

Please note!!

This is only a draft of Section 6.03 and cannot be used for an application until the Board of Supervisors approves.

## **Section 6.03 Wind Energy Installation.**

### **A. Statement of Intent.**

As to all zoning districts within Burt County, a conditional use permit may be sought to allow wind energy conversion systems (WECS), including such devices as wind chargers or wind turbines, subject to the regulations established in this section or as otherwise prohibited within a particular overlay district. Provided, however, the county has expressed an intent to limit WECS within the R-1, R-M and C-1 zoning districts without a showing of exceptional need and limited negative impacts to adjoining properties.

### **B. Definitions.**

The following are defined for the specific use of this Section 6.03.

AGGREGATE PROJECT shall mean projects that are developed and operated in a coordinated fashion, but which have multiple entities separately owning on or more of the individual WECS within the larger project. Associated infrastructure such as power lines and transformers that service the facility may be owned by a separate entity but are also part of the aggregated project.

CLUSTERING Shall mean the grouping of wind turbines positioned or occurring closely together around a particular dwelling.

COMMERCIAL WECS shall mean a wind energy conversion system of equal to or greater than one hundred kilowatts (100kW) in total name plate generation capacity.

DEVELOPER shall mean any individual, corporation, or other organized entity that is planning, proposing, collecting easements/contracts from property owners, or any other activity associated with a proposed WECS project, WECS project under construction, or operator of the completed WECS system including individual wind turbines, and/or their successors.

DAYTIME HOURS shall mean a time beginning at sunrise and ending at sunset.

FALL ZONE shall mean the area, defined as the furthest distance from the tower base, in which said turbine will collapse in the event of a structural failure. This distance shall be based upon the manufacturers written specifications and is typically less than the total height of the structure.

FEEDER LIINE shall mean any power line that carries electrical power from one or more wind turbines to the point of interconnection with the electric power grid, in the case of interconnection with the high voltage transmission systems the point of interconnection shall be the substation serving the wind energy conversion system.

HABITABLE STRUCTURE see Article 2.

HUB The mechanical area sitting atop of a wind turbine structure containing the generation equipment and the point where the blades are connected to the system.

HUB HEIGHT shall mean the overall height measured from the grade of a wind turbine to the center point of the hub of the turbine.

ICE BRAKING shall mean a means built into individual wind turbines that will shut the turbine down if ice buildup is detected.

LANDOWNER shall mean an individual, group of individuals or entity involved in the overall project via land leases, permit applications, contracts, easements or other such means.

LANDOWNER, NON-PARTICIPATING shall mean an individual, group of individuals or entity not involved in the overall project via land leases, contracts, easements, and other such means.

METEOROLOGICAL TOWER shall mean, for purposes of this Regulation, a tower which is erected primarily to measure wind speed and directions plus other data relevant to siting a Wind Energy Conversion System. Meteorological towers do not include towers and equipment used by airports, the Nebraska Department of Roads, or other applications to monitor weather conditions.

NON-PARTICIPATING LANDOWNER IMPACT EASEMENT shall mean any easement given by a non-participating Landowner allowing a WECS project to be constructed. Said easement shall be negotiated between the properties and a release signed by the landowner.

PUBLIC CONSERVATION LANDS shall mean land owned in fee title by State or Federal agencies and managed specifically for conservation purposes, including but not limited to State Wildlife Management Areas, Federal Wildlife Refuge, and Waterfowl Production Areas. For purposes of this Section 6.03, public conservation lands will also include lands owned in fee title by non-profit conservation organizations. Public conservation lands will also include private lands upon which conservation easements have been sold to public agencies or non-profit conservation organizations.

ROTOR DIAMETER shall mean the diameter of the circle described by the moving rotor blades in Figure 1.

SHADOW FLICKER shall mean the shadow cast from the rotating blades of a WECS system, which moves, with the blades.

SMALL WIND ENERGY SYSTEM shall mean a wind energy conversion system consisting of a wind turbine, a tower, and associated control or conversion electronics, which has a rated capacity of not more than one hundred kilowatts (100kW) and which is intended to primarily reduce on-site consumption of utility power.

SUBSTATIONS shall mean any electrical facility to convert electricity produced by wind turbines to a voltage greater than thirty-five thousand (35,000, 35kV) for interconnection with high voltage transmission line.

