TOWN OF YUCCA VALLEY

PLANNING COMMISSION MEETING

The Mission of the Town of Yucca Valley is to provide a government that is responsive to the needs and concerns of its diverse citizenry and ensures a safe and secure environment while maintaining the highest quality of life

TUESDAY
JUNE 28, 2011
6:00 p.m.

YUCCA VALLEY COMMUNITY CENTER, YUCCA ROOM
57090 - 29 PALMS HIGHWAY
YUCCA VALLEY, CALIFORNIA 92284

* * * *

PLANNING COMMISSION MEMBERS

Robert Lombardo, Chairman
Mike Alberg, Commissioner
Vickie, Bridenstine, Commissioner
Michael Hildebrand, Commissioner
Tim Humphreville, Commissioner

AGENDA

REGULAR MEETING OF THE
TOWN OF YUCCA VALLEY PLANNING COMMISSION
6:00 P.M., TUESDAY, JUNE 28, 2011

The Town of Yucca Valley complies with the Americans with Disabilities Act of 1990. If you require special assistance to attend or participate in this meeting, please call the Town Clerk's office at (760) 369-7209 at least 48 hours prior to the meeting.

If you wish to comment on any subject on the agenda, or any subject not on the agenda during public comments, please fill out a card and give it to the Planning Commission secretary. The Chair will recognize you at the appropriate time. Comment time is limited to 3 minutes.

CALL TO ORDER:

ROLL CALL:
Mike Alberg, Commissioner
Vickie Bridenstine, Commissioner
Michael Hildebrand, Commissioner
Tim Humphreville, Commissioner
Robert Lombardo, Chairman

PLEDGE OF ALLEGIANCE

APPROVAL OF AGENDA

Action: Move by_____2nd by_____Voice Vote_____.

PUBLIC COMMENTS

In order to assist in the orderly and timely conduct of the meeting, the Planning Commission takes this time to consider your comments on items of concern, which are not on the agenda. When you are called to speak, please state your name and community of residence. Please limit your comments to three minutes or less. Inappropriate behavior, which disrupts or otherwise impedes the orderly conduct of the meeting, will result in forfeiture of your public comment privileges. The Planning Commission is prohibited by State law from taking action or discussing items not included on the printed agenda.

PUBLIC HEARINGS:

1. CONDITIONAL USE PERMIT, CUP 02-11 NEILSON

A request for approval to install two 25' tall towers, one with three, five foot diameter wind turbines and one with two five foot diameter wind turbines. The applicant proposes to place the towers in the rear of the property, 40' from the rear property line and 68' from the eastern property line. The towers will be approximately 30' in overall height, less than the maximum permitted in this land use district but taller than the surrounding trees and homes.

Recommendation: Based upon the findings contained within the staff report and the included Conditions of Approval the Planning Commission:

a) Determines that the project is categorically exempt from CEQA under Section 15332, Class 32, Infill Development: and
b) Approved Conditional Use Permit, CUP 02-11, for the construction of two 25' tall towers, one tower with three, five foot diameter wind turbines, the second tower with two five foot diameter wind turbines

Action: Moved by_____ 2nd by _____ Voice Vote_____.

2. CONTINUATION OF PUBLIC HEARING ON THE REGULATION OF WIND ENERGY CONVERSION SYSTEMS (WECS) AND PRESENTATION OF A DRAFT ORDINANCE.

A request from staff that the Commission discuss and provide direction on regulations regarding wind energy conversion systems.

Recommendation: That the Planning Commission completes the review of the draft ordinance and requests a joint meeting with the Town Council as the Commission indicated at their meeting of May 24, 2011.

Action: Moved by_____ 2nd by _____ Voice Vote_____.

DISCUSSION ITEM

3. SELECTION OF PLANNING COMMISSION CHAIRMAN AND VICE-CHAIRMAN

Recommendation: That the Planning Commission move to appoint the selected Commissioners to serve as the Chairman and the Vice-Chairman of the Planning Commission for the next twelve months.

A. Nominate and Elect Chairman

Action: Moved by_____ 2nd by _____ Voice Vote_____.

B. Nominate and Elect Vice Chairman

Action: Moved by_____ 2nd by _____ Voice Vote_____.

DEPARTMENT REPORTS:

NONE

CONSENT AGENDA:

All items listed on the consent agenda are considered to be routine matters and may be enacted by one motion and a second. There will be no separate discussion of the consent agenda items unless a member of the Planning Commission or Town Staff requests discussion on specific consent calendar items at the beginning of the discussion. Public requests to comment on consent calendar items should be filed with the Deputy Town Clerk before the consent agenda is called.

4. MINUTES–

A request that the Planning Commission approve as submitted the minutes of the regular meetings held on May 12, 2011, May 24, 2011 and June 14, 2011

Action: Moved by_____ 2nd by _____ Voice Vote_____.

STAFF REPORTS AND COMMENTS:

FUTURE AGENDA ITEMS:

SPR 02-08, Yucca Plaza, Extension of time

COMMISSIONER REPORTS AND REQUESTS:

Commissioner Alberg
Commissioner Bridenstine
Commissioner Hildebrand
Commissioner Humphreville
Chairman Lombardo

ANNOUNCEMENTS:

The next regular meeting of the Yucca Valley Planning Commission will be held on Tuesday, July 12, 2011 at 6:00 p.m.

ADJOURN

Planning Commission: June 28, 2011

TOWN OF YUCCA VALLEY
COMMUNITY DEVELOPMENT DEPARTMENT
CURRENT PLANNING DIVISION STAFF REPORT
NIELSON WIND TURBINES

Case: CONDITIONAL USE PERMIT, CUP 02-11 NIELSON WIND TURBINES CATEGORICAL EXEMPTION FROM CEQA, SECTION 15332, CLASS 32, INFILL DEVELOPMENT

Request: A REQUEST FOR APPROVAL TO INSTALL TWO 25' TALL TOWERS; ONE TOWER WITH THREE, FIVE FOOT DIAMETER WIND TURBINES; THE SECOND TOWER WITH TWO FIVE FOOT DIAMETER WIND TURBINES

Applicant: ANDY CANADA
P.O. BOX 1073
YUCCA VALLEY, CA 92286

Property Owner:
HEIDI NIELSEN
56742 ANTELOPE TRAIL
YUCCA VALLEY, CA 92284

Representative:
ANDY CANADA
P.O. BOX 1073
YUCCA VALLEY, CA 92286

Location: THE PROJECT IS LOCATED AT 56742 ANTELOPE TRAIL, EAST OF GRAND AVENUE, AND IDENTIFIED AS APN 595-102-03.

Existing General Plan Land Use Designation:
THE SITE IS DESIGNATED SINGLE FAMILY RESIDENTIAL FIVE (5) UNITS PER ACRE (RS-5).

Existing Zoning Designation:
THE SITE IS DESIGNATED SINGLE FAMILY RESIDENTIAL FIVE (5) UNITS PER ACRE (RS-5).

Surrounding General Plan Land Use Designations:
NORTH: SINGLE FAMILY RESIDENTIAL FIVE (5) UNITS PER ACRE (RS-5)
SOUTH: COMMERCIAL MIXED USE (C-MU) ACROSS ANTELOPE TRAIL
WEST: SINGLE FAMILY RESIDENTIAL FIVE (5) UNITS PER ACRE (RS-5)

Division Approvals:
Engineering _____ Building & Safety _____ Public Works_____

EAST: SINGLE FAMILY RESIDENTIAL FIVE (5) UNITS PER ACRE (RS-5)

Surrounding Zoning Designations:

NORTH: SINGLE FAMILY RESIDENTIAL FIVE (5) UNITS PER ACRE (RS-5)
SOUTH: COMMERCIAL MIXED USE (C-MU) ACROSS ANTELOPE TRAIL
WEST: SINGLE FAMILY RESIDENTIAL FIVE (5) UNITS PER ACRE (RS-5)
EAST: SINGLE FAMILY RESIDENTIAL FIVE (5) UNITS PER ACRE (RS-5)

Surrounding Land Use:

NORTH: SINGLE FAMILY RESIDENCES AND VACANT LOTS
SOUTH: SINGLE FAMILY RESIDENCES AND VACANT LOTS
WEST: SINGLE FAMILY RESIDENCES AND VACANT LOTS
EAST: SINGLE FAMILY RESIDENCES AND VACANT LOTS

Public Notification:

PURSUANT TO SECTION 83.030115, LEGAL NOTICE IS REQUIRED TO BE GIVEN TO ALL PROPERTY OWNERS WITHIN A THREE (300) HUNDRED FOOT RADIUS OF THE EXTERIOR BOUNDARIES OF THE SUBJECT SITE. THIS PROJECT WAS POSTED ON **TUESDAY APRIL 7, 2011 AND PUBLISHED ON APRIL 9, 2011**. AT THE MEETING APRIL 26, 2011 THE PLANNING COMMISSION CONTINUED THE ITEM TO THEIR REGULAR MEETING OF MAY 24, 2011. THE ITEM WAS AGAIN CONTINUED AT THE MEETING OF MAY 24, 2022 TO JUNE 14, 2011. AT THE MEETING OF JUNE 14, 2011 STAFF WAS DIRECTED TO RETURN WITH FINDINGS AND CONDITIONS FOR APPROVAL. THERE HAS BEEN NO WRITTEN RESPONSES RECIEVED AS OF THE WRITING OF THIS STAFF REPORT. PUBLIC COMMENTS HAVE BEEN RECEIVED AT THE PLANNING COMMISSION MEETINGS OF **APRIL 26, 2011 and JUNE 14, 2011.** COPIES OF THE MINUTES ARE ATTACHED TO THIS STAFF REPORT.

RECOMMENDATION:

CONDITIONAL USE PERMIT, CUP 02-11: BASED UPON THE FINDINGS CONTAINED WITHIN THE STAFF REPORT AND THE INCLUDED CONDITIONS OF APPROVAL THE PLANNING COMMISSION:

a) DETERMINES THAT THE PROJECT IS CATEGORICALLY EXEMPT FROM CEQA UNDER SECTION 15332, CLASS 32, IN-FILL DEVELOPMENT; AND

b) APPROVES CONDITIONAL USE PERMIT, CUP 02-11, FOR THE CONSTRUCTION OF TWO 25' TALL TOWERS; ONE TOWER WITH THREE, FIVE FOOT DIAMETER WIND TURBINES; THE SECOND TOWER WITH TWO FIVE FOOT DIAMETER WIND TURBINES

Project Planner: Robert Kirschmann Reviewed by: Shane Stueckle

Appeal Information:
Actions by the Planning Commission, including any finding that a negative declaration be adopted, may be appealed to the Town Council within 10 calendar days. Appeal filing and processing information may be obtained from the Planning Division of the Community Development Department. Per Section 83.030145 of the Development Code, minor modifications may be approved by the Planning Division if it is determined that the changes would not affect the findings prescribed in Section 83.030140 of the Development Code, Required Findings, and that the subject of the proposed changes were not items of public controversy during the review and approval of the original permit, including modifications to phasing schedules for the project.

I. GENERAL INFORMATION

PROJECT DESCRIPTION: A request for approval to install two 25' tall towers, one with three, five foot diameter wind turbines and one with two five foot diameter wind turbines. The applicant proposes to place the towers in the rear of the property, 40' from the rear property line and 68' from the eastern property line. The towers will be approximately 30' in overall height, less than the maximum permitted in this land use district but taller than the surrounding trees and homes.

LOCATION: The project is located at 56742 Antelope Trail, east of Grand Avenue and identified as APN 595-102-03.

PROJECT SYNOPSIS:	**SITE COVERAGE**
PROJECT AREA	1.2 acres
BUILDING AREA	No new buildings are proposed Existing single family home and garage is approximately 2, 247 square feet. There are two storage buildings one at 320 square feet, the other at 418 square feet.
PHASED CONSTRUCTION:	No
FLOOD ZONE	Map 8860 Zone X, area outside the floodplain
ALQUIST PRIOLO ZONE	No
OFF-SITE IMPROVEMENTS REQ.	No off-site improvements are recommended
ASSESSMENT DISTRICTS REQ.	No
RIGHT-OF-WAY DEDICATION REQ.	Not recommended
UTILITY UNDERGROUNDING:	All new service lines shall be underground in conformance to Ordinance 169
AIRPORT INFLUENCE AREA:	Located within the horizontal surface and safety review area 3 of the airport

TRAILS & BIKE LANE MASTER PLAN	No facilities on or adjacent to the project
PUBLIC FACILITY MASTER PLAN	No facilities on or adjacent to the project.
PARKS AND RECREATION MASTER PLAN	No facilities on or adjacent to the project
MASTER PLAN OF DRAINAGE:	No facilities on or adjacent to the project
STATE OF CALIFORNIA STORM WATER POLLUTION PREVENTION PLAN (SWPPP) REQUIRED:	No, less than 1 acre disturbed
REDEVELOPMENT PROJECT AREA:	Yes
STREET LIGHTS:	None recommended
SPECIFIC PLAN/ PLANNED DEVELOPMENT AREA:	No
FUTURE PLANNING COMMISSION ACTION REQURIED	No
FUTURE TOWN COUNCIL ACTION REQURIED	No

II. PROJECT ANALYSIS

GENERAL PLAN CONSIDERATION: The proposed project is located in the Residential Single Family, 5 units per acre land use designation.

Policy 2 of the Energy Resources section of the General Plan's Open Space, Mineral, Energy and Conservation element states "Support efforts to develop alternative energy technologies which have a minimum adverse impact on the environment".

DEVELOPMENT CODE STANDARDS

As the Commission is aware, the Town currently does not have regulations specific to wind energy conversion systems. The Development Code provides the following guidance and standards regarding development within the RS-5 land use districts.

Section 84.0410 (19) Additional Uses allows for "Development of natural resources including, but not limited to: mineral deposits, extractions, natural vegetation and energy sources, together with the necessary buildings, apparatus or appurtenances incidental

thereto." Therefore, under existing requirements in place the proposed project is subject to the review and approval of a Conditional Use Permit.

ENVIRONMENTAL CONSIDERATIONS: The project is exempt from the California Environmental Quality Act under Section 15332, class 32, Infill Development.

ADJACENT LAND USES: The project site is located in an area that consists of single family residences and scattered vacant lots. The property west of the subject site is vacant. The property east of the subject site is developed with a single family residential unit. The property north is vacant. The property south of the subject site is vacant. Properties to the north-west and south-east are developed with single family residential units. Properties to the north east and south west are vacant.

SITE CHARACTERISTICS: The site contains approximately 1.2 acres, and the dimensions are approximately 166' x 325'. The site is general flat and at street grade. The site is developed with an approximate 2,247 square foot residence and two (2) sheds, 320 square feet and 418 square feet. The lot is generally flat with some desert native vegetation occurring onsite. While the site contains 1.2 acres, because of the underlying zoning of RS-5, the project site can be further subdivided into smaller residential lots of approximately 7200 square feet.

BUILDING ELEVATIONS: No new buildings are proposed. The proposal is to install two 25' tall towers, one with three (3), five (5) foot diameter wind turbines and one (1) with two (2) five (5) foot diameter wind turbines installed on the towers. The applicant has provided the proposed elevations for the structures.

ROADWAY IMPROVEMENTS: No roadway improvements are recommended as part of this project.

ASSESSMENT DISTRICTS: No assessment districts are recommended as part of this project.

DISCUSSION: The applicant proposes to place the towers in the rear of the property, 40' from the rear property line and 68' from the eastern property line. The towers will be approximately 30' in overall height, which is less than the maximum height permitted in this land use district and slightly taller than the surrounding trees and homes

The Town does not have any specific regulations for the installation of wind energy conversion systems. Since there are no standards in place, the Town is following section 84.0410 (19) which states: "Development of natural resources including, but not limited to: mineral deposits, extractions, natural vegetation and energy sources, together with the necessary buildings, apparatus or appurtenances incidental thereto." Therefore, the project can be reviewed through the Conditional Use Permit process.

The Single Family Residential Land Use District allows for a maximum height of 35'.

Pursuant to Section 87.0405, Permitted Structural Height Increases, maximum structure height may be increased by 50% subject to the approval of a Land Use Compliance Review. Section 87.0405(C) (18) is the only reference to wind mills found in the Development Code. This section would allow the tower to be increased in height to 52.5'.

The Residential Single Family Land Use district (RS-5) sets standards for the height, setbacks, and numbers of structures that can be constructed on a lot. The following chart identifies Development Code standards and compares/contrasts the proposed project to those standards.

	RS 5 Land Use District Standards	**Proposed Standards**
Lot size	7,200 square feet	1.12 acre
Front Setback	25'	Existing, >25'
Side Setbacks	5'/10'	86'/98'
Rear Setback	15'	40'
Maximum structure height	35'	30'

The properties surrounding the subject site vary in size, from similar sizes of 1.2 acres to lots as small as 6,970 square feet, 12,169 square feet, 13,068 square feet (7128 and 7126 Seymour Drive, and one parcel south of the project site, across Antelope Trail). As all these properties, including the subject site, are located within an RS-5 land use district, properties, subject to Town approval, may be subdivided to lots of 7200 square feet.

The Planning Commission discussed this application at its regular meeting of June 14, 2011. At that meeting the Planning Commission directed Staff to return with findings and Conditions of Approval to support the proposal. Below are the recommended Findings.

CONDITIONAL USE PERMIT FINDINGS:

(a) The location, size, design, density and intensity of the proposed development is consistent with the General Plan, the purpose of the land use district in which the site is located, and the development policies and standards of the Town;

The proposed wind turbines will be located at the rear of the property. The height will not exceed the height which is permitted within Residential Land Use Districts. The project further will help to support Policy 2 of the General Plan by providing for the opportunity to develop alternative energy resources. The proposed wind turbines are consistent with General Plan policies.

(b) The location, size, design and architectural design features of the proposed structures and improvements are compatible with the site's natural landform, surrounding sites, structures and streetscapes;

The proposed wind turbines will be located at the rear of the property. The height will not exceed the height which is permitted within Residential Land Use Districts. The proposed wind turbines are compatible with the site and surrounding sites, structures and streetscapes.

(c) The proposed development produces compatible transitions in the scale, bulk, coverage, density and character of the development between adjacent land uses;

The proposed wind turbines are comparable in height to other residences, both existing and those that could be constructed in the future. The maximum height which is permitted in the Residential Single Family Land Use Districts is 35'. The wind turbines are proposed at an overall height of 30'. The wind turbines are compatible with the surrounding development.

(d) The building site and architectural design is accomplished in an energy efficient manner;

No new buildings are proposed as part of this request. The project includes two 25' tall towers, one with three (3), five (5) foot diameter wind turbines and one (1) with two (2) five (5) foot diameter wind turbines installed on the towers. The structures are designed to help increase the use of renewable energy resources.

(e) The materials, textures and details of the proposed construction, to the extent feasible, are compatible and consistent with the adjacent and neighboring structures;

The Development Code contains no specific standards for wind turbines, including materials. There are no other wind mills constructed within the vicinity of the proposed project, however a similar request could be submitted by other properties in Town.

(f) The development proposal does not unnecessarily block views from other buildings or from public ways, or visually dominate its surroundings with respect to mass and scale to an extent unnecessary and inappropriate to the use;

The applicant has located the towers at the rear of the property, 40' from the rear property line and 68' from the eastern property line. The towers will be approximately 30' in overall height, less than the maximum permitted in this land use district but taller than the surrounding trees and homes.

(g) That the amount, location, and design of open space and landscaping conforms to the requirements of the Development Code, enhances the visual appeal and is compatible with the design and functions of the structure(s), site and surrounding area;

The RS Land Use District allows for up to 40% lot coverage. The total lot coverage is six (6) percent. The applicant is proposing two towers on the property. The site is well within the lot coverage requirements. There are

no other requirements for open space or landscaping in the Development Code for Single family residences.

(h) The quality in architectural design is maintained in order to enhance the visual desert environment of the Town and to protect the economic value of existing structures;

The applicant has presented the proposed elevations. They include two towers, one with three turbines and one with two turbines. There are no specific standards within the Development Code for these types of structures. The structures have been located at the rear of the property to help minimize the appearance.

(i) There are existing public facilities, services, and utilities available at the appropriate levels and/or that new or expanded facilities, services and utilities shall be required to be installed at the appropriate time to serve the project as they are needed;

Utility services required to facilitate this development such as water and electric are currently on the site and accessible to the proposed development. A net metering agreement with Southern California Edison will need be completed by the applicant.

(j) That access to the site and circulation on and off-site is required to be safe and convenient for pedestrians, bicyclists, equestrians and motorists;

No changes are requested or required to the circulation as a result of this proposal.

(k) That traffic generated from the proposed project has been sufficiently addressed and mitigated and will not adversely impact the capacity and physical character of surrounding streets;

The project will have no traffic impact or change the capacity/ physical character of the surrounding streets.

(l) That traffic improvements and/or mitigation measures have been applied or required in a manner adequate to maintain a Level of Service C or better on arterial roads, where applicable, and are consistent with the Circulation Element of the Town General Plan;

No traffic improvements or mitigation measures are required for this project.

(m) There will not be significant harmful effects upon environmental quality and natural resources including endangered, threatened, rare species, their habitat, including but not limited to plants, fish, insects, animals, birds or reptiles;

The proposed towers will be constructed on an existing parcel, developed with a 2,247 square foot residence and garage, a 410 square foot detached structure and a 320 square foot structure. The project is exempt under the California Environmental Quality Act (CEQA) per Section 15332, Class 32 Infill Development. According to the US Department of Energy the "overall impact on birds is extremely low (<1 of 30,000) compared to other human-

related causes, such as buildings, communication towers, traffic, and house cats". Therefore, based upon the fact the site is already developed, and the impact to birds would be extremely low there are no significant impacts expected on the environmental quality and natural resources.

(n) There are no other relevant or anticipated negative impacts of the proposed use that cannot be mitigated and reduced to a level of non-significance in conformance with CEQA, the California Environmental Quality Act;

The proposal is exempt from the California Environmental Quality Act (CEQA) Section, 15332, Class 32 Infill Development. There are no anticipated effects to the environment.

(o) The impacts which could result from the proposed development, and the proposed location, size, design and operating characteristics of the proposed development, and the conditions under which it would be operated or maintained will not be considered to be detrimental to the public health, safety and welfare of the community or be materially injurious to properties and/or improvements within the immediate vicinity or be contrary to the General Plan; and

There are no anticipated issues resulting form the approval of this project that would be detrimental to the public health, safety and welfare of the community.

(p) The proposed development will comply with each of the applicable provisions of the Development Code, and applicable Town policies, except approved variances.

The project, as conditioned will comply with applicable provisions of the Development Code and Town Policies. No variances are proposed

At the meeting of June 14, 2011 the Commission discussed the possibility of the lot being subdivided in the future. Condition of Approval P4 was add and addresses this concern. The condition states:

Should an application be submitted to subdivide said lot the towers shall be removed or brought into compliance with any Town adopted regulations in place at time of application submittal.

The following are the recommended Conditions of Approval for the project:

TOWN OF YUCCA VALLEY
COMMUNITY DEVELOPMENT DEPARTMENT
RECOMMENDED CONDITIONS OF APPROVAL
NIELSON WIND TURBINES

This approval is for Conditional Use Permit CUP 02-11 a request to install two 25' tall towers, one with three, five foot diameter wind turbines and one with two five foot diameter wind turbines. The applicant proposes to place the towers at the rear of the property, 40' from the rear property line and 68' from the eastern property line. The towers will be approximately 30' in overall height, less than the maximum permitted in this land use district but taller than the surrounding trees and homes. The project is located at 56742 Antelope Trail, east of Grand Avenue and identified as APN 595-102-03.

GENERAL CONDITIONS

G1. The applicant shall agree to defend, indemnify and hold harmless the Town of Yucca Valley, its agents, officers and employees, at his sole expense, against any action, claim or proceedings brought against the Town or its agents, officers or employees, to attack, set aside, void, or annul this approval or because of the issuance of such approval, or in the alternative, to relinquish such approval, in compliance with the Town of Yucca Valley Development Code. The applicant shall reimburse the Town, its agents, officers, or employees for any court costs, and attorney's fees which the Town, its agents, officers or employees may be required by a court to pay as a result of such action. The Town may, at its sole discretion, participate at its own expense in the defense of any such action but such participation shall not relieve applicant of his obligations under this condition. The Town shall promptly notify the applicant of any claim, action or proceedings arising from the Town's approval of this project, and the Town shall cooperate in the defense.

G2. This Conditional Use Permit shall become null and void if construction has not commenced within three (3) years of the Town of Yucca Valley date of approval. Extensions of time may be granted by the Planning Commission and/or Town Council, in conformance with the Town of Yucca Valley Development Code. The applicant is responsible for the initiation of an extension request.

Approval Date: June 28, 2011
Expiration Date: June 28, 2014

G3. The applicant shall ascertain and comply with requirements of all State, County, Town and local agencies as are applicable to the project area. These include, but are not limited to, Environmental Health Services, Transportation/Flood Control, Fire Warden, Building and Safety, State Fire Marshal, Caltrans, High Desert Water District, Airport Land Use Commission, California Regional Water Quality Control Board, the Federal Emergency Management Agency, MDAQMD-Mojave Desert Air Quality Management District, Community Development, Engineering, and all other Town Departments.

G4. All conditions are continuing conditions. Failure of the applicant to comply with any or all of said conditions at any time shall result in the revocation of the approval on the property.

G5. No on-site or off-site work shall commence without obtaining the appropriate permits for the work required by the Town and the appropriate utilities. The approved permits shall be readily available on the job site for inspection by Town personnel.

G6. The applicant shall pay all fees charged by the Town as required for application processing, plan checking, construction and/or electrical inspection. The fee amounts shall be those which are applicable and in effect at the time work is undertaken and accomplished. Fees for entitlement prior to construction permits are based on estimated costs for similar projects. Additional fees may be incurred, depending upon the specific project. If additional fees for services are incurred, they must be paid prior to any further processing, consideration, or approval(s).

G7. All improvements shall be inspected by the Town as appropriate. Any work completed without proper inspection may be subject to removal and replacement under proper inspection.

G8. All refuse shall be removed from the premises in conformance with Yucca Valley Town Code 33.083.

G9. During construction, the applicant shall be responsible to sweep public paved roads adjacent to the project as necessary and as requested by the Town staff to eliminate any site related dirt and debris within the roadways. During business activities, the applicant shall keep the public right-of-way adjacent to the property in a clean and sanitary condition.

G10. No staging of construction equipment or parking of worker's vehicles shall be allowed within the public right-of-way.

G11. All existing street and property monuments within or abutting this project site shall be preserved consistent with AB 1414. If during construction of onsite or offsite improvements monuments are damaged or destroyed, the applicant shall retain a qualified licensed land surveyor or civil engineer to reset those

monuments per Town Standards and file the necessary information with the County Recorder's office as required by law (AB 1414).

PLANNING CONDITIONS

P1. In accordance with Ordinance 169, utility undergrounding shall be required for all new service and distribution lines that provide direct service to the property being developed; existing service and distribution lines that are located within the boundaries being developed; existing service and distribution lines between the street frontage property line and the centerline of the adjacent streets of the property being developed; existing Service and Distribution lines located on adjacent properties along or within 10 feet of the lot lines of the property being developed; or existing service and distribution lines being relocated as a result of a project.

P2. All exterior lighting shall comply with the Ordinance 90, Outdoor Lighting and shall be illustrated on all construction plans.

P3. The noise generated by the proposed wind turbines shall not exceed 55dB except under extreme weather conditions.

P4. Should an application be submitted to subdivide said lot or any abutting property the towers shall be removed or brought into compliance with any Town adopted regulations in place at time of application submittal.

ENGINEERING CONDITIONS

E1. Prior to any work being performed within the public right-of-way, **(if applicable)** the applicant shall pay the required fees and obtain an encroachment permit from the Department of Community Development. The applicant shall apply for an encroachment permit from the Town for utility trenching, utility connection, or any other encroachment onto public right-of-way. The applicant shall be responsible for the associated costs and arrangements with each public utility.

E2. Prior to any work being performed within the public right-of-way, **(if applicable)** the applicant shall provide the name, address, telephone, facsimile number, and e-mail address of the contractor to perform the work. A description of the location, purpose, method of construction, and surface and subsurface area of the proposed work shall be supplied. A plat showing the proposed location and dimensions of the excavation and the facilities to be installed, maintained, or repaired in connection with the excavation, and such other details as may be required by the Town Engineer shall be provided.

E4. The applicant shall restore any pavement cuts required for installation or extension of utilities for the project within the public right-of-way. In all cases

where cuts are allowed, the applicant is required to patch the cuts to City standards and the approval of the Town Engineer. The patching shall include a grinding of the pavement to a width 5 feet beyond the edge of the trench on each side, or as determined by the Town Engineer, and replacement with a full-depth asphalt concrete recommended by the Soils Engineer**(if applicable)**.

E5. The applicant shall observe the construction of this project to make certain that no damage or potential for damage occurs to adjacent roadway, existing improvements, adjacent property, and other infrastructure. The applicant shall be responsible for the repair of any damage occurring to offsite infrastructure as determined by the Town Engineer. The applicant shall repair any such damage prior to certificate of occupancy. If the damage is such that it cannot be repaired within a reasonable amount of time as determined by the Town Engineer, the applicant may petition the Town Engineer for additional conditions that may allow the time, amount of surety, or other requirements to repair the damage.

BUILDING AND SAFETY CONDITIONS

B1. The applicant shall submit three sets of plans to the Building and Safety Dept. for plan check and approval prior to the installation of any equipment.

B2. At the time of building plan check submittal, the applicant shall provide approval from the San Bernardino County Fire Dept.

B3. At the time of permit issuance the applicant shall be responsible for the payment of fees associated with electronic file storage of documents.

B4. Prior to final inspection, all required improvements shall be constructed and finalized and accepted by the appropriate agency prior to the issuance of a Certificate of Occupancy.

B5. The Building Plans submitted for construction of the towers shall be approved and wet stamped by an Engineer of Record.

I HEREBY CERTIFY THAT THE APPROVED CONDITIONS OF APPROVAL WILL BE SATISFIED PRIOR TO OR AT THE TIMEFRAMES SPECIFIED AS SHOWN ABOVE. I UNDERSTAND THAT FAILURE TO SATISFY ANY ONE OF THESE CONDITIONS WILL PROHIBIT THE ISSUANCE OF ANY PERMIT OR ANY FINAL MAP APPROVAL.

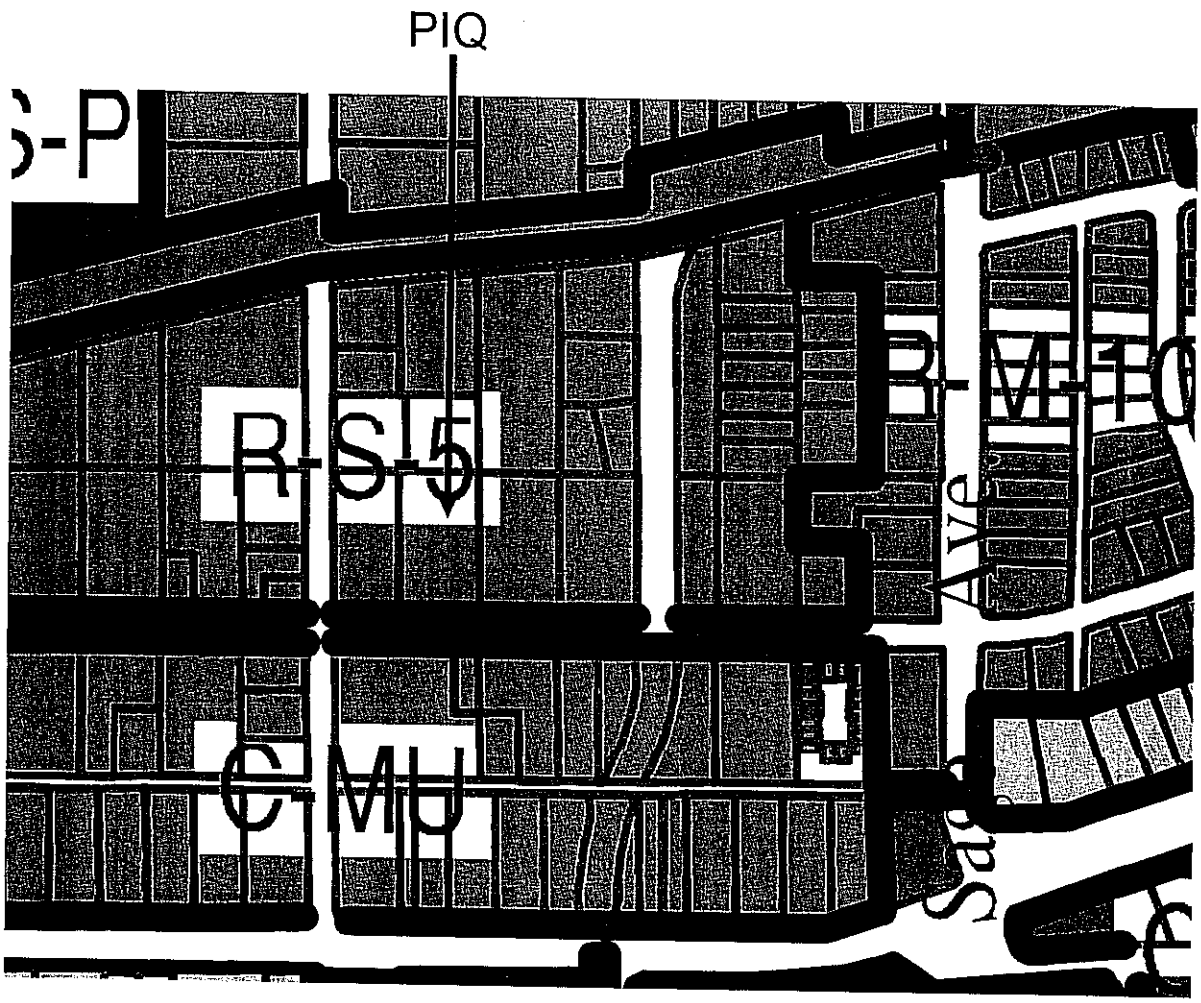
Applicant's Signature _____ Date _____

Attachments:

1. Standard Exhibits
2. Planning Commission packet from June 14, 2011
3. Draft Minutes from June 14, 2011(included under consent agenda)
4. Application materials
5. Site Plans & Elevations
6. Technical Specifications for the proposed wind turbines
7. Notice of Hearing
8. Notice of Exemption
9. Section 87.0905 Noise
10. General Plan Noise Element
11. Ordinance 136, Residential Land Use Districts
12. Ordinance 211 Additional Uses
13. Planning Commission Minutes from April 26, 2011

TOWN OF YUCCA VALLEY

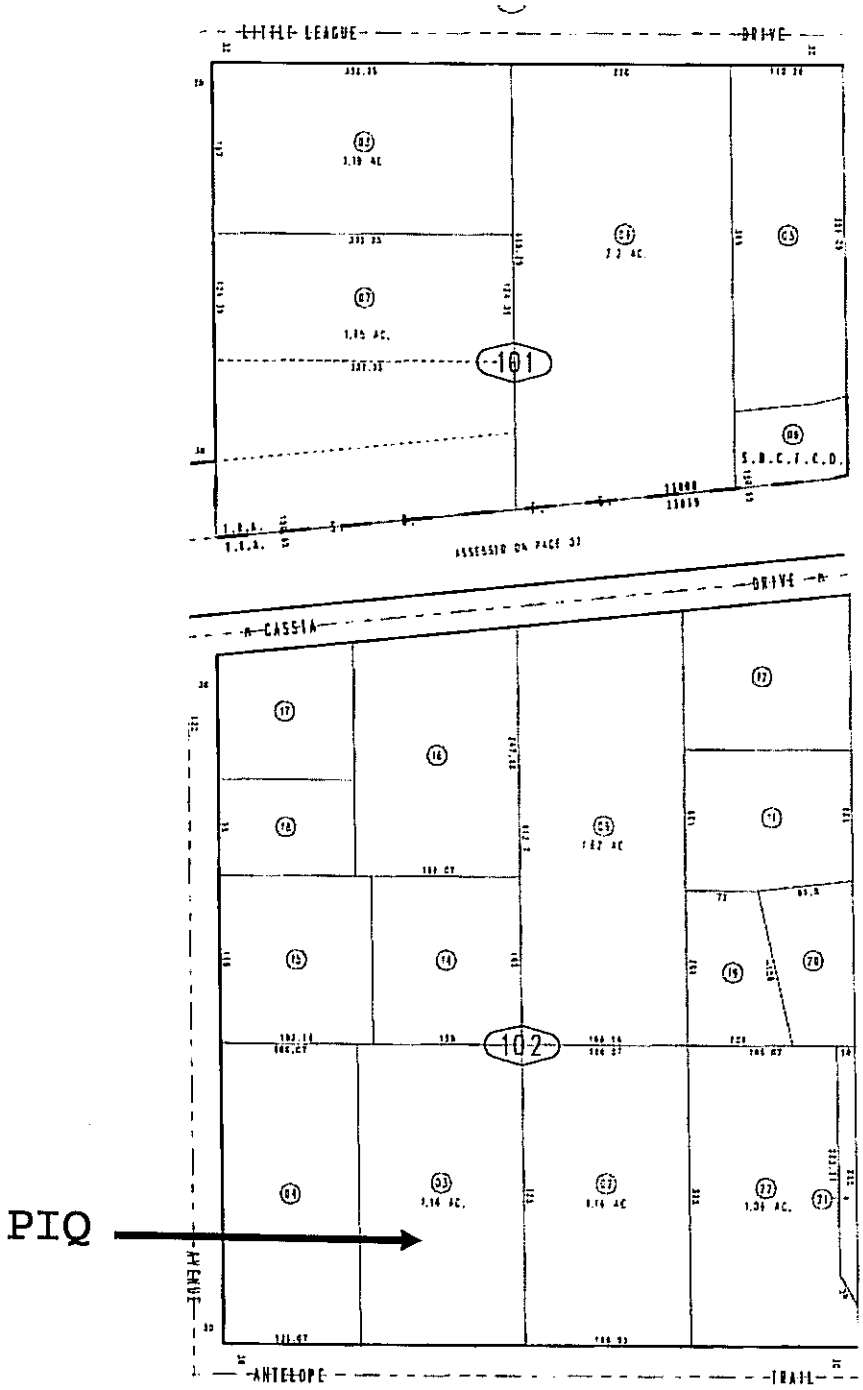
PROJECT NO.: CONDITIONAL USE PERMIT, CUP 02-11 NEILSON



ZONING AND GENERAL PLAN LAND USE MAP

TOWN OF YUCCA VALLEY

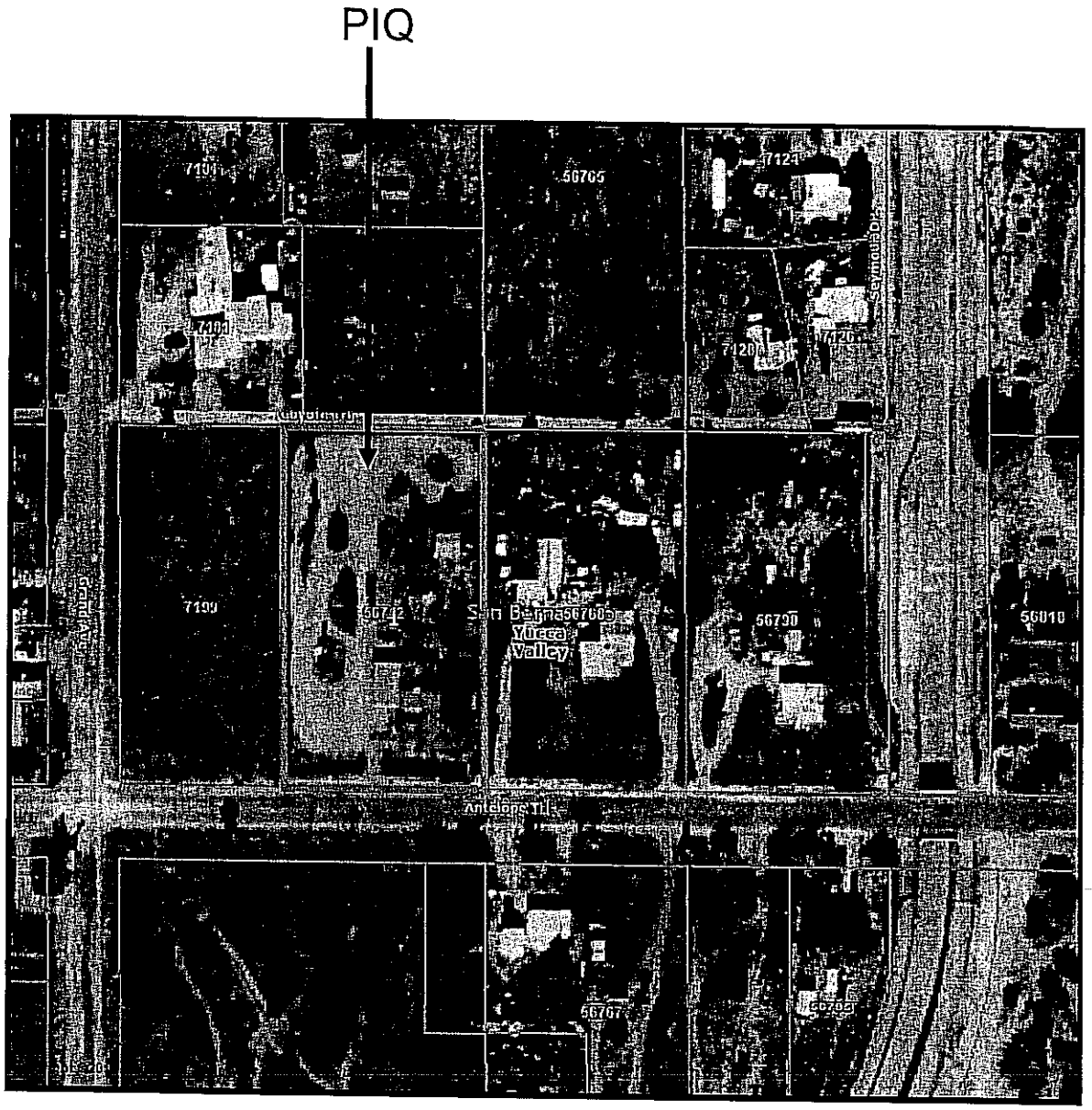
PROJECT NO.: CONDITIONAL USE PERMIT, CUP 02-11 NEILSON



ASSESSORS PARCEL MAP

TOWN OF YUCCA VALLEY

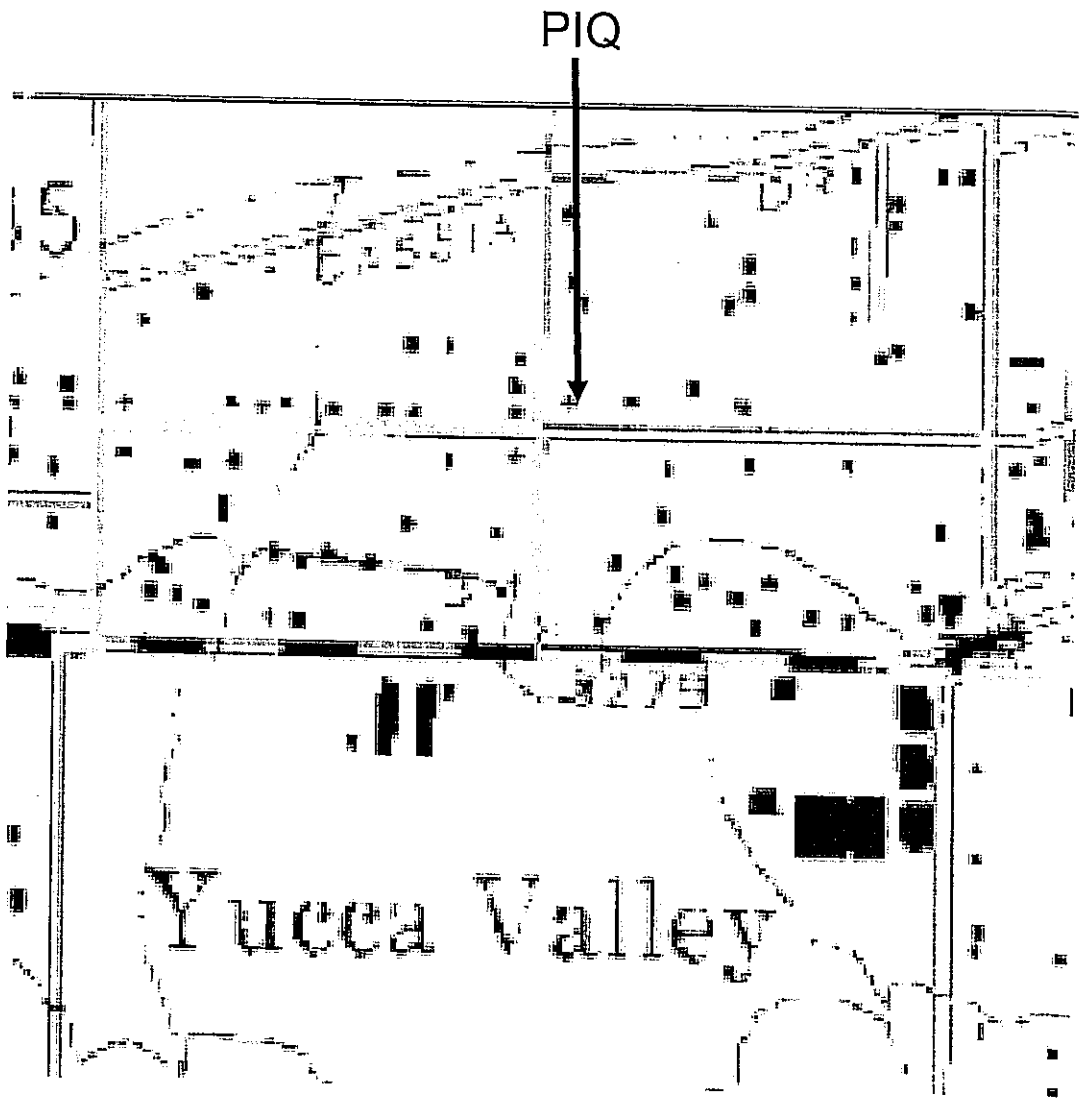
PROJECT NO.: CONDITIONAL USE PERMIT, CUP 02-11 NEILSON



AERIAL PHOTO

TOWN OF YUCCA VALLEY

PROJECT NO.: CONDITIONAL USE PERMIT, CUP 02-11 NEILSON

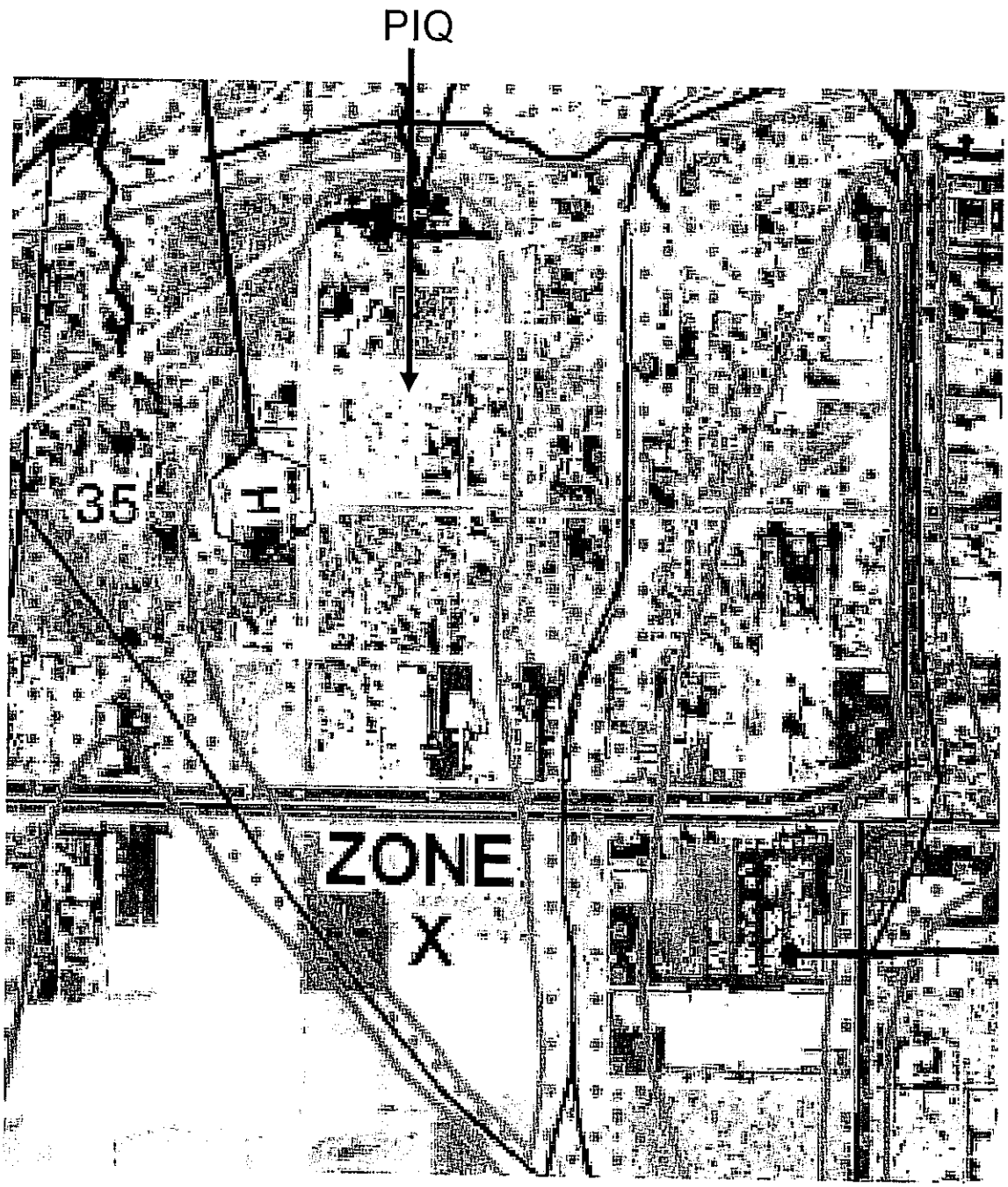


ALQUIST-PRIOLO MAP

YUCCA VALLEY SOUTH

TOWN OF YUCCA VALLEY

PROJECT NO.: CONDITIONAL USE PERMIT, CUP 02-11 NEILSON



FEMA MAP 8860

Planning Commission: June 14, 2011

TOWN OF YUCCA VALLEY
COMMUNITY DEVELOPMENT DEPARTMENT
CURRENT PLANNING DIVISION STAFF REPORT
NIELSON WIND TURBINES

Case: CONDITIONAL USE PERMIT, CUP 02-11 NIELSON WIND TURBINES CATEGORICAL EXEMPTION FROM CEQA, SECTION 15332, CLASS 32, INFILL DEVELOPMENT

Request: A REQUEST FOR APPROVAL TO INSTALL TWO 25' TALL TOWERS; ONE TOWER WITH THREE, FIVE FOOT TALL WIND TURBINES; THE SECOND TOWER WITH TWO FIVE FOOT TALL WIND TURBINES

Applicant: ANDY CANADA
P.O. BOX 1073
YUCCA VALLEY, CA 92286

Property Owner:
HEIDI NIELSEN
56742 ANTELOPE TRAIL
YUCCA VALLEY, CA 92284

Representative:
ANDY CANADA
P.O. BOX 1073
YUCCA VALLEY, CA 92286

Location: THE PROJECT IS LOCATED AT 56742 ANTELOPE TRAIL, EAST OF GRAND AVENUE, AND IDENTIFIED AS APN 595-102-03.

Existing General Plan Land Use Designation:
THE SITE IS DESIGNATED SINGLE FAMILY RESIDENTIAL FIVE (5) UNITS PER ACRE (RS-5).

Existing Zoning Designation:
THE SITE IS DESIGNATED SINGLE FAMILY RESIDENTIAL FIVE (5) UNITS PER ACRE (RS-5).

Surrounding General Plan Land Use Designations:

NORTH: SINGLE FAMILY RESIDENTIAL FIVE (5) UNITS PER ACRE (RS-5)
SOUTH: COMMERCIAL MIXED USE (C-MU) ACROSS ANTELOPE TRAIL
WEST: SINGLE FAMILY RESIDENTIAL FIVE (5) UNITS PER ACRE (RS-5)
EAST: SINGLE FAMILY RESIDENTIAL FIVE (5) UNITS PER ACRE (RS-5)

Division Approvals:
Engineering _____ Building & Safety _____ Public Works_____

Surrounding Zoning Designations:

NORTH: SINGLE FAMILY RESIDENTIAL FIVE (5) UNITS PER ACRE (RS-5)
SOUTH: COMMERCIAL MIXED USE (C-MU) ACROSS ANTELOPE TRAIL
WEST: SINGLE FAMILY RESIDENTIAL FIVE (5) UNITS PER ACRE (RS-5)
EAST: SINGLE FAMILY RESIDENTIAL FIVE (5) UNITS PER ACRE (RS-5)

Surrounding Land Use:

NORTH: SINGLE FAMILY RESIDENCES AND VACANT LOTS
SOUTH: SINGLE FAMILY RESIDENCES AND VACANT LOTS
WEST: SINGLE FAMILY RESIDENCES AND VACANT LOTS
EAST: SINGLE FAMILY RESIDENCES AND VACANT LOTS

Public Notification:

PURSUANT TO SECTION 83.030115, LEGAL NOTICE IS REQUIRED TO BE GIVEN TO ALL PROPERTY OWNERS WITHIN A THREE (300) HUNDRED FOOT RADIUS OF THE EXTERIOR BOUNDARIES OF THE SUBJECT SITE. THIS PROJECT WAS POSTED ON **TUESDAY APRIL 7, 2011 AND PUBLISHED ON APRIL 9, 2011**. AT THE MEETING APRIL 26, 2011 THE PLANNING COMMISSION CONTINUED THE ITEM TO THEIR REGULAR MEETING OF MAY 24, 2011. THE ITEM WAS AGAIN CONTINUED AT THE MEETING OF MAY 24, 2022 TO JUNE 14, 2011. THERE HAS BEEN NO WRITTEN RESPONSES RECIEVED AS OF THE WRITING OF THIS STAFF REPORT. PUBLIC COMMENTS HAVE BEEN RECEIVED AT THE PLANNING COMMISSION MEETING OF **April 26, 2011.** COPIES OF THE MINUTES ARE ATTACHED TO THIS STAFF REPORT.

