and the density would have been higher. This occurs because the number of sampling sites and their acreage was not used in the calculation of density.

Comparing densities and making conclusions about attractiveness of habitats, as was done on pages 59 and 76 of the Wildlife Evaluation and Impact

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1650 N.W. Front Ave.
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Telephone:
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Facsimile:
503.274.0123

Assessment, may be misleading because the densities are subject the inaccuracies discussed above.

Development of The Wildlife Management Plan

The issue of using the active mining ponds as a model for formulating a wildlife management plan remains a concern. As was stated in the May 19, 1995 review, the active ponds will not be similar to the proposed mining expansion once mining is terminated and they should not be used as a model in developing the wildlife management plans. Once the mining operations are terminated, the phases of the expansion will tend to have the characteristics of the Inactive Mining Pond (Scappoose Sand and Gravel). The Wildlife Management Plan states that this pond "is structurally very similar to both of the active ponds described previously. It is also deep with relatively steep sloped shorelines. ... the shoreline vegetation is slightly more established than the active ponds. This is due to the lack of disturbance within the pond area. The turbidity appears to be less than that of the active ponds. This is also due to the absence of activity within the pond."

If the objective of the Wildlife Management Plan is to develop a management plan for the long-term (during and after active mining), then the Inactive Mining Pond, or a similar pond, should have been used to formulate the plan. It should be noted that the Inactive Mining Pond was in the beginning stages of natural reclamation (some vegetation on the shoreline, decreased turbidity). While the date of the last active mining on the Inactive Mining Pond is not known, it likely that with passing time of inactivity, this pond will become more densely vegetated and the turbidity would decrease. With these changes, the Inactive Mining Pond would become a more attractive habitat and the number of species and density would likely increase. The Wildlife Management Plan should have addressed these issues.

Section 5.0, Implementation and Monitoring Plan of a untitled report submitted to me by Ron Rathburn of EnviroScience, Inc., July 28, 1995 states that, "the pre-operational phase will determine the optimal combination of management techniques..." This pre-operational phase will be conducted on the active mining ponds. While the active ponds are representative of the proposed mining activity, they are not representative of the ponds after mining is terminated. The optimal management techniques determined on the active mining ponds may be not applicable for the ponds once mining is terminated.

Additional Issues

While the analysis of bird flight patterns shows the existing conditions from terrestrial habitats, the flight pattern assessment does not analyze the likely pattern of bird flight from the proposed 400-acre pond east of the runway.

If the wildlife management plan is not as effective as anticipated by Lone Star Northwest, the pond attract birds. The likely flight pattern would be important in determining the impact to airport operations.

In addition, bird use of terrestrial habitats can be controlled more reliability than use of large aquatic habitats (LaBoeuf, per. comm., 1995). Use of overhead wires, as cited in Section 5.0, Implementation and Monitoring Plan of a untitled report, would be extremely difficult in a 400-acre pond. The wires would have to be at least 0.75 miles long to go from shore to shore.

If you have any questions regarding my review, please feel free to call me at (503) 274-9000. Thank you for the opportunity to work with Transwestern Aviation.

Sincerely,

SRI/SHAPIRO, Inc.

Joseph A. Maser, Ph.D.
General Manager

US Department
of Transportation

Federal Aviation
Administration

Seattle Airports District Office
1601 Lind Avenue, S.W.
Renton, WA 98055-4056

11

September 1, 1992

Ms. Shirley Parsons
Operations Manager
Port of St. Helens
P. O. Box 598
St. Helens, Oregon 97051

Dear Ms. Parsons:

Recently, it came to our attention that Lone Star Northwest is preparing a second application for a zone change on a parcel of land approximately 2,500 feet from the runway. The zone change is apparently needed before Lone Star can construct their sand and gravel operation. We reiterate our previous position (letter dated October 30, 1991), that the Federal Aviation Administration (FAA) is opposed to the development of the sand and gravel operation due to its high potential to become a bird attractant.

In August, a grant was issued to the Port of St. Helens for design and construction of airport improvement items, with a second grant planned for December of this year. By accepting these two grants and previous ones, the Port obligated itself to adhere to grant assurances which include taking "appropriate action, including the adoption of local zoning laws to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations." The Port of St. Helens should consider safety of operations, their grant obligations, and do everything in their power to prevent the proposed zone change or any other proposals which would create incompatible land uses.