TOTAL HEIGHT shall mean the highest point, above ground level. Reached by a rotor tip or any other part of the Wind Conversion System.

TOWER shall mean the vertical structure that supports the electrical, rotor blades, or meteorological equipment.

TOWER HEIGHT shall mean the total height of the Wind Energy Conversion System exclusive of the rotor blades.

TRANSMISSION LINE shall mean the electrical power lines that carry voltages of at least sixty-nine thousand (69,000) volts (69kV) and are primarily used to carry electrical energy over medium to long distances rather than directly interconnecting and supplying electric energy to retail customers.

WIND ENERGY CONVERSION SYSTEM (WECS) shall mean an electrical generating facility comprised of one (1) or more wind turbines and accessory facilities, including but not limited to; power lines, transformers, substations, and meteorological towers that operate by converting the kinetic energy of wind into electrical energy. The energy may be used on-site or distributed into the electrical grid.

WIND TURBINES shall mean any piece of electrical generating equipment that converts the kinetic energy of blowing wind into electrical energy using airfoils or similar devices to capture the wind.

C. Small Wind Energy Systems

1. Purpose

It is the purpose of this regulation to promote the safe, effective, and efficient use of small wind energy systems installed to reduce the on-site consumption of utility supplied electricity.

2. Requirements

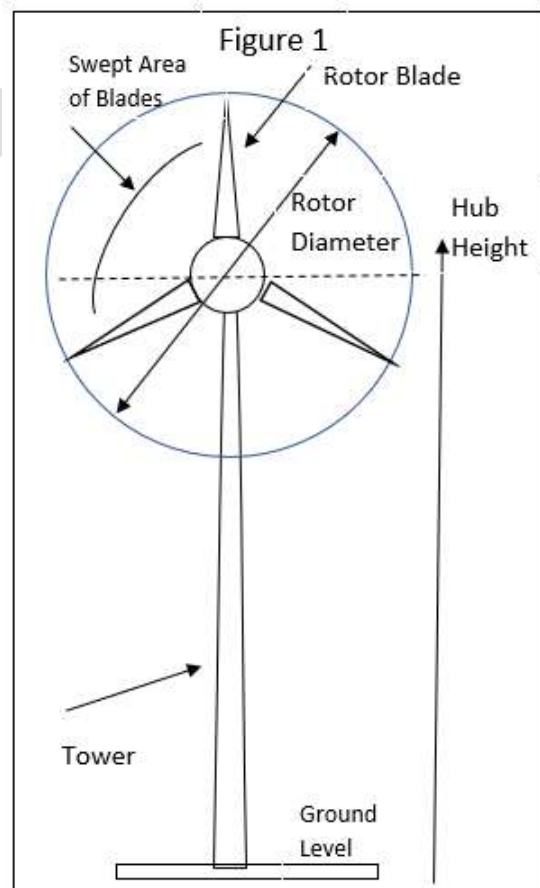
A. Tower Height

- a. For property sizes between one half ( $\frac{1}{2}$ ) acre and one (1) acre the tower height shall be limited to eighty (80) feet.
- b. For property sizes of one (1) acre or more, there is no limitation on tower height, except as imposed by FAA regulations or based on negative impacts to adjoining properties. See Figure 1.

B. Setbacks

- a. No part of the wind system structure, including guy-wire anchors, may extend closer than ten (10) feet to the property lines of the installation site.

C. Noise



- a. Small wind energy systems shall not exceed fifty (50) dBA, as measured at the closest potential neighboring dwelling unit.
- b. The noise level may be exceeded during short term events such as utility outages and/or severe storms.

D. Approved Wind Turbines

- a. Small wind turbines must have been approved under the Emerging Technologies program of the California Energy Commission or any other small wind certification program recognized by the American Wind Energy Association.

E. Compliance with Zoning Codes

- a. Applications for small wind energy systems shall be accomplished by standard drawings of the wind turbine structure, including the tower base and footings.
- b. An engineering analysis of the tower showing compliance with the official building code of the governing body and/or the State of Nebraska certified by a professional engineer licensed and certified in Nebraska shall also be submitted.
- c. Wet stamps shall not be required.

F. Compliance with FAA Regulations and Airport Overlay District.

- a. Small wind energy systems must comply with applicable FAA Regulations, including any necessary approvals for installations close to an airport.