RECOMMENDATION:

CONDITIONAL USE PERMIT, CUP 02-11: THAT THE PLANNING COMMISSION DIRECTS THE APPLICANT TO MODIFY THE APPLICATION TO REFLECT WIND TURBINES MORE APPROPRIATELY SIZED AND LOCATED FOR THE RS-5 LAND USE DISTRICT.

ALTERNATIVE A: THAT THE PLANNING COMMISSION DIRECTS STAFF TO RETURN TO THE PLANNING COMISSION WITH THE NECESSARY FINDINGS FOR APPROVAL OF THE APPLICATION AS SUBMITTED.

Project Planner: Robert Kirschmann Reviewed by: Shane Stueckle

Appeal Information:

Actions by the Planning Commission, including any finding that a negative declaration be adopted, may be appealed to the Town Council within 10 calendar days. Appeal filing and processing information may be obtained from the Planning Division of the Community Development Department. Per Section 83.030145 of the Development Code, minor modifications may be approved by the Planning Division if it is determined that the changes would not affect the findings prescribed in Section 83.030140 of the Development Code, Required Findings, and that the subject of the proposed changes were not items of public controversy during the review and approval of the original permit, including modifications to phasing schedules for the project.

I. GENERAL INFORMATION

PROJECT DESCRIPTION: A request for approval to install two 25' tall towers, one with three, five foot tall wind turbines and one with two five foot tall wind turbines. The applicant proposed to place the towers in the rear of the property, 40' from the rear property line and 68' from the eastern property line. The towers will be approximately 30' in overall height, less than the maximum permitted in this land use district but taller than the surrounding trees and homes.

LOCATION: The project is located at 56742 Antelope Trail, east of Grand Avenue and identified as APN 595-102-03.

PROJECT SYNOPSIS:	**SITE COVERAGE**
PROJECT AREA	1.2 acres
BUILDING AREA	No new buildings are proposed Existing single family home and garage is approximately 2, 247 square feet. There are two storage buildings one at 320 square feet, the other at 418 square feet.
PHASED CONSTRUCTION:	No
FLOOD ZONE	Map 8860 Zone X, area outside the floodplain
ALQUIST PRIOLO ZONE	No
OFF-SITE IMPROVEMENTS REQ.	No off-site improvements are recommended
ASSESSMENT DISTRICTS REQ.	No
RIGHT-OF-WAY DEDICATION REQ.	Not recommended
UTILITY UNDERGROUNDING:	All new service lines shall be underground in conformance to Ordinance 169
AIRPORT INFLUENCE AREA:	Located within the horizontal surface and safety review area 3 of the airport

TRAILS & BIKE LANE MASTER PLAN	No facilities on or adjacent to the project
PUBLIC FACILITY MASTER PLAN	No facilities on or adjacent to the project.
PARKS AND RECREATION MASTER PLAN	No facilities on or adjacent to the project
MASTER PLAN OF DRAINAGE:	No facilities on or adjacent to the project
STATE OF CALIFORNIA STORM WATER POLLUTION PREVENTION PLAN (SWPPP) REQUIRED:	No, less than 1 acre disturbed
REDEVELOPMENT PROJECT AREA:	Yes
STREET LIGHTS:	None recommended
SPECIFIC PLAN/ PLANNED DEVELOPMENT AREA:	No
FUTURE PLANNING COMMISSION ACTION REQURIED	No
FUTURE TOWN COUNCIL ACTION REQURIED	No

II. PROJECT ANALYSIS

GENERAL PLAN CONSIDERATION: The proposed project is located in the Residential Single Family, 5 units per acre land use designation.

Policy 2 of the Energy Resources section of the General Plan's Open Space, Mineral, Energy and Conservation element states "Support efforts to develop alternative energy technologies which have a minimum adverse impact on the environment".

DEVELOPMENT CODE STANDARDS

As the Commission is aware, the Town currently does not have regulations specific to wind energy conversion systems. The Development Code provides the following guidance and standards regarding development within the RS-5 land use districts.

Section 84.0410 (19) Additional Uses allows for "Development of natural resources including, but not limited to: mineral deposits, extractions, natural vegetation and energy sources, together with the necessary buildings, apparatus or appurtenances incidental

thereto." Therefore, under existing requirements in place the proposed project is subject to the review and approval of a Conditional Use Permit.

ENVIRONMENTAL CONSIDERATIONS: The project is exempt from the California Environmental Quality Act under Section 15332, class 32, Infill Development.

ADJACENT LAND USES: The project site is located in an area that consists of single family residences and scattered vacant lots. The property west of the subject site is vacant. The property east of the subject site is developed with a single family residential unit. The property north is vacant. The property south of the subject site is vacant. Properties to the north-west and south-east are developed with single family residential units. Properties to the north east and south west are vacant.

SITE CHARACTERISTICS: The site contains approximately 1.2 acres, and the dimensions are approximately 166' x 325'. The site is general flat and at street grade. The site is developed with an approximate 2,247 square foot residence and two (2) sheds, 320 square feet and 418 square feet. The lot is generally flat with some desert native vegetation occurring onsite. While the site contains 1.2 acres, because of the underlying zoning of RS-5, the project site can be further subdivided into smaller residential lots of approximately 7200 square feet.

BUILDING ELEVATIONS: No new buildings are proposed. The proposal is to install two 30' tall towers, one with three (3), five (5) foot tall wind turbines and one (1) with two (2) five (5) foot tall wind turbines installed on the towers. The applicant has provided the proposed elevations for the structures.

ROADWAY IMPROVEMENTS: No roadway improvements are recommended as part of this project.

ASSESSMENT DISTRICTS: No assessment districts are recommended as part of this project.

DISCUSSION: The applicant proposed to place the towers in the rear of the property, 40' from the rear property line and 68' from the eastern property line. The towers will be approximately 30' in overall height, which is less than the maximum height permitted in this land use district and slightly taller than the surrounding trees and homes

The Town does not have any specific regulations for the installation of wind energy conversion systems. Since there are no standards in place, the Town is following section 84.0410 (19) which states: "Development of natural resources including, but not limited to: mineral deposits, extractions, natural vegetation and energy sources, together with the necessary buildings, apparatus or appurtenances incidental thereto." Therefore, the project can be reviewed through the Conditional Use Permit process.

The Single Family Residential Land Use District allows for a maximum height of 35'.

Pursuant to Section 87.0405, Permitted Structural Height Increases, maximum structure height may be increased by 50% subject to the approval of a Land Use Compliance Review. Section 87.0405(C) (18) is the only reference to wind mills found in the Development Code. This section would allow the tower to be increased in height to 52.5'.

The Residential Single Family Land Use district (RS-5) sets standards for the height, setbacks, and numbers of structures that can be constructed on a lot. The following chart identifies Development Code standards and compares/contrasts the proposed project to those standards.

	RS 5 Land Use District Standards	**Proposed Standards**
Lot size	7,200 square feet	1.12 acre
Front Setback	25'	Existing, >25'
Side Setbacks	5'/10'	86'/98'
Rear Setback	15'	40'
Maximum structure height	35'	30'
Maximum accessory structure height	20'	30'

The properties surrounding the subject site vary in size, from similar sizes of 1.2 acres to lots as small as 6,970 square feet, 12,169 square feet, 13,068 square feet (7128 and 7126 Seymour Drive, and one parcel south of the project site, across Antelope Trail). As all these properties, including the subject site, are located within an RS-5 land use district, properties, subject to Town approval, may be subdivided to lots of 7200 square feet.

As proposed, the wind energy conversion systems would be located to the rear of the property, set back 40' from the rear property line. The proposed location places the wind energy conversion systems approximately 100' plus from the developed property located north-west of the proposed location.

At the Planning Commission meeting of May 24, 2011, the Planning Commission discussed property standards for the placement of wind energy conversion systems during its deliberations on the Draft Wind Energy Conversion System (WECS) Ordinance. During the Commission's deliberations, the Planning Commission indicated a desire to allow roof mounted or similar WECS in areas of ½ acre or smaller.

While the subject site and several surrounding properties contain more than ½ acre, these properties can be further subdivided to the standards of the RS-5 land use district, resulting in 7200 square foot residential lots. As the representatives of the WECS applications have indicated that these systems have a life-cycle of upwards of 20 years,

the possibility of further subdivision activity creating smaller lots with homes closer to the subject site exists. Timing of potential subdivision activity is unknown.

As currently subdivided, properties surrounding the proposed site vary in size from 6,970 square feet to 1.2 acres or larger, with the larger parcels being zoned for commercial use and are located south of Antelope Trail. As discussed during the Commission's deliberations on the Draft WECS Ordinance, one of the issues or concerns is with WECS towers is the impact upon viewsheds and related neighborhood appearance as additional WECS facilities are installed over time.

While the Commission discussed lot sizes in some detail during its deliberations, the underlying zoning, which allows for the subdivision of property to specific lots sizes, was not discussed in great detail. While there are both larger lot (1 acre plus) and smaller lots (6,970 square feet) in this neighborhood, the underlying zoning which allows for the further subdivision of the properties should be taken into consideration.

The installation of the WECS at the proposed location places the systems in the visible rear yard areas of two existing homes, with the potential for the systems being highly visible from the yards of no less than three additional future home sites. This detail is highlighted as the Commission has heard public testimony from the residents of this neighborhood that they have no desire to see these systems from their homes or yards.

If the Commission finds that it desires to approve the application as submitted, staff has provided an alternative recommendation which directs staff to return to the Planning Commission with the necessary findings for the Commission's consideration of approval. One issue that the Commission discussed during its deliberations of the Draft WECS Ordinance was that of the color of the WECS systems and trying to blend the systems into the surrounding neighborhood. The Commission should provide direction on that issue if it desires to consider the application for approval.

Attachments:

1. Standard Exhibits
2. Application materials
3. Site Plans & Elevations
4. Notice of Hearing
5. Notice of Exemption
6. Ordinance 136, Residential Land Use Districts
7. Ordinance 211 Additional Uses
8. Planning Commission Minutes from April 26, 2011

Date:	3/29/11
Case No.	CUP 02-11 Fee $300
Case No:	Fee
Case No.	Fee
EA No:	Fee

- [x] CONDITIONAL USE PERMIT
- [ ] SITE PLAN REVIEW
- [ ] PLANNED DEVELOPMENT
- [ ] ENVIRONMENTAL ASSESSMENT
- [ ] TRACT MAP
- [ ] PARCEL MAP
- [ ] GENERAL PLAN AMENDMENT
- [ ] REZONING

(Please Print Legibly)

Applicant ANDY CANADA

Address P.O. BOX 1073 City YUCCA VAL State CA Zip 92284

Phone 760 218-4337 Fax Cell SAME

E-mail Address CANADAANDY@HOTMAIL.COM

Project Name (if any): NIELSEN WIND TURBINES

Contact Person/Representative SAME

Address City State Zip

Phone Fax Cell

E-mail Address

Property Owner HEIDI NIELSEN Phone

Address 56742 ANTELOPE TR City YUCCA VAL State CA Zip 92284

E-Mail Address Fax

Assessor Parcel Number(s) 0595-102-03 Tract Map # Lot #

Property Dimensions 146.02 X 325 Existing Land Use RES.

Structure Square Footage 2,985 General Plan Designation/Zoning RS-5

Location: (Example: Address & Street or SW corner of Elk & Onaga or 300 ft N of Paxton on W side of Airway)
56742 ANTELOPE TR.

Proposed Project Description: Precisely describe the proposed project for which approval is being sought and the application is being submitted. Use additional sheets and attach to application if necessary.
INSTALL 2 TOWERS APPROX. 20 FT. TALL WITH 3 WIND TURBINES APPROX 5 FT. TALL ON EACH TOWER

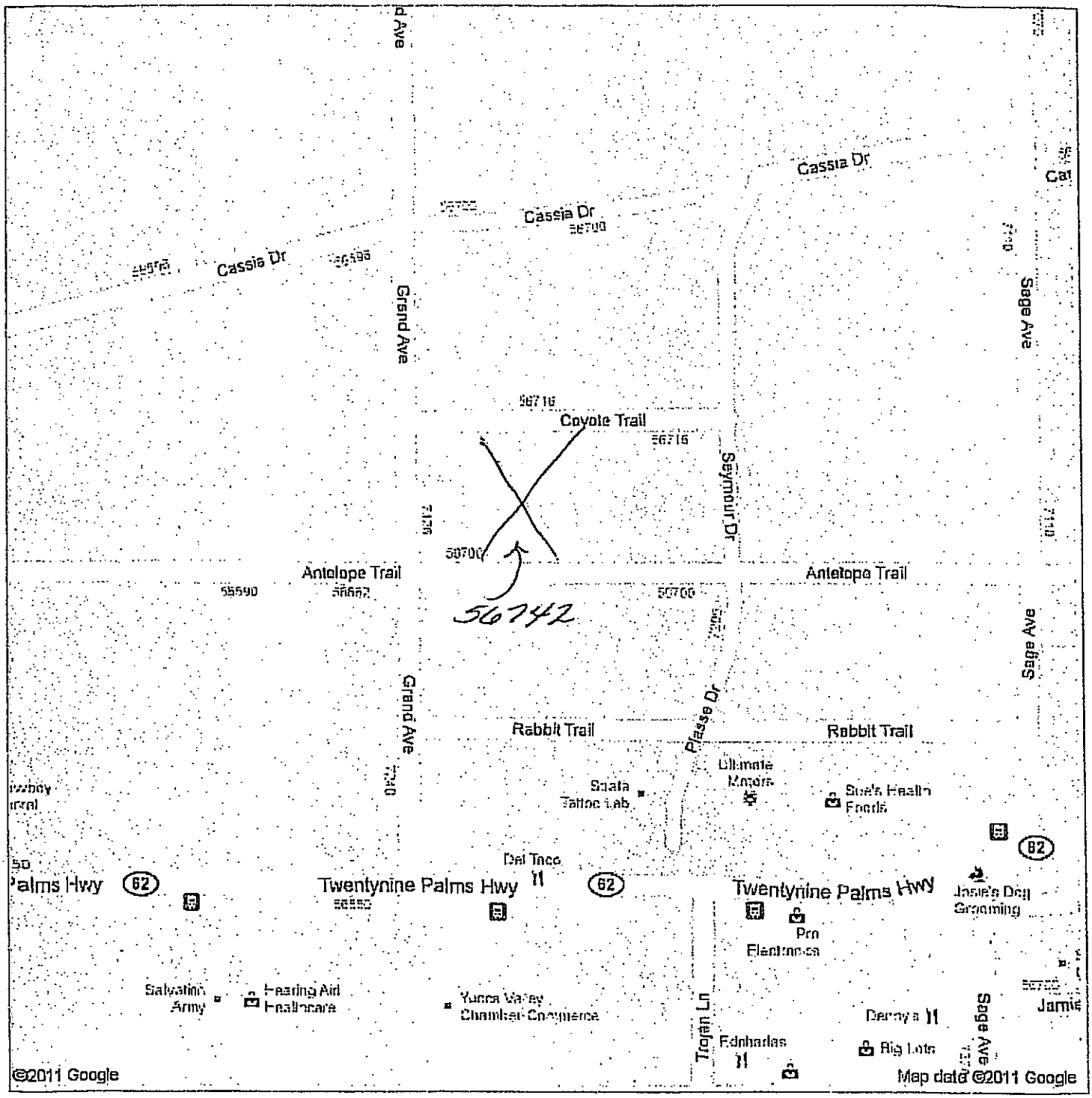
Owner's Signature Date 3-26-11

NOTE: THE INFORMATION I HAVE PROVIDED IS TRUE AND OPEN AS PUBLIC INFORMATION. THE PLANNING APPLICATION DOES NOT GUARANTEE APPROVAL OR CONSTITUTE A BUILDING PERMIT APPLICATION. ADDITIONAL FEES MAY BE REQUIRED DEPENDING ON ANY ADDITIONAL ADMINISTRATIVE COSTS.

Applicant's Signature Date 3-26-11

Town of Yucca Valley
Community Development/Public Works Department
58928 Business Center Dr., Yucca Valley, CA 92284
760 369-6575 Fax: 760 228-0084

Google maps



56742 Antelope Trail, Yucca Valley, CA

TOWN OF YUCCA VALLEY
DEVELOPMENT APPLICATION
DEVELOPER DISCLOSURE STATEMENT

This portion of the Application must be fully completed and signed by the Applicant. If not fully completed and signed, the Application will be deemed incomplete. Additionally, this portion of the Application must be fully completed and signed by the Applicant and filed with the Planning Department again not less than five nor more than ten days prior to the hearing before the Planning Commission and not less than five nor more than ten days prior to the hearing before the City Council, if any.

1. Address of subject property: 56742 Antelope Tr.

   Cross street: Grand Ave

2. Date this Disclosure Statement is completed: 3-28-11

3. Name of Applicant: Andy Canada

   A. If Applicant is a limited liability company ("LLC"), please state:
      1) Full name of LLC
      2) Address of LLC
      3) State of registration
      4) Name and address of managing member(s)
      5) Name and address of agent for service of process

   B. If Applicant is a partnership, please state:
      1) Full name of partnership
      2) Address of partnership
      3) State of registration
      4) Name and address of general partners
      5) Name and address of agent for service of process

   C. If Applicant is a corporation, please state:
      1) Full name of corporation
      2) Address of corporation
      3) State of incorporation
      4) Name and address of officers of corporation
      5) Name and address of shareholder with fifty percent (50%) or more of the shares of the corporation, if any

6) If no shareholder has fifty percent (50%) or more of the corporation's share, name and address of controlling shareholder
7) Name and address of agent for service of process

4. Name of each Owner of the subject property: Heidi Nielsen

A. If Owner is a limited liability company ("LLC"), please state:
1) Full name of LLC
2) Address of LLC
3) State of registration
4) Name and address of managing member(s)
5) Name and address of agent for service of process

B. If Owner is a partnership, please state:
1) Full name of partnership
2) Address of partnership
3) State of registration
4) Name and address of general partners
5) Name and address of agent for service of process

C. If Owner is a corporation, please state:
1) Full name of corporation
2) Address of corporation
3) State of incorporation
4) Name and address of officers of corporation
5) Name and address of shareholder with fifty percent (50%) or more of the shares of the corporation, if any
6) If no shareholder has fifty percent (50%) or more of the corporation's
7) Name and address of agent for service of process

5. If the subject property is in escrow to be conveyed to another party or is the subject of a purchase and sale agreement, state the name of each person in escrow to purchase the subject property or a party to the purchase and sale agreement ("Party in Escrow"): _____

A. If the Party in Escrow is a limited liability company ("LLC"), please state:

1) Full name of LLC
2) Address of LLC
3) State of registration
4) Name and address of managing member(s)
5) Name and address of agent for service of process

B. If Party in Escrow is a partnership, please state:

1) Full name of partnership
2) Address of partnership
3) State of registration
4) Name and address of general partners
5) Name and address of agent for service of process

C. If Party in Escrow is a corporation, please state:

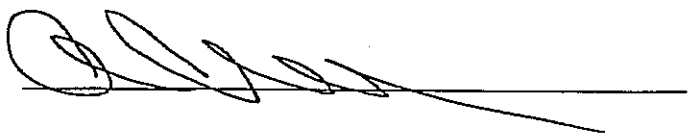
1) Full name of corporation
2) Address of corporation
3) State of incorporation
4) Name and address of officers of corporation
5) Name and address of shareholder with fifty percent (50%) or more of the shares of the corporation, if any
6) If no shareholder has fifty percent (50%) or more of the corporation's share, name and address of controlling shareholder
7) Name and address of agent for service of process

6. For any deeds of trust or other liens on the property (other than real property tax liens) please state the following:

A. Name of beneficiary of the deed of trust or lien Henri Nielsen

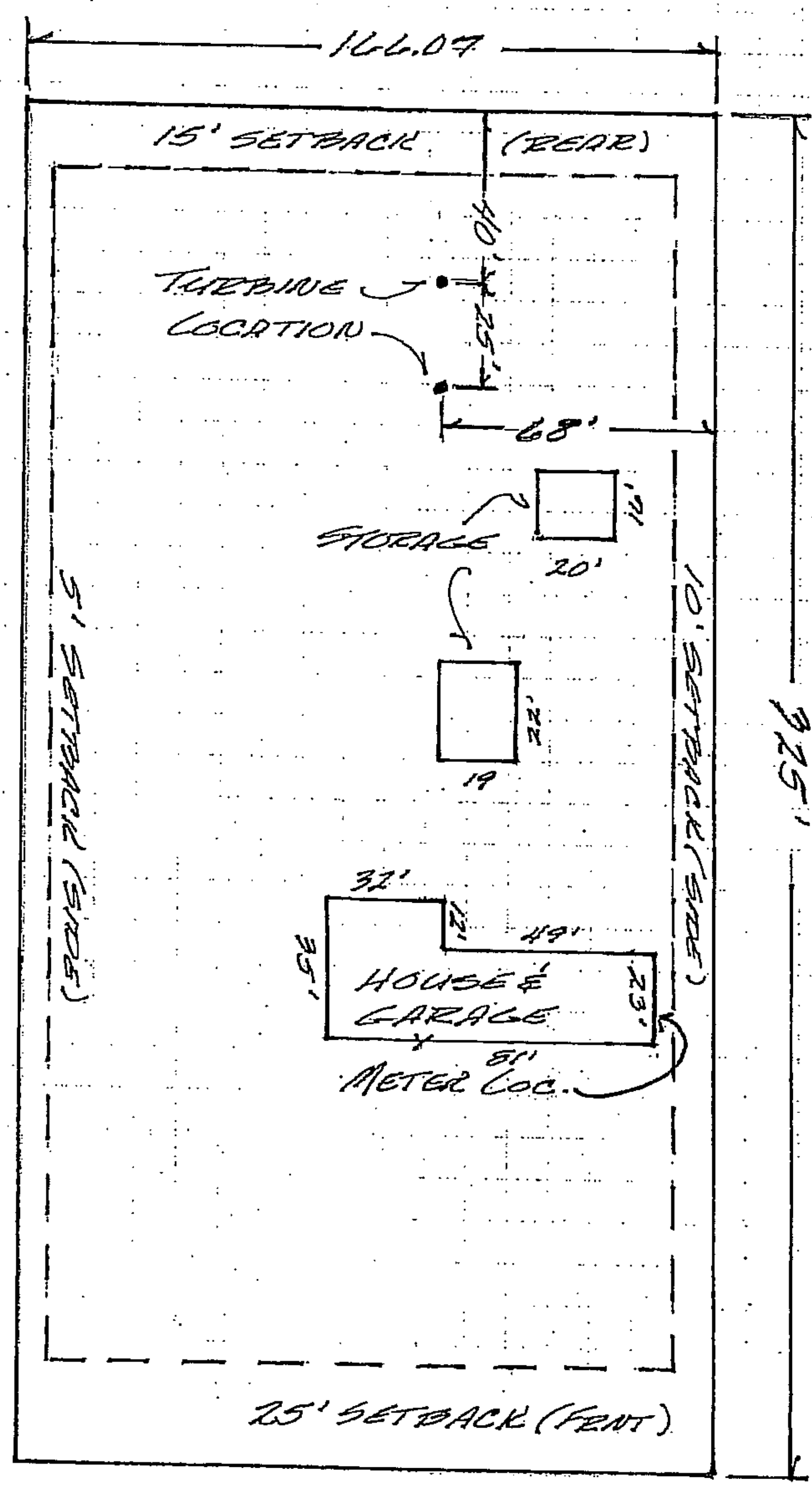
B. Date of the deed of trust or lien.

I certify under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed on the date and location set forth below



Name: ANDY CANADA
Title: Contractor
Date of signing: 3-28-11

PLOT PLAN

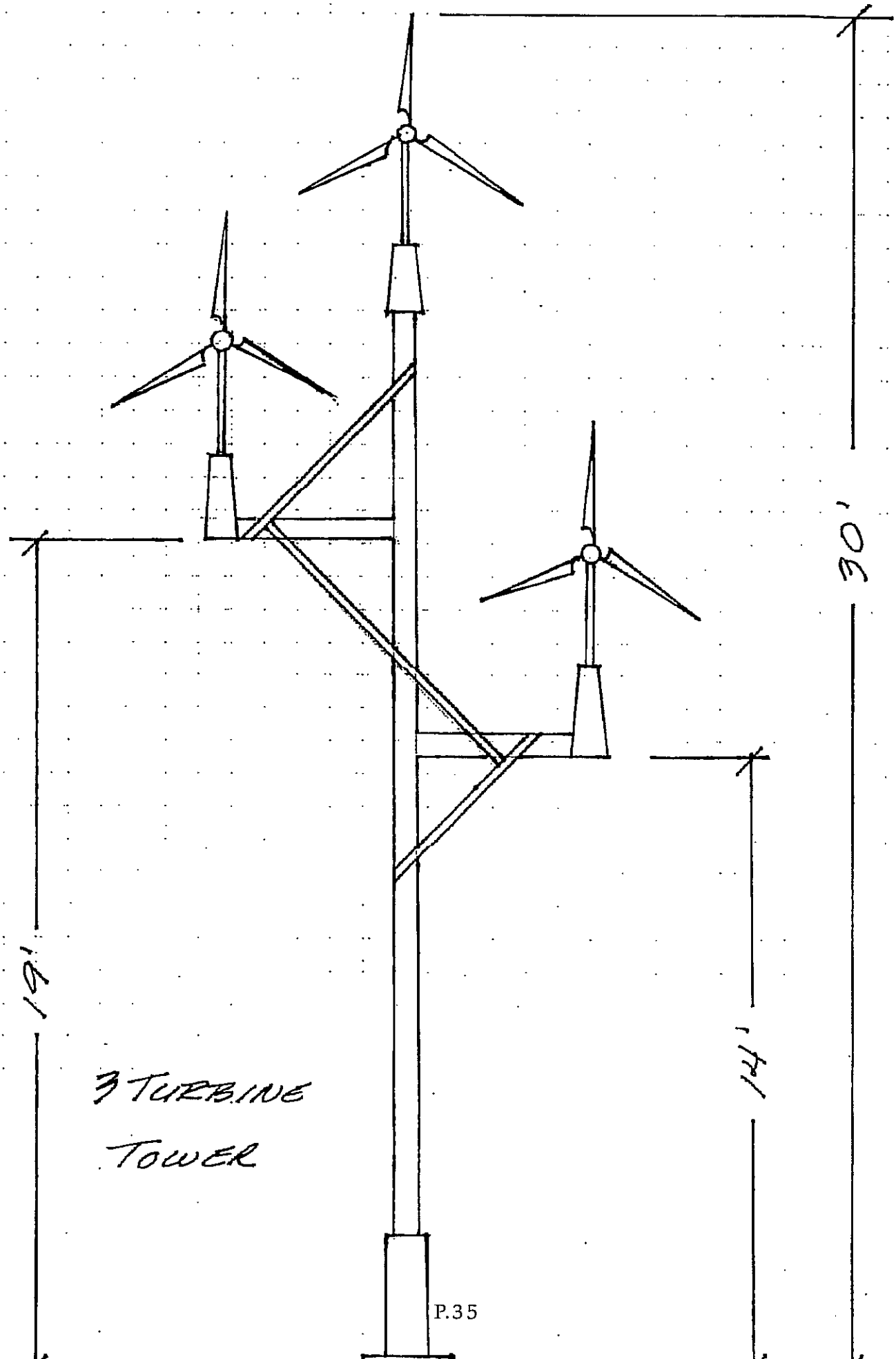


ANTELOPE TR.

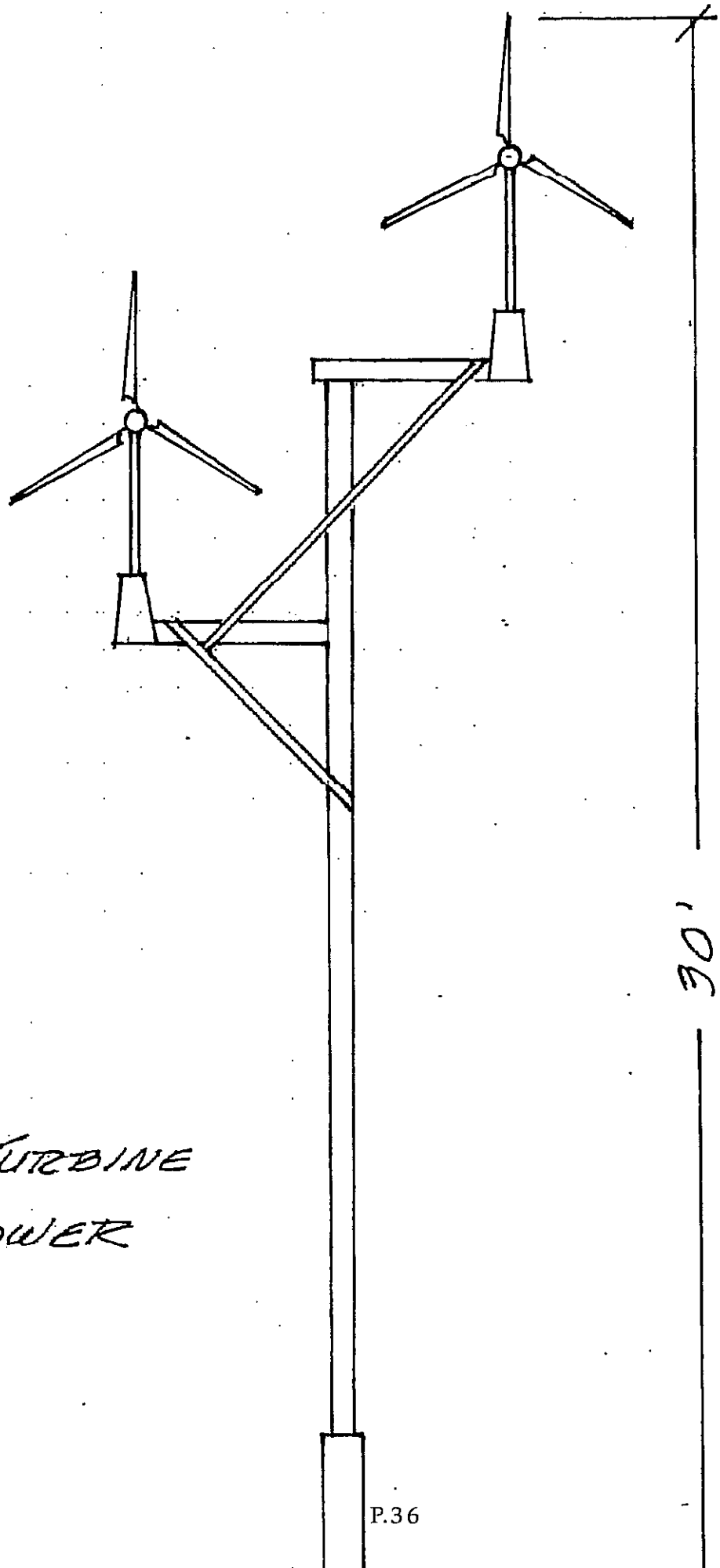
NEW WIND TURBINES FOR:
HEIDI WIECSEL
56742 ANTELOPE TR.
YUCCA VALLEY, CA 92284

APN 595-107-03

SCALE - 1" = 40'



3 TURBINE TOWER



2 TURBINE TOWER

PMA Description Direct Drive, Rotary Flux 1800 Watt Permanent Magnet Generator

Outer Frame Material Aluminium Alloy LM25 TF/T6

Fully heat treated to resist warping.

Outer Frame Finish Aluminium surface is anodised then power painted for anti-corrosion protection

Shaft Stainless Steel

Shaft Bearing High Standard Sealed Bearing (NSK 6207VV or NSK 6207DDU) (2) 1 front 1 in back

Fasteners (nuts and bolts) Stainless Steel

Lamination Stack High Spec Cold-Rolled Steel

Windings Temperature Max 350 degrees Fahrenheit

Magnetic Material NdFeB (Neodymium Iron Boron)

Magnet Temperature Max 300 degrees Fahrenheit

Rated Output Power 1800 Watts

Generator Configuration 3 Phase AC Output

Generator Head weight 43 pounds (just the PMG itself)

Complete assembled unit 76 pounds

Mount 1.5 inch schedule 80 pipe / 1.9 inch OD approx 40 mm

Direct Grid Connect 240 V AC 220/240 V AC 15 amp breaker recommended for the AC connection

Rotor Diameter 6' 3" (75") Swept Area: 30 Square Feet

Rotor Material Stainless steel hub with 1/8" thick Aluminum blades

Rated Output 1800 watts at 30 mph "real world"

Instantaneous Wind-speed Max rated output by industry standard 5.0 kW - aka - I. L. S. rating or B* S*

Start-up speed 7.5 mphGrid connection @ 7.5 and maintains to 5 mph, with usable power before other systems connect. (most are 12 mph)

Performance Range Provide maximum possible production in common winds of 7.5 to 17 mph, Which increases monthly Kwh production.

Max Wind Speed Electronic braking applied at max power of 2100 Watts, (or) at 33 to 37 mph wind density dependant.

Safety Brake can be applied and maintained for extended periods of time through input controller.

This unit produces voltages up to 750 volts AC and care must be used if exposed wires are present.

Features Low start up speed due to low cogging and resistive torque design.

Gearless direct drive low rpm generator

High standard, quality components for use in harsh and extreme environment for wind turbines.

High efficiency and tuned for max production in common wind speeds (not to be confused with full output)

Excellent heat dissipation due to the winding running on the outside edge of the Aluminium alloy outer frame

Low mechanical resistance energy loss

Generator is designed using specially selected material and treated to resist corrosion and oxidation.

Designed for reliable long operational lifetime under long-term full output.

Designed with 15 to 20 years of operation in mind.

Brush-less Design (no more changing brushes every couple of years)

Quieter than most other grid connect system on the market.

AC output from the unit connects to grid module in your home. (No electronics in the head to

HutchNet Wireless LLC
One East Ninth, Suite 108 • Hutchinson, KS 67501
Office Ph. 620.259.WIFI [9434]
Email: info@hutchnetwireless.com • www.hutchnetwireless.com

Sound pressure level and frequency / tone response evaluation.

Report Date: 04/27/11

Client:
TLG WindPower
6816 W. 82nd Ave.
Nickerson, KS 67561
PH: 620-422-3700

Service Description:
Sound Level & Tone Analysis
Subject: TLG-1800-GT
Wind Turbine

Survey date(s): 4/22, 4/23, 4/27/2011

Purpose:
HutchNet Wireless LLC is to provide third party on site survey and analysis of a wind turbine located at 6816 W. 82nd Avenue Nickerson, KS. The test location is a rural setting and the turbine itself is located 152 feet from a paved road with a posted speed limit of 55 mph. (Distance shown in Exhibit A test environment)

Purpose of the test is to determine the audible levels (dBA) also referred to as SPL (Sound Pressure Level) emitted from the turbine at defined distances. The client indicated that he wanted advanced testing preformed to include resonant frequencies for structural harmonics in addition to audible level / dBA, but the main focus of the test will be dBA. At the clients request testing cannot be conducted unless the wind speed reaches at least 20 mph during gusts.

Test Subject:
The subject being analyzed is a wind turbine manufactured by TLG WindPower Products with a model ID of TLG-1800-GT. It has three blades with a total diameter of 6.25 feet. Blade material is aluminum alloy. According to the manufacturer this is a small scale home wind turbine that is directly connected to the utility grid with a peak output rating of 2.1Kw.
(Images of test subject will appear in Exhibit A test environment.)

Survey Equipment:

Digital Camera

Kaindl Electronics Windtronic 2 handheld Anemometer to reference wind speed

Phonic: Model PAA2, Serial #OGA0H80069, 31 band @ 1/3 octave frequency and sound level audio analyzer. (Windscreen used for test)

The meter was calibrated prior to the test using a ND9 1 kHz IEC942 calibrator.
The Acoustical range for this test is full spectrum (20 Hz ~ 20 KHz) @ 32 ms (millionth of a second) sample rate with "A" scale weighting to match human ear response. "A" scale = dBA

Reference of terms covering Exhibit B survey results:
Frequency: Range of frequency monitored in Hz or KHz
ms: millionth of a second, also referred to as milliseconds
Ambient Sound: base reading of all sound levels measured from all environmental sources with turbine stopped.

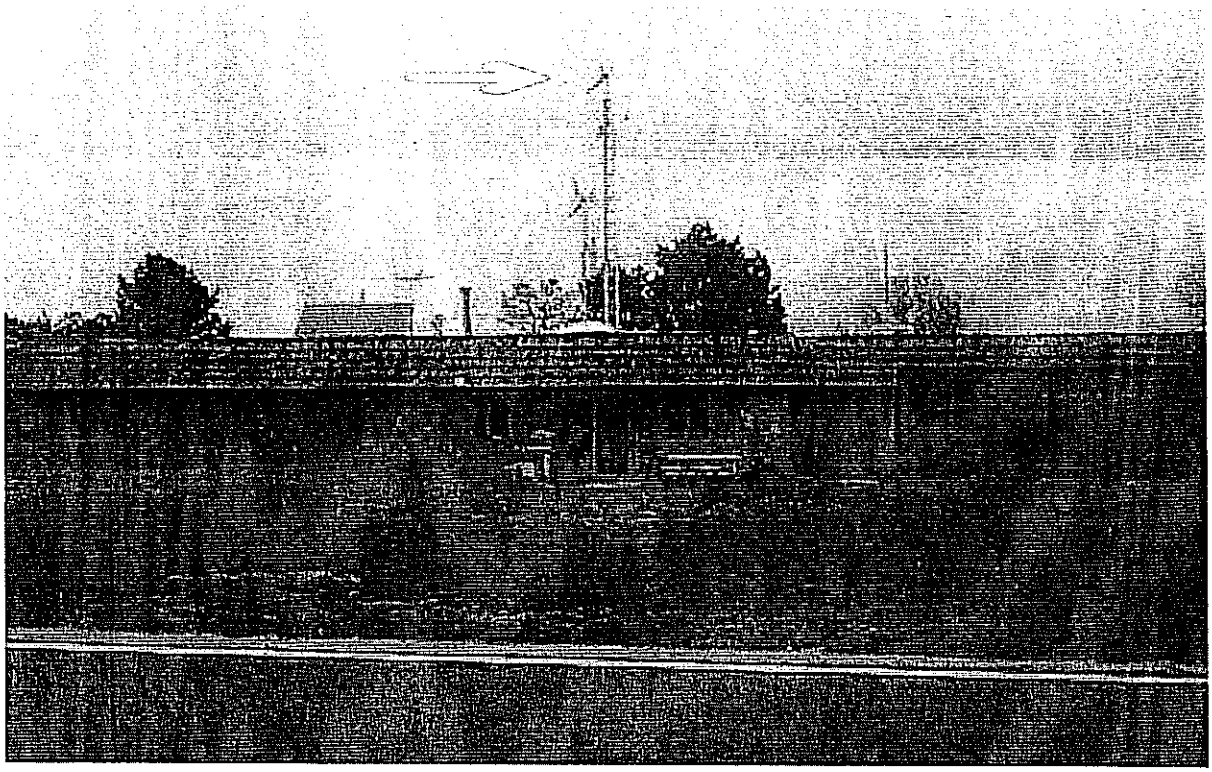
dBA: decibels measured using "A" weighing scale (ANSI standard)
Wind Speed: approximate range of wind speed in (mph) at time span of test
Distance: distance from base of subject tower in (feet) at point of test
Time: Length of time in (minutes) the turbine was monitored
N/A: not applicable

Exhibit A

Test Environment

The location is approximately a 1.5 acre rural parcel on 82nd Ave which is referred to by locals as the old highway and it has traffic present. However, testing was able to be completed during times of no traffic. Tree and wildlife noises were present throughout the test process and may cause some of the readings to be slightly higher than actual due to wind noise from pine trees and the singing of various birds in close proximity to the turbine and should be considered when viewing dBA in Exhibit B survey results.

View of test subject from paved road (without zoom)
Mounted on tallest pole



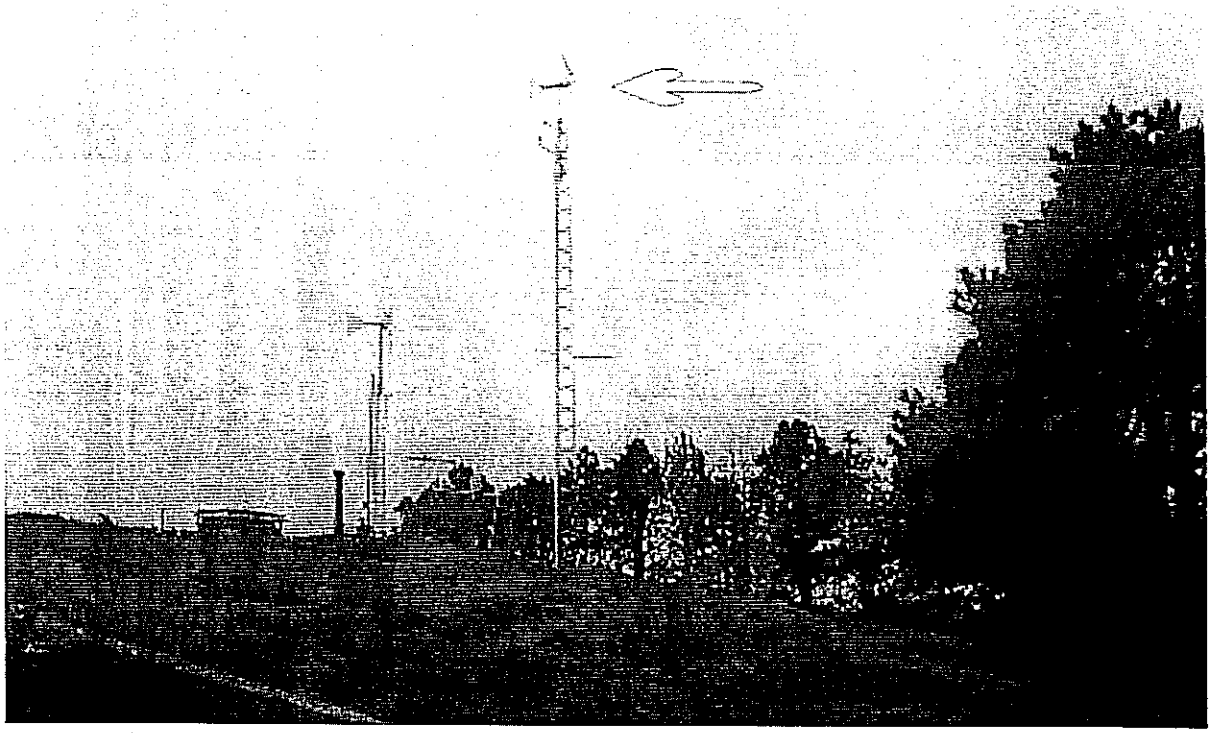


Image above taken at the end of the ambient test and displays all sounds including traffic.

Exhibit B

Survey Results

Sound Pressure Levels (dBA) of the TLG-1800-GT

Dates of test: **4/22/11, 4/23/11**

Wind Speed 5~12 mph

Frequency	Distance	Time	Wind Speed	dBA
20~20	0	2 min	~8-10 mph	35
20~20	33'	3 min	~5-10 mph	33.2
20~20	75'	2 min	~10-12 mph	N/A
20~20	100'	2 min	~8-10 mph	N/A
20~20	150'	2 min	~10-12 mph	N/A
Ambient Sound	Ambient Sound	5 min	N/A	32-42

Sound Pressure Levels (dBA) of the TLG-1800-GT

Date of test: **4/27/11**

Wind Speed 12~24 mph

Frequency	Distance	Time	Wind Speed	dBA
20~20	0	2 min	~18-24 mph	43 – 44.1
20~20	33'	2 min	~16-24 mph	42.5 – 43
20~20	75'	1 min	~12-19 mph	41 – 42.2
20~20	100'	1 min	~16-22 mph	N/A
20~20	150'	1 min	~22-24 mph	N/A
Ambient Sound	Ambient Sound	5 Min	N/A	50

Resonant Frequency of the TLG-1800-GT

Tower Structural Design Data

Frequency below indicates the range of emitted frequency at test point

Wind Speed	Distance	Time	Frequency	Note
~8 mph	Tower Contact	90 Seconds	400Hz	
~12, ~18, ~22 mph	Tower Contact	2 Minutes	1.6KHz	Intermittent

Summary of Test

Testing of the TLG-1800-GT reveled that at certain wind speeds the turbine can emit two different frequency tones during operation that would best be described as a whirring noise. These tones are only present at certain wind speeds and are non-existent the majority of time. The tones can only be heard in close proximity to the turbine.

I cannot provide data for high wind conditions above 25 mph where I suspect the dBA levels might be slightly higher than those recorded during the test. I would have to concede that in higher winds speeds other objects around the turbine would generate more noise than the turbine itself. In reference it was noted that the wind passing through the surrounding trees and the birds approximately 100 feet from the SPL meter created more noise than the turbine itself did. The extra dBA from the surrounding objects are factors in the dBA results.

In addition, tractor equipment being used at a distance of at least ½ mile away generated sound bursts exceeding 50 dBA.

It is the opinion of this technician that the turbine does not emit enough dBA to cause any interference with daily life wherever it may be installed.

Note: The resonant frequency information appearing in Exhibit B survey results is advanced information requested by the client for tower manufactures to use as a reference tool in tower design and has no other purpose than to illustrate structural harmonics.

Also noted was that the client requested I return onsite to verify the dBA levels of the turbines at higher wind speeds. The resonant frequency was isolated and was below the ambient sound at ~12, 16 and 24 mph speeds.

The information contained in this document is accurate to the best of my knowledge and abilities.

Ron Williams

Signed: _____ Date: 4-27-11

ADVERTISING FOR
NOTICE OF PUBLIC HEARING
YUCCA VALLEY COMMUNITY CENTER
57090 29 PALMS HIGHWAY
YUCCA VALLEY, CALIFORNIA 92284

TUESDAY, APRIL 26, 2011, BEGINNING AT 6:00 P.M.

A PUBLIC HEARING HAS BEEN SCHEDULED BEFORE THE TOWN OF YUCCA VALLEY PLANNING COMMISSION TO CONSIDER THE FOLLOWING DESCRIBED APPLICATION:

CASE NUMBER: Conditional Use Permit, CUP 02-11 Nielson Wind Turbines

APPLICANT: Andy Canada
P.O. Box 1073
Yucca Valley, CA 92286

PROPOSAL: Proposal to construct two 20' tall towers, each with three (3), five (5) foot tall wind turbines installed on each tower.

LOCATION: 56742 Antelope Trail, east of Grand Avenue and identified as APN 595-102-03

ENVIRONMENTAL DETERMINATION: The project was reviewed under the California Environmental Quality Act (CEQA) and the Town's Guidelines to implement same. The project is exempt from CEQA under Section 15301, Existing Facilities.

Any person affected by the application(s) may appear and be heard in support or opposition to the proposal at the time of the hearing. The environmental findings, along the with proposed project application(s) are available and may be reviewed at the Town of Yucca Valley Planning Division, 58928 Business Center Drive, Yucca Valley, CA 92284 from 7.30 a.m. to 5:30 p.m., Monday through Thursday or obtain information at (760) 369-6575.

The Planning Commission in their deliberation could recommend approval of the project, deny the project, or approve the project in an alternative form. If you challenge any of the projects in court, you may be limited to raising only those issues you or someone else raised at the Public Hearing described in this notice, or in written correspondence delivered to the Town Planning Division at, or prior to the Public Hearing.

Publish Date: Posted on April 7, 2011 and published on April 9, 2011.

April 7, 2011
Date

/s/Janet Anderson
Janet Anderson
Town Clerk

Notice of Exemption

Form D

To: ☐ Office of Planning and Research
PO Box 3044, 1400 Tenth Street, Room 222
Sacramento, CA 95812-3044

☑ County Clerk
County of San Bernardino
385 N. Arrowhead, 2nd Flr.
San Bernardino, CA. 92415

From: (Public Agency) Town of Yucca Valley
58928 Business Center Drive
Yucca Valley, CA 92284
(Address)

Project Title: Conditional Use Permit, CUP 02-11

Project Location - Specific:

The project is located at 56742 Antelope Trail, east of Grand Ave and is identified as APN 595-102-03.

Project Location – City: Yucca Valley **Project Location – County:** San Bernardino

Description of Project:

A request to install two 30' tall towers, one with three (3), five (5) foot tall wind turbines and one (1) with two (2) five (5) foot tall wind turbines installed on the towers.

Name of Public Agency Approving Project: Town of Yucca Valley

Name of Person or Agency Carrying Out Project: Andy Canada

Exempt Status: (*check one*)

- ☐ Ministerial (Sec. 21080(b)(1); 15268);
- ☐ Declared Emergency (Sec. 21080(b)(3); 15269(a));
- ☐ Emergency Project (Sec. 21080(b)(4); 15269(b)(c));
- ☑ Categorical Exemption. State type and section number: Section 15332,class 32,Infill Development
- ☐ Statutory Exemptions. State code number:

Reasons why project is exempt:

The project is exempt from CEQA due to the fact that the project is located on a site that is currently developed with a single family residence.

Lead Agency
Contact Person: Robert Kirschmann Area Code/Telephone/Extension: (760)369-6575

If filed by applicant:

1. Attach certified document of exemption finding.
2. Has a Notice of Exemption been filed by the public agency approving the project? ☐ Yes ☐ No

Signature: _____ Date: _____ Title: _____

☑ Signed by Lead Agency
☐ Signed by Applicant

Date received for filing at OPR: _____

Revised May 1999

Chapter 9

PERFORMANCE STANDARDS

Sections:

87.0901 Intent.

(a) The provisions of this chapter shall apply to commercial and industrial land uses.

(b) Performance standards are designed to mitigate the environmental impacts of existing and proposed land uses within a community. Environmental impacts include noise, air quality, glare, heat, and waste disposal and runoff control. Performance standards protect the health and safety of workers, nearby residents and businesses; and prevent damaging effects to surrounding properties.

87.0905 Noise.

(a) NOISE MEASUREMENT. Noise will be measured with a sound level meter, which meets the standards of the American National Standards Institute (ANSI Section SI4-1979, Type 1 or Type 2). Noise levels shall be measured using the "A" weighted sound pressure level scale in decibels (ref. pressure = 20 micronewtons per meter squared). The unit of measure shall be designated as dBA. The Director of the Department of Environmental Health Services shall be the noise control officer.

(b) NOISE STANDARDS.

(1) The following table describes the noise standard for emanations from any source, as it affects adjacent properties:

NOISE STANDARDS

Affected Land Use (Receiving Noise)	Noise Level (Ldn)	Time Period
Residential	55 dBA	7:00 a.m.–10:00 p.m.
	55 dBA	10:00 p.m.–7:00 a.m.
Professional Services	55 dBA	Anytime
Other Commercial	60 dBA	Anytime
Industrial	70 dBA	Anytime

(2) No person shall operate or cause to be operated any source of sound at any location or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level, when measured on any other property, either incorporated or unincorporated, to exceed:

(A) The noise standard for that receiving land use [as specified in Subsection (b)(1) of this section] for a cumulative period of more than thirty (30) minutes in any hour; or

(B) The noise standard plus 5 dBA for a cumulative period of more than five (5) minutes in any hour; or

(C) The noise standard plus 10 dBA for a cumulative period of more than five (5) minutes in any hour; or

(D) The noise standard plus 15 dBA for a cumulative period of more than one (1) minute in any hour; or

(E) The noise standard plus 20 dBA for any period of time.

(c) If the measured ambient level exceeds any of the first four (4) noise limit categories above, the allowable noise exposure standard shall be increased to reflect said ambient noise level. If the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under this category shall be increased to reflect the maximum ambient noise level.

(d) If the alleged offense consists entirely of impact noise or simple tone noise, each of the noise levels in Subsection (b)(1) of this section shall be reduced by 5 dBA.

(e) EXEMPT NOISES.

(1) The following sources of noise are exempt:

(A) Motor vehicles not under the control of the industrial use.

(B) Emergency equipment, vehicles, and devices.

(C) Temporary construction, repair, or demolition activities between 7:00 a.m. and 7:00 p.m. except Sundays and Federal holidays.

NOISE ELEMENT

PURPOSE

The purpose of the Noise Element is to coordinate the community's various land uses with the existing and future noise environment, and to ensure that any negative effects of noise are minimized or avoided completely. Lack of noise is a basic characteristic of a rural environment. As development occurs, the Town shall carefully review proposals to ensure that land uses incompatible with the noise environment are avoided or are properly mitigated. It is the intention of this Element to identify current noise conditions within the Town and determine future noise impacts resulting from continued growth. Through the implementation of the policies and programs of this Element, any current and future adverse noise impacts can be greatly reduced or avoided entirely, to protect the general health, safety and welfare of the community from noise impacts.

BACKGROUND

The Noise Element is directly related to the Land Use and Circulation Elements. The location of sensitive land uses including housing, schools and medical facilities, are also affected by issues addressed in the Noise Element.