If you require any assistance in regards to compatible land use, please do not hesitate to call Suzanne Lee-Pang of our office at (206) 227-2654.

Sincerely,

J. Wade Bryant
Manager

1 Enclosure
Letter dated 7/31/92 from Transwestern Helicpoters, Inc.

cc:
John Helm, Transwestern Helicopters
John Marra, Oregon Department of Land Conservation
and Development (LCDC)

EXHIBIT
12

U.S. Department of Transportation
Federal Aviation Administration

Northwest Mountain Region
Colorado, Idaho, Montana
Oregon, Utah, Washington
Wyoming

1601 Lind Avenue, S. W.
Renton, Washington 98055-40

OCT 30 1991

RECEIVED
NOV 1 1991
PORT OF ST. HELENS

Ms. Shirley J. Parsons
Operations Manager
Port of St. Helens
P.O. Box 598
St. Helens, OR 97051

Dear Ms. Parsons:

This letter is in reference to Lone Star Northwest's proposed sand and gravel operation which is to take place on land adjacent to the Scappoose Industrial Airpark. The development is approximately 2,500 feet from the runway. FAA Order 5200.5A, Waste Disposal Sites On Or Near Airports, states that "disposal sites will be considered as incompatible if located within 5,000 feet of any runway used only by piston powered aircraft." It is recognized that there is a difference between waste disposal sites and sand and gravel operations. However, this issue was discussed with our headquarters personnel. They indicated that the intent of the order was to apply to any type of development which could be considered as a bird attractant.

Due to the magnitude and size of the proposed operation, it has a very high potential of becoming a bird attractant. The FAA objects to the development of the sand and gravel operation. The Port of St. Helens should consider safety of operations, their grant obligations, and their liability before endorsing or approving this proposal or any mitigation measures.

If we can provide any further information in this matter please contact me.

Sincerely,

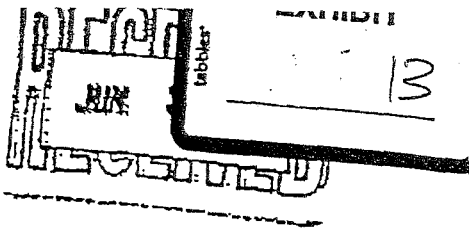
Harold N. Handke

Harold N. Handke
Airport Certification Safety Inspector
Airports Division
Northwest Mountain Region

HUTT MOEN
ASSOCIATES

Services to the Aviation Industry:

- *Planning*
- *Engineering*
- *Management*



May 29, 1996

Mr. Peter Williamson
General Manager
Port of St. Helens
P.O. Box 598
St. Helens, Oregon 97051

SUBJECT: Proposed Gravel Extraction Operations
Scappoose Industrial Airpark

Dear Mr. Williamson:

It has come to our attention that the Columbia County Board of Commissioners may soon be considering proposals which would permit extensive commercial gravel extraction operations immediately adjacent to Scappoose Industrial Airpark. One of these proposed areas, a 400+ acre site, was formerly known as the Meier's property. We understand that full utilization of this site, in conjunction with the proposed identification of two additional sites, for gravel extraction could result in the creation of a 1,700 acre body of water beginning less than 900 feet from the centerline of the Airport's Runway 15-33.

As the aviation consultant firm that prepared the *Scappoose Industrial Airpark Master Plan* in April 1990, we are concerned that the proposed use of this site for extensive gravel extraction has the potential to seriously compromise the continued safe and efficient operation of the Airport. As we noted in the *Master Plan*, gravel extraction in the immediate vicinity of the airport presents several potential problems. These problems include: airspace obstructions (excavation equipment, antennas, etc.), dust and grit (which is injurious to aircraft components), glare from lights, electronic interference, and bird strike hazards. In addition, the elimination of flat, open land suitable for aircraft emergency landings is a concern, especially within the runway approach / departure corridors.

The most significant and difficult to control of these potential problems is the bird strike hazard. Ponds and other bodies of water often attract birds. This is particularly true when vegetation suitable for bird habitat is allowed to grow around the periphery of the water body. Water bodies also serve as an attractive source of food for both indigenous and migratory birds. Stagnant bodies of water — such as those typically left behind following gravel extraction — are especially attractive to birds.