G. Compliance with Burt County Public Power District Code.

- a. Permit applications for small wind energy systems shall be accompanied by a line drawing of the electrical components in sufficient detail to allow for a determination that the manner of installation conforms to the Burt County Public Power District code.

H. Utility Notification.

- a. No small wind energy system shall be installed until evidence has been given that the utility company has been informed or the customer's intent to install an interconnected customer-owned generator.
- b. Off-grid systems shall be exempt for this requirement.

D. Commercial/Utility Grade Wind Energy Systems

1) **Purpose**

It is the purpose of this Regulation to promote the safe, effective, and efficient use of commercial/utility grade wind energy systems within Burt County.

## 2) **Requirements**

- a. Commercial/Utility Grade wind energy conversion systems may be permitted as a conditional use within any district where the use is listed and allowed. Provided, however, commercial/utility grade systems are expressly prohibited within the R-1 and R-M zoning jurisdictions. The following requirements and information shall be met and supplied:
  - i. The name(s) of project applicant. If the project applicant is not the owner of the land on which the project will be located, the landowner must join in the application as a co-applicant.
  - ii. The name of the project owner and landowner.
  - iii. The legal description and address of the project.
  - iv. A description of the project, including number, type, name, plate generating capacity, tower height, rotor diameter, and total height of all wind turbines and means of interconnecting with the feeder lines.
  - v. Site layout, including the location of property lines, wind turbine, electrical grid, and all related accessory structures. This site layout shall include distances and be drawn to scale.
  - vi. Certification by a Nebraska Engineer competent in disciplines of WECS.
  - vii. Documentation of land ownership or legal control of the property.
  - viii. The latitude and longitude of individual wind turbines. Included in the submittal will be an area or zone in close proximity and meets setbacks.
  - ix. A USGS topographical map, or map with similar data, of the property and surrounding area, including any other Wind Energy Conversion System not owned by the applicant, within ten (10) rotor distances of the proposed Wind Energy Conversion System.
  - x. Location of wetlands, scenic, and natural areas (including bluffs) within 1320 feet of the proposed Wind Energy Conversion System.
  - xi. An Acoustical Analysis that certifies that the noise requirements within this regulation can be met.
  - xii. FAA permits.
  - xiii. Location of and evidence that there will be no interference with any commercial and/or public safety communication towers within two (2) miles of the proposed Wind Energy Conversion System.
  - xiv. Proof of compliance with any Overlay District regulations within the county.
  - xv. Decommissioning plan and decommissioning bond as required by this Section 6.03.
  - xvi. Description of potential impacts on nearby Wind Energy Conversion Systems and wind resources on adjacent properties not owned by the applicant.

- b. Roads – Applicants shall:
  - i. Identify all County, municipal, or township roads to be used for the purpose of transporting WECS, substation parts, cement, and/or equipment for construction. Operation or maintenance of the WECS and obtain applicable weight and size permits from the impacted jurisdictions prior to construction.
  - ii. Conduct a pre-construction survey, in coordination with the appropriate jurisdictions to determine existing road conditions. The survey shall include photographs and a written agreement to document the condition of the public facility.
  - iii. Be responsible for restoring the road(s) and bridges to preconstruction conditions following construction, installation, re-installation, maintenance and repairs and/or decommissioning efforts
- c. Drainage System:

The applicant shall be responsible for immediate repair of damage to public drainage systems stemming from construction, operation, or maintenance of the WECS.
- d. Permit Fees:

Applicant(s) shall remit an application fee set by the County Zoning Administrator

3) **Aggregated Projects**

Aggregated projects may jointly submit a single application and be reviewed under joint proceedings, including notices, public hearing, reviews, and as appropriate, approvals.

- a. Permits may be issued and recorded separately.
- b. Joint projects will be assessed fees as one project.
- c. Setbacks to property lines, not road rights-of-way, may be less when adjoining property owners are within the same aggregate project.