Low noise levels are a basic element of the rural environment. Generally, the Town enjoys a quiet noise environment typical of rural communities. The noise environment of the Town is dominated by State Routes 62 and 247 as well as local traffic. In general, the residential neighborhoods of the community are quiet, with average noise levels typical of quiet rural areas. Occasional intrusive noise from general aviation and military aircraft have a very limited impact on the communities noise environment. The issues addressed in the Noise Element include those set forth in Subsection (f) of the California Government Code Section 65302, which requires that the Noise Element identify and analyze noise problems in the community.

The implementation of the California Environmental Quality Act (CEQA), Section 21083.1, mandates adherence to the State Guidelines and empowers communities to determine whether or not a proposed project may have a "significant effect on the environment". These significant impacts may range from excessive traffic noise in a residential neighborhood, to industrial manufacturing noise impacting a hospital or convalescent home.

The California Department of Health Services has prepared a Model Community Noise Control Ordinance, which was developed in accordance with Section 46062 of the Health and Safety Code to assist local agencies in the development of model ordinances to control and abate noise. State guidelines require that a community noise control ordinance be adopted which sets forth control policies and programs that "minimize the exposure of community residents to excessive noise."

Concern regarding the potential psychological and physiological impacts of noise has increased significantly in recent years. Excessive noise levels are not only a potential annoyance, but can constitute a significant health threat resulting in Temporary or permanent hearing loss, and mental distress.

Definitions

Noise is defined as unwanted or undesired sound. Airborne sound is the result of a very rapid change in air pressure from the surrounding "normal" atmospheric pressure. The combination of noise from all sources near and far is the Ambient Noise Level[1]. For purposes of this discussion, the ambient noise level at a given location is termed "environmental noise".

Understanding environmental noise requires some familiarity with the physical description of noise. The important physical characteristics of sound include its frequency range, intensity/loudness and temporal/time-varying aspect. The decibel (dBA), A-weighted level, and Community Noise Equivalency Level (CNEL) are all units of measurement used to describe and numerically weight noise.

The decibel is a unit of measurement describing the amplitude or strength of sound. The Community Noise Equivalent Level (CNEL) is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time of day corrections require the addition of five decibels to sound levels in the evening from 7 p.m. to 10 p.m., and the addition of 10 decibels to sound levels at night between 10 p.m. and 7 a.m. These additions are made to the sound levels at these time periods, because during the evening and night hours, with the decrease in overall amount and loudness of noise generated, when compared to daytime hours, there is an increased sensitivity

1. Model Noise Community Noise Control Ordinance, Office of Noise Control, California Department of Health. Adopted April 1977.

to sounds. For this reason the sound seems louder and it is weighted accordingly.

Range of Noise

The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at three feet is roughly at 60 dBA, while loud engine noises equate to 110 dBA, which can cause serious discomfort. Due to the logarithmic nature of the sound measuring (decibel) scale, doubling the sound energy of a noise source only increases the decibel rating by 3 dBA. However, due to the internal mechanism of the human ear and how it receives and processes noise, a sound must be nearly 10 dBA higher than another sound to be judged twice as loud. Physical health, psychological well-being, social cohesion, property values and economic productivity can all be affected by excessive amounts of noise.

Noise Impacts

The effects of noise on people can be grouped into three general categories: subjective effects, such as annoyance and nuisance, interference with activities, such as conversation and sleep, and physiological effects, for example, a startle or hearing loss.

In community noise assessments, changes in noise levels greater than 3 dBA are often identified as significant, while changes less than 1 dBA will not be discernible to the human ear. In the range of 1 dBA to 3 dBA people who are very sensitive to noise may perceive a slight change in noise level. No scientific evidence is available to support the use of 3 dBA as the significance threshold. In laboratory testing situations, humans are able to detect noise level changes of slightly less than 1 dBA. However, in a community situation the noise exposure is extended over a long time period, and changes in noise levels occur over years, rather than the immediate comparison made in a laboratory situation. Therefore, the level at which changes in community noise levels become discernible is likely to be some value greater than 1 dBA, and 3 dBA appears to be appropriate for most people.

Negative reactions to noise generally increase with the inflation of the difference between background or ambient noise and the noise generated from a particularly intrusive source such as a barking dog, traffic, or industrial operations. In most situations, noise control measures need to reduce noise by 5 to 10 dBA in order to effectively lower the perceived sound. Therefore, loud, short duration noises from barking dogs and low-flying aircraft generally have little impact upon the CNEL levels of an area, due to the averaging techniques utilized to define CNEL.

Existing Community Noise Levels

In the Town of Yucca Valley, the primary source of noise, as in many desert communities, is related to vehicular traffic. To a lesser degree aircraft overflight also contributes an intrusive element to the noise environment. Most transportation noise is highly predictable if specific data concerning operating characteristics are available. Computer models and simulations are used to compute the noise environment along transportation routes based upon the vehicles operating characteristics and the number of vehicles utilizing that particular transportation route. These predictions, provided by existing quantitative models, have been verified by sound measurements at strategic and sensitive receptor locations in the Town of Yucca Valley. The Noise Monitoring section identifies the noise monitoring site locations.

Noise Monitoring

The noise model verification measurements, which were the actual noise surveys conducted in the Town of Yucca Valley, were done over a period from October, 1993 to January, 1994, and were administered by the acoustical engineering professionals, Walker & Celano.

Noise monitoring was executed at a total of nine sites selected to be representative of existing noise sensitive uses or generators. The locations and estimated CNEL values are listed below, and are identified by number in Table V-1. Exhibit V-4 illustrates the approximate location of the nine noise monitoring sites.

TABLE V-1

NOISE MONITORING[2]
LOCATIONS AND CNEL VALUES

SITE	LOCATION	CNEL
1	Hwy. 62 at Fortuna Ave.	69.0
2	Hwy. 247 at Farrelo Rd.	68.9
3	Joshua Ln. at Hardesty Dr.	65.2
4	Palomar Ave. at Lisbon Dr.	50.4
5	8543 Palomar Ave. at water pumping station	*70.9
6	Benecia Tr. at Inca Tr.	52.0
7	Yucca Tr. at Emerson Ave.	67.9
8	Onaga Tr. at Yucca Valley High School	65.2
9	Buena Vista Dr. at Terry Ln.	63.0

*When pumping station is in operation

NOTE: A detailed description of each monitoring site and monitoring conditions are set forth in the General Plan Program EIR. In addition, the Noise Study in the technical appendix of the General Plan Program EIR includes the Summary of Measured Noise Levels Table which offers more detailed measurements.

Vehicular Noise

The principle noise source measured (1994) within the community is vehicular traffic, including automobiles, trucks, buses, and motorcycles. The level of noise generated by vehicular traffic generally varies according to the volume of traffic, the percentage of trucks, and traffic speed. Based upon a version of the FHWA Noise Prediction Model noise contours (CNEL = 60, 65 and 70 dBA) have been calculated. Tables V-2 and V-3 in this element show the noise impacts of traffic at several locations in the community on local noise environment.

The distances to the CNEL contours are shown in feet and measured from the centerline of the road. Exhibits V-5 and V-6 identify the projected 60, 65 and 70 dBA CNEL noise contour boundaries for existing and General Plan buildout traffic volumes.

Aircraft Traffic Noise

Aircraft noises impacting the community emanate from two sources, general aviation operations at the Yucca Valley Airport and military aircraft overflights originating from and destined for the Twentynine Palms Air Ground Combat Center.

The Yucca Valley Airport is a privately owned airstrip which has been leased on a long term basis to the Yucca Valley Airport District. The site is a public use airport classified in the National Plan of Integrated Airport Systems as a general aviation, basic utility facility. In 1994, the airfield was home to 52 single engine aircraft. From mid 1990 to mid 1991, the airport supported 12,500 operations. Approximately 3,000 operations were generated by the airport based aircraft, while the remaining 9,500 operations were from transient airport. Any potential expansion of this airport is restricted by surrounding development and terrain.[3] The general aviation activity at this airport is not a significant noise problem.

Exhibit V-7 depicts the 60 CNEL contour for the Yucca Valley Airport that was estimated by evaluating noise impact studies which were prepared for the Chino Airport, Ontario International, Rialto Municipal and Cable airports and the Air Installation Compatible Use Zone studies for George and Norton AFBs.[4]

In addition to the noise generated by vehicular traffic and aircraft, there are other noise generators within the Town which could create significant noise related conflicts. Industrial operations related to such activities as rock crushing, construction and automotive repair can create substantial noise problems. Even mechanical equipment, including chillers, refrigerator units and heating/air conditioner equipment associated with commercial centers can significantly impact the noise environment.

Various animals and recreational vehicles (dirt bikes, quads, etc.) are generally termed nuisance noise. Although the annoyance factor of these types of noise sources can be significant, the Town Development Code and other Ordinances are better suited to address these noise issues.

2. Noise monitoring and CNEL estimates by Walker & Celano
3. Airport Comprehensive Land Use Plan, Yucca Valley Airport, San Bernardino County Planning Department, February 1992
4. Ibid

Conflicts arise when these noise generators are located in close proximity to noise sensitive land uses, such as churches, hospitals, schools, libraries and residential neighborhoods and are not sufficiently screened.

Future Noise Levels

Future noise impacts to the community are expected to be primarily generated by increasing traffic volumes. From the Circulation Element, we can extract the future volumes projected on major roadways. In order to make the projected traffic noise data more accurate, the average posted speed limits and a percentage mix of light and heavy truck traffic along the roadways were included in the modeling data. Computer modeling was also used to estimate noise impacts due to the increased traffic volumes. It is important to note that special attention to site design may substantially reduce noise impacts below those projected, and therefore, these estimates are considered to be conservative and unmitigated. Tables V-2 and V-3 lists the 1994 and projected General Plan buildout noise contours generated by the Town's major roadways.

Noise and Land Use

The compatibility of different land uses is directly related to the user's sensitivity to noise and the potential for impacts to be mitigated. Particularly sensitive land uses include residences, schools, libraries, churches, hospitals, and nursing homes. In addition, parks, golf courses and other outdoor activity areas can be sensitive to noise disturbances. Less sensitive land uses include commercial and industrial uses, hotels and motels, playgrounds and neighborhood ball parks, and other outdoor spectator sport arenas. Least sensitive to noise are heavy commercial and industrial uses, transportation, communication and utility land uses. Exhibit V-8 illustrates the ranges of allowable exterior noise levels for various land uses.

FUTURE DIRECTIONS

Generally, the Town of Yucca Valley enjoys a quiet noise environment typical of rural communities. The Town is, however, most notably impacted by highway and major roadway noise sources. Future efforts in this regard must focus on the preservation of the rural, and in many parts of the community near wilderness, quiet, atmosphere which the community now enjoys.

Existing and future noise abatement and mitigation will have varying levels of effectiveness depending upon the noise type and its source, site conditions, geography and land uses. Noise issues have been carefully considered in the development of the Land Use Element and land use distributions. Zoning designations provide another level of land use control, which assures appropriate uses near significant noise sources and development standards and guidelines which will reduce impacts are enhance compatibility. The Circulation Element has also been designed, where possible, to protect the Town's residential areas from excessive traffic noise and to assure compatible noise levels.

In areas subject to significant or potentially significant noise impacts, site planning and design standards are geared to provide adequate noise impact mitigation. Those mitigation measures include the use of buffer zones, walls, landscaping between residences and roadways, and earthen berms. In addition, site planning and building orientation can provide shielding of outdoor living spaces and orient openable windows away from roadways. Effective acoustical materials can also be incorporated into building windows and walls which adequately reduce outdoor noise.

NOISE GOAL, POLICIES AND PROGRAMS

Goal

To maintain noise levels that complement and are consistent with the Town's low density residential character and the preservation of the rural desert environment.

Policy 1

Prepare and adopt a Noise Ordinance which establishes noise exposure thresholds that will trigger the need for project-specific noise impact studies in the community. The Ordinance shall also provide development standards and project design guidelines, which include a wide range of mitigation measures which can be applied to meet Town standards.

Program 1.A

Develop acceptable noise standards for various land uses with noise contour limits between noise generators and sensitive land uses. This noise limit will be determined depending upon proposed and surrounding land uses. If exceedance of the acceptable noise limit is proposed, a noise study will be required and mitigation measures will be developed to bring the development into compliance, or the project will be denied as proposed.

Responsible Agency: Community Development Department; Town Council

Schedule: 1995-1996; Update every five years

Program 1.B
Provide an outline of minimal requirements for noise studies for future projects. Studies shall analyze project impacts and the effectiveness of proposed mitigation measures.
Responsible Agency: Community Development Department
Schedule: 1995-1996; Continuous

Policy 2
Protect noise sensitive land uses, including residences, schools, hospitals, libraries, churches and convalescent homes from high noise levels from both existing and future noise sources.

Program 2.A
Establish and periodically update an inventory of existing significant noise sources and incompatibility areas, and shall develop procedures to reduce the noise effects on these areas where economically and aesthetically feasible.
Responsible Agency: Community Development Department
Schedule: 1995-1996; Continuous

Program 2.B
Prepare noise studies in conjunction with individual developments-(tentative tract maps and building permits) in order to determine precise noise barrier heights and locations and building structure noise mitigation (i.e., upgraded windows, mechanical ventilation, etc.) required in conjunction with specific development projects.
Responsible Agency: Community Development Department
Schedule: Continuous

Program 2.C
Require the installation of soundwalls, earthen berms, wall and window noise insulation and other, mitigation measures in areas exceeding the Town's noise limit standards and corresponding acoustical analysis.
Responsible Agency: Community Development Department
Schedule: 1995-1996; Continuous

Program 2.D
Verify projected noise levels through noise monitoring at locations adjacent to residential and other noise sensitive areas where traffic volumes have increased by more than 30%.
Responsible Agency: Community Development Department
Schedule: After the appropriate traffic volume increase has occurred

Policy 3
Project designs will be required to include measures which assure that interior noise levels for residential development not to exceed 45 CNEL as required by Title 25 (California Noise Insulation Standards).

Program 3.A
In areas subject to potentially significant noise impacts, the Town shall require developers to monitor and document compliance with all applicable noise level limits.
Responsible Agency: Community Development Department
Schedule: As development occurs

Policy 4
Land uses that are compatible with higher noise levels shall be located adjacent to the Town's designated arterial roads, or the Yucca Valley Airport, in order to maximize noise related land use compatibility.

Program 4.A
Periodically review land use patterns and the community noise environment, and shall amend the Land Use map as appropriate to assure reasonable land use/noise compatibility.
Responsible Agency: Community Development Department; Town Council
Schedule: Review every five years

Policy 5
Develop and maintain a circulation plan that is consistent with the residential character of the Town, avoids impacts to existing and planned sensitive receptors/uses, and which provides fixed routes for existing and future truck traffic.

Program 5.A
Designate primary truck routes and clearly mark these routes through the Town. Construction traffic, delivery traffic, and through truck traffic shall be limited to these routes.
Responsible Agency: Community Development Department; Community Services Department; Caltrans
Schedule: 1995-1996; Update every five years

F:\GPLAN\CITZ\NOINEW.SRS
Rev. 10

TABLE V-2

EXISTING NOISE CONTOURS

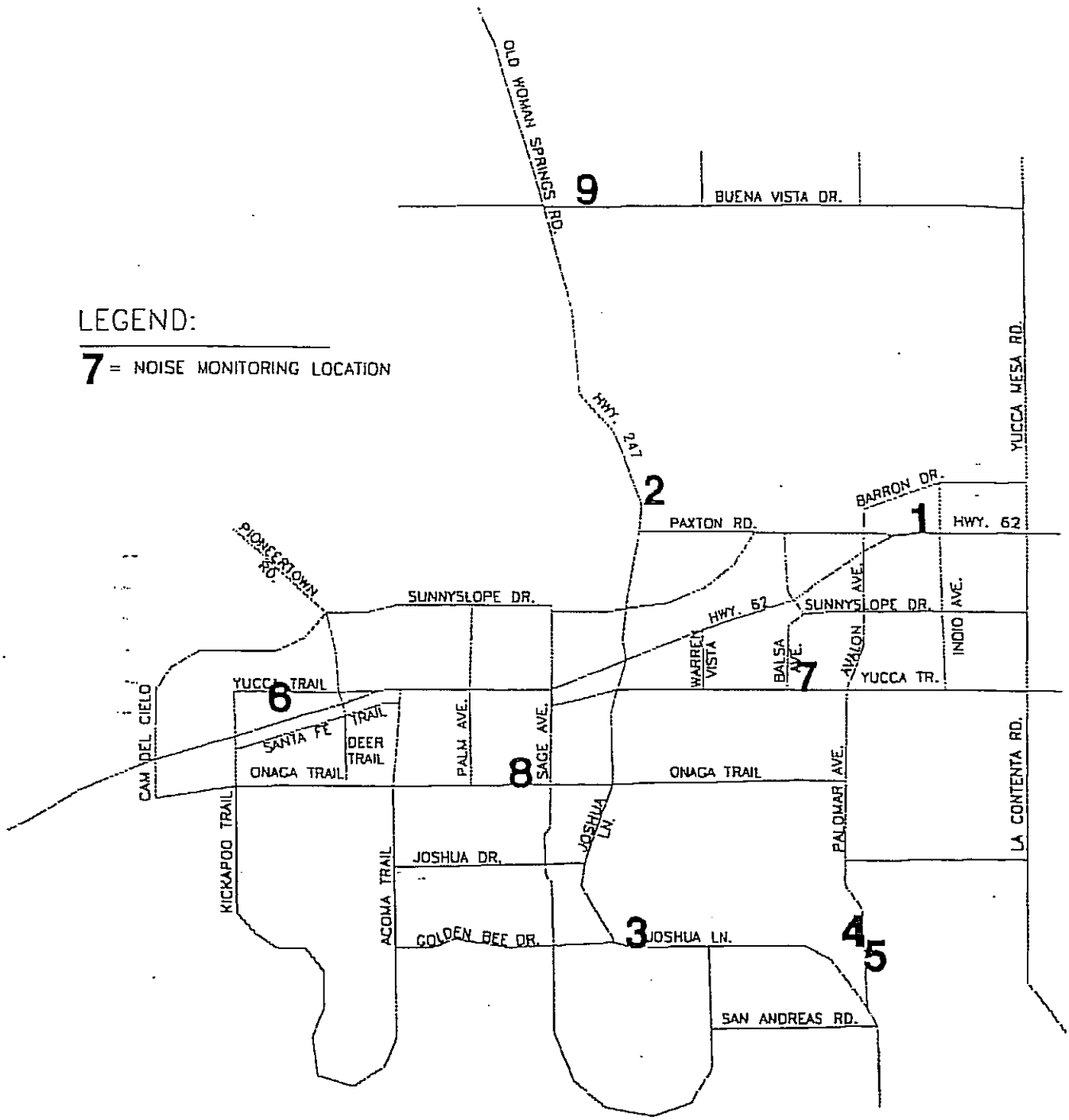
ROAD	SEGMENT	CNEL AT 100 FT. (dBA)	DISTANCE TO CONTOUR (FT.)		
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
SR-62	W/O Kickapoo	70.5	106	229	493
	E/O Acoma Tr.	69.1	86	185	399
	W/O SR-247	69.1	86	185	399
	W/O Yucca Mesa	71.6	126	271	584
SR-247	S/O Buena Vista	65.8	51	111	239
	N/O SR-62	65.7	51	110	236
Yucca Tr.	E/O Joshua Ln.	59.7	21	44	96
	W/O Palomar Ave.	61.4	27	57	123
	W/O La Contenta	59.9	21	46	99
Onaga Tr.	W/O Avalon Ave.	49.5	4	9	20
	W/O Joshua Ln.	56.6	13	27	59
	E/O Acoma Tr.	57.7	15	32	70
	E/O Deer Tr.	55.7	11	24	51
Pioneertown	N/O SR-62	47.1	3	6	14
Sage Ave.	N/O Onaga Tr.	52.8	7	15	33
Acoma Tr.	S/O Onaga Tr.	51.8	6	13	28
	S/O SR-62	58.3	16	36	77
Joshua Ln.	N/O Joshua Dr.	56.7	13	28	60
	S/O SR-62	57.6	15	31	68
Avalon Ave.	N/O Yucca Tr.	58.8	18	38	83
Palomar Ave.	N/O Onaga Tr.	55.9	11	25	53
Yucca Mesa	N/O SR-62	58.6	17	37	80
La Contenta	S/O SR-62	52.8	7	15	33
Skyline Ranch	W/O SR-247	54.0	9	19	40
Buena Vista	E/O SR-247	56.7	13	28	60
Kickapoo Tr.	S/O SR-62	53.3	8	16	36
Santa Fe Tr.	E/O Kickapoo	51.1	5	12	26

ROAD	SEGMENT	CNEL AT 100 FT. (dBA)	DISTANCE TO CONTOUR (FT.)		
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
Deer Tr.	N/O Onaga Tr.	52.7	7	15	32
Palm Ave.	S/O SR-62	49.7	4	9	20
Balsa Ave.	S/O SR-62	52.4	7	15	31
	N/O SR-62	56.4	12	27	58
Paxton Rd.	W/O Avalon Dr.	47.4	3	7	15
Sunnyslope Dr.	W/O Palm Ave.	51.3	6	12	26
	E/O Sage Ave.	51.3	6	12	26
	E/O Hwy 247	–	–	–	–
	W/O Indio Ave.	–	–	–	–
Joshua Dr.	E/O Acoma Tr.	–	–	–	–
	E/O Sage Ave.	55.3	10	22	48
Camino Del Cielo	N/O SR-62	50.6	5	11	23
	S/O SR-62	–	–	–	–

TABLE V-3
GENERAL PLAN BUILDOUT NOISE CONTOURS

ROAD	SEGMENT	CNEL AT 100 FT. (dBA)	DISTANCE TO CONTOUR (FT.)		
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
SR-62	W/O Kickapoo	72.8	143	308	664
	E/O Acoma Tr.	71.4	115	247	532
	W/O SR-247	71	108	233	502
	W/O Yucca Mesa	74.3	180	387	834
SR-247	S/O Buena Vista	72.5	136	293	632
	N/O SR-62	70.4	98	212	456
Yucca Tr.	E/O Joshua Ln.	64.5	41	89	192
	W/O Palomar Ave.	66.6	57	124	267
	W/O La Contenta	65	45	98	210
Onaga Tr.	W/O Avalon Ave.	60.2	22	47	101
	W/O Joshua Ln.	63	33	71	153
	E/O Acoma Tr.	63.6	36	77	167
	E/O Deer Tr.	64.3	40	86	186
Pioneertown	N/O SR-62	57.8	15	32	69
Sage Ave.	N/O Onaga Tr.	62	28	61	132
Acoma Tr.	S/O Onaga Tr.	62.7	32	68	146
	S/O SR-62	63.5	36	77	166
Joshua Ln.	N/O Joshua Dr.	61.6	27	58	125
	S/O SR-62	62.7	31	67	145
Avalon Ave.	N/O Yucca Tr.	66.3	55	119	256
Palomar Ave.	N/O Onaga Tr.	63.6	36	78	168
Yucca Mesa	N/O SR-62	62	29	61	132
La Contenta	S/O SR-62	59.7	20	43	92
Skyline Ranch	W/O SR-247	61.5	26	57	122
Buena Vista	E/O SR-247	64.1	40	85	183
Kickapoo Tr.	S/O SR-62	59.8	20	44	95
Santa Fe Tr.	E/O Kickapoo	57.6	15	31	67
Deer Tr.	N/O Onaga Tr.	59.4	19	41	88
Palm Ave.	S/O SR-62	57.5	15	31	67
Balsa Ave.	S/O SR-62	59.4	19	41	88
	N/O SR-62	65	45	97	209
Paxton Rd.	W/O Avalon Dr.	63.4	36	77	165
Sunnyslope Dr.	W/O Palm Ave.	63.2	34	74	160
	E/O Sage Ave.	63.9	38	82	177
	E/O SR-247	61.5	26	57	122
	W/O Indio Ave.	64.5	42	90	193
Joshua Dr.	E/O Acoma Tr.	62.4	30	66	141
	E/O Sage Ave.	63.6	36	78	168
Camino Del Cielo	N/O SR-62	62.3	30	65	139
	S/O SR-62	62.7	32	68	146

NOISE MONITORING LOCATIONS



north

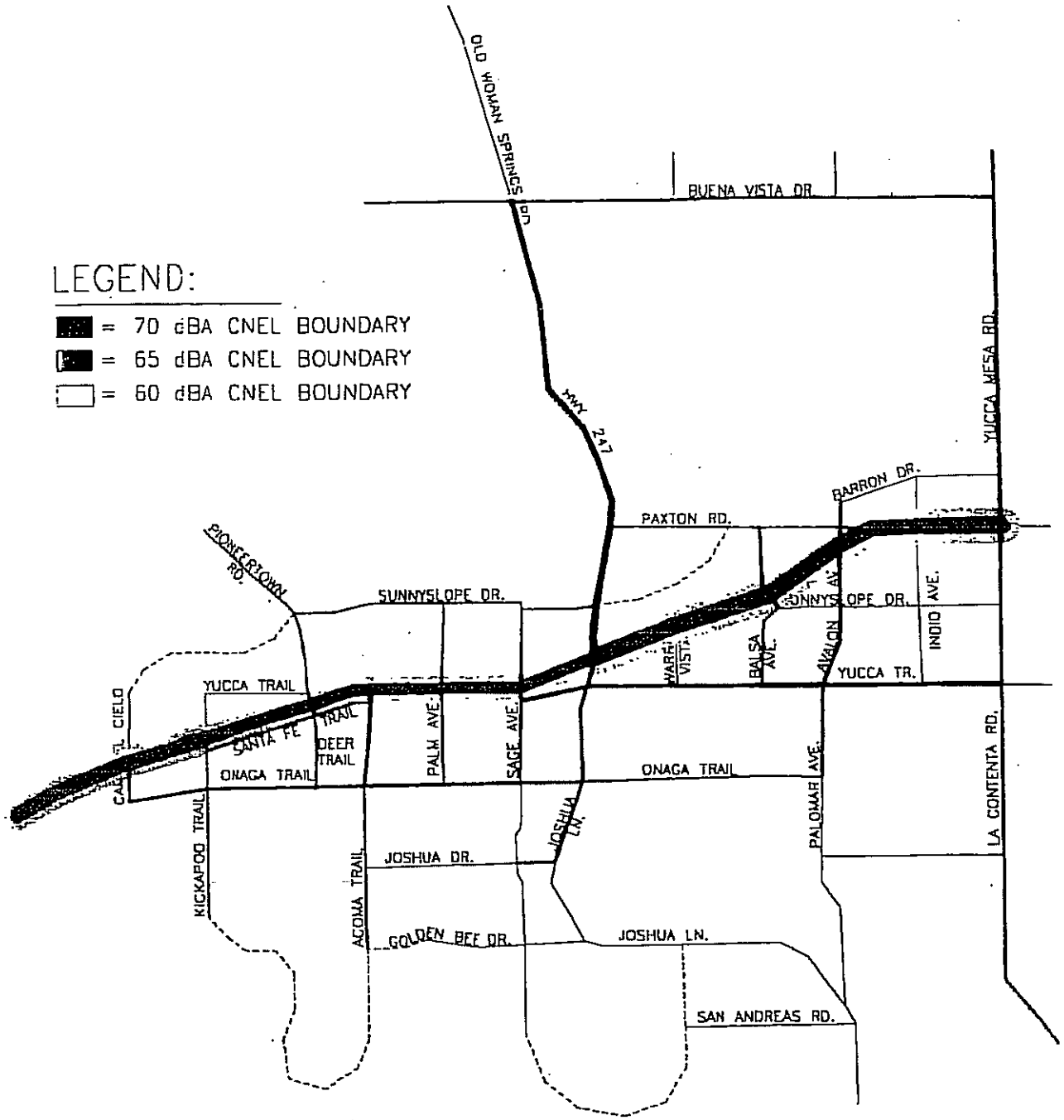
TOWN OF YUCCA VALLEY
GENERAL PLAN NOISE ELEMENT

EXHIBIT V-4

Robert Kahn, John Kain & Associates, Inc.

636-94-002:08

TOWN OF YUCCA VALLEY
EXISTING ROADWAY NOISE CONTOURS



north

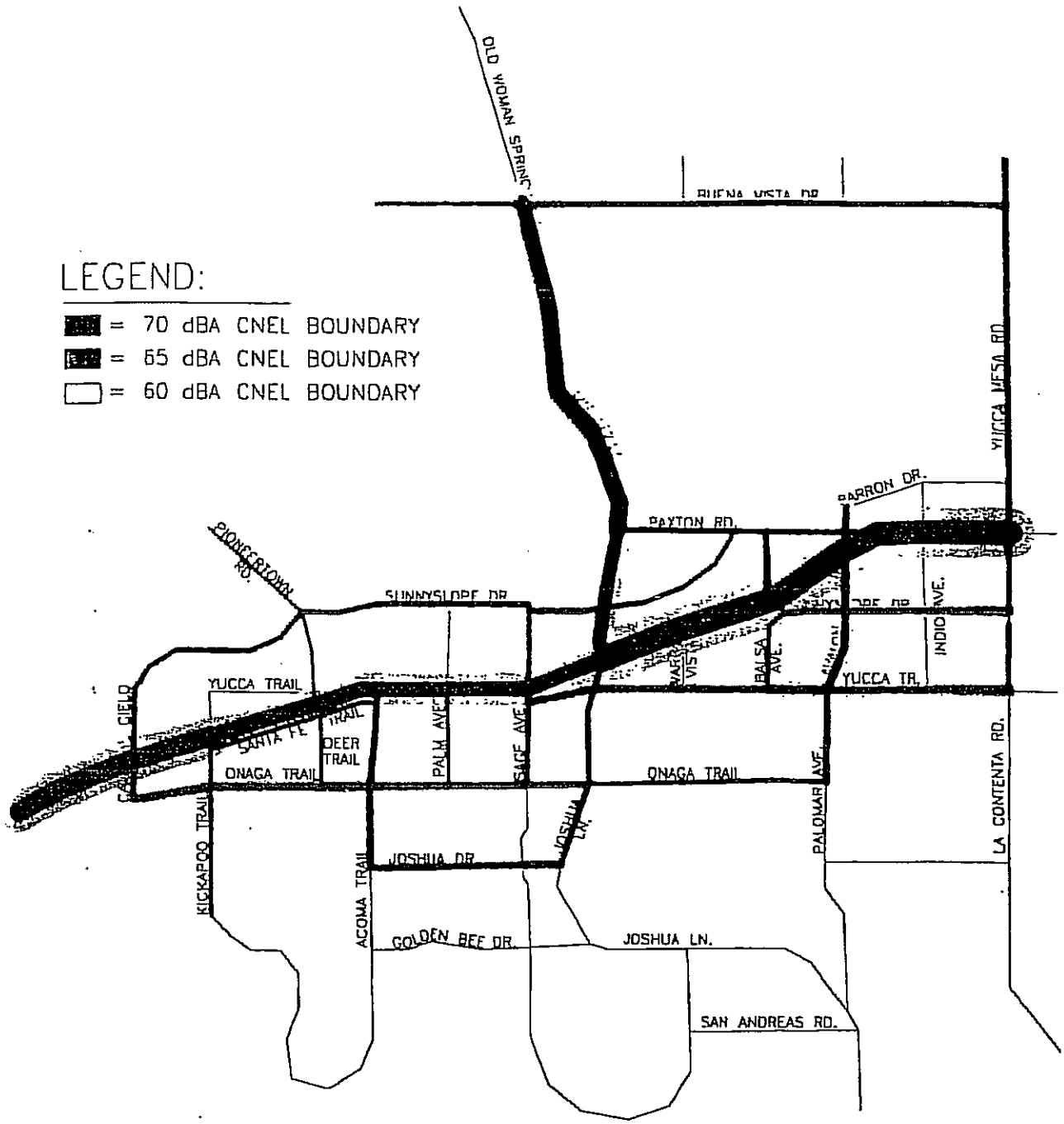
TOWN OF YUCCA VALLEY
GENERAL PLAN NOISE ELEMENT

EXHIBIT V-5

Robert Kahn, John Kain & Associates, Inc.

636-04-002:11

TOWN OF YUCCA VALLEY
BUILDOUT ROADWAY NOISE CONTOURS



north

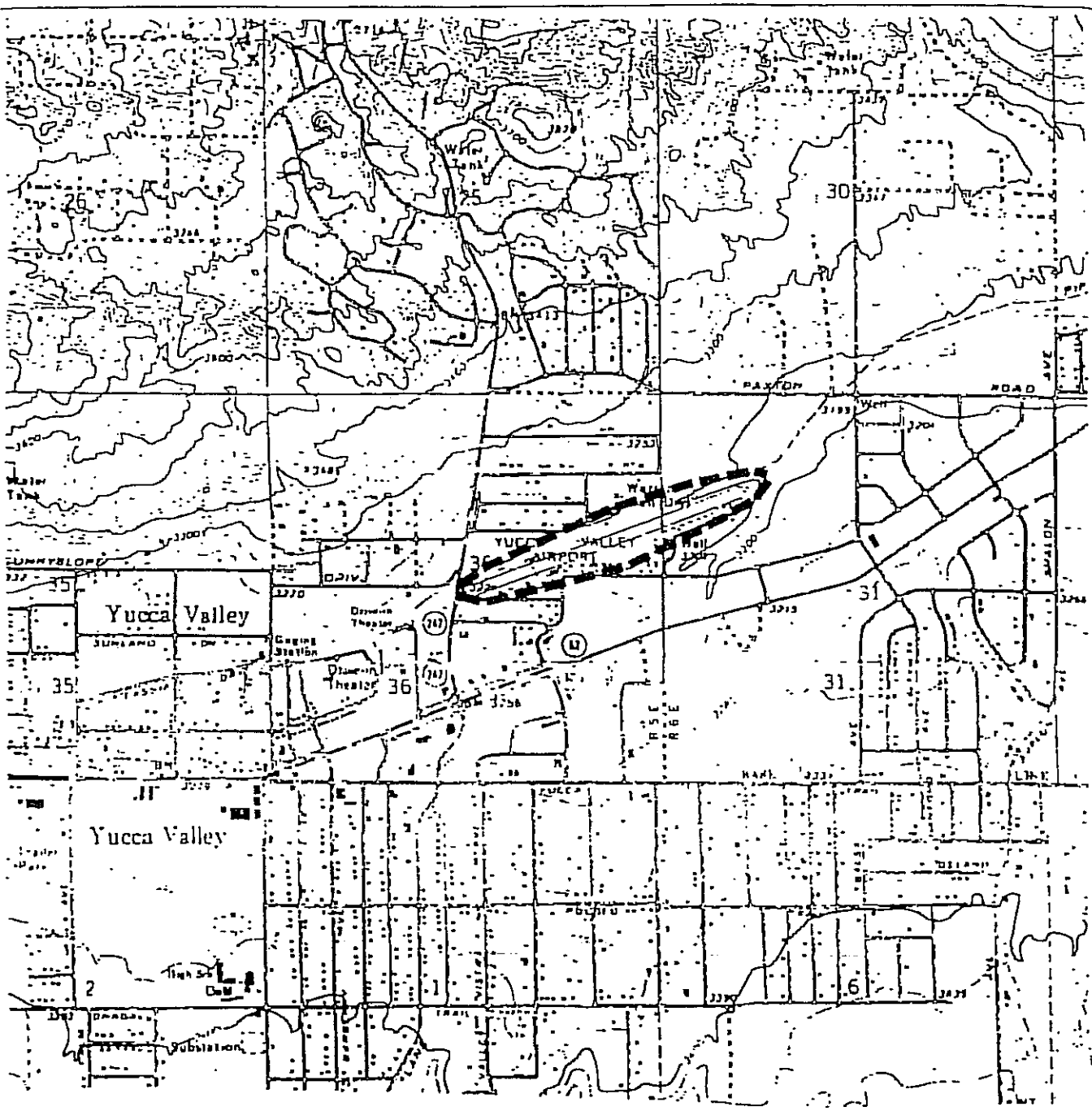
TOWN OF YUCCA VALLEY
GENERAL PLAN NOISE ELEMENT

EXHIBIT V-6

Robert Kahn, John Kain & Associates, Inc.

636-84-002:12

YUCCA VALLEY AIRPORT
60 CNEL CONTOUR



LEGEND

60 CNEL Contour

north

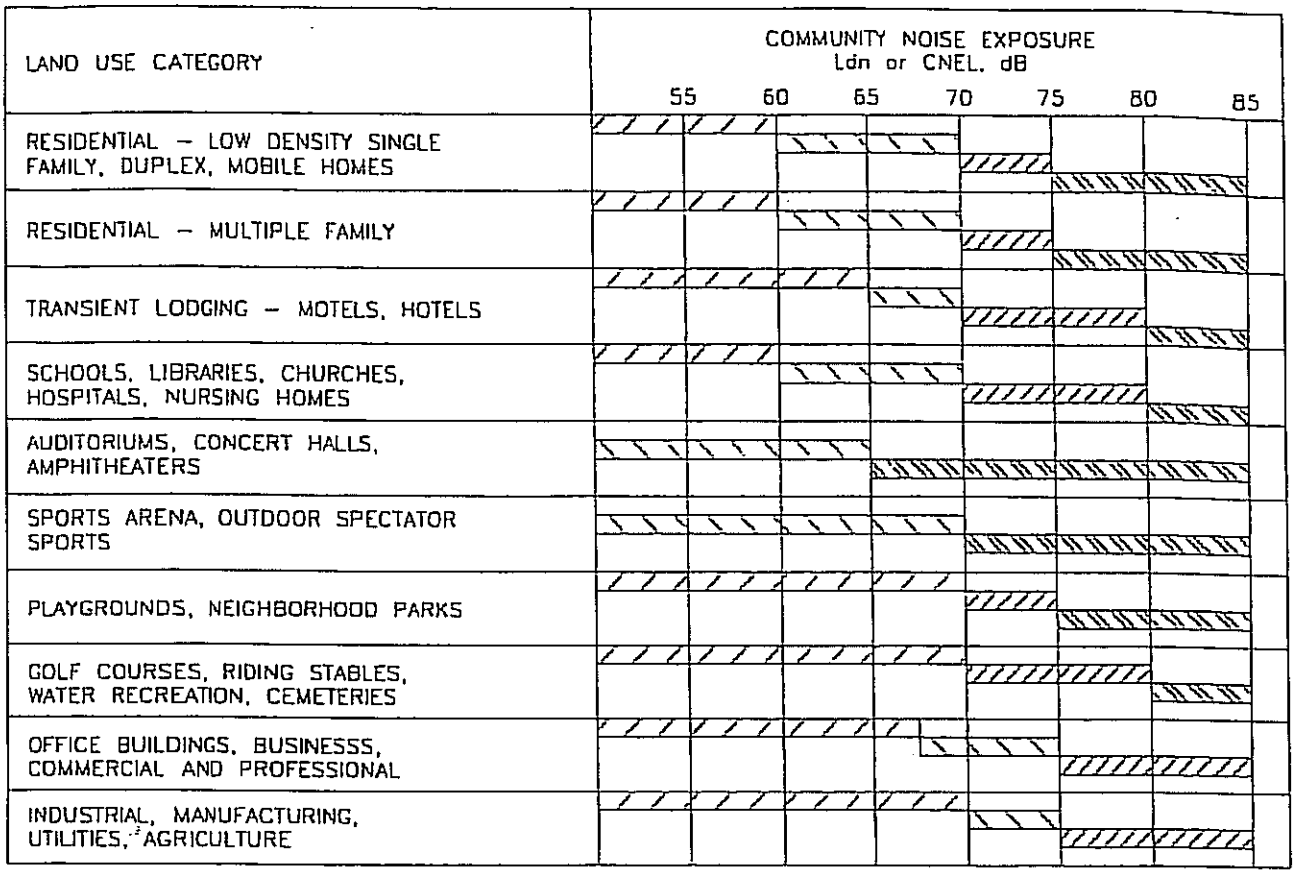
TOWN OF YUCCA VALLEY
GENERAL PLAN NOISE ELEMENT

EXHIBIT V-7

Robert Kahn, John Kain & Associates, Inc.

636-94-002:10

NOISE/LAND USE COMPATIBILITY MATRIX



NORMALLY ACCEPTABLE

SPECIFIED LAND USE IS SATISFACTORY, BASED UPON THE ASSUMPTION THAT ANY BUILDINGS INVOLVED ARE OF NORMAL CONVENTIONAL CONSTRUCTION, WITHOUT ANY SPECIAL NOISE INSULATION REQUIREMENTS.

CONDITIONALLY ACCEPTABLE

NEW CONSTRUCTION OR DEVELOPMENT SHOULD BE UNDERTAKEN ONLY AFTER A DETAILED ANALYSIS OF THE NOISE REDUCTION REQUIREMENTS IS MADE AND NEEDED NOISE INSULATION FEATURES INCLUDED IN THE DESIGN. CONVENTIONAL BUT WITH CLOSED WINDOWS AND FRESH AIR SUPPLY SYSTEMS OR AIR CONDITIONING WILL NORMALLY SUFFICE.

NORMALLY UNACCEPTABLE

NEW CONSTRUCTION OR DEVELOPMENT SHOULD GENERALLY BE DISCOURAGED. IF NEW CONSTRUCTION DEVELOPMENT DOES PROCEED, A DETAILED ANALYSIS OF THE NOISE REDUCTION REQUIREMENTS MUST BE MADE AND NEEDED NOISE INSULATION FEATURES INCLUDED IN THE DESIGN.

CLEARLY UNACCEPTABLE

NEW CONSTRUCTION OR DEVELOPMENT SHOULD GENERALLY NOT BE UNDERTAKEN.

SOURCE: COTTON/BELAND/ASSOCIATES MODIFIED FROM U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT AND STATE OF CALIFORNIA GUIDELINES.

TOWN OF YUCCA VALLEY
GENERAL PLAN NOISE ELEMENT

EXHIBIT V-8

836-94-002;09

Robert Kahn, John Kain & Associates, Inc.

ORDINANCE NO. 136

AN ORDINANCE OF THE TOWN COUNCIL OF THE TOWN OF YUCCA VALLEY, CALIFORNIA, AMENDING TITLE 8, DIVISION 4, CHAPTER 3, SECTIONS 84.0305 (RESOURCE CONSERVATION), 84.0310 (AGRICULTURE), 84.0320 (RURAL LIVING-RL), 84.0325 (SINGLE FAMILY RESIDENTIAL) OF THE SAN BERNARDINO COUNTY CODE AS ADOPTED AND AMENDED BY THE TOWN OF YUCCA VALLEY RELATING TO PERMITTED LAND USES IN THE HILLSIDE RESERVE DISTRICT, RURAL RESIDENTIAL DISTRICT, AND SINGLE RESIDENTIAL DISTRICT (DCA-02-02).

The Town Council of the Town of Yucca Valley does ordain as follows:

SECTION 1. Development Code Amended.

1.1 Section 84.0305 of Title 8, Division 4, Chapter 3 of the Development Code of the San Bernardino County Code as adopted and amended by the Town of Yucca Valley is hereby further amended to read as follows:

"**Sections: 84.0305 Hillside Reserve (R-HR) District.**
The Hillside Reserve (R-HR) District shall be located as specified by the Town of Yucca Valley General Plan.

(a) **GENERAL PROVISIONS:** The specific purposes of the Hillside Reserve District regulations are to:

(1) Provide for limited single-family residential development within hillside areas and similarly constrained areas and provide the greatest potential for open space preservation and managed animal keeping;

(2) Provide adequate light, air, privacy, and open space for each dwelling unit and protect residents from the harmful effects of excessive noise, population density, traffic congestion and other adverse environmental impacts;

(3) Provide sites for public and semipublic land uses needed to complement residential development or requiring a residential environment; and

(4) Insure the provision of public services and facilities needed to accommodate planned population densities.

(b) **USE CLASSIFICATIONS:** In the following schedule, the letter "P" designate use classifications permitted in the RL District, the letters "PD" designate use classification allowed on approval of a Planned Residential Development, the letters "LSP" designate use classification allowed on approval of a Livestock Permit, the letters "CUP" designate use classification allowed on approval of a Conditional Use Permit.

Hillside Reserve (R-HR) Use Classification		P Permitted CUP Conditional Use Permit PD Planned Residential Development LSP Livestock Permit
Use	**Zoning District** 20 ac	**Additional Use Regulations**
Residential:		
Family Day Care Homes: Large Small	 CUP P	Refer to Additional Uses Section of Development Code
Home Occupations	HOP	Refer to HOP Section of Development Code
Institutional Uses	CUP	Refer to Additional Uses Section of Development Code
Manufactured Housing	P	Refer to Single Residential Design Standard Section of the Development Code
Planned Residential Dev.	PD	
Single family dwellings	P	Refer to Single Residential Design Standard Section of the Development Code
Mobile Home Parks	CUP	Not to exceed the underlying land use density on minimum parcel size of forty (40) acres
Second Dwellings	CUP	Refer to Accessory Uses Section of Development Code
Animal raising of densities greater than those specified by Section 84.0560	LSP	
Commercial Kennels & Catteries	CUP	Two (2) acres minimum parcel size
Row, Field, Tree, and Nursery crop cultivation	P	

(c) **DEVELOPMENT STANDARDS:** The following schedule prescribes development regulations for the Hillside Reserve District:

Hillside Reserve (R-HR) Property Development Regulations		
Use	Zoning District	
Lot Size (acres)	20	Lot area measured in gross acres
Minimum Lot Frontage	150	
Maximum Lot Dimensions (Width to depth ratio)	1:4	
Yards (setbacks):		
Front	75'	(1), (2)
Side	75'	
Arterial/Collector Street Side	75'	
Local Street Side	75'	
Rear	75'	
Maximum Structure Height:	35	
Maximum Lot Coverage	None Required	
Maximum Housing Density (D.U./Acre)	1/20	
Minimum District Size (Acres)	100	

(1) The setbacks delineated in this table shall be the standard unless a different setback is delineated on said Final Map, Parcel Map, or Composite Development Plan.

(2) Reduced setbacks may be allowed pursuant to Section 87.0510 unless otherwise stated in this Section.

(d) **ACCESSORY STRUCTURES REGULATIONS:** Residential accessory structures include any of those customarily related to a residence, including garages, greenhouses, storage sheds, studios, barns, workshops, and similar structures.

(1) Any new accessory building requiring a building permit shall be subject to the following standards:

(A) Any accessory structure shall be architecturally compatible with the primary structure.

(B) Any single accessory building, excluding any authorized dependant housing or second unit as approved under a Conditional Use Permit, shall not have a floor area in excess of fifty (50%) percent of the footprint of the primary building nor shall the cumulative floor area of all accessory buildings have a floor area in excess of one hundred (100%) percent of the footprint of the primary building.

(C) Lots in the R-HR land use district which are 10 acres in size or greater are exempt from any area requirements for accessory structures.

(D) All building setback standards of the land use district shall apply.

(E) Any accessory structure must be on the same parcel as the primary building.

(F) The maximum height of any accessory structure shall not exceed 20 feet.

(G) The maximum number of detached accessory structures shall be two, regardless of any requirement for a building permit.

(2) USE OF CARGO CONTAINERS: As storage for construction clean-up or construction material, a cargo container used as a temporary storage device may be located anywhere on the property, except in the "clear sight triangle" during the duration of the construction activity associated with an active building permit subject to the approval of a Temporary Use Permit."

1.2 Section 84.0310 of Title 8, Division 4, Chapter 3 of the Development Code of the San Bernardino County Code as adopted by the Town of Yucca Valley is hereby repealed.

1.3 Section 84.0320 of Title 8, Division 4, Chapter 3 of the Development Code of the San Bernardino County Code as adopted and amended by the Town of Yucca Valley is hereby further amended to read as follows:

"Section: 84.0320 Rural Living (RL) District.
The Rural Living (RL) District shall be located as specified by the Town of Yucca Valley General Plan.

(a) **GENERAL PROVISIONS:** The specific purposes of the Rural Living District regulations are to:

(1) Provide appropriately located areas for single family dwellings that are consistent with the General Plan and the standards of public health and safety established by the Yucca Valley Municipal Code;

(2) Provide adequate light, air, privacy, and open space for each dwelling unit and protect residents from the harmful effects of excessive noise, population density, traffic congestion and other adverse environmental impacts;

(3) Provide sites for public and semipublic land uses needed to complement residential development or requiring a residential environment; and

(4) Insure the provisions of public services and facilities needed to accommodate planned population densities.

(b) **USE CLASSIFICATIONS:** In the following schedule, the letter "P" designate use classifications permitted in the RL District, the letters "PD" designate use classification allowed on approval of a Planned Development, the letters "LSP" designate use classification allowed on approval of a Livestock Permit, the letters "CUP" designate use classification allowed on approval of a Conditional Use Permit.

R-L (Rural Living) Use Classification		P Permitted CUP Conditional Use Permit PD Planned Residential Development LSP Livestock Permit
Use	Zoning District R-L-1, 2.5, 5, 10, 20 ac	Additional Use Regulations
Residential:		
Family Day Care Homes: Large Small	 CUP P	Refer to Additional Uses Section of Development Code
Home Occupations	HOP	Refer to HOP Section of Development Code
Institutional Uses	CUP	Refer to Additional Uses Section of Development Code
Manufactured Housing	P	Refer to Single Residential Design Standard Section of the Development Code
Planned Residential Dev.	PD	
Single Family Dwellings	P	Refer to Single Residential Design Standard Section of the Development Code
Second Dwellings	CUP	Refer to Accessory Uses Section of Development Code
Mobile Home Parks	CUP	Not to exceed the underlying land use density on minimum parcel size of twenty (20) acres
Animal raising of densities greater than those specified by Section 84.0560	LSP	
Commercial Kennels & Catteries	CUP	Two (2) acre minimum parcel size

Row, field, tree, and nursery crop cultivation	P	Any structure associated with this activity is limited to 10,000 Sq. Ft. on parcels of 5 acres or less.

(c) **DEVELOPMENT STANDARDS:** The following schedule prescribes development regulations for the Rural Living Residential District:

Rural Living (RL) Property Development Regulations		
Use	Zoning District RL-1, 2.5, 5, 10, 20 ac	
Lot Size (acres)	see map suffix	Lot area measured in gross acres
Minimum Lot Dimension (width/Depth in ft.)	150/150	
Maximum Lot Dimensions (Width to depth ratio)		
Less than 10 ac	1:4	
Greater than 10 ac	1:3	
Yards (setbacks):		
Front	50'	(1), (2)
Side	15'	
Arterial/Collector Street Side	50'	
Local Street Side	25'	
Rear	15	
Maximum Structure Height:	35	
Maximum Lot Coverage	20%	
Minimum District Size (Acres)	30	

(1) The setbacks delineated in this table shall be the standard unless a different setback is delineated on said Final Map, Parcel Map, or Composite Development Plan.

(2) Reduced setbacks may be allowed pursuant to Section 87.0510 unless otherwise stated in this Section.

(d) **ACCESSORY STRUCTURES REGULATIONS:** Residential accessory structures include any of those customarily related to a residence, including garages, greenhouses, storage sheds, studios, barns, workshops, and similar structures.

(1) Any new accessory building requiring a building permit shall be subject to the following standards:

(A) Any accessory structure shall be architecturally compatible with the primary structure.

(B) Any accessory building, excluding any authorized dependant housing or second unit as approved under a Conditional Use Permit, shall not have a floor area in excess of fifty (50%) percent of the footprint of the primary building nor shall the cumulative floor area of accessory buildings have a floor area in excess of one hundred (100%) percent of the footprint of the primary building.

(C) Lots in the RL land use district which are ten (10) acres in size or greater are exempt from the area requirements for accessory structures.

(D) All building setback standards of the land use district shall apply.

(E) Any accessory structure must be on the same parcel as the primary building.

(F) The maximum number of detached accessory structures shall be two, regardless of any requirement of a building permit.

(G) The maximum height of any accessory structure shall not exceed 20 feet.

(2) USE OF CARGO CONTAINERS: As storage for construction clean-up or construction material, a cargo container used as a temporary storage device may be located anywhere on the property, except in the "clear sight triangle" during the duration of the construction activity associated with an active building permit subject to the approval of a Temporary Use Permit."

Section 84.0325 of Title 8, Division 4, Chapter 3 of the Development Code of the San Bernardino County code as adopted and amended by the Town of Yucca Valley is further amended to read as follows:

"**Sections: 84.0325 Single Residential District (RS).**

The Single Residential (RS) District shall be located as specified by the Town of Yucca Valley General Plan.

(a) **GENERAL PROVISIONS**: The specific purposes of the Single Residential District regulations are to:

(1) Provide appropriately located areas for single family dwellings that are consistent with the General Plan and the standards of public health and safety established by the Yucca Valley Municipal Code;

(2) Provide adequate light, air, privacy, and open space for each dwelling unit and protect residents from the harmful effects of excessive noise, population density, traffic congestion and other adverse environmental impacts;

(3) Provide sites for public and semipublic land uses needed to complement residential development or requiring a residential environment; and

(4) Insure the provisions of public services and facilities needed to accommodate planned population densities.

(b) **USE CLASSIFICATIONS:** In the following schedule, the letter "P" designate use classifications permitted in the RS District, the letters "PD" designate use classification allowed on approval of a Planned Development, the letters "LSP" designate use classification allowed on approval of a Livestock Permit, the letters "CUP" designate use classification allowed on approval of a Conditional Use Permit.