707 AVIATION BLVD.
SANTA ROSA, CA 95403

TEL: (707)526-5010
FAX: (707)526-9721

Birds and aircraft do not mix well. Turbine-powered aircraft, such as those used for business / corporate flying, typically suffer the most from an in-flight encounter with birds. A turbine-powered aircraft encounter with a flock of birds could result in a substantial, and possibly total, loss of engine power. This could occur immediately after takeoff at low altitude. Even small aircraft can be seriously damaged or destroyed by a bird strike. For these reasons, the Federal Aviation Administration and all state aviation agencies strongly encourage communities to not locate bodies of water close to airports nor to locate airports near bodies of water.

Scappoose Industrial Airpark has experienced above-average growth over the past five years. While other general aviation airports across the nation have experienced decreasing activity in recent years, aviation activity at Scappoose Industrial Airpark has substantially increased. The *Master Plan* anticipated that the Airport would serve as an important element of the County's overall economic development effort — providing safe and reliable general aviation air access to the region. This important role is now being realized. To further this role, the Airport's operational safety and utility must be protected and enhanced. We strongly urge Columbia County and the Port of St. Helens to preserve the Airport's future viability by avoiding the placement of additional bodies of water near the Airport.

Sincerely,

David B. Heal, A.A.E.
Senior Consultant

DBH:ca

c: Columbia County Board of Commissioners

SHUTT MOEN
ASSOCIATES

ZC 3-02 (Scappoose Industrial Airpark) July 25, 2002

CITY OF SCAPPOOSE STAFF REPORT

Request: Approval of an application for amendments to the Scappoose Zoning Map (ZC 3-02) changing the existing zoning at the Scappoose Industrial Airpark (Port of St. Helens properties) and the Transwestern Aviation, Inc. site. The proposed zone change is from the current zone of Light Industrial (LI) to Public Use Airport (PUA).

Location: The subject properties are located east of West Lane Road/Honeyman Road, south of Moore Road, west of Ring-a-ring Road, and north of the Crown Zellerbach Logging Road, and are further described as Columbia County Assessor Map Nos. 3106-020: Tax Lots 800, 1104, 1106 and 1200; 3106-000: Tax Lots 300, 503 and 600; and, 3107-000: Tax Lots 101 and 102.

Applicant: City of Scappoose

EXHIBITS

1. Staff Report and Findings of Fact
2. Columbia County Assessor's Map delineating subject properties
3. Public Notice and Vicinity Map
4. Letter from Mark J. Greenfield, Esq. on behalf of the Port of St. Helens dated June 26, 2002
5. Letter from Transwestern Aviation, Inc. dated July 15, 2002.
6. By reference only: G 4-02

SUBJECT SITE

The subject site consists of buildings associated with the Scappoose Industrial Airpark, including the Transwestern Aviation, Inc. structure. The remainder of the land is developed by the runway and associated taxiways, and undeveloped industrial land containing a mixture of wild grasses, blackberries, various shrubbery, and a number of trees.

The site is bordered to the north by Moore Road, and beyond that, by mining operations; to the east by rural residential properties and resource (farm) land currently located within Columbia County; to the south by a combination of Columbia County resource and resource industrial land; and to the west by Columbia County resource land, West Lane/Honeyman Road, and a small RV park. The subject site is designated as Industrial (I) on the comprehensive plan map, and is currently zoned Light Industrial (LI). Adjacent zoning includes County Forest-Agriculture - 19-acre minimum lot size (FA-19) to the north; County Rural-Residential, five-acre minimum lot size (RR-5), Resource-Industrial Planned Development (RIPD), and Primary Agriculture - 38-acre minimum lot size (PA-38) to the east; PA-38 and RIPD to the south; and RIPD, PA-38, Heavy Industrial (HI), Airport Industrial (AI), and FA-19 to the west.

EXHIBIT 1

CONCURRENT LEGISLATVIVE ACTION

Concurrent to this quasi-judicial action proposing amendments to the Scappoose Zoning Map, the City of Scappoose is proposing legislative amendments (G 4-02), amending the Scappoose Development Code by creating the proposed PUA zone, as well as a Public Airport Safety and Compatibility Overlay.

PROPOSED ZONE CHANGE

As detailed within the accompanying G 4-02 report, the proposed zone change is necessary in order (in part) to comply with Work Task II (Airport Planning Rule) of the City's Periodic Review Work Program. The zone change is applicable to both the Port of St. Helens properties, being as they are the Airport Operator, and the Transwestern Aviation, Inc. site, as Transwestern is the Airpark's Fixed Base Operator (FBO).