4) **Setbacks**

All towers shall adhere to the setbacks established in the following table: on next page

	Wind Turbine- Non-Commercial	WECS Wind Turbine Commercial/Utility WECS	Meteorological Towers
Property Lines	1.1 times the total height	2 times the total height	1.1 times the total height
Neighborhood Dwelling Units*	N.A.	3.5 times the total height	1.1 times the total height
Road Rights-of-Way**	1.1 times the total height	1.1 times the total height	1.1 times the total height
Other Rights-of-Way	1.1 times the total height	1.1 times the total height	1.1 times the total height
Public Conservation Lands including Wildlife Management Areas and State Recreation Areas	Same setback as accessory buildings	1.1 times the total height	600 feet
Wetlands, USFW Types III, IV, and V	N.A.	600 feet	600 feet
Other Structures not on the applicant's site	N.A.	750 feet	1.1 times the total height
River Bluffs over 15 feet	_____	Diameter of rotor	_____

\*The setback for dwelling units shall be reciprocal in that no dwelling unit shall be constructed within the same distance required for a commercial/utility Wind Energy Conversion System, without a signed waiver.

\*\* The setback shall be measured from any future Rights-of-Way if a planned or expanded Right-of-Way is known.

#### 5) **Special Safety and Design Standards**

- a) All towers shall adhere to the following safety and design standards:
  - a. Clearance of rotor blades or airfoils must maintain a minimum of twenty-five (25) feet of clearance between their lowest point and the ground.
  - b. All Commercial/Utility WECS shall have a sign or signs posted on the tower, transformer, and substation, warning of high voltage. Other signs shall be posted on the turbine with emergency contact information.
  - c. All wind turbines, which are a part of commercial/utility WECS, shall be installed with a tubular, monopole type tower.
  - d. Consideration shall be given to painted aviation warnings on all towers less than two hundred (200) feet.
  - e. Color finish: All wind turbines and towers that are a part of a commercial/utility WECS shall be white, gray, or another non-obtrusive color. Blades may be black in order to facilitate decking. Finishes shall be matte or non-reflective.



- f. Lighting: lighting, including light intensity and frequency of strobe, shall adhere to but not exceed requirements established by the FAA permits and regulations and comply with current standards and best practices to be specified in the conditional use permit.
  - g. Shadow flicker: shadow flicker on any dwelling on a non-participating landowner shall be considered minimal with the 2,200-foot setback due to shadow diffusion.
  - h. Other signage: all other signage shall comply with the sign regulations found in these Regulations.
  - i. Feeder Lines: all communications and feeder lines installed as part of a WECS shall not be considered an essential service.
  - j. Waste Disposal: solid and hazardous wastes, including but not limited to crates, packaging materials, damaged or worn parts, as well as used oils and lubricants, shall be removed from the site promptly and disposed of in accordance with all applicable local, State, and Federal rules and regulations.
  - k. Discontinuation and Decommissioning: A WECS shall be considered a discontinued use after one (1) year without energy production, unless a plan is developed and submitted to the Zoning Administrator outlining the steps and schedule for returning the WECS to service.
  - l. Noise: no Commercial/Utility WECS shall exceed fifty (50) dBA at the nearest structure occupied by humans. Exception; a Commercial/Utility WECS may exceed fifty (50) dBA during periods of severe weather as defined by the US Weather Service.
  - m. Interference: the applicant shall minimize or mitigate interference with electromagnetic communications, such as radio, telephone, microwaves, or television signals caused by any WECS. The applicant shall notify all communication tower operators within five (5) miles of the proposed WECS location upon application to the County for permits.
- b) The distance between tower support bases of any two WECS shall be a minimum of five (5) rotor lengths, determined by the size of the largest rotor. A reduction of this requirement may be granted if the County finds that such reduction does not impede the operation of the surrounding WECS or adversely affect surrounding property and is consistent with public health, safety and welfare.

6) **Retention of Expert**

- a) The Planning Commission may hire an engineer and/or other expert necessary to assist the Planning Commission and County Board in reviewing and evaluating the application for a conditional use permit, and once permitted, site inspections and decommissioning bond review. The applicant shall reimburse the County for the actual costs of such engineer/expert evaluation and consultation to the County in connection with the review and recommendation report of any application, site inspection(s) and bond review.
- b) The total amount of the costs to be reimbursed to the County for engineer or expert services may vary with the scope and complexity of the project, the completeness of the application and other information as may be needed to complete the necessary review and analysis.
- c) The Zoning Administrator shall have discretion to determine when an application is deemed complete and sufficient administrative review has been conducted before scheduling of a public hearing before the Planning Commission.