RS (Single Residential) Use Classification		P Permitted CUP Conditional Use Permit PD Planned Residential Development LSP Livestock Permit
Use	Zoning District RS-2, 3.5, 5	Additional Use Regulations
Residential:		
Family Day Care Homes: Large Small	 CUP P	Refer to Additional Uses Section of Development Code
Home Occupations	HOP	Refer to HOP Section of Development Code
Institutional Uses	CUP	Refer to Additional Uses Section of Development Code
Manufactured Housing	P	Refer to Single Residential Design Standard Section (88.0101) of the Development Code
Planned Residential Dev.	PD	
Single Family Dwellings	P	
Second Dwellings	CUP	Refer to Accessory Uses Section of Development Code
Mobile Home Parks	CUP	Not to exceed the underlying land use density on minimum parcel size of ten (10) acres
Animal raising of densities greater than those specified by Section 84.0560	LSP	
Row, Field, Tree, and Nursery Crop Cultivation	P	Any structure associated with this activity is limited to 10,000 sq. Ft. on parcels of 5 acres or less.

(c) **DEVELOPMENT STANDARDS:** The following schedule prescribes development regulations for the Single Residential District:

Single Residential (RS) Property Development Regulations		
Use	Zoning District RS-2, 3.5, 5	
Lot Size (square feet)	7,200 map suffix will modify	Lot area measured in net square feet
Minimum Lot Dimension (width/Depth in ft.)		
Less than 1 acre	60/100	
Greater than 1 acre	150/150	
Maximum Lot Dimensions (Width to depth ratio)		
Less than 10 ac	1:4	
Greater than 10 ac	1:3	
Yards (setbacks):		(1), (2), (3)
Front	25	
Side	5 &10	
Arterial Street Side	25	
Local Street Side	15	
Rear	15	
Maximum Structure Height:	35	
Maximum Lot Coverage	40%	
Minimum District Size (Acres)	10	

(1) The setbacks delineated in this table shall be the standard unless a different setback is delineated on said Final Map, Parcel Map, or Composite Development Plan.

(2) Reduced setbacks may be allowed pursuant to Section 87.0510 unless otherwise stated in this Section.

(3) A Final or parcel map may establish front yard setbacks no less than twenty-two (22) feet provided the average setback of all parcels is at least twenty-five (25).

(d) **ACCESSORY STRUCTURES REGULATIONS**: Residential accessory structures include any of those customarily related to a residence, including garages, greenhouses, storage sheds, studios, barns, workshops, and similar structures.

(1) Any new accessory building requiring a building permit shall be subject to the following standards:

(A) Any accessory building shall be architecturally compatible with the primary structure.

(B) Any accessory building, excluding any authorized dependant housing or second unit as approved under a Conditional Use Permit, shall not have a floor area in excess of fifty (50%) percent of the footprint of the primary building not to exceed 750 square-feet.

(C) Any accessory building shall meet the minimum building setback standards of the land use district but that an accessory structure not requiring a building permit may encroach up to 3 feet from the rear property line.

(D) The maximum number of detached accessory structures:

(1) Any RS lot having less than 20,000 square-feet in area shall be limited to one accessory structure.

(1) Any RS lot greater in size than 20,000 square-feet shall be limited to two accessory structures.

(E) Any accessory structure must be on the same parcel as the primary structure.

(F) The maximum height of any accessory structure shall not exceed 20 feet.

(2) USE OF CARGO CONTAINERS: As storage for construction clean-up or construction material, a cargo container used as temporary storage device may be located anywhere on the property, except in the "clear sight triangle" during the duration of an active building permit subject to the approval of a Temporary Use Permit."

SECTION 2. All prior enactment's of the Town including ordinances or portions of ordinances adopted, or incorporated by reference which are in conflict with this ordinance including chapter 5 of Division 4, of Title 8 of the San Bernardino County Code as adopted and amended by the Town of Yucca Valley are hereby repealed, effective upon the date upon which this ordinance becomes effective and operative.

SECTION 3. NOTICE OF ADOPTION. Within fifteen (15) days after the adoption hereof, the Town Clerk shall certify to the adoption of this Ordinance and cause it to be published once in a newspaper of general circulation printed and published in the County and circulated in the Town pursuant to Section 36933 of the Government Code.

SECTION 4. EFFECTIVE DATE. This Ordinance shall become effective thirty (30) days from and after the date of its adoption.

APPROVED AND ADOPTED by the Town Council and signed by the Mayor and attested by the Town Clerk this 6th day of February, 2003.

MAYOR

ATTEST:

Town Clerk

APPROVED AS TO FORM:

Town Attorney

APPROVED AS TO CONTENT:

Town Manager

\\PWN\VOL1\BACKUP G\RESTOREF\COMMON\COMMON\Ordinances\2002\DCA202T2.doc

STATE OF CALIFORNIA

COUNTY OF SAN BERNARDINO

TOWN OF YUCCA VALLEY

I, Janet M. Anderson, Town Clerk of the Town of Yucca Valley, California hereby certify that the foregoing Ordinance No. 136 as duly and regularly introduced at a meeting of the Town Council on the 16th day of January, 2003, and that thereafter the said ordinance was duly and regularly adopted at a meeting of the Town Council on the 6th day of February, 2003, by the following vote, to wit:

Ayes: Council Members Cook, Leone, Mayes, Neeb and Mayor Earnest

Noes: None

Absent: None

Abstain: None

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the Town of Yucca Valley, California, this 7th day of February, 2003.

(SEAL)

Town Clerk of the Town of
Yucca Valley

ORDINANCE NO. 211

AN ORDINANCE OF THE TOWN COUNCIL OF THE TOWN OF YUCCA VALLEY, CALIFORNIA, AMENDING TITLE 8, DIVISION 4, CHAPTER 4, SECTION 84.0410 OF THE COUNTY OF SAN BERNARDINO CODE AS ADOPTED BY THE TOWN OF YUCCA VALLEY RELATING TO SWAP MEETS

The Town Council of the Town of Yucca Valley, California, does ordain as follows:

SECTION 1. Code Amended

Title 8, Division 4, Chapter 4, Section 84.0410 of the San Bernardino County Code as adopted by the Town of Yucca Valley is hereby amended in its entirety to read as follows:

"Chapter 4

ADDITIONAL USES

Sections:

84.0410 List of Additional Uses

84.0401 List of Additional Uses.

(a) The following uses shall be allowed in any official land use district subject to the reviews specified by Sections 84.0401 and 84.0405.

(1) Temporary and permanent government facilities and enterprises (Federal, State, and Local) where buildings and/or property are publicly owned or leased.

(2) Temporary support facilities associated with highway construction and other public facilities including, but not limited to, batch plants and equipment storage yards.

(3) Transportation facilities principally involved in the movement of people together with the necessary buildings, apparatus, or appurtenances incidental thereto, including but not limited to, airports, heliports, train stations, bus station and car pool facilities.

(4) Institutional uses including but not limited to schools, colleges, and universities, conference centers, hospitals, churches, rehabilitation centers and organizational camps.

(5) Museums, art galleries, and libraries.

(6) Planetarium, aquariums, zoos, botanical gardens and arboretums.

(7) Historic and monument sites.

(8) Cemeteries, including pet cemeteries, subject to Design Standards and the mapping requirements specified by this Title. A Conditional Use Permit and a Tentative Tract Map filed concurrently shall be required.

(9) Social care facilities with seven (7) or more clients.

(10) Solid waste disposal sites, rubbish incinerators, and recycling centers. (Recycling centers are limited to certain land use districts as described in Section 84.0625 of this Division).

(11) Sewer plants and sewage disposal sites.

(12) Electrical generating stations.

(13) Public utilities and public service uses or structures including but not limited to: reservoirs, pumping plants, electrical substations, repeater huts, towers and satellite receiving stations. A multiple site network may be submitted as one project.

(14) Radio and television stations and towers.

(15) Racetracks or stadiums.

(16) Campgrounds not exceeding a density of four (4) sites per acre.

(17) Sports-oriented recreational uses requiring remote locations including but not limited to: rifle, pistol and archery rangers, sky diving jump sites, off-road and recreational vehicle parks, marinas, golf courses, hunting and fishing clubs, ski resorts and recreational camps.

(18) Gas pressure control stations, water treatment plants, (purification), water storage tanks, gas production plants, petroleum pipeline and pressure control stations.

(19) Development of natural resources including, but not limited to: mineral deposits, extractions, natural vegetation and energy sources, together with the necessary buildings, apparatus or appurtenances incidental thereto.

(20) Correctional institutions.

(21) Bail bond operation located within one (1) mile of a correctional institution.

(22) Arenas, field houses, auditoriums, rodeo facilities.

(23) Recreation and community centers, gymnasiums, athletic clubs.

(24) Wildlife and nature preserves, lakes, general recreation, leisure and ornamental parks open to the general public.

(25) Emergency and transitional shelters for the homeless.

(b) Subject to the requirements of an approved Conditional Use Permit, swapmeets may be allowed within the CG-General Commercial, CS-Service Commercial, and I-Industrial land use districts subject to the following conditions and requirements:

(1) **Definition: "Swap Meet"** means any outdoor place, location, or activity that is generally held on weekends on an on-going basis where new or used goods or secondhand personal property is offered for sale or exchange to the general public by three or more individuals or licensed vendors, usually in compartmentalized spaces, each typically occupying no more than 150 square-feet per vendor on the same or adjoining properties. The term swap meet is interchangeable with and applicable to: flea markets, auctions, open air markets, or other similarly named or labeled activities; but the term does not include the usual supermarket or department store retail operation, when all activities are conducted indoor.

(2) **Location Standards:** No swap meets shall be allowed on any land that is adjacent to or abutting either SR 62 or SR 247 unless the sales activity is a minimum of 400 feet from any property line adjacent to either highway. In a General Commercial (CG) land use district, any sales activity, excluding parking shall be a minimum of 200 feet from any parcel zoned Office Commercial, Neighborhood Commercial, Mixed-Use Commercial, or Single Family Residential. Any sales activity in Service Commercial (CS), excluding parking shall be a minimum of 200 feet from any parcel zoned Office Commercial, Neighborhood Commercial, Mixed-Use Commercial, or Single Family Residential.

(3) **Design Standards:**

(A) Permanent restroom facilities shall be provided in accordance with Building Code and San Bernardino County Health Department requirements.

(B) The sales area shall be distinctly defined in either the form of fencing or vegetation or in manner as approved by the Town and landscape screening shall be encouraged.

(C) Parking and parking lot landscaping shall be provided in accordance with Parking Code. Additional landscaping will be required along all street right-of-way.

(D) Minimum parcel size shall be five acres.

(E) No direct access to a swap meet will be permitted from either SR 62 or SR 247, but shall be restricted to non highway streets.

SECTION 2. NOTICE OF ADOPTION. Within fifteen (15) days after the adoption hereof, the Town Clerk shall certify to the adoption of this Ordinance and cause it to be published once in a newspaper of general circulation printed and published in the County and circulated in the Town pursuant to Section 36933 of the Government Code.

SECTION 3. EFFECTIVE DATE. This Ordinance shall become effective thirty (30) days from and after the date of its adoption.

APPROVED AND ADOPTED by the Town Council and signed by the Mayor attested by the Town Clerk this 18th day of May, 2010.

MAYOR

ATTEST:

TOWN CLERK

APPROVED AS TO FORM:

TOWN ATTORNEY

STATE OF CALIFORNIA

COUNTY OF SAN BERNARDINO

TOWN OF YUCCA VALLEY

I, Janet M. Anderson, Town Clerk of the Town of Yucca Valley, California hereby certify that the foregoing Ordinance No. 211 as duly and regularly introduced at a meeting of the Town Council on the 4th day of May, 2010, and that thereafter the said ordinance was duly and regularly adopted at a meeting of the Town Council on the 18th day of May, 2010, by the following vote, to wit:

Ayes:	Council Members Huntington, Luckino, Neeb, and Mayor Mayes
Noes:	None
Abstain:	Council Member Herbel
Absent:	None

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the Town of Yucca Valley, California, this 19th day of May, 2010.

(SEAL)

Town Clerk of the Town of
Yucca Valley

TOWN OF YUCCA VALLEY
PLANNING COMMISSION MEETING MINUTES
APRIL 26, 2011

Chair Lombardo called the regular meeting of the Yucca Valley Planning Commission to order at 6:00 p.m.

Commissioners present: Abel, Alberg, Hildebrand, Humphreville and Chair Lombardo

Pledge of Allegiance was led by Chair Lombardo.

APPROVAL OF AGENDA

Commissioner Alberg moved to approve the April 26, 2011 Agenda. Motion was seconded by Commissioner Humphreville. Motion carried 5-0 on a voice vote.

PUBLIC COMMENTS: None

PUBLIC HEARINGS:

1. CONDITIONAL USE PERMIT, CUP 02-11 NIELSON

A request to install two 20' tall towers, each with three (3), five (5) foot tall wind turbines installed on each tower.

Associate Planner Kirschmann requested that the Public Hearing item be continued to the meeting of May 24, 2011. Staff was notified on April 20, 2011 that the request would be modified and new plans submitted. Staff received new plans on April 25, 2011.

Chair Lombardo opened the Public Hearing.

Aaron Hickson, Yucca Valley, spoke in opposition commenting that it is unsafe for birds, a fire hazard, and not wanting to see five wind turbines looking out of his property.

Sibylle Hickson, Yucca Valley, spoke in opposition commenting that it would be an eyesore, noisy and that it would lower her property value.

Dana Collins, Joshua Tree, spoke in opposition commenting solar energy would be a better alternative.

Vi Saffle, Yucca Valley, spoke in opposition commenting that it should not be in Yucca Valley.

John Saffle, Yucca Valley, spoke in opposition commenting on undergrounding utilities.

Andy Canada, Yucca Valley, applicant, spoke in favor commenting on energy savings.

Jon Wright, Yucca Valley, spoke in favor commenting on energy savings.

Olivia de Haulleville, Yucca Valley, spoke in favor commenting on being ecologically minded.

Melinda Allen, Joshua Tree, spoke in favor commenting on energy savings.

Davin Loeper, Yucca Mesa, spoke in favor commenting on sustainable energy.

Chair Lombardo continued the Public Hearing to May 24, 2011.

Commissioner Alberg moved to recommend Public Hearing item Conditional Use Permit, CUP 02-11 Nielson, be continued to the meeting of May 24, 2011.

Motion was seconded by Commissioner Humphreville. Motion carried 5-0 on a voice vote.

DEPARTMENT REPORTS:

2. REQUEST FOR DEFERRAL OF CONDITIONS OF APPROVAL FOR CUP 01-08 & TPM 19103, WARREN VISTA CENTER

A request to allow a Certificate of Occupancy to be issued prior to the establishment of Assessment Districts and prior to the relocation of the traffic signal at SR 62 & Warren Vista and the construction of the Cal-Trans required median island.

With reference to the complete printed staff report provided in the meeting packets and preserved in the project and meeting files, Associate Planner Kirschmann presented the project discussion to the meeting summarizing that the project was approved by the commission at the meeting of January 6, 2009, stating that Rite Aid is nearing completion expecting to stock shelves in mid May-June asking for deferral of Conditions of Approval conditions 15, 16, 33, 35, 67, and 71 relating to street improvements and the formation of assessment districts with the estimation of improvements to be completed prior to the opening of the store to the public.

Bill Warner, Applicant's Representative, requested approval of the deferral of Conditions of Approval based upon the findings in the staff report commenting that Rite Aid is completing the street improvements as scheduled nicely but wanted to request some leeway to allow for fixturizing, to train staff, and other possible preparatory activities inside the building prior to opening for Certificate of Occupancy and the timeframe required for the establishment of the assessment district.

There being no one wishing to speak, Chair Lombardo closed the Public Comment.

Commissioner Abel moved to approve the Applicant's request to defer the Conditions of Approval for CUP 01-08 & TPM 19103, Warren Vista Center as identified in the staff report and directed staff to return with a project status report at the June 14, 2011, Planning Commission meeting.

The motion was seconded by Commissioner Hildebrand. Motion carried 5-0 on a voice vote.

CONSENT AGENDA:

3. MINUTES –

Commissioner Alberg moved that the Planning Commission approve as submitted the minutes of the Regular Planning Commission Meeting held on April 12, 2011. The motion was seconded by Commissioner Abel. Motion carried 5-0 on a voice vote.

STAFF REPORTS AND COMMENTS:

Deputy Town Manager Stueckle advised the commission of Council Member Mayes' resignation and the schedule conflict of the Special Town Council meeting to be held on Tuesday, May 10, 2011, to discuss the said vacancy.

It was suggested that Planning Commission adjourn the regular meeting of May 10, 2011, due to lack of a quorum and schedule a special meeting to be held on Thursday, May 12, 2011 at 6:00 p.m.

FUTURE AGENDA ITEMS:

Deputy Town Manager Stueckle stated May 10th items will be moved to the Special Planning Commission meeting of May 12, 2011, and the Conditional Use Permit, CUP 02-11 Nielson Wind Turbines item is scheduled for May 24, 2011 meeting.

COMMISSIONER REPORTS AND REQUESTS:

Commissioner Abel – commented on staff's excellent job on the Senior Housing Project.

Commissioner Alberg – None

Commissioner Hildebrand – None

Commissioner Humphreville – commented on Senior Housing Project meeting

attended with fellow subcommittee member Commissioner Abel.

Chair Lombardo – None

ANNOUNCEMENTS:

Chair Lombardo announced that there will not be a regular meeting of the Yucca Valley Planning Commission on Tuesday, May 10, 2011 at 6:00 p.m.

ADJOURNMENT

The meeting adjourned at 6:49 p.m.

Respectfully submitted by,

Christine E. Kim, CMC
Deputy Town Clerk

PLANNING COMMISSION STAFF REPORT

To: Honorable Chairman & Planning Commission
From: Robert Kirschmann, Associate Planner
Date: June 21, 2011
For Commission Meeting: June 28, 2011

Subject: Ordinance No
Continuation of Public Hearing
Wind Energy Conservation Systems (WECS) Draft Ordinance

Prior Commission Review: The Planning Commission held a Public Hearing on this item at the meeting of May 24, 2011. The Planning Commission discussed the item and at their regular meeting of March 22, 2011

Recommendation: That the Planning Commission completes the review of the draft ordinance and requests a joint meeting with the Town Council as the Commission indicated at their meeting of May 24, 2011.

Executive Summary: The Town of Yucca Valley has no regulations for the installation of renewable energy systems, such as wind generators. The Town has recently received a number of inquiries for the installation of both roof mounted and freestanding wind generators. Since the Town has no regulations for these systems, Staff is seeking Planning Commission feedback and direction on the draft regulations as attached to this Staff Report.

Discussion: The intent of the regulations and standards contained in the draft Ordinance is to ensure compatibility with building architecture, the neighborhood, and community appearance, and to minimize the visual appearance of WECS within neighborhoods and the community. Additionally, the regulations and standards ensure proper design, placement, construction and operational standards to promote the health, safety and welfare of the community.

The Draft Ordinance establishes standards and regulations for the installation of wind energy conversion systems (WECS) within the Town. The following information outlines the general standards as drafted.

The Ordinance as drafted only regulates WECS within the residential land use districts. All WECS are subject to the review and approval by the Planning Commission. There are standards called out for both freestanding and roof mounted units as follows:

Roof Mounted: Roof mounted units are allowed in all residential land use districts on a lot of any size. The height is limited to 35 feet as measured from finished grade. This is the maximum height of any residential structure. As currently drafted a maximum of five (5) units are allowed on the roof.

Freestanding: The regulations for freestanding WECS include a requirement for a minimum lot size of 20,000 square feet net and a zoning designation of Residential Single Family, two (2) homes per acre (RS-2). The Ordinance requires that the abutting lots

meet the requirements to install a WECS on their property and if an abutting property is subdivided in the future, and no longer meets the requirements of the code that the WECS be removed.

The maximum height is 52.5 feet, discussed further under height. Properties up to five (5) acres are allowed only one freestanding unit. Properties exceeding five (5) acres may have two (2).

Noticing: The draft Ordinance establishes the requirement to provide notice to all property owners within 300 feet of the site proposed for installation of a WECS. This was modified based upon the Planning Commission discussion on May 24, 2011.

Lot Size: Based upon input received from the Planning Commission at the May 24, 2011 meeting the minimum lot size has been modified as follows:

Lot Size.

1. *Freestanding WECS*

   a. *Freestanding WECS may be installed, subject to Planning Commission approval, on parcels zoned for single family residential use when said parcel contains not less than 20,000 square feet in net area.*

   b. *Freestanding WECS may be installed, subject to Planning Commission approval, on parcels zoned RS-2 or lower densities, including, but not limited to RL 1, RL 2.5, RL 5, and RH-R. .*

   c. *A freestanding WECS may be installed on parcels where the minimum parcel size is consistent with this Code but where the zoning is inconsistent pursuant to the following:*

      1. *All abutting parcels exceed the minimum lot size of 20,000 square feet.*

      2. *The WECS shall be removed from the parcel if an application is approved to subdivide the property to parcels sizes below 20,000 square feet as specified in this Code.*

      3. *The WECS shall be removed from the parcel if an application is approved to subdivide any abutting properties to parcels sizes bellow 20,000 square feet as specified in this Code.*

The previous draft required a minimum of 2 acres to install a WECS. The modifications to the draft Ordinance included allowing roof mounted WECS on lots of any size and states as follows:

2. *Roof mounted*

a. *Roof mounted WECS permanently attached to the roof of an approved residential structure shall have no minimum parcel size requirement, and are allowed in all single family and multi-family land use districts*

Maximum Height: The Draft Ordinance requires that roof mounted WECS meet the height restrictions set forth in the residential land use district. Therefore, the height would be limited to 35 feet.

However, section 87.0405(c) (18) allows for the maximum structure height to be increased by no more than 50 percent for wind mills subject to the approval of a Land Use Compliance Review. Since the maximum height in the residential land use districts are 35 feet, an increase of 50 percent would allow a 52.5 foot wind mill. Therefore, staff crafted the ordinance to include that increase. The Planning Commission may wish to discuss whether or not this height is appropriate and make any modifications necessary.

Design Standard: The Draft Ordinance establishes minimum design standards, which are intended to ensure that the WECS do not significantly detract from existing views. The WECS shall be painted a neutral color to blend into the surroundings and guyed wires to support free standing poles are discouraged.

The language of this section has been modified to:

Design Standards.

1. *During the Land Use Compliance Review process, each WECS shall be reviewed by the Planning Commission to ensure the WECS are installed in a manner that will not significantly detract from existing views, architectural/aesthetic compatibility, noise, effectiveness, and other potential impacts to the surrounding properties.*
2. *WECS shall be painted and maintained a neutral color to blend into the surroundings.*
3. *Monopole mounted WECS are preferred.*
4. *WECS requiring the use of guyed wires are discouraged; however, guyed wires may be permitted based upon neighborhood compatibility, subject to Planning Commission approval.*

Location: WECS must be located behind the front of the primary structure on the property. Additionally, WECS cannot be located in a required set back or easement.

Fall Zone/Setbacks: At the meeting of May 24, 2011 the Planning Commission requested that the fall zone not be included in the ordinance. The draft ordinance has removed the fall zone definition and included language under **Setbacks.**

The language regarding setbacks was modified to allow WECS to be located in the side and rear yard areas, but located behind the front of the primary structure. This will provide flexibility to use the side yard but not located in front of the primary structure.

Language was added requiring freestanding WECS to meet the setbacks of the underlying Zoning, or as required by a Final Map, Composite Development Plan, Specific Plan, Planned Development, etc.

Roof mounted WECS are discussed separately and are required to meet the setbacks of the land use district.

The Ordinance, as drafted could potentially allow for WECS on lots down to 20,000 square feet net or the residential Single Family 2 homes per acre (RS-2) The standard side yard setbacks in this designation are five (5) feet on one side and ten (10) on the other. That means that a tower could be built as close as five (5) foot to a neighboring property. At this distance there could be potential impacts to the neighbor including noise, visual aesthetics, shadows cast on property. Additionally, industry standard is at least 100% of the height of the tower. Should a special circumstance be applicable to a specific application a variance could be requested.

The draft language is as follows:

Setback Requirements.

1. *Freestanding WECS*

b. Freestanding WECS shall be located behind the front of the primary structure.

c. Freestanding WECS shall meet all setbacks as required by the Land Use District, Recorded Tract Map, Composite Development Plan, Specific Plan, Planned Development or other regulations pertaining to the property.

2. *Roof Mounted WECS*

a. All roof mounted WECS shall be mounted on structures so that the WECS meets the minimum setback required by the Land Use District, Recorded Tract Map, Composite Development Plan, Specific Plan, Planned Development or other regulations pertaining to the property.

Noise Standards: Staff modified to comply with section 87.0905(b) Noise standards. This code sections sets the noise level at 55dBA at all times.

Number of WECS Allowed: The Draft Ordinance has been revised to allow a maximum of one (1) freestanding WECS on developed properties up to five (5) acres gross. Developed properties which exceed five (5) acres and have a designation of RL 5 or larger may be allowed up to two (2) WECS.

Where the number of WECS is to be exceeded the Draft Ordinance defines that as a Wind Farm, which is subject to a Conditional Use Permit application. The Planning Commission will need to discuss the definition of a WECS, as discussed later in this staff report.

Number Permitted.

1. Freestanding WECS

a. *One (1) Freestanding WECS shall be permitted for parcels developed with single family residential structures on parcels containing between 20,000 square feet net and five (5) acres gross.*

b. *Developed properties which both exceed five (5) acres gross and are designated RL 5 or larger shall be permitted a maximum of two (2) freestanding WECS.*

c. *Freestanding WECS are prohibited on vacant, undeveloped land, unless a Conditional Use Permit is approved by the Planning Commission for a Wind Farm. Wind Farms are only allowed on properties zoned RL-5.*

2. Roof mounted WECS

a. *The maximum number of roof mounted WECS shall not exceed five (5) unless a variance requested is submitted in conjunction with the application and approved by the Planning Commission*

3. *Any additional WECS, or any WECS located on a vacant parcel, will be considered a "wind farm" and subject to the Planning Commission's review and approval of a Conditional Use Permit.*

Abandonment: The abandonment section of the draft ordinance was updated to be consistent with Municipal Code section 63.064 Substandard Properties.

Definition of WECS: The draft Ordinance defines a WECS as:

> ***Wind Energy Conversion System (WECS)****. A device(s) designed or used for the purpose of converting wind energy into electrical or mechanical power, including all interconnection and auxiliary equipment, and consists of one energy generating turbine and associated blades.*

It is important to discuss the definition to ensure that appropriate language is included in the final version of the ordinance. For example, the ordinance as drafted allows only one (1) WECS/ energy generating turbine on lots less than 5 acres gross.

The Planning Commission requested information on various systems to determine the differences and similarities between WECS that require five (5) turbines as opposed to those that only require one. Staff conducted some research and included specification sheets from several different manufacturers for different types of models.

There are a wide range of products sold by various companies. It is very difficult to generalize the information due to these differences. Many WECS proposed for single family residential use are around the 10kW range. The height and size of the turbines are directly related to the number of turbines needed to generate 10kW. Many WECS consist of one tower and one turbine. The height varies from 30-140 feet depending on the model and specific site conditions. The turbine blades vary from eight (8) foot in diameter to over 23 feet. The smaller WECS that have been presented to the Planning Commission require more turbines because the smaller size and height produces less energy. The WECS most recently presented to the Commission were 30' tall and had blades of five (5) foot diameter.

Alternatives: None recommended

Fiscal impact: N/A

Attachments:

1. Draft Ordinance
2. Draft Ordinance, changes accepted
3. Background material on wind generators
4. Section 87.0405 Permitted Structural Height Increases
5. Section 87.0905 Noise and General Plan Noise Element (included as back up with Conditional Use Permit, CUP 02-11)
6. Town of Apple Valley Code, Section 9.78 Wind Energy Systems
7. San Bernardino County Code ,Section 84.26.010
8. City of 29 Palms, page 8-4 of Ordinance 229
9. City of Hesperia, Section 16.16.063
10. City of Palmdale, Section 99.01
11. City of Lancaster, Section 17.08.335

ORDINANCE NO.

AN ORDINANCE OF THE TOWN COUNCIL OF THE TOWN OF YUCCA VALLEY, CALIFORNIA, AMENDING TITLE 8, DIVISION 4, CHAPTER 4, SECTION 84.0410 OF THE COUNTY OF SAN BERNARDINO DEVELOPMENT CODE AS ADOPTED BY THE TOWN OF YUCCA VALLEY RELATING TO WIND ENERGY CONVERSION SYSTEMS (WECS).

The Town Council of the Town of Yucca Valley, California, does ordain as follows:

SECTION 1 Code Amended

Title 8, Division 4, Chapter 4, Section 84.0410 of the San Bernardino County Development Code as adopted by the Town of Yucca Valley is hereby amended as follows:

"CHAPTER 4"

ADDITIONAL USES

SECTIONS:

84.0410 LIST OF ADDITIONAL USES.

(f) Wind Energy Conversion Systems (WECS)

1. Purpose
2. Administration
3. Definitions
4. Private, Non-commercial , WECS
5. General Requirements for the Installation of WECS

1. PURPOSE

This Chapter is intended to establish regulations and procedures for the review of any WECS proposed for installation within the Town of Yucca Valley that are not otherwise permitted or regulated in this Development Code. It is intended to provide a mechanism to take advantage of renewable, green energy while minimizing potential adverse effects on surrounding properties and infrastructure or on the public health, safety and welfare.

A. APPLICABILITY

No WECS shall be erected, placed, displayed, or maintained in any district within the Town of Yucca Valley, except as specifically allowed by this Chapter. The number, design, type and size of such WECS, as outlined in this Chapter, are intended to be minimum standards which do not necessarily ensure compatibility with building

architecture, the neighborhood, and community appearance. Therefore, in addition to these standards, consideration shall be given to a WECS relationship to the overall appearance of the subject property as well as the surrounding community. Compatible design, simplicity, ~~and~~ effectiveness, noise and other potential impacts ~~and conformance to the design guidelines provided by Section 88.0101, Single Residential Design Standards, and Commercial Design Guidelines approved by the Town Council,~~ are to be used in determining approvals.

A Land Use Compliance Review approved by the Planning Commission, as provided in Section 83.030305 of this Code shall be required prior to the installation of any and all WECS. The Commission may approve, conditionally approve, modify or deny requests for the installation of WECS. The Commission may establish conditions and limitations necessary to minimize detrimental effects on surrounding property and/or the general public.

A Land Use Compliance Review allows for review of ~~the~~ architectural/aesthetic compatibility, noise, effectiveness, and other potential impacts ~~review of structures permitted by this Code for the various zoning districts~~the WECS may create. A Land Use Compliance Review is not required if a Conditional Use Permit has been submitted and approved where the Commission has addressed the aesthetics and site design issues required under a Land Use Compliance Review.

2. ADMINISTRATION

A. Administration. The Director is authorized to administer and enforce the provisions of this Chapter, unless otherwise provided in this Chapter. The Director may designate a representative to act in his/her place.

B. Interpretation

1. This Chapter shall be interpreted in a manner which best fulfills the intent of its provisions.

2. Questions arising from the application of the Chapter shall be interpreted by the Director. If any inconsistency still exists in the interpretation, an appeal application ~~shall~~ may be referred to the Planning Commission for ~~its~~ a determination or the Director may schedule the matter for a determination by the Planning Commission.

C. Appeals

1. Any decision or determination by the Director may be appealed to the Planning Commission in accordance with the provisions of this Development Code.

2. Any decision of the Planning Commission may be appealed to the Town Council in accordance with the provisions of this Development Code.

3. DEFINITIONS

~~**Fall Zone.** The potential fall area for the wind energy conversion system. The fall area is measured by using 110 percent of the total height as the radius around the center point of the base of the tower. (Figure 1)~~

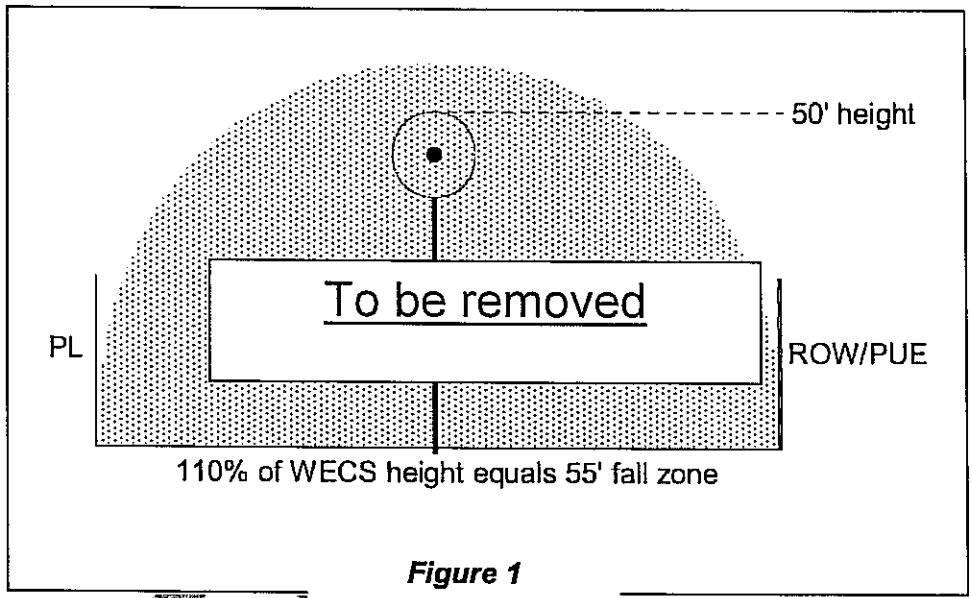


Figure 1

Height. The vertical distance from ground level to the top of the WECS, including the blade when at its highest point.

Net-Metering Service. A service to an electric consumer under which electric energy generated by that electric consumer from an eligible on-site generating facility and delivered to the local distribution facilities may be used to offset electric energy provided by the electric utility to the electric consumer during the applicable billing period. Net Metering does not allow the sale of power back to the electric company or into the wholesale electricity market.

Over-Speed Control. A mechanism used to limit the speed of blade rotation to below the safe design limits of the WECS.

Private, Non-Commercial WECS. A single WECS installed on a developed property for the purposes of providing energy for on-site consumption.

Wind Energy Conversion System (WECS). A device(s) designed or used for the purpose of converting wind energy into electrical or mechanical power, including all interconnection and auxiliary equipment, and consists of one energy generating turbine and associated blades.

Wind Farm. Multiple WECS installed at a single property or area for the purpose of generating larger quantities of electrical or mechanical power for transmission to a public or private utility or for transmission to another property.

4. PRIVATE, NON-COMMERCIAL, WECS

The installation of a private, non-commercial, WECS is permitted as an accessory use within any residential zoning designation upon approval of a Land Use Compliance Review by the Planning Commission. The Land Use Compliance Review process grants the Planning Commission authority to modify these requirements based upon neighborhood compatibility.

***A.* Lot Size.**

1. Freestanding WECS

   a. Freestanding WECS may be installed, subject to Planning Commission approval, on parcels zoned for single family residential use when said parcel contains not less than 20,000 square feet in net area. ~~Shall not be installed upon any lot or recorded parcel containing less than one-half acre (20,000 square feet net)~~

   b. Freestanding WECS may be installed, subject to Planning Commission approval, on parcels zoned RS-2 or lower densities, including, but not limited to RL 1, RL 2.5, RL 5, and RH-R. ~~Shall not be installed upon any lot or recorded parcel designated as Residential Single Family 2 units per acre (RS-2) or higher density of less than two (2) net acres in size.~~

   c. A freestanding WECS may be installed on parcels where the minimum parcel size is consistent with this Code but where the zoning is inconsistent pursuant to the following ~~Freestanding conditions of approval requiring Roof mounted residential parcel, and are allowed in all single family and multi-family land use districts~~

      1. All abutting parcels exceed the minimum lot size of 20,000 square feet.

      2. The WECS shall be removed from the parcel if an application is approved to subdivide the property to parcels sizes below 20,000 square feet as specified in this Code.

      3. The WECS shall be removed from the parcel if an application is approved to subdivide any abutting properties to parcels sizes bellow 20,000 square feet as specified in this Code.

2. Roof mounted

a. Roof mounted WECS permanently attached to the roof of an approved residential structure shall have no minimum parcel size requirement, and are allowed in all single family and multi-family land use districts

B. Setback Requirements.

1. Freestanding WECS

a. ~~The structure~~Freestanding WECS ~~must~~ shall be located behind the ~~rear of the primary structure.~~ front of the primary structure.

~~The WECS may be located in the side yard if minimum setbacks are met and the location is approved by the Planning Commission.~~

b. ~~The~~Freestanding WECS shall meet all setbacks as required by the Land Use District, Recorded Tract Map, Composite Development Plan, Specific Plan, Planned Development or other regulations pertaining to the property.

2. Roof Mounted WECS~~WECS shall be setback a distance equal to the fall zone from any property line, overhead utility lines, utility easement or right-of-way.~~

a. All roof mounted WECS shall be mounted on structures so that the ~~turbines~~WECS meets the minimum setback as required by the Land Use District, Recorded Tract Map, Composite Development Plan, Specific Plan, Planned Development or other regulations pertaining to the property.

C. Height.

1. ~~Free~~-standing WECS

a. The ~~M~~maximum height of Freestanding WECS shall not exceed 52.5 feet unless a variance is approved by the Planning Commission ~~and~~

2. Roof-~~top~~ mounted WECS

a. ~~are subject to the m~~The ~~M~~maximum height of roof mounted WECS shall not exceed 35 feet from finished grade to top of blade. The roof mounted WECS shall not ~~sit~~ be placed any higher above the roof line than ~~is~~ required for blade clearance unless a variance application is approved by the Planning Commission. ~~permitted within the applicable zoning designation.~~

***D.* Noise.** No WECS shall generate a sound level in excess of 5~~5~~0 dBA, as measured at the nearest property line~~, during the hours of 7:00 a.m. to 10:00 p.m., nor a level in excess of 40 dBA during the hours of 10:00 p.m. to 7:00 a.m.~~ at anytime except during extreme weather conditions.

***E.* Design Standards.**

1. During the Land Use Compliance Review process, each WECS shall be reviewed by the Planning Commission to ensure the WECS are installed in a manner that will not significantly detract from existing views, architectural/aesthetic compatibility, noise, effectiveness, and other potential impacts to the surrounding properties.

2. WECS ~~must consist of non-reflective materials~~shall be painted and maintained a neutral color to blend into the surroundings.

3. Monopole mounted WECS are preferred.

4. WECS requiring the use of guyed wires are discouraged; however, guyed wires may be permitted based upon neighborhood compatibility, subject to Planning Commission approval.

***F.* Net-Metering.** Private, noncommercial WECS may be net-metered with written authorization provided by the utility company.

***G.* Number Permitted.**

1. Freestanding WECS

a. ~~Only One (1)~~ Freestanding WECS shall be permitted for parcels developed with single family residential structures~~lots~~ on parcels containing between 20,000 square feet net ~~up to and~~ and five (5) acres gross.

b. Developed properties which both exceed five (5) acres gross and are designated RL 5 or larger shall be permitted a maximum of two (2) freestanding WECS.

c. Freestanding WECS are prohibited on vacant, undeveloped land, unless a Conditional Use Permit is approved by the Planning Commission for ~~a Winda~~ Wind Farm. Wind Farms are only allowed on properties zoned RL-5.

2. Roof mounted WECS

a. The maximum number of roof mounted WECS shall not exceed five (5) unless a variance requested is submitted in conjunction with the application and approved by the Planning Commission

3. Any additional WECS, or any WECS located on a vacant parcel, will be considered a "wind farm" and subject to the Planning Commission's review and approval of a Conditional Use Permit.

a. ~~Only one (1) WECS shall be permitted per developed lot..~~

~~Any additional WECS, or any WECS located on a vacant parcel, will be considered a "wind farm" and subject to the Planning Commission's review and approval of a Conditional Use Permit.~~

H. Each WECS shall be operated and maintained in sound working order in conformance with the manufacturer's specifications at all times. This maintenance shall include the physical appearance of the device so it does not significantly detract from existing views, architectural/aesthetic compatibility, noise, effectiveness, and other potential impacts to the surrounding properties.~~not present an unsightly appearance~~. A copy of the manufacturer's specifications and use instructions shall be submitted with any application for review by the Planning Commission and/or Town Council and shall be retained within the ~~public hearing~~ record/file for that application.

I. Any WECS that is not operated for a continuous period of six (6) months shall be considered abandoned, and the owner of such WECS shall remove the same within thirty (30) days of receipt of written notice from the Town notifying the owner of such abandonment. If the owner does not remove the equipment, along with all associated and ancillary equipment, devices, structures or support for that WECS, or does not request a hearing before the Planning Commission on the issue of whether the equipment is abandoned and subject to removal, the Town may declare the WECS and all ancillary equipment as a Public Nuisance in accordance with Section 63.064, Substandard Properties of the Municipal Code.~~require removal of the equipment and store it in a secure location. The owner shall have fourteen (14) days from the date the Town provides the owner with written notice of removal of the equipment and notification of the current location of equipment, to reclaim the equipment. If the equipment is not reclaimed in accordance with this section, the Town may dispose of the equipment in accordance with the Town's existing policy for disposal of abandoned or lost property.~~

~~Failure to remove an abandoned WECS within said thirty (30) days shall be grounds to remove the device at the owner's expense.~~

J. A Building Permit, issued by the Town of Yucca Valley, shall be obtained prior to the installation of a WECS system.

K. Every WECS shall be installed strictly per the Manufacturer's Installation specifications, or as modified and certified by an Engineer licensed by the State of California.

L. The Planning Commission may impose Conditions of Approval that are necessary to address health, safety, community welfare and community

aesthetic issues or concerns raised during the Land Use Compliance Review process

M. Noticing of the Land Use Compliance Review shall include all properties within ~~1,000~~300 feet of the site requesting the installation of a WECS.

N. No WECS, or associated and ancillary equipment, batteries, devices, structures or support(s) shall be located within any required front, side or rear yard setback area.

O. No non-enclosed wiring between a WECS and the main or accessory structure on site, or any associated and ancillary equipment, batteries, devices, structures or support(s) for any WECS shall be located above ground level.

P. When a WECS system is removed from a site, all associated and ancillary equipment, batteries, devices, structures or support(s) for that system shall also be removed.

5. GENERAL REQUIREMENTS FOR THE INSTALLATION OF ANY WECS

A. The safety of the design and construction of all WECS, including towers and associated equipment, shall be certified by the manufacturer or by an Engineer Licensed by the State of California.

B. Safety wires shall be installed on the turnbuckles on guy wires of guyed WECS towers.

C. All WECS towers shall be equipped with manual and automatic over-speed controls. The rotor and over-speed control design and fabrication shall conform to good engineering practices and shall be certified by the manufacturer or by an Engineer Licensed by the State of California.

D. All installations shall conform to the requirements of the latest adopted version of the National Electrical Code, adopted by the Town of Yucca Valley.

E. The compatibility of the tower structure with the rotors and others components of the WECS shall be certified by the manufacturer or by an Engineer Licensed by the State of California.

F. All WECS towers or facilities shall either have tower climbing apparatus located not closer than twelve (12) feet to the ground or be un-climbable by design for the first twelve (12) feet.

G. WECS sited on top of, or attached to and extending above the roof line of, an existing structure shall comply with all applicable provisions of the latest version of the Uniform Building Code, as adopted by the Town of Yucca Valley. Certification by an Engineer Licensed by the State of California shall be required. Any device located in such a manner shall be subject to the height limitations of the underlying zoning designation.

H. No part of a WECS tower or facility shall be located upon, within or extend over a drainage, utility or other established easement(s). No portion or part of the WECS shall be located on or over any property line(s). The base of any

WECS or the guy wire anchors of a guyed WECS tower shall not be located in any required minimum front, side or rear setback area. No such WECS shall be located between the main structure on site and any existing or planned public right-of-way.

I. Clearance between any WECS and existing or planned electrical lines shall be in compliance with the requirements of the most recently adopted edition of the National Electrical Safety Code.

J. Efforts should be made to site WECS to reduce the likelihood of blocking or reflecting television or other communications signals and from blocking established views. If signal interference occurs, the WECS owner shall make all reasonable efforts to resolve the problem. If the problem(s) cannot be eliminated or reduced to an acceptable level by the individual experiencing the interference, then the WECS owner shall shut down and remove the source of interference within thirty (30) days from the date of receiving official notice from the Town of Yucca Valley.

K. Nothing within this Chapter shall be construed to allow the infringement of the enjoyment rights of a property owner by another by the installation, maintenance or use of a WECS.

L. The owner of any WECS shall provide, as part of the submission for review by the Planning Commission of a Land Use Compliance Review, proof of liability insurance that specifically addresses the installation, use and maintenance of the WECS.

M. Homebuilt, experimental and prototype WECS shall be allowed provided they comply with all applicable regulations detailed within this Chapter.

N. The interconnections between a wind turbine and the electric utility shall be in compliance with to the most recently adopted edition of the National Electrical Safety Code and all Federal regulations. Certification shall be submitted in writing by the owner that the WECS will automatically disconnect from the utility when there is no power input from the utility.

O. Battery storage units associated with a WECS shall be in compliance with the latest adopted edition of the National Electric Code or other applicable Codes and shall be inspected by ~~an inspector for~~ the Town of Yucca Valley.

P. The safety of structural components of reconstructed or reconditioned WECS, and the compatibility of the rotors of reconstructed or reconditioned WECS, shall be certified by an Engineer Licensed by the State of California. The safety of electrical components of reconstructed or reconditioned WECS shall be certified by an Engineer Licensed by the State of California. The safety of all modifications to any WECS shall be certified by an Engineer Licensed by the State of California. Certification of safety is required before any Building Permit for a WECS is issued for modifications made prior to installation. Certification of the safety of modifications made after the WECS has been installed shall also be subject to the requirements of a Building Permit. Failure to have the safety of any modifications certified either prior to installation, or prior to use of a system modified after installation, shall result

in the revocation of the Building Permit and any discretionary approvals granted for the WECS until such certification has been obtained and provided to the Town of Yucca Valley.

SECTION 2. NOTICE OF ADOPTION. Within fifteen (15) days after the ~~adoption hereof~~adoption hereof, the Town Clerk shall certify to the adoption of this Ordinance and cause it to be published once in a newspaper of general circulation printed and published in the County and circulated in the Town pursuant to Section 36933 of the Government Code.

SECTION 3. EFFECTIVE DATE. This Ordinance shall become effective thirty (30) days from and after the date of its adoption.

APPROVED AND ADOPTED by the Town Council and signed by the Mayor attested by the Town Clerk this ____day of _____, 201_.

_____
MAYOR

ATTEST:

_____
Town Clerk

APPROVED AS TO FORM:

_____
Town Attorney

APPROVED AS TO CONTENT:

_____
Town Manager

ORDINANCE NO.

AN ORDINANCE OF THE TOWN COUNCIL OF THE TOWN OF YUCCA VALLEY, CALIFORNIA, AMENDING TITLE 8, DIVISION 4, CHAPTER 4, SECTION 84.0410 OF THE COUNTY OF SAN BERNARDINO DEVELOPMENT CODE AS ADOPTED BY THE TOWN OF YUCCA VALLEY RELATING TO WIND ENERGY CONVERSION SYSTEMS (WECS).

The Town Council of the Town of Yucca Valley, California, does ordain as follows:

SECTION 1 Code Amended

Title 8, Division 4, Chapter 4, Section 84.0410 of the San Bernardino County Development Code as adopted by the Town of Yucca Valley is hereby amended as follows:

"CHAPTER 4"

ADDITIONAL USES

SECTIONS:

84.0410 LIST OF ADDITIONAL USES.

(f) Wind Energy Conversion Systems (WECS)

1. Purpose
2. Administration
3. Definitions
4. Private, Non-commercial , WECS
5. General Requirements for the Installation of WECS

1. PURPOSE

This Chapter is intended to establish regulations and procedures for the review of any WECS proposed for installation within the Town of Yucca Valley that are not otherwise permitted or regulated in this Development Code. It is intended to provide a mechanism to take advantage of renewable, green energy while minimizing potential adverse effects on surrounding properties and infrastructure or on the public health, safety and welfare.

A. APPLICABILITY

No WECS shall be erected, placed, displayed, or maintained in any district within the Town of Yucca Valley, except as specifically allowed by this Chapter. The number, design, type and size of such WECS, as outlined in this Chapter, are intended to be minimum standards

which do not necessarily ensure compatibility with building architecture, the neighborhood, and community appearance. Therefore, in addition to these standards, consideration shall be given to a WECS relationship to the overall appearance of the subject property as well as the surrounding community. Compatible design, simplicity, effectiveness, noise and other potential impacts are to be used in determining approvals.

A Land Use Compliance Review approved by the Planning Commission, as provided in Section 83.030305 of this Code shall be required prior to the installation of any and all WECS. The Commission may approve, conditionally approve, modify or deny requests for the installation of WECS. The Commission may establish conditions and limitations necessary to minimize detrimental effects on surrounding property and/or the general public.

A Land Use Compliance Review allows for review of architectural/aesthetic compatibility, noise, effectiveness, and other potential impacts the WECS may create. A Land Use Compliance Review is not required if a Conditional Use Permit has been submitted and approved where the Commission has addressed the aesthetics and site design issues required under a Land Use Compliance Review.

2. ADMINISTRATION

A. Administration. The Director is authorized to administer and enforce the provisions of this Chapter, unless otherwise provided in this Chapter. The Director may designate a representative to act in his/her place.

B. Interpretation

1. This Chapter shall be interpreted in a manner which best fulfills the intent of its provisions.

2. Questions arising from the application of the Chapter shall be interpreted by the Director. If any inconsistency still exists in the interpretation, an appeal application may be referred to the Planning Commission for a determination or the Director may schedule the matter for a determination by the Planning Commission.

C. Appeals

1. Any decision or determination by the Director may be appealed to the Planning Commission in accordance with the provisions of this Development Code.

2. Any decision of the Planning Commission may be appealed to the Town Council in accordance with the provisions of this Development Code.

3. DEFINITIONS

Height. The vertical distance from ground level to the top of the WECS, including the blade when at its highest point.

Net-Metering Service. A service to an electric consumer under which electric energy generated by that electric consumer from an eligible on-site generating facility and delivered to the local distribution facilities may be used to offset electric energy provided by the electric utility to the electric consumer during the applicable billing period. Net Metering does not allow the sale of power back to the electric company or into the wholesale electricity market.

Over-Speed Control. A mechanism used to limit the speed of blade rotation to below the safe design limits of the WECS.

Private, Non-Commercial WECS. A single WECS installed on a developed property for the purposes of providing energy for on-site consumption.

Wind Energy Conversion System (WECS). A device(s) designed or used for the purpose of converting wind energy into electrical or mechanical power, including all interconnection and auxiliary equipment, and consists of one energy generating turbine and associated blades.

Wind Farm. Multiple WECS installed at a single property or area for the purpose of generating larger quantities of electrical or mechanical power for transmission to a public or private utility or for transmission to another property.

4. PRIVATE, NON-COMMERCIAL, WECS

The installation of a private, non-commercial, WECS is permitted as an accessory use within any residential zoning designation upon approval of a Land Use Compliance Review by the Planning Commission. The Land Use Compliance Review process grants the Planning Commission authority to modify these requirements based upon neighborhood compatibility.

A. Lot Size.

1. Freestanding WECS

   a. Freestanding WECS may be installed, subject to Planning Commission approval, on parcels zoned for single family residential use when said parcel contains not less than 20,000 square feet in net area.

   b. Freestanding WECS may be installed, subject to Planning Commission approval, on parcels zoned RS-2 or lower densities, including, but not limited to RL 1, RL 2.5, RL 5, and RH-R. .

   c. A freestanding WECS may be installed on parcels where the minimum parcel size is consistent with this Code but where the zoning is inconsistent pursuant to the following:Roof

1. All abutting parcels exceed the minimum lot size of 20,000 square feet.

2. The WECS shall be removed from the parcel if an application is approved to subdivide the property to parcels sizes below 20,000 square feet as specified in this Code.

3. The WECS shall be removed from the parcel if an application is approved to subdivide any abutting properties to parcels sizes bellow 20,000 square feet as specified in this Code.

2. Roof mounted

   a. Roof mounted WECS permanently attached to the roof of an approved residential structure shall have no minimum parcel size requirement and are allowed in all single family and multi-family land use districts

B. Setback Requirements.

1. Freestanding WECS

   a. Freestanding WECS shall be located behind the front of the primary structure.

   b. Freestanding WECS shall meet all setbacks as required by the Land Use District, Recorded Tract Map, Composite Development Plan, Specific Plan, Planned Development or other regulations pertaining to the property.

2. Roof Mounted WECS

   a. All roof mounted WECS shall be mounted on structures so that the WECS meets the minimum setback required by the Land Use District, Recorded Tract Map, Composite Development Plan, Specific Plan, Planned Development or other regulations pertaining to the property.

C. Height.

1. Freestanding WECS

   a. The maximum height of Freestanding WECS shall not exceed 52.5 feet unless a variance is approved by the Planning Commission

2. Roof mounted WECS

a. The maximum height of roof mounted WECS shall not exceed 35 feet from finished grade to top of blade. The roof mounted WECS shall not be placed any higher above the roof line than required for blade clearance unless a variance application is approved by the Planning Commission.

***D.* Noise.** No WECS shall generate a sound level in excess of 55 dBA, as measured at the nearest property line at anytime except during extreme weather conditions.

***E.* Design Standards.**

1. During the Land Use Compliance Review process, each WECS shall be reviewed by the Planning Commission to ensure the WECS are installed in a manner that will not significantly detract from existing views, architectural/aesthetic compatibility, noise, effectiveness, and other potential impacts to the surrounding properties.

2. WECS shall be painted and maintained a neutral color to blend into the surroundings.

3. Monopole mounted WECS are preferred.

4. WECS requiring the use of guyed wires are discouraged; however, guyed wires may be permitted based upon neighborhood compatibility, subject to Planning Commission approval.