Therefore, staff recommends that based on the findings of fact, the conclusionary findings for approval, and the material submitted by the applicant, that a recommendation of approval of ZC 3-02 be forwarded to the City Council.

EXHIBIT "A"
FINDINGS OF FACT AND CONCLUSIONARY FINDINGS FOR APPROVAL
ZC 3-02 (SCAPPOOSE INDUSTRIAL AIRPARK)

1. The applicant is requesting approval of an application for amendments to the Scappoose Zoning Map changing the existing zoning at the Scappoose Industrial Airpark (Port of St. Helens properties) and the Transwestern Aviation, Inc. site. The subject properties are located east of West Lane Road/Honeyman Road, south of Moore Road, west of Ring-a-ring Road, and north of the Crown Zellerbach Logging Road, and are further described as Columbia County Assessor Map Nos. 3106-020: Tax Lots 800, 1104, 1106 and 1200; 3106-000: Tax Lots 300, 503 and 600; and, 3107-000: Tax Lots 101 and 102.

2. The subject site is designated as Industrial (I) on the comprehensive plan map, and is currently zoned Light Industrial (LI).

3. The Columbia County Board of Commissioners; Columbia County Department of Land Development Services; the Port of St. Helens; the Oregon Department of Aviation; the Scappoose Drainage Improvement Company, and Glacier NW, Inc. have been provided an opportunity to review the proposal. As of the date of this report, no comments in opposition to the request had been received.

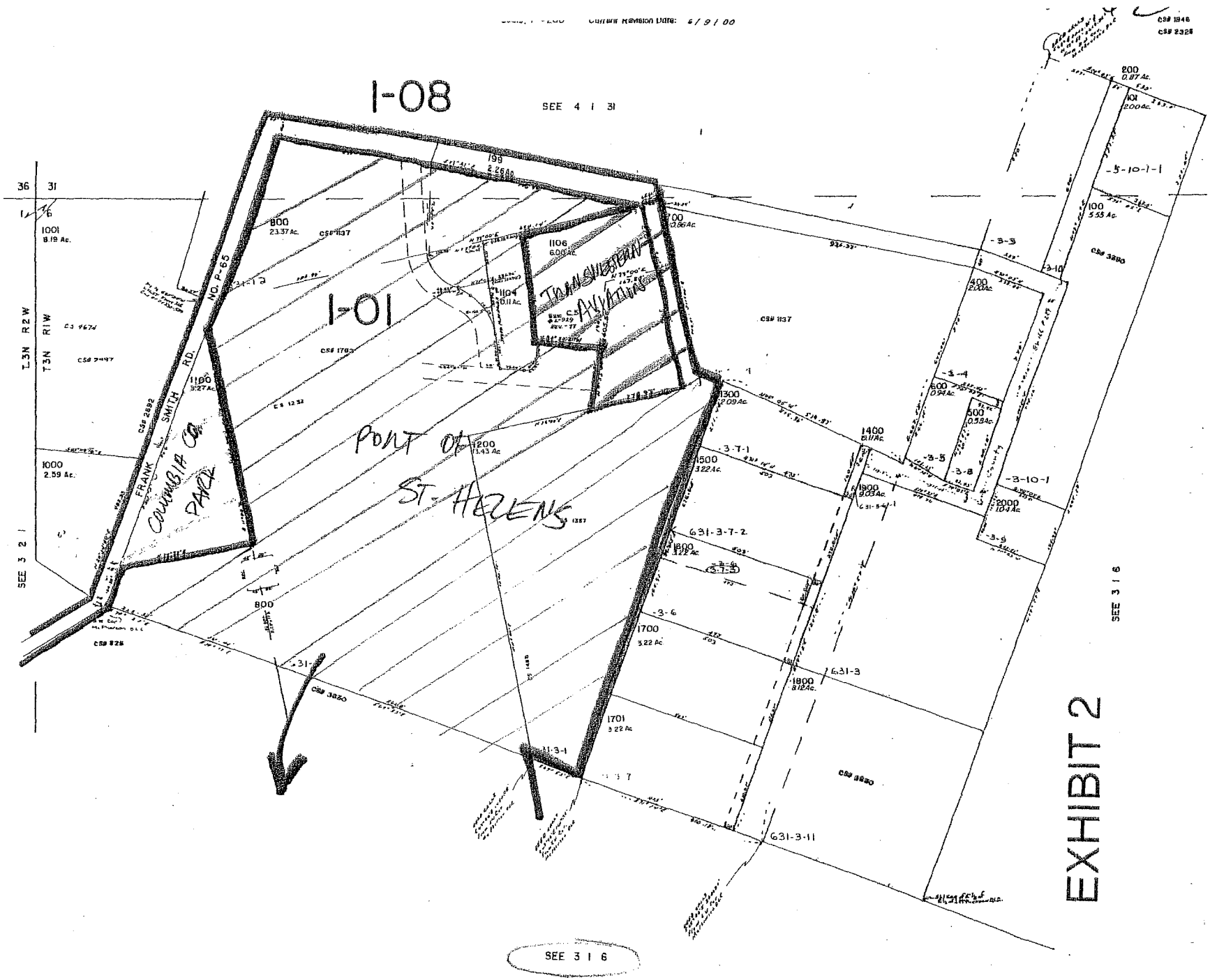
4. The following sections of Title 17 of the Scappoose Municipal Code (Scappoose Development Code) are applicable to this request:

"17.22.030 Quasi-judicial amendments. Quasi-judicial amendments shall be in accordance with the procedures set forth in Chapter 17.162 and the following:
A. The commission shall make a recommendation to the Council to approve, approve with conditions or deny an application for a quasi-judicial comprehensive plan map amendment or zone changes based on the following:
1. The applicable comprehensive plan policies and map designation;
2. The change will not adversely affect the health, safety and welfare of the community;
3. The applicable standards of this title or other applicable implementing ordinances; and
4. Evidence of change in the neighborhood or community or a mistake or inconsistency with the comprehensive plan or zoning map as it relates to the subject property.
B. The council shall decide the applications on the record.
C. A quasi-judicial application may be approved, approved with conditions or denied."

Finding:

The proposed zone change (ZC 1-03) has been processed in accordance with the requirements of Chapter 17.162. The proposed zone change meets the goals and policies of the Comprehensive Plan, and is in conformance with the existing Comprehensive Plan

Map designation (Industrial). In addition, the proposed zone change will not adversely affect the greater health, safety and welfare of the community, but rather, as coupled with the proposed Public Use Airport Safety and Compatibility Overlay (AO) will provide an even greater level of protection and safety. Finally, the proposed zone change is part of the City's acknowledged Periodic Review Work Program (Work Task II). Therefore, the provisions of Section 17.22.030 are satisfied.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COLUMBIA CO.
FRANK SMITH RD.
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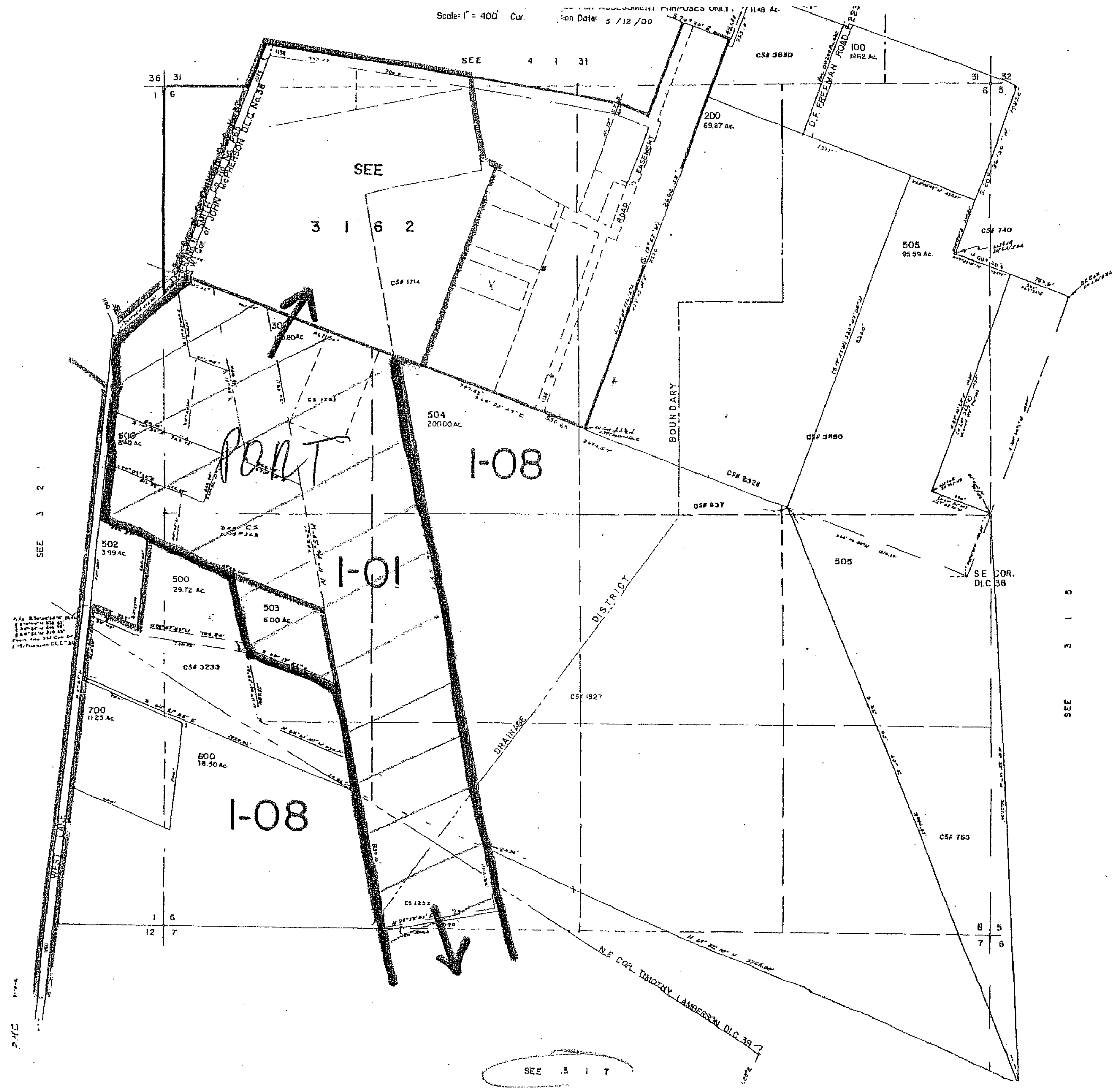
EXHIBIT 2



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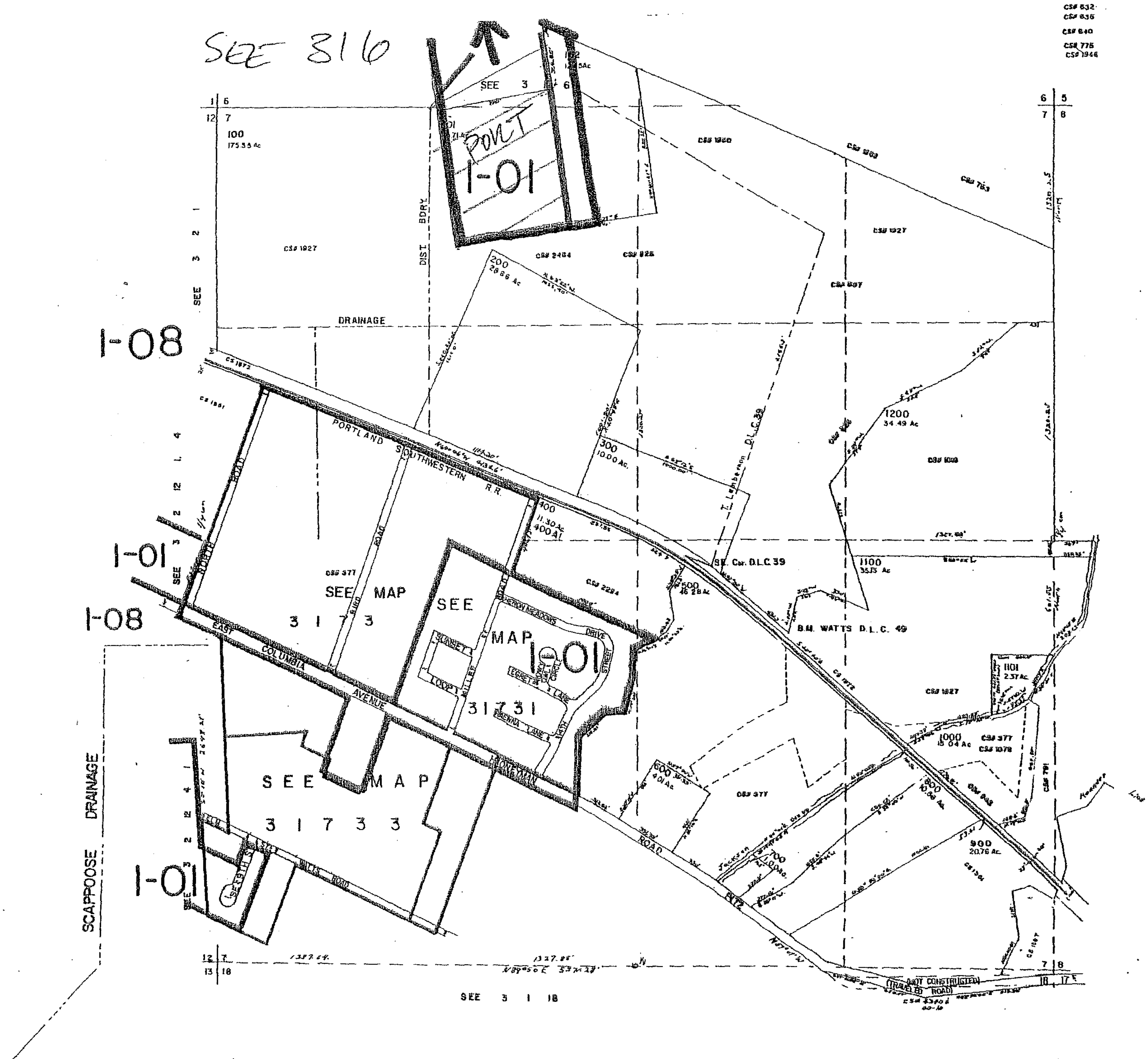
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EAST COLUMBIA AVENUE
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T. Lamberson D.L.C. 39
SE. Cor. D.L.C 39
B.M. WATTS D.L.C. 49
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(NOT CONSTRUCTED)
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3 1 7

MARK J. GREENFIELD

Attorney at Law

Suite 100
2121 S.W. Broadway
Portland, Oregon 97201

Telephone: (503) 227-2979
Facsimile: (503) 242-9001

June 26, 2002

Mr. Michael Walter
Scappoose Planning Department
City Hall
P.O. Box "P"
Scappoose, Oregon 97056

Subject: Proposed Public Use Airport Zone and Public Use Airport Safety and Compatibility Overlay Zone

Dear Michael:

On behalf of the Port of St. Helens, I have reviewed the latest revisions to the proposed Public Use Airport Zone and Public Use Airport Safety and Compatibility Overlay Zone and offer the following comments.

The proposed Public Use Airport zone looks fine. The Port recommends that it be adopted as written.

Regarding the proposed Safety/Compatibility zone, the Port first wishes to thank the City for revising Section 17.xx.080 to prohibit new or expanded water impoundments of one-quarter acre in size or larger within 5,000 feet from the end or edge of a runway. As I indicated to you earlier, this provision is very important in terms of protecting air navigational safety, as it will substantially reduce the threat of bird strikes at the Airpark.

The Port also requests one additional change to the draft ordinance. In the table at the end of Section 17.xx.070, in the Direct Impact Area column, under Sanitary Landfills, please consider adding a new footnote stating that sanitary landfills also are not permitted in the secondary impact area. This is important to the Port, because sanitary landfills can be major bird attractants that can significantly increase the level of bird strike hazard near an airport.

The Port thanks you and the City of Scappoose for its effort on these ordinances.

Very truly yours,

Mark J. Greenfield

cc: Shirley Parsons

EXHIBIT 4

TRANSWESTERN AVIATION, INC.

Scappoose Industrial Air Park • P.O. Box R • Scappoose, OR 97056
(503) 543-3121 • (503) 226-4731 • FAX (503) 543-5296

C

July 15, 2002

Michael Walter
City of Scappoose
P.O. Box P
Scappoose, OR 97056

Dear Mr. Walter:

Transwestern Aviation fully supports the adoption by the City of Scappoose of the Public Use Airport (PUA) Zone. Please include this letter in the record of the public hearing proceedings related to the PUA.

Sincerely,

John Helm
General Manager

EXHIBIT 5