7) **Decommissioning Plan**

- a) A Decommissioning Plan for installed facilities and infrastructure must be submitted to the Planning Commission at the time of permit application.
  - i) A Decommissioning Plan must include:
    - 1. The manner in which the commercial/utility WECS will be decommissioned;
    - 2. A decommissioning schedule;
    - 3. A detailed estimate of the cost of decommissioning a commercial/utility WECS by an independent professional engineer licensed in the state of Nebraska that shall at minimum include:
      - i. Dismantling and removal of all wind turbines and towers, accessory facilities, power lines and overhead cables, transformers, substations, and meteorological towers turbine generators, and debris of the commercial/utility WECS;
      - ii. Removal of the WECS and accessory facilities to four (4) feet below ground level within one hundred eighty (180) days of the discontinuation of use. This period may be extended by the Board of Supervisors following a written request by an agent or the owner of the WECS.;
      - iii. Site restoration and reclamation to the approximate original topography that existed prior to the construction of the commercial/utility WECS with grading, topsoil, re-spread over the disturbed areas at a depth similar to that in existence prior to the disturbance, and reseeded that achieves the same utility of native vegetation of the surrounding areas to prevent adverse hydrological effects, unless the Commission approves

- a signed request by the applicable landowner, identifying the surface features the land owner prefers to remain in place and a valid reason the landowner prefers those features to remain;
  - iv. Repairs and construction from damage to public roads, culverts, and natural drainage ways resulting directly from the decommissioning of a commercial/utility WECS;
  - v. All access roads shall be removed, cleared, and graded, unless a property owner agreement indicates otherwise or the County, through official action of County Supervisors, agree to keep the road; and
  - vi. The current salvageable value of the component parts of the commercial/utility WECS, as determined by an independent evaluator.
4. Copy of as-built plans including structural and electrical drawings of all facilities and all disturbances associated with the commercial/utility WECS and accessory facilities. The as-built plans must be certified by an independent professional engineer licensed in the State of Nebraska that the information included on depicted as-built plans is complete and accurate; and
5. The financial resources that will be available to pay for decommissioning and removal of the commercial/utility WECS and accessory facilities.
- b) The Commission may reject a decommissioning plan if:
- i. It finds that the plan does not provide for decommissioning as defined herein and as required by any applicable federal or state laws, rules or regulations; and
  - ii. The plan does not adequately describe the cost of decommissioning.
- c) The decommissioning plan shall also be reviewed by the County Attorney for recommendation.
- (ii) All expenses related to decommissioning shall be the responsibility of the owner of the commercial/utility WECS, including any expenses related to releasing any easements.

8) **Decommissioning Bond**

- a) A decommissioning performance surety bond is required for all approved conditional use permits granted for the installation of commercial/utility WECS. The surety bond must be transferable upon sale of the facilities to any new owner and may not be refunded to any owner/operator of said bond until decommissioning has been satisfactorily completed or as otherwise recommended by the Planning Commission and approved by the Board of Supervisors.
- b) The Commission shall require submission of a bond by the project owner in the amount of the estimated cost to the County if it had to perform the decommissioning and reclamation work required of an owner. This amount is based on the estimated cost to the County to ensure compliance with this Section.
- c) The bond amount shall be based on:
  - i) The estimated costs submitted by the project owner and certified by an independent professional engineer licensed in the State of Nebraska in accordance with this Regulation;
  - ii) Estimated costs to the County that may arise from applicable public contracting requirements or the need to bring personnel and equipment to the facility after its abandonment by the project owner to perform the decommissioning and reclamation work;
  - iii) Estimated costs to the County that may arise from management, operation, and maintenance of the site upon temporary or permanent operator insolvency or abandonment, until full bond liquidation can be affected;
  - iv) Unless the provisions of the bond provide otherwise, the line items in the bond calculations are estimates only and are not limits on spending of any part of the bond to complete any particular task subsequent to forfeiture of the bond or settlement in the context of bond forfeiture proceedings; and
  - v) Such other cost information as may be required by or available to the County.
- d) In determining the amount of a bond required in accordance with the rule, the County shall consider:
  - i) The character and nature of the site where the commercial/utility WECS is located; and
  - ii) The current market salvage value of the commercial/utility WECS and its component parts.
- e) The project owner shall submit to the County a bond payable to Burt County, Nebraska in a form acceptable to the County and in a sum determined by the County, conditioned on the faithful decommissioning of the commercial/utility WECS. The bond must be submitted prior to commencing construction on the commercial/utility WECS.