***F.* Net-Metering.** Private, noncommercial WECS may be net-metered with written authorization provided by the utility company.

***G.* Number Permitted.**

1. Freestanding WECS

a. One (1) Freestanding WECS shall be permitted for parcels developed with single family residential structures on parcels containing between 20,000 square feet net and five (5) acres gross.

b. Developed properties which both exceed five (5) acres gross and are designated RL 5 or larger shall be permitted a maximum of two (2) freestanding WECS.

c. Freestanding WECS are prohibited on vacant, undeveloped land, unless a Conditional Use Permit is approved by the Planning Commission for a Wind Farm. Wind Farms are only allowed on properties zoned RL-5.

2. Roof mounted WECS

a. The maximum number of roof mounted WECS shall not exceed five (5) unless a variance requested is submitted in conjunction with the application and approved by the Planning Commission

3. Any additional WECS, or any WECS located on a vacant parcel, will be considered a "wind farm" and subject to the Planning Commission's review and approval of a Conditional Use Permit.

a.

H. Each WECS shall be operated and maintained in sound working order in conformance with the manufacturer's specifications at all times. This maintenance shall include the physical appearance of the device so it does not significantly detract from existing views, architectural/aesthetic compatibility, noise, effectiveness, and other potential impacts to the surrounding properties.. A copy of the manufacturer's specifications and use instructions shall be submitted with any application for review by the Planning Commission and/or Town Council and shall be retained within the record/file for that application.

I. Any WECS that is not operated for a continuous period of six (6) months shall be considered abandoned, and the owner of such WECS shall remove the same within thirty (30) days of receipt of written notice from the Town notifying the owner of such abandonment. If the owner does not remove the equipment, along with all associated and ancillary equipment, devices, structures or support for that WECS, or does not request a hearing before the Planning Commission on the issue of whether the equipment is abandoned and subject to removal, the Town may declare the WECS and all ancillary equipment as a Public Nuisance in accordance with Section 63.064, Substandard Properties of the Municipal Code.

J. A Building Permit, issued by the Town of Yucca Valley, shall be obtained prior to the installation of a WECS system.

K. Every WECS shall be installed strictly per the Manufacturer's Installation specifications, or as modified and certified by an Engineer licensed by the State of California.

L. The Planning Commission may impose Conditions of Approval that are necessary to address health, safety, community welfare and community aesthetic issues or concerns raised during the Land Use Compliance Review process

M. Noticing of the Land Use Compliance Review shall include all properties within 300 feet of the site requesting the installation of a WECS.

N. No WECS, or associated and ancillary equipment, batteries, devices, structures or support(s) shall be located within any required front, side or rear yard setback area.

O. No non-enclosed wiring between a WECS and the main or accessory structure on site, or any associated and ancillary equipment, batteries, devices, structures or support(s) for any WECS, shall be located above ground level.

P. When a WECS system is removed from a site, all associated and ancillary equipment, batteries, devices, structures or support(s) for that system shall also be removed.

5. GENERAL REQUIREMENTS FOR THE INSTALLATION OF ANY WECS

A. The safety of the design and construction of all WECS, including towers and associated equipment, shall be certified by the manufacturer or by an Engineer Licensed by the State of California.

B. Safety wires shall be installed on the turnbuckles on guy wires of guyed WECS towers.

C. All WECS towers shall be equipped with manual and automatic over-speed controls. The rotor and over-speed control design and fabrication shall conform to good engineering practices and shall be certified by the manufacturer or by an Engineer Licensed by the State of California.

D. All installations shall conform to the requirements of the latest adopted version of the National Electrical Code, adopted by the Town of Yucca Valley.

E. The compatibility of the tower structure with the rotors and other components of the WECS shall be certified by the manufacturer or by an Engineer Licensed by the State of California.

F. All WECS towers or facilities shall either have tower climbing apparatus located not closer than twelve (12) feet to the ground or be un-climbable by design for the first twelve (12) feet.

G. WECS sited on top of, or attached to and extending above the roof line of, an existing structure shall comply with all applicable provisions of the latest version of the Uniform Building Code, as adopted by the Town of Yucca Valley. Certification by an Engineer Licensed by the State of California shall be required. Any device located in such a manner shall be subject to the height limitations of the underlying zoning designation.

H. No part of a WECS tower or facility shall be located upon, within or extend over a drainage, utility or other established easement(s). No portion or part of the WECS shall be located on or over any property line(s). The base of any WECS or the guy wire anchors of a guyed WECS tower shall not be located in any required minimum front, side or rear setback area. No such WECS shall be located between the main structure on site and any existing or planned public right-of-way.

I. Clearance between any WECS and existing or planned electrical lines shall be in compliance with the requirements of the most recently adopted edition of the National Electrical Safety Code.

J. Efforts should be made to site WECS to reduce the likelihood of blocking or reflecting television or other communications signals and from blocking established views. If signal interference occurs, the WECS owner shall make all reasonable efforts to resolve the problem. If the problem(s) cannot be eliminated or reduced to an acceptable level by the individual experiencing the interference, then the WECS owner shall shut down and remove the source of interference within thirty (30) days from the date of receiving official notice from the Town of Yucca Valley.

K. Nothing within this Chapter shall be construed to allow the infringement of the enjoyment rights of a property owner by another by the installation, maintenance or use of a WECS.

L. The owner of any WECS shall provide, as part of the submission for review by the Planning Commission of a Land Use Compliance Review, proof of liability insurance that specifically addresses the installation, use and maintenance of the WECS.

M. Homebuilt, experimental and prototype WECS shall be allowed provided they comply with all applicable regulations detailed within this Chapter.

N. The interconnections between a wind turbine and the electric utility shall be in compliance with the most recently adopted edition of the National Electrical Safety Code and all Federal regulations. Certification shall be submitted in writing by the owner that the WECS will automatically disconnect from the utility when there is no power input from the utility.

O. Battery storage units associated with a WECS shall be in compliance with the latest adopted edition of the National Electric Code or other applicable Codes and shall be inspected by the Town of Yucca Valley.

P. The safety of structural components of reconstructed or reconditioned WECS, and the compatibility of the rotors of reconstructed or reconditioned WECS, shall be certified by an Engineer Licensed by the State of California. The safety of electrical components of reconstructed or reconditioned WECS shall be certified by an Engineer Licensed by the State of California. The safety of all modifications to any WECS shall be certified by an Engineer Licensed by the State of California. Certification of safety is required before any Building Permit for a WECS is issued for modifications made prior to installation. Certification of the safety of modifications made after the WECS has been installed shall also be subject to the requirements of a Building Permit. Failure to have the safety of any modifications certified either prior to installation, or prior to use of a system modified after installation, shall result in the revocation of the Building Permit and any discretionary approvals granted for the WECS until such certification has been obtained and provided to the Town of Yucca Valley.

SECTION 2. NOTICE OF ADOPTION. Within fifteen (15) days after the adoption hereof, the Town Clerk shall certify to the adoption of this Ordinance and cause it to be published once in a newspaper of general circulation printed and published in the County and circulated in the Town pursuant to Section 36933 of the Government Code.

SECTION 3. EFFECTIVE DATE. This Ordinance shall become effective thirty (30) days from and after the date of its adoption.

APPROVED AND ADOPTED by the Town Council and signed by the Mayor attested by the Town Clerk this ____day of _____, 2011._____

MAYOR

ATTEST:

_____

Town Clerk

APPROVED AS TO FORM:

_____

Town Attorney

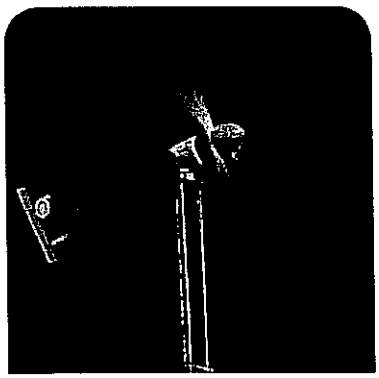
APPROVED AS TO CONTENT:

_____

Town Manager

AWEA AMERICAN WIND ENERGY ASSOCIATION

FAQ for Small Wind Systems



FOR MORE INFORMATION, PLEASE CONTACT:

Ron Stimmel
Small Wind Advocate

rstimmel@awea.org
202-383-2546

For a complete list of AWEA member equipment providers see: www.awea.org/smallwind /smsyslst.html

General Information about Small Wind Systems

Small Wind Turbines are electric generators that use the energy of the wind to produce clean, emissions-free power for individual homes, farms, and small businesses. With this simple and increasingly popular technology, individuals can generate their own power and cut their energy bills while helping to protect the environment. Unlike utility-scale turbines, small turbines can be suitable for use on properties as small as one acre of land in most areas of the country.

What size turbine is needed to power an entire home? On average, a typical American home would require a small turbine with a 5-kilowatt (kW) generating capacity to meet all its electricity needs. A machine of this size has a diameter of approximately 18 feet. The exact size needed to power a home, however, can range from 2 kW to 10 kW (12-25 ft. diameter) based on a home's energy use, average wind speeds, and the turbine's height above ground (which affects its productivity).

How tall are they? The average height of a small wind turbine (of any capacity) is about 80ft. (about twice the height of a neighborhood telephone pole), with a range of 30-140 ft. Generator size and tower height are not generally related; a 5-kW turbine could be on a tower anywhere from 30-140 ft. in height, for example.

What is the average payback period? The length of the payback period depends on the turbine, the quality of wind at the installation site, prevailing electricity rates, and available financing and incentives. Depending on these and other factors, the time it takes to fully recover the cost of a small wind turbine can take anywhere from 6 to 30 years.

How much do they cost? The purchase and installation of a system large enough to power an entire home costs, on average, $30,000, but the price can range from $10,000 to $70,000 depending on system size, height, and installation expenses. The purchase and installation of very small (<1 kW) off-grid turbines generally cost $4,000 to $9,000, and a 100-kW turbine can cost $350,000. The federal government and many states have rebate or tax credit programs in place to encourage investment in small wind (see http://dsireusa.org).

What happens when the wind does not blow? For grid-connected systems, the user will not notice a difference when the wind is not blowing. The utility provides electricity when the wind does not blow, and any extra electricity the turbine generates is sent back to the utility system to be used by a neighbor. Off-grid turbines store power in batteries for on-demand use and are often complemented by solar electric panels to provide more consistent generation.

Do I need to take wind measurements? Taking detailed measurements to gauge your wind resource is usually unnecessary. Individual installers/dealers or manufacturers can determine whether your property is suitable for a system by inspecting the surrounding area.

Continued...

AWEA AMERICAN WIND ENERGY ASSOCIATION

FAQ for Small Wind Systems

How much land and wind are required? Will my town let me install a turbine?

Installers recommend sites with average wind speeds of at least 12 mph, but specific land requirements vary from place to place. Zoning codes sometimes impose a minimum requirement on lot size or on the distance a turbine may be placed from a property line, and may vary depending on the height of the proposed turbine. Also, it is essential to have a site with unobstructed access to winds, which most often requires higher towers, larger land lots, and non-urban locations. Currently, less than 1% of all small wind turbines are used in urban applications partly due to zoning restrictions, but mostly because wind quality is much poorer in densely built environments. Contact your turbine factory dealer or see AWEA small-wind permitting guide at www.awea.org/smallwind for help navigating the permitting process.

How does the rated capacity of a small wind system compare to its actual performance?

Rated capacity indicates the rate of energy production at a given wind speed, so the answer depends on wind speed - and the turbine. A more accurate indicator of energy production, however, is blade length. A 5-kW turbine (average residential size, 18ft. rotor diameter) produces around 10,000 kWh per year in 12-mph average winds, which is about 100% of what an average U.S. home requires. At the larger end of the spectrum, a 100-kW turbine (60ft. diameter) in these conditions will generate around 250,000 kWh per year.

Are batteries or other storage needed?

For very small systems, yes, but not for residential-scale turbines or larger. There are two types of systems: those connected to the electricity grid ("on-grid") and those used off-grid for battery charging or backup power. Most systems sold today are off-grid, but demand is rising for on-grid systems which essentially use the grid as a "battery": when the wind blows, the owner uses electricity from the turbine; when winds are low and consumption is high, the owner uses electricity from the grid. A small wind turbine is more commonly used in conjunction with solar photovoltaic technology than it is with a battery storage system.

How are small wind systems maintained?

Routine inspections are performed once every few years of a turbine's 20+-year lifespan. A professional installer or trained technician (usually the manufacturer or dealer that sold the turbine) maintains the turbine and tower through physical inspections, though some turbines can be monitored remotely from a home computer.

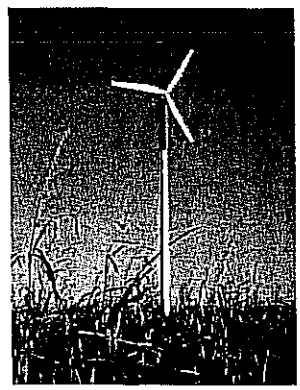
How can I advocate for good policies?

AWEA, our members, and our allies actively engage state and federal lawmakers to promote good policies for small wind, such as tax credits, streamlined zoning and permitting, net metering, and standardized grid interconnection rules. Grassroots activism is a key component of our efforts. To join, visit the following links:
www.awea.org/legislative/grassroots_activities.html
www.awea.org/smallwind/toolbox2/drawer_2_promotion.html

Where can I go for more information?

The American Wind Energy Association has a toolbox of information on its Web site for people interested in installing a small wind system at www.awea.org/smallwind. On this site, you can find advice from an expert, some state-specific information about buying and installing a small wind turbine, success stories, technical information, and much more.

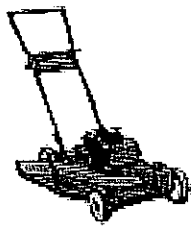
Also see "Wind Turbine Buyer's Guide" by Mick Sagrillo and Ian Woofenden in *Home Power* magazine (June/July 2007) http://www.homepower.com/view/?file=HP131_pg38_Sagrillo.



Photos courtesy of Bergey Windpower and Michael Meremin, Beach Haven, NJ

140 DECIBELS
Immediate danger to hearing
Gunshot Jet at take-off

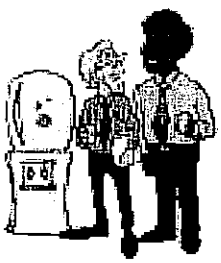
125 DECIBELS
Pain threshold
Air raid siren Firecracker



90 DECIBELS
Risk of hearing damage in 8 hours
Lawn mower Truck traffic

85 DECIBELS
Beginning of OSHA regulations

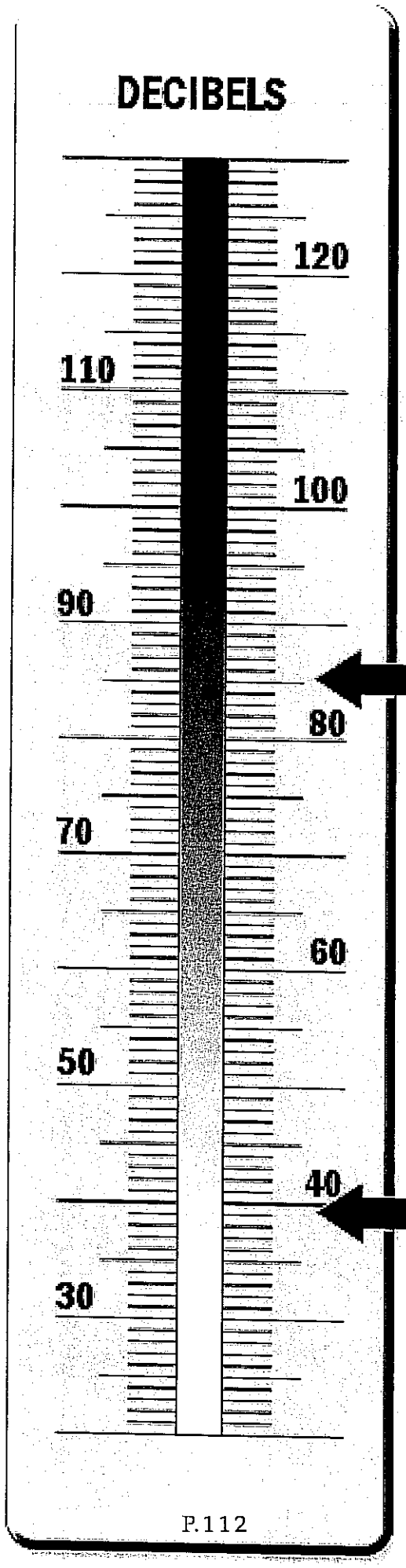
70 DECIBELS
Vacuum cleaner

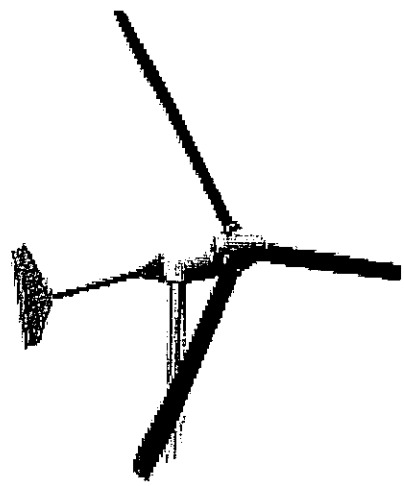


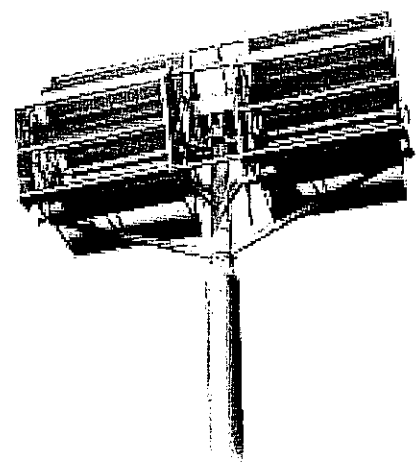
60 DECIBELS
Normal speech

40 DECIBELS
Library

30 DECIBELS
Faint sound,
Whisper







Testimonials.

"I installed my Bergey 10 kW in 2001. I haven't paid an electric bill since and the turbine has paid for itself. It's the best investment I ever made." **G. Sansone, Oak Hills, CA**

"I replaced a broken Whirlwind Power turbine with a Bergey 10 kW in 1988. I should have bought the Bergey in the first place."
R. Bohl, Phillipburg KS

"My first Bergey 10 kW installation has operated for over 26 years with insignificant maintenance costs and has had a 100% availability factor. It couldn't be more reliable."
S. Chase, Shokan NY.

"I made a big mistake when I used a Chinese turbine with an American sounding name. It just didn't hold up. What a difference in the Bergey equipment." **S. Jackson, Chico, CA**

Specifications.

- Reference Rated Power: 10 kW.
- AWEA Rated Power: 8.2 kW at 25mph.
- AWEA Rated Annual Energy: 13,200 kWh at 11 mph average.
- AWEA Rated Sound Level: 54.7 dBA.
- Cut-in Wind Speed: 5 mph.
- Cut-out Wind Speed: none.
- Peak Power: 12.5 kW at 28 mph.
- Max. Design Wind Speed: 135 mph.
- Design Operating Life: 30-50 years.
- Turbine Rotor Diameter: 23 ft.

Buying a Bergey turbine.
The best candidates for a Bergey 10 kW wind turbine are those with a residential or commercial property of at least 1 acre, an electric bill averaging over $150 per month, and a wind resource of at least 10 mph. Each project is a little different so a site survey and quotation are necessary. The typical steps in buying a Bergey wind turbine are:

1. Contact a local Bergey dealer. For assistance, see the Dealer Lists page at www.bergey.com.

2. Purchase a site survey from the dealer. Following the survey you will receive a quotation and a projection of performance and payback.

3. Purchase the system. Your Bergey dealer will apply for the necessary permits and available rebates, contact your utility company, get your Bergey wind equipment shipped, and provide you with a preliminary schedule for the work at your home or business.

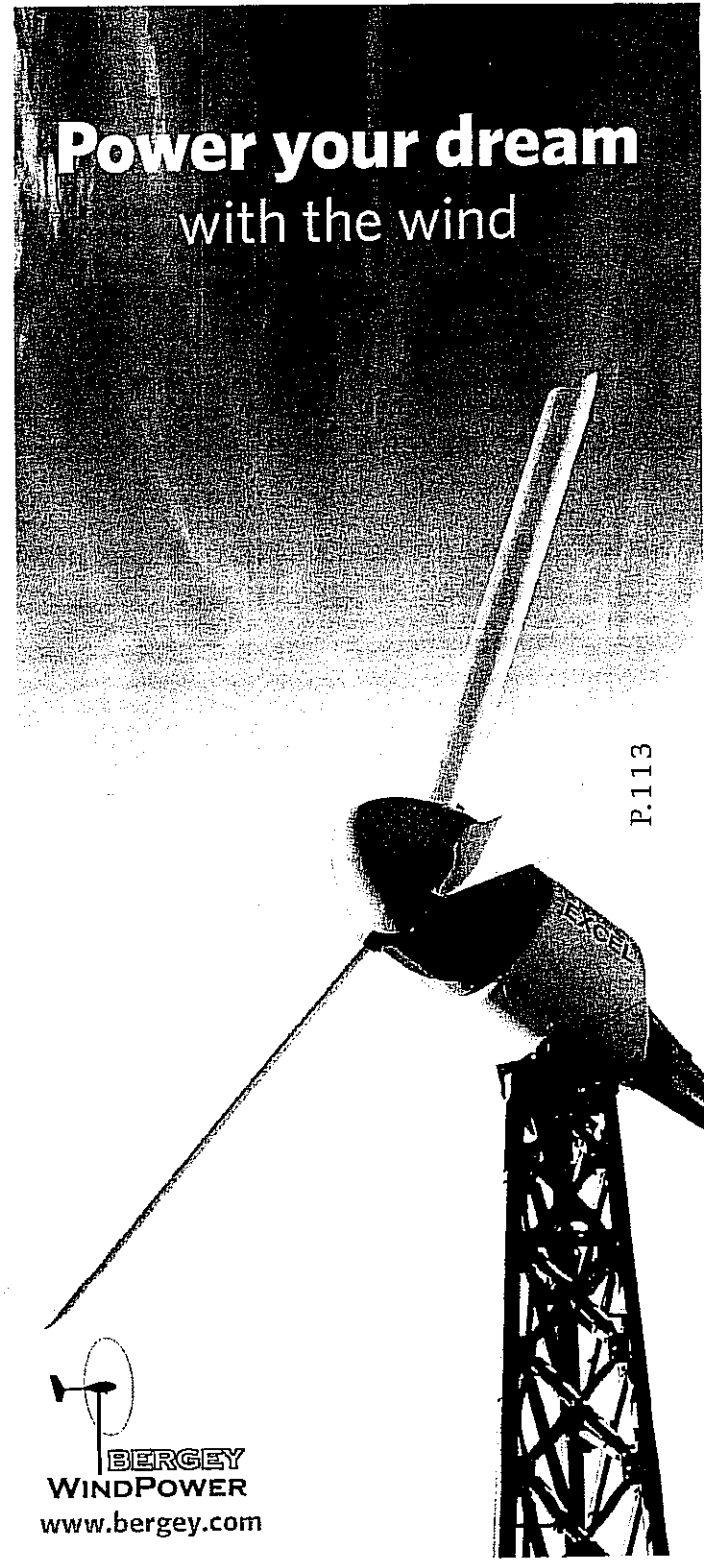
4. Once the permits and equipment are in hand, your Bergey dealer will schedule your installation. This will involve several visits for foundations, wiring, and turbine installation.

Typically, getting the permits to install the 80 - 140 ft towers we recommend is the biggest obstacle you and your BWC dealer will face. Few cities or counties have ordinances that favor small wind turbines.

For information on the permitting issues we recommend the AWEA guide available at:
www.awea.org/smallwind/pdf/InThePublicInterest.pdf

You will also find additional information at:
www.bergey.com

Power your dream
with the wind



BERGEY
WINDPOWER
www.bergey.com

P.113

Why buy a small wind system?

A Bergey wind turbine is a smart investment that will lower your monthly expenses, increase your net worth, and help support American manufacturing jobs. At the same time it will help clean the air, slow climate change, and move us towards energy independence.

You will also enjoy watching your utility meter turn backwards and the lively interaction between the wind and your Bergey turbine. Finally, it will totally change your view of wind – you will start appreciating windy days.

For those fortunate enough to have a windy site of at least one acre, a Bergey wind system will be substantially less expensive than a comparable solar system, it will take up less space, and its performance won't degrade over time.

It's like buying vs. renting a home.

Over the next 10 years a typical homeowner or small business will pay $18,000 to over $50,000 in electric bills, at rates that often increase faster than inflation. When you choose a Bergey wind system you take the same monthly expense and invest it in a tangible asset. Once your Bergey turbine is paid off, you will enjoy more money in your pocket every month for the next 20 – 40 years.

A Bergey wind turbine is an excellent investment. It will typically provide a rate of return of 6% - 25%, much better than traditional investments.

Tax credits and rebates make it affordable.

Small wind turbines qualify for a 30% federal tax credit and, for businesses, accelerated depreciation. USDA grants are available for farmers, ranchers, and rural businesses. Many states offer additional incentives (see www.dsireusa.org). These incentives make owning a Bergey wind turbine surprisingly affordable.

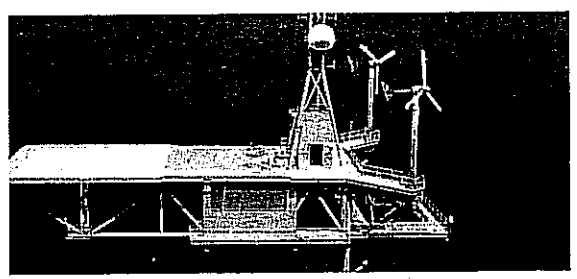
Why a Bergey wind turbine?

Bergey Windpower is the oldest and most experienced manufacturer of residential-sized wind turbines in the world. Thirty years ago Bergey pioneered the radically-simple "Bergey design" that has proven to provide the best reliability, performance, service life, and value of all of the hundreds of competitive products that have come and gone in that time. With only three moving parts and no scheduled maintenance necessary, the Bergey 10 kW has compiled a service record that no other wind turbine can match. We back it up with the longest warranty in the industry.

There are now many new small wind products on the market. Though sometimes heavily promoted, these new entrants lack the track record that provides confidence as a sound investment. Over the years Bergey wind turbines have often replaced unsuccessful competitive products. The bottom line is that wind turbines are a big investment, and Bergey is the wise choice.

Bergey turbines are simple, but they also incorporate sophisticated technology that has been refined over more than a quarter-century. From its custom airfoil to its "super magnet" low speed alternator to its custom inverter, there's no more advanced technology in the industry. The result is exceptional low wind speed performance, robust storm protection, and almost silent operation.

Finally, Bergey offers more tower options than any other small turbine manufacturer. We have Guyed-Lattice, Self-Supporting Lattice, Tubular Self-Supporting, and Guyed Tilt-up Lattice towers in heights from 60 ft to 160 ft.



Bergeys are built on strong basics:

Simplicity:
The only moving parts are the parts you see moving.

Reliability:
Developed in "Tornado Alley", proven in critical military applications, and backed by our exclusive 10-year warranty.

Performance:
Low start-up(5 mph), continuous operation in high winds, and extremely quiet.

Our technology makes it happen!

PowerFlex Blades
Our exclusive "full length reinforcement" fiberglass blades are stronger than steel and the strongest in the industry.

BW-7 Airfoil
Our custom designed airfoil (blade shape) is quieter and more efficient than the "catalog airfoils" others use.

Neo-10 Alternator
Our custom designed very-low-speed "super magnet" alternator also serves as the blade mounting hub, integrating what are typically two seperate assemblies.

AutoFurl Storm Protection
Our uniquely simple passive, fully automatic, high wind protection is hurricane proven.

Powersync II Inverter
Our custom designed third-generation power converter is UL-certified and extremely rugged.

ET 7.5 Three phase, High Voltage Wind Turbine

Wind Turbines:
Wind Turbines from Earth-Tech Energy Systems are second to none when it comes to quality, performance and payback on your investment. Our wind turbines are high voltage, three phase turbines which are three times more powerful than the old standard single phase turbines. That means three times more output and three times faster payback on your investment. We use the highest quality stainless steel components treated with long lasting rust protection and greased using high grade lithium grease which means our turbines are virtually maintenance free. These high efficiency turbines start in lower wind speeds than older style single phase turbines and also perform at their peak in lower wind speeds. Battery back up for emergency power and buffering the system is included with our package, not an option like other grid tie systems. Our wind turbines come standard with a 15 year warranty.

Grid Tie Inverters
Our inverters are manufactured by Xantrex, the leading manufacturer of advanced power electronics for renewable energy. Grid-Interactive renewable energy systems enable you to demonstrate your personal commitment to a renewable energy future. With the Xantrex XW grid-interactive system, backup AC power is made available 24 hours a day in the event of a utility outage, providing reliable power and peace-of-mind. At night, the inverter's automatic power save mode ensures that energy is not wasted by needlessly charging your batteries from the utility grid. An average conversion efficiency of 93% using the California Energy Commission (CEC) test protocol provides greater savings and a shorter time period for system payback.

Controller
Our controller is state of the art and the only controller on the market that is blending the high voltage, high efficiency turbines with solar power. We are proud to be leading the way in hybrid technology. All grid interactive components are UL approved with GFI protection, Island protection and surge protection to meet grid tie requirements.

ET 7.5 WIND TURBINE SPECIFICATIONS

Rotor Diameter	18 Feet
Blade Material / Number of blades	Fiberglass – 3 Blades
Rated Power / Maximum Power	7000 watts
Rated Wind Speed	22 mph
Start Up Wind Speed	5.5 mph
Working Wind Speed	6.5 to 55 mph
Maximum Wind Speed (Survival Speed)	110 mph
Rotator Speed	300 rpm
Working Voltage	DC48V/120V/240V/300V/350V
Generator Style	Three phase, permanent magnet
Charging Method	Constant Voltage, current saving
Speed Regulation Method	Yaw, Auto brake
Weight	780 lbs
Tower height	40 feet
Suggested battery capacity	12 V Deep cycle gel batteries
Lifetime	20 years
Maintenance	None for 5 yrs then grease collar every 5 yrs
Generator Construction	Stainless Steel, lifetime rust protection

ACOUSTIC TESTS OF SMALL WIND TURBINES*§

P. Migliore, J. van Dam and A. Huskey

National Renewable Energy Laboratory, National Wind Technology Center
1617 Cole Boulevard, Golden, Colorado 80401, USA
paul_migliore@nrel.gov; jeroen_van_dam@nrel.gov; arlinda_huskey@nrel.gov

ABSTRACT

Eight small wind turbines ranging from 400 watts to 100 kW in rated power were tested for acoustic emissions at the U.S. Department of Energy's National Renewable Energy Laboratory. Rigorous test procedures based on international standards were followed for measurements and data analyses. Results are presented in the form of sound pressure level versus wind speed, where the sound was recorded downwind of the turbine at a distance equal to the hub height plus half the rotor diameter. When there was sufficient separation between wind turbine noise and background noise, the apparent sound power level was calculated. In several cases, this was not possible. The implications of this problem are discussed briefly. Some of the configurations tested were specifically developed to reduce the noise level of their predecessors. Test data for these machines demonstrate marked progress toward quieter turbines.

INTRODUCTION

Until recently, wind turbine manufacturers and operators were challenged by the tasks of keeping machines operating reliably and improving energy capture. Although dramatic improvements have been made in both areas, there have been occasions when acoustic emissions proved so vexing they overshadowed performance and reliability issues. For example, some wind turbines suffer an unfavorable reputation for noise problems associated with high tip speeds, furling, or blade flutter. The U.S. Department of Energy (DOE) and its National Renewable Energy Laboratory (NREL) are engaged in several turbine research and demonstration projects focused on reducing the cost of energy at low wind speed sites. Recent analyses have shown that this effort, if successful, will lead to the installation of wind turbines in large numbers. In this circumstance, it is essential that the turbines available for deployment are quiet. This suggests there should be an effort by NREL to measure the acoustic signature of existing turbines and work diligently to reduce (below the state of the art) the signatures of new turbines being developed. Coincidentally, with recent energy shortages and the ensuing statewide deployment incentives, there is resurgent interest in small wind turbines for distributed generation. Because of the potential for installation near residences, noise may be even more important for small turbines than for large turbines installed in wind power plants.

Because small wind turbines are sold in large numbers and located close to people, there is a need for reliable noise data. If it was available, homeowners and local authorities could use the information to develop expectations regarding noise production before the turbines are actually installed. Furthermore, based on field test observations and the influence of the parameters investigated, improvements to the turbines might be made with relative ease and low cost.

As part of its aeroacoustic research program, NREL performed acoustic tests [1] on eight small wind turbines with power ratings from 400 W to 100 kW. The goals of these tests were to develop a database of acoustic signatures to compare new and existing turbines and to establish targets for low-noise rotors. Test results will be documented and disseminated in the form of NREL reports, technical papers, seminars, and colloquia. This is part of broader effort to support the U.S. wind industry in applying rational acoustic-design principles to the development and deployment of advanced wind turbines.

Tests were conducted on two Bergey ***Excel*** and one ***XL.1*** turbines, one Southwest Windpower ***Whisper H40*** and two ***AIR*** turbines, an Atlantic Orient Corporation ***AOC 15/50***, and a Northern Power Systems ***North Wind 100***. In some cases, more than one configuration was tested to demonstrate noise reduction techniques. Measurements were made according to procedures described in the International Electrotechnical Commission (IEC) standard for acoustic noise measurement techniques [2] with minor modifications that were necessary for small turbines. In addition to the acoustic signals, wind speed and direction, turbine power and rotor speed were measured. In this paper, results are

* This work was performed at the National Renewable Energy Laboratory in support of the U.S. Department of Energy under Contract No. DE-AC36-99GO10337.

presented as sound pressure level and apparent sound power level for several wind speeds of interest. In the NREL report [1], noise spectra of sound pressure level versus imission[1] frequency are also provided.

MEASUREMENTS AND DATA ANALYSES

Acoustic tests were conducted at the National Wind Technology Center (NWTC) near Boulder, Colorado. The site is located in somewhat complex terrain at an approximate elevation of 1850 m above sea level. The soil is covered with grassy vegetation and measurements indicate that the roughness length is approximately 0.05 m. A gravel mine and concrete plant to the west are the main sources of background noise, although passing automobiles and airplanes also contribute. The prevailing wind direction is 292° relative to true north.

Data were collected and analyzed according to the IEC standard [2] and NREL's quality assurance system [3] where possible. A reference microphone was located downwind of the turbine at a distance equal to the hub height plus half the rotor diameter. The microphone was placed on a circular plywood ground board that is one meter in diameter and 13 mm thick. The ground board was placed on a flat surface with no cavities beneath and the edges of the board were covered with dirt. Three additional microphones and ground boards were placed around some turbines for special tests. For this study, only data from the reference microphone were considered.

Wind speeds of 6–10 m/s were measured, although measurements were taken outside this range for some turbines. Data were obtained for both the operating and parked conditions to allow correction for background noise. In circumstances of intrusive background noise, such as airplanes, automobiles or animals, the test data were discarded.

In addition to the acoustic pressures, wind speed and direction were measured. Both were essential to the subsequent analysis, and particular importance is assigned to having the reference microphone downwind of the turbine. For some tests, rotor speed and power were also measured with the expectation that these data might provide insight regarding noise-generating mechanisms.

Acoustic data were recorded on an 8-channel digital audiotape (DAT). All other data were recorded on a digital data logger. The analog microphone signals were recorded (digitally) on the DAT and then played back as analog inputs to a signal analyzer. Depending on the desired averaging period, either 1-minute or 10-second average sound pressure[2] levels were calculated. Although the IEC standard prescribes 1-minute averages, 10-second averages seem to reflect the system dynamics better for small turbines. The sound pressure levels were synchronized with the averages of the other data channels, and the average wind speed was determined for each data point then normalized to standardized conditions.

The wind speed standardization equation takes the wind speed measured at any height and roughness length and normalizes it to a "standardized" height of 10 m and a roughness length of 0.05 m. The formula used for this transformation is given in Equation (1).

$$V_s = V_z \cdot [\ln (10/0.05) \ln (H/z_0) \div \ln (H/0.05) \ln (z/z_0)] \quad (1)$$

where,

V_s	is the standardized wind speed (m/s)
V_z	is the wind speed (m/s) measured at height z
H	is the rotor center height (m)
z_0	is the roughness length of the test site (m)
z	is the wind speed measurement height (m)

Noise measurements for the operating wind turbine (wind turbine plus background noise) are correlated with background-only noise measurements at standardized wind speeds. The noise measurements are then corrected for background noise using Equation (2).

$$L_s = 10 \cdot \log [10^{(Ls+n/10)} - 10^{(Ln/10)}] \quad (2)$$

where,

[1] In the study of acoustics, the term "imission" refers to the noise level perceived by an observer at a receptor location. This is in contradistinction to the term "emission" which means 'something sent forth by emitting' and refers to the strength of the acoustic source.

[2] Sound is characterized by small pressure fluctuations overlaying atmospheric pressure, but the human ear does not respond linearly to the amplitude of sound pressure [4]. Doubling the amplitude produces the sensation of louder noise, but it seems far less than twice as loud. For this reason, the scale used to characterize sound pressure amplitudes is logarithmic, which is an approximation of the actual response of the human ear. The definition of sound pressure level L_p is

$L_p = 10 \cdot \log [\, p^2 \div p^2_{ref}]$ expressed in decibels, dB,

where p is the root mean square sound pressure and p_{ref} has a value of $2 \cdot 10^{-5}$ Pa corresponding to the weakest audible sound – the threshold of human hearing – at a frequency of 1000 Hz.

L_s is the equivalent sound pressure level (dB) of the wind turbine operating alone

L_{s+n} is the equivalent sound pressure level (dB) of wind turbine plus background noise

L_n is the equivalent sound pressure level (dB) of the background noise

The background-corrected sound pressure level of the wind turbine is translated into sound power[3] level using Equation (3). The 6 dB constant accounts for the approximate doubling of sound pressure that occurs for microphone measurements on a ground board [2].

$$L_{WA} = L_{Aeq,c} - 6 + 10 \cdot \log [4\pi R_1^2/S_0] \quad (3)$$

where,

L_{WA} is the background-corrected A-weighted[4] apparent sound power level of the turbine, dB(A)

$L_{Aeq,c}$ is the background-corrected A-weighted sound pressure level determined from analysis of multiple data pairs as described below, dB(A)

R_1 is the slant distance, in meters, between the microphone and the rotor center

S_0 is the reference area, $S_0 = 1\ m^2$

In practice, Equation (2) is not applied to individual data points. Instead, a large amount of data is accumulated and calculations are based on trends or averages. A linear regression is used to fit a straight line through the measured sound pressure level data for the operating wind turbine between the standardized wind speeds of 6 and 10 m/s. The process is repeated for background noise measurements. Then, the background-corrected sound pressure level is determined for a particular wind speed by subtracting the two results using Equation (2). However, according to the IEC Standard [2], if the difference in sound pressure level between the operating wind turbine and the background noise is less than 6 dB, the data may not be used for determination of the sound power level at that wind speed. If the difference is at least 6 dB, the sound power level for the turbine is calculated from Equation (3).

A second method for calculating sound power level was used in some cases. All of the acoustic data for the operating turbine and for the background noise were sorted and energy averaged in 1-m/s wind speed bins centered on integer values. A sound pressure level for the operating turbine was calculated for each wind speed if there were more than three data points in the bin. This process was repeated for background measurements. For each wind speed bin, the operating turbine noise was corrected for background noise using Equation (2). If the difference between the two was at least 6 dB, the sound power level for the wind turbine operating alone was calculated using Equation (3). This method was used for the comparisons in Table 1.

In addition to evaluating the sound power level as described above, it is useful to examine the spectra of sound pressure level versus frequency. NREL uses one of two approaches, depending upon the availability of data. Either two 1-minute spectra or twelve 10-second spectra having wind speeds closest to the reporting wind speed were energy averaged to obtain one spectrum. These narrow band spectra, so called because small incremental frequency bands were used, were reported [1] for wind speeds of 6, 8, and 10 m/s.

In some cases, the narrow band spectra were analyzed for the presences of pure tones. That information is not reported here but may be found in the individual test reports [5, 6, 7, 8]. The spectra were visually checked for the presence of possible tones. Similar spectra were developed for background noise around the same wind speeds to make sure that the peaks did not originate from the background noise. If there were no obvious tones indicated and nothing was heard during the tests, no further analysis was performed. If tones were observed, the Measnet [9] procedure was used to determine tonality. In this procedure, the critical band is identified and the tone and masking noise levels are calculated. The tonality value is the difference between the tone level and the masking noise level.

---

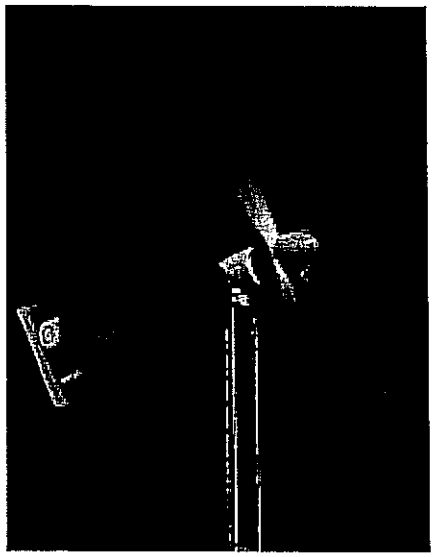
[3] Whereas sound pressure level is a property of the observer location [4], the total strength of a source of sound is characterized by the sound power emitted by the source. In general, the sound power P transmitted through a surface S is the integral of the sound intensity I (energy transmitted per unit time and unit area) over the surface. If the surface S encloses the source of the sound, then P is the total sound power emitted by the source. The definition of sound power level is

$L_w = 10 \cdot \log [P \div P_{ref}]$ expressed in decibels, dB,

where $P_{ref} = 10^{-12}$ watts is the standard reference sound power. The eardrum can detect incoming sound power as weak as one picowatt, and exposure to incoming sound power of more than one watt will result in some hearing loss.

[4] The ear is not equally sensitive to tones of different frequencies. Maximum response occurs between 3000 and 4000 Hz, where the hearing threshold is somewhat less than 0 dB. A 100 Hz tone, however, must have an intensity of 40 dB to be heard [4]. Therefore, weighted sound levels have been introduced where lower frequencies are de-emphasized in a manner similar to human hearing. A-weighting is most commonly used and is well suited for sound levels that are not too high.

BERGEY EXCEL-S TURBINES



Bergey Windpower Company of Norman, Oklahoma, (www.bergey.com) manufactures the ***Excel-S*** (shown above), which is a three-blade upwind turbine that Bergey rates at 10 kW at a wind speed of 13 m/s. It is connected to a Bergey Gridtek inverter that provides power to the NWTC electrical grid. The ***Excel*** uses a permanent magnet alternator to produce three-phase variable frequency output at a nominal 240-volts. The three-phase output is rectified to DC power and then converted to single-phase 240-volt 60 Hz AC power in the inverter. The turbine blades are constructed of pultruded fiberglass. In high wind speeds—greater than about 16 m/s—the turbine will furl out of the wind to protect it from over-speeding.

The rotor diameter of the machine tested at the NWTC was 7 m and its hub height was 36.5 m. The slant distance of the microphone, an important parameter in Equation (3), was 54.5 m. To better reflect the dynamics of the turbine, 10-second averages were used instead of 1-minute averages. Wind speed was measured at hub height and standardized using Equation (1).

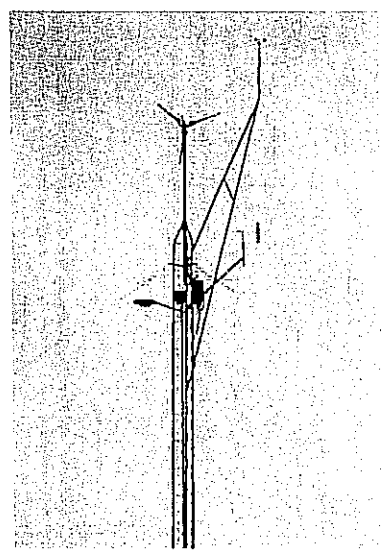
The Bergey ***Excel*** operates both loaded and unloaded, a condition defined by whether or not it is connected to the load. The load in this case was the utility grid. Because the operating condition has a strong influence on the noise characteristics, measurements were taken under both conditions.

Figure 1 shows the measured sound pressure levels for an earlier version of the ***Excel*** with BW03 airfoils. The graph also shows sound pressure levels measured when the inverter was offline (turbine was unloaded) for all or part of the 10-second averaging period. In this situation, the noise level increases approximately 4 dB(A) to 5 dB(A) compared to the turbine loaded. The apparent sound power level at 8 m/s, a common comparison point for wind turbines, was found to be 98.4 dB(A).

The ***Excel*** was also tested with a second blade set that had a reduced rotor diameter of 6.17 m, an opposite direction of rotation, and a Selig-Hanley SH3052 airfoil. The slant distance from the turbine to the microphone was the same as for the previous BW03 tests. Figure 2 shows a dramatic reduction in measured noise for this configuration. For example, in the range of 8 – 14 m/s the sound pressure level of the operating turbine was reduced by approximately 10 – 15 dB(A).

Although the turbine noise could not be separated from the background noise for the SH3052 blades (Figure 2), the sound pressure level can be compared directly to the BW03 blades (Figure 1), because the slant distance was identical in both tests, and the background noise levels were virtually the same. In high wind conditions, both configurations became noisy when the inverter was offline and the unloaded rotor increased speed. Thus, it is desirable to prevent the inverter from going offline under normal operating conditions, a feature that was not characteristic of the turbine tested at the NWTC.

SOUTHWEST WINDPOWER AIR TURBINES



Southwest Windpower, Inc., of Flagstaff, Arizona, (www.windenergy.com) produces the ***AIR 403*** (shown above), a three-blade upwind turbine with a manufacturer's rated power of 400 watts at 12.5 m/s. The DC output of the turbine was connected to a DC bus that was also connected to a battery bank and an Enermaxer. This device maintained the DC bus voltage at a constant 13.2 volts to prevent the turbine from shutting

down when the batteries were fully charged. The ***AIR 403*** is a free yaw turbine that employs aero-elastic stall, also known as flutter, for over-speed protection.

The machine tested at the NWTC had a rotor diameter of 1.14 m and a hub height of 13.3 m. The anemometer was mounted on a boom from the same tower. The microphone at the reference position was located at a slant distance of 19.1 m.

Figure 3 shows the measured sound pressure level for the ***AIR 403***. Three patterns are distinguishable. At higher wind speeds, the turbine flutters as a means of over-speed control. Green triangle markers indicate the 10-second time periods during which the blades experienced flutter. Small horizontal bars on the markers indicate continuous flutter. The 10-second time periods during which the blades did not flutter are indicated with blue diamond markers. It appears that flutter increases the noise of the turbine approximately 10 – 12 dB(A). The apparent sound power level at 8 m/s, when the blades do not flutter, was found to be 81.2 dB(A).

We were not able to collect background noise data at higher wind speeds nor calculate the sound power level when the blades flutter. However, we estimated a background noise level of 65 dB(A) by extrapolating the available data to 20 m/s. By binning data between 18 and 20 m/s, we estimated a sound power level of 112.5 dB(A) for the blades in flutter, which is quite loud.

To mitigate the impact of this blade flutter, Southwest Windpower developed a new version of the turbine called ***Air X***. The ***Air X*** controller causes the blades to stall if the rotor speed or DC voltage exceed set limits. A marine version of this turbine was tested at the NWTC. The distinctions from the standard version are corrosion protection and sealed electronics.

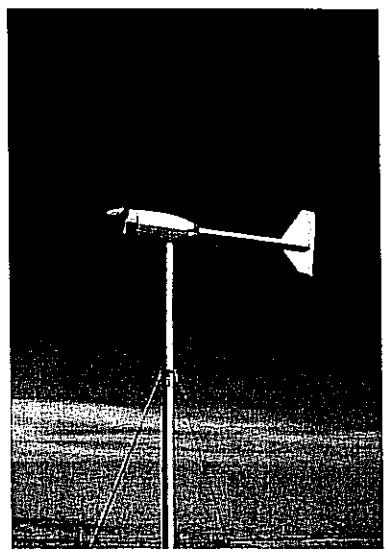
The measured sound pressure level of the ***AIR X*** is shown in Figure 4. During normal operation, when the blades are not fluttering, two groups of data can be distinguished. One group, which is representative of power production mode, is plotted above the background noise level. A second group overlays the background noise level, shown in this plot with open symbols. This lower noise level—sometimes as much as 10 dB(A) lower—occurs when the turbine is operating in stall mode or automatic shutdown mode. This is caused by the turbine controller attempting to limit the rotor speed. In turbulent winds, which are typical of the NWTC test site, rotor speed control is not precise. Therefore, the 10-second averages do not always reflect the same rotor speed.

If a curve is fit or a bin analysis is performed using the entire set of normal operation data, the resulting sound pressures will be mix of normal operation, stall mode, and parked data. This procedure would underestimate the noise level an observer would experience during the normal power production mode.

Figure 4 exhibits a curious trend between 6 and 10 m/s, where the sound pressure level is unexpectedly low. Repeated reviews of the test data failed to provide an explanation for this behavior, although it is likely to be a result of the controller limiting rotor speeds.

In comparing Figures 3 and 4, it is evident that the control strategy implemented on the ***AIR X*** was successful in reducing the occurrence of flutter-induced noise.

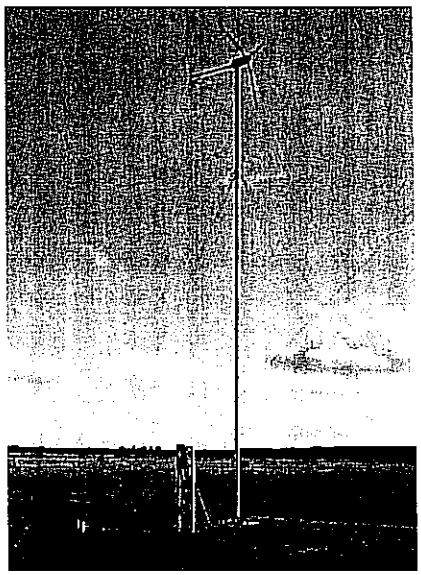
BERGEY XL.1 TURBINE



The Bergey ***XL.1*** (shown above) is a three-blade upwind turbine with a manufacturer's rated power of 1 kW at a wind speed of 11 m/s. A permanent magnet generator produces three-phase variable frequency output that is rectified to 24 volts DC. The turbine uses sideways furling for over-speed protection. It has a rotor diameter of 2.5 m and a hub height of 9 m. The microphone at the reference position was located at a slant distance of 13.8 m.

Figure 5 shows the measured sound pressure level for the ***XL.1***. The measured values are quite low and the apparent sound power level at 8 m/s cannot be reported because the turbine noise level could not be separated from the background noise.

SOUTHWEST WINDPOWER WHISPER H40

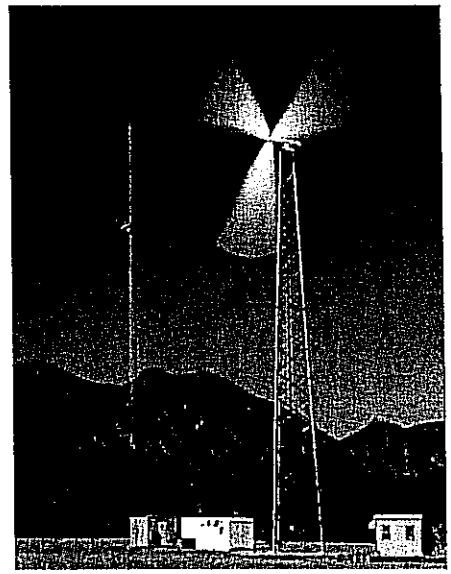


The ***Whisper H40*** (pictured above) is a three-blade upwind turbine with a rated power of 900 watts at a wind speed of 12.5 m/s. As tested, the turbine had its 24-volt DC output grid connected via a Trace SW4024 inverter. Power and over-speed control are by a patented "angle governor" that combines horizontal and vertical furling.

The Whisper's rotor diameter was 2.1 m and hub height was 9.1 m. The microphone at the reference position was located at a slant distance of 13.6 m. Test data were averaged over 10-second periods instead of 1-minute periods to better characterize the noise at higher wind speeds when the turbine employs over-speed control. Wind speed measurements, which were obtained from a hub-height anemometer located on a compass heading of 292° from the turbine, were standardized to the reference height of 10 m.

Figure 6 shows the measured sound pressure level for the ***Whisper H40***. There was sufficient separation between the turbine and background noise to determine the apparent sound power level at 8 m/s. It was found to be 84.9 dB(A)

ATLANTIC ORIENT CORPORATION AOC 15/50 TURBINE



The Atlantic Orient Corporation, of Norwich, Vermont, and Charlottetown, Prince Edward Island, Canada, (www.aocwind.net) manufactures the ***AOC 15/50*** wind turbine (pictured above). It is a three-blade, downwind, free yaw machine with a rated power of 50 kW at 12 m/s. Its fixed-pitch, constant speed, stall-regulated, 15-m diameter rotor employs 7.2-m wood-epoxy blades manufactured by Aerpac/Merrifield Roberts. The rotor is mounted on the gearbox low-speed shaft, and the three-phase induction generator is connected to the gearbox high-speed shaft. The tower is a 24.4-m high, freestanding, three-leg lattice steel structure that provides a hub height of 25 m.

The turbine employs three independent brake systems. Electro-magnetically controlled tip plates are installed on the blade tips to provide aerodynamic braking. A capacitor/resistor network provides dynamic braking, and a mechanical brake is used for parking the rotor.

Figure 7 shows the measured 1-minute average sound pressure levels as a function standardized wind speed. The slant distance of the microphone was 41.2 meters. The apparent sound power level at 8m/s was found to be 101.1 dB(A) [6].

NORTHERN POWER SYSTEMS NORTH WIND 100 TURBINE

Northern Power Systems of Waitsfield, Vermont, (www.northernpower.com) manufactures the ***North Wind 100*** (shown above), a three-blade upwind turbine with a rated power of 100 kW at 13 m/s. Its fixed pitch, variable speed, stall controlled, 19.1-m diameter rotor employs modified ERS 0100 blades manufactured by TPI Composites. The test turbine was mounted on a 23.4-m tubular steel tower that provides a hub height of 25.0 m. The grid-connected turbine uses a direct-drive (no gearbox) salient pole synchronous generator and is specially designed to operate in very cold climates.

Figure 8 shows the measured 1-minute average sound pressure level for the ***North Wind 100***. The slant distance of the microphone was 42.0 meter. There was no difficulty obtaining the 6 dB separation between turbine and background noise [8], and the apparent sound power level at 8 m/s was found to be 93.8 dB(A).

Aeroacoustic emissions are a strong function of size. With a diameter of 19.1m, the ***North Wind 100*** is larger than others in the test group. Comparisons [10] to similar turbines indicate that its sound pressure level is typical for machines of its size.

COMPARISON OF TESTED TURBINES

We wish to compare the acoustic signatures of all the turbines on a common basis, but owing to the difficulty of separating wind turbine noise from background noise for the quieter machines, a complete database is not available for all the turbines tested. For example, as noted above, it was not possible to calculate an apparent sound power level for the Bergey ***XL.1***. Still, important observations may be made from the data that are available. Table 1 and Figure 9 provide this information.

The ***AOC 15/50*** and the early version of the ***Excel*** with BW03 blades have the highest noise levels of the turbines tested. Because it was one of the largest turbines tested, we expected the ***AOC 15/50*** to be somewhat noisier. Test engineers also observed that mechanical noise was more prevalent than on other turbines. Furthermore, the ***AOC 15/50*** employs tip plates that are likely to add aeroacoustic noise. In support of this hypothesis, we note that tests of an ***AWT-26*** turbine at the NWTC measured an increment of almost 2 dB(A) for similar tip plates. These tests were conducted with a tip plate on one blade and conventional tip on the other, thus leaving no question of differences in test conditions or instrumentation.

Significantly, improvements made to the ***Excel*** reduced acoustic emissions to the point that turbine noise could not be separated from background noise. For this reason, the ***Excel*** with SH3052 airfoils does not appear in Figure 9, but Figures 1 and 2 corroborate this assertion.

The ***Air 403*** data do not exhibit the smooth trends of the other turbines. By listening to the sound recordings, we learned that several of the measurements actually captured the noise of the blades in flutter. Figure 3, which was discussed previously, clearly illustrates this.

Considering the difficulties introduced by variations in background noise, it is interesting to compare the levels from different tests. Several of these are shown in Figure 10, where it can be seen that a range of 10 dB(A) is typical for most wind speeds. It appears that the variation in background noise is greater at low wind speeds than at high wind speeds where the noise of the wind itself masks some of the other constituents of background noise. We also observed that at low wind speeds, the highest background noise levels correspond to the test sites closest to the concrete plant. This was expected because of the relationship between sound pressure level and the distance from the source, as seen in Equation (3). Recognizing the importance of a quiet site for acoustic testing, we are exploring other locations at the NWTC (further from known noise sources) for future tests.

SUMMARY

A series of field tests were conducted to measure the acoustic noise of several small wind turbines. Rigorous procedures for both testing and data analyses were followed. Because the NWTC is a turbulent site, the wind turbines, some of which have temperamental controls, sometimes have different acoustic signatures on different days even at the same wind speed. Particularly vexing is the variation in background noise and the inability to separate it from turbine noise for the quieter machines. This has prompted NREL researchers to seek quieter sites that are less susceptible to background noise variations.

In considering individual turbines, we conclude that for the Bergey ***Excel*** and Southwest Windpower ***AIR*** turbines, the manufacturers' efforts to reduce noise through the use of new airfoils or control techniques have resulted in quieter turbines.

In normal operation, the ***Excel*** turbine with SH3052 blades exhibits significantly lower noise than its predecessor with BW03 blades. NREL researchers attribute this improvement to the new airfoils and reduced tip speed owing to smaller rotor diameter. In high wind conditions and unloaded (inverter offline), both turbines become much noisier.

In normal power-production mode, the ***AIR 403*** and the ***AIR X*** exhibit similar noise characteristics. In high wind conditions, when the blades flutter, the ***AIR 403*** becomes much noisier than in normal operation. Control improvements in the ***AIR X***, which stall the blades when rotor speed exceeds set limits, reduced the occurrence of this flutter-induced noise.

For the ***Excel*** with SH 3052 blades, the ***XL.1,*** and the ***Whisper H40*** at virtually all wind speeds above 7 m/s, separation between operating turbine and background noise levels was less than 6 dB(A).

ACKNOWLEDGEMENTS

Conducting multiple test campaigns over many years while maintaining scientific rigor is a formidable challenge. Arlinda Huskey and Jeroen van Dam spent countless hours calibrating instruments; setting up experiments, some in miserable weather; listening to recordings; analyzing and plotting data; and writing reports. It is difficult to overstate their accomplishments as documented in this paper and the NREL report [1].

REFERENCES

[1] Migliore, P., van Dam, J. and Huskey, A., (2003). *Acoustic Tests of Small Wind Turbines*, NREL SR-500-34601. Golden, CO: National Renewable Energy Laboratory

[2] International Electrotechnical Commission, First Edition, (1998). International Standard IEC 61400-11, "Wind Turbine Generator Systems – Part 11: Acoustic Noise Measurement Techniques".

[3] NREL National Wind Technology Center, (2001). "Test Manual for the Acoustics Testing of Wind Turbines per ISO Guide 25, 1990".

[4] Wagner, S., Bareiß, R. and Guidati, G, (1996). "Wind Turbine Noise," Springer-Verlag, Berlin, pp. 14-21.

[5] Huskey, A. and Meadors, M., (2001). *Wind Turbine Generator System, Acoustic Noise Test Report for the Whisper H40 Wind Turbine.*

[6] Huskey, A. and van Dam, J., (2003), *Wind Turbine Generator System, Acoustic Noise Test Report Revision 1 for the AOC 15/50 Wind Turbine*, NREL Test Report.

[7] Huskey, A. and Meadors, M., (2003). *Wind Turbine Generator System, Acoustic Noise Test Report for the Bergey Excel Wind Turbine*, NREL Test Report.

[8] Huskey, A. and Meadors, M., (2002). *Wind Turbine Generator System, Acoustic Noise Test Report for the NW100 Wind Turbine*, NREL Test Report.

[9] "Measnet Acoustic Noise Measurement Procedure", (1997). www.measnet.org

[10] van Dam, J., (1999). "*Trend in de akoestische bronsterktes van windturbines*" *(Trend in the acoustic sound power level of wind turbines)*, Energieonderzoek Centrum Nederland (Energy Research Center of the Netherlands ECN), Proceedings of the Netherlands Renewable Energy Conference.

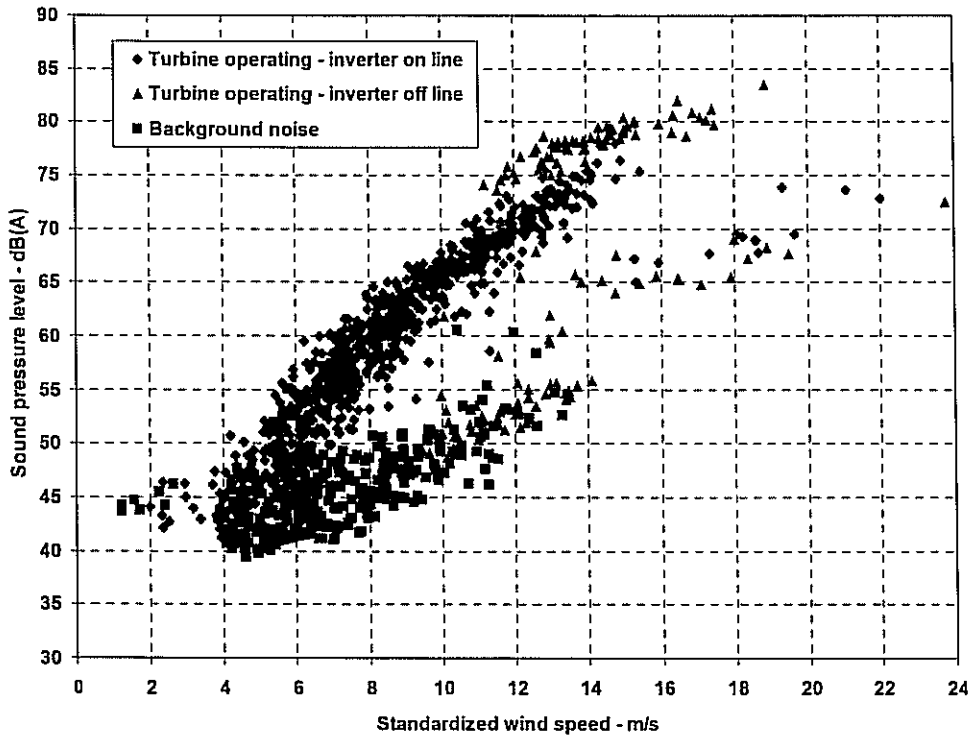


Figure 1. 10-second average sound pressure level for Bergey Excel-S with BW03 airfoils

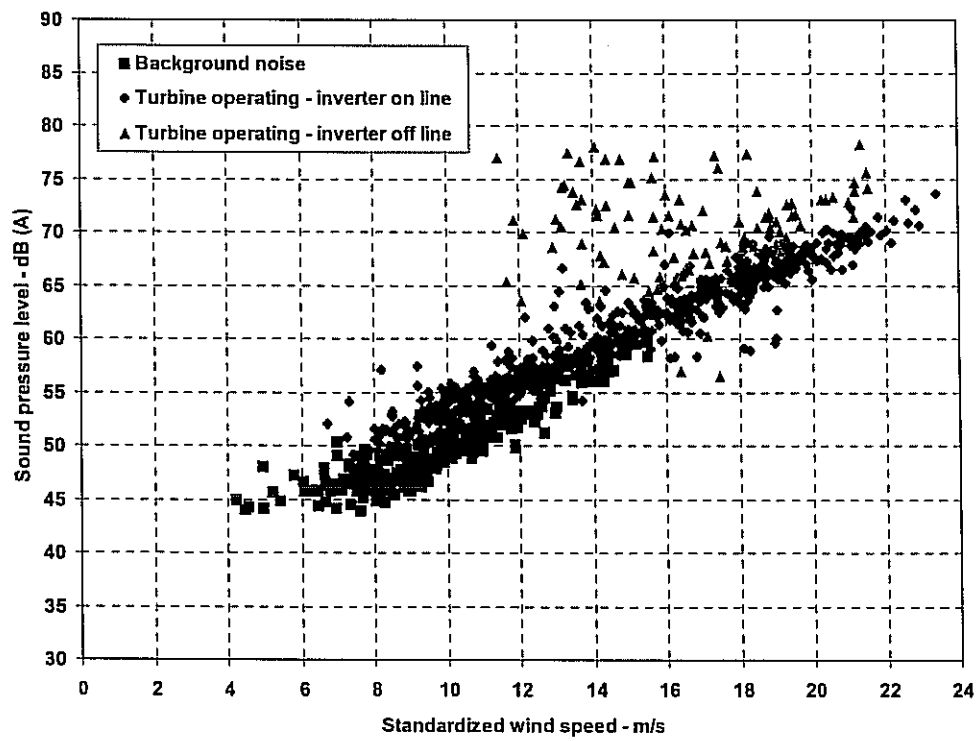


Figure 2. 10-second average sound pressure level for Bergey Excel-S with SH3052 airfoils

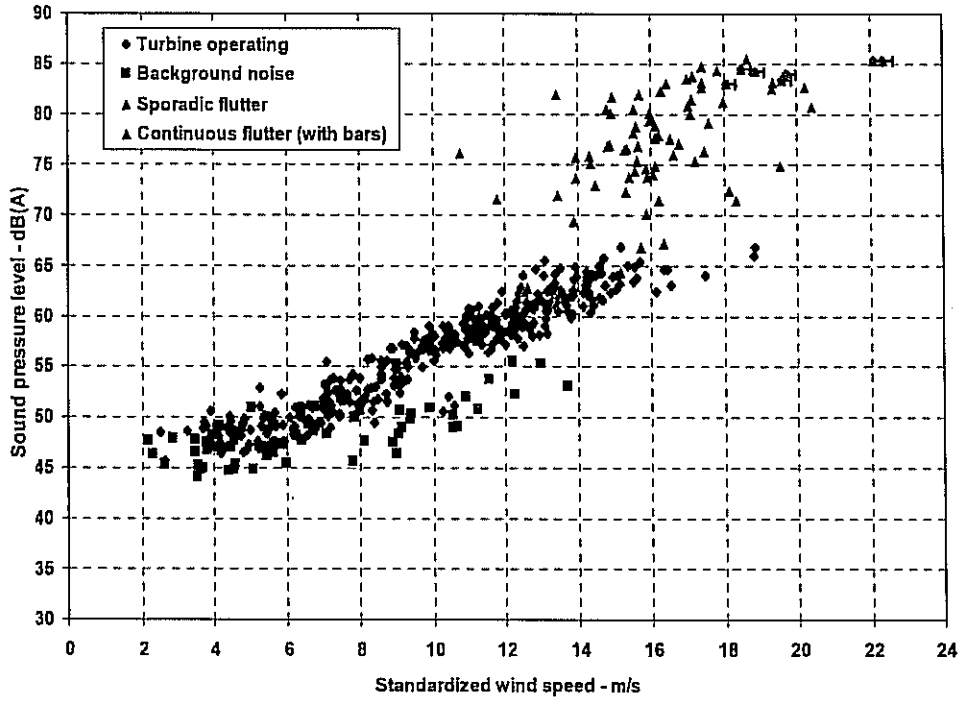


Figure 3. 10-second-average sound pressure level for Southwest Windpower AIR 403

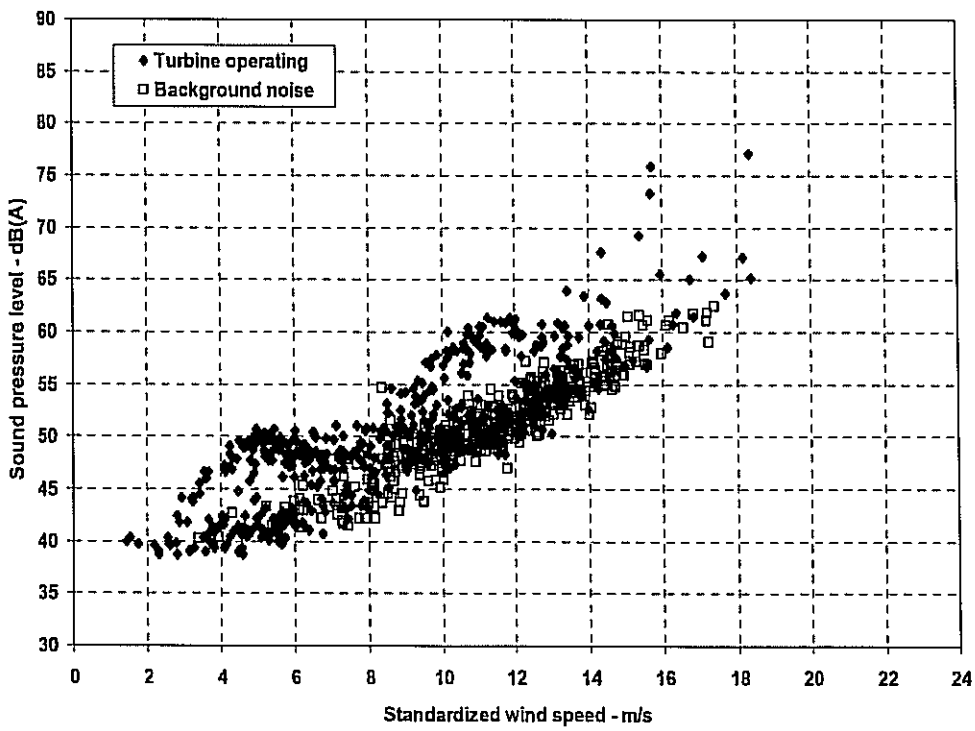


Figure 4. 10-second average sound pressure level for Southwest Windpower AIR X

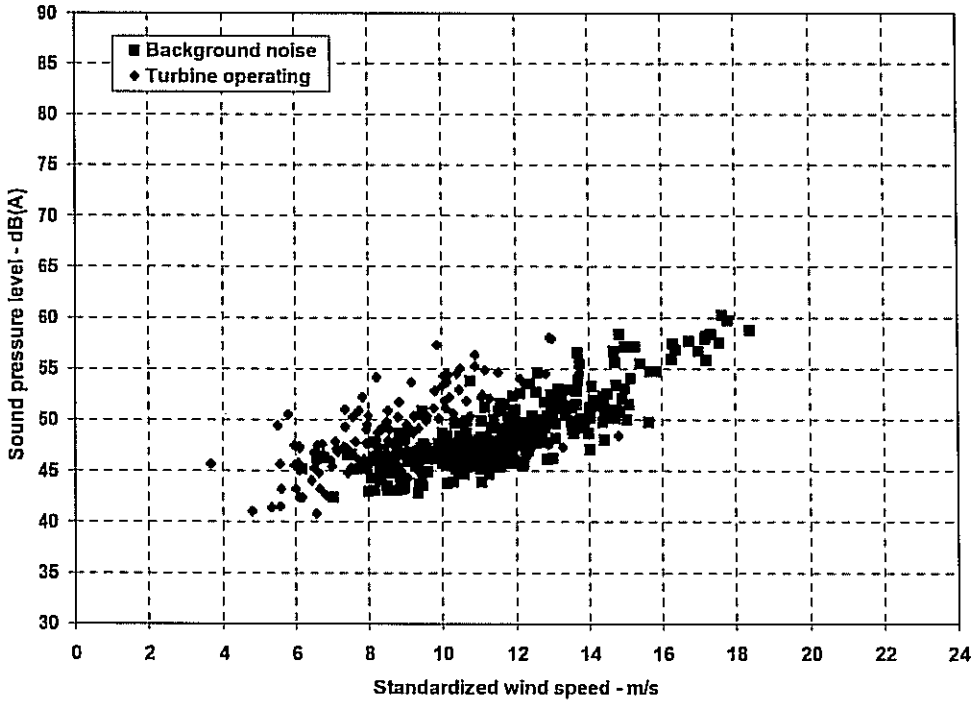


Figure 5. 10-second-average sound pressure level for Bergey XL.1

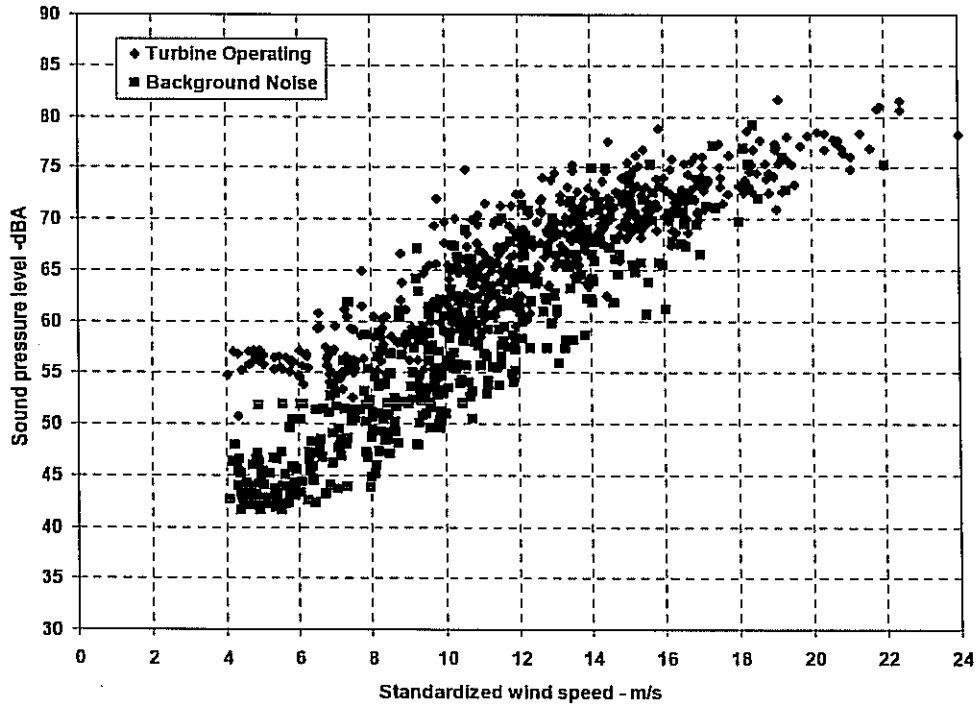


Figure 6. 10-second-average sound pressure level for Southwest Windpower Whisper H40

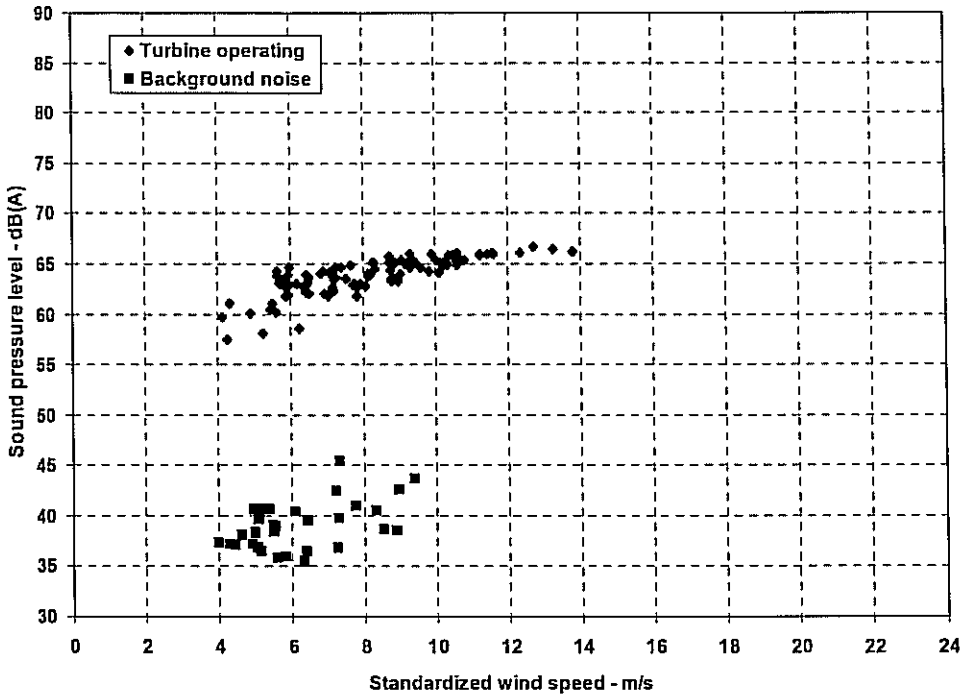


Figure 7. 1-minute-average sound pressure level for Atlantic Orient Corporation AOC 15/50

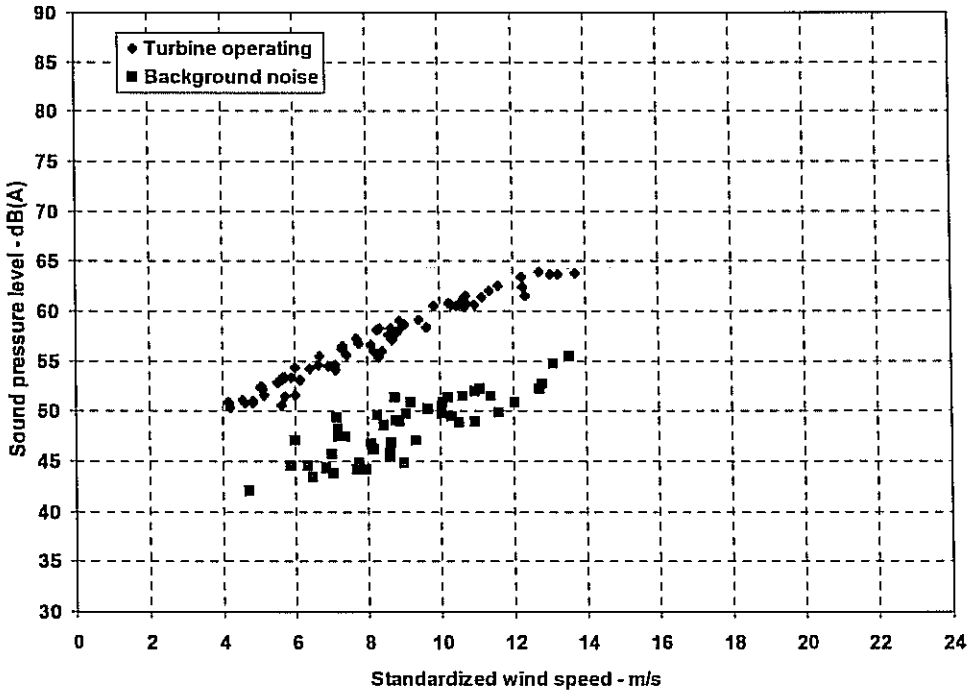


Figure 8. 1-minute-average sound pressure level for Northern Power Systems North Wind 100

	Wind Speed (m/s)													
	3	4	5	6	7	8	9	10	11	12	13	14	15	16
AIR 403	**	**	**	**	**	*80.9*	*84.2*	86.7	92.9	90.5	97.7	98.0	–	–
AIR X	73.1	76.6	78.8	77.7	77.5	**	81.3	85.2	88.9	90.0	*88.8*	92.0	94.0	101.6
Whisper H40	–	82.6	83.8	82.8	*83.5*	85.3	*87.4*	*91.0*	*92.4*	**	96.3	**	**	**
XL-1	–	–	–	**	**	**	*75.8*	*78.7*	*78.0*	**	*80.8*	–	–	–
Excel BW03	–	**	*87.2*	91.0	96.1	99.5	102.2	105.4	107.6	109.8	112.2	–	–	–
Excel SH3052	–	–	–	–	*90.7*	*90.7*	*92.3*	*93.4*	*95.1*	*96.9*	*99.0*	*100.3*	*101.5*	–
AOC 15/50	–	86.9	86.9	100.1	100.8	–	101.9	–	–	–	–	–	–	–
North Wind 100	–	–	–	89.8	91.9	93.9	95.1	97.0	98.1	99.6	100.8	–	–	–

– *Insufficient data are available.*

** *Separation between operating turbine and background noise is less than 3 dB.*

b Numbers in italics have separation between operating turbine and background noise of between 3 and 6 dB.

Table 1. Apparent sound power level for turbines with at least 3 dB(A) separation from background noise. Values were obtained by the bin analysis method described on page 3.

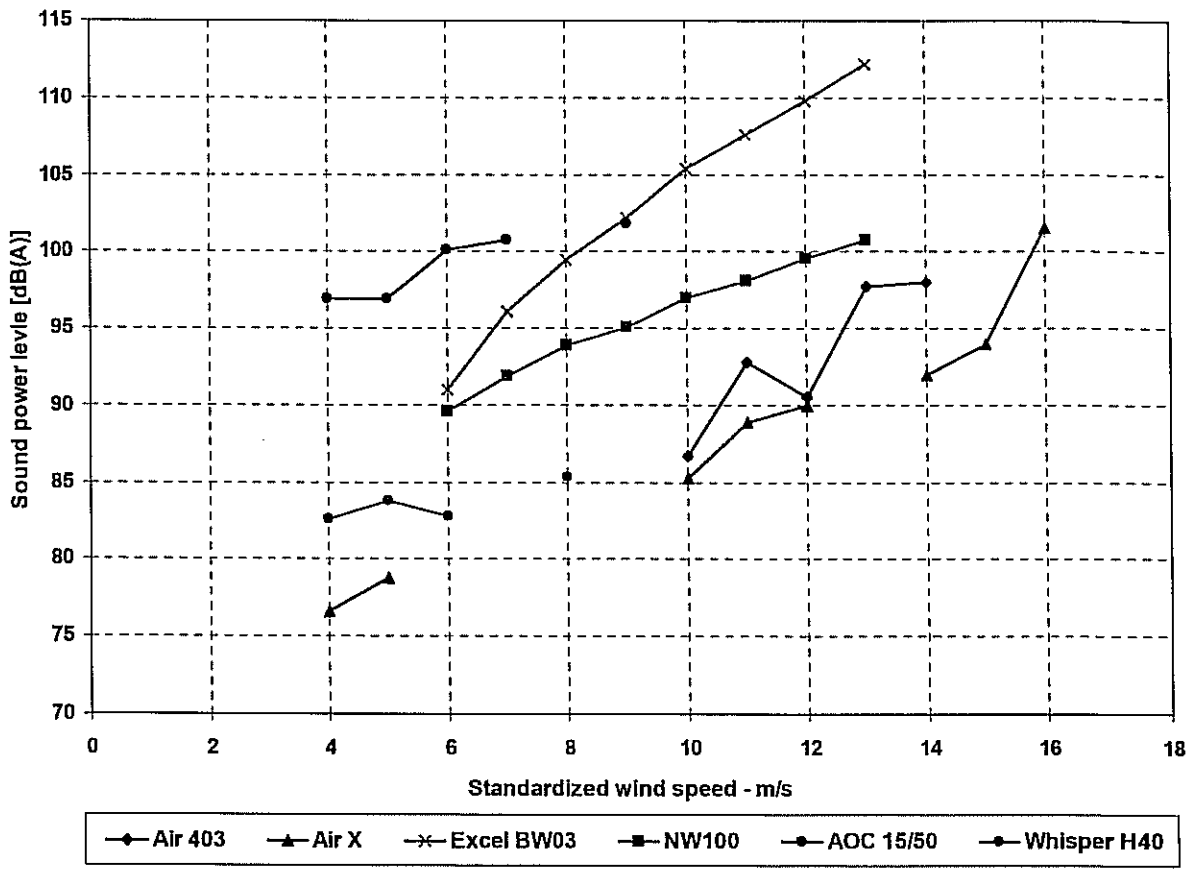


Figure 9. Apparent sound power level for turbines with at least 6 dB(A) separation from background noise. Values were taken from Table 1.

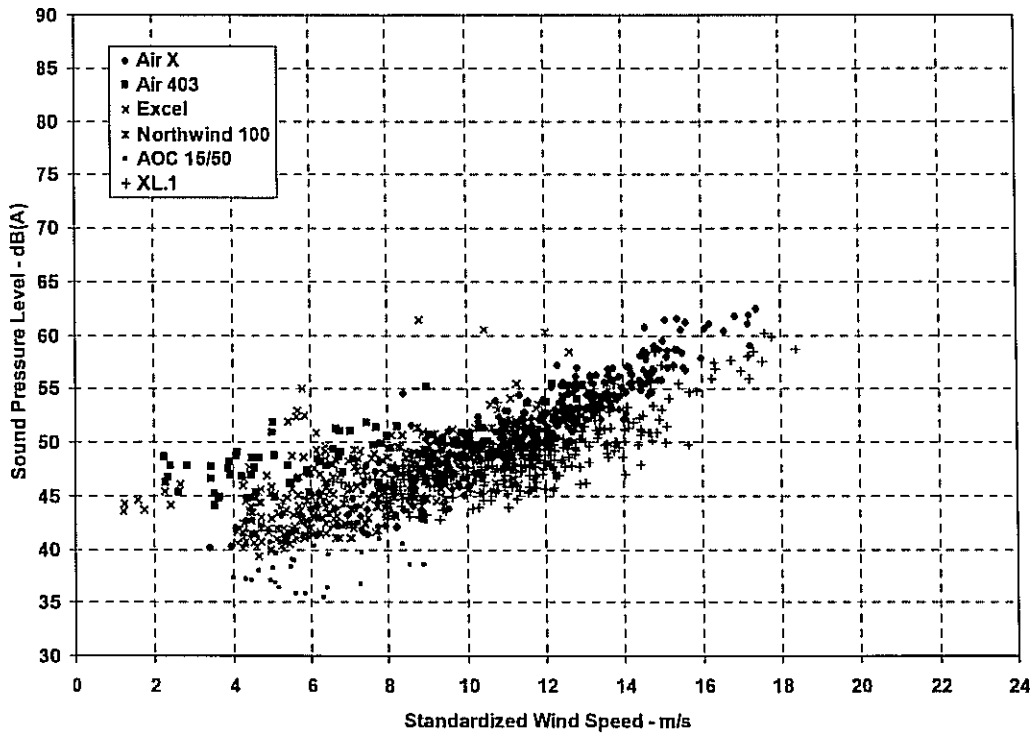


Figure 10. Background sound pressure level for several of the turbines tested.

BERGEY
WINDPOWER

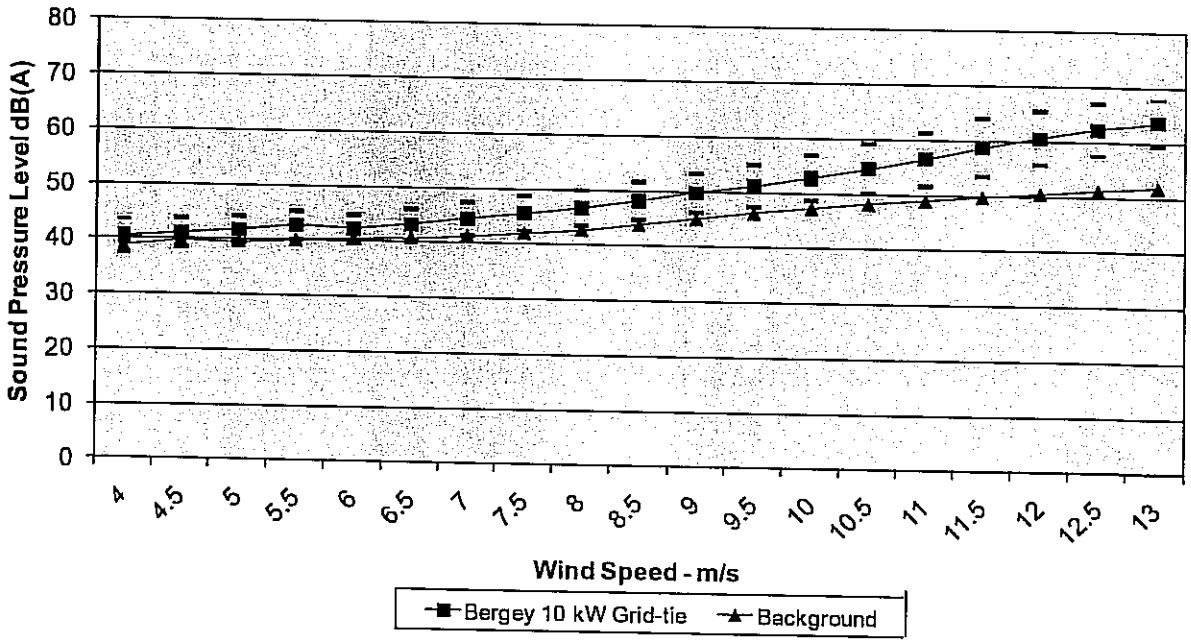
July 14, 2010

Acoustic Characteristics of the Bergey Excel-S 10 kW Wind Turbine

The following noise level data were taken by the USDA Agricultural Research Service in Bushland, Texas. USDA-Bushland is a contractor to the U.S. Department of Energy and has been field testing small wind turbines since the 1970's. This acoustics testing was conducted in support of certification of the BWC Excel-S to AWEA 9.1-2009. Per the AWEA standard, the tests were conducted in accordance with IEC 61400-11, "Wind Turbine Generator Systems, Part 11 - Acoustic Noise Measurement Techniques".

The sampling microphone was a calibrated Larson Davis Model 824, which was placed 34.2m (112 ft) from the base of the 30m (100 ft) wind turbine tower. The slant distance was 46m (151 ft). Wind speed was taken at a height of 10 m (33 ft)

Noise Data Collected on Bergey 10 kW Grid-tie, 30.5 m tower
USDA-ARS Lab near Bushland, TX (June 2010)



The data range provided is 4 m/s – 13 m/s because the calculation of the turbine component of the total sound pressure was calculated using background sound data at the same site from an earlier test on another brand of wind turbine and that test range was 4 – 13 m/s. Background sound levels must be taken with the wind turbine shutdown and that is more difficult to achieve on the Bergey Excel than the other brand previously tested. New background sound data over a wider range is currently being gathered. We do not believe there will be any significant differences in the results when this newer background data is available.

The calculation of the wind turbine contribution to total sound levels for follows the guidelines in IEC 61400-11.

For a typical 5 m/s (11.2 mph) average wind speed site the wind speed will be below 11 m/s (25 mph) over 95% of the time. In this range the Excel-S wind turbine will add just 1 – 6 dBA to the background. As a general rule it takes 3 dBA added before a person will perceive a separate noise source.

AWEA Rated Sound Level: 52.1 dBA

The Rated Sound Level is the sound level at 60 m (197 ft) that the wind turbine will not exceed 95% of the time in a 5 m/s (11 mph) average wind speed site. The previous version of the BWC Excel-S had an AWEA Rated Sound Level of 54.7 dBA. The new version is quieter because the more powerful neodymium alternator has reduced the rated rotor speed from 300 RPM to 240 RPM.

The Sound Power Level is the total noise right at the source – the top of the tower. For the BWC Excel-S turbine the Sound Power Level corresponding to the AWEA Rated Sound Level is 91.0 dBA. Sound diminishes with distance. The Sound Pressure Level is the sound a listener would hear at the distance given, in this case 60m (197 ft)

The binned sound pressure and sound power level data is provided on the following page.

2010 Excel-S Acoustics Test Data
Bushland, 46 m Slant Distance

Wind Bin (m/s)	Recorded Sound Pressure Level (dBA)	Std Dev	Backgrd Sound Pressure Level* (dBA)	Turbine Sound Pressure Level (dBA)	Turbine Sound Power Level (dBA)
1	37.08	0.35			
1.5	36.14	0.55			
2	36.70	1.68			
2.5	38.57	3.05			
3	39.18	3.03			
3.5	39.94	3.27			
4	40.39	3.04	38.7	40.39	78.5
4.5	41.06	2.75	39.55	41.06	79.2
5	41.76	2.47	39.48	41.76	79.9
5.5	42.71	2.66	39.84	42.71	80.9
6	43.51	2.66	40.31	42.21	80.4
6.5	44.56	2.81	40.67	43.26	81.4
7	45.75	3.01	41.2	44.45	82.6
7.5	46.87	3.10	41.87	45.57	83.7
8	48.08	3.24	42.65	46.78	84.9
8.5	49.55	3.41	43.72	48.25	86.4
9	51.04	3.60	44.91	49.83	88.0
9.5	52.40	3.78	46.14	51.23	89.4
10	53.92	4.17	47.17	52.89	91.0
10.5	55.53	4.53	48.13	54.66	92.8
11	57.31	4.92	48.91	56.63	94.8
11.5	59.35	5.22	49.73	58.85	97.0
12	61.07	4.88	50.48	60.67	98.8
12.5	62.69	4.71	51.17	62.37	100.5
13	64.02	4.24	51.85	63.75	101.9
13.5	65.44	3.79			
14	66.60	3.29			
14.5	67.39	3.12			
15	68.10	3.04			
15.5	68.92	3.40			
16	69.60	3.18			
16.5	70.02	2.63			
17	71.42	1.82			
17.5	71.79	1.71			
18	71.53	3.22			
18.5	72.14	2.30			
19	73.00	1.13			
19.5	70.10	4.93			
20	62.00	0.00			

* - From 2006 test on another turbine

Sound Levels at a Distance from the Turbine

Sound Power Level is defined as the sound level at a distance of 1 meter (3.3 ft) from the source, which we take as the center of the rotor or, in other words, hub height. As a person gets farther and farther away from the wind turbine, the intensity of the sound they will hear reduces as the square of the distance. The following table provides the AWEA Rated Sound Levels at different distances from the base of the turbine, assuming a 30m (100 ft) tower. These levels do not include a contribution from background noise levels.

Distance from Turbine (meters)	Distance (feet)	Slant Distance (m)	Sound Press. Level (dBA)
30	98.42	42.4	53.5
60	196.85	67.1	49.5
90	295.27	94.9	46.5
120	393.70	123.7	44.2
150	492.12	153.0	42.4
180	590.55	182.5	40.8
210	688.97	212.1	39.5
240	787.40	241.9	38.4
270	885.82	271.7	37.4
300	984.25	301.5	36.5
330	1,082.67	331.4	35.6
360	1,181.10	361.2	34.9
390	1,279.52	391.2	34.2

Chapter 4

HEIGHT REGULATIONS

Sections:

87.0401 General Provisions.

The maximum structural height development standards established by the land use districts may be increased as specified by this chapter provided such increase does not conflict with airport safety regulations or approved conditions of approval.

87.0405 Permitted Structural Height Increases.

(a) Single Dwelling. Single dwellings in land use districts that impose a height limitation of thirty-five (35) feet or less may exceed the height limit by up to twenty-five (25) feet, when two side yards of at least twenty (20) feet are provided.

(b) Institutional Structures. Institutional buildings in land use districts that impose a height limitation of thirty-five (35) feet or less may exceed the thirty-five (35) foot height limit by up to twenty-five (25) feet when the required front, side and rear yards are increased an additional one (1) foot in excess of minimum requirements for each four (4) feet in height above thirty-five (35) feet.

(c) Miscellaneous Structures. The maximum structure height specified in a land use district may be exceeded by no more than fifty percent (50%) for the following structures, subject to an approved Land Use Compliance Review by the Building Official:

(1) Cupolas, domes, skylights and gables.
(2) Ornamental towers and spheres.
(3) Church steeples and towers.
(4) Flag poles.
(5) Birdhouses.
(6) Residential chimneys, flues, smokestacks and enclosures.
(7) Mechanical equipment and its screening.
(8) Elevator housings.
(9) Bulkheads and skylights.
(10) Monuments.
(11) Barns, silos, grain elevators, windmills and other farm buildings or structures in Rural Conservation or Agricultural districts.
(12) Noncommercial antennae up to sixty-five (65) feet in residential districts.
(13) Fire or parapet walls.
(14) Fire and hose towers.

(15) Stairway housing.

(16) Water tanks.

(17) Cooling towers, gas holders, smokestacks or other structures in industrial districts which are required by permitted industrial processes.

(18) Windmills and solar energy collectors in residential or commercial districts.

(19) Water towers.

(20) Observation and carrillon towers.

(21) Radio and television station towers.

(22) Distribution and transmission cables and towers.

(23) Outdoor theater screens.

(24) Sign spires.

(25) Penthouses.

(26) Other roof structures and mechanical appurtenances similar to those listed above.

CHAPTER 9.78 WIND ENERGY CONVERSION SYSTEMS (WECS)

SECTIONS:

9.78.010 PURPOSE *(Amended Ord. 403)*

This Chapter is intended to establish regulations and procedures for the review of any WECS proposed for installation within the Town of Apple Valley that are not otherwise permitted or regulated in this Development Code. It is intended to provide a mechanism to take advantage of renewable, green energy while minimizing potential adverse effects on surrounding properties and infrastructure or on the public health, safety and welfare.

9.78.020 APPLICABILITY

No WECS shall be erected, placed, displayed, or maintained in any district within the Town of Apple Valley, except as specifically allowed in this Chapter. The number, design, type and size of such WECS, as outlined in this Chapter, are intended to be minimum standards which do not necessarily ensure compatibility with building architecture, the neighborhood, and community appearance. Therefore, in addition to these standards, consideration shall be given to a WECS relationship to the overall appearance of the subject property as well as the surrounding community. Compatible design, simplicity and effectiveness, and conformance to the design guidelines provided by Chapters 9.31 "Residential Design Standards", 9.37 "Commercial and Office District Design Standards" and 9.47 'Industrial Design Standards" of this Code, are to be used in determining approvals.

A Development Permit approved by the Planning Commission, as provided in Chapter 9.17 "Development Permits" of this Code shall be required prior to the installation of any and all WECS. The Commission may approve, conditionally approve, modify or deny requests for the installation of WECS. The Commission may establish conditions and limitations necessary to minimize detrimental effects on surrounding property and/or the general public.

A Development Permit allows for the architectural/aesthetic review of structures permitted by this Code for the various zoning districts. A Development Permit is not required if a Conditional Use Permit has been submitted and approved where the Commission has addressed the aesthetics and site design issues required under a Development Permit.

9.78.030 ADMINISTRATION

*A. **Administration.*** The Director is authorized by the Town Council to administer and enforce the provisions of this Chapter, unless otherwise provided in this Chapter. The Director may designate a representative to act in his/her place.

*B. **Interpretation***

1. This Chapter shall be interpreted in a manner which best fulfills the intent of its provisions.

2. Questions arising from the application of the Chapter shall be interpreted by the Director. If any inconsistency still exists in the interpretation, an appeal application shall be referred to the Planning Commission for its determination.

C. Appeals

1. Any decision or determination by the Director may be appealed to the Planning Commission in accordance with the provisions of this Development Code.

2. Any decision of the Planning Commission may be appealed to the Town Council in accordance with the provisions of this Development Code.

9.78.040 DEFINITIONS *(Amended Ord. 403)*

Fall Zone. The potential fall area for the wind energy conversion system. The fall area is measured by using 110 percent of the total height as the radius around the center point of the base of the tower. (Figure 9.78-A)

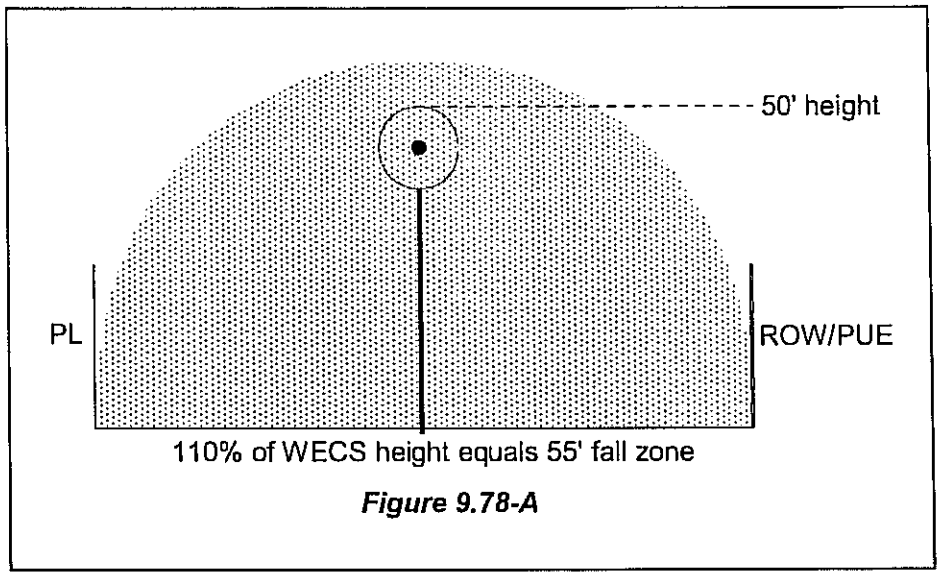


Figure 9.78-A

Height. The vertical distance from ground level to the top of the WECS, including the blade when at its highest point.

Net-Metering Service. A service to an electric consumer under which electric energy generated by that electric consumer from an eligible on-site generating facility and delivered to the local distribution facilities may be used to offset electric energy provided by the electric utility to the electric consumer during the applicable billing period. Net Metering does not allow the sale of power back to the electric company or into the wholesale electricity market.

Overspeed Control. A mechanism used to limit the speed of blade rotation to below the safe design limits of the WECS.

Private, Non-Commercial WECS. A single WECS installed on a developed property for the purposes of providing energy for on-site consumption.

Wind Energy conversion System (WECS). A device designed or used for the purpose of converting wind energy into electrical or mechanical power, including all interconnection and auxiliary equipment.

Windfarm. Multiple WECS installed at a single property or area for the purpose of generating larger quantities of electrical or mechanical power for transmission to a public or private utility.

9.78.050 PRIVATE, NON-COMMERCIAL, WECS *(Amended Ord. 403)*

The installation of a private, non-commercial, WECS is permitted as an accessory use within any zoning designation upon approval of a Development Permit by the Planning Commission. The Development Permit review process grants the Planning Commission authority to modify these requirements based upon neighborhood compatibility.

A. **Lot Size.** WECS shall not be installed upon a lot or recorded parcel of less than two (2) net acres in size.

B. **Setback Requirements.**

1. WECS must be located behind the rear of the primary structure.

2. WECS shall be setback a distance equal to the fall zone from any property line, overhead utility lines, utility easement or right-of-way.

C. **Height.** Roof-top mounted WECS are subject to the maximum height permitted within the applicable zoning designation. There is no maximum height for a free-standing WECS, provided that the structure meets the minimum setback requirements.

D. **Noise.** No WECS shall generate a sound level in excess of 50 dBA, as measured at the nearest property line, during the hours of 7:00 a.m. to 10:00 p.m., nor a level in excess of 40 dBA during the hours of 10:00 p.m. to 7:00 a.m. except during extreme weather conditions.

E. **Design Standards.**

1. During the Development Permit review process, each WECS shall be reviewed by the Planning Commission to ensure the WECS are installed in a manner that will not significantly detract from existing views.

2. WECS must consist of non-reflective materials.

3. Monopole mounted WECS are preferred.

4. WECS requiring the use of guyed wires are discouraged; however, guyed wires may be permitted based upon neighborhood compatibility.

F. **Net-Metering.** Private, noncommercial WECS may be net-metered with written authorization provided by the utility company.

G. Only one (1) WECS shall be permitted per developed lot. Any additional WECS, or any WECS located on a vacant parcel, will be considered a "windfarm" and subject to the Planning Commission's review and approval of a Conditional Use Permit.

H. Each WECS shall be operated and maintained in sound working order in conformance with the manufacturer's specifications at all times. This maintenance shall include the physical appearance of the device so it does not present an unsightly appearance. A copy of the manufacturer's specifications and use instructions shall be submitted with any application for review by the Planning Commission and/or Town Council and shall be retained within the public hearing record/file for that application.

I. Any WECS that is not operated for a continuous period of six (6) months shall be considered abandoned, and the owner of such WECS shall remove the same within thirty (30) days of receipt of written notice from the Town notifying the owner of such abandonment. If the owner does not remove the equipment, along with all associated and ancillary equipment, devices, structures or support for that WECS, or does not request a hearing before the Planning Commission on the issue of whether the equipment is abandoned and subject to removal, the Town may remove the equipment and store it in a secure location. The owner shall have fourteen (14) days from the date the Town provides the owner with written notice of removal of the equipment, and notification of the current location of equipment, to reclaim the equipment. If the equipment is not reclaimed in accordance with this section, the Town may dispose of the equipment in accordance with the Town's existing policy for disposal of abandoned or lost property.

Failure to remove an abandoned WECS within said thirty (30) days shall be grounds to remove the device at the owner's expense.

J. A Building Permit, issued by the Town of Apple Valley, shall be obtained prior to the installation of a WECS system.

K. Every WECS shall be installed strictly per the Manufacturer's Installation specifications, or as modified and certified by an Engineer licensed by the State of California.

L. The Commission may impose Conditions of Approval that are necessary to address health, safety, community welfare and community aesthetic issues or concerns raised during the Development Permit review.

M. Noticing of the Development Permit shall include all properties within 1,000 feet of the site requesting the installation of a WECS.

N. No WECS, or associated and ancillary equipment, batteries, devices, structures or support(s) shall be located within any required front, side or rear yard setback area.

O. No wiring between a WECS and the main or accessory structure on site, or any associated and ancillary equipment, batteries, devices, structures or support(s) for any WECS, shall be located above ground level.

P. When a WECS system is removed from a site, all associated and ancillary equipment, batteries, devices, structures or support(s) for that system shall also be removed.

9.78.070 GENERAL REQUIREMENTS FOR THE INSTALLATION OF ANY WECS

A. The safety of the design and construction of all WECS, including towers and associated equipment, shall be certified by the manufacturer or by an Engineer Licensed by the State of California.

B. Safety wires shall be installed on the turnbuckles on guy wires of guyed WECS towers.

C. All WECS towers shall be equipped with manual and automatic over-speed controls. The rotor and over-speed control design and fabrication shall conform with good engineering practices and shall be certified by the manufacturer or by an Engineer Licensed by the State of California.

D. All installations shall conform to the requirements of the latest adopted version of the National Electrical Code, adopted by the Town of Apple valley.

E. The compatibility of the tower structure with the rotors and others components of the WECS shall be certified by the manufacturer or by an Engineer Licensed by the State of California.

F. All WECS towers or facilities shall either have tower climbing apparatus located not closer than twelve (12) feet to the ground or be un-climbable by design for the first twelve (12) feet.

G. WECS sited on top of, or attached to and extending above the roof line of, an existing structure shall comply with all applicable provisions of the latest version of the Uniform Building Code, as adopted buy the Town of Apple Valley. Certification by an Engineer Licensed by the State of California shall be required. Any device located in such a manner shall be subject to the height limitations of the underlying zoning.

H. No part of a WECS tower or facility shall be located upon, within or extend over a drainage, utility or other established easement(s). No portion or part of the WECS shall be located on or over any property line(s). The base of any WECS or the guy wire anchors of a guyed WECS tower shall not be located in any required minimum front, side or rear setback area. No such WECS shall be located between the main structure on site and any existing or planned public right-of-way.

I. Clearance between any WECS and existing or planned electrical lines shall be in compliance with the requirements of the most recently adopted edition of the National Electrical Safety Code.

J. Efforts should be made to site WECS to reduce the likelihood of blocking or reflecting television or other communications signals and from blocking established views. If signal interference occurs, the WECS owner shall make all reasonable efforts to resolve the problem. If the problem(s) cannot be eliminated or reduced to an acceptable level by the individual experiencing the interference, then the WECS owner shall shut down and remove the source of interference within thirty (30) days from the date of receiving official notice from the Town of Apple Valley.

K. Nothing within this Chapter shall be construed to allow the infringement of the enjoyment rights of a property owner by another by the installation, maintenance or use of a WECS.

L. The owner of any WECS shall provide, as part of the submission for review by the Planning Commission of a Development Permit, proof of liability insurance that specifically addresses the installation, use and maintenance of the WECS.

M. Homebuilt, experimental and prototype WECS shall be allowed provided they comply with all applicable regulations detailed within this Chapter.

N. Intentionally left blank.

O. The interconnections between a wine turbine and the electric utility shall be in compliance to the most recently adopted edition of the National Electrical Safety Code and all Federal regulations. Certification shall be submitted in writing by the owner that the WECS will automatically disconnect from the utility when there is no power input from the utility.

P. Battery storage units associated with a WECS shall be in compliance with the latest adopted edition of the National Electric Code or other applicable Codes and shall be inspected by an inspector for the Town of Apple Valley.

Q. The safety of structural components of reconstructed or reconditioned WECS, and the compatibility of the rotors of reconstructed or reconditioned WECS, shall be certified by an Engineer Licensed by the State of California. The safety of electrical components of reconstructed or reconditioned WECS shall be certified by an Engineer Licensed by the State of California. The safety of all modifications to any WECS shall be certified by an Engineer Licensed by the State of California. Certification of safety is required before any Building Permit for a WECS is issued for modifications made prior to installation. Certification of the safety of modifications made after the WECS has been installed shall also be subject to the requirements of a Building Permit. Failure to have the safety of any modifications certified either prior to installation, or prior to use of a system modified after installation, shall result in the revocation of the Building Permit and any discretionary approvals granted for the WECS until such certification has been obtained and provided to the Town of Apple Valley.

County of San Bernardino

Section

§ 84.26.010 Purpose.

As allowed by Government Code § 65892.13, the purpose of this Chapter is to provide a uniform and comprehensive set of standards for the placement of accessory wind energy systems on parcels in unincorporated areas of the County in order to encourage the generation of electricity for on-site use, thereby reducing the consumption of electrical power supplied by utility companies. These regulations are intended to ensure that accessory wind energy systems are designed and located in a manner that minimizes visual and safety impacts on the surrounding community.

(Ord. 4011, passed - -2007)

§ 84.26.020 Applicability.

This Chapter provides development standards for accessory wind energy systems.

(Ord. 4011, passed - -2007)

§ 84.26.030 Development Standards.

(a) *Number of Units and Required Separation.* Normally, only one unit per parcel shall be allowed. However, additional units may be allowed at the rate of one unit for every ten acres to a maximum of three units. The acreage requirement may be met by one parcel or the total acreage of multiple parcels held under common ownership. Units shall be installed with at least 240 feet separation from each other. If the units are to 50 feet in height, a maximum of two units may be installed per five acres. For every additional five acres, one additional unit may be added not to exceed a maximum of five units. Additionally, the separation between the units may be reduced to twice the height of the systems.

(b) *Maximum Tower Height.* The tower height limitations in Table 84-17 (Maximum Tower Heights for Accessory Wind Energy Systems) shall apply to all accessory wind energy systems, provided that the application for a system includes evidence that the proposed height does not exceed the height recommended by the manufacturer or distributor of the system. Variances to the tower height limitations may be approved in compliance with Chapter 85.17 (Variances).

Table *84-14*

Maximum Tower Heights for Accessory Wind Energy Systems

	Region		
Land Use Zoning District (parcel size within zoning district)	Valley	Mountain	Desert

AG	80 feet	80 feet	120 feet
RC	80 feet	80 feet	120 feet
RL (1 acre to less than 2.5 acres)	65 feet	65 feet	80 feet
RL (2.5 acres to less than 5 acres)	65 feet	65 feet	80 feet
RL (5 acres or greater)	80 feet	80 feet	100 feet
RM (minimum 1 acre)	52.5 feet	52.5 feet	52.5 feet
RS (minimum 1 acre)	52.5 feet	52.5 feet	52.5 feet
All other land use zoning districts	65 feet(1)	65 feet(1)	80 feet(1)
Note:			
(1) Or the maximum structure height specified in Division 2 (Land Use Zoning Districts and Allowed Land Uses) for the land use zoning district in which the system is located, whichever is greater.			

(c) *Setbacks.* The minimum setback from any property line shall be equal to the system height.

(d) *Climbing Apparatus.* Climbing apparatus shall be located at least 12 feet above the ground, and the tower shall be designed to prevent climbing within the first 12 feet.

(e) *Lighting.* Tower structure lighting shall be prohibited unless required by another Code or regulation.

(f) *Noise.* The noise performance standards in § 83.01.080 (Noise) shall apply, except during short-term events (e.g., utility outages, windstorms, etc.).

(g) *Visual Effects.* An accessory wind energy system shall not substantially obstruct views of adjacent property owners.

(h) *Location.*

(1) An accessory wind energy system shall be placed or constructed below any major ridgeline when viewed from any designated scenic corridor as identified in the Open Space Element of the General Plan and in Chapter 82.19 (Open Space (OS) Overlay).

(2) An accessory wind energy system shall not be:

(A) Located within a scenic corridor as identified in the Open Space Element of the General Plan and in Chapter 82.19 (Open Space (OS) Overlay).

(B) Allowed where otherwise prohibited by any of the following:

(I) The Alquist-Priolo Earthquake Fault Zoning Act.

(II) The terms of any easement.

(III) The listing of the proposed site in the National Register of Historic Places or the California Register of Historical Resources.

(i) *Turbine Certification.* The system's turbine shall be approved or shall have been approved by the California Energy Commission or certified by a national program (i.e., National Electrical Code (NEC), American National Standards Institute (ANSI), and Underwriters Laboratories (UL).

(j) *Engineering Analysis.* The application shall include standard drawings and an engineering analysis of the system's tower, showing compliance with the Uniform Building Code (UBC) or the California Building Code and certification by a professional mechanical, structural, or civil engineer licensed by the State. However, a wet stamp shall not be required, provided that the application demonstrates that the system is designed to meet the:

(1) UBC requirements for wind exposure D;

(2) UBC requirements for Seismic Zone 4;

(3) Requirements for a soil strength of not more than 1,000 pounds per square foot; or

(4) Other relevant conditions normally required by a local agency.

(k) *Compliance with Aviation Law.* The system shall comply with all applicable Federal Aviation Administration requirements and the State Aeronautics Act (Public Utilities Code §§ 21001 *et seq.*).

(l) *Compliance with Electrical Code.* The application shall include a line drawing of the electrical components of the system in sufficient detail to allow for a determination that the installation conforms to the National Electric Code.

(m) *Reduction in Onsite Electricity Consumption.* The system shall be used primarily to reduce onsite consumption of electricity.

(Ord. 4011, passed - -2007; Am. Ord. 4098, passed - -2010)

Use	RS-4	RS -3	RS-2	RS-1	RS-E	Notes
	P	P	P	P	P	Subject to permits and requirements specified in Chapter 19.36 *Home Occupations.*
Second units	P	P	P	P	P	Pursuant to the requirements specified in Chapter 19.53, *Second Units.*
Windmills and solar energy collectors, non commercial, up to thirty-five (35) feet in height.	P/M*	P/M*	P/M*	P/M*	P/M*	Structures shall be set back from all property lines at least 1 1/4 times the height of the structure, measured to the highest element of the structure. * One windmill Permitted per parcel. Minor Use Permit required for additional windmills.
Up to a fifty percent (50%) increase, to 52 ½ feet, may be approved subject to Minor Use Permit.	M	M	M	M	P	
C. Institutional Uses All institutional uses shall be accessible from an Expressway, Arterial or Collector Street, or have an adequate, improved private drive.						
Cemeteries	C	C	C	C	C	
Churches, synagogues, temples, and other religious facilities	C	C	C	C	C	
Conference centers and organizational camps	C	C	C	C	C	
Governmental facilities	C	C	C	C	C	Including public service facilities, such as libraries, museums, parks, recreation facilities, and civic uses.
Hospitals	C	C	C	C	C	
Schools	C	C	C	C	C	
E. Cultural Activities						
Art Galleries and studios	M	M	M	M	M	
F. Transient Lodging Facilities						
Bed and Breakfast Uses	C	C	C	C	C	Subject to the limitations, regulations and standards in Chapter 19.54, *Bed and Breakfast Inns.*
G. Transportation and Communication Facilities, and Utilities						

c. The reasonable possibility of locating the facility on an existing structure,
d. The reasonable possibility of designing the facility to conceal its intended purpose,
e. The facility to the greatest extent feasible shall be designed so that it is aesthetically and architecturally compatible with the surrounding use,
f. A facility mounted on a building or structure shall be aesthetically and architecturally compatible with the building or structure or shall be screened with materials that are aesthetically and architecturally compatible with the building,
g. The facility shall have subdued colors and be covered with non-reflective materials,
h. The facility as proposed shall have been approved by the Federal Communications Commission, California Public Utilities Commission or other governmental agency having jurisdiction over the facility and the facility shall be consistent in matters with such approvals, and
i. The availability of alternate sites proposed to be located within the same land use district within which the facility is proposed to be located and the availability of reasonably and functionally equivalent alternate sites located in land use districts other than that within which the facility is proposed to be located.

E. In the event a facility is abandoned, the holder of the conditional use permit for the facility shall remove the facility at its sole cost and expense. A facility shall be considered abandoned if it ceases to be used as allowed in the conditional use permit for more than one hundred eighty (180) consecutive days.

F. In the event the planning commission denies an application for a conditional use permit for a facility, it shall render its decision in writing and shall support its decision by substantial evidence in the written record.

(Ord. 290 § 4 (Exh. A), 2000)

16.16.063 - Alternative energy technology standards.

A. Windmills as defined by Section 16.08.890 shall be permitted in accordance with Section 16.16.064 and subject to the provisions as provided herein.
1. The structure and all appurtenant equipment for all tower-mounted windmills shall be located behind the primary building, not within the front or street side yard, and a minimum of 1.1 times the overall structure height from the side and rear property lines. Guy wires may encroach into the minimum setbacks, but shall not encroach over property lines.
2. The structure may need to be farther from the property lines based upon the required specifications regarding noise identified in Section 16.16.063(A)(3).
3. Specifications on the noise produced by the windmill shall be submitted for windmills within all zone districts, identifying the distance from the structure to the property line to meet the city's noise ordinance. The setback shall be increased should the manufacturers' specifications evidence that the windmill would exceed the evening noise standard at any property line.
4. Tower-mounted windmills shall not exceed the height limitation of the zone district in conjunction with the special height increases of Section 16.20.060. The height shall be measured to the top of the blades or rotors or any other portion of the windmill, which extends farthest above ground level. The blades and rotors of the windmill shall be a minimum of fifteen (15) feet above ground level at the lowest point to ensure the safety of persons and property beneath. Approval of additional height beyond the special height increases within Section 16.20.060 shall require approval of a variance.
5. Multiple tower-mounted windmills are allowed subject to compliance with the minimum setback and accessory structure lot coverage limitations as well as in conformance with the noise ordinance. The area of a windmill is defined as the circular area measured horizontally at the farthest spread of the rotors/blades of the windmill from the pole in determining accessory structure lot coverage.
6. Roof-mounted windmills shall not exceed fifty (50) feet or the height regulation of the zone district, whichever is greater. Approval of a minor exception is needed to exceed the height restriction by up to ten percent and approval of a variance shall be required to exceed the allowed height beyond ten percent. Roof-mounted windmills do not qualify for the special height increases of Section 16.20.060. The height shall be measured from the ground to the top of the blade/rotor or any other portion of the windmill.
7. Specifications on the noise produced by the windmill shall be submitted pursuant to Section 16.16.063(A)(3), identifying the distance from the structure to the property line necessary to meet the city's noise ordinance. The windmill shall be located so that it does not exceed the evening noise standard at any property line.
8. All windmills shall be a light gray, white, or other city-approved non-reflective color to minimize visual disruption of the area. Use of conspicuous colors is prohibited. Windmills shall not contain signs or be illuminated, unless required by state or federal law.

9. Nothing in this development code amendment shall be construed to affect the structural requirements for any windmill, as enforced by the building and safety division. All windmills shall require issuance of a building permit prior to installation.
10. All mechanical equipment associated with the windmill located outdoors shall be secured by a minimum five-foot high fence to prevent unauthorized access. Ladders or step bolts on the side of towers shall be a minimum of nine feet above ground level or shall be equipped with an approved method to prevent unauthorized access.
11. Windmills shall be equipped with manual and automatic controls to limit the operational speed of the blades/rotor to the design limits of the windmill. An automatic braking, governing or feathering system shall also be provided to prevent uncontrolled rotation.
12. No windmill shall cause any electromagnetic interference.
13. Windmills shall be kept in good working order and shall be maintained in an aesthetic state. All windmills which are in a nonoperational state for one hundred eighty (180) consecutive days or more shall be considered abandoned and shall be dismantled and removed from the property at the owner's expense.
14. Wind farms shall be allowed in rural residential, agricultural, institutional, and industrial zone districts with approval of a conditional use permit.
15. All references to wind machines within the current development code shall be eliminated.

B. Solar energy systems as defined by Section 16.08.770 shall be permitted in accordance with Section 16.16.064 and subject to the provisions as provided herein.
1. Solar systems are subject to compliance with the minimum setback and accessory structure lot coverage limitations. The area of a solar system is defined as the rectangular area of the solar panels for the purpose of determining accessory structure lot coverage.
2. Solar systems shall be kept in good working order and shall be maintained in an aesthetic state. All solar systems which are in a nonoperational state for one hundred eighty consecutive days or more shall be considered abandoned and shall be dismantled and removed from the property at the owner's expense.

(Ord. No. 2009-12, § 3, 2-16-10)

16.16.064 - Alternative energy permitting requirements.

Alternative Energy Technology	Zone District			
	Single-family residential, rural residential and agricultural districts[1]	Multiple-family residential districts	Commercial districts[2]	Industrial and institutional districts[3]
Tower-mounted windmill	Allowed as an accessory structure on developed 15,000 square foot and larger lots.	Allowed as an accessory structure on a developed lot if approved by a Revised Site Plan Review application.	Allowed as an accessory structure on a developed lot if approved by a Revised Site Plan Review application.	Allowed as an accessory structure on developed lots.
Roof-mounted windmill	Not permitted.	Not permitted.	Allowed as an accessory structure on a developed lot if approved by a Revised Site Plan Review application.	
Roof-mounted solar energy systems	Allowed as an accessory structure on a developed lot. Roof-mounted solar systems shall not face a street unless the solar system is designed approximately parallel to the roof plane or integral to the roof material. A revised site plan review application shall be approved to allow roof-mounted solar systems to face a street. Approval of a Revised Site		Allowed as an accessory structure on a developed lot if approved by a Revised Site Plan Review application.	

	Plan Review shall be based upon the location of buildings, orientation of the roof planes, tree locations, or other factors which negatively affect system efficiency, preventing the system from being situated on a roof plane not facing a street.	
Ground-mounted solar energy systems	Allowed as an accessory structure within the rear yard on a developed lot if approved by a Revised Site Plan Review application. Approval shall be subject to the determination that the configuration and location of buildings, orientation of the roof planes, tree locations, or other factors which negatively affect system efficiency, prevent installation on the roof.	Allowed as an accessory structure on a developed lot if approved by a Revised Site Plan Review application.

[1]This includes rural residential, as well as single-family residential, rural residential and agricultural districts within Specific Plan and Planned Development districts.

[2]This includes similar commercial districts within Specific Plan and Planned Development districts.

[3]This includes similar industrial and institutional districts within Specific Plan and Planned Development districts.

(Ord. No. 2009-12, § 3(Exh. A), 2-16-10)

16.16.065 - Bed and breakfast uses.

A. Bed and breakfast uses as defined in Section 16.08.080, shall be permitted in all residential zone/land use districts and all zone/land use districts where residential uses are permitted.

B. Requirements.

1. Only one family dwelling structure, including habitable accessory structures shall be considered for bed and breakfast uses.
2. This use shall be conducted as an accessory use only; the residential structure shall serve as the primary residence of the owner. If a corporation is the owner, a majority shareholder of the corporation shall reside in the residential structure where the said use is proposed.
3. Permits—Taxes.
   a. All bed and breakfast uses shall be subject to:
      i. Special use permit as specified in Chapter 16.12. The special use permit is renewable annually;
      ii. Health permit as required by county and state requirements; and
      iii. Transient occupancy tax (bed tax).
   b. Application for a permit shall be made by the resident property owner or his legal agent having power of attorney to make such application.
4. Where deemed appropriate by the building official, owners/operators of bed and breakfast uses shall be required to sign and record a certificate of land use compliance and abide by the provisions outlined therein.

C. Findings. Prior to acting upon an application for a special use permit for a bed and breakfast use, the reviewing authority shall find that all the following are true:

1. That the site upon which the bed and breakfast use is to be established, shall conform to all standards of the zone/land use district in which it is located, and that the site for the proposed use is adequate in size and shape to accommodate said use and all yards, building coverage, setbacks, parking areas and other applicable requirements of the code;
2. That the residential character of the neighborhood in which the use is located shall be maintained and preserved and that the issuance of the permit shall not be significantly detrimental to the public health, safety and welfare or injurious to the vicinity and district in which the use is located.

D. Conditions.

1. Structural Features.
   a.

ARTICLE 99 RENEWABLE ENERGY

(Zoning Ordinance Amendment 09-02, adopted by City Council November 4, 2009.)

Section 99.01 Co-located Small Wind Energy Systems (CSWES)

A. Purpose and intent

It is the intent of these regulations to permit Co-located Small Wind Energy Systems (CSWES) as an accessory use in the C-2 (Office Commercial), C-3 (General Commercial), C-4 (Commercial Center), C-5 (Service Commercial), M-1 (Light Industrial), M-2 (General Industrial), M-3 (Airport Industrial), and M-4 (Planned Industrial) zone districts. It is the purpose of these regulations to ensure that alternative energy systems are available in the City of Palmdale, and that they are installed and co-located in a manner that avoids hazards to public health and safety, minimizes adverse aesthetic impacts, and ensures compatibility with the surrounding neighborhood.

B. Definitions

Co-located Small Wind Energy System (CSWES) shall mean a wind energy conversion system that is located on a pole with site lighting below the turbine, which has a rated capacity of 8kW or less.

Temporary Meteorological Tower (met tower) shall mean a temporary structure which includes the tower, base plate, anchors, guy cables and hardware, anemometers, (wind speed indicators), wind direction vanes, booms to hold equipment anemometers and vanes, data logger, instrument wiring, and any telemetry devices that are used to monitor or transmit wind speed and wind flow characteristics over a period of time for either instantaneous wind information or to characterize the wind resource at any given location.

Co-Located Wind Energy System Height shall mean the vertical distance from ground level to the tip of the wind generator blade when it is at its highest point.

C. Development Standards

Installation of Co-located Small Wind Energy Systems (CSWES) where permitted as an accessory use subject to administrative review by a Minor Modification application, shall be constructed in the following manner:

1. Minimum parcel size. Developments of a minimum of 20 acres or more with parking lot light fixtures at a minimum of 25 feet in height.

2. Setbacks. Co-located Small Wind Energy Systems shall meet the following setbacks:

   a. A distance equal to the tower height from any abutting private properties that are not part of the development.

   b. A distance equal to the tower height from any overhead utility lines, unless written permission is granted by the affected utility.

   c. A distance equal to 150 feet from any property that is residentially used or designated.

3. Noise. Co-located Small Wind Energy Systems shall meet the following criteria with respect to noise:

   a. A site-specific noise study or the manufacture's engineered sound studies shall be submitted for review and the decibel level shall comply with the Noise Element of the General Plan.

   b. Decibel levels for each unit shall not exceed 65 decibels (dBA) as measured at the property line except during short-term events such as utility outages and severe windstorms.

4. Aesthetics. Co-located Small Wind Energy Systems shall meet the following criteria with respect to aesthetics:

   a. All proposed replacement poles for a CSWES system shall be of the same design, shape and color as the remaining light poles throughout the parking lot.

   b. The wind turbine housing and the blades of the CSWES system shall not be brightly colored. The turbine housing should be white, sky colored, or should coordinate with the color palette approved for the project buildings.

   c. The physical size of the turbine shall not extend beyond 36 inches from the center of the pole.

   d. The maximum diameter of the blades shall not exceed 16 feet.

5. Access.

   a. All ground mounted electrical and control equipment shall be labeled and secured to prevent unauthorized access.

   b. The pole shall be designed and installed so as to not provide step bolts or a ladder.

6. Lighting.

   a. A Co-located Small Wind Energy System (CSWES) shall not be illuminated unless such lighting is required by the Federal Aviation Administration. A light temporarily used to inspect a turbine, tower and associated equipment is permissible, providing said light is only used for inspection purposes and not left on for an extended period of time. All sites that are part of a CSWES shall comply with Section 86.03.

   b. The height of the light fixture on the structure itself shall not be altered from its original height as previously permitted or as permitted by the reviewing authority when co-locating a CSWES in a parking lot.

c. All light fixture poles, including collocated poles, shall be consistent in design and color throughout the development.

d. A revised photometric plan shall be submitted for review for compliance with Section 86.03(K) of the Zoning Ordinance when modifications to existing site lighting is proposed.

7. Height. Co-located Small Wind Energy Systems shall meet the following criteria with respect to height:

a. The maximum CSWES Height shall be sixty (60) feet at the highest point with one of the blades at its highest vertical point.

b. The maximum height of the center of the turbine shall not exceed 53 feet.

c. The maximum diameter of the blades from the lowest point to the highest point shall not exceed 16 feet.

8. Temporary meteorological (Met) towers shall be permitted under the same standards as those for a CSWES facility. Approval for a temporary met tower shall be valid for a maximum of 30 days.

9. Signs. All signs, other than the manufacturer's or installer's identification, appropriate warning signs shall be prohibited.

10. Building Permit. Applicable building permits shall be required for a CSWES.

11. The system shall comply with all applicable Federal Aviation Administration requirements, including but not limited to Subpart B (commencing with Section 77.11) of Part 77 of Title 14 of the Code of Federal Regulations regarding installations close to airports. These regulations apply to any installation within 20,000 feet of an airport and exceeding specific heights based on specific FAA and airport parameters.

12. If the CSWES use has been determined by the Planning Director or his or her designee to be inoperative or abandoned for a period of six (6) months, the CSWES shall be removed, unless a new application to re-establish the use is filed with the City. The City may remove an abandoned facility, repair any and all damage to the premises caused by such removal, and otherwise restore the premises as in appropriate to be in compliance with applicable code at any time: 1) after ninety (90) days following a notice of abandonment, or 2) following a notice of decision by the Director of Planning, subject to the owner/operator's right of appeal under the City of Palmdale Municipal Code. The City may, but shall not be required to, store the removed facility, or any part thereof. The owner of the premises upon which the abandoned facility was located, and all prior operators of the facility, shall be jointly liable for the entire cost of such removal, repair, restoration and storage, and shall remit payment to the City promptly after demand therefore is made. The City may, in lieu of storing the removed facility, convert it to the City's use, sell it, or dispose of it in any manner deemed by the City to be appropriate.

D. Review Process

Co-located Small Wind Energy Systems (CSWES) shall be permitted as an Accessory Use when permitted in the zoning district subject to Administrative Approval pursuant to Zoning Ordinance Section 26.04, Minor Modification or as permitted by the reviewing authority when co-locating a CSWES in a parking lot.

A temporary meteorological tower shall be permitted subject to Administrative Approval pursuant to Zoning Ordinance Section 26.04, Minor Modification for a period not to exceed 30 days as stated in Section 99.01 (C) 7.

E. Submittal Requirements

The applicant shall submit the information required by the appropriate application form, including but not limited to the following information.

Applications for a CSWES shall include the following items:

1. Site Plan

    a. Property lines and physical dimensions of the subject property;
    b. Location, dimensions, and types of existing major structures on the property;
    c. Location of the proposed CSWES units including, foundations and associated equipment;
    d. Proposed CSWES elevation drawings,
    e. The right-of-way of any public road that is contiguous with the property;
    f. Any overhead utility lines;
    g. A site specific noise study; and
    h. A photometric plan if existing lighting is being modified.

2. A perspective rendering from any abutting public way if the CSWES is visible from said public way.

3. Specifications of the CSWES including manufacturer and model, rotor diameter, and proposed pole height.

4. Typical pole foundation specifications or drawings from the wind turbine manufacturer.

(Ord. 711 §§ 10—12, 1995; prior zoning ord. §§ 212.200—212.230)

17.08.335 - Vertical Axis Wind Turbine System (VAWTS).

A. Purpose and Intent. It is the purpose and intent of this section to promote the safe, effective and efficient construction and use of VAWTS on residential lots within the city limits of the City of Lancaster. These regulations are intended to assure that VAWTS are designed and located in a manner that minimizes visual, noise, and safety impacts on the surrounding community. Commercial wind turbines in residential zones are subject to a conditional use permit.

B. Applicability. These specific standards are applicable for all vertical axis wind turbine system in residential zones allowed subject to approval of a director's review in accordance with Article VI of Chapter 17.32

C. Definitions. Definitions for the administration of this Section are contained within Section 17.01.240.

D. Restriction on Use of Electricity Generated by VAWTS. A VAWTS shall be used exclusively to supply electrical power for on-site consumption. Electrical power generated by the VAWTS exceeding on-site consumption may be used by the utility company in exchange for a reduction in the cost of electrical power supplied by that company to the parcel for on-site use, as long as no net revenue is produced by such excess electrical power. VAWTS, as allowed pursuant to this section shall not be used for commercial production or profit.

E. Type of Device. Vertical axis wind turbines system (VAWTS) shall meet the following guidelines. All other noncommercial and commercial wind energy conversions system shall meet the requirements outlined in Article XI, Wind Energy Conversion Systems and shall be subject to a conditional use permit.

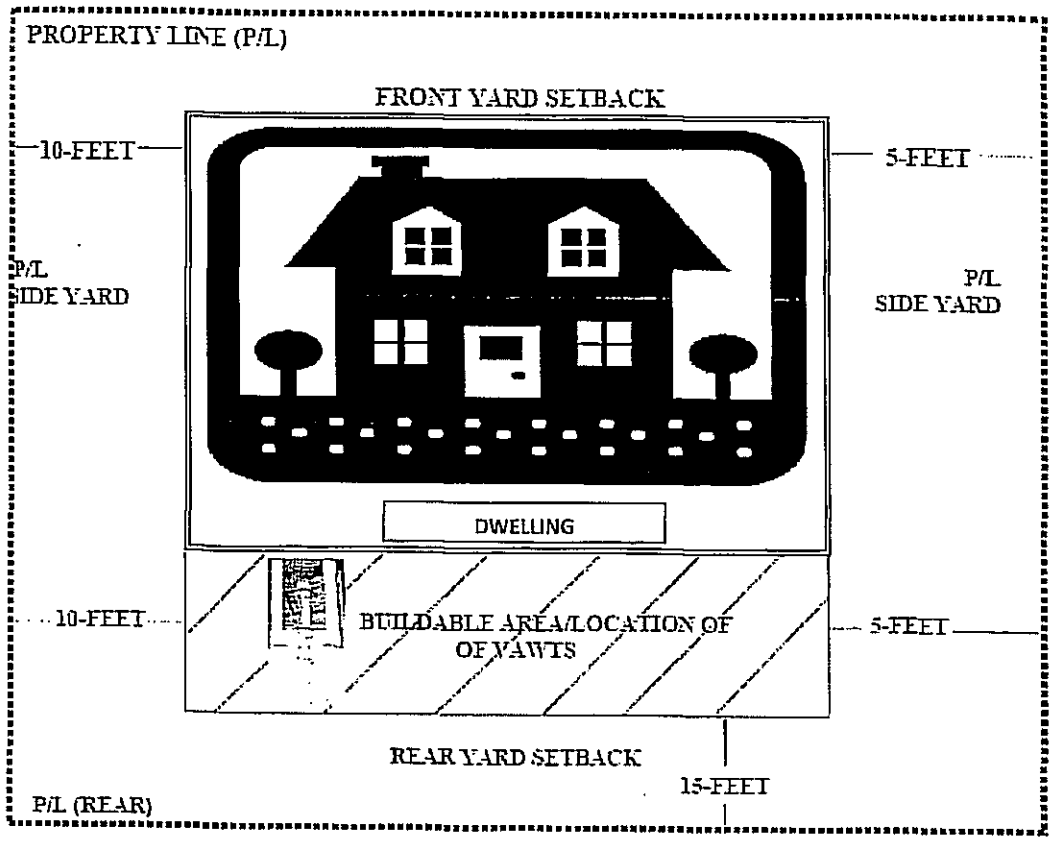
F. Property Development Regulations. A VAWTS shall be subject to all applicable regulations of the residential zone in which it is proposed, except that the following standards shall take precedence over the regulations of the residential zones to the extent that they differ. The following shall be deemed to be conditions of approval of every VAWTS unless specifically modified under the director's review and approval process.

1. No part of a VAWTS shall be located within or over drainage, utility, or any other established easements. Each VAWTS shall be setback from the nearest above-ground public communication or electrical line by a distance which is equivalent to the height of the VAWTS.
2. Blade Clearance. No part of a VAWTS blade shall extend within fifteen (15) feet of the ground, trees, or any other structure.
3. Only one VAWTS shall be allowed per residence.
4. Devices mounted on a building may require strengthening of the existing structure to bear the additional weight and stress created by the VAWTS for which a building permit shall be obtained.

G. Yard Requirements. The following shall apply for building and ground mounted VAWTS in all residential zones:

1. VAWTS shall be located behind the primary building outside of the front, side and rear yard setbacks (refer to Diagram 1 and Section 17.08.100.B.3).
2. Tower height shall not exceed the maximum height of the zone in which the VAWTS is located (refer to Section 17.08.100.B.3).

DIAGRAM 1
VAWTS
R-7,000, R-10,000 and R-15,000 Zones Only



Sample of R-7,000 Zone

H. VAWTS Standards.

1. Cage Width. Maximum seventy-eight (78) inches (six and one-half feet).
2. Cage Height. Maximum eighty-four (84) inches (seven feet).
3. California Energy Commission Approval. The equipment shall meet California Energy Commission standards for approved small wind turbines (VAWTS) [www.consumerenergycenter.org].
4. Compliance with Aviation Safety Standards. The VAWTS shall comply with all applicable FAA requirements, including any necessary approvals for installations close to airports and other facilities with flight operations in the vicinity such as Fox Field, and Plant 42.
5. Design. An VAWTS must be designed and constructed in accordance with the following:
   a. Colors. The colors used in the construction materials or finished surface shall be muted and visually compatible with surrounding development.
   b. Lighting. If required by FAA requirements, all required lights shall be shielded from adjacent properties, and no other lights shall be placed upon the Tower.
   c. Noise. Noise from a VAWTS shall conform with normally acceptable noise standards of sixty-five (65) dBA at property line.
   d. Visual Effects. Any VAWTS that is placed within the viewshed of a designated Scenic Highway or vista shall be assessed for its visual effects, and appropriate conditions relating to setting, buffers, and design of the facility.
   e. Climbing Apparata. All climbing apparatus for ground-mounted VAWTS must be located at least fifteen (15) feet above the ground, and the structure must be designed to prevent climbing within the first fifteen (15) feet.
   f. Automatic Overspeed Controls. VAWTS shall be equipped with manual and automatic overspeed controls to limit the blade rotation speed to within the design limits of the VAWTS.
   g. Access Doors. If a VAWTS is equipped with access doors, all access doors shall be lockable.
6.

Grid Interconnection. The renewable energy must be permanently interconnected to the electrical distribution grid of the utility serving the customer's electrical load. The VAWTS shall interconnect to the electricity distribution system and must comply with applicable electrical codes and utility interconnection requirements.

7. Maintenance. VAWTS shall be maintained in an operational condition that poses no potential safety hazards.
8. Removal. Within six months after the VAWTS has ceased to operate the permittee shall remove the VAWTS, clear the site of all equipment, and restore the site as nearly as practicable to its condition prior to the installation of the VAWTS. Failure to remove such VAWTS shall constitute as a public nuisance.

I. The Planning Director can require additional design criteria or other information as deemed necessary to integrate the proposed VAWTS with the surrounding area.

(Ord. No. 954, §§ 4, 5, 12-14-2010; Ord. No. 933, § 3, 10-13-2009)

17.08.337 - Non-Commercial Wind Energy System (NC-WES).

A. Purpose and Intent. It is the purpose and intent of this section to promote the safe, effective and efficient construction, and use of NC-WES in the Rural Residential Zones (RR-1 and RR-2.5 only). These regulations are intended to assure that NC-WES are designed and located in a manner that minimizes visual, noise, and safety impacts on the surrounding community.

B. Applicability. These specific standards are applicable for all Non-Commercial Wind Energy Systems in the Rural Residential Zones (RR-1 and RR-2.5 only), and subject to approval of a Director's Review in accordance with Article VI of Chapter 17.32. The definitions contained in Section 17.04.240 regarding wind energy conversion systems shall apply to this section.

C. Development Standards. An NC-WES shall be subject to all applicable regulations of the Rural Residential Zones (RR-1 and RR-2.5 only) in which it is proposed, except that the following standards shall take precedence over the regulations of the Rural Residential Zones to the extent that they differ.

1. Accessory Use. A NC-WES is considered to be an ancillary structure and may only be placed on a parcel already developed with a primary use, or placed on a parcel concurrent with the development of a primary use.
2. Minimum Lot Size. The minimum parcel size shall be 40,000 square feet.
3. Location of NC-WES.
   a. Setback. A NC-WES shall be located:
      i. Behind the primary building within the buildable area of the parcel (exclusive of required front, side, and rear yard areas),, and located a minimum of 30 feet from any property line. (Note: Setback distances shall not apply to guy wires or anchors).
      ii. Shall not be located within or over drainage, utility, or other established easements.
      iii. Each wind turbine shall be setback from the nearest above-ground public communication or electrical line by a distance which is equivalent to the height of the wind turbine.
4. Blade Clearance. No part of an NC-WES blade shall extend within 15 feet of the ground, trees, or any other structure.
5. Maximum Tower Height. Tower Height shall not exceed 65 feet above grade on any parcel of 5 acres or less. Parcels greater than 5 acres in size may have a maximum tower height of 80 feet.
6. Maximum Blade Rotor Area Diameter. The overall diameter of the blade area shall not exceed 24 feet.
7. Compliance with Aviation Safety Standards. The NC-WES shall comply with all applicable Federal Aviation Administration (FAA) requirements, including any necessary approvals for installations within an adopted Airport Land Use Plan, Air Installation Compatibility Use Zone (AICUZ), or other recognized over-flight area.
8. Wind Turbine Approval. Wind Turbines must be approved under the Emerging Technologies program of the California Energy Commission or any other small wind certification program recognized by the AWEA.
9. Design. An NC-WES must be designed and constructed in accordance with the following:
   a. Colors. The colors used in the construction materials or finished surface shall be muted and visually compatible with surrounding development.
   b. Lighting. Lighting of the Tower shall only be permitted if required by, and done in conformance with, the requirements of the FAA.
   c. Noise. Noise from an NC-WES shall not exceed 65 decibels at any property line.

d. Visual Effects. Any NC-WES that is placed within the view shed of a designated Scenic Highway or vista shall be assessed for its visual effects, and appropriate conditions relating to setting, buffers, and design of the facility.

e. Climbing Apparatus. All climbing apparatus must be located at least fifteen (15) feet above the ground, and the tower must be designed to prevent climbing within the first fifteen (15) feet.

f. Automatic Overspeed Controls. An NC-WES shall be equipped with both manual and automatic overspeed controls to limit the blade rotation speed to within the design limits of the NC-WES.

g. Access Doors. If an NC-WES is equipped with access doors, all access doors shall be lockable.

10. Signs. One sign, limited to eighteen (18) inches in length and one (12) inches in height, shall be posted at the base of the Tower. The sign shall include a notice of no trespassing, a warning of high voltage, and the phone number of the property owner to call in the event of an emergency.

11. Maintenance. NC-WES shall be maintained in an operational condition that poses no potential safety hazards.

12. Removal. Within six (6) months after the operation of an NC-WES has ceased the permittee shall remove the N-WECS, clear the site of all equipment, and restore the site as nearly as practicable to its condition prior to the installation of the N-WECS. Failure to remove such NC-WES as required above shall constitute a public nuisance.

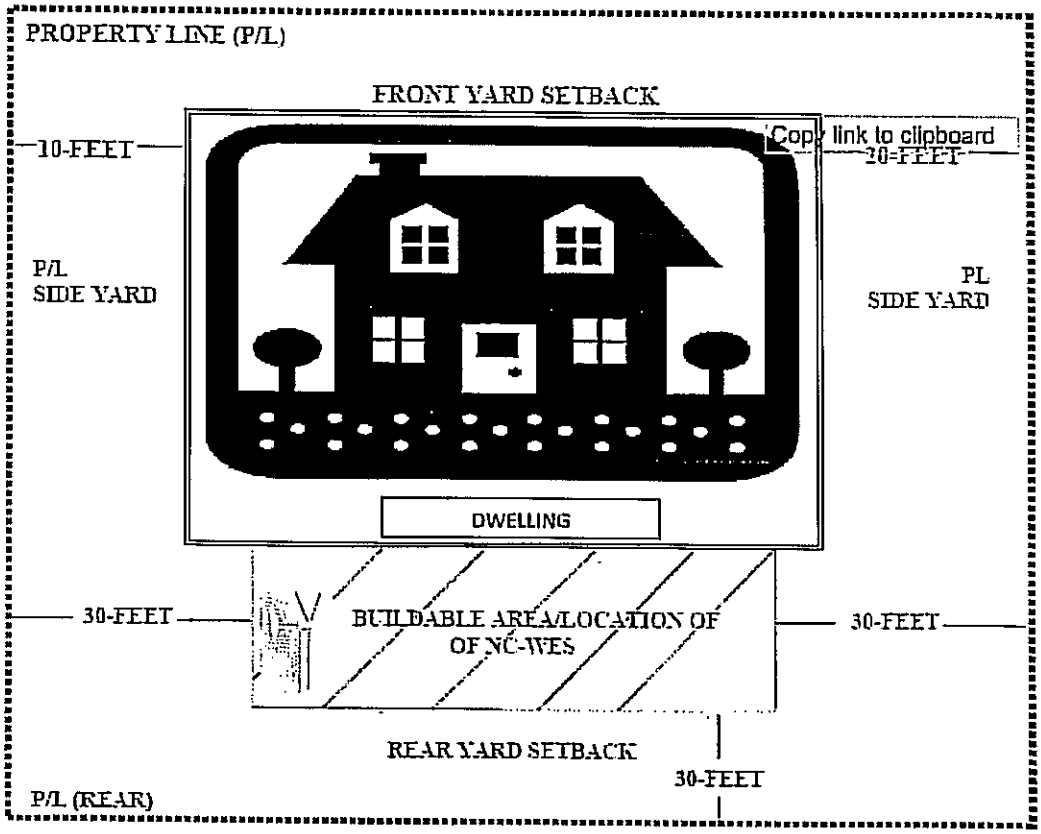
D. Review and Decision Process.

1. Application. A Director's Review application in accordance with Article VI of Chapter 17.32 shall be filed for a NC-WES meeting the requirements of this Section.

2. Notice of Application. The applicant shall submit as part of the Director's Review, a list of all owners of real property as listed on the latest county assessor's equalized assessment roll, located within 300 feet of the boundaries of the parcel on which the NC-WES is proposed. Written notices shall be given by mail to all such owners of the intent to consider the application for a NC-WES at least 10 days prior to a decision on the application.

3. Consideration by Planning Director. The Planning Director shall review the application for conformance with the requirements of this section and consider any comments received prior to making a decision on the request. The Planning Director shall approve, approve with conditions, or deny the application. Any decision of the Planning Director may be appealed to the Planning Commission in accordance with Chapter 2.44 of the Lancaster Municipal Code.

DIAGRAM 1
NC-WES
RR-1 and RR-2.5 Zones



Sample of RR-1 Zone

(Ord. No. 954, § 6, 12-14-2010)

ORDINANCE NO. 954

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF LANCASTER, CALIFORNIA, AMENDING TITLE 17 OF THE MUNICIPAL CODE, TO MODIFY THE REQUIREMENTS FOR CERTAIN WIND ENERGY SYSTEMS IN THE RURAL RESIDENTIAL (RR-1 AND RR-2.5) ZONES

WHEREAS, the City Council of the City of Lancaster, finds that it is necessary to amend Title 17 of the Municipal Code (Zoning Ordinance) based on increasing energy demands facing California and a desire to encourage the use of renewable energy by allowing Non-Commercial Wind Energy Systems (NC-WES) in Rural Residential Zones (RR-1 and RR-2.5 only) with a more efficient review and approval process; and

WHEREAS, the amendment to Title 17 of the Lancaster Municipal Code will modify the current requirements by requiring a Director's Review application (Category "B"), to regulate NC-WES in Rural Residential Zones (RR-1 and RR-2.5 only) in lieu of the current requirement for a Conditional Use Permit, and thereby would reduce applicable fees and time necessary for approval; and

WHEREAS, the establishment of the proposed regulations for wind energy systems would streamline the process, and make it easier and less expensive for property owners to use this form of alternative renewable energy; and

WHEREAS, the City Council finds that small wind energy systems, designed for non-commercial residential use, are recognized by the State Energy Resources Conservation and Development Commission as an excellent technology to help achieve the goals of increased in-state electricity generation, reduced demand on the state electric grid, increased consumer energy independence, and nonpolluting electricity generation; and

WHEREAS, wind energy is an abundant, renewable, and nonpolluting energy resource, and when converted to electricity, reduces dependence on nonrenewable energy resources and reduces air and water pollution that results from conventional energy sources; and

WHEREAS, small wind energy systems enhance the reliability and electrical generation quality of the power grid, reduce peak power demands, increase in-state electricity generation, diversify the City of Lancaster's energy supply portfolio, and provide a competitive supply market by promoting consumer choice; and

WHEREAS, the City Council finds that the Legislature of the State of California recognized the need to promote all feasible adoption of clean, renewable, and distributed energy sources by enacting the Reliable Electric Service Investments Act (Article 15 (commencing with Section 399) of Chapter 2.3 of Part 1 of Division 1 of the Public Utilities Code); and

WHEREAS, The City Council hereby makes the following findings in support of the Ordinance:

1. The proposed Zoning Ordinance amendment is consistent with General Plan Policy No. 3.6.6 which states: "Consider and promote the use of alternative energy such as wind energy and solar energy", and it will not alter the land use patterns and requirements established by the General Plan; and

2. The proposed amendments to the Lancaster Municipal Code will not adversely affect the public health, peace, comfort or welfare, because amending the application process would not affect the existing land use and still allow for a public notification/comment process; and

3. The modification to the Lancaster Municipal Code would not cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat because the proposed procedural modification and would not alter land; and

4. The Council hereby finds the environmental findings adopted by the City Council Resolution No. 09-52 on July 14, 2009, are valid for the amendment because the project is consistent with the General Plan. Therefore, no further environmental review is required pursuant to Section 15162 of the State CEQA Guidelines.

5. A uniform and comprehensive set of standards, conditions, and procedures for the placement of Non Commercial – Wind Energy Systems (NC-WES) is necessary to encourage the generation electricity for on-site use, increasing the use of renewable energy within the City.

THE CITY COUNCIL OF THE CITY OF LANCASTER, CALIFORNIA, DOES HEREBY ORDAIN AS FOLLOWS:

Section 1. Delete and Replace under Section 17.04.240: "Wind energy conversion system" to read as follows:

Wind energy conversion system "means a mechanism which is designed to utilize the natural movement of air as a means of generating electricity." The following terminology as it pertains to wind energy conversion systems is listed below:

"**AWEA** means American Wind Energy Association."

"**FAA** means Federal Aviation Administration."

"**Guy Wires** means wires or cables used in tension to support a tower."

"**Non-Commercial Wind Energy System ("NC-WES")** means a small wind energy system suitable for Rural Residential Zone (RR-1 and RR-2.5 only) meeting the requirements of Section 17.08.337, consisting of a wind turbine, tower, blades, associated controls and conversion electronics, which has a rated capacity that does not exceed the allowable rated capacity under the Emerging Renewables Fund of the Renewables Investment Plan administered by the California Energy Commission and which will be used primarily to reduce on-site consumption of utility power by converting mechanical energy into electricity."

"**Tower** means the portion of the NC-WES upon which the wind turbine is mounted."

"**Tower Height** means the height above grade of the fixed portion of the tower measured from the ground to the top of the tower, excluding the wind turbine, blades and wind-measuring devices."

"**USGS** means the United States Geological Survey."

"**Vertical Axis Wind Turbine(VAWTS)"** means a small scale, non-commercial vertical axis wind turbine system, designed with a vertical axis, suitable for residential zones consisting of a wind turbine, tower, blades, associated controls and conversion electronics, which has a rated capacity that does not exceed the allowable rated capacity under the Emerging Renewables Fund of the Renewables Investment Plan administered by the California Energy Commission and which will be used primarily to reduce on-site consumption of utility power by converting mechanical energy into electricity."

"**Wind Turbine** means a non-commercial small wind turbine consisting of a wind turbine generator and rotors, which has a rated capacity of not more than 100 kilowatts (kW) and which converts kinetic energy in wind into mechanical energy."

Section 2. Add Section: 17.08.060.Z to read as follows:

"Z. Non-Commercial Wind Energy Systems in the Rural Residential Zones (RR-1 and RR-2.5 only) pursuant to the requirements of Section 17.08.337. (See Article V of Chapter 17.08 for standards.)"

Section 3. Amend Section: 17.08.070.DD to read as follows:

"DD. Wind energy conversion systems for private and public use, excluding NC-WES and VAWTS allowed pursuant to Section 17.08.060.Y. and 17.08.060.Z (See Article XI of Chapter 17.40 for standards.)"

Section 4. Amend Section: 17.08.355.C to read as follows:

"C. Definitions. Definitions for the administration of this Section are contained within Section 17.01.240."

Section 5. Delete Diagram under Section 17.08.335.G and replace with Attachment 1:

Section 6. Add Section 17.08.337 (see Exhibit "A")

Section 7. That the City Clerk shall certify to the passage of this Ordinance and will see that it is published and posted in the manner required by law.

I, Geri K. Bryan, CMC, City Clerk of the City of Lancaster, do hereby certify that the foregoing ordinance was regularly introduced and placed upon its first reading on the 9th day of November, 2010, and placed upon its second reading and adoption at a regular meeting of the City Council on the _____day of _____, 2010, by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

ATTEST:

APPROVED:

_____
GERI K. BRYAN, CMC
City Clerk
City of Lancaster

_____
R. REX PARRIS
Mayor
City of Lancaster

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) ss
CITY OF LANCASTER)

CERTIFICATION OF ORDINANCE
CITY COUNCIL

I,_____, _____City of Lancaster, California, do hereby certify that this is a true and correct copy of the original Ordinance No. 954, for which the original is on file in my office.

WITNESS MY HAND AND SEAL OF THE CITY OF LANCASTER, on this _____ Day of the _____, _____.

(seal)

_____

"EXHIBIT A"

SECTION 17.08.337 - Non-Commercial Wind Energy System (NC-WES)

A. **Purpose and Intent.** It is the purpose and intent of this section to promote the safe, effective and efficient construction, and use of NC-WES in the Rural Residential Zones (RR-1 and RR-2.5 only). These regulations are intended to assure that NC-WES are designed and located in a manner that minimizes visual, noise, and safety impacts on the surrounding community.

B. **Applicability**. These specific standards are applicable for all Non-Commercial Wind Energy Systems in the Rural Residential Zones (RR-1 and RR-2.5 only), and subject to approval of a Director's Review in accordance with Article VI of Chapter 17.32. The definitions contained in Section 17.04.240 regarding wind energy conversion systems shall apply to this section.

C. **Development Standards.** An NC-WES shall be subject to all applicable regulations of the Rural Residential Zones (RR-1 and RR-2.5 only) in which it is proposed, except that the following standards shall take precedence over the regulations of the Rural Residential Zones to the extent that they differ.

1. **Accessory Use.** A NC-WES is considered to be an ancillary structure and may only be placed on a parcel already developed with a primary use, or placed on a parcel concurrent with the development of a primary use.
2. **Minimum Lot Size.** The minimum parcel size shall be 40,000 square feet.
3. **Location of NC-WES.**
    a. **Setback.** A NC-WES shall be located:
        i. Behind the primary building within the buildable area of the parcel (exclusive of required front, side, and rear yard areas),, and located a minimum of 30 feet from any property line. (Note: Setback distances shall not apply to guy wires or anchors).
        ii. Shall not be located within or over drainage, utility, or other established easements.
        iii. Each wind turbine shall be setback from the nearest above-ground public communication or electrical line by a distance which is equivalent to the height of the wind turbine.
4. **Blade Clearance.** No part of an NC-WES blade shall extend within 15 feet of the ground, trees, or any other structure.
5. **Maximum Tower Height.** Tower Height shall not exceed 65 feet above grade on any parcel of 5 acres or less. Parcels greater than 5 acres in size may have a maximum tower height of 80 feet.
6. **Maximum Blade Rotor Area Diameter**. The overall diameter of the blade area shall not exceed 24 feet.
7. **Compliance with Aviation Safety Standards.** The NC-WES shall comply with all applicable Federal Aviation Administration (FAA) requirements, including any necessary approvals for installations within an adopted Airport Land Use Plan, Air Installation Compatibility Use Zone (AICUZ), or other recognized over-flight area.

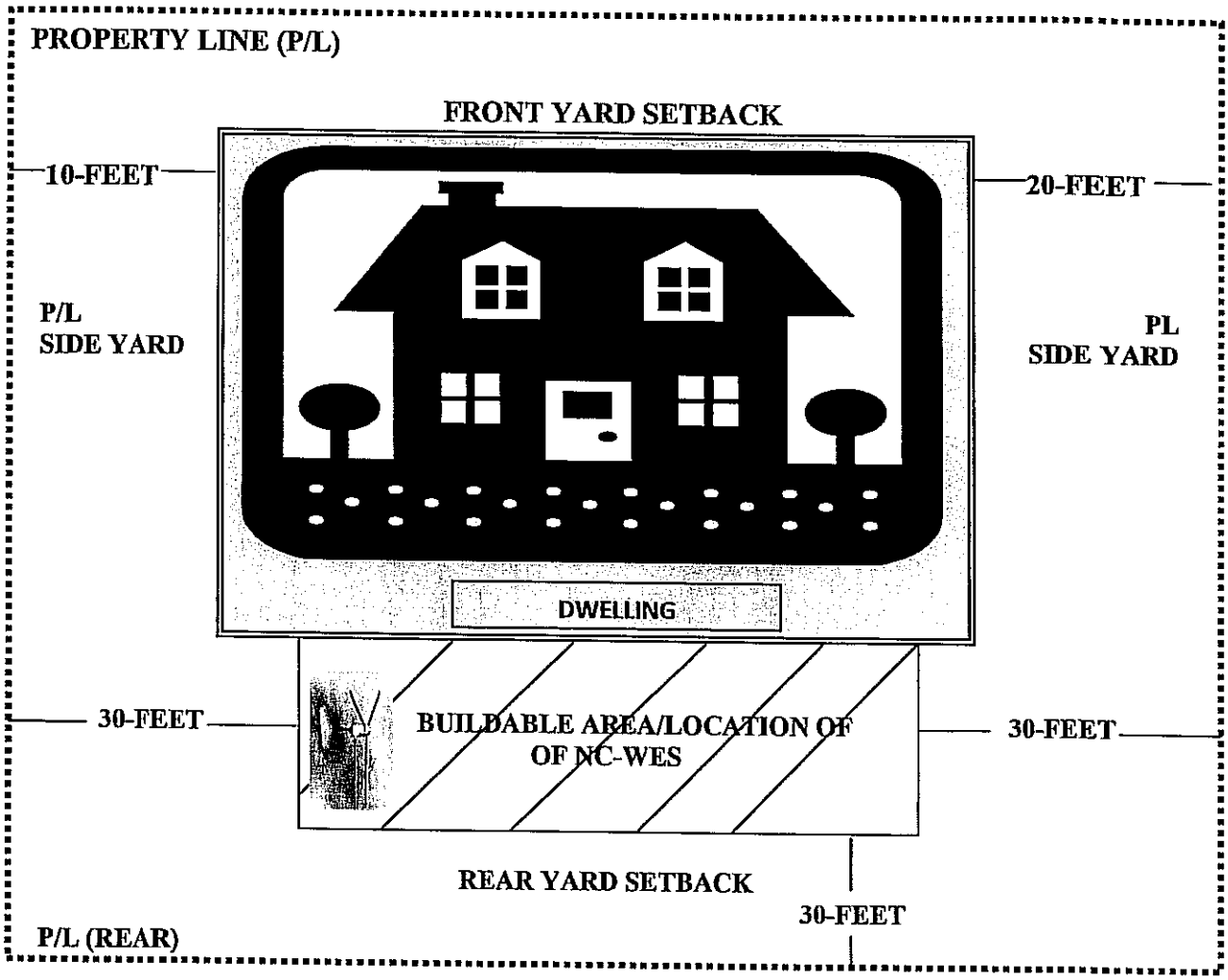
8. **Wind Turbine Approval.** Wind Turbines must be approved under the Emerging Technologies program of the California Energy Commission or any other small wind certification program recognized by the AWEA.
9. **Design.** An NC-WES must be designed and constructed in accordance with the following:
    a. Colors. The colors used in the construction materials or finished surface shall be muted and visually compatible with surrounding development.
    b. Lighting. Lighting of the Tower shall only be permitted if required by, and done in conformance with, the requirements of the FAA.
    c. Noise. Noise from an NC-WES shall not exceed 65 decibels at any property line.
    d. Visual Effects. Any NC-WES that is placed within the view shed of a designated Scenic Highway or vista shall be assessed for its visual effects, and appropriate conditions relating to setting, buffers, and design of the facility.
    e. Climbing Apparatus. All climbing apparatus must be located at least fifteen (15) feet above the ground, and the tower must be designed to prevent climbing within the first fifteen (15) feet.
    f. Automatic Overspeed Controls. An NC-WES shall be equipped with both manual and automatic overspeed controls to limit the blade rotation speed to within the design limits of the NC-WES.
    g. Access Doors. If an NC-WES is equipped with access doors, all access doors shall be lockable.
10. **Signs.** One sign, limited to eighteen (18) inches in length and one (12) inches in height, shall be posted at the base of the Tower. The sign shall include a notice of no trespassing, a warning of high voltage, and the phone number of the property owner to call in the event of an emergency.
11. **Maintenance.** NC-WES shall be maintained in an operational condition that poses no potential safety hazards.
12. **Removal.** Within six (6) months after the operation of an NC-WES has ceased the permittee shall remove the N-WECS, clear the site of all equipment, and restore the site as nearly as practicable to its condition prior to the installation of the N-WECS. Failure to remove such NC-WES as required above shall constitute a public nuisance.

D. **Review and Decision Process.**

1. **Application.** A Director's Review application in accordance with Article VI of Chapter 17.32 shall be filed for a NC-WES meeting the requirements of this Section.
2. **Notice of Application.** The applicant shall submit as part of the Director's Review, a list of all owners of real property as listed on the latest county assessor's equalized assessment roll, located within 300 feet of the boundaries of the parcel on which the NC-WES is proposed. Written notices shall be given by mail to all such owners of the intent to consider the application for a NC-WES at least 10 days prior to a decision on the application.

3. **Consideration by Planning Director.** The Planning Director shall review the application for conformance with the requirements of this section and consider any comments received prior to making a decision on the request. The Planning Director shall approve, approve with conditions, or deny the application. Any decision of the Planning Director may be appealed to the Planning Commission in accordance with Chapter 2.44 of the Lancaster Municipal Code.

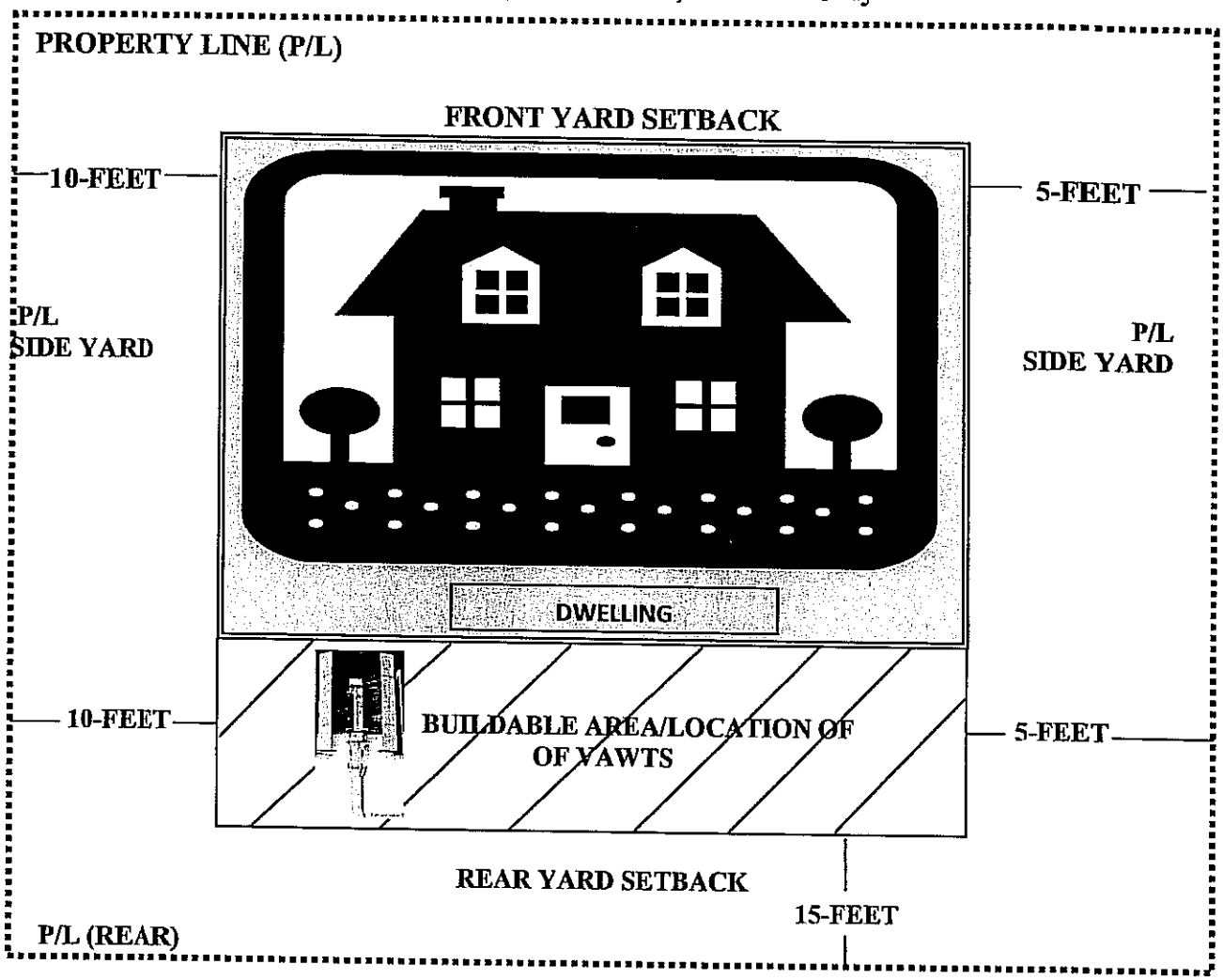
DIAGRAM 1
NC-WES
RR-1 and RR-2.5 Zones



Sample of RR-1 Zone

ATTACHMENT I

DIAGRAM 1
VAWTS
R-7,000, R-10,000 and R-15,000 Zones Only



Sample of R-7,000 Zone

PLANNING COMMISSION STAFF REPORT

To: Honorable Chairman & Planning Commission
From: Diane Olsen, Planning Technician
Date: June 24, 2011
For Commission Meeting: June 28, 2011

Subject: Selection of Planning Commission Chairman and Vice-Chairman

Prior Commission Review: NA

Recommendation: That the Planning Commission move to appoint the selected Commissioners to serve as the Chairman and Vice-Chairman of the Planning Commission for the next twelve months.

Order of Procedure:

Request Staff Report
Request Public Comment
Commission Questions
Motion/Second
Discussion on Motion
Call the Question (Voice Vote)

Discussion: The Town of Yucca Valley Municipal Code and the Planning Commission Rules of Procedure require the members of the Commission to annually select one of its members to serve as the Chairman and one of its members to serve as the Vice-Chairman. The chairperson presides over the meetings, calls special meetings of the Commission, sees that all actions of the Commission are taken properly, signs documents of the Commission and assists staff in determining agenda items. The Planning Commission has not re-organized since February, 23, 2010.

The Rules of Procedures for the Town of Yucca Valley Planning Commission includes the following language for the selection of the Chairman and Vice-Chairman.

a. A Chairman and Vice-Chairman shall be elected annually from among the Commission's membership at the first meeting in October to serve at the pleasure of the Commission.

b. The Vice-Chairman shall succeed the Chairman if he/she vacates the office before the term is completed, the Vice-Chairman to serve the unexpired term of the vacated office. A new Vice-Chairman shall be elected at the next regular meeting.

c. In the absence of the Chairman and Vice-Chairman, any other member shall call the Commission to order, whereupon a chairman shall be elected from the members present to preside

Alternatives: None recommended

Fiscal impact: N/A

Attachments:

1. Section 4.04, Planning Commission
2. Planning Commission Rules of Procedure

CHAPTER 4.04

PLANNING COMMISSION

SECTION:

4.04.010: **PLANNING COMMISSION CREATED:** There is created a Planning Commission for the Town. It shall consist of five (5) members, appointed by the Town Council; the terms of members of the initial Commission shall be set by lot, with one member serving until June 30, 1993, two (2) members serving until June 30, 1994, and two (2) members serving until June 30, 1995. Thereafter, all terms shall be for three (3) years and shall expire three (3) years after the effective date of the appointment, except those appointments made after the commencement of the term to fill a vacancy or removal, in which case the term of office shall be for the balance of the unexpired terms. There is no maximum number of terms that may be served by any individual Planning Commissioner. The Town Council may remove from office any Planning Commissioner at any time without cause. Until a Planning Commission is appointed and its members have qualified and begun functioning, the Town Council shall continue to carry out the functions which otherwise will be performed by the appointed Planning Commission. (Ord. 25, 10-1-1992)

4.04.020: **OFFICERS, STAFF:** The Planning Commission shall appoint the chairperson and vice-chairperson annually subject to his removal at any time by a majority vote of the Commission. The chairperson shall preside at all meetings and hearings of the Commission. The chairperson may represent the Commission before the Town Council or appoint other members of the Commission to do so. The vice-chairperson shall perform all of the duties of the chairperson in case of absence, and

shall perform such other duties as may from time to time be assigned by the chairperson. The Commission shall be authorized to appoint and fix the membership of such number of standing and temporary committees as it may find expedient for the performance of its duties. The Town Manager may appoint an executive secretary and other staff and provide such compensation for their services as may be authorized by the Town Council and by the annual Town budget of expenditures. (Ord. 25, 10-1-1992)

4.04.030: MEMBERSHIP: Should any vacancy occur among the members of the Planning Commission other than by expiration, the chairperson shall forward a notice to the Mayor and members of the Town Council indicating that such a vacancy exists. The Mayor and Town Council shall fill the vacancy in accordance with the provisions of this Chapter. (Ord. 25, 10-1-1992)

4.04.040: MEETINGS; RULES:

A. Meetings:

1. Location; Time: Regular meetings of the Planning Commission shall be held at the Community Center, 57090 29 Palms Highway, Yucca Valley, California, commencing at the hour of seven o'clock (7:00) P.M. on the first and third Tuesdays of each month if necessary. At each regular meeting, the Planning Commission shall consider all matters properly brought before it in accordance with this Chapter and State law. When there are no agenda items to be scheduled before the Planning Commission, the Commission members shall be given notice three (3) days prior to the meeting that no meeting will be held. (Ord. 25, 10-1-1992; amd. 2000 Code)

2. Adjourned Meetings: Any regular meeting may be adjourned to a designated time and place and when so adjourned shall be considered as a regular meeting. Adjourned meetings shall only be held when necessary for review of special land development proposals, review of complex planning and land development matters, for additional review of nonstandard land development applications, and for those items or issues deemed necessary by the Planning Commission.

3. Quorum: A quorum consists of three (3) members of the Planning Commission. In the event that a quorum is not present, less than a quorum, or if no members are present, the clerk or secretary, may adjourn the meeting to a stated time and place..

B. Rules; Records; Minutes: The Planning Commission shall adopt rules for the transaction of business, shall keep a public record of its resolutions, transactions, findings and determinations, and shall hold at least one regular meeting each month. Minutes of the Planning Commission meetings shall be filed with the Town Clerk. (Ord. 25, 10-1-1992)

4.04.050: FUNCTIONS, POWERS AND DUTIES: The functions, powers and duties of the Planning Commission shall be all those functions, powers and duties of a Planning Commission and Board of Zoning Adjustment as provided in the State Planning and Zoning Law[1]. The Planning Commission shall perform all functions and take all actions designated in the Development Code of the County of San Bernardino, which has been adopted by the Town, for the Planning Commission and the Planning Commission subcommittee. It is also recognized that the Town Council takes final action upon the adoption or amendment to the general plan, or any specific plan, and upon any change of zoning district, approval of any tentative tract map and where otherwise required by law. (Ord. 25, 10-1-1992)

4.04.060: APPEAL PLANNING COMMISSION DECISIONS: All actions of the Planning Commission are subject to appeal to the Town Council in the manner set forth in the Development Code, and if not otherwise set forth, then by delivery by the applicant or other person affected by the decision of a written notice of appeal to the Town Clerk within ten (10) days after the decision of the Planning Commission or after the giving of notice of same where notice is required. Within a period of ten (10) days after the decision of the Planning Commission, any member of the Town Council may submit a written request with the Town Clerk that the matter acted upon by the Planning Commission be scheduled for a hearing before the Town Council. The decision of the Planning Commission shall be final after the time for appeal or for a request for hearing by a Council member has passed and if no appeal request has been filed. Upon receipt of a timely appeal, or of a timely request by a Council member, the Town Clerk shall schedule the matter for a hearing or public hearing before the Town Council, in which case the decision of the Town Council, after considering or hearing the matter, shall then be final. (Ord. 76, 7-18-1996)

1. California Government Code chapters 3 and 4 of title 7 commencing with § 65100.

Planning Commission Rules of Procedure

ORGANIZATION AND OFFICERS

A. Organization

The Planning Commission shall consist of five regular members and shall be organized and exercise such powers as prescribed by ordinance of the Town of Yucca Valley.

B. Officers

1. Selection

a. A Chairman and Vice-Chairman shall be elected annually from among the Commission's membership at the first meeting in October to serve at the pleasure of the Commission.

b. The Vice-Chairman shall succeed the Chairman if he/she vacates the office before the term is completed, the Vice-Chairman to serve the unexpired term of the vacated office. A new Vice-Chairman shall be elected at the next regular meeting.

c. In the absence of the Chairman and Vice-Chairman, any other member shall call the Commission to order, whereupon a chairman shall be elected from the members present to preside.

2. Responsibilities

The responsibilities and powers of the officers of the Planning Commission shall be as follows:

a. Chairman

(I) Preside at all meetings of the Commission.

(2) Call special meetings of the Commission in accordance with legal requirements and the Rules of Procedure.

(3) Sign documents of the Commission.

(4) See that all actions of the Commission are properly taken.

(5) Assist staff in determining agenda items.

(6) The Chairman shall be an ex officio member of all committees with voice but no vote.

b. Vice-Chairman

During the absence, disability or disqualification of the Chairman, the Vice-Chairman shall exercise or perform all the duties and be subject to all the responsibilities of the Chairman.

C. Duties and Powers

1. The Planning Commission shall have the power to recommend to the Town Council, after a public hearing thereon, the adoption, amendment or repeal of a general plan, or any part thereof, for the physical development of the Town.

2. The Planning Commission shall exercise such functions with respect to land subdivisions, planning, and zoning as may be prescribed by ordinance.

3. The Commission shall advise the Town Council on those matters falling within its charged responsibilities in a manner reflecting concern for the overall development and environment of the Town as a setting for human activities.

4. If any commissioner should be absent for three consecutive regular meetings of the Planning Commission without permission of the commission expressed in its official minutes, he/she shall relinquish his/her seat on the Commission.

D. Rules of Order

Except as otherwise provided in these Rules of Procedure, "Robert's Rules of Order, Newly Revised, "shall be used as a guide to the conduct of the meetings of the Planning Commission provided, however, that the failure of the Commission to conform to said rules or order shall not, in any instance, be deemed to invalidate the action taken.

MEETINGS

A. Public Meetings

All meetings shall be held in full compliance with the provision of state law, ordinances of the Town, and these Rules of Procedure.

B. Regular Meetings

Regular meetings shall be held on the first and third Tuesdays at 7:00 p.m. in the Community Center unless otherwise determined by the Commission.

C. Adjourned Meetings

In the event it is the wish of the Planning Commission to adjourn its meeting to a certain hour on another day, a specific date, time, and place must be set by the commission prior to the regular motion to adjourn.

D. Special Meetings

Special meetings of the Planning Commission may be held at any time upon the call of the Chairman or by a majority of the voting members of the Commission or upon request of the Town Council following at least 24 hours notice to each member of the Commission and to the press. The time and place of the special meeting shall be determined by the convening authority.

E. Study Sessions/Workshops

1. The Commission may be convened as a whole or as a committee of the whole in the same manner as prescribed for the calling of a special meeting for the purpose of holding a study session provided that no official action shall be taken and no quorum shall be required.

2. Such meetings shall be open to the public; but, unless the Commission invites evidence or comments to be given, participation by interested members of the public shall not take place at such study sessions.

F. Agenda

1. An agenda for each meeting of the Commission shall be prepared by the Planning Director or his/her staff with the cooperation and approval of the Chairman or in his/her absence, the Vice-Chairman.

2. The Commission cannot guarantee that applicants meeting filling deadlines will be placed on the agenda of the first meeting thereafter.

3. There shall be attached to each agenda a report of matters pending further action by the Commission.

4. A copy of the agenda shall be posted at the required locations for a period of seventy-two (72) hours prior to the time scheduled for the meeting.

G. Order of Meetings

1. The Order of Business Shall Be as Follows:

a. The Chairman shall take the chair precisely at the hour appointed for the meeting and shall immediately call the commission to order.

b. Pledge of allegiance.

c. Members present and absent shall be recorded.

d. The agenda shall be approved as submitted or revised.

e. Any member of the audience may comment on any matter which is not listed on the agenda.

f. The public shall be advised of the procedures to be followed in the meeting.

g. The Commission shall then hear and act upon those proposals scheduled for consideration or public hearing, together with such other matters of business and report as the Commission or Planning Director finds to require Commission consideration.

h. The minutes of any preceding meeting shall be submitted for approval.

i. Adjournment.

2. Presentation or Hearing of Proposals

The following shall be the order of procedure for public hearings concerning planning and zoning matters:

a. The Chairman shall announce the subject of the public hearing, as advertised.

b. If a request is made for continuance, a motion may be made and voted upon to continue the public hearing to a definite time and date.

c. The staff shall be asked to present the substance of the application, staff report and recommendation, and to answer technical questions of the Commission.

d. Order of Testimony. The order of testimony shall be as follows:

(1) Applicant's statement

(2) Proponents' statements

(3) Opponents' statements

(4) If necessary, a rebuttal from the applicant

(5) Public hearing closed

(6) The Commission shall then deliberate and either determine the matter or continue the matter to another date and time certain.

e. Rules of Testimony. The rules of testimony shall be as follows:

(1) Persons presenting testimony to the Commission are requested to give their name and community of residence for the record.

(2) If there are numerous people in the audience who wish to participate on the issue, and it is known that all represent the

same opinion, a spokesman should be selected to speak for the entire group. The spokesman will thus have the opportunity of speaking for a reasonable length of time and of presenting a complete case.

(3) To avoid unnecessary cumulative evidence, the Chair may limit the number of witnesses or the time of testimony on a particular issue.

(4) Irrelevant and off-the-subject comments will be ruled out of order.

(5) The Chair will not permit any complaints regarding the staff or individual commissioners during a public hearing. Complaints not related or germane to the project shall be submitted in writing to the Community Development Director or presented verbally as a separate item on the agenda.

H. Motions

1. A motion to adjourn shall always be in order except during roll call.

2. The Chairman of the Commission, or other presiding officer, may make and second motions and debate from the Chair subject only to such limitations of debate as are imposed on all members of the Commission.

I. Voting

1. Voting Requirements

a. A quorum shall consist of three members.

b. The affirmative vote of a majority of the entire five member Commission present is necessary for it to take action. Thus, all actions of the Planning Commission require at least three affirmative votes, with all members being present. Except for subsection c below or required by State law, a majority of the Planning Commission shall be sufficient to do business and motions may be passes 2-1 if only 3 attend.

c. Certain votes of the Commission require a majority vote of the total membership (three votes) to carry. These are:

(1) Adoption or amendment of a master (general) plan or any part thereof.

(2) Any precise (specific) plan or any part thereof.

d. When a member of the Commission abstains from voting on any matter before it because of a potential conflict of interest, said vote shall not constitute nor be considered as either a vote in favor of or

opposition to the matter being considered. When a member of the Commission abstains from voting for any reason other than a potential conflict of interest, the abstention shall be counted with the majority.

2. Voting Order

The order of voting will be rotated each meeting except that the Chairman shall vote last.

3. Recording of Votes

The minutes of the Commission's proceeding shall show the vote of each member, including if they were absent or failed to vote on a matter considered.

4. Disqualification from Voting

When a Commissioner determines not to act because they have a disqualifying conflict of interests, the Commission determination must be accompanied by disclosure of the financial interest, made part of the official record, or made in writing to the Planning Commission secretary.

REVIEW AND AMENDMENTS PROCEDURE

A. Review

These Rules of Procedure shall be reviewed in October of each year by a subcommittee appointed by the Chair with the general agreement of the Commission. The review subcommittee shall present their recommendation for amending, or not amending, these rules.

B. Amendment

In addition, these Rules of Procedure may be amended at any meeting of the Planning Commission by a majority of the membership of the Commission provided that the proposed amendment is received by each Commissioner not less than 5 days prior to said meeting.

SELECTION AND RESPONSIBILITIES OF CHAIRPERSON AND VICE-CHAIRPERSON

Being Chairperson is a rewarding experience but involves a number of responsibilities in addition to running the Commission meetings. One of those responsibilities is to provide quarterly reports to the Town Council at one of their regular scheduled Town Council meetings. Normally, a lot of extra time is spent both preparing for such meetings and working with the Planning Director and others on various matters such as those noted below.

Those Planning Commissioners who have not served as Chairperson might discuss the responsibilities with the present or former chairperson to get a better idea of what is involved.

It has been suggested that the Commission members take turns being the chair and the vice-chair. Sometimes members serve one term and sometimes two consecutive terms. Seniority is often a consideration but does not have to be a deciding factor. Also, consideration should be given to a member's ability and effectiveness as chair in making the selection. Of course, sometimes individual Commission members prefer not to be the vice-chairperson and/or the chairperson and that should be respected.

Procedures for Chairing Meetings

The following steps are normally appropriate for regular Planning Commission meetings:

1. **Call the meeting to order** promptly at the appointed hour (if a quorum exists).

2. **Pledge of allegiance.**

3. **Roll Call.** Ask the staff to call the roll.

4. **Update Agenda.** Ask whether staff or commissioners have any proposed changes to the agenda and indicate when and how those new items will be considered.

5. **Communications.** Announce that this is the time on the agenda that any member of the audience may comment on any matter which is not listed on the agenda.

6. Announce to the audience certain Planning Commission procedures:

   The Planning Commission normally ends its meetings at 10:30 p.m. even if it necessitates carrying items over to another meeting. The Planning Commission will not consider a new item on the agenda after 10:30 p.m., except under unusual circumstances.

   In order to assist in completing the agenda items, **please be brief** and to the point, preferably 2 to 5 minutes. The maximum time limit is 15 minutes unless prior arrangements have been made.

   Please use the **microphone** and **write your name and community of residence on the sign-in sheet** provided for the record.

7. **Consent Items:** All matters listed under consent items on the agenda are considered routine and will be acted upon (roll call vote) without discussion by the Planning Commission unless any Commission member or member of the audience has a question or wishes to make a statement or discuss the item. In that event, the chairperson will remove that item from the regular consent items and place it for separate consideration. Be sure to ask if anyone wishes an item removed from the regular consent items. Take up such items next, as first regular agenda items.

Minutes: Note the minutes on the consent agenda and, unless changes are necessary, approve on consent agenda.

8. **Regular Agenda Items:**

   1. **Announce** the item.

   2. Ask the staff to present the **staff report**.

   3. Ask the Planning Commission if they have **any questions** for the staff.

   4. **Open the public hearing**. If it is necessary to continue the public hearing, make sure that the hearing is opened (and not closed) and continued to a specific time and date. (See below: "9. Public Hearings")

   5. Invite the **applicant** to speak.

   6. Invite **others in favor** of the application to speak.

   7. Invite those **in opposition** to speak.

   8. Ask the staff if any **written communications** have been received and, if so, have them either read into the record or summarized as appropriate.

   9. Allow, if necessary, the applicant to make a **rebuttal** statement. This must be brief and limited to a rebuttal of comments made by those in opposition.

   10. **Close** the public hearing.

   11. Ask the Planning Commission if they have **any questions** for the staff or public hearing speakers.

   12. Turn the item over to the Planning Commission for **discussion**. It may be appropriate to focus or structure the discussion regarding certain issues or questions. If the Commissioners do not volunteer comments, it may be necessary to ask individual Commissioners what they think about specific points. Normally, the Commission should first discuss land use and zoning issues, and then deliberate on specific conditions and details rather than mixing the two or beginning with details.

   13. After a motion and second are made, **restate the motion** or at least get confirmation from the Planning Commission that everyone is clear on the motion prior to voting.

Adopted: December 5, 1995
Revised: April 6, 1999

TOWN OF YUCCA VALLEY
PLANNING COMMISSION MEETING MINUTES
MAY 12, 2011

Chair Lombardo called the regular meeting of the Yucca Valley Planning Commission to order at 6:03 p.m.

Commissioners Present: Alberg, Hildebrand, Humphreville and Chair Lombardo. Commissioner Abel was absent.

Pledge of Allegiance was led by Chair Lombardo

APPROVAL OF AGENDA

Deputy Town Manager Stueckle requested that Item 3, Approval of Minutes be removed from the agenda.

Commissioner Alberg moved to approve the agenda as amended. Commissioner Hildebrand seconded. Motion carried 4-0 on a voice vote.

PUBLIC COMMENTS

Margo Sturgis, Yucca Valley, commented regarding the responsibilities of the Planning Commissioners.

PUBLIC HEARINGS

1. CONDITIONAL USE PERMIT, CUP 03-11, SPECIFIC PLAN, S 01-11, ENVIRONMENTAL ASSESSMENT, EA 01-11 SENIOR HOUSING PROJECT

The applicant requests approval of a Conditional Use Permit and Specific Plan to allow the construction of a 75 unit, three (3) story affordable senior (age-restricted) housing project. The project will consist of 74-650 square foot, one (1) bedroom apartments and one (1) 750 square foot two (2) bedroom apartment; 4,199 square feet of common area; 3,924 of community and leasing area; 275 square feet of laundry area; 31,132 square feet of total interior common area, corridors, stairwells and balconies; and approximately 4,446 square feet of carports. The total building square footage is approximately 87,482 square feet. The site includes a minimum of 26 covered parking stalls and 22 uncovered parking stalls. The project will include onsite retention, on site wastewater disposal/treatment, landscaping, visitor parking, and may include amenities such as a clubhouse, pool/spa, gazebo, internal sidewalks, street furniture, and related amenities, etc.

Primary access to the site will be from Dumosa Avenue. Emergency access will be provided through the alley to the projects west. The project may include vacating all or a portion of Antelope Trail along the projects northern boundary. Pedestrian access from the site will be available to town hall, community services, library, museum and senior

center

Deputy Town Manager Stueckle advised that CORE will be making a presentation after the Staff's presentation and before the Commissions discussions. He advised that the Chamber of Commerce has a conflict and requested that the Chair open the public hearing before Staff's presentation and allow them to make a comment.

Chair Lombardo Opened the Public Hearing

Jennifer Collins, Chamber of Commerce, on Tuesday of this week the Board of Directors for the Chamber unanimously voted to support the Senior Housing Project. She read the letter advising of the Chamber's favorable vote, with the understanding that the local contractors and service providers be given a fair chance to participate in the project.

Deputy Town Manager Stueckle presented the staff report as contained in the meeting packet and retained in the project files. A PowerPoint presentation was displayed during the discussion and maintained in the project file. Advised there are revised conditions.

Associate Planner Kirschmann advised of the following changes to the Conditions of Approval. Condition P-6 dealing with landscaping and irrigation was rearranged to clarify the condition; E-8 was removed and some of the language incorporated into E-48; E-40 was removed was standard COA that dealt with subdivisions and did not apply to this project; E-48 refers to the construction of the signal on Dumosa and had portions of E-8 incorporated into it; E-49 was reworded to make it clearer.

Some of the items will come back to the Planning Commission or the Senior Housing Subcommittee prior to final approval.

Julie Mungai, CORE, gave the background of National CORE, and advised of other properties they have developed and gave a Power Point Presentation showing the various properties.

Deputy Town Manager Stueckle advised of the process the Town and CORE has gone through regarding the project and showed the results of outreach meetings that have been held.

Byron Ely, Vice President of Construction for CORE, advised they have worked very effectively with the Town staff to produce a high quality of development. He showed the various site plans that have been developed for the project.

Tom Shea, Architect, gave a review of architectural features of the project.

Ms. Mungai described the funding mechanism, timeline for completion of the project, affordability standards and on site amenities.

Chair Lombardo reopened the Public Hearing

Margo Sturgis, Yucca Valley, spoke in favor of the project but expressed concern regarding the fact that the building will be 3 stories, but there are no ladder trucks in Town.

Linda Walli, Yucca Valley, spoke in favor of having a senior housing complex close by, noting she has been trying to find someplace fairly reasonable close by.

There being no one else wishing to speak Chair Lombardo closed the Public Hearing.

Commissioner Hildebrand questioned if the alleyway. Mr. Ely stated it will be gated and will have access in emergencies if necessary but will not be an active access. Chair Hildebrand questioned if the Town's sign board will be saved. Mr. Ely stated it will be moved to the eastern side of Dumosa and will be located in a way that is still visible.

Commissioner Humphreville questioned if the slope at the north end of the project would allow parking in that area. Mr. Ely advised there are ways to add additional parking, noting it would mean that some of the landscaping would have to be relocated and there might have to be some small terrace walls built. Commissioner Humphreville questioned if any of the other communities CORE has built in have been rural communities without the public transit common in urban areas. Mr. Ely advised they have looked at that issue also and feel they project will have adequate parking.

Commissioner Alberg questioned the phasing and if it is all outside the project. Mr. Ely advised that is correct, it is the intention that all the units as well as the onsite amenities will be constructed at one time and then future improvements could be later. Deputy Town Manager Stueckle added the project itself, the housing units, onsite improvements, driveways, parking, all of those things will be constructed at one time. The improvements on Dumosa, changes to Antelope Trial will be constructed with the 75 units and onsite improvements. The traffic signal, included in the Environmental Assessment is a little bit of an unknown today due to dealings with Caltrans. Commissioner Alberg questioned when schools and parks became commercial services as stated on page 10 of the staff report. Deputy Town Manager Stueckle advised that goes back to some of the General Plan language. Associate Planner Kirschmann advised that additional language was added to that sentence to clarify it. Commissioner Alberg questioned if there is going to be a

bridge going over to the senior site. Deputy Town Manager Stueckle Advised there are internal bridges laid out on the project interconnecting the wings of the project. Commissioner Alberg questioned if it is safer to cross the street at Antelope Trail or the Senior Center Parking Lot. Deputy Town Manager Stueckle advised one of the additional tasks that has yet to receive additional attention is evaluation of the area from the cul-de-sac point to the Senior Center. Commission Alberg questioned if overnight guests are allowed. Ms. Mungai advised they do allow overnight guests but there is a limited time they can stay.

Commissioner Humphreville questioned how many people are on site from management. Ms. Mungai advised at a minimum there is one manager and one maintenance person.

Commissioner Alberg questioned if any of the amenities included on the campus at this time are still scheduled to move with the Old Town Plan. Deputy Town Manager Stueckle advised the Old Town Specific Plan, as currently adopted, as well as the Public Facilities Master Plan, identifies a possible relocation of the County branch library as well as the Museum to the Old Town Area. There has been rethinking of those policy issues, and the Old Town Specific Plan is going to be reevaluated as part of the General Plan update. The primary issue being that this complex as it exists today has a significant degree of energy that is created by the different types of activities here. Commissioner Alberg questioned the traffic signal noting there will be 3 lights within about a mile. Deputy Town Manager Stueckle advised of the process with Caltrans to get the light approved and then engineered. Commissioner Alberg questioned if the Town can do something to coordinate the utilities so that the road does not have to be cut up two or three times. Deputy Town Manager Stueckle stated that both CORE and the Town are going to be working on those utility issues to make sure those new improvements are constructed so we don't have to see streets opened back up for any utility issues that got missed in the process. Commissioner Alberg questioned if all the funding sources have to happen to make this project a go. Ms. Mungai advised that they do.

Commissioner Humphreville questioned the fire issue. Deputy Town Manager Stueckle advised that the CORE and Town team met with the head Fire Marshall for the Desert District Division of County Fire and reviewed the site plan, construction materials, heights, access etc. Changes were made to standpipes as well as construction techniques that are necessary for implementation of the fire department standards. Any building in San Bernardino County of 5,000 sf. or more is required to have sprinklers and we would anticipate fire hydrant spacing of being able to reach any portion of the building from 150 feet of a hydrant. The issue of the structure height and construction of three stories was reviewed with fire personnel and they are satisfied with their current equipment and accessibility to this site.

Town Manager Nuaimi commented that the key to the project is the HUD funding. If you get the HUD funding, the tax credit is an automatic funding source that you apply for. The third source is the RDA, and we will be taking an item to them on Tuesday, that essentially commits the RDA to whatever that gap funding. We do have adequate resources to fully fund that gap amount. That doesn't stop us from going after County HOME funds, and we have been advocating strongly with the County that this region needs to receive benefit from HOME funds.

Deputy Town Manager Stueckle the Council is hearing this matter as a Public Hearing at their meeting next Tuesday. Following the Council's action on the land use application and CEQA, once those two items are completed then the Council and Redevelopment Agency will be considering its financial commitments to the Project.

Commissioner Humphreville moved that the Planning Commission recommends approval of the Mitigated Negative Declaration and Mitigation Monitoring Program for Environmental Assessment, EA 01-11 to the Town Council; that the Planning Commission recommends approval of Specific Plan, S 01-11 to the Town Council based on the findings contained within the staff report and the recommended Conditions of Approval, as amended, and that they introduce the accompanying Ordinance; and that the Planning Commission recommends approval of Conditional Use Permit, CUP 03-11 to the Town Council based on the findings contained within the staff report and the recommended Conditions of Approval, as amended, and recommend adoption of the accompanying Resolution. Commissioner Hildebrand seconded. Motion carried 4-0-1 on a voice vote with Commissioner Abel absent.

Deputy Town Manager Stueckle advised there is going to be a Senior Services Fair here on Monday, May 16th from 9:00 a.m. to 12:00 p.m.

Chair Lombardo recommended a break and advised he must leave at this time and will not be here when the Commission returns. Deputy Town Manager Stueckle reported that the Commission does not have a vice chair at this time to take over the meeting and recommended that someone be identified an acting Chair for the remainder of the meeting.

Chair Lombardo advised he would like to appoint Commissioner Humphreville as Vice Chair at this time. There being no objection Commissioner Humphreville was appointed acting Chair.

DEPARTMENT REPORTS:

2. DISCUSSION ON THE REGULATION OF WIND ENERGY GENERATORS AND PRESENTATION OF A DRAFT ORDINANCE.

A request from staff that the Commission discuss and provide direction on regulations regarding wind energy generators

Chair Lombardo advised he went and saw a wind turbine in Joshua Tree and has revised his thinking about allowing them. He feels they should be allowed, but there should be more consideration regarding lot size.

The item was continued to the May 24, 2011 Meeting.

CONSENT AGENDA

3. **Minutes**

Item removed from Agenda

FUTURE AGENDA ITEMS

May 24, 2011
Conditional Use Permit, CUP 02-11 Nielson Wind Turbines
Minor Permit Processing

STAFF REPORTS AND COMMENTS

None

COMMISSIONER REPORTS AND REQUESTS

None

ANNOUNCEMENTS

The next regular meeting of the Yucca Valley Planning Commission is Tuesday, May 24, 2011 at 6:00 p.m. in the Yucca Valley Community Center.

ADJOURNMENT

The meeting was adjourned at 8:00 p.m.

Respectfully submitted,

Jamie Anderson
Town Clerk

TOWN OF YUCCA VALLEY
PLANNING COMMISSION MEETING MINUTES
MAY 24, 2011

Chair Lombardo called the regular meeting of the Yucca Valley Planning Commission to order at 6:00 p.m.

Commissioners Present: Alberg, Hildebrand, Humphreville and Chair Lombardo

Pledge of Allegiance was led by Chair Lombardo

APPROVAL OF AGENDA

Commissioner Alberg moved to approve the agenda. Commissioner Humphreville seconded. Motion carried 4-0 on a voice vote.

PUBLIC COMMENTS

None

PUBLIC HEARINGS

1. CONTINUATION OF PUBLIC HEARING ON THE REGULATION OF WIND ENERGY GENERATORS AND PRESENTATION OF A DRAFT ORDINANCE.

A request from staff that the Commission discuss and provide direction on regulations regarding wind energy generators

With reference to the complete printed staff report provided in the meeting packets and preserved in the project and meeting files, Associate Planner Kirschmann presented the project discussion to the meeting. A PowerPoint presentation was projected on the screen during the discussion, a printed copy of which is preserved in the meeting file.

The Town has no regulations for the installation of renewable energy systems and has recently received a number of inquiries for the installation of both roof-mounted and free standing wind generators. The intent of the standards contained in the Draft Ordinance is to ensure compatibility with building architecture, the neighborhood and community appearance, and to minimize the visual appearance of WECS within neighborhoods and the community.

Deputy Town Manager Stueckle commented it was the Commissions desire to hear input from community on these standards and recommended going directly to the public hearing to take public testimony at this point.

Chair Lombardo opened the public hearing.

Eugene Buchanan, Apple Valley, advised he has been active trying to sell the wind turbines in the community. He agrees with the standard regarding sound limitation and that the poles be under 35 fee. He described the small turbines he installs and advised he does not agree to limiting a property to one unit. He noted that one turbine will not save enough money to warrant the monthly lease cost. In addition, the Federal and State Government are offering subsidies for these units this year so there is next to no out of pocket costs, but there is only a short window.

Edward Hewitt, Apple Valley, advised he has two windmills on his property. One is a 100' bergey that has been up for 8 years and he has no electric bill at all. He also has a 35' with a 1.8 kw unit on top for a test to make sure it does that they say it does. It appears to be pretty efficient, makes less noise than the bergey and is closer to the ground. He has not seen any evidence of damage to birds or bats in the 8 years his tower has been up and has not had any complaints from his neighbors. Feels notification of those within 350' of the proposed projects should be sufficient, and 1,000 is excessive. Chair Lombardo questioned if Mr. Hewitt receives a check from the power company. Mr. Hewitt advised he has not noting the law just changed in January 1st allowing you to choose receiving $.06 per kw or placing excess kw into a bank.

Andy Canada, Yucca Valley, spoke in favor of allowing windmills on smaller lots not just for people on the outskirts of town. He believes the 300' is quite a distance.

Don Cannon, Yucca Valley, spoke in opposition to the windmills noting they are ugly and he doesn't want them in his neighborhood.

Dana Collins, Joshua Tree, spoke in opposition questioning the noise, and expressed hope that a lot more research is done before anything is allowed to go up.

Melinda Allen, Yucca Mesa, spoke in favor of allowing windmills noting if the lot size is limited to 2 acres a lot of people in Yucca Valley will be excluded, especially lower income people who would benefit the most. You would also limit the benefit the local community would get from having truly green energy. We need everything possible to boost the economy and get people back to work.

There being no one else wishing to speak, Chair Lombardo returned to Commission discussion.

Commissioner Hildebrand asked questions regarding the bergey systems. Mr. Buchanan advised that they require a 100' tower and have a huge footprint. With reference to the smaller lower units you would need about 5 of them to get enough of a savings.

Commissioner Alberg questioned if the fact that Net Metering does not allow the sale of power back to the electric company is a directive of the utility or the Town. Chair Lombardo advised that that ruling has been changed. Deputy Town Manager Stueckle advised it is up to the utility company. Commissioner Alberg questioned why a roof top unit would require a setback. Associate Planner Kirschmann advised that when the ordinance was drafted roof top units were not under consideration, and would take a language modification. Commissioner Alberg questioned if the sound level numbers used in the ordinance are based on industry standard. Deputy Town Manager Stueckle advised those are typical residential noise limits.

Commissioner Humphreville recommended looking at allowing roof mounted units on smaller lots. He expressed concern regarding requiring engineering for these towers, noting we could be hurting more than helping by eliminate allowing placement where they could be hidden more, and it seems unnecessary. He questioned what constitutes a wind farm, noting it would be nice to see difference between 2 or 3 smaller units versus the taller type. He suggested holding a joint meeting with the Town Council.

Chair Lombardo advised he visited the existing unit in Pioneertown and one in Joshua Tree noting that both were the older technology and had some noise associated with them. He stated when staff writes the regulations, he likes the idea of stating a decibel level at the lot line. As far as height, if the tower is under 35' it is a lot less intrusive than the 100' towers he has seen in those two cases. The draft ordinance forces newer technology to make it work. In addition there should be color guidelines, and he also thinks notification of 1000 feet are excessive and should be

300'. It was suggested that there might be a test of perhaps 50 turbines in town to see if they perform as expected, and we should get a lot more public comment on it, perhaps the newer technology would alleviate some of the concerns that have already been stated.

Commissioner Humphreville questioned if there is a city in California that allows these units on smaller lots. Deputy Town Manager Stueckle advised that Hesperia does, and Twentynine Palms does not specify lot size.

Paula Finefrock, Yucca Valley, commented she has not decided if she is for or against allowing these units, noting her biggest fear is driving into town and seeing a bunch of them because they are an eyesore and make a lot of noise.

Mr. Buchanan invited people to come to Hesperia to see what they have there and answered questions regarding roof mounted units.

It was noted that time is a factor due to rebates being allowed this year.

Deputy Town Manager Stueckle recapped that the Commission would like a joint meeting with the Council, a modification to the ordinance to allow for roof top and side yards for towers less than 35' in height, for staff to come back with additional data in terms of efficiency and the issue of dealing with multiple units, review of the notification area. Staff can take that as direction if the Commission is comfortable

Chair Lombardo requested input regarding the required fall zone. Commissioners Hildebrand and Humphreville did not feel the fall zone was necessary due to the need for engineering, and Commissioner Alberg did feel it was necessary. Chair Lombardo added he did not feel there was a necessity for a fall zone if we know it is not coming down and if it can be serviced.

Deputy Town Manager Stueckle clarified that direction from Commission is for staff to look at the language so can the Commission can look at allowing more than one WECS on a piece of property, staff needs to come back with a little bit of data, and the Commission wants to look at minimum lot sizes. Commissioner Hildebrand commented that the people who need it are on smaller properties. Commissioner Humphreville stated the Commission can look at roof mounted units on half acre lots. Commissioner Alberg added that he does not feel there needs to be a minimum acreage for roof mounted units. Deputy Town Manager Stueckle advised that staff will rework the ordinance and bring it back for future consideration. He recommended continuing the public hearing to the to second meeting in June.

Commissioner Alberg moved to continue the public hearing to June 28, 2011. Commissioner Humphreville seconded. Motion carried 4-0 on a voice vote.

2. CONDITIONAL USE PERMIT, CUP 02-11 NIELSON WIND TURBINES

A request to install two 30' tall towers, one with three (3), five (5) foot tall wind turbines and one (1) with two (2) five (5) foot tall wind turbines installed on the towers.

Associate Planner Kirschmann advised the applicant has requested that the item be continued.

Commissioner Humphreville moved to continue the public hearing to the meeting of June 14, 2011. Commissioner Alberg seconded. Motion carried 4-0 on a voice vote.

DEPARTMENT REPORTS:

None

CONSENT AGENDA

3. **Minutes**

Commissioner Alberg moved to approve the minutes of the regular meeting held on April 26, 2011 as submitted. Commissioner Hildebrand seconded. Motion carried 4-0 on a voice vote.

FUTURE AGENDA ITEMS

June 14, 2011
Conditional Use Permit, CUP 02-11 Nielson Wind Turbines
Minor Permit Processing

STAFF REPORTS AND COMMENTS

None

COMMISSIONER REPORTS AND REQUESTS

None

ANNOUNCEMENTS

The next regular meeting of the Yucca Valley Planning Commission is Tuesday, June 14, 2011 at 6:00 p.m. in the Yucca Valley Community Center.

ADJOURNMENT

The meeting was adjourned at 7:18 p.m.

Respectfully submitted,

Jamie Anderson
Town Clerk

TOWN OF YUCCA VALLEY
PLANNING COMMISSION MEETING MINUTES
JUNE 14, 2011

Chair Lombardo called the regular meeting of the Yucca Valley Planning Commission to order at 6:00 p.m.

Town Clerk Anderson administered the Oath to incoming Commissioner Bridenstine.

Commissioners Present: Alberg, Bridenstine, Hildebrand, Humphreville and Chair Lombardo

Pledge of Allegiance was led by Chair Lombardo

APPROVAL OF AGENDA

Commissioner Alberg moved to approve the agenda. Commissioner Humphreville seconded. Motion carried 5-0 on a voice vote.

PUBLIC COMMENTS

None

PUBLIC HEARINGS

1. CONDITIONAL USE PERMIT, CUP 01-11 NEILSON

A request for approval to install two 25' tall towers, one with three, five foot tall wind turbines and one with two five foot tall wind turbines. The applicant proposed to place the towers in the rear of the property, 40' from the rear property line and 68' from the eastern property line. The towers will be approximately 30' in overall height, less than the maximum permitted in this land use district but taller than the surrounding trees and homes.

With reference to the complete printed staff report provided in the meeting packets and preserved in the project and meeting files, Associate Planner Kirschmann presented the project discussion to the meeting. A PowerPoint presentation was projected on the screen during the discussion, a printed copy of which is preserved in the meeting file.

Commissioner Humphreville questioned the difference between 5 fans vs. the typical 1 fan. Associate Planner Kirschmann advised he is trying to get more information on the wattage, most of the information was regarding noise. Commissioner Humphreville expressed concern the property could be subdivided at a later time making it smaller than the existing 1 ¼ acre and suggested a condition requiring removal of the towers if that occurred. He noted that he has a problem with two towers and would prefer to see just one with the others units on the roofs of the accessory buildings, but the Town does not have an ordinance regulating these towers and he has a problem

with changing the rules in the middle of a project. The request does comply within the present rules. He questioned the fact that the condition states that the noise generated shall not exceed 60 decibels yet they are recommending 40-45 decibels at the property line. Associate Planner Kirschmann stated the 60 dB came out of the noise element of the General Plan and is normally acceptable in single family residential areas.

Commissioner Alberg stated he was also opposed to changing the rules in middle, but he also has a concern about the two towers and the lot size. He suggested the Commission needs to meet with the Council quickly.
Commissioner Hildebrand stated he feels the way the project is presented is ok, noting on smaller lots he is more in favor of roof mounted turbines.

Commissioner Bridenstine stated she had a couple of issues, mainly regarding engineering. She noted she did some research and could not find any examples of multiple turbines on a tower, and quested why 5 are proposed on this project. She also questioned what kind of turbulence will be created with 5 turbines so close together and how effective they are going to be. She also didn't find any research regarding engineering with multiple turbines on a single tower. She does not believe in changing the rules in the middle, but is also concerned about setting a precedent.

Chair Lombardo opened the public hearing.

Andy Canada, Yucca Valley, applicant, explained the type of turbines noting there are multiple units on two towers so that he does not have 5 towers erected, and having a lesser footprint on the land. These are the best producing turbines with low noise levels, all the footings are engineered, and they have a warranty. With reference to the lack of examples of multiple units on a tower, he noted here are some in Hesperia. Chair Lombardo questioned the reaction from the neighbors. Mr. Canada advised he hasn't had any negative reaction except from the one couple who attended the first hearing. Commissioner Humphreville questioned how it would hurt the system if he was asked to put 2 of the fans on the accessary structures. Mr. Canada advised those accessory buildings are sheds and he doesn't know if they can handle the units, and noted the roof of the house is closer to Antelope, and he was trying to keep them in the back away from the road. Commissioner Alberg questioned if the stated decibels at the base were per unit or the total. Mr. Canada stated that is 45-50 decibels with multiple turbines. Commissioner Bridenstine questioned how the units are maintained. Mr. Canada stated they are self-maintained with only one moving part and they are designed to tilt down.

Commissioner Alberg requested an explanation of staff's recommendation. Associate Planner Kirschmann advised it goes back to previous Commission discussion about having multiple towers on smaller lot areas. He noted in this case there is a potential at some point for the lot to be subdivided into smaller lots. Deputy Town Manager Stueckle advised that the staff recommendation was structured with an alternative A going back to policy discussion on lot size. He noted at some point in the future we may start to see more suburban development with smaller lots. If the Commission sees a need for a condition of approval, that if and when the property is subdivided the tower would need to be removed, the appropriate motion would be Alternative A

that the Commission direct staff to return to the Commission with the necessary findings for approval of the application as submitted.

Commissioner Humphreville noted if there was an ordinance in place, he probably wouldn't support the application, but he does have a problem with changing the rules in the middle.

Commissioner Bridenstine agreed stated she doesn't like multiple towers, feeling it is starting to become wind farms on this type zoning. If the Town had an ordinance would not be in favor of the project, but doesn't think we can change the rules.

Commission consensus was that they do not care for multiple towers on the lot but don't feel there is an prohibition at this time. Upon questioning as to whether approval would set a precedence, Deputy Town Manager Stueckle advised that it would not.

Chair Lombardo questioned why there are multiple units proposed rather than one larger unit. Mr. Canada advised a larger unit would have to be much higher. Melinda Allen, Yucca Valley, added that larger generators have to reach a much higher rpm before they start generating power.

Commissioner Alberg questioned what conditions would be presented if Alternative A were choses. Associate Planner Kirschmann advised that one would reference the fact that the lot size would be required to stay the same or the towers removed.

Upon discussion Commissioner Humphreville moved to direct staff to return to the Planning Commission with the necessary findings for approval of the application as submitted. Commissioner Alberg seconded. Motion carried 5-0 on a voice vote.

PERMIT HEARING:

2. LAND USE COMPLIANCE REVIEW, LUCR 02-11 MCDONALDS

A request for approval to install a new point of order drive thru and complete exterior remodel at the existing McDonald's restaurant.

With reference to the complete printed staff report provided in the meeting packets and preserved in the project and meeting files, Associate Planner Kirschmann presented the project discussion to the meeting. A PowerPoint presentation was projected on the screen during the discussion, a printed copy of which is preserved in the meeting file.

Commissioner Bridenstine stated she likes the project noting it is nice and clean and looks great. Double stacking helps with the speed of service.

Commissioner Hildebrand expressed concern regarding the exit from the drive up window

and the fact that you cannot see cars coming across the front of the building. McDonalds representatives stated that the will look at that area regarding placing a stop sign or caution sign.

Commissioner Humphreville thanked McDonald's representatives for caring about the community.

Quan Mack, Architect, requested direction regarding the landscaping along the highway noting there is no water in the area. Associate Planner Kirschmann advised staff will be happy to work with applicant on that.

Commissioner Alberg moved to find the project categorically exempt from CEQA under section 15332, class 32, in-fill development and approve Land Use Compliance Review, LUCR 02-11, based upon the Conditions of Approval contained within this staff report. Commissioner Humphreville seconded. Motion carried unanimously.

DEPARTMENT REPORTS:

3. CONDITIONAL USE PERMIT, CUP 01-08 AND TENTATIVE PARCEL MAP, TPM 1903, WARREN VISTA CENTER

Update for the Planning Commission on: the request for deferral of Conditions of Approval for CUP 01-08 & TPM 19103, Warren Vista Center. Request to allow a Certificate of Occupancy to be issued prior to the establishment of Assessment Districts and prior to the relocation of the traffic signal at SR 62 & Warren Vista and construction of the Cal-trans required median island.

Associate Planner Kirschmann gave an update on the status of the conditions and project.

Commissioner Humphreville questioned if the lack of street lights gives us a legal problem with pedestrian safety. Associate Planner Kirschmann advised there will be street lights at the intersection and on site.

Commissioner Alberg moved to receive and file the report. Commissioner Bridenstine seconded. Motion carried unanimously.

4. MINOR PERMIT APPLICATION PROCESS – REVIEW AND DISCUSSION

A request from staff that the Commission discuss and provide feedback on minor

permit processing.

With reference to the complete printed staff report provided in the meeting packets and preserved in the project and meeting files, Associate Planner Kirschmann presented the project discussion to the meeting. A PowerPoint presentation was projected on the screen during the discussion, a printed copy of which is preserved in the meeting file.

Commissioner Humphreville commented regarding commented regarding Special License Permits noting that they are required for sale of firewood, fruits and vegetables or flowers, etc. but are not required for things such as parking lot yard sales, noting that it looks bad, and he has a problem with it.

Commissioner Humphreville questioned if the sign code and native plant ordinances will be looked at in conjunction with the Development Code. Deputy Town Manager Stueckle advised that they will.

The Commission received the report.

CONSENT AGENDA

None

STAFF REPORTS AND COMMENTS

None

COMMISSIONER REPORTS AND REQUESTS

None

ANNOUNCEMENTS

The next regular meeting of the Yucca Valley Planning Commission is Tuesday, June 28, 2011 at 6:00 p.m. in the Yucca Valley Community Center.

ADJOURNMENT

The meeting was adjourned at 7:17 p.m.

Respectfully submitted,

Jamie Anderson
Town Clerk