- f) If a project owner does not submit an acceptable bond to the County within the timeframe required by this Regulation, the Zoning Administrator may assess an administrative penalty of not more than fifteen hundred dollars (\$1,500), and an additional administrative penalty of not more than fifteen hundred dollars (\$1,500) for each day the bond is late.
- g) A project owner may appeal the County's penalty assessment to the board within twenty (20) days after receipt of written notice of the penalty.
- h) Once every five (5) years, a project owner may request a reduction of the required bond amount upon submission of evidence to the County proving that decommissioning work, reclamation, or other circumstances will reduce the maximum estimated cost to the County to complete decommissioning and therefore warrant a reduction of the bond amount.
- i) The County shall engage an engineer or other expert, at the expense of the project owner, to review each decommissioning plan and bond amount every five (5) years. The performance bond must be increased, as required by the County, if the cost to decommission a commercial/utility WECS increases. The County shall notify the project owner of any proposed bond increase and provide the project owner an opportunity for an informal conference on the proposal. The project owner shall increase the bond within ninety (90) days of receiving the County's revised bond amount.
- j) Surety bonds are subject to the following requirements:
  - a. The County may not accept a surety bond in excess of ten percent (10%) of the surety company's capital surplus account as shown on a balance sheet certified by a certified public accountant.
  - b. The County may not accept surety bonds from a surety company for any project owner in excess of three (3) times the surety's maximum single obligation as provided in A. above.
  - c. The County may not accept a surety bond from a surety company for any project owner unless that surety is registered with the state auditor and is listed in the United States Department of the Treasury Circular 570 as revised.
  - d. A power of attorney must be attached to the surety bond.
  - e. The surety bond must provide a requirement and a mechanism for the surety company to give prompt notice to the County and the owner of:
    - 1. Any action alleging bankruptcy or insolvency of the surety or violation that would result in suspension or revocation of the license of the surety;
    - 2. Cancellation by the project owner; and
    - 3. Cancellation or pending cancellation by the surety.
  - f. Upon a determination by the County that a surety is unable to comply with the terms of the bond, the owner of a commercial/utility WECS shall be deemed to be without bond coverage. The project owner shall replace the bond coverage within ninety (90) days of notice from the County.

- g. Whenever operations are abandoned concurrent with the cancellation of the bond, the County shall forfeit the bond and decommission the site.
- k) The County may accept as bond an assignment of a certificate of deposit in a denomination not in excess of two hundred fifty thousand dollars (\$250,000), or the maximum insurable amount as determined by Federal Deposit Insurance Corporation (FDIC), whichever is less. The County may not accept a combination of certificates of deposit for a commercial/utility WECS in excess of that limit.
- l) The County may only accept automatically renewable certificates of deposit issued by a bank insured by the FDIC or a credit union insured by the National Credit Union Administration (NCAU).
- m) The County shall require the project owner to deposit sufficient amounts of certificates of deposit, to assure that the County will be able to liquidate those certificates prior to maturity, upon forfeiture, for the amount of the bond required by this Regulation.
- n) The County shall require that each certificate of deposit be made payable to or assigned to the County, both in writing and in the records of the bank or credit union issuing the certificate. The County shall require banks or credit unions issuing these certificates to waive all rights of setoff or liens against these certificates.
- o) The written determination to forfeit all or part of the bond, including the reasons for forfeiture and the amount to be forfeited, is a final decision by the County. The County may forfeit any or all bonds deposited for an entire commercial/utility WECS. Liability under any bond, including separate bond increments or indemnity agreements applicable to a single owner, must extend to the project owner's entire commercial/utility WECS.
- p) In the event the estimated amount forfeited is insufficient to pay for the full cost of decommissioning and reclamation, the project owner and landowner shall be jointly liable for the remaining costs. The County may complete or authorize completion of decommissioning of the bonded area and may recover from the project owner and/or the landowner all costs of decommissioning in excess of the amount forfeited.
- q) If the owner of a commercial/utility WECS is found to be in violation of the provisions of this Regulation, appeals should be made in accordance with the established procedures of the Burt County Zoning Regulations.

#### **Section 6.04 Waste Disposal Sites and Landfills.**

A Conditional Use Permit may be granted for any waste material disposal, garbage disposal, or land fill operations in the designated zoning district; provided the following special conditions shall be considered: