



2026 NACO Resource

Land Use Permit Toolkit

A Message from the NACO President

When it became clear that LB663 (2026) would pass in the legislature, NACO leadership and I knew that we needed to develop a resource to help counties navigate the new rules and regulations that would affect their approach to land use issues. The LB663 Committee, comprised of county leaders, local experts, and NACO staff members, collaborated for five months to develop this comprehensive toolkit, which we hope will serve as a valuable resource for county leadership now and in the future.

This could not have happened without the help of so many subject matter experts and willing partners from across the state. I can't thank everyone enough for all their thoughtful input and guidance.



Valery Bell

2026 NACO President

Box Butte County Treasurer

Role of NACO and This Toolkit

The NACO Land Use Committee does not advocate for or against specific development types. Its role is to provide counties with information, planning tools, and regulatory considerations that support local decisions reflecting community priorities, applicable laws, and sound planning practices. Counties should consult county attorneys, planning professionals, utility providers, and engineers before adopting specific standards.

The appendices include templates, example language, and additional resources. They are not legal recommendations or model ordinances.

Artificial intelligence (AI) was used as an editorial and formatting tool to condense vetted content, organize meeting notes, and create charts and graphics; all conclusions, recommendations, and final content were reviewed and verified prior to publication.

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Executive Summary

Nebraska county officials are increasingly asked to evaluate complex land use proposals involving energy infrastructure, data centers, livestock facilities, and other emerging developments. These proposals often involve significant public interest, substantial infrastructure considerations, competing property-rights concerns, and evolving legal requirements.

In response to LB663 (2026) and the evolving land use challenges facing Nebraska counties, NACO President Valery Bell established the Land Use Committee to provide counties with practical guidance, planning tools, and educational resources to support consistent, informed, and legally defensible land use decisions.

How to Use This Toolkit

Each section functions as a stand-alone reference organized around four components:

Key Takeaways—concise overview of concepts, statutory considerations, and policy issues.

Siting Considerations—background on legal requirements, planning principles, and community impacts.

Best Practices—guidance for developing procedures, evaluating applications, and establishing permit conditions.

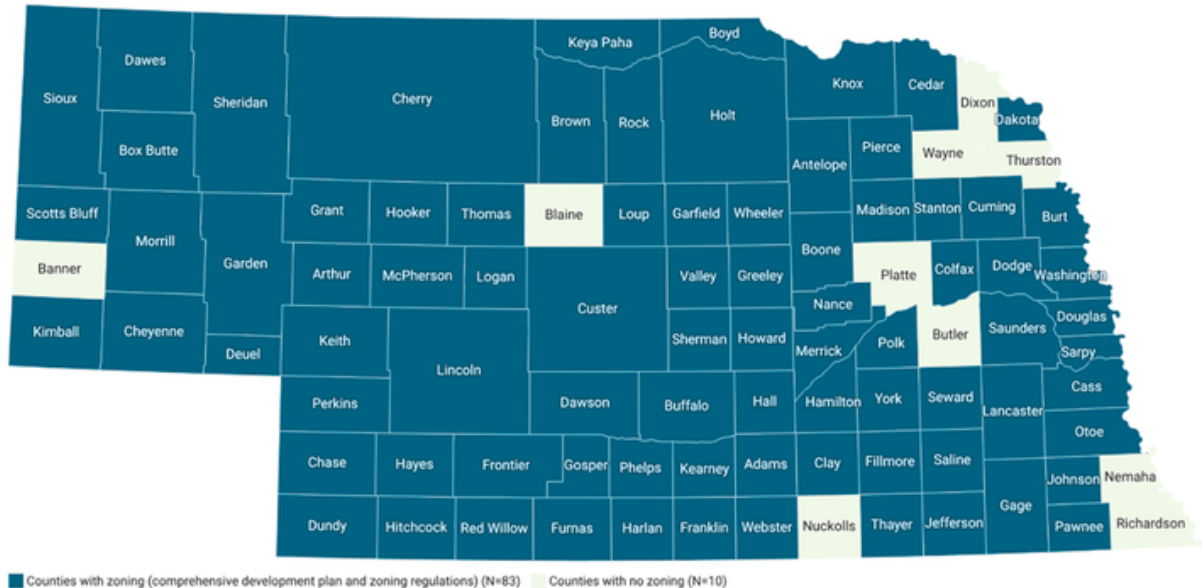
Appendices—example hearing script, legal case summaries, case studies, and technical assistance contacts.

The appendices provide examples and planning tools for local consideration. They are not model ordinances, mandatory standards, or legal advice. Counties should consult county attorneys, planning professionals, and other subject-matter experts before adopting specific regulations or permit conditions.

A Flexible Framework for Local Decision-Making

No two counties are identical. This toolkit does not advocate for or against particular types of development. It provides a framework for evaluating proposals using objective criteria, sound planning principles, applicable law, and local priorities—adaptable to each county's circumstances while remaining consistent with Nebraska law and adopted comprehensive development plans.

Figure1. Zoned Counties in Nebraska



Introduction

This toolkit outlines the statutory, procedural, and policy framework governing county zoning in Nebraska. Rooted in the state's delegated authority, zoning must follow the adoption of a comprehensive development plan and align with statutory goals protecting public health, safety, welfare, and economic stability. Key themes include coordination across jurisdictions, infrastructure readiness, public engagement, conditional use or special exceptions timelines, and constitutional protections for property rights including takings and due process.

Guidance addresses emerging land uses highlighting siting, environmental, infrastructure, and community impact considerations. References to “impacts” in this document are not intended to imply a solely positive or solely negative effect. Throughout, the toolkit stresses proactive planning, legally defensible standards, financial assurances such as decommissioning requirements, and the balance between private property rights and public interests.

Nebraska's Land Use Context

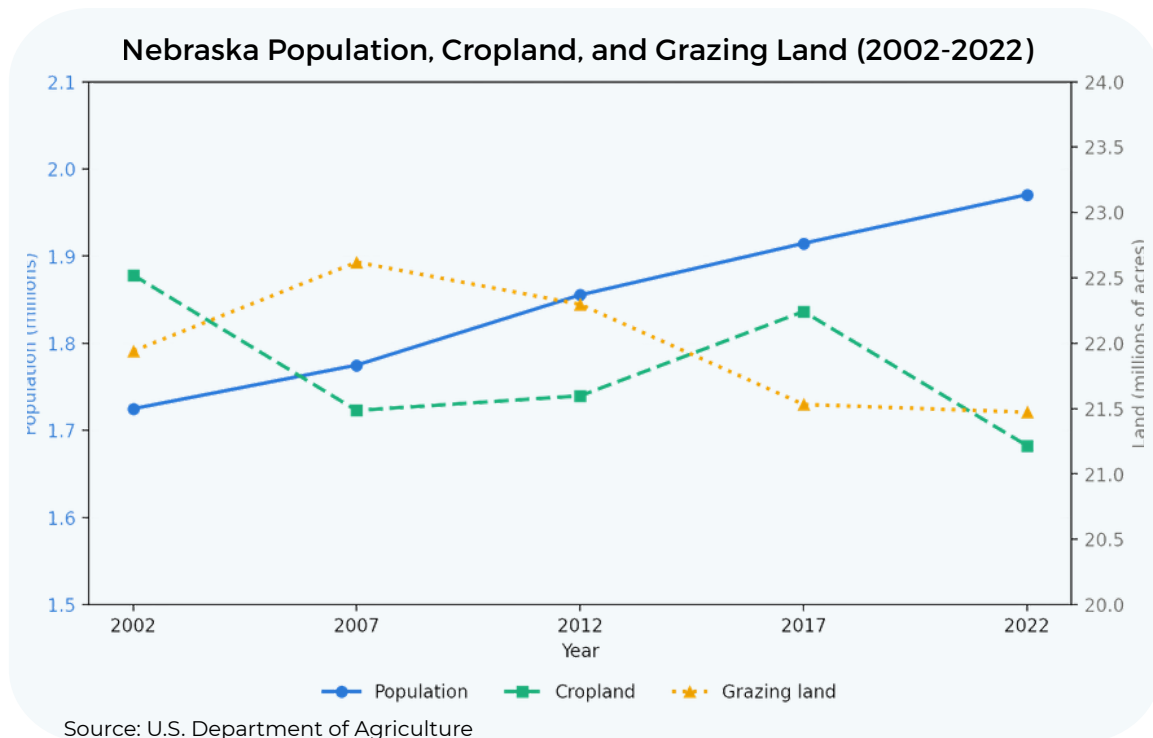
According to Nebraska Revised Statute § 70-1014.02 (1)(a), "Nebraska has the authority as a sovereign state to protect its land, natural resources, and cultural resources for economic and aesthetic purposes for the benefit of its residents and future generations by regulation of energy generation projects."

Agriculture remains Nebraska's dominant land use, with approximately 42.7 million acres of cropland and grazing land, representing about 93% of the state's total land area. Although cropland and grazing acreage have gradually declined since 2002—from approximately 22.5 million to 21.2 million acres and 21.9 million to 21.5 million acres, respectively—these changes have been incremental, and Nebraska remains one of the nation's leading agricultural states. Some of this shift reflects enrollment in the Conservation Reserve Program (CRP), which temporarily converts eligible cropland to conservation uses under long-term contracts before many acres eventually return to production. During the same period, developed land, transportation corridors, energy infrastructure, and industrial uses have expanded modestly as Nebraska's economy has diversified. The state's nominal gross domestic product nearly doubled from approximately \$77 billion in 2002 to \$152 billion in 2022, reflecting growth across multiple sectors while agriculture continues to serve as the foundation of Nebraska's economy.

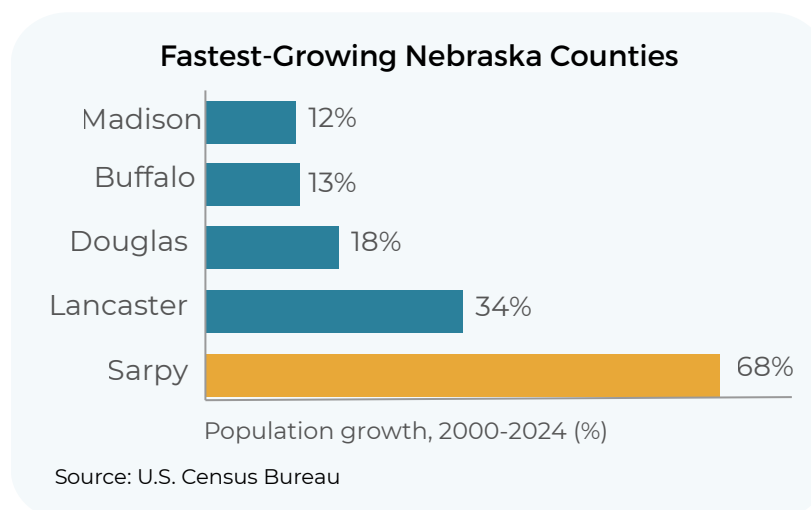


Population Growth and Land Use Patterns

Nebraska's population grew from approximately 1.7 million in 2002 to an estimated 2.0 million by 2022—a 17.6% increase over two decades. This growth is geographically concentrated: roughly 70% of Nebraskans live along the I-80 corridor, with the Omaha and Lincoln metros accounting for the majority of new development activity. Sarpy County has been among the fastest-growing counties in the Midwest, with population increasing nearly 68% since 2000, reflecting broader regional growth along the Platte River corridor.



Population growth is accompanied by expanded infrastructure needs—roads, utilities, stormwater systems, and schools—that may involve land at the urban-rural interface. Nebraska sees an estimated 5,000–10,000 acres of land annually transition from agricultural to other uses, continuing a gradual pattern of cropland acreage change documented over several decades.



Zoning Authority in Nebraska

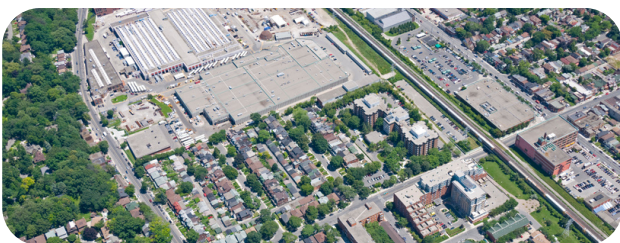
Key Takeaways

- Zoning authority is derived from state law and must be grounded in a comprehensive plan. Counties may adopt zoning regulations only after adopting a comprehensive development plan and receiving recommendations from the planning commission.
- The purpose of zoning is to protect public welfare. Counties use zoning to regulate land use and development in ways that promote public health, safety, welfare, and economic stability.
- A comprehensive development plan serves as a county's long-range vision for growth and development, addressing land use, transportation, utilities, housing, and public facilities.
- Zoning and conditional use permits and special exceptions are distinct tools. Zoning establishes the baseline framework for land use; conditional use permits and special exceptions allow specific uses within a zone subject to conditions designed to protect surrounding properties and the public interest.

What is County Zoning?

County zoning is the exercise of authority granted by the Nebraska Legislature to county boards to regulate the use and development of land and structures in the unincorporated areas of a county. Its purpose is to promote the public health, safety, morals, and general welfare of present and future residents. In practical terms, zoning separates incompatible land uses and establishes development standards that help preserve the property tax base and guide orderly growth.

Zoning is adopted by county board resolution following the creation of a comprehensive development plan. Neb. Rev. Stat. § 23-114.03 requires that zoning regulations be adopted only after the planning commission's specific recommendations have been received, and that all regulations be consistent with the adopted comprehensive development plan. Nebraska county zoning authority exists pursuant to statutes Neb. Rev. Stat. §§23-114 through 23-114.06 and 23-172 to 23-174.02 for counties with a primary class city (Lancaster County).



Statutory Purposes of Zoning (Neb. Rev. Stat. § 23-114.03)

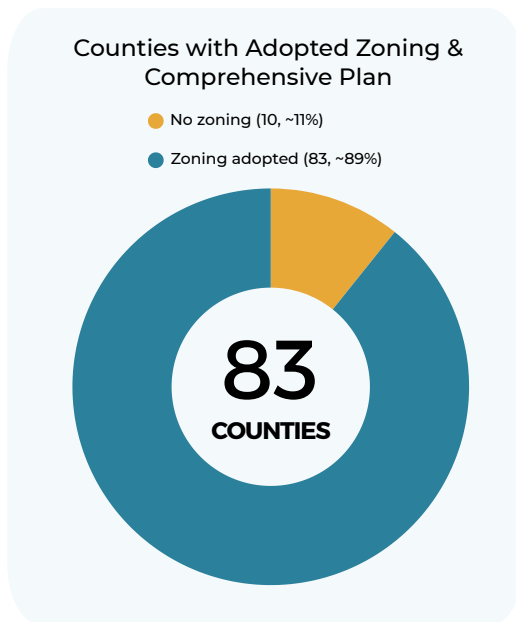
Zoning regulations must be designed to promote the health, safety, morals, convenience, order, prosperity, and welfare of present and future inhabitants of Nebraska. The statute identifies fourteen specific purposes:

1. Developing both urban and nonurban areas
2. Lessening congestion in the streets or roads
3. Reducing the waste of excessive amounts of roads
4. Securing safety from fire and other dangers
5. Lessening or avoiding hazards to persons and damage to property from storm or flood waters
6. Providing adequate light and air
7. Preventing excessive concentration or wasteful scattering of population
8. Promoting distribution of population and land uses to assure adequate transportation, water, drainage, sanitation, recreation, and other public requirements
9. Protecting the tax base
10. Protecting property against blight and depreciation
11. Securing economy in governmental expenditures
12. Fostering the state's agriculture, recreation, and other industries
13. Encouraging the most appropriate use of land in the county
14. Preserving, protecting, and enhancing historic buildings, places, and districts

What Is a Conditional Use Permit?

A conditional use permit (CUP) or special exception authorize a land use that is not permitted by right under a zoning district's standard regulations but may be appropriate in certain locations when specific conditions are met. CUPs allow counties to evaluate proposed uses on a case-by-case basis, weighing factors such as site suitability, infrastructure capacity, land use compatibility, and potential impacts on public health and safety.

Unlike a variance, which modifies dimensional standards, a CUP permits a use that the zoning ordinance anticipates may be appropriate—but only with conditions attached to protect neighboring properties and the broader public interest. Common examples include large-scale agricultural operations, energy facilities, data centers, and recreational uses in agricultural zones.



ROLE OF THE COUNTY

Currently, 83 of Nebraska's 93 counties—approximately 89%—have adopted zoning and comprehensive development plans. When zoning is adopted in accordance with a comprehensive development plan, counties are positioned to promote orderly growth, protect public health and safety, preserve agricultural and other important land uses, reduce conflicts between incompatible land uses, and maintain the property tax base.

Even if a proposed land use is not specifically identified in a county's zoning regulations, an applicant may still be able to submit a conditional use permit or special exception application if the proposed use is reasonably similar to a listed use.

The county board holds ultimate authority over zoning decisions, acting on recommendations from the planning commission. The planning commission reviews applications, conducts public hearings, and provides recommendations based on the county's adopted plan and regulations. The county board then acts on those recommendations, with authority to approve, deny, or modify applications in accordance with applicable law.

Best Practices Summary

Effective county zoning practice begins with a current, regularly updated and accessible comprehensive development plan that reflects local priorities and land use patterns. Counties should consider establishing clear, written criteria for evaluating zoning applications and conditional use permits and special exceptions to support consistent, transparent, and legally defensible decisions. Public notice and hearing procedures should be followed rigorously, with findings documented in the record. Permit conditions, where applicable, should be specific, measurable, and directly tied to identified impacts. Counties are encouraged to consult with county attorneys, planning professionals, and relevant state agencies when evaluating complex or high-impact proposals.

Comprehensive Development Plans

Key Takeaways

- Comprehensive development plans provide the foundation for county land use decisions and establish a long-term vision for growth and development.
- Zoning is the primary tool for implementing a comprehensive plan; zoning regulations must be grounded in a rational nexus—a reasonable connection to a legitimate public purpose and the impacts of the development being regulated.
- Planning is a continuous process requiring periodic updates (including annual review), broad public participation, and legal diligence to remain effective and defensible.

What Is a Comprehensive Development Plan?

A comprehensive development plan is a long-term, data-driven policy guide that establishes a county's vision for future growth and land use, typically spanning 10–20 years. Plans should be reviewed annually and updated to reflect changing conditions while avoiding frequent amendments driven by short-term interests. These plans address land use, transportation, utilities, housing, public facilities, and other community priorities. The plan reflects broad public participation and provides the legal and policy foundation for all subsequent zoning and land use decisions.

Developing and adopting a comprehensive plan generally takes 15–18 months and involves background analysis, community input, goal-setting, plan development, and final adoption. Once adopted, zoning regulations may be implemented in an additional 6–8 months.

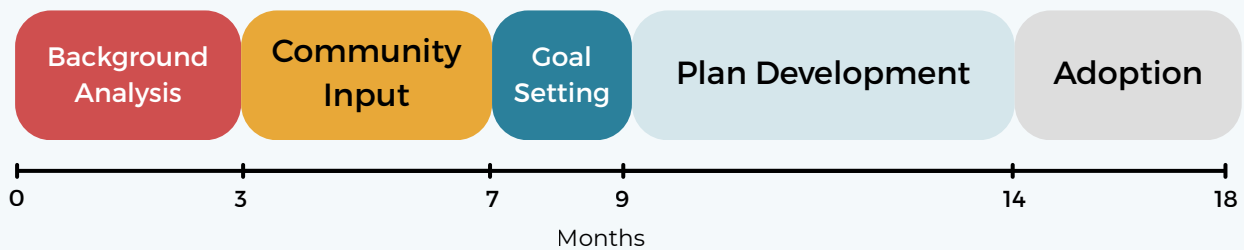
CASE STUDY - HAMILTON COUNTY

When updating its comprehensive plan and zoning regulations in 2018/2019, Hamilton County made a point to hold public meetings and meet with the villages to help inform the development of their standards.

Planning and Zoning Administrator Hillary Betka said that when the planning commission receives an application for a conditional use permit, she goes through the comprehensive plan and ensures that it both aligns with the existing standards and with what the plans are for the future of the county as outlined in the plan.

See Appendix D for the full case study.

Comprehensive Development Plan Timeline (~15-18 months)



Nebraska Statutory Requirements

Neb. Rev. Stat. § 23-114.03 requires that zoning regulations be adopted only after the county has adopted a comprehensive development plan and received the planning commission's specific recommendations. All zoning regulations must be consistent with the adopted plan.

Required Plan Elements (Neb. Rev. Stat. § 23-114.02)	Recommended Plan Elements
 County Facilities	 Population
 Land Use	 Housing
 Energy	 Economics
 Transportation	 Natural Resources / Environment

Best Practices Summary

Counties benefit from treating the comprehensive development plan as a long-term policy guide consulted across all land use decisions—zoning, rezonings, conditional use permits and special exceptions, infrastructure investments, and conservation matters. Plans should be maintained on a structured review schedule to address changing demographics, economic conditions, and emerging land uses without undermining long-term planning integrity. Broad stakeholder engagement throughout the process—including residents, elected officials, planning commissioners, industry representatives, and subject-matter experts—builds public trust and supports balanced, defensible policy. Professional legal and planning guidance (including hiring consultants) is especially valuable when undertaking major changes to a plan, evaluating moratoriums, addressing emerging uses, or navigating state or federal regulatory requirements. The adopted plan should be readily available on the county website.

County Zoning Maps: Modernization and Accessibility

Key Takeaways

- A county zoning map is the visual counterpart to a county's written zoning regulations, showing district boundaries and any overlay areas; Neb. Rev. Stat. § 23-114.03 requires counties to adopt an official zoning map (or maps) indicating districts and regulations, publish it in book or pamphlet form within fifteen days of adoption, and file it with the county clerk; where a map is incorporated into the zoning regulations by reference, that reference must be published in the same manner.
- Many Nebraska counties still rely on static, paper-based, or flat PDF zoning maps, which can be difficult to keep current, prone to drifting out of sync with the adopted zoning text, and not accessible for residents and applicants to access outside office hours.
- Modern, GIS-based, web-hosted zoning maps improve accuracy, transparency, and efficiency for county staff, elected officials, applicants, and residents, and can be layered with parcel, floodplain, agricultural, and infrastructure data to support more informed permitting and planning decisions.
- Modernization is primarily a resource and capacity question for many counties. Counties should consider phased approaches and shared GIS services.

What Is a County Zoning Map?

A county zoning map is the graphic companion to a county's written zoning regulations. Where the zoning text describes what is allowed in each district—permitted uses, setbacks, height limits, conditional use standards—the map shows where each district applies. It typically depicts the boundaries of agricultural, residential, commercial, and industrial districts, along with any overlay districts, and is the primary tool used by county staff, applicants, and residents to determine which set of regulations applies to a given parcel before a permit, conditional use permit, or rezoning application is filed.

The map and the zoning text function together and must be read as a single regulatory framework. A parcel's zoning designation on the map controls which section of the zoning ordinance applies to it, and an inaccurate or outdated map can create confusion for applicants, inconsistent enforcement, and legal exposure for the county if a decision is made based on a map that no longer reflects the officially adopted boundaries. The map should have a title block with an area where the chief official and clerk can note the date of adoption. Also, each time there is an annexation, rezoning, or subdivision, such change should be drawn on the map and noted in the adoption/amendment block. Sometimes, there is confusion regarding the zoning map and its relationship with (1) the map of existing land uses and (2) the future land use map, both of which typically are included in the county's comprehensive plan.

County-City Extra Territorial Jurisdiction (ETJ) Coordination

Nebraska cities possess extraterritorial jurisdiction (ETJ), or the authority to regulate land use outside their municipal boundaries. Because cities and counties may both exercise land use authority in these overlapping zones, coordination on zoning designations and development standards is essential. Where city and county zoning maps conflict or where updates in one jurisdiction are not reflected in the other, applicants and county staff may face confusion about which regulations apply, and both jurisdictions face increased risk of legal challenges to permitting decisions. City and county planners and planning commissions should establish regular communication protocols and coordinate map updates when annexations, rezonings, or boundary changes occur in ETJ areas, as required by Neb. Rev. Stat. § 16-901. Such coordination will reduce duplicated efforts, as well as help ensure that both official zoning maps reflect the same regulatory framework. Readers who are unsure whether a parcel falls within city ETJ authority or what zoning regulations apply should contact their county planning or zoning office, which can advise whether the county maintains an official zoning map in paper form, digital form, or both.

Shared GIS Services

Shared GIS services allow participants to use one coordinated system. Formal agreements establish responsibilities, funding arrangements, data ownership, and access. Each participant maintains data within its area of responsibility and contributes updates to a common platform. A lead agency typically manages the system, provides technical support, and enforces shared data standards. Costs may be divided based on population, parcel count, service area, or use. Shared GIS services reduce duplicate spending on software licenses, servers, aerial imagery, specialized staff, training, and application development. It also gives smaller jurisdictions access to GIS capabilities they may not be able to afford independently. Successful shared GIS programs depend on reliable funding, consistent data standards, and regular updates.

Nebraska already has several examples of shared GIS services. For example, the Sarpy County GIS Coalition combines funding and data from Sarpy County, five cities, and the Papio-Missouri River Natural Resources District, with the county serving as the central data repository and providing mapping, application development, training, and technical support. Similarly, Adams County, Hastings, and Hastings Utilities share land-use, infrastructure, utility, and natural-resource data through one public mapping system. Hall County and Grand Island maintain a cooperative county-city database. Douglas County and Omaha make geographic information available through the joint DOGIS platform. These partnerships reduce duplicated data and effort, improve access to consistent information across jurisdictions, and allow participants to share the costs and expertise needed to maintain useful GIS technology.

Nebraska Statutory Requirements

Nebraska law directly addresses the zoning map as part of the zoning adoption process. Neb. Rev. Stat. § 23-114.03 provides that “an official map or maps indicating the districts and regulations shall be adopted” as part of a county’s zoning regulations. The statute further requires that, within fifteen days after adoption of the regulations or maps, they be published in book or pamphlet form, and that the map or maps be filed with the county clerk. Where a zoning plan or map is incorporated into the zoning regulations by reference rather than reproduced in full, that incorporation must likewise be published in book or pamphlet form or in a legal newspaper. This requirement separates Nebraska’s zoning map adoption process from other states. Colorado, South Dakota, Iowa, Missouri, and Kansas all possess broad state statutory frameworks that permit counties to maintain and adopt their official zoning maps in digital format. Under these local enabling acts, counties are fully authorized to utilize geographic information systems (GIS) or electronic records to manage and display their official land-use boundaries alongside traditional paper archives.

Because zoning district boundaries are part of the adopted zoning regulations, changes to those boundaries—rezonings, annexations, or the creation of new districts—must follow the same statutory process as other zoning amendments, including planning commission review and recommendation, public hearing, and county board action. The map is not a separate administrative document that county staff can revise informally; it is a legal record that changes only through the same adoption process required for the underlying zoning text.

County Considerations

The following are best practices for counties to consider when updating, modernizing, and maintaining their zoning maps. As with other sections of this toolkit, these are practical considerations rather than legal requirements or model standards, and counties should consult county attorneys and GIS or planning professionals before changing how official zoning maps are created, stored, or published.

1. Zoning Map Audits

Counties should consider periodically auditing the zoning map against the written zoning regulations and the record of board-approved rezonings, annexations, and plat actions to confirm the map reflects only officially adopted district boundaries. Any discrepancy between the map and the adopted record should be resolved promptly and documented. This review will help ensure that the zoning map and regulations are consistent.

2. GIS Zoning Layer Review

Counties should consider reviewing GIS zoning layers for the following potential issues: gaps, “slivers,” overlapping base districts, and unclassified areas, as well as municipal zoning that might appear to be under county jurisdiction. Base zoning districts should be complete and mutually exclusive. Airport hazard areas, wellhead protection areas, floodplains, and other overlays should generally be maintained as separate layers where they operate in addition to the underlying district.

3. Transition to GIS-based Mapping

Counties relying on static paper maps or flat, non-interactive PDF files should consider transitioning to a GIS-based digital zoning map tied to parcel data. A GIS-based map allows staff, applicants, and residents to search by address or parcel number, reduces staff time spent manually verifying district assignments, and provides a more durable and easily updated record than paper or scanned documents. Counties may need to clearly define the roles and responsibilities of those maintaining and updating the data.

4. Public-facing Zoning Maps

Counties should consider hosting an interactive, public-facing zoning map on the county website so residents and applicants can review district boundaries and applicable regulations outside of office hours. Public-facing maps should be designed for plain-language use, include a clear legend, function on mobile devices, and account for accessibility of county web content generally.

5. Process for Updating Zoning Maps

Counties should consider establishing a defined internal process and timeline for updating the zoning map after every board-approved rezoning, annexation, or plat action, so that the lag between an amendment's adoption and its reflection on the map does not create confusion for applicants or risk for the county. Dating or version-stamping each update supports a clear record of when a given boundary took effect.

6. Coordinated Zoning Map Maintenance

Because zoning boundaries interact with parcel and ownership records, counties should consider coordinating zoning map maintenance with the county assessor's office, GIS or information technology staff, and the register of deeds, whether those functions are performed in-house or through a contracted GIS provider, so that zoning, parcel, and ownership data remain aligned.

7. Official Zoning Map

Counties should consider maintaining the officially adopted zoning map, in paper or digital form, as the legal record consistent with the publication and filing requirements of Neb. Rev. Stat. § 23-114.03. Where a county also maintains a more frequently updated, publicly hosted reference or informational map, it should clearly distinguish that reference map from the official adopted record to avoid ambiguity over the controlling version in the event of a dispute.

8. Shared GIS Services

Smaller or rural counties with limited in-house GIS capacity should consider shared services, regional planning agencies, or contracted GIS providers.

9. Zoning Map Overlays

Counties should consider overlaying the zoning district map with other relevant data layers—floodplain boundaries, Natural Resources District boundaries, transmission and utility infrastructure, agricultural land data, and road or right-of-way information—to support more informed review by planning commissions and county boards evaluating complex or emerging land use applications.

10. Cybersecurity and Redundancy

As zoning maps move to digital and cloud-based platforms, counties should consider data backup, redundancy, and basic cybersecurity practices to protect the official zoning record against loss, corruption, or unauthorized alteration.

CASE STUDY - HALL COUNTY

For nearly 30 years, Hall County and Grand Island's shared GIS model has reduced overhead by consolidating software licenses, servers, and specialized personnel. "I think for them to get access to the same GIS resources we have, they'd be paying three or four times more," said Grand Island GIS Administrator Nick Nolte. The partnership also strengthens emergency response. During a recent tornado exercise, city and county personnel used a shared dashboard to post damage photos, shelter availability, and other real-time information in one centralized system.

See Appendix D for the full case study.

Best Practices Summary

Counties should treat the zoning map as a living companion to the written zoning regulations—accurate, current, and consistent with every board-approved amendment. Where resources allow, transitioning from static paper or PDF maps to a GIS-based, web-accessible map improves both public transparency and staff efficiency, and can be layered with parcel, floodplain, and infrastructure data to support more informed review of increasingly complex land use proposals. Smaller counties with limited technical capacity should consider phased modernization and shared GIS services. Regardless of format, counties should maintain a clear, legally compliant official record consistent with Neb. Rev. Stat. § 23-114.03, publish and file map amendments promptly, and clearly distinguish any publicly hosted reference map from the official adopted record to avoid confusion or dispute over the controlling version. Zoning districts should be clearly labeled or colored, and any alphanumeric zone abbreviations should be keyed to a legend on the map.

LB663 (2026): Permit Review Requirements

Key Takeaways

- LB663 establishes mandatory “shot clock” review timelines; counties must act on all conditional use permit and special exception applications within statutory deadlines or risk automatic approval.
- Permit decisions must be based on adopted zoning regulations and established criteria—not subjective preferences or public opposition alone.
- Counties cannot require applicants to obtain separate state, federal, or local permits before making a zoning decision; these are parallel, independent processes.
- LB663 requires county attorneys, planning commission members, and county board members to complete two hours of zoning and permitting education per term.

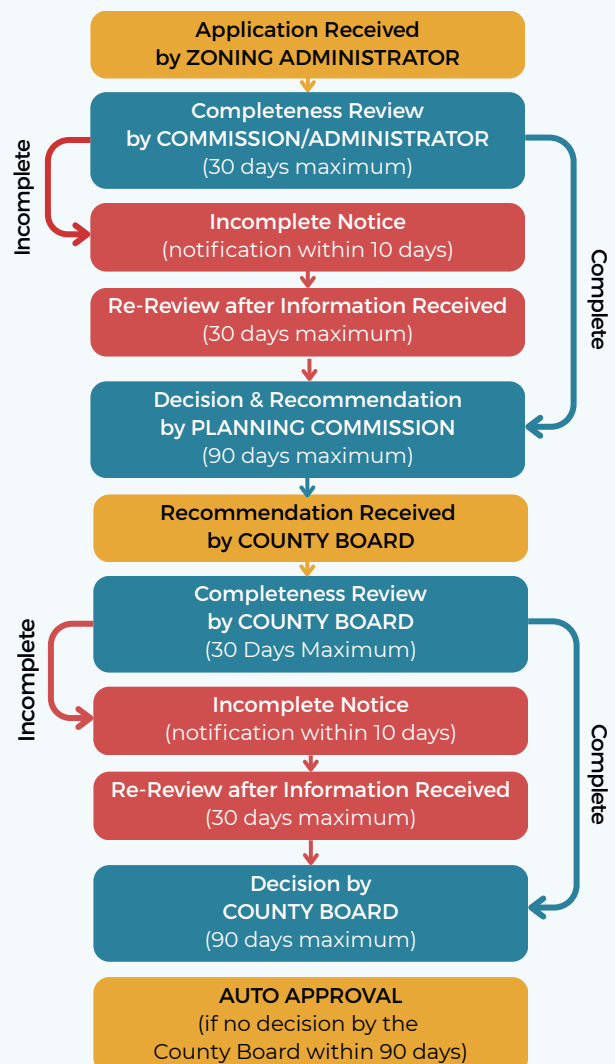
The “Shot Clock”: Statutory Review Timeline

Upon receipt by the planning commission of an application, the county zoning administrator or commission shall have **thirty days** to determine if the application is complete. If the administrator or commission determines the application is incomplete, within **ten days** following such determination, the administrator or commission shall notify the applicant in writing as to what information is required to make the application complete. The administrator or commission shall have **thirty days** after receipt of any additional information provided by the applicant to redetermine if the application is complete. Within **ninety days** after the commission receives a complete application, the commission shall:

(i) If the commission has the authority to grant or deny a conditional use permit or special exception, grant or deny such application; or

(ii) If the commission does not have the authority to grant or deny a conditional use permit or special exception, make a recommendation to the board that such application be granted or denied. Neb. Rev. Stat. §23-114.01(7)(b)

LB663 Permit Review: “Shot Clock” Timeline



See Appendix F for a full page graphic.

County Obligations and County Board Rights

County Obligations	County Board Rights
• Determine completeness within 30 days of receipt • Notify applicant of deficiencies within 10 days of incomplete determination • Re-review within 30 days after additional information is received • Issue a decision or recommendation within 90 days of a complete application • Base decisions only on adopted zoning regulations and documented evidence • Recognize independence of state and federal permitting processes	• Require a pre-submission review process to ensure application completeness • Deny applications supported by a written record of clear, factual evidence of noncompliance • Apply all adopted zoning standards and conditions to approvals • Appeals of zoning decisions require clear and convincing evidence that the decision was arbitrary, capricious, illegal, or inconsistent with county regulations

Education Requirements

LB663 requires county attorneys, planning commission members, and county board members in counties with zoning to complete two hours of zoning and permitting education per term. NACO will track county board member hours at NACO education events.

Best Practices Summary

Counties may establish a clear, written workflow for application intake, completeness review, and decision-making that aligns with LB663's statutory deadlines. Standardized application checklists and a pre-submission review process help ensure applications are complete before the clock starts, reducing delays and administrative burden. All permit decisions—approvals and denials—should be grounded in the county's adopted zoning regulations and supported by documented findings. Counties should avoid denying permits based on speculation or unsubstantiated public comment, relying instead on factual evidence in the record. Consistent training for board members, planning commissioners, and county attorneys on LB663 requirements supports legally defensible, efficient, and fair permit administration.

Moratoriums

Key Takeaways

- A land use moratorium temporarily suspends development approvals while a county evaluates emerging issues and considers updates to its comprehensive plan or zoning regulations
- Moratoriums may be appropriate when existing regulations do not adequately address new or evolving land uses, but should be used sparingly and only for clear planning purposes
- Any moratorium must be supported by a legitimate public purpose and implemented through reasonable, narrowly tailored means; the purpose and estimated duration should be clearly communicated to the public
- Duration is a critical factor in legal defensibility; moratoriums generally should not exceed six to twelve months, and counties should consult their county attorney before adoption

What Is a Land Use Moratorium?

A land use moratorium is a local enactment that temporarily suspends development approvals while a county considers and potentially adopts changes to its comprehensive plan or zoning regulations. Its purpose is to preserve the status quo while the county gathers information, engages the public, and evaluates whether existing regulations adequately address new or emerging land uses. Moratoriums are a short-term planning tool—not a long-term solution—and should be used only when a clear planning need exists.

Statutory and Legal Considerations

Nebraska statutes do not establish a specific framework governing the adoption of moratoriums; however, any moratorium must be consistent with constitutional requirements, including due process, equal protection, the commerce clause, and the contract clause. Legal risk increases with duration. Moratoriums that are overly broad, insufficiently justified, or extended beyond approximately six to twelve months are more likely to face successful legal challenge. Courts evaluate moratoriums on a case-by-case basis. Counties should document the public purpose, scope, and anticipated timeline for any moratorium and consult legal counsel before and during its implementation.

CASE STUDY - HAMILTON COUNTY

Hamilton County placed a moratorium on solar permits after reviewing current solar regulations and deciding they didn't feel they were up to date – especially given the large size of commercial solar projects. So, they put the moratorium in place while they re-evaluate setbacks and figure out what's best for the county. They want a broader understanding of planning and zoning from a statewide perspective, which is why they also have a third-party planning consultant assisting them. The solar moratorium was recently extended for another six months. Planning and Zoning Administrator Hillary Betka said the county is at a point where they're really close, but to have made all of the progress on developing standards that they have thus far and then to rush it at the end wasn't what the planning commission wanted, so it asked for the six month extension to ensure everything was absolutely right. In six months, they will review the regulations and solicit suggestions from the board before moving into public hearings.

See Appendix D for the full case study.

Reasoning for a Moratorium

A moratorium may be appropriate when a county needs time to study emerging land uses or development trends, allow for public input and impact analysis, review whether the comprehensive plan and zoning regulations adequately address a new use, or consider whether regulatory updates are warranted. The following illustrates both the valid purposes of a moratorium and the relationship between duration and legal risk:

Valid Purposes for a Moratorium

-  Study emerging land uses or development trends
-  Allow time for public input and impact analysis
-  Review adequacy of comprehensive plan & zoning
-  Ensure decisions reflect current information
-  Consider updates to regulation or standards

Moratorium Duration & Legal Risk



Best Practices Summary

Moratoriums should be used sparingly, with a clearly defined and documented public purpose tied to a legitimate planning need. Before adoption, counties should consult county attorneys and planning professionals to ensure the moratorium is narrowly tailored in both scope and duration. Short-term moratoriums—generally under six months—carry lower legal risk and are more defensible; durations beyond six to twelve months face substantially greater scrutiny and are strongly discouraged. The moratorium’s purpose, geographic scope, and expected timeline should be clearly communicated to the public throughout the process. The goal of any moratorium should be to create adequate time to make well-informed, permanent planning decisions—not to indefinitely delay development.

Private Land Rights

Key Takeaways

- Private property rights are constitutionally protected for both participating and non-participating landowners; counties retain authority to regulate land use, but must do so through objective standards and proportional conditions
- Permit conditions, setbacks, and mitigation measures must be reasonably related and proportional to the actual impacts of a proposed project to avoid an unconstitutional regulatory taking
- Zoning authority is separate from eminent-domain authority; county zoning approval does not grant developers or utilities the power to acquire easements or take property
- Clear communication about the limits of county authority helps manage public expectations and keeps zoning discussions focused on lawful land use considerations

What Are Private Land Rights?

Private property rights are a foundational principle of both the United States and Nebraska Constitutions. Property owners generally have the right to use and enjoy their land as they choose, provided that use does not create a nuisance or injure others. This right applies equally to applicants seeking to develop their property and to neighboring or non-participating landowners who may be affected by a proposed development. County zoning decisions must respect and balance both sets of rights.

Statutory and Constitutional Protections

The Fifth Amendment to the U.S. Constitution and Article I, § 21 of the Nebraska Constitution prohibit the taking or damaging of private property for public use without just compensation. Courts have recognized that government regulations may constitute an unconstitutional regulatory taking if they go too far in restricting property rights. Counties should ensure that all conditions, exactions, and requirements imposed as part of a zoning or permitting decision are grounded in a legitimate public purpose and proportional to the actual impacts of the project.

Participating Landowner Protections

- **Right to develop:** Property owners may use and develop land consistent with adopted zoning
- **Proportionality:** Permit conditions and exactions must be reasonably connected to actual project impacts
- **Separate processes:** County zoning approval does not substitute for or authorize eminent-domain proceedings
- **Investment expectations:** Regulations should not unreasonably interfere with reasonable investment-backed expectations
- **Takings protection:** Regulations that unreasonably burden participating landowners may raise constitutional concerns

Non-Participating Landowner Protections

- **Right to enjoyment:** Neighboring landowners retain the right to reasonably use and enjoy their own property
- **Nuisance protection:** Counties may impose conditions to prevent unreasonable harm to adjacent properties
- **Due process:** All affected parties are entitled to notice, public hearing participation, and a reasoned decision

Balancing Private Property Rights in County Zoning Decisions

The county's role in balancing the rights of participating landowners, non-participating landowners, and the broader public interest.

Participating Landowner	County's Role	Non-Participating Landowner
Right to develop per adopted zoning	Apply regulations consistently	Right to use & enjoy property
Subject to permit conditions & standards	Base decisions on objective evidence	Protected from nuisance & harm
Must obtain other permits independently	Ensure conditions are proportional to impacts	May provide evidence at public hearing
Zoning ≠ eminent domain authority		
Constitutional takings protections	Balance all property rights fairly	

Best Practices Summary

Zoning decisions should be grounded in objective criteria and supported by documented evidence in the record. Permit conditions, infrastructure requirements, setbacks, and mitigation measures must have a clear connection to a project's actual impacts and should not impose burdens disproportionate to those impacts. During public hearings, county boards should clearly explain the distinction between zoning decisions and eminent-domain proceedings, keeping discussion focused on lawful land use considerations. County attorneys should be consulted when adopting regulations or imposing conditions that may implicate constitutional protections, including takings, due process, equal protection, the commerce clause, or the contract clause. The county's role is to apply adopted regulations consistently and fairly—balancing the development rights of applicants with the rights of neighboring landowners and the long-term interests of the community.

Public Hearings

Key Takeaways

- Well-defined hearing procedures—including standardized opening statements, speaking rules, time limits, and participation guidelines—promote fairness, consistency, and transparency for all participants
- Decisions must be based solely on evidence presented in the public record; zoning hearings, particularly for conditional use permits or special exceptions and rezonings, may function as quasi-judicial proceedings
- County officials should avoid ex parte communications and conflicts of interest, disclose any outside contacts, and base decisions on the hearing record rather than outside pressure or influence
- Complete recordkeeping (through written submissions, audio or video recordings, and meeting minutes) supports transparent decision-making and provides a defensible record if decisions are challenged
- Strong, consistent leadership by a trained chairperson or neutral moderator is essential to effective, orderly hearings

Conducting an Effective Public Hearing

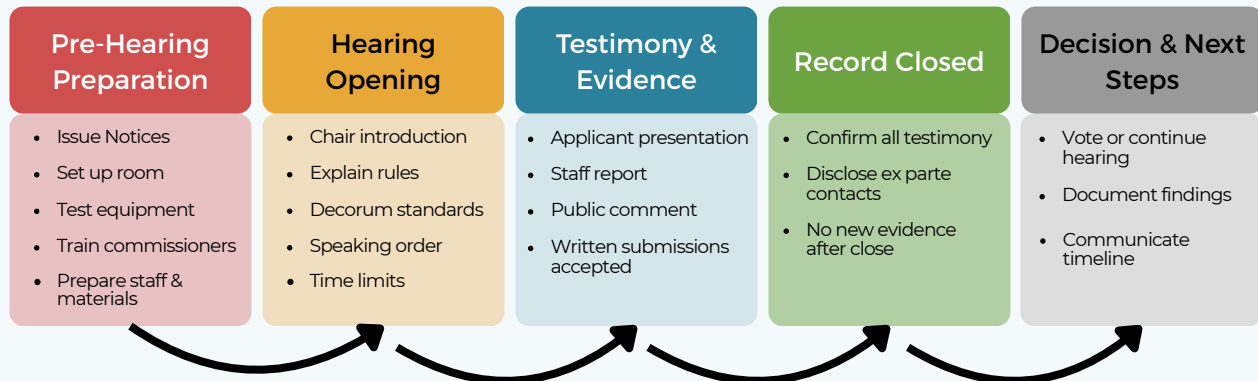
Good public hearings begin with good preparation. Before the hearing, counties should confirm that planning commission bylaws are current, meeting notices have been properly issued, the room is set up to accommodate expected attendance, and all equipment, including sound systems, recording devices, and presentation tools, has been tested. Planning commissioners and board members benefit from training and educational materials prior to complex or high-profile hearings.

At the opening of each hearing, the chairperson should deliver a standardized statement explaining decorum, speaking order, time limits, and the purpose of the proceeding. A three-minute speaking limit is common and helps ensure all interested parties have an opportunity to be heard. Many jurisdictions use a visible timer or green-yellow-red signal system. The chairperson should clarify that comments must focus on the zoning criteria under consideration and that all speakers—regardless of viewpoint—will be treated consistently under the same procedural rules.

All hearings must comply with the Nebraska Open Meetings Act and applicable statutory notice requirements. Written comments submitted before or during the hearing should become part of the official record. Counties should determine in advance whether written submissions will be read aloud, summarized, or acknowledged by number. If a hearing remains open after testimony closes, and county board members seek out or encounter new information, they should disclose the information on the public record before making a decision.

Counties should provide reasonable accommodations pursuant to the Americans with Disabilities Act (ADA), maintain audio or video recordings when appropriate, and utilize staff support for sign-in, speaker management, and timing. For highly attended or contentious hearings, a neutral moderator and the presence of a sheriff's representative can help maintain order. At the conclusion of the hearing, the chairperson should clearly communicate the next procedural step and any anticipated decision timeline.

Public Hearing Process Flow



**Hearing may remain open to a future meeting if additional information is needed.*

**All hearings must comply with the Nebraska Open Meetings Act.*

CASE STUDY - YORK COUNTY

York County ensures public hearings are accessible by publishing them on Facebook and in the newspaper. However, Commissioner Randy Obermeier noted that their most effective form of communication both before, during, and after public hearings is through the public information director who they hired and who he said a lot of community members follow for updates on county business.

The county board always asks law enforcement to attend the meetings, but Obermeier said that a well-executed board meeting is just a matter of running it in a controlled way. When he was the county board chair, he said he swiftly shut down escalating behaviors because it was up to him to set the tone from the beginning and maintain a sense of control throughout the meeting.

During his time as the board chair, York County was navigating intense public pressure related to a potential 2,500-acre solar field. Obermeier said that it was a subject that caused a lot of emotional reactions, and he prioritized giving community members the respect they deserved while also being diligent if they started getting out of hand.

An effective method for maintaining control in the boardroom is the countdown clock. York County allows three minutes per person when speaking at public hearings. They have a TV set up behind the board that counts down so that attendees know when their time has finished.

See Appendix D for the full case study.

Best Practices Summary

Counties should adopt, communicate, and consistently apply standardized hearing procedures—including preparation protocols, opening scripts, time limits, and written submission rules. Record integrity must be protected by avoiding ex parte communications, disclosing any outside contacts, and ensuring all decisions are grounded in evidence from the hearing record. Meeting management tools—visible timers, ADA accommodations, tested audio systems, nameplates, and staff support—contribute to orderly, professional proceedings. Chairpersons and planning commissioners benefit from regular training on hearing procedures and decision-making standards. At the close of every hearing, next steps and anticipated decision dates should be clearly communicated to all attendees. See Appendix A for examples of ADA-compliant hearing notices and public hearing scripts.

Pre-Submission Process

Committee Recommendation for Consideration

Key Takeaways

- A formal pre-submission process improves application quality and reduces delays by identifying issues, studies, permits, and infrastructure concerns before a formal application is filed
- Early coordination between applicants and county officials promotes more efficient reviews and helps ensure compliance with LB663 statutory timelines, including completeness requirements
- Complex projects often require input from multiple departments and outside agencies; a pre-application meeting aligns expectations among all parties early in the process
- Clear expectations regarding required plans, studies, and agreements reduce uncertainty and improve the defensibility of permitting decisions

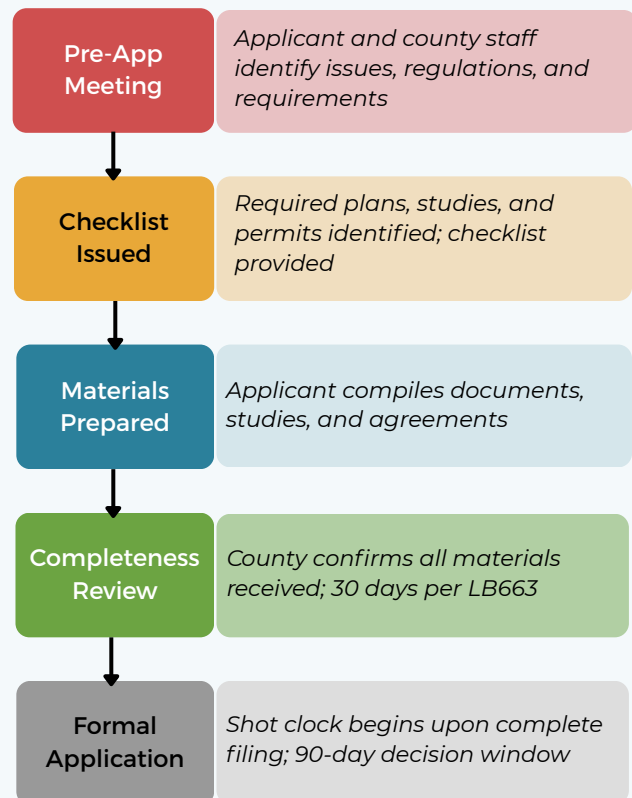
Pre-Submission Process

Counties may consider establishing a formal pre-submission process for complex land use applications—particularly those involving energy projects, data centers, livestock facilities, or industrial developments. The process begins with a pre-application meeting between the applicant and relevant county staff, during which key project issues, applicable regulations, required studies, infrastructure concerns, and procedural requirements are identified before a formal application is submitted. Counties may also reserve the right to retain independent technical experts when specialized review is necessary to evaluate project impacts.

Counties may consider providing applicants a project-specific checklist identifying the plans, studies, and supporting documentation required with their application. Early identification of applicable local, state, and federal permits helps applicants understand project timelines—though a county's decision cannot be conditioned on the status of those separate permits. Review timelines under LB663 begin only after the application is deemed complete.

Pre-Submission Process Flow

Pre-submission process flow from pre-application meeting through formal filing and LB663 shot clock activation.



**LB663 review timelines begin only after application is deemed complete.*

Suggested Pre-Application Meeting Participants

<u>County Staff</u>  • Zoning administrator • Planning staff • County attorney • County board representative	<u>Infrastructure</u>  • Highway superintendent • Public power utility representatives • Engineers & consultants	<u>Public Safety</u>  • Emergency management personnel • Local fire officials • First responders	<u>Regulatory Agencies</u>  • State agency representatives • Federal regulators • Other subject-matter experts as needed
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Best Practices Summary

Counties are encouraged to adopt a policy for the pre-submission process as part of their zoning regulations, establishing it as a standard requirement for complex or high-impact applications. Embedding the process in adopted regulations, rather than treating it as an informal courtesy, provides a consistent, defensible framework and sets clear expectations for all applicants.

- Incorporate the pre-submission process into county zoning regulations to establish it as a formal, consistent requirement for complex applications
- Require pre-application meetings for major energy, industrial, livestock, and data center developments before a formal application is filed
- Provide applicants with a project-specific checklist identifying required studies, plans, agreements, and supporting documentation early in the process
- Encourage early coordination with utilities, emergency responders, highway departments, and state agencies prior to application submission
- Establish clear completeness standards and communicate major decision points and statutory review timelines so applicants understand how LB663 deadlines will be applied

PUBLIC POWER AND ENERGY IN NEBRASKA

Key Takeaways

- Nebraska is the only state served entirely by publicly owned, not-for-profit electric utilities—locally governed to keep decisions close to communities and legally required to provide reliable, low-cost service to all customers
- Nebraska’s utilities operate within the Southwest Power Pool (SPP), a 17-state regional grid that coordinates reliability, transmission planning, and wholesale markets
- Demand across every customer class is powering unprecedented load growth—driven by the expansion of data centers, advanced manufacturing, transportation, and modern agricultural technology
- LB1010 (2026) and LB1261 (2026) establish statewide policy for data centers, battery storage, and privately developed generation facilities requiring public power oversight, Nebraska Power Review Board (NPRB) approval, and incorporating community-impact considerations into county land-use reviews
- Counties are increasingly being asked to evaluate proposals involving transmission lines, substations, generation facilities, battery energy storage systems (BESS), data centers, and large industrial users—based on local impacts, applicable regulations, and community priorities

Nebraska’s Public Power System

Nebraska is unique among all fifty states as the only state served entirely by publicly owned electric utilities. Unlike most states where electricity is primarily provided by investor-owned utilities operating on behalf of shareholders, Nebraska’s public power entities—including public power districts, municipal systems, electric cooperatives, and public power agencies—are governed by locally elected or appointed boards, operate on a not-for-profit basis, and are legally obligated under state statute to serve all customers who request service. Revenue is reinvested into operations, infrastructure, and reliability—not distributed to shareholders. This structure originated in the 1930s and 1940s and continues to underpin electric service across the state.

A key component of Nebraska’s framework is the Nebraska Power Review Board (NPRB), which reviews certain electric infrastructure projects and coordinates aspects of statewide electric planning. Nebraska’s utilities also operate within the Southwest Power Pool (SPP), a regional transmission organization coordinating electricity movement, reliability, wholesale markets, and transmission planning across (or part of) 17 states. SPP membership allows Nebraska utilities to draw on a broader mix of regional resources, improving reliability during extreme weather, equipment outages, and periods of peak demand.



Why Electricity Demand Is Increasing

Electricity has become an essential component of modern life—supporting homes, businesses, agriculture, healthcare, communications, transportation, and industry. Several converging trends are driving demand growth in Nebraska at a pace that is reshaping the scale and type of energy infrastructure proposals counties are being asked to review.

Data Centers

Data centers are one of the fastest-growing electricity users nationally. Modern data centers support cloud computing, artificial intelligence (AI), precision agriculture tools, financial transactions, 5G communications, and digital storage. AI is the largest driver of data-center electricity demand growth, but not the only driver. Some proposed hyperscale facilities would require 500 MW to 1 GW or more of continuous power, equivalent to hundreds of thousands of homes. Data center demand is expected to continue rising (to as much as 10-15% of total U.S. electricity demand by 2030) but the exact path of growth is highly uncertain. For example, in the early 2000's there were widespread concerns that data center electricity demand could grow to use 33% of all U.S. electricity by 2050. Instead, electricity demand growth was relatively flat through the 2010's and data centers used were just over 2% of total U.S. electricity demand in 2020, before rising to ~5% in 2025.

Transportation Electrification

Electric vehicles, electric irrigation systems, and electrified heating, cooling, and industrial processes are all shifting demand from fossil fuels to the electric grid.

Agricultural Technology

Modern Nebraska agriculture increasingly relies on electricity for irrigation, grain handling, livestock operations, precision agriculture systems, and automation.

Manufacturing and Industrial Growth

New manufacturing investment, agricultural processing facilities (ethanol, sustainable aviation fuel), and industrial expansion all add significant electricity loads.

How Utilities Are Responding

Nebraska utilities are planning for increased demand through a diversified generation portfolio and infrastructure investment. Generation resources include natural gas, coal, nuclear, hydroelectric, wind, solar, and biomass. Battery Energy Storage Systems (BESS) are increasingly used to store electricity and balance supply and demand. Utilities are also investing in transmission lines, substations, and grid modernization. Demand-Side Management (DSM) programs encourage customers to reduce usage during peak periods to help manage system loads.

As utilities plan new generation, transmission, substations, and energy storage projects to maintain regional reliability requirements set by SPP, counties will increasingly encounter related land use proposals requiring local review.

Recent Nebraska Energy Legislation

LB1010 (2026) -

Large Energy Users & Storage:

Establishes utility review processes for large electric loads (data centers >10 MW; large-load customers >20 MW), requirements for energy storage projects, and cost responsibility provisions for infrastructure serving large customers. Administered through Nebraska's public power utilities; counties may encounter associated zoning, transmission, substation, and land use considerations.

LB1261 (2026) -

Eminent Domain Limitations:

Limits when public power utilities may exercise eminent domain for privately developed generation facilities serving a single industrial customer with new load exceeding 1 GW. Projects must be co-located with the industrial customer, approved by NPRB, and meet specific statutory thresholds. Counties reviewing such projects may consider coordinating closely with the applicable public power utility.

Understanding Electrical Power Units

Electric generation and consumption are measured in Watts and units derived from Watts. Understanding these units helps county officials evaluate the scale of proposed energy, industrial, agricultural, and data center development, as well as understand what LB1010 and LB1261 thresholds mean in practical terms.

Scale of Electrical Power: From Households to Hyperscale

Scale of electrical power from household appliances to hyperscale facilities.

Gold badges indicate LB1010 (2026) and LB1261 (2026) statutory thresholds relevant to county review.

1 kW	1,000 W - Microwave, hair dryer, space heater	
100 kW	100,000 W - Small commercial building, grain elevator, enterprise data center	
1 MW	1,000 kW - ~750-1,000 Nebraska homes at peak demand, edge/micro data center	
10 MW	10,000 kW - Manufacturing plant, ethanol facility, colocation data center	LB1010
100 MW	100,000 kW - Large industrial, sustainable aviation fuel facility, telecom data center	
500 MW	500,000 kW - Utility-scale natural gas plant, hyperscale data center	
1 GW	1,000 MW - Nuclear/coal/hydro plant, hyperscale cloud/AI data campus	LB1261
10 GW	10,000 MW - ~7.5-10 million homes - approximately Nebraska's 2025 peak demand	

Note: A typical Nebraska home uses 1-2 kW at any moment. A hyperscale AI data center may require 1 GW or more of continuous power.

Nebraska's Opportunity and County Role

The scale of emerging energy and technology proposals can appear significant. At the same time, growing energy needs reflect broader economic opportunities for Nebraska—new manufacturing investment, agricultural processing, technology development, and infrastructure modernization. Nebraska's public power system, central location, productive agricultural economy, and available land position the state to compete for new investment across rural and urban communities.

Counties play an important role in this landscape—evaluating proposals based on local priorities, applicable regulations, infrastructure capacity, and community impacts. Understanding the basics of Nebraska's public power system, regional grid coordination, demand growth trends, and applicable state law equips county officials to ask the right questions and make well-informed, legally defensible decisions as energy-related land use proposals continue to evolve.

Solar Energy Siting Considerations

Key Takeaways

- Residential, community, commercial, and utility-scale solar facilities present different land use considerations and are often regulated differently by project size and type
- Counties benefit from clearly identifying which solar projects are permitted uses, which require conditional review, and which standards apply by zoning district or project scale
- Setbacks, screening, drainage, and infrastructure requirements are most defensible when tied to local conditions and public welfare objectives
- Solar review processes should consider addressing building and electrical code compliance, emergency response coordination, infrastructure needs, decommissioning, and financial assurance
- Counties should be aware that utility interconnection and wildlife or environmental considerations involve state and federal processes that operate separately from local zoning authority

What Is Solar Energy?

Solar energy is energy generated from sunlight. Most local land use discussions involve photovoltaic (PV) solar systems, which use solar panels to convert sunlight into electricity. Solar facilities may serve an individual home or business, a group of customers, or the broader electric grid. Projects typically include solar panels, racking systems, inverters, wiring, access roads, fencing, electrical equipment, and in some cases substations, battery storage, or transmission infrastructure. While solar panels generally use little water and create minimal operational noise, larger facilities may involve land use, drainage, transportation, emergency response, agricultural, and community compatibility considerations.

Current information on utility-scale solar facilities in Nebraska is available from the Nebraska Department of Water, Energy, and Environment (DWEE); counties may consult DWEE, along with applicable local records, for the most current information on project locations, operating status, and generating capacity.

Solar Project Types

Residential / Accessory Solar

Typically rooftop or small ground-mounted systems designed to offset on-site electricity use. Key considerations include building permits, electrical permits, setbacks, roof load, and emergency access.

Small Commercial or Institutional Solar

Serves a business, school, farm, or public facility. Key considerations include site access, fencing, drainage, setbacks, visibility, and utility coordination.

Community Solar

Provides electricity or bill credits to multiple subscribers. Key considerations include zoning compatibility, interconnection, setbacks, drainage, screening, and long-term maintenance.

Large Commercial Solar

May occupy dozens to hundreds of acres. Key considerations include agricultural and industrial impacts, road and bridge impacts, construction traffic, emergency coordination, decommissioning, and bonding.

Utility-Scale Solar

Large generation projects supplying electricity to the grid. Key considerations include conditional use review or special exceptions, agricultural and industrial impacts, infrastructure impacts, emergency coordination, bonding, and community benefit agreements.



Solar Project Scale Comparison

Solar project scale comparison by typical acreage, energy output, and ownership structure; actual numbers may vary by project.

	Acres	Energy Output	Ownership
Residential / Accessory	<1	5kW-25 kW	Homeowner, farm, business
Small Commercial	1-10	25 kW-1 MW	Business, school, cooperative
Community Solar	5-30	1-5 MW	Utility, cooperative, developer
Large Commercial	25-200	5-25 MW	Corporate/private
Utility-Scale	100-2,000+	25-500+ MW	Utility, output-tied producer

County Land-Use Considerations for Permitting

The following are the primary considerations for counties when reviewing solar applications. Each may be addressed through adopted zoning standards tied to identified public welfare objectives.

1. Project Classification and Permitting Pathways

Counties should consider defining solar projects by size, use, and impact. Counties should consider establishing which projects are permitted by right and which require conditional or special review, as well as consider distinguishing between rooftop, accessory ground-mounted, community, commercial, and utility-scale systems by zoning district.

2. Site Suitability and Land-Use Compatibility

Counties should consider reviewing existing land uses, future growth patterns, transportation corridors, utility access, proximity to residences, and compatibility with agriculture and surrounding development. Solar projects are encouraged to align with the county's comprehensive plan and long-term development priorities. Agrivoltaic designs, combining solar production with grazing, pollinator habitat, or native vegetation, may allow productive agricultural use to continue alongside energy generation.

3. Setbacks and Screening

Counties should consider tying setback distances to the specific compatibility concern being addressed such as noise or safety rather than applying an arbitrary distance. Where screening, buffering, or other mitigation measures can address the same concern, the board may consider allowing a reduced setback in exchange for those measures, keeping standards consistent for similarly situated participating and non-participating landowners.

4. Roads, Bridges, and Construction Impacts

Larger solar projects may generate temporary increases in truck traffic, heavy equipment movement, road wear, and construction activity. Counties should consider requiring road use agreements, haul route identification, pre-construction road condition documentation, bridge and culvert evaluation, traffic control plans, dust control, and repair obligations.

5. Drainage, Stormwater, and Soil Conservation

Grading, panel rows, access roads, and vegetation changes may affect drainage patterns. Counties should consider requiring site-specific drainage review, erosion control plans, stormwater management, and vegetation establishment. Coordination with Natural Resources Districts (NRDs) is encouraged for larger projects.

6. Emergency Response

Counties should consider requiring solar facilities to support safe emergency access. Requirements may include emergency response plans, project site maps, locked gate access procedures, equipment labeling, contact information, shutoff procedures, and local first responder orientation. Battery storage systems, if included, may require additional review for fire suppression, thermal runaway risk, and hazardous materials.

7. Decommissioning and Financial Assurance

Counties should consider requiring a decommissioning plan covering removal of panels, racking, wiring, fencing, foundations, access roads, and substations, along with site restoration and reseeded. A cost estimate prepared by a qualified professional may accompany the plan and be updated periodically. Financial assurance, through bonds, letters of credit, or similar instruments, may cover costs even if salvage values decline.

8. Non-Participating Landowner Considerations

Counties should consider providing clear public engagement processes and encouraging applicants to communicate early with non-participating landowners.

9. Economic, Tax, and Community Impacts

Counties should consider tax revenue, nameplate capacity tax, lease payments, construction spending, and potential public safety costs. Communities may also evaluate pre- and post-project impacts, including temporary and permanent workforce demands, housing and lodging capacity, traffic and general construction-related impacts, and potential effects on local infrastructure and public services. Community benefits, such as road improvements, infrastructure upgrades, workforce housing support, or emergency responder training, may be appropriate where voluntarily offered and consistent with applicable law.

County Land-Use Considerations for Solar Permitting

Primary solar permitting considerations for county review.

Project Classification	Site Suitability & Ag Use	Setbacks & Screening
Permitted use vs. conditional review by size & zoning district; define types	Land-use compatibility, soils, drainage, agrivoltaics, agricultural impacts	Tie to actual impacts; vary by project type, district & neighbor status
Drainage & Soil Conservation	Emergency Response	Decommissioning & Financial Assurance
Require drainage review, erosion control, stormwater management, and NRD coordination.	Include response plans, site maps, access procedures, and battery storage review.	Require removal plans, cost estimates, and bonding or escrow instruments.

Awareness: Utilities and Electric Infrastructure

County zoning decisions do not control utility interconnection or the siting and approval of transmission lines and substations—these responsibilities lie with Nebraska’s public power system and the Nebraska Power Review Board. Solar projects may depend on the capacity of existing electric infrastructure, and larger proposals may necessitate new substations, transmission upgrades, or easements that impact local roads and land use. Early coordination between applicants and the appropriate public power district or electric cooperative is strongly encouraged to ensure infrastructure needs are understood before a zoning application is submitted.

Key Entities – Utility and Interconnection Awareness

Nebraska Power Review Board (NPRB): Approves service territory boundaries, coordinates statewide electric planning, and approves certain generation and transmission projects

NPPD / OPPD / LES / Municipal Utilities / Cooperatives / Southwest Power Pool: The applicable public power entities, regional transmission organizations which are involved in interconnection processes, and infrastructure cost allocation; public power utilities develop local policies and infrastructure standards while following the Southwest Power Pool interconnective requirements across their respective service territories

Awareness: Wildlife and Environmental Regulations

County zoning authority does not extend to state or federal environmental and wildlife regulations. Counties cannot require or enforce compliance with these requirements as part of a zoning decision, nor should permit approvals be conditioned on the status of separate state or federal reviews. However, counties should be aware that applicants may be subject to these processes, and early identification of potential environmental considerations can help avoid project delays.

Key Agencies – Environmental and Wildlife Awareness

Nebraska Game & Parks Commission (NGPC): Consult for wildlife habitat, threatened/endangered species, grassland and wetland impacts within state jurisdiction

U.S. Fish & Wildlife Service (USFWS): Federal review may apply under the Endangered Species Act for projects affecting federally listed species or critical habitat

U.S. Army Corps of Engineers: Section 404 of the Clean Water Act may require permits for projects affecting jurisdictional wetlands or waters of the U.S.

Nebraska Natural Resources Districts (NRDs): Consult for groundwater, drainage, erosion, and stormwater considerations relevant to project siting

Solar Siting: Local, State, and Federal Regulatory Framework*

Level	Agency / Entity	Potential Reviews, Permits, or Coordination
Local	County Planning and Zoning Department	Conditional use permits, special exceptions, rezoning, site plan review, variances, comprehensive plan consistency review
	County Board	Permit approvals, development agreements, road-use agreements, public hearing review, permit conditions
	County Highway Department / Highway Superintendent	Haul routes, driveway permits, road crossings, road-use agreements, oversize/overweight construction coordination, bridge and culvert review
	County Emergency Management	Emergency response planning, site access, incident coordination, disaster and hazardous materials planning
	Local Fire Department / Fire District	Emergency access review, fire response planning, site familiarization, training, equipment needs, Knox box/access protocols
	Public Power District / Electric Utility	Electric service, transmission upgrades, interconnection, substation coordination, utility easements
State	Natural Resources District (NRD)	Floodplain, groundwater, erosion, drainage, watershed, and natural resources coordination
	Nebraska Department of Water, Energy and Environment (DWEE)	Construction stormwater, water quality, air quality, waste management, wastewater, environmental permits
	Nebraska Department of Transportation (NDOT)	State highway access, utility occupancy, state highway crossings, oversize/overweight load coordination
	Nebraska Power Review Board	Generation facility approvals or exemptions; transmission approvals where applicable
	Nebraska Game and Parks Commission	Wildlife, habitat, threatened and endangered species, conservation coordination
	Nebraska State Historic Preservation Office (SHPO)	Historic, archaeological, and cultural resource review
Federal	U.S. Fish and Wildlife Service	Endangered Species Act consultation, critical habitat, migratory bird and eagle coordination
	U.S. Environmental Protection Agency	Environmental compliance oversight, NPDES oversight, spills, hazardous substances, water quality programs
	U.S. Army Corps of Engineers	Section 404 permits, wetlands, waters of the United States, stream crossings, fill activities
	Tribal Governments / Bureau of Indian Affairs	Tribal consultation, cultural resources, traditional cultural properties, lands or interests involving tribes
	Federal Aviation Administration	Airport compatibility, glint-glare study requirements, obstruction evaluation, marking, lighting, aviation safety
	U.S. Department of Agriculture	Conservation programs, CRP impacts, rural energy or rural development programs

*This table is intended as a general reference and does not identify every permit, approval, or coordinating agency that may apply. Permit requirements vary by project and are subject to change.

CASE STUDY - LANCASTER COUNTY

Lancaster County has approved nearly 1 GW of energy facilities, which will provide the county with over \$5 million in tax revenue every year once operational. Commissioner Chelsea Johnson said that the solar project currently under construction has created jobs within the county, utilizing both local workers and workers from out-of-county, bringing in revenue for our shops, restaurants, and hotels – which also brings in sales tax revenue.

“As we look at budget cuts to keep our property tax request low, this additional revenue will be very helpful for continuing to provide important services in the county – particularly as we are seeing funding cuts at the state and federal levels,” she said. “I try to look at the concerns holistically and work to mitigate the measurable impacts that could affect neighbors as well as the community as a whole. On principle, I don’t think it’s right for a county to effectively take away someone’s property rights through regulatory action without a strong rational nexus that is based in measurable, demonstrated impacts.”

Such measurable impacts include erosion impacts to neighboring property, which is why Johnson advocated for additional erosion control conditions to be placed on the solar project that most recently came before the county board.

Johnson also noted, “If your vegetation management plan requires perennials that benefit pollinators, then you may see improved soil conditions at the end of the project’s life. In places where this approach has been used, there have been demonstrated increases in local pollinator populations which provide benefit to the surrounding area.”

Johnson pointed out that in Nebraska, we are more accustomed to seeing hedgerows than we are to seeing solar panels. While she doesn’t think that visual preference is a strong rational nexus to take away someone’s property rights, she does think it’s completely fair to try to mitigate and reduce the visual impacts as much as possible by requiring the developer to put enhanced visual screening in place – which was another condition that the county put on the solar developer in Lancaster County. She said that development of these projects can have impacts on roads and bridges – the developer should pay for any infrastructure changes that are needed as a result of their project and we require them to do so through our road use agreement.

“I also keep in mind what tax dollars mean in terms of services that we can provide to the community at large. These projects generate significant tax revenue which we then use to pay for gravel, necessary equipment, and public safety, which can allow for a smaller share of the pie to be taken from our residents in property tax,” Johnson said.

CASE STUDY - YORK COUNTY

York County was looking at an application for a 2,500-acre solar field outside of McCool Junction, where there was an overhead power line and substation, so the necessary infrastructure already existed that would make the area prime for a solar project. York County Commissioner Randy Obermeier saw that there was an excellent opportunity for these acres being rented from landowners to create generational wealth and bring an influx in wages – and therefore an influx in spending within the county. The public was resistant to the way the solar field would visually change the landscape. Ultimately, the board imposed large setback requirements that Obermeier believes could potentially prevent future solar projects in York County.

See Appendix D for the full case studies.

Best Practices Summary

Counties should consider defining solar project categories by size, use, and impact, and may establish clear permitting pathways for each. Counties should consider grounding all standards—setbacks, screening, drainage, access, and infrastructure requirements—in identified public welfare objectives which are applied consistently. Early coordination with public power districts, emergency responders, road departments, and NRDs reduces delays and improves application quality. Counties may consider requiring decommissioning plans and financial assurance for all ground-mounted projects beyond accessory scale. Counties should treat utility interconnection and state or federal environmental reviews as parallel, independent processes—applicants bear responsibility for those obligations separately from local zoning approval. Counties should consider periodically reviewing regulations as solar technology, battery storage, and state or federal requirements continue to evolve.

Wind Energy Siting Considerations

Key Takeaways

- Accessory, commercial, and utility-scale wind projects may present different land use considerations and are often regulated differently by project size and type
- Setbacks, road protections, and public safety considerations are most defensible when tied to local conditions and documented project impacts
- Wind review processes may address, among other issues, infrastructure, emergency response, non-participating landowners, decommissioning, and financial assurance
- Counties should be aware that utility interconnection, aviation review, and wildlife or environmental considerations involve state and federal processes that operate separately from local zoning authority

What Is Wind Energy?

Wind energy is electricity generated by converting the kinetic energy of moving air into electrical power through wind turbines. Wind projects may range from a single turbine serving a farm or business to large utility-scale wind farms supplying electricity to the regional grid. Projects typically include turbines, access roads, collection lines, substations, and in larger developments, transmission upgrades and maintenance facilities. Wind turbines can generate sensory impacts that vary by turbine size, site conditions, and proximity to neighboring properties.

Current data on utility-scale wind facilities in Nebraska is maintained by the Nebraska Department of Water, Energy, and Environment (DWEE), and the U.S. Energy Information Administration (EIA); counties are encouraged to consult these sources for the most current project inventory.

Wind Project Categories

Accessory Wind

Small-scale systems serving a single residence, farmstead, or business; generally less than one acre and up to 100 kW. Key considerations include building permits, setbacks, infrastructure and emergency access.

Small Commercial Wind

Serves farms, cooperatives, schools, or businesses; typically 1–20 acres and 100 kW–1 MW. Key considerations include site access, drainage, setbacks, and utility coordination.

Commercial Wind

Developed primarily for electricity sales; typically 500–5,000 acres and 1–25 MW with multiple turbines. Key considerations include agricultural and industrial impacts, road and bridge impacts, setbacks, non-participating landowners, and decommissioning.

Utility-Scale Wind

Large generation projects supplying regional transmission systems; 5,000–50,000+ acres and 25–500+ MW. Key considerations include conditional use review or special exceptions, agricultural and industrial impacts, extensive infrastructure, emergency coordination, bonding, and community benefit agreements.

Wind Project Scale Comparison

Wind project scale comparison by typical acreage, energy output, and ownership structure; actual numbers may vary by project. Acreage reflects overall project footprint; disturbed area is typically much smaller.

	Acres	Energy Output	Ownership
Accessory	<1	Up to 100 kW	Homeowner, farmer
Small Commercial	1-20	100 kW-1 MW	Farm, business, cooperative
Commercial	500-5,000	1-25 MW	Developer, utility
Utility-Scale	5,000-50,000 +	25-500+ MW	Utility, IPP, energy company

County Land-Use Considerations for Permitting

The following are the primary considerations for counties when reviewing wind energy applications. Each may be addressed through adopted zoning standards tied to identified public welfare objectives.

1. Project Classification and Permitting Pathways

Counties should consider defining wind energy systems by size and operational characteristics, as well as establishing which projects are permitted by right and which require conditional or special use review. Clear definitions help applicants, staff, and the public understand applicable requirements and reduce disputes.

2. Site Suitability and Land-Use Compatibility

Counties should consider reviewing existing land uses, future growth patterns, transportation corridors, utility access, proximity to residences, and compatibility with agriculture and surrounding development. Wind projects are encouraged to align with the county's comprehensive plan and long-term development priorities.

3. Setbacks

Counties should consider tying setback distances to the specific compatibility concern being addressed such as safety, noise, shadow flicker, and lighting, rather than applying an arbitrary distance. Counties may consider evaluating these factors using project-specific information while keeping standards consistent for similarly situated participating and non-participating landowners.

4. Roads, Bridges, and Construction Impacts

Utility-scale wind projects may require oversized loads, cranes, concrete deliveries, and heavy equipment. Counties should consider requiring haul route identification, bridge and culvert evaluation, pre-construction road condition documentation, road-use agreements, traffic control plans, dust control, and repair obligations.

5. Drainage, Stormwater, and Soil Conservation

Grading, access roads, and vegetation changes may affect drainage patterns. Counties should consider requiring site-specific drainage review, erosion control plans, stormwater management, and vegetation establishment. Coordination with Natural Resources Districts (NRDs) is encouraged for larger projects.

6. Emergency Response

Counties should consider requiring applicants to coordinate with emergency responders regarding site access, fire response, emergency contacts, and first responder training. Counties may consider whether specialized equipment or protocols are necessary for larger facilities.

7. Decommissioning and Financial Assurance

Counties should consider requiring a decommissioning plan that addresses turbine removal, foundation treatment, access road restoration, and site reclamation. Financial assurance through bonds, or letters of credit may be sufficient to cover costs throughout the project's life, with periodic cost estimate updates.

8. Non-Participating Landowner Considerations

Counties should consider providing clear public engagement processes and encouraging applicants to communicate early with non-participating landowners.

9. Economic, Tax, and Community Impacts

Counties should consider tax revenue, nameplate capacity tax, lease payments, construction spending, and potential public service costs. Communities should also consider evaluating pre- and post-project impacts, including temporary and permanent workforce demands, housing and lodging capacity, traffic and general construction-related impacts, and potential effects on local infrastructure and public services. Community benefits, such as road improvements, infrastructure upgrades, workforce housing support, or emergency responder training, may be appropriate where voluntarily offered and consistent with applicable law. Any commitments should be legally authorized and proportional to project impacts.

County Land-Use Considerations for Wind Permitting

Primary county land use considerations for wind energy permitting.

Project Classification	Site Suitability & Ag Use	Setbacks, Noise & Flicker
Permitted vs. conditional review by size & type; clear definitions required	Topography, land use, proximity to residences, agricultural impacts	Tie to turbine height, safety & local conditions; project-specific studies
Roads & Infrastructure	Emergency Response	Decommissioning & Bonding
Haul routes, oversized loads, bridge review, road-use agreements	Site access, fire response, emergency contacts, first responder training	Plan + financial assurance; foundation treatment; periodic cost updates

Additional: comprehensive plan consistency, neighbor impacts, economic/tax effects, workforce & housing, community benefits, aviation coordination.



Awareness: Utilities and Interconnection

County zoning decisions do not govern utility interconnection, transmission siting, or substation approvals—these are administered through Nebraska's public power system and the Nebraska Power Review Board. However, counties should be aware that wind projects depend on available electric infrastructure, and larger projects may require new substations or transmission upgrades that affect local roads and land use. Early applicant coordination with the applicable public power entity is encouraged so that infrastructure needs are understood before a zoning application is filed.

Key Agencies – Utilities and Interconnection

Nebraska Power Review Board (NPRB): Approves service territory boundaries, coordinates statewide electric planning, and approves certain generation and transmission projects

NPPD / OPPD / LES / Municipal Utilities / Cooperatives / Southwest Power Pool: The applicable public power entities, regional transmission organizations which are involved in interconnection processes, and infrastructure cost allocation; public power utilities develop local policies and infrastructure standards while following the Southwest Power Pool interconnective requirements across their respective service territories

Awareness: Aviation Safety

County zoning decisions do not govern federal aviation requirements. Wind turbines above certain heights require Federal Aviation Administrations (FAA) obstruction evaluation and aviation lighting. Counties cannot substitute local zoning conditions for FAA review or approval. However, counties should be aware that applicants are responsible for coordinating with the FAA and Nebraska Department of Transportation, Division of Aeronautics, and that aviation lighting technologies such as Aviation Activated Lighting Systems (AALS) may help reduce visual impact while maintaining federal safety compliance.

Key Agencies – Aviation Safety

Federal Aviation Administration (FAA): Wind turbines above certain heights require obstruction evaluation and may require aviation lighting; applicants are responsible for FAA coordination and compliance

Aviation Activated Lighting Systems (AALS): Radar-activated lighting technology that illuminates turbines only when aircraft are present, reducing visual impact for neighboring properties while maintaining FAA safety compliance

Nebraska Department of Transportation, Division of Aeronautics: Coordinates with airport authorities on turbine siting near airspace; early consultation is encouraged for projects near airports or flight paths

Awareness: Wildlife and Environmental Regulations

County zoning authority does not extend to state or federal wildlife and environmental regulations. Counties cannot require or enforce compliance with these requirements as part of a zoning decision, nor should permit approvals be conditioned on the status of separate state or federal reviews. However, counties should be aware that wind projects, particularly those affecting birds, bats, grasslands, and wetlands, may be subject to state and federal review processes.

Key Agencies –Wildlife and Environmental Regulations

Nebraska Game & Parks Commission (NGPC): Consult for wildlife habitat, birds, bats, threatened/endangered species, and grassland or wetland impacts within state jurisdiction

U.S. Fish & Wildlife Service (USFWS): Federal review may apply under the Endangered Species Act; wind energy and migratory bird/bat impacts may trigger additional USFWS coordination

U.S. Army Corps of Engineers: Section 404 of the Clean Water Act may require permits for projects affecting jurisdictional wetlands or waters of the U.S.

Nebraska Natural Resources Districts (NRDs): Consult for groundwater, drainage, erosion, and stormwater considerations relevant to project siting

Wind Siting: Local, State, and Federal Regulatory Framework*

Level	Agency / Entity	Potential Reviews, Permits, or Coordination
Local	County Planning and Zoning Department	Conditional use permits, special exceptions, rezoning, site plan review, variances, comprehensive plan consistency review
	County Board	Permit approvals, development agreements, road-use agreements, public hearing review, permit conditions
	County Highway Department / Highway Superintendent	Haul routes, driveway permits, road crossings, road-use agreements, oversize/overweight construction coordination, bridge and culvert review
	County Emergency Management	Emergency response planning, site access, incident coordination, disaster and hazardous materials planning
	Local Fire Department / Fire District	Emergency access review, fire response planning, site familiarization, training, equipment needs, Knox box/access protocols
	Natural Resources District (NRD)	Floodplain, groundwater, erosion, drainage, watershed, and natural resources coordination
	Public Power District / Electric Utility	Interconnection, transmission routing, substations, collection lines, utility easements
State	Nebraska Department of Water, Energy and Environment (DWEE)	Construction stormwater, water quality, air quality, waste management, wastewater, environmental permits
	Nebraska Department of Transportation (NDOT) / NDOT Division of Aeronautics	State highway access, utility occupancy, state highway crossings, oversize/overweight load coordination; turbine siting near airspace; coordination for projects near airports or flight paths
	Nebraska Game and Parks Commission	Wildlife, habitat, threatened and endangered species, conservation coordination
	Nebraska State Historic Preservation Office (SHPO)	Historic, archaeological, and cultural resource review
	Nebraska Power Review Board	Generation facility approvals or exemptions; transmission approvals where applicable
Federal	U.S. Army Corps of Engineers	Section 404 permits, wetlands, waters of the United States, stream crossings, fill activities
	U.S. Fish and Wildlife Service	Endangered Species Act consultation, critical habitat, migratory bird and eagle coordination
	U.S. Environmental Protection Agency	Environmental compliance oversight, NPDES oversight, spills, hazardous substances, water quality programs
	Tribal Governments / Bureau of Indian Affairs	Tribal consultation, cultural resources, traditional cultural properties, lands or interests involving tribes
	Federal Aviation Administration	Obstruction evaluation, tower height, marking, lighting, aviation safety
	Federal Communications Commission	Communications interference or antenna-related coordination

*This table is intended as a general reference and does not identify every permit, approval, or coordinating agency that may apply. Permit requirements vary by project and are subject to change.

CASE STUDY - HAMILTON COUNTY

Commissioner Rich Nelson said Hamilton County had a moratorium on wind projects for a while. Residents had made signs protesting wind energy and invited opponents of wind generation to testify before the board. Like with the solar moratorium, the wind moratorium was enacted because the county did not feel comfortable with the regulations and standards they currently had in place.

Nelson said that when he looks back on the wind issue, he remembers that by the time they were at the point of finalizing regulations for wind, he had a stack of papers two feet tall of studies he received from proponents and opponents. He remembered that some people felt so passionate about wind energy that they wanted commissioners recalled for even considering it. When the moratorium expired and they had established their regulations, Hamilton County was left with only a couple of places where wind projects would even be feasible.

See Appendix D for the full case study.

Best Practices Summary

Counties should consider defining wind project categories by size, use, and impact, as well as establishing clear permitting pathways for each. All standards concerning setbacks, road requirements, and infrastructure conditions should be grounded in identified public welfare objectives and applied consistently. Setbacks are most defensible when tied to specific compatibility concerns related to safety and local conditions. Early coordination with public power districts, emergency responders, road departments, and NRDs is encouraged to reduce delays and improves application quality. Decommissioning plans and financial assurance should be considered for all commercial and utility-scale projects, with periodic cost updates. Counties should treat utility interconnection, FAA aviation review, and state or federal environmental reviews as parallel, independent processes—applicants bear responsibility for those obligations separately from local zoning approval. Counties should consider periodically reviewing regulations as turbine technology, energy markets, wildlife research, and state or federal requirements continue to evolve.

Data Center Siting Considerations

Key Takeaways

- Data centers may vary significantly in size, function, infrastructure demand, and community impact—from small enterprise facilities serving a single organization to hyperscale campuses requiring hundreds of megawatts of electricity. Because data centers are not a one-size-fits-all land use, counties may benefit from clear project definitions and permitting pathways tailored to each project type
- LB1010 (2026) and LB1261 (2026) establish statewide policy for data centers, battery storage, and privately developed generation facilities requiring public power oversight, Power Review Board approval, and incorporating community-impact considerations into county land-use reviews
- Water use, power consumption, noise, and land use compatibility are among the most common siting considerations; cooling system type significantly affects long-term water demand
- Counties are encouraged to coordinate with utilities, state agencies, and other stakeholders as part of the review process; however, counties must make zoning decisions independently and cannot delay or condition approvals on the outcome of state, federal, or utility processes

What Is a Data Center?

Data centers are facilities used to store, process, and distribute digital information. Modern facilities support cloud computing, artificial intelligence (AI), financial transactions, communications, e-commerce, government services, healthcare systems, and other digital activities. While some data centers occupy a single building, large campuses may include multiple buildings supported by extensive electrical, telecommunications, water, and transportation infrastructure. Data centers are not a one-size-fits-all land use—a small enterprise server room serving a hospital presents very different infrastructure demands, community impacts, and permitting considerations than a hyperscale campus requiring hundreds or even thousands of megawatts. Counties benefit from clear project definitions that distinguish between these types so that standards are proportional, appropriate, and applied consistently.

Current data on data center facilities is maintained by datacentermap.com. Published inventories of Nebraska data centers vary depending on how facilities are defined (e.g., hyperscale, colocation, enterprise, or edge facilities). However, available data consistently indicate that development is concentrated in the Omaha metropolitan area, with additional growth occurring in the Lincoln area.



Data Center Project Types

Small Enterprise

Typically serves a single company, hospital, school, or government entity; 0–10 acres and 1–10 MW. Key considerations include building permits, electrical service, cooling systems, and emergency access.

Regional Data Center

Provides colocation services and cloud infrastructure for multiple customers; 10–50 acres and 10–50 MW. Key considerations include site access, utility coordination, noise, drainage, and LB1010 applicability (>10 MW).

Large Data Center

Serves major corporate, financial, or cloud-computing operations; 50–150 acres and 50–100 MW. Key considerations include land use compatibility, agricultural and industrial impacts, road and infrastructure impacts, water supply, cooling systems, decommissioning, and community benefit agreements.

Hyperscale Data Center

Among the largest facilities in the world; 100–1,000+ acres and 100 MW to 1 GW+. Key considerations include conditional use review or special exceptions, agricultural and industrial impacts, extensive infrastructure upgrades, LB1010 large-load customer requirements, LB1261 applicability for associated generation, long-term fiscal planning, and community engagement.

Data Center Project Scale Comparison

Data center project scale comparison by acreage, energy demand, and typical ownership.

	Approx. Acres	Energy Demand	Typical Ownership
Small Enterprise	1-10	1-10 MW	Private company, hospital, school, government entity
Regional	10-50	10-50 MW	Technology company, colocation provider
Large	50-150	50-100 MW	Cloud provider, technology company
Hyperscale	100-1,000+	100 MW-1 GW+	Microsoft, Google, Amazon, Meta, Oracle, etc.

Note: LB1010 triggers at >10 MW for data centers and cryptocurrency mining; large-load customer provisions apply at >20 MW.

County Land-Use Considerations for Permitting

The following are the primary considerations for counties when reviewing data center applications. Each may be addressed through adopted zoning standards tied to identified public welfare objectives.

1. Infrastructure Readiness

Infrastructure readiness may be a primary consideration for counties. Counties should consider assessing electrical service, substations, transmission infrastructure, fiber connectivity, transportation access, water supply, wastewater treatment capacity, and emergency services. Early identification of infrastructure constraints may help to avoid delays and improve project design. Counties should consider requiring applicants to identify anticipated electrical demand, infrastructure upgrades, and project timelines.

2. Project Classification and Permitting Pathways

Counties should consider defining data center types by size, infrastructure demand, and operational characteristics, as well as establishing which projects are permitted by right and which require conditional or special use review. Different project scales may create substantially different infrastructure, utility, and community impacts.

3. Site Suitability and Land-Use Compatibility

Counties should consider reviewing existing land uses, future growth patterns, transportation corridors, utility access, proximity to residences, and compatibility with agriculture and surrounding development. Data center projects are encouraged to align with the county's comprehensive plan and long-term development priorities.

4. Setbacks and Screening

Counties should consider tying setback and screening to the specific compatibility concerns being addressed. Tools like setbacks, buffers, screening, landscaping, lighting standards, and fencing may improve compatibility with neighboring properties, and for larger facilities, counties may wish to consider requiring noise studies, acoustic modeling, or lighting plans as part of the review process. As with other project types, standards are best applied consistently.

5. Roads, Bridges, and Construction Impacts

Construction of large data centers may involve substantial truck traffic, oversized equipment deliveries, and road impacts. Counties should consider requiring haul route identification, bridge and culvert evaluation, pre-construction road documentation, road-use agreements, traffic control plans, dust control, and repair obligations.

6. Water Use and Cooling Systems

Water demand is an increasingly important siting issue. Open-loop cooling systems continuously withdraw and discharge or evaporate water, consuming more overall. Closed-loop systems recirculate water and reduce consumption. Counties should consider better understanding the proposed cooling technology because it significantly affects long-term water use, wastewater generation, and infrastructure needs. Coordination with the applicable Natural Resources District is encouraged for groundwater considerations.

7. Drainage, Stormwater and Soil Conservation

Grading, access roads, and vegetation changes may affect drainage patterns. Counties should consider requiring site-specific drainage review, erosion control plans, stormwater management, and vegetation establishment. Coordination with Natural Resources Districts (NRDs) is encouraged for larger projects.

8. Emergency Response

Applicants should consider coordinating with fire departments, emergency management, and law enforcement. Emergency plans are encouraged to address backup power systems, fuel storage, hazardous materials, facility access, security procedures, and emergency contacts. Larger facilities may require specialized equipment or protocols.

9. Decommissioning and Financial Assurance

Although many data centers may operate for decades, changing technology and market conditions can result in expansion, repurposing, closure, or redevelopment. Counties should consider requiring decommissioning plans that address equipment removal, infrastructure restoration, and site transition. Counties are encouraged to periodically review financial assurance through bonds, or letters of credit.

10. Non-Participating Landowner Considerations

Counties should consider providing clear public engagement processes and encouraging applicants to communicate early with non-participating landowners.

11. Economic, Tax, and Community Impacts

Data centers may generate significant tax revenue, construction spending, and economic activity. Counties should consider evaluating pre- and post-project impacts, including temporary and permanent workforce demands, housing and lodging capacity, traffic and general construction-related impacts, and potential effects on local infrastructure and public services. Community benefits, such as road improvements, infrastructure upgrades, workforce housing support, or emergency responder training, may be appropriate where voluntarily offered and consistent with applicable law. Any commitments should be legally authorized and proportional to project impacts.

County Land-Use Considerations for Data Center Permitting

Primary county land use considerations for data center permitting.

Project Classification Permitted vs. conditional by size & infrastructure; clear definitions	Site Suitability & Design Land use compatibility, setbacks, screening, noise & lighting	Infrastructure Readiness Electrical, water, fiber, transportation, wastewater & emergency services
Roads & Construction Haul routes, bridge review, road-use agreements, traffic management	Emergency Response Fire, backup power, hazmat, facility access, first responder coordination	Lifecycle Planning Decommissioning plan, repurposing, financial assurance, cost updates

Additional: comprehensive plan consistency, neighbor impacts, workforce & housing, economic/tax effects, community benefit agreements.

Awareness: Utilities, LB1010 (2026), and LB1261 (2026)

County zoning decisions do not govern utility interconnection, transmission siting, substation approvals, or the state-law requirements established by LB1010 and LB1261—these are administered through Nebraska’s public power system, the Nebraska Power Review Board, and the applicable utilities. Larger data center projects depend on available electric infrastructure, and larger projects may require new substations, transmission upgrades, or easements that affect local roads and land use. Counties are encouraged to coordinate with utilities and other stakeholders as part of the review process to understand infrastructure capacity, project timelines, and potential impacts. However, counties must make zoning decisions independently and cannot delay, condition, or withhold approvals based on the outcome of state or federal permitting processes. Applicants are responsible for compliance with those parallel requirements.

Nebraska Power Review Board (NPRB): Approves service territory boundaries, coordinates statewide electric planning, and approves certain generation and transmission projects relevant to data center development

LB1010 — Large-Load Customer Act (>20 MW): Public power utilities must establish formal standards for customer disclosures, study processes, site verification, curtailment provisions, and financial commitments; utilities may negotiate individualized rates and directly allocate infrastructure costs to the large-load customer

LB1010 — Data Centers (>10 MW): Certain large facilities must comply with utility review processes, pay directly for infrastructure upgrades, and may be subject to reporting, community benefit agreements, and decommissioning-related requirements

LB1261 — Associated Generation Facilities: Establishes conditional limitations on eminent domain for privately developed generation facilities serving a single large industrial customer with new electric load exceeding 1,000 MW; facility must be co-located with the customer, interconnected to the electric system, and approved by NPRB

NPPD / OPPD / LES / Municipal Utilities / Cooperatives / Southwest Power Pool: The applicable public power entities, regional transmission organizations which are involved in interconnection processes, and infrastructure cost allocation; public power utilities develop local policies and infrastructure standards while following the Southwest Power Pool interconnective requirements across their respective service territories

Data Center Siting: Local, State, and Federal Regulatory Framework*

Level	Agency / Entity	Potential Reviews, Permits, or Coordination
Local	County Planning and Zoning Department	CUPs, special exceptions, rezoning, site plan review, variances, comprehensive plan consistency
	County Board	Permit approvals, development agreements, community benefit agreements, road-use agreements
	County Highway Department / Highway Superintendent	Driveways, access roads, construction traffic, road and bridge impacts, haul routes
	County Emergency Management	Emergency response planning, backup power/fuel coordination, incident planning
	Local Fire Department / Fire District	Fire access, building/fire code coordination, backup generator and fuel storage response planning
	Public Power District / Electric Utility	Large load service, electric capacity, substations, transmission upgrades, utility agreements, LB1010 large-load processes
	Water and Wastewater Utility / Sanitary District	Water supply, cooling systems, wastewater treatment, discharge capacity, utility extensions
	Telecommunications / Fiber Providers	Fiber connectivity, route planning, easements, utility coordination
	Natural Resources District (NRD)	Floodplain, groundwater, erosion, drainage, watershed, and natural resources coordination
State	Nebraska Department of Water, Energy and Environment (DWEE)	Air permits for backup generators, stormwater, water quality, wastewater, fuel storage/spill issues
	Nebraska Department of Transportation (NDOT)	State highway access, utility permits, oversize loads
	Nebraska Power Review Board	Generation, transmission, or utility infrastructure approvals where applicable; LB1261-related utility infrastructure awareness
Federal	U.S. Environmental Protection Agency	Air, water, hazardous substances, fuel storage, environmental compliance oversight
	U.S. Army Corps of Engineers	Wetlands, waters, stream crossings, fill activities
	Federal Aviation Administration	Obstruction evaluation for tall structures or facilities near airports

*This table is intended as a general reference and does not identify every permit, approval, or coordinating agency that may apply. Permit requirements vary by project and are subject to change.

CASE STUDY - HAMILTON COUNTY

Planning and Zoning Administrator Hillary Betka and Commissioner Rich Nelson said the key considerations unique to data center proposals are the energy and water usage issues. Betka noted that data centers don't bring many permanent jobs, but she understands how the facilities can do some good for the institutions like hospitals that need them. Nelson added that Hamilton County has some of the most productive farmland in the country, and so people get very concerned when you start removing or impeding on that agricultural ground.

At the end of the day, Betka said that Hamilton County does not have the power infrastructure to handle a largescale project like a data center, and Nelson echoed that electricity and power infrastructure is already a major concern for the county.

See Appendix D for the full case study.

Best Practices Summary

Because data centers are not a one-size-fits-all land use, counties should consider defining clear project categories by size, infrastructure demand, and operational characteristics, as well as establishing permitting pathways proportional to each type. A small enterprise facility serving a local hospital may warrant different standards than a hyperscale campus. Infrastructure readiness (including electrical, water, wastewater, fiber, and transportation capacity) should be evaluated early, and counties are encouraged to coordinate with public power entities, telecommunications providers, NRDs, and emergency responders to inform the review process. However, counties must proceed with zoning decisions independently and cannot delay or condition approvals on the status of utility, state agency, or federal processes—applicants bear responsibility for compliance with LB1010, LB1261 (2026), and any other applicable requirements. Counties should consider reviewing the proposed cooling system type for long-term water and wastewater implications. Counties should also consider requiring decommissioning plans and financial assurance for all large and hyperscale facilities, with periodic cost updates. Counties should consider periodically reviewing regulations as AI, cooling technologies, utility infrastructure, and Nebraska state law continue to evolve. All zoning standards should be grounded in identified public welfare objectives and applied consistently.

Battery Energy Storage System (BESS) Siting Considerations

Key Takeaways

- BESS facilities store electricity for later use, improving grid reliability, supporting renewable energy, and providing backup power; projects may be standalone or paired with solar, wind, or other generation resources
- Fire safety and emergency response preparedness are among the most important siting considerations; battery technologies vary in fire risk, thermal runaway behavior, and emergency response requirements
- Counties should consider maintaining technology-neutral regulations focused on performance, safety, and operational standards rather than requiring specific battery chemistries or manufacturers
- LB1010 (2026) may apply to certain energy storage projects; counties are encouraged to coordinate with public power entities early while proceeding with zoning decisions independently of utility, state, and federal processes
- Decommissioning plans and financial assurance may address battery component recycling and disposal, which differ from other energy facility decommissioning obligations

What Is a Battery Energy Storage System (BESS)?

A Battery Energy Storage System (BESS) stores electricity for later use, helping balance electric supply and demand, improve grid reliability, support renewable energy development, and enhance system resilience. BESS projects may be developed as standalone facilities or paired (hybrid) with solar, wind, data centers, or other energy infrastructure. Hybrid systems store excess electricity produced during periods of high generation and discharge it when production decreases or demand increases; standalone systems support grid reliability, manage peak demand, and provide backup power independent of a specific generation source.

Battery technologies continue to evolve rapidly. Many counties will encounter projects using different battery chemistries, designs, and safety systems. Lithium-ion batteries are currently the most common, but other technologies are being developed and proposed. Different chemistries vary in performance, cooling requirements, fire risk, and emergency response considerations. Counties should focus on compliance with applicable building, fire, electrical, and safety codes rather than requiring specific technologies.



BESS Project Categories

Accessory Storage

Small-scale systems serving a single residence, farmstead, or business; less than one acre and up to 1 MW charging capacity. Key considerations include building permits, electrical permits, setbacks, and emergency access.

Commercial Storage

Larger systems serving businesses, agricultural operations, utilities, cooperatives, schools, or hospitals; 1–5 acres and 1–20 MW. Key considerations include site access, utility coordination, noise, drainage, and LB1010 (2026) applicability.

Utility-Scale Storage

Supports electric grid operations; 5–25 acres and 20–100 MW. Often requires substations, interconnection facilities, and transmission infrastructure. Key considerations include utility coordination, fire safety, emergency response planning, road impacts, and decommissioning.

Large Utility Storage

Major energy infrastructure serving regional electric systems or transmission networks; 25–100+ acres and 100–500+ MW. Key considerations include conditional use review or special exceptions, agricultural and industrial impacts, extensive supporting infrastructure, LB1010 requirements, specialized emergency response, financial assurance, and long-term lifecycle planning.

BESS Project Scale Comparison

BESS project scale comparison by typical acreage, charging capacity, energy stored, and ownership; actual numbers may vary by project. LB1010 may apply to energy storage projects.

	Approx. Acres	Charging Capacity	Energy Stored	Typical Ownership
Accessory Storage	<1	Up to 1 MW	Up to 4 MWh	Homeowner, business
Commercial Storage	1-5	1-20 MW	4-80 MWh	Business, utility, cooperative
Utility- Scale Storage	5-25	20-100 MW	80-400 MWh	Utility, developer, IPP
Large Utility Storage	25-100+	100-500+ MW	400-2,000+ MWh	Utility, transmission provider, investment group

Note: LB1010 (2026) may apply to energy storage projects. Counties are encouraged to coordinate with the applicable public power entity early in the review process.

County Land-Use Considerations for Permitting

The following are the primary considerations for counties when reviewing data center applications. Each may be addressed through adopted zoning standards tied to identified public welfare objectives.

1. Project Classification and Permitting Pathways

Counties should consider defining battery storage facilities by size and operational characteristics (i.e., stand-alone vs. hybrid systems), as well as establishing which projects are permitted by right and which require conditional or special use review. Different scales may present substantially different infrastructure, safety, and community impacts.

2. Site Suitability and Land-Use Compatibility

Counties should consider reviewing existing land uses, future growth patterns, transportation corridors, utility access, proximity to residences, and compatibility with agriculture and surrounding development. Battery Storage projects are encouraged to align with the county's comprehensive plan and long-term development priorities.

3. Setbacks and Screening

Counties should consider tying setbacks, buffers, fencing, screening, spacing to public safety, emergency access, and site-specific conditions rather than arbitrary distances. Noise from cooling systems, transformers, and inverters may also be evaluated where compatibility concerns exist. Security measures including controlled access, surveillance, and warning signage may also be considered.

4. Roads, Bridges, and Construction Traffic

Construction may require delivery of large equipment and battery modules. Counties should consider requiring haul route identification, bridge and culvert evaluation, road-use agreements, traffic control plans, dust control, and repair obligations.

5. Drainage, Stormwater and Soil Conservation

Grading, panel rows, access roads, and vegetation changes may affect drainage patterns. Counties should consider requiring site-specific drainage review, erosion control plans, stormwater management, and vegetation establishment. Coordination with Natural Resources Districts (NRDs) is encouraged for larger projects.

6. Emergency Response

Fire protection and emergency preparedness are critical considerations for BESS facilities. Counties should consider requiring applicants to identify fire detection and suppression systems, thermal runaway mitigation measures, monitoring and containment systems, ventilation, hazardous materials management, and emergency shutdown procedures. Counties should also consider requiring emergency response plans, site access provisions, emergency contacts, and coordination with local fire departments. Counties may likewise consider asking applicants to provide site-specific first responder training, facility familiarization, and coordination with specialized response contractors. Compliance with applicable fire and electrical codes, including recognized industry standards such as National Fire Protection Association (NFPA) code 855, should be confirmed.

7. Decommissioning and Financial Assurance

Counties should consider requiring decommissioning plans that address equipment removal, recycling or disposal of battery components (which may involve hazardous materials), site restoration, and future land use. Counties are encouraged to periodically review financial assurance through bonds, or letters of credit. Battery chemistry affects disposal requirements and costs, which may be reflected in the decommissioning plan.

8. Technology Neutrality

Battery technologies continue to evolve. Counties should consider adopting performance- and safety-based standards rather than requiring specific manufacturers, battery chemistries, or storage technologies. This approach helps ensure that regulations remain effective as technology advances.

9. Hybrid and Co-Located Systems

BESS facilities paired with solar, wind, data centers, or industrial facilities may involve additional infrastructure, larger footprints, and operational considerations. Counties should consider evaluating hybrid projects as a whole rather than reviewing the storage component in isolation.

10. Non-Participating Landowner Considerations

Counties should consider providing clear public engagement processes and encouraging applicants to communicate early with non-participating landowners.

11. Economic and Community Impacts

Counties should consider evaluating both benefits and costs, including infrastructure demands and public service impacts. Counties should also consider evaluating pre- and post-project impacts, including temporary and permanent workforce demands, housing and lodging capacity, traffic and general construction-related impacts, and potential effects on local infrastructure and public services. Community benefits, such as road improvements, infrastructure upgrades, workforce housing support, or emergency responder training, may be appropriate where voluntarily offered and consistent with applicable law. Any commitments should be legally authorized and proportional to project impacts. BESS projects may also be subject to nameplate capacity tax.

County Land-Use Considerations for BESS Permitting

Primary county land use considerations for BESS permitting.

Project Classification Permitted vs. conditional by size and type; clear definitions	Site Suitability & Design Land use compatibility, setbacks, buffers, noise and screening	Fire Safety & Emergency Response Response plans, training, site access, and thermal runaway mitigation
Roads, Bridges, & Construction Traffic Bridge and culvert evaluation, road-use agreements, traffic control plans, and repair obligations.	Technology Neutrality Performance and safety standards - not specific chemistry or manufacturer	Decommissioning & Bonding Equipment removal, battery recycling/disposal, and financial assurance

Additional: roads and construction, neighboring landowners, security and access control, economic/tax effects, hybrid/co-located systems.

Awareness: Utilities and LB1010 (2026)

County zoning decisions do not govern utility interconnection, transmission siting, substation approvals, or the state-law requirements established by LB1010. These are administered through Nebraska's public power system and the Nebraska Power Review Board. Counties are encouraged to coordinate with utilities and other stakeholders to understand infrastructure capacity, project timelines, and potential community impacts. However, counties must make zoning decisions independently and cannot delay, condition, or withhold approvals based on the outcome of utility or state processes. Applicants are responsible for compliance with LB1010 and all related utility requirements.

Nebraska Power Review Board (NPRB): Approves service territory boundaries, coordinates statewide electric planning and approves certain generation and transmission projects relevant to data center development

LB1010 — Energy Storage Requirements: Energy storage facilities must generally have a power purchase agreement with a public power utility, obtain the consent of the applicable public power district, secure NPRB approval where required, and satisfy applicable transmission arrangements

LB1010 — Nameplate Capacity Tax: Stand-alone energy storage projects are subject to a nameplate-capacity-based tax framework under LB1010; counties should be aware this may affect project economics and applicant timelines

NPPD / OPPD / LES / Municipal Utilities / Cooperatives / Southwest Power Pool: The applicable public power entities, regional transmission organizations which are involved in interconnection processes, and infrastructure cost allocation; public power utilities develop local policies and infrastructure standards while following the Southwest Power Pool interconnective requirements across their respective service territories

BESS Siting: Local, State, and Federal Regulatory Framework*

Level	Agency / Entity	Potential Reviews, Permits, or Coordination
Local	County Planning and Zoning Department	Conditional use permits, special exceptions, rezoning, site plan review, variances, comprehensive plan consistency review
	County Board	Permit approvals, development agreements, road-use agreements, public hearing review, permit conditions
	County Highway Department / Highway Superintendent	Haul routes, driveway permits, road crossings, road-use agreements, oversize/overweight construction coordination, bridge and culvert review
	County Emergency Management	Emergency response planning, site access, incident coordination, disaster and hazardous materials planning
	Local Fire Department / Fire District	Emergency access review, fire response planning, site familiarization, training, equipment needs, Knox box/access protocols
	Public Power District / Electric Utility	Utility coordination, interconnection, charging/discharging arrangements, substation and transmission upgrades
	Natural Resources District (NRD)	Floodplain, groundwater, erosion, drainage, watershed, and natural resources coordination
State	Nebraska Department of Water, Energy and Environment (DWEE)	Construction stormwater, water quality, air quality, waste management, wastewater, environmental permits
	Nebraska Department of Transportation (NDOT)	State highway access, utility occupancy, state highway crossings, oversize/overweight load coordination, structure height
	Fire Marshal / Code Officials	Fire code review, NFPA 855 energy storage standards, UL 9540/UL 9540A testing and safety documentation
	Nebraska Game and Parks Commission	Wildlife, habitat, threatened and endangered species, conservation coordination
	Nebraska Power Review Board	Energy storage, generation or transmission approvals/coordination where applicable
	Nebraska State Historic Preservation Office (SHPO)	Historic, archaeological, and cultural resource review
Federal	U.S. Army Corps of Engineers	Section 404 permits, wetlands, waters of the United States, stream crossings, fill activities
	U.S. Fish and Wildlife Service	Endangered Species Act consultation, critical habitat, migratory bird and eagle coordination
	U.S. Environmental Protection Agency	Environmental compliance oversight, NPDES oversight, spills, hazardous substances, water quality programs
	Tribal Governments / Bureau of Indian Affairs	Tribal consultation, cultural resources, traditional cultural properties, lands or interests involving tribes

*This table is intended as a general reference and does not identify every permit, approval, or coordinating agency that may apply. Permit requirements vary by project and are subject to change.

Best Practices Summary

Counties should consider defining BESS project categories by size and operational characteristics, as well as establishing permitting pathways proportional to each type. Fire safety and emergency response preparedness should be treated as primary considerations—requirements are encouraged to address detection and suppression systems, thermal runaway mitigation, hazardous materials management, and first responder coordination and training. All standards should be technology-neutral, focusing on measurable performance and safety outcomes rather than specific battery chemistries or manufacturers. Counties are encouraged to coordinate with public power entities and emergency responders while proceeding with zoning decisions independently. Counties should consider requiring decommissioning plans that account for battery component removal, and financial assurance should reflect those costs throughout the project's life. Counties should consider periodically reviewing regulations as battery technologies, fire safety standards, utility requirements, and Nebraska state law continue to evolve.

Livestock Siting Considerations

Key Takeaways

- Counties should consider grounding livestock siting decisions in their comprehensive plan, adopted zoning regulations, and factual findings
- Counties should consider clearly defining livestock feeding facilities, confined animal feeding operations (CAFOs), animal units, head-count thresholds, and expansions, and specify when conditional or special review is required
- Objective tools such as the Nebraska Livestock Siting Assessment Matrix and University of Nebraska-Lincoln (UNL) Ag Site Planner may help counties evaluate proposals using consistent, research-based criteria
- County zoning approval is separate from state and federal environmental permitting; counties are encouraged to coordinate with relevant agencies while proceeding with zoning decisions independently

What Is a Livestock Feeding Operation?

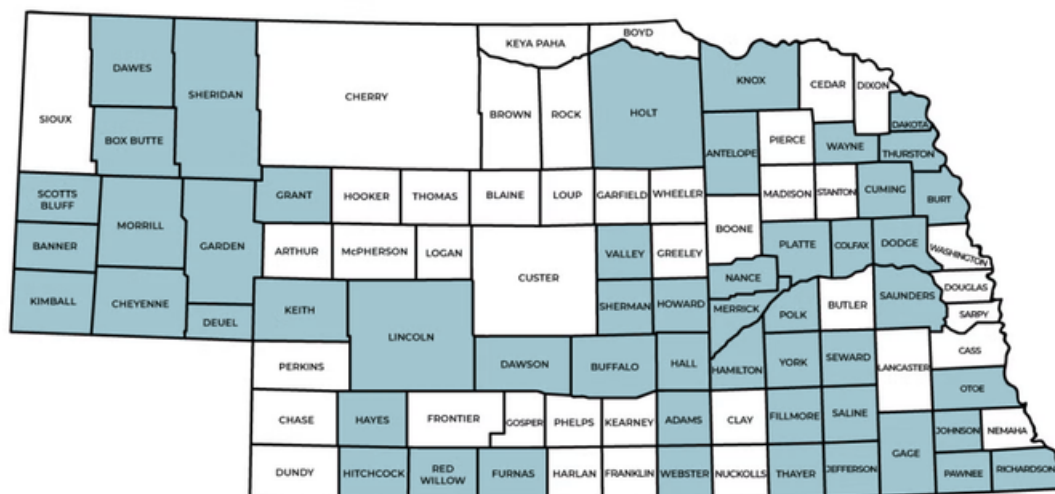
Livestock feeding operations are facilities where animals are confined and fed for a significant portion of their growth cycle rather than relying primarily on grazing. These operations may include cattle feedlots, dairy facilities, swine operations, poultry facilities, and other livestock production systems. Depending on size, animal type, and management practices, operations may range from small family-owned facilities to large commercial operations serving regional or national markets.

Livestock production remains a cornerstone of Nebraska's agricultural economy. Counties play an important role in balancing agricultural development, private property rights, environmental stewardship, and the interests of neighboring landowners. Siting decisions should reflect local comprehensive plan goals, adopted standards, and documented evidence rather than generalized support or opposition.

A Livestock Friendly County is a county that has been voluntarily designated by the Nebraska Department of Agriculture (NDA) as actively supporting the growth and development of Nebraska's livestock industry. To receive the designation, a county must apply to the NDA and demonstrate that it meets the program's criteria. NDA considers several factors, such as local planning and zoning practices, county support for livestock development, coordination with other jurisdictions, and compliance with the Livestock Waste Management Act. Importantly, the designation does not limit or transfer a county's zoning authority or local control; it is intended as a recognition and promotional program rather than a regulatory program.



Map of Nebraska's Livestock Friendly Counties (Nebraska Department of Agriculture)



Livestock Operation Categories

Small / Family Operation:

Typically fewer than 300 animal units; may include cattle, hogs, poultry, or dairy. Generally permitted by right under most county zoning frameworks. Key considerations include setbacks, odor, and access.

Commercial Operation:

300–1,000 animal units; serves larger production or contract markets. Key considerations include manure management, water quality, road impacts, setbacks, and compatibility with surrounding land uses.

Confined Animal Feeding Operations (CAFO) – Medium:

1,000–3,000 animal units; subject to state and federal CAFO permitting requirements administered separately from local zoning. Key considerations include nutrient management plans, groundwater protection, odor setbacks, carcass management, and biosecurity.

CAFO – Large:

3,000+ animal units; major agricultural infrastructure with regional market connections. Key considerations include conditional use review or special exceptions, comprehensive manure and nutrient management, road and bridge impacts, neighboring landowner protections, emergency response, and compliance monitoring.

Livestock Facility Scale Comparison

Livestock operation by typical animal units, common species, and ownership; actual numbers may vary by project.

	Animal Units (AUs)	Common Species	Typical Ownership
Small / Family	Typically <300	Cattle, hogs, poultry, dairy	Homeowner, family farm
Commercial Operation	300-1,000	Cattle feedlot, dairy, swine	Family corp., partnership
CAFO (Medium)	1,000-3,000	Cattle, swine, poultry, dairy	Corporate, contract grower
CAFO (Large)	3,000+	Cattle feedlot, swine, poultry	Corporate, regional operator

AU = Animal Units. CAFO thresholds are defined by EPA and Nebraska DWEI; state and federal permitting requirements apply separately from local zoning. Counties have flexibility in how they define and apply animal unit zoning requirements, subject to any limits set by state law.

County Land-Use Considerations for Permitting

The following are the primary considerations for counties when reviewing livestock applications. Each consideration may be addressed through adopted zoning standards tied to identified public welfare objectives.

1. Project Classification and Permitting Pathways

Counties should consider defining livestock feeding facilities, CAFOs, expansions, and animal unit thresholds, as well as establishing when a use is permitted by right and when a conditional use permit or special exception is required. Different scales may create substantially different land use, infrastructure, environmental, and community impacts.

2. Site Suitability and Land-Use Compatibility

Counties should consider evaluating existing land uses, future growth patterns, topography, drainage, proximity to residences and schools, transportation infrastructure, and compatibility with surrounding agricultural and non-agricultural uses. Livestock projects are encouraged to align with the county's comprehensive plan, agricultural impacts, and long-term development priorities.

3. Objective Siting Tools

The Nebraska Livestock Siting Assessment Matrix (nda.nebraska.gov/promotion/livestock_matrix) provides a research-based framework for evaluating livestock proposals. The UNL Ag Site Planner (ianrmedia.unl.edu/our-work/ag-site-planner) offers the Risk Management Tool, Regulatory Guidance Tool, and Odor Footprint Tool. Counties may use these tools as decision-making aids, incorporate them into local procedures, or reference them in findings of fact.

4. Setbacks and Odor

Odor is the most common concern raised during livestock public hearings. Counties should consider evaluating setbacks, prevailing winds, topography, ventilation systems, manure handling practices, mortality management, and odor-control measures. Counties should consider tying setback standards to identified compatibility concerns which are applied consistently to both participating and non-participating neighboring landowners.

5. Roads, Bridges, and Construction Impacts

Livestock facilities may generate significant truck traffic for feed delivery, livestock transport, manure hauling, and rendering. Counties should consider requiring haul route identification, bridge and culvert evaluation, pre-construction road documentation, dust control, road-use agreements, and repair obligations.

6. Drainage, Stormwater and Soil Conservation

Grading, access roads, and vegetation changes may affect drainage patterns. Counties should consider requiring site-specific drainage review, erosion control plans, stormwater management, and vegetation establishment. Coordination with Natural Resources Districts (NRDs) is encouraged for larger projects.

7. Emergency Response

Counties should consider livestock operations, particularly larger-scale facilities, to maintain an emergency response plan addressing fire, manure or waste spills, animal disease outbreaks, and severe weather events. Plans may consider identifying site access points, water sources, and evacuation or containment procedures for local emergency responders, and be coordinated with the county's fire department or emergency management office. Counties may consider requiring that response plans be updated periodically and kept on file with the county or made available to first responders upon request.

8. Non-Participating Landowner Considerations

Counties should consider providing clear public engagement processes and encouraging applicants to communicate early with non-participating landowners.

9. Economic, Tax, and Community Impacts

Livestock operations can contribute to the local economy through agricultural production, employment, capital investment, property tax revenue, and purchases from local businesses. Counties should evaluate both benefits and costs, including infrastructure demands and public service impacts. Counties should also evaluate pre- and post-project impacts, including temporary and permanent workforce demands, housing and lodging capacity, traffic and general construction-related impacts, and potential effects on local infrastructure and public services. Other community benefits may include road improvements, infrastructure upgrades, or workforce housing support. Emergency responder training may be appropriate when offered voluntarily and consistently with applicable law. Any commitments should be legally authorized and proportional to project impacts.

County Land-Use Considerations for Livestock Permitting

Primary county land use considerations for livestock permitting.

Project Classification Permitted vs. conditional by AU threshold, species, or facility type	Water Quality & Environmental Manure storage, runoff controls, nutrient management, groundwater protection	Emergency Response Fire, manure release, disease outbreak, first responder coordination
Odor & Compatibility Setbacks, prevailing winds, topography, manure management practices	Roads & Traffic Haul routes, bridge review, road-use agreements	Permit Conditions & Compliance Clear, measurable conditions; complaint procedures; enforcement

Additional: carcass & biosecurity, neighboring landowners, workforce & housing, economic/tax effects, siting matrix & UNL tools.

Awareness: State and Federal Environmental Permitting

County zoning decisions do not govern state or federal environmental permitting for livestock operations. CAFO permits, nutrient management plans, groundwater authorizations, and animal health requirements are administered by the Nebraska Department of Agriculture, Nebraska DEQ, Natural Resources Districts, and federal agencies. Counties are encouraged to coordinate with these agencies to understand applicable requirements and potential project impacts. However, counties must make zoning decisions independently and cannot delay or condition approvals on the status of separate state or federal permits. Applicants are responsible for obtaining all required state and federal approvals.

Nebraska Department of Agriculture (NDA): Administers the Nebraska Livestock Siting Assessment Matrix and CAFO permit program; coordinates on animal feeding operations and manure management plans

Nebraska Department of Water, Environment & Energy (DWEE): Administers water quality permits and CAFO NPDES permits for qualifying operations; coordinates with EPA on Clean Water Act compliance

Natural Resources Districts (NRDs): Groundwater permits, nutrient management plans, and drainage considerations may require NRD review depending on location and operation size

U.S. EPA: Federal NPDES CAFO permits apply to large CAFOs discharging to waters of the U.S.; effluent guidelines and Clean Water Act Section 402 requirements apply to qualifying operations

USDA APHIS: Federal animal disease programs, quarantine authority, and biosecurity coordination; counties should be aware of applicable state and federal animal health response protocols

Awareness: Manure & Carcass Management

Applicants should identify manure storage and composting facilities, runoff controls, nutrient management practices, land application plans, transportation routes, groundwater protection measures, and emergency spill response procedures. Counties should evaluate these materials in relation to local surface water resources, drainage patterns, and NRD groundwater management areas. State and federal CAFO permitting requirements apply separately from local zoning. Applicants should identify mortality management procedures, composting or rendering arrangements, disease prevention measures, biosecurity protocols, and emergency response plans related to animal health. Counties may coordinate with the Nebraska Department of Agriculture and USDA APHIS for awareness of applicable state and federal animal health requirements.

Livestock Siting: Local, State, and Federal Regulatory Framework*

Level	Agency / Entity	Potential Reviews, Permits, or Coordination
Local	County Planning and Zoning Department	CUPs, special exceptions, livestock siting permits, site plan review, zoning compliance, comprehensive plan consistency
	County Board	Permit approvals, conditions of approval, road-use agreements, public hearings, enforcement actions
	Planning Commission	Application review, recommendations, public hearings, findings of fact
	County Highway Department / Highway Superintendent	Ingress/egress, haul routes, bridge capacity, road-use agreements, road maintenance, manure/feed hauling impacts
	Natural Resources District (NRD)	Groundwater, wells, watershed, erosion, floodplain, water resources coordination
State	Nebraska Department of Water, Energy and Environment (NDWEE)	Livestock Waste Control Facility Construction and Operating Permits, NPDES permits, water quality, manure management, environmental compliance
	Nebraska State Historical Society, State Historic Preservation Office (SHPO)	Historic preservation issues
	Nebraska Department of Transportation	ROW, encroachment, movement of overweight/overdimensional vehicles
	Nebraska Department of Agriculture	Livestock Matrix, livestock-friendly programs, animal health, noxious weeds, agricultural coordination
	Nebraska Game and Parks Commission	Wildlife, habitat, threatened and endangered species coordination
Federal	U.S. Environmental Protection Agency	CAFO/NPDES oversight, Clean Water Act, environmental compliance
	U.S. Army Corps of Engineers	Wetlands, waters, stream crossings, fill activities
	U.S. Department of Agriculture / NRCS / FSA	Conservation programs, nutrient management assistance, conservation compliance, program land issues
	U.S. Fish and Wildlife Service	Endangered species and habitat consultation

*This table is intended as a general reference and does not identify every permit, approval, or coordinating agency that may apply. Permit requirements vary by project and are subject to change.

CASE STUDY - HALL COUNTY

Commissioner Karen Bredthauer said livestock remains a major land use issue in Hall County, but setback requirements and the expansion of rural residences has limited the opportunity for development. She stressed the importance of establishing a matrix for permit requests to optimize the application process.

See Appendix D for the full case study.

Best Practices Summary

Counties should clearly define livestock operation categories, animal unit thresholds, and permitting pathways, distinguishing between small family operations, commercial facilities, and CAFOs. Regulations should be tied to public health, environmental protection, infrastructure capacity, and land use compatibility. Objective tools including the Nebraska Livestock Siting Assessment Matrix and UNL Ag Site Planner should be used to support fact-based, consistent decision-making. Odor setbacks and manure management requirements should be grounded in site-specific review and applied consistently across participating and non-participating neighboring landowners. Counties are encouraged to coordinate with NDA, DWEE, NRDs, and emergency responders while proceeding with zoning decisions independently of state and federal environmental permit timelines. Permit conditions should be clear, measurable, and enforceable, with written procedures for complaints, monitoring, and revocation. Counties should periodically review regulations as agricultural practices, environmental standards, and state laws evolve.

Fiber Deployment Siting Considerations

Key Takeaways

- Fiber deployment in county rights of way is typically managed through right-of-way (ROW) use permits, not zoning regulations; counties should consider having a clear, written ROW permit process that addresses construction standards, restoration, and infrastructure protection
- Fiber installation affects county roads, rights-of-way, drainage systems, culverts, and ditches; restoration standards must be established before construction begins
- Nebraska 811 One-Call compliance is required before any excavation; this should be a standard condition of every ROW permit
- Early coordination with road departments, utilities, and existing infrastructure owners may reduce conflicts and protect county assets
- Counties should distinguish between facilities in county ROW, private easements, and private property—different approvals apply to each, and private easements are the applicant's responsibility, not the county's

IMPORTANT DISTINCTION:

Fiber and broadband deployment in county ROW is not typically regulated through zoning ordinances. It is managed through ROW use permits, franchise agreements, or administrative approvals that address construction methods, infrastructure protection, and restoration. Counties should have a written ROW permit process specifically for fiber and broadband projects.

What Is Fiber and Broadband Infrastructure?

Fiber and broadband infrastructure provides the backbone for high-speed internet access, public safety communications, telehealth, remote work, precision agriculture, education, and economic development. Fiber infrastructure typically consists of underground or aerial fiber-optic cable, handholes, pedestals, cabinets, splice cases, and supporting facilities. Deployment may occur within county road rights-of-way, along utility corridors, on bridges, or across private property under separate easement agreements.

As demand for high-speed connectivity continues to grow—driven by precision agriculture, rural healthcare, remote work, and state and federal broadband expansion programs—counties are increasingly asked to facilitate efficient and infrastructure-protective fiber deployment across their road systems.



Common Deployment Methods

Directional Boring

The most common method for underground fiber installation; a horizontal boring machine places conduit or cable beneath the road surface without cutting pavement. Key considerations include bore depth, entry and exit pit locations, and identification of existing underground utilities.

Open Trenching

Involves cutting a trench in the road shoulder, ditch, or pavement to place conduit or cable; creates more surface disturbance than boring. Key considerations include pavement repair, compaction standards, erosion control, and full restoration of road and drainage features.

Aerial / Bridge Attachment

Fiber attached to existing utility poles or bridge structures above ground. Key considerations include pole attachment agreements with the pole owner, bridge load review, minimum height clearances, and coordination with existing aerial utilities.

Road Crossings

Boring or sleeving under road surfaces to cross from one side to the other; highest risk of road damage. Key considerations include traffic control, casing or sleeve requirements, inspection provisions, and road repair bonds.

Fiber Deployment Methods and Key Permit Considerations

Fiber deployment methods and key county ROW permit considerations for each.

	Description	Key Permit Considerations
Directional Boring	Underground; avoids cutting road surface; most common method	Bore depth, entry/exit pits, location of existing utilities
Open Trenching	Cuts roadway or ditch; higher surface disturbance	Pavement repair, compaction, erosion control, restoration
Aerial / Bridge Attachment	Attached to existing poles or bridge structures	Pole attachment agreements, bridge load review, height
Road Crossings	Bore or sleeve under road surface; highest road impact risk	Traffic control, casing/sleeve req., road repair bonds

Note: Fiber deployment methods and key county ROW permit considerations for each.

County ROW Permit Considerations

The following are the primary considerations for counties when processing fiber and broadband ROW use permits. These are permit-based administrative considerations, not zoning standards.

1. Route Plan and Construction Documentation

Counties should consider requiring applications to identify proposed routes, agricultural impacts, construction methods for each segment, bore depths, trench locations, road and ditch crossings, bridge attachments, existing utility conflicts, and anticipated construction schedules. Route maps should be provided at sufficient detail to allow county road department review.

2. Roads, Drainage, and Infrastructure Protection

Counties should consider protecting roads, shoulders, ditches, culverts, driveways, and drainage infrastructure from construction impacts. Permit conditions may address minimum bore depths under paved surfaces, compaction requirements for trenched areas, pavement repair standards, gravel replacement, erosion control, drainage restoration, and post-construction inspection timelines. Pre-construction road condition documentation is strongly encouraged.

3. Nebraska 811 and Utility Coordination

Nebraska law requires notification through the Nebraska 811 One-Call system before any excavation. This should be a standard permit condition. Applicants should also coordinate with existing utility providers—electric, gas, telecommunications, water, and sewer—to identify conflicts and avoid utility strikes during construction.

4. Traffic Control and Public Safety

Counties should consider requiring applications to include a traffic control plan that addresses lane closures, signage, flagging procedures, work zone setups, school bus routes, emergency vehicle access, and construction staging areas. Road closures or lane restrictions on county roads typically require advance notice to the county road department.

5. Insurance, Bonding, and Contractor Information

Counties should consider requiring proof of general liability insurance, contractor licensing or registration information, and a performance bond or other financial assurance sufficient to cover road and drainage restoration if the work is not completed properly. Bond amounts are encouraged to reflect restoration costs for the scope of work.

6. Fees and In-Kind Contributions

Although counties are permitted to charge fees for right-of-way access, both Nebraska law and the Federal Telecommunications Act require such fees to be competitively neutral, non-discriminatory, and directly related to the actual cost of reviewing and administering permits. Common approaches include flat rates, tiered structures, and per-mile or per-crossing schedules. Nebraska State law prohibits Counties from conditioning permit approvals on the provision of in-kind services or collecting taxes or fees through the provision thereof.

7. Abandonment, Removal, and Long-Term Obligations

ROW permits should specify what happens to fiber conduit and infrastructure if it is abandoned. Counties may require removal of abandoned facilities or allow them to remain in place under specific conditions. Long-term maintenance responsibilities, ownership transfer notifications, and contact information updates are encouraged to be addressed in the permit.

8. Non-Participating Landowner Considerations

Certain fiber deployment projects may require access to private land for drops, vaults/hubs, or accessory structures. Counties should consider encouraging applicants to communicate with affected landowners prior to commencing construction.

9. Economic, Tax, and Community Impacts

Fiber deployment may expand a county's tax base by attracting new businesses, supporting business expansion, and enabling remote work and technology-driven industries. Counties should consider evaluating both benefits and costs, including infrastructure demands and public service impacts. Counties should also consider evaluating pre- and post-project impacts, including temporary and permanent workforce demands, housing and lodging capacity, traffic and general construction-related impacts, and potential effects on local infrastructure and public services. Community benefits, such as road improvements, infrastructure upgrades, workforce housing support, or emergency responder training, may be appropriate where voluntarily offered and consistent with applicable law. Any commitments should be legally authorized and proportional to project impacts.

County ROW Permit Considerations for Fiber Deployment

County ROW permit considerations for fiber and broadband deployment.

Route & Construction Plan Route map, method, bore depth, road crossings, schedule	Roads, Drainage & Restoration Ditches, culverts, pavement repair, post-construction insp.	Traffic Control & Public Safety Lane closure plan, signage, flagging, emergency access
Nebraska 811 & Utility Coordination One-Call Compliance before any excavation; existing utility coordination	Insurance & Bonding Proof of liability insurance; performance bond for restoration	Abandonment & Removal Conditions for abandoned facilities; restoration obligations

Additional: contractor licensing/registration, bridge attachment agreements, aerial pole attachment coordination.

Awareness: State and Federal Programs

County ROW permitting authority is limited to the county's own road rights-of-way. Fiber deployment on state highways, federal roads, or private property requires separate approvals from NDOT, federal agencies, or private landowners. Counties are encouraged to be aware of state and federal broadband funding programs, as grant conditions may affect project design, timelines, and construction standards. Counties must process ROW permits on their own timelines and cannot condition approvals on the outcome of grant awards or state/federal review processes.

Nebraska 811 One-Call: State law requires notification before any excavation; all fiber bore and trench work in county ROW must comply; this should be a standard permit condition

Nebraska Dept. of Transportation (NDOT): Fiber crossing or paralleling state highways requires a separate NDOT permit; county ROW permits do not cover state highway ROW

FCC Universal Service Fund (USF): Federal broadband grant programs funding fiber deployment in rural Nebraska; grant conditions may specify construction standards, timelines, and reporting requirements

NTIA BEAD Program: Federal Broadband Equity, Access, and Deployment program administered through NBO/NDOT; may fund large-scale fiber deployment projects; counties may be asked to expedite ROW processing for funded projects

Federal Communications Commission (FCC) Broadband Maps: Federal broadband availability maps influence grant eligibility; counties may be asked to provide data or submit challenges on behalf of constituents

Fiber/Broadband Deployment: Local, State, and Federal Regulatory Framework*

Level	Agency / Entity	Potential Reviews, Permits, or Coordination
Local	County Planning and Zoning Department	CUPs, special exceptions, livestock siting permits, site plan review, zoning compliance, comprehensive plan consistency
	County Board	Permit approvals, conditions of approval, road-use agreements, public hearings, enforcement actions
	Planning Commission	Application review, recommendations, public hearings, findings of fact
	County Highway Department / Highway Superintendent	Ingress/egress, haul routes, bridge capacity, road-use agreements, road maintenance, manure/feed hauling impacts
	Natural Resources District (NRD)	Groundwater, wells, watershed, erosion, floodplain, water resources coordination
State	Nebraska Department of Water, Energy and Environment (NDWEE)	Livestock Waste Control Facility Construction and Operating Permits, NPDES permits, water quality, manure management, environmental compliance
	Nebraska State Historical Society, State Historic Preservation Office (SHPO)	Historic preservation issues
	Nebraska Department of Transportation	ROW, encroachment, movement of overweight/overdimensional vehicles
	Nebraska Department of Agriculture	Livestock Matrix, livestock-friendly programs, animal health, noxious weeds, agricultural coordination
	Nebraska Game and Parks Commission	Wildlife habitat, threatened and endangered species coordination
Federal	U.S. Environmental Protection Agency	CAFO/NPDES oversight, Clean Water Act, environmental compliance
	U.S. Army Corps of Engineers	Wetlands, waters, stream crossings, fill activities
	U.S. Department of Agriculture / NRCS / FSA	Conservation programs, nutrient management assistance, conservation compliance, program land issues
	U.S. Fish and Wildlife Service	Endangered species and habitat consultation

*This table is intended as a general reference and does not identify every permit, approval, or coordinating agency that may apply. Permit requirements vary by project and are subject to change.

Best Practices Summary

Counties should consider establishing a clear, written ROW use permit process specifically for fiber and broadband deployment—separate from zoning—that addresses route documentation, construction methods, bore depths, road and drainage protection, Nebraska 811 compliance, traffic control, insurance, bonding, and restoration standards. Pre-construction road condition documentation protects counties from disputes over repair obligations. Permit conditions are encouraged to clearly specify restoration standards before construction begins rather than relying on after-the-fact negotiation. Nebraska 811 notification should be a non-negotiable permit condition for all excavation work. Abandonment and long-term maintenance obligations are encouraged to be addressed in every permit. Counties should be aware of active state and federal broadband funding programs and their potential effects on project timelines and design, while processing permit applications on the county's own timeline independent of grant award status.

Cell Tower Siting Considerations

Key Takeaways

- Cell tower siting is regulated through county zoning and conditional use permits or special exceptions; different tower types warrant different levels of review, from administrative approvals for co-location to full CUP review for new structures
- Counties should consider evaluating co-location on existing towers, utility poles, water towers, or buildings before a new tower is approved; applicants should document why co-location is not feasible
- Setbacks and fall zones are encouraged to be based on tower height and structural engineering certification rather than arbitrary distances
- FCC shot-clock rules impose mandatory timelines on county review of eligible facilities' requests and co-location applications, independent of LB663; counties should be aware of these federal timelines
- FAA obstruction evaluation and FCC tower registration are the applicant's responsibility and operate separately from county zoning; counties cannot condition approvals on FAA or FCC outcomes

NEBRASKA DATA NOTE:

Nebraska had approximately 3,200–3,500 registered cell towers and 5,200+ total cell sites (including rooftop and small cell) as of 2024. Current data is maintained in the FCC Antenna Structure Registration (ASR) database at fcc.gov/asr, searchable by state and county. Rural Nebraska counties—particularly in the Sandhills and western regions—remain targets for new tower construction driven by precision agriculture, public safety communications, and carrier network upgrades.



What Is a Cell Tower?

Cell towers are structures that support wireless communications antennas and equipment, providing cellular voice, data, and broadband services. In Nebraska, towers support commercial wireless carriers, public safety communications, and rural broadband services. Tower structures vary significantly in size, design, and review requirements—from small wireless facilities mounted on existing poles to large lattice or guyed towers on new sites. The appropriate level of county review depends on the type of structure, whether it is co-located on an existing facility, and its potential impacts on surrounding land uses.

Current data on cell tower registrations in Nebraska is maintained in the FCC Antenna Structure Registration (ASR) database at fcc.gov/asr. Counties are encouraged to search the ASR database by county to identify existing registered structures when evaluating co-location requirements.

Tower Types and Permitting Pathways

Small Wireless Facilities

Mounted on existing utility poles, streetlights, buildings, or structures to improve localized coverage; typically handled through administrative permit or ROW permit with limited site review. Key considerations include structural adequacy of the host structure, attachment height, and equipment enclosure.

Co-Located Wireless Facilities

Antennas or equipment added to an existing tower, water tower, building, or utility structure; may require administrative approval or limited conditional review. Key considerations include structural certification of the existing structure for additional loading, equipment shelters, utility connections, and FCC Section 6409 applicability.

Monopole / Stealth Tower

A single-pole freestanding structure, which may be designed as a flagpole, tree, or other camouflaged form; typically subject to full CUP review. Key considerations include co-location analysis, setbacks, fall zone, visual impact, access road, utility connection, FAA review, and decommissioning.

Lattice / Guyed Tower

Multi-leg or wire-supported structures with the largest footprint and greatest visual impact; subject to the highest level of county review. Key considerations include all CUP standards plus guy wire anchors, agricultural and industrial impacts, larger setback area, aviation lighting, and specialized structural certification.

Cell Tower Type and Permitting Pathway Comparison

Cell tower type and permitting pathway comparison. FCC shot-clock rules noted.

	Typical Permitting	Description	Typical Ownership
Small Wireless Facility	Admin. permit or ROW permit; limited review	Mounted on existing pole, building, or structure	Carrier, tower company
Co-Located Wireless	Admin. or CUP on existing structure	Antennas on existing tower, water tower, or utility structure	Carrier, tower company, utility
Monopole / Stealth Tower	CUP typically required; full site review	Single pole structure; may be disguised as tree or flagpole	Tower company, carrier, developer
Lattice / Guyed Tower	CUP required; highest level of county review	Multi-leg or guyed structure; largest footprint	Tower company, cell carrier, broadband provider

Note: FCC shot-clock rules impose mandatory timelines on county review of eligible facilities requests and co-location applications, independent of LB663

County Siting Considerations for Permitting

The following are the primary considerations for counties when reviewing cell tower applications through zoning and conditional use processes or special exceptions.

1. Co-Location Analysis

Before approving a new tower structure, counties should consider requiring applicants to demonstrate that co-location on existing towers, utility poles, water towers, buildings, or other structures is not technically or commercially feasible. Co-location reduces the need for new structures, minimizes visual impacts, and avoids unnecessary proliferation. The FCC ASR database and county records can help identify existing registered structures in the area.

2. Site Suitability and Land-Use Compatibility

Counties should consider evaluating tower locations based on surrounding land uses, future proximity to residences, schools, airports, and future development patterns, and compatibility with agriculture and surrounding development. Cell Tower projects are encouraged to align with the county's comprehensive plan and long-term development priorities.

3. Setbacks and Fall Zones

Counties should consider creating setbacks based on tower height and structural engineering certification rather than arbitrary distances. A common standard requires towers to be set back from property lines and occupied structures at a distance equal to or greater than total tower height, including any antenna arrays. Site-specific conditions and engineering analysis may warrant adjustments. Structural certification by a licensed engineer should be required for all new towers.

4. Visual Impacts and Screening

Counties may consider screening, landscaping, or design standards where towers are visible from residences, public roads, or sensitive viewsheds. Stealth designs, camouflage options, and equipment enclosures may reduce visual impacts. Standards are encouraged to be proportional to actual compatibility concerns rather than creating unnecessary cost burdens.

5. Roads and Construction Impacts

New tower sites may require access roads, utility connections, equipment shelters or cabinets, and fencing. Access roads are encouraged to be reviewed for road impact, drainage effects, and restoration obligations. Fencing, controlled access, warning signage, and surveillance can also be included in permit conditions.

6. Drainage, Stormwater and Soil Conservation

Grading, access roads, and vegetation changes may affect drainage patterns. Counties should consider requiring site-specific drainage review, erosion control plans, stormwater management, and vegetation establishment. Coordination with Natural Resources Districts (NRDs) is encouraged for larger projects.

7. Decommissioning and Financial Assurance

Counties should consider requiring decommissioning plans address removal of towers, antennas, equipment shelters, guy wire anchors, foundations, and access roads, along with site restoration. Financial assurance—through bonds, or letters of credit—may be sufficient to cover removal costs if the tower is abandoned. Permit conditions are encouraged to specify what constitutes abandonment and the timeline for removal.

8. Non-Participating Landowner Considerations

Counties should consider providing clear public engagement processes and encouraging applicants to communicate early with non-participating landowners.

9. Economic and Community Impacts

Cell tower construction can generate economic benefits through construction spending, lease payments to landowners, and improved wireless connectivity that supports businesses, agriculture, emergency services, education, and remote work. Counties should consider evaluating both benefits and costs, including infrastructure demands and public service impacts. Counties should also consider evaluating pre- and post-project impacts, including temporary and permanent workforce demands, housing and lodging capacity, traffic and general construction-related impacts, and potential effects on local infrastructure and public services. Community benefits, such as road improvements, infrastructure upgrades, workforce housing support, or emergency responder training, may be appropriate where voluntarily offered and consistent with applicable law. Any commitments should be legally authorized and proportional to project impacts.

County Siting Considerations for Cell Towers

County ROW permit considerations for fiber and broadband deployment.

Co-Location First Existing vertical assets (towers, buildings, etc.) may accommodate additional radio equipment; county use for public safety communications equipment	Setbacks & Fall Zone Scale setback requirements with structure height; minimize potential damage to infrastructure or structures	Security & Maintainance Road access requirements; fencing; accessory buildings
Land Use Compatibility Proximity to residential areas or projected growth areas; screening requirements; concealment/stealth design features	Aviation (FAA/FCC) Lighting; paint or other markings; proximity to commercial, recreational, and agricultural flight paths	Decommissioning & Assurance Performance bonds during construction; specific abandonment and decommissioning procedures

Additional: contractor licensing/registration, bridge attachment agreements, aerial pole attachment coordination.

Awareness: Federal Aviation Administration (FAA), Federal Communications Commission (FCC), and Federal Requirements

County zoning decisions do not govern FAA obstruction evaluations, FCC tower registration requirements, or FCC shot-clock rules. These are administered by federal agencies independent of local zoning authority. Counties must make zoning decisions independently and cannot condition approvals on the outcome of FAA or FCC processes. Applicants bear full responsibility for all federal filings, registrations, and compliance.

Federal law and regulations preempt many local regulations of telecommunications towers and other wireless facilities. For example, counties may not deny a permit for a telecommunications tower solely on the grounds of aesthetic considerations or concerns relating to environmental or health impacts; any denial must be well-documented and closely tied to existing zoning regulations. Additional federal preemptions apply to permits for tower site modification or equipment co-location.

FAA Obstruction Evaluation: Towers above 200 feet AGL or within certain distances of airports must file for FAA obstruction evaluation; aviation lighting may be required; Aviation Activated Lighting Systems (AALS) can reduce visual impact while maintaining compliance.

FCC Antenna Structure Registration (ASR): Towers meeting height thresholds must be registered in the FCC ASR system; registration is the applicant's responsibility; the ASR database (fcc.gov/asr) is publicly searchable and useful for co-location analysis

FCC Section 6409 — Eligible Facilities Requests: Federal law requires counties to approve eligible facilities requests (co-location or modification of existing towers) within 60 days; this shot clock runs independently of LB663 and counties cannot deny eligible requests that meet federal criteria

FCC Shot-Clock Rules — New Towers: Federal rules impose a 150-day shot clock on county review of new tower applications; failure to act may be deemed a denial; counties should track timelines carefully

Nebraska Dept. of Aeronautics: Coordinates with airport authorities on tower siting near airspace; consultation is encouraged for towers near airports or established flight paths

Section 106 — Cultural Resources: Federally licensed towers may trigger Section 106 review under the National Historic Preservation Act; the State Historic Preservation Office (SHPO) coordinates these reviews; this is the applicant's and FCC's responsibility

Cell Tower: Local, State, and Federal Regulatory Framework*

Level	Agency / Entity	Potential Reviews, Permits, or Coordination
Local	County Planning and Zoning Department	Tower siting permits, CUPs, special exceptions, zoning compliance, co-location review, small wireless review
	County Board	Permit approvals, right-of-way agreements, development agreements, public hearing review
	County Highway Department / Highway Superintendent	Right-of-way permits, fiber route approvals, road crossings, boring/trenching coordination, culverts, ditches, restoration standards
	County Emergency Management / Local Fire Department	Emergency access, public safety communications, construction access coordination
	Public Power District / Electric Utility	Pole attachments, electric service, utility crossings, make-ready work, coordination with existing infrastructure
State	Nebraska Department of Transportation (NDOT)	State highway right-of-way permits, utility occupancy, crossings, access permits
	Nebraska Department of Water, Energy and Environment (NDWEE)	Construction stormwater, erosion control, water quality, wetlands-related coordination
	Nebraska State Historic Preservation Office (SHPO)	Historic and archaeological resource review
Federal	Federal Communications Commission	Antenna Structure Registration, wireless siting rules, radio frequency compliance, communications licensing
	Federal Aviation Administration	Obstruction evaluation, lighting/markings, airport airspace compatibility
	U.S. Army Corps of Engineers	Section 404 wetlands/waters permits, stream crossings, fill activities
	U.S. Fish and Wildlife Service	Endangered species, migratory birds, habitat review

*This table is intended as a general reference and does not identify every permit, approval, or coordinating agency that may apply. Permit requirements vary by project and are subject to change.

Best Practices Summary

Counties should consider establishing clear zoning regulations and permitting procedures that distinguish between new towers, co-located facilities, and small wireless installations, recognizing that different facility types warrant different levels of review. Counties may consider requiring applicants proposing new towers to demonstrate that co-location on existing structures is not technically or commercially feasible before a new tower is approved. Setbacks, fall zones, and site design standards are encouraged to be based on tower height, structural engineering, public safety, and compatibility with surrounding land uses rather than arbitrary distances. Permit conditions may address access roads, drainage, utilities, fencing, security, visual screening, and long-term maintenance responsibilities where appropriate. Decommissioning requirements may also clearly define abandonment, establish timelines for removal, and require financial assurance sufficient to restore the site if the owner fails to act. Counties should remain aware of applicable federal requirements—including FAA obstruction evaluations, FCC Antenna Structure Registration, Section 6409 eligible facilities requests, and FCC shot-clock timelines—while recognizing that these processes operate independently of local zoning authority and remain the applicant's responsibility.

Appendix A: Recommended Checklist/Script for Facilitator of Planning and Zoning Hearing/Conditional Use Permit Application Hearing

Executive Summary for Elected & Appointed Officials

PURPOSE

This guide provides Nebraska local officials with a practical framework for conducting public hearings that are fair, orderly, legally defensible, and respectful. The primary goals are to:

- Create a complete public record.
- Provide all participants a fair opportunity to be heard.
- Maintain civility and order.
- Ensure decisions are based on applicable laws, regulations, and evidence—not popularity, emotion, or political pressure.

FOUR CORE PRINCIPLES

1. The Board Acts Under the Law

Public hearings are conducted pursuant to Nebraska law, local ordinances, regulations, and adopted procedures. Board members must apply the standards established by those authorities.

2. The Purpose Is to Build the Record

A public hearing is not a debate or public vote. Its purpose is to collect information, testimony, and evidence for the Board to consider when making a decision.

3. Everyone Deserves an Equal Opportunity to Be Heard

All participants should be treated respectfully, regardless of viewpoint. The presiding officer should apply procedural rules consistently to all speakers.

4. Decisions Must Be Based on Evidence and Applicable Standards

Board decisions should be based upon:

- Applicable regulations and ordinances
- Comprehensive plans and adopted policies
- Evidence presented during the hearing
- Nebraska law

Decisions should not be based upon:

- Number of supporters or opponents
- Audience reactions
- Personal attacks
- Political threats or pressure
- Emotion alone

RESPONSIBILITIES OF THE PRESIDING OFFICER

The Presiding Officer should:

- Remain neutral at all times
- Explain the purpose of the hearing and hearing procedures
- Maintain order and civility
- Apply speaking rules and time limits consistently
- Keep testimony focused on the matter before the Board
- Ensure every participant has a meaningful opportunity to be heard
- Clearly separate public testimony from Board deliberation
- Avoid comments that suggest support for or opposition to the proposal

PUBLIC PARTICIPATION EXPECTATIONS

To ensure a productive hearing:

Participants Should:

- Treat all persons with respect
- Address comments to the Board
- Remain focused on the issue under consideration
- Allow others to speak without interruption
- Disagree respectfully

Participants May Not:

- Engage in personal attacks
- Interrupt speakers
- Disrupt the hearing
- Engage in cheering, booing, or demonstrations
- Use abusive or threatening language

The Presiding Officer should immediately address disruptive conduct in a consistent and professional manner.

TESTIMONY MANAGEMENT TOOLS

When Discussion Becomes Emotional

Acknowledge concerns while redirecting participants to the hearing process and applicable standards.

When Personal Attacks Occur

Redirect testimony back to the issue before the Board.

When Interruptions Occur

Reinforce expectations of order, civility, and equal participation.

When Time Limits Expire

Politely conclude testimony and move to the next speaker.

When Testimony Becomes Repetitive

Allow speakers to state agreement with previous testimony rather than repeating lengthy comments.

When Comments Are Off Topic

Redirect testimony to matters relevant to the application, issue, or applicable standards.

When Written Materials Are Submitted

Receive written materials through designated staff so they may be included consistently in the record.

When Additional Procedures Are Necessary

The Presiding Officer may:

- Call a recess
- Continue the hearing to a future date
- Request conflict-of-interest disclosures from Board members
- Allow limited applicant response when authorized by procedure

Conflict of Interest & Ex Parte Communications

Prior to deliberation, Board members should disclose:

- Actual conflicts of interest
- Potential conflicts of interest
- Significant communications regarding the matter occurring outside the public hearing process

Disclosures should be made on the record.

Practical Reminders for Board Members

Do:

- Listen carefully
- Ask clarifying questions
- Remain professional
- Follow established procedures
- Focus on applicable standards
- Support a complete and accurate record

Do Not:

- Debate members of the public
- Permit disruptions to continue
- Consider audience size as evidence
- Allow personal opinions to substitute for applicable standards
- Predetermine the outcome before deliberation

SCRIPT FOR FACILITATOR OF PLANNING AND ZONING HEARING

WELCOME/REQUEST FOR CIVILITY:

Good morning/afternoon, thank you for taking time to attend today's hearing which shall be conducted pursuant to the requirements established by the Legislature in the **Open Meetings Act**. The committee/board will be taking up the amendments to the zoning regulations/conditional use permit or special exception applications in the order posted. This public hearing is your turn to come forward and be part of the public process to consider planning and zoning issues in _____ County. Like any public hearing or gathering, thank you for participating with CIVILITY and RESPECT for everyone attending this hearing **SIGN-IN SHEET FOR ATTENDEES** No public body shall require members of the public to identify themselves as a condition for admission to the meeting nor shall such body require that the name of any member of the public be placed on the agenda prior to such meeting in order to speak about items on the agenda. If you are planning to address the body, please fill out one of the testifier sheets on the back table, including an address and the name of any organization represented by such person unless the address requirement is waived to protect the security of the individual.

ANNOUNCE THAT PUBLIC COMMENT WILL BE AFTER PRESENTATION BY the zoning administrator/conditional use applicant(s):

Inform attendees that:

- No final decision has been made
- Public testimony is an important part of the process
- The Board's role is to gather information before deliberating

For Conditional Use Permit or special exceptions and zoning matters, consider receiving:

- Staff reports
- Applicant presentations
- Technical information

before opening public testimony.

INTRODUCTION AND PRESENTATIONS BY DESIGNATED REPRESENTATIVES OF POLITICAL SUBDIVISIONS:

PUBLIC COMMENTS FOLLOWING THE PRESENTATIONS BY THE DESIGNATED REPRESENTATIVES OF THE POLITICAL SUBDIVISIONS:

Please raise your hand if you intend to speak this evening so I can determine a reasonable amount of time which will apply to everyone from the public wishing to speak. Based on the number of individuals wanting to speak, each citizen will be given _____ minutes to comment. Direct comments to board members and questions will not be responded to rather the board members will ask speakers questions when necessary.

Please come forward if you wish to comment. I BEFORE SPEAKING, please also complete the Sign-In Sheet for Citizens Speaking located on the podium. Please also state your name, address, and any organization(s) you may represent so our record of this joint hearing is complete.

BOARD DELIBERATION

The Board should:

- Discuss evidence presented
- Apply applicable standards
- Deliberate openly
- Base decisions on the record

THANK EVERYONE FOR ATTENDING:

Thank you again for taking time to attend this public hearing. As I stated earlier, the ultimate TRANSPARENCY and more details are provided at the hearing of every political subdivision pursuant to the provisions of the Open Meetings Act which has been in effect for decades. Local elected and appointed officials sincerely appreciate your input and ideas!

FOR ADVERTISING

Americans with Disabilities Act (ADA) Accommodation Hearing Testimony Permitted (draft language – sample)

The Planning Commission/County Board has established an Americans with Disabilities Act (ADA) accommodation of public hearing written testimony for qualified individuals who have a physical or mental impairment that substantially limits one or more major life activities (as defined in Title I of the American with Disabilities Act, C.F.R. 35.108).

Qualified individuals may submit written public hearing testimony [if applicable, via an online portal]. As an eligible individual submitting written testimony, the person's name and position will be listed on the hearing statement with a notation that the testimony was submitted as ADA Accommodation Written Testimony.

If you are a qualified individual and would like to submit ADA Accommodation written testimony on a conditional use permit or special exception for public hearing, contact the clerk at xxx.xxx.xxxx. ADA Accommodation written testimony is allowed once the public hearing has been scheduled and must be submitted and verified prior to 8:00 a.m. CST/MST on the morning of the public hearing.

Appendix B: Pre-Application Process for Applicants

PHASE 1: INITIAL PROJECT REVIEW

- Schedule pre-application meeting with county staff
- Identify primary county point of contact
- Review zoning district and land use classification
- Determine whether the proposal requires a permitted use, conditional use permit, special exception, rezoning request, or planned development approval
- Review comprehensive plan consistency
- Identify nearby land uses and sensitive receptors
- Discuss anticipated project timeline

PHASE 2: COUNTY DEPARTMENT COORDINATION

- Meet with zoning administrator
- Review applicable zoning regulations and setbacks
- Consult with county attorney regarding agreements and legal considerations
- Coordinate with highway superintendent regarding roads, bridges, haul routes, and road-use agreements
- Coordinate with emergency management and fire services regarding emergency access and response planning

PHASE 3: UTILITY AND INFRASTRUCTURE COORDINATION

- Meet with Public Power District representatives
- Identify utility service availability and capacity
- Confirm interconnection requirements
- Identify transmission infrastructure and substation needs
- Review utility upgrade responsibilities
- Discuss Nebraska Power Review Board requirements, if applicable

PHASE 4: REGULATORY PERMIT REVIEW

- Identify required local permits and approvals
- Identify required state permits and approvals
- Identify required federal permits and approvals
- Determine agency consultation requirements

PHASE 5: REQUIRED PLANS AND STUDIES

- Site plan and buildable area map
- Survey and legal description
- Road-use or road maintenance agreements
- Traffic impact analysis
- Grading, drainage, and erosion control plans
- Stormwater management plan
- Decommissioning plan and cost estimate
- Financial assurance documentation
- Emergency response plan
- First responder training plan
- Noise, glare, odor, or visual impact studies as applicable
- Utility interconnection and infrastructure plans
- Wetland, floodplain, and environmental assessments as applicable

PHASE 6: SAFETY AND EMERGENCY PLANNING

- Fire protection plan
- Hazardous materials management plan
- Site security plan
- Emergency contact list
- Incident notification procedures

PHASE 7: FINANCIAL AND LEGAL DOCUMENTATION

- Decommissioning agreement
- Bond or other financial assurance
- Community benefit agreement, if applicable
- Development agreement, if applicable
- Road-use agreement
- Maintenance agreement

PHASE 8: APPLICATION COMPLETENESS REVIEW

- Submit completed application form
- Submit required fees
- Submit all required plans, studies, and agreements
- Complete county completeness review
- Address identified deficiencies
- Obtain completeness determination

Appendix C: Selected Legal Foundations and Case Reviews

FOUNDATIONS OF ZONING AUTHORITY

***Village of Euclid, Ohio v. Ambler Realty Co.* 272 U.S. 365 (1926)**

The case of *Village of Euclid, Ohio v. Ambler Realty Co.* is widely considered the foundation of modern zoning in the United States. Although land use regulation dates back centuries, including practices originating in Spain and later incorporated into English colonial charters, the *Euclid* decision established the constitutional legitimacy of zoning in America.

In *Euclid*, the United States Supreme Court upheld local zoning regulations as a valid exercise of a community's police powers. The Court recognized that local governments may regulate land use to protect the health, safety, morals, and general welfare of their citizens.

Why It Matters to Counties: The *Euclid* decision remains the legal foundation for county zoning authority and land use regulation throughout the United States.

CONDITIONAL USE PERMITS, SPECIAL EXCEPTIONS, AND LB 663 (2026) PROCEDURES

Nebraska Conditional Use Permit and Special Exceptions Timelines

Nebraska law establishes specific timelines for reviewing and deciding conditional use permits and special exceptions.

Once a county board receives a recommendation from the planning commission, the board has thirty days to determine whether the application is complete. If the application is incomplete, the board must notify the applicant in writing within ten days and identify the information needed to complete the application. Upon receiving additional information, the board has thirty days to determine whether the application is complete.

After determining that an application is complete, the county board has ninety days to grant or deny the conditional use permit or special exception. If the board fails to act within the ninety-day period, the application is deemed approved.

Authority: *Neb. Rev. Stat. § 23-114.01(7)*

Materially New Information

If, after receiving the planning commission's recommendation and before the expiration of the ninety-day review period, the county board obtains information that materially affects the application, the board may require submission of a new application or additional information.

In such cases, the board must take action during an open meeting and schedule a hearing not less than ninety days after taking that action. The board then has ninety days following submission of the new information to approve or deny the application. If no action is taken within that period, the permit is deemed granted.

Authority: *Neb. Rev. Stat. § 23-114.01(7)(d)*

Why It Matters to Counties: County boards should maintain careful records, monitor statutory deadlines, and ensure that any requests for additional information are based on information that materially affects the application.

MORATORIUMS AND INTERIM DEVELOPMENT CONTROLS

Tahoe-Sierra Preservation Council, Inc. v. Tahoe Regional Planning Agency **535 U.S. 302 (2002)**

In *Tahoe-Sierra Preservation Council, Inc. v. Tahoe Regional Planning Agency*, the U.S. Supreme Court considered whether two development moratoriums totaling approximately thirty-two months constituted a taking of private property.

The moratoriums were adopted to preserve the status quo while regional planners studied development impacts and prepared a comprehensive plan. The Court held that temporary development moratoriums are not automatically considered regulatory takings. Instead, moratoriums must be evaluated based on the specific facts and circumstances of each case. In *Tahoe*, the court held that two moratoria, totaling 32 months on development was permissible and not per se takings.

The Court emphasized that temporary moratoriums can be valuable planning tools that allow local governments to gather information, evaluate alternatives, and make informed land use decisions. However, the duration of a moratorium remains an important factor when evaluating whether a taking has occurred.

Why It Matters to Counties: Temporary moratoriums may be legally permissible when they serve a legitimate planning purpose and are reasonably limited in duration. Extended moratoriums may receive greater judicial scrutiny. All moratoriums should be carefully evaluated with county attorneys.

PROPERTY RIGHTS, DUE PROCESS, AND TAKINGS

Private Property Rights

Nebraska courts have long recognized the importance of private property rights.

In *Strode v. City of Ashland*, the Nebraska Supreme Court stated:

"The right to full and free use and enjoyment of one's property in a manner and for such purposes as the owner may choose, so long as it is not for the maintenance of a nuisance or injurious to others, is a privilege protected by law."

Authority: *Strode v. City of Ashland*, 295 Neb. 44, 886 N.W.2d 293 (2016).

Why It Matters to Counties: County officials should balance private property rights with the county's authority to regulate land use for the protection of public health, safety, and welfare.

CONSTITUTIONAL PROTECTIONS

United States Constitution

U.S. Const. Art.I, §10, cl. 2.

No State shall ... pass any ... Law impairing the obligation of contracts.

Fifth Amendment (Takings Clause)

"...nor shall private property be taken for public use, without just compensation."

The Takings Clause prohibits government from taking private property for public use without providing just compensation.

Fourteenth Amendment (Due Process Clause)

"...nor shall any State deprive any person of life, liberty, or property, without due process of law."

The Due Process Clause requires fair procedures and protects property owners from arbitrary governmental actions.

Nebraska Constitution

Article I, Section 3 — Due Process and Equal Protection

"No person shall be deprived of life, liberty, or property, without due process of law, nor be denied equal protection of the laws."

Article I, Section 21 — Takings

"The property of no person shall be taken or damaged for public use without just compensation therefor."

***Penn Central Transportation Co. v. New York City* 438 U.S. 104 (1978)**

In *Penn Central*, the U.S. Supreme Court established the primary balancing test used to evaluate regulatory takings claims.

The Court identified three factors:

The economic impact of the regulation;

The extent to which the regulation interferes with reasonable investment-backed expectations; and

The character of the governmental action.

Why It Matters to Counties: The Penn Central balancing test remains the primary framework for evaluating whether a land use regulation constitutes a regulatory taking.

***Nollan v. California Coastal Commission* 483 U.S. 825 (1987)**

In *Nollan*, the Supreme Court held that permit conditions requiring dedication of property must have a logical connection, or "essential nexus," to the impacts of the proposed development.

Why It Matters to Counties: Permit conditions should be directly related to legitimate public purposes and project impacts.

***Dolan v. City of Tigard* 512 U.S. 374 (1994)**

In *Dolan*, the Supreme Court expanded the *Nollan* analysis and established the "rough proportionality" test.

The Court held that permit conditions must not only be related to project impacts, but must also be roughly proportional to those impacts.

Why It Matters to Counties: Counties should ensure that permit conditions, mitigation requirements, and infrastructure obligations are proportional to the impacts of the proposed development.

***Koontz v. St. Johns River Water Management District* 570 U.S. 595 (2013)**

In *Koontz*, the Supreme Court reaffirmed the principles established in *Nollan* and *Dolan*.

The Court held that governments may not condition permit approval on the surrender of property rights unless there is both a nexus and rough proportionality between the condition imposed and the impacts of the proposed development.

Why It Matters to Counties: Permit conditions should be carefully crafted to ensure they are legally connected to project impacts and are not excessive.

Sheetz v. County of El Dorado
144 S. Ct. 893 (2024)

In *Sheetz*, the Supreme Court clarified that the Takings Clause applies to legislatively imposed permit conditions and development impact fees, not just conditions imposed through individual permit decisions.

Why It Matters to Counties: Development fees and permit conditions adopted by ordinance may still be subject to constitutional scrutiny under the Takings Clause.

REGULATORY TAKINGS

The Nebraska Supreme Court has recognized two categories of per se regulatory takings: Government actions that require a permanent physical invasion of his property; however minor, and Where regulations completely deprive a property owner of all economically beneficial use of property.

Authority: *Strode v. City of Ashland*, 295 Neb. 44, 886 N.W.2d 293 (2016).

Why It Matters to Counties: Counties should consider potential takings implications when adopting regulations, imposing permit conditions, or restricting land uses.

EMINENT DOMAIN

"Eminent domain is the right of the government to take private property for public use upon payment of just compensation to the owner."

Source: *Nebraska Planning Handbook, Second Edition (2025)*.

For example, Nebraska law authorizes county boards to acquire property for roads and related public purposes through gift, dedication, purchase, lease, prescription, or eminent domain.

Authority: *Neb. Rev. Stat. § 23-108*.

Why It Matters to Counties: Counties should distinguish between land use approval decisions and separate eminent-domain proceedings authorized by law.

Appendix D: Case Studies

KAREN BREDTHAUER - HALL COUNTY

Comprehensive Plan and Conditional Use Permits

In December 2025, Hall County updated its comprehensive plan for the first time since the 2000s. The county also developed a livestock zoning matrix for helping handle permit applications. Applicants have to meet certain thresholds outlined in the matrix that consider factors like neighbors, proximity to water sources, setbacks, and filings with the Nebraska Department of Environment and Energy.

County Commissioner Karen Bredthauer said the matrix and comprehensive plan reduced conflict during county board meetings because the expectations and requirements are already very clearly outlined.

Bredthauer said common examples of conditions the board places on CUPs include things like imposing hours of operation and road usage plans on gravel pits and asphalt plants. This cuts back on noise disturbances and helps protect weak bridges and roads from excessive heavy-vehicle traffic.

Hall county evaluates compatibility and monitors/enforces compliance primarily through neighbor feedback. Bredthauer said that community response is their clearest indication of whether or not there's a problem. Compliance is also monitored through complaints submitted either to zoning officials or to the board directly. When concerns are raised, someone is promptly sent to inspect the site and report findings back to the board.

Moratoriums

Hall County has not implemented a moratorium during Bredthauer's time, but she acknowledged that moratoriums could become necessary and imagined that one would likely be imposed if there was a proposal for something that wasn't already addressed in existing zoning regulations. In that situation, she said commissioners would likely pause approvals long enough to solicit professional guidance.

Public Hearings

Hall County encourages public participation through social media and notices in the newspaper, but Bredthauer said the most turnout comes when people hear about upcoming potentially contentious hearings through word-of-mouth.

A proposal for a data center garnered a lot of negative attention from Hall County residents. Bredthauer said that community members packed the boardroom to express their concerns about noise, water use, electricity use, and its proximity to homes. In the case of controversial hearings like this, law enforcement is present and the county board chair outlines basic rules: each person gets three minutes, and everyone should try to avoid repetition. So, if someone already made the same points you were planning on making, it's not necessary to repeat them to the board.

Decision-Making Process

Land use decisions in Hall County are guided by the comprehensive plan, existing zoning regulations, and consideration of what already exists in the neighborhood. The pre-established criteria outlined in the matrix also helps ease the decision-making process.

Bredthauer said that an example of a time Hall County had to take a creative approach to a land use request was when a citizen wanted to build a composting facility. Several commissioners and neighbors initially opposed the project, but Bredthauer eventually convinced the board to establish a three-month test site. During this trial period, commissioners and nearby residents met to monitor conditions – paying special attention to odor, which was the primary concern. At the end of the three months, they realized that the smell wasn't much different from what already existed near feedlots and the facility was approved.

Livestock Operations

Bredthauer said livestock remains a major land use issue in Hall County, but setback requirements and the expansion of rural residences has limited the opportunity for development. She stressed the importance of establishing a matrix for permit requests to optimize the application process.

Solar Development/Wind Energy

Hall County is at the bottom of the list for wind energy development because of the Platte River crane migration flyway. Bredthauer said solar projects are also limited, but those that do exist are usually within city limits and do not encroach on prime farmland.

Data Centers

Data center proposals create unique concerns as outlined in the above recounting of a data center proposal that stoked negative community response. Bredthauer said that the county has to consider power availability and existence of extra power substations for data center proposals.

For the approved data center at the Army ammunition plant site, the electrical infrastructure already existed. The county also put regulatory language into the contract for the datacenter so that there are automatic load shutoffs during high-usage periods.

Looking Ahead

Bredthauer doesn't anticipate any large changes in land use concerns in the next 5-10 years, but she recommends that counties set up good comprehensive plans and establish permit application matrixes like the one in Hall County to navigate any future issues. She also noted that soliciting expert input and developing study groups is the most effective way to develop objective and effective comprehensive plans and application matrixes.

RICH NELSON & HILLARY BETKA - HAMILTON COUNTY

Comprehensive Plans and Conditional Use Permits

When updating its comprehensive plan and zoning regulations in 2018/2019, Hamilton County made a point to hold public meetings and meet with the villages to help inform the development of their standards. Planning and Zoning Administrator Hillary Betka said that when the planning commission receives an application, she goes through the comprehensive plan and ensures that it both aligns with the standards and with what the plans are for the future of the county. They rely on both a zoning matrix and the comprehensive plan to guide their decisions on conditional use permits or special exceptions.

Commissioner Rich Nelson said the key elements they pay careful attention to for any given land use project include whether it will be detrimental to public health, safety, morals, comfort, and general welfare of the public.

A commonly applied condition to approved permits is that if it's industrial or another type of large development, the county requires that once its use is up, the owner must restore the land to its previous use. Conditional use permits might also have time limits for when they need to be up and operational or the county might only approve its use for a certain amount of time, and after that time expires the land needs to be returned to the original intent of the zone.

Similarly, if the project begins negatively affecting the surrounding area, the impetus to mitigate that harm is on the land user. For instance, a construction batch plant was approved with the condition that if complaints about odor arose, the plant would be responsible for deodorizing and decreasing the odor footprint.

Enforcing compliance falls to the planning and zoning commission. Hamilton County once faced a particularly difficult enforcement when someone moved his building into the right-of-way without applying for a conditional use permit or special exception. The building was a company that was using the building for storage – a large toolshed of sorts – but the owner also wanted to store irrigation equipment on the property surrounding the building. Betka got word from the highway department that despite her warnings to the owner that he needed to go through the appropriate application channels, he was moving forward with the project anyway.

The building violated setback requirements for the right-of-way, and Betka once again contacted the owner to make him aware of the issues and inform him that he needed to go through the conditional use permitting process. It ended up taking quite a few months for all of the conditions on the project to be laid out, and the owner ended up having to cut the building off in order to comply with setback requirements. Nelson said the county stayed firm, even though during the process the individual who had moved the building rallied customers in the community to come forward and advocate for the location of the building. Even still, the commission and the board felt it was important not to make exceptions – and the owner ended up paying the consequences by having to physically alter the building in order to meet the standards in county regulations.

Moratoriums

Hamilton County placed a moratorium on solar permits after reviewing current solar regulations and deciding they didn't feel they were up to date – especially given the large size of commercial solar projects. So, they put the moratorium in place while they re-evaluate setbacks and figure out what's best for the county. They want a broader understanding of planning and zoning from a statewide perspective, which is why they also have a third-party planning consultant assisting them. The solar moratorium was recently extended for another six months. Betka said the county is at a point where they're really close, but to have made all of the progress on developing standards that they have thus far and then to rush it at the end wasn't what the planning commission wanted, so it asked for the six month extension to ensure everything was absolutely right. In six months, they will review the regulations and solicit suggestions from the board before moving into public hearings.

Nelson said Hamilton County had a moratorium on wind projects for a while. Residents had made signs protesting wind energy and invited opponents of wind generation to testify before the board. Like with the solar moratorium, the wind moratorium was enacted because the county did not feel comfortable with the regulations and standards they currently had in place. Nelson said that when he looks back on the wind issue, he remembers that by the time they were at the point of finalizing regulations for wind, he had a stack of papers two feet tall of studies he received from proponents and opponents. He remembered that some people felt so passionate about wind energy that they wanted commissioners recalled for even considering it. When the moratorium expired and they had established their regulations, Hamilton County was left with only a couple of places where wind projects would even be feasible.

Public Hearings

Both Planning Commission and Board of Commissioners meetings are advertised ten business days prior to the meeting and are published on the Hamilton County web page. Commission meetings are primarily held at the fairgrounds, whereas board meetings are held in the courthouse. However, Nelson said that with potentially contentious topics they will either reserve a larger room in the courthouse or host the meeting at the fairgrounds to accommodate the larger crowd. They invite a sheriff or deputy to attend meetings, and with larger meetings, they sometimes use a moderator, which Nelson said helps ensure that the board can pay full attention to those who are speaking. For the wind energy public hearings, commissioners decided to move their meetings to the evenings so that more people could attend.

Decision-Making Process

Hamilton County uses a finding of facts worksheet that lays out all considerations for public impact – everything that should be considered in approving or denying a conditional use permit. It's used for every conditional use permit that's brought in front of the commission. If the project violates any of the considerations outlined by the worksheet, a condition can be imposed to address it. Nelson said the

finding of fact worksheet then stays with the application and the board reviews the worksheet again to ensure commissioners agree with the planning and zoning commission's assessment.

A few examples of considerations outlined in the worksheet include: "the use will not be injurious to the enjoyment of other property in the immediate vicinity, the use will not endanger the health, safety, morals, comfort, or general welfare of the public, adequate utilities, access roads, drainage, and/or necessary facilities have been or are being provided, the use does not include vibration which is noticeable, without instruments, on any adjoining lot or property," and much more. There is also a place on the worksheet for planning commission members and/or board members to add their own considerations that they believe need to be addressed. The county attorney attends most of the planning commission and board meetings to address any legal concerns.

There have been significant issues that have required extra steps during the decision-making process. Nelson referenced a green ammonia plant that would have brought a number of challenges from electrical needs to water usage. He said that after listening to public concerns about adjacent wells running dry and other resource shortage issues, they sought input from natural resources districts on what the true impact of the green ammonia plant would be on the aquifer.

This ultimately prompted a moratorium on large water users while they conducted a water study, which is being done in conjunction with the city of Aurora and Olsson Engineers. Betka said that the study group meets either weekly or monthly for progress meetings.

According to Nelson, the study is almost complete. The objective is to gather data on how large water users would actually impact wells in the surrounding area and the aquifer overall. It is meant to be a tool they can use to accurately weigh pros and cons of things like the ammonia plant that would use a large amount of water. Nelson also said that the study will also help maintain fairness and transparency when it comes to the decision-making process.

Livestock Operations

Nelson said Hamilton County is livestock friendly and they adopted a livestock matrix provided by the State of Nebraska. The matrix operates on a point system, which Betka said is very effective in helping them assess and regulate. Applicants need a certain number of points to be eligible for the permit. Nelson said it has helped simplify dealing with the public because it shows them that there's a system in place that they use every time they consider a CUP.

Solar Development/Wind Energy

As of July 2026, Hamilton County is still in the process of reviewing its solar regulations, evaluating setback requirements, and determining what's best for the future of the county. They have a third-party consultant assisting them, which Betka said is valuable for understanding the issue on a broader, state-wide level.

Hamilton County faced a lot of public resistance to wind projects – some even going so far as making protest signs and invited opponents of wind generation to testify before the board. Commissioners implemented a moratorium while they assessed current standards and, ultimately, imposed regulations and standards that Nelson said left the county with very few places where a wind project could realistically be established.

Data Centers

Betka and Nelson said the key considerations unique to data center proposals are the energy and water usage issues. Betka noted that datacenters don't bring many permanent jobs, but she understands how the facilities can do some good for the institutions that need them, like hospitals. Nelson added that Hamilton County has some of the most productive farmland in the country, and so people get very concerned when you start removing or impeding on that agricultural ground.

At the end of the day, Betka said that Hamilton County does not have the power infrastructure to handle a largescale project like a datacenter, and Nelson echoed that electricity and power infrastructure is already a major concern for the county.

Looking Ahead

Betka said that she can see nuclear energy and battery storage become emerging issues in the foreseeable future. Nelson noted that if you look back at all of the changes that have happened in the last 5-10 years, it really shows that we don't know what could happen.

Overall, Betka believes that Hamilton County has handled land use issues very well and that hiring a consultant to assist was helpful. She stressed the importance of speaking to other counties to see what their process is and what has been productive for them. Communicating with people in the same field and same situation is important because it can get stressful, but most counties are going through the same thing. She said that it's not that you have to backpack off what others are doing, but it's good to get those perspectives.

RANDY OBERMEIER – YORK COUNTY

Comprehensive Plans and Conditional Use Permits

In York County, Commissioner Randy Obermeier said that the standards that guide approval or denial of conditional use permits are outlined in their zoning rules, but when requests come forward, he likes to consider the request from all angles: who is asking, how does it fit, what are they using it for, and, most importantly, will it do harm?

Obermeier said the most common type of CUP request in York County is for an extra dwelling within a 40-acre parcel. For these requests, the board considers the value an extra dwelling may bring. For instance, a man with twenty acres wanted to build a second house on his property for when family visited and he was also a big part of his church, so he wanted that house to also be available to travelling ministers. The board approved the permit on the condition that he parceled the property separate from his twenty acres. They also required that the secondary house has its own sewer and electric separate from the primary house to ensure that down the line, nobody will have to figure out how to separate those resources.

Another applicant wished to build a second house, and the board approved the permit but gave the family one year after the end of construction for them to tear down or move the old house.

Obermeier's rationale for approving or denying permits relies heavily on the objective facts of any given request. He said he thinks about what evidence exists that harm could be done beyond aesthetic complaints. The complaints about visual impacts of certain facilities or infrastructure, he said, are often rooted in emotion.

After approving the permit, Obermeier said it's each commissioner's responsibility to fact-check and help monitor and enforce compliance. Also, the board tries to delegate certain responsibilities to the landowner – requiring them to report on progress so that when things are completed, the zoning administrator can inspect them. Because of LB663, York County is looking to establish a process that gives the zoning commission more authority to make decisions on CUP applications instead of making the constituent go through the entire process in front of the zoning board and then repeat it again in front of the county board. He said they'd like to give them the power to carry out the straightforward CUPs, making the commissioners the first in line for people who wish to appeal the zoning board's decision.

Moratoriums

York County hasn't had to consider a moratorium, but Obermeier said he imagined that they would implement one if it became necessary.

Public Hearings

York County ensures public hearings are accessible by publishing them on Facebook and in the newspaper. However, Obermeier said that their most effective form of communication both before, during, and after public hearings is through the public information director who they hired and who he said a lot of community members-

follow for updates on county business.

Melanie Wilkinson runs a popular news and opinion website called Just Melanie W., where she publishes county news and assists department heads in their communications efforts. Obermeier said it's an effective way for the county to control some of the coverage and tell its own story.

The county board always asks law enforcement to attend the meetings, but Obermeier said that a well-executed board meeting is just a matter of running it in a controlled way. When he was the county board chair, he said he swiftly shut down escalating behaviors because it was up to him to set the tone from the beginning and maintain a sense of control throughout the meeting.

During his time as the board chair, York County was navigating intense public pressure related to a potential 2,500-acre solar field. Obermeier said that it was a subject that caused a lot of emotional reactions, and he prioritized giving community members the respect they deserved while also being diligent if they started getting out of hand. An effective method for maintaining control in the boardroom is the countdown clock. York County allows three minutes per person when speaking at public hearings. They have a TV set up behind the board that counts down so that attendees know when their time has finished.

On weighing public input against technical or expert recommendations, Obermeier said that the conclusion arrives at depends on where the recommendations come from. He said that oftentimes people go seeking confirmation bias when they do their research and present it to the board, so it's the board's responsibility to look into what the issue actually is and what the motivations might be for the person bringing that information forward. He said it's important to hear out both sides, but the vote should come from a rational place, not an emotional one – especially when you come to understand that when people are trying to influence your opinion, they tend to only bring forth the data and arguments that most strongly support their case. He prioritizes not hurting their feelings, but relying on rational thought, because, ultimately, there may come a time that you need to defend your decision in a court of law.

Similarly, Obermeier said that he is transparent about his decisions during hearings. He goes beyond telling the public how he's voting and explains why he's voting the way he is. For instance, when he voted against implementing large setback requirements on solar fields, it was because he felt that landowners' rights were the first priority as long as they weren't hurting anyone.

Decision-Making Process

York County's land use is mostly farmland, so, as far as making decisions, Obermeier said he looks at what's brought forward, tries to think outside the box, and holds a strong belief that landowners should be able to dictate what happens on that land. If a landowner wants to do something with their land, they should be able to do so as long as it's not doing substantial harm.

To balance property rights with community impact, Obermeier tries to listen to the whole community, not solely the opinions of those who show up at hearings. He said that this was especially important when it came to the solar issue because a lot of people had an opinion about it, but not all of them were able to present their opinions directly in front of the board. Whether it's because they don't like confrontation or they can't attend because of their schedule, Obermeier said that it's a board member's job to give equal weight to their opinion and listen to their constituents.

In addition to community opinion, input from planning staff and legal counsel carry significant weight when making a decision. However, Obermeier noted that, at the end of the day, it's the board members who are held accountable for the decisions they make, so while he always takes their recommendations on board, he prioritizes drawing his own rational conclusions.

For example, Obermeier had a CUP application for 11 acres on a T-intersection where there were already two houses within the 40-acre parcel. The planning and zoning board was not in favor of it, but Obermeier felt that since it was a young family looking to put a three-quarter-million dollar home on 11 acres of creek-bottom property, the value of both bringing that family into the community and approving it from a tax-base standpoint made the decision to approve the application a no-brainer.

Livestock Operations

Obermeier said that the key concerns surrounding livestock CUPs are the odor footprint and runoff issues. The board has to fully understand how an operation will fit into its potential neighborhood.

Obermeier balances agricultural growth with neighboring landowner concerns by listening to those concerns, but he thinks that if an applicant has taken the time to go through the application process and meets all the zoning rules, it's their right to do what they want on that property. However, if their proposal goes beyond the outlined conditions in a way that affects their neighbor, he's more likely to side with the neighbor.

Solar Development/Wind Energy

York County was looking at an application for a 2,500-acre solar field outside of McCool Junction, where there was an overhead power line and substation, so the necessary infrastructure already existed that would make the area prime for a solar project. He saw that there was an excellent opportunity for these acres being rented from landowners to create generational wealth and bring an influx in wages – and therefore an influx in spending within the county. The public was resistant to the way the solar field would visually change the landscape. Ultimately, the board imposed large setback requirements that Obermeier believes could potentially prevent future solar projects in York County.

Data Centers

Obermeier said that datacenters present their own set of unique issues, including massive infrastructure demands that could negatively impact residents. He said that the board would have to take into account the potential water and power issues and, in his opinion, ensure that communities aren't shorted on their resources. Even if datacenters generate money, he said the board would have to have a long, thoughtful conversation about the negative impacts on York County residents.

Looking Ahead

Obermeier said conversations about solar projects aren't going away, despite the strong opposition. Education is the most effective way to manage growth and an increasing demand for land use projects. He said that in York County, they have generations of families who have always used their land for the same thing, and the only way to make them understand how their land might be used in a different way is for trusted leaders to spearhead education efforts.

Navigating county land use issues should be a collaborative process. Obermeier said it's important to learn from fellow counties and communicate with them about the challenges they're facing. He said that every county is unique, but the fact is that they're all dealing with the same opportunities and oppositions.

CHELSEA JOHNSON – LANCASTER COUNTY

Comprehensive Plans and Conditional Use Permits (CUPs)

Lancaster County utilizes its zoning regulations to guide decisions about conditional use permits. The zoning regulations were developed with public input and are based on the county's comprehensive plan, which is reviewed every 5 years.

Commissioner Chelsea Johnson said that when they receive conditional use permit applications, they receive a report from the planning department staff as well as a recommendation from the planning commission. The report from the planning department staff typically includes research with citations into commonly raised questions/concerns about the specific use type. The work done by the planning commissioners and staff provides the county board with substantive guidance.

"Our zoning regulations are based on the comprehensive plan, which outlines the long-term vision for the county. We have different zoning districts and land uses that are defined as compatible within those. For example, agriculture is the dominant land use in Lancaster County, accounting for ~75% of the County's total land area. Our zoning regulations articulate that our AG district is intended to encourage a vigorous agricultural industry throughout the county and to limit urban sprawl as typified by urban or acreage development. We allow livestock facilities, wind, solar, and battery storage by special permit in our AG district because these land uses are consistent with our goal to limit urban sprawl and maintain a robust agricultural economy in our AG District," Johnson said.

Conditions most commonly applied to CUPs are erosion control plans, road use agreements, vegetation management plans, decommissioning plans, emergency response plans and training, and additional setback requirements to address unique circumstances that are project specific.

To monitor and enforce compliance, some of the conditions, like an erosion control plan and road use agreement, must be met before the applicant is allowed to receive their building permit. Other conditions, like noise, vegetation management implementation, etc., are complaint-based because instances for non-compliance would occur after the project has been built. If the complaint is investigated and non-compliance is verified, then there are three main avenues Lancaster County has used to address that. First, the county talks with the project-owner and asks them to resolve the issue. If the permit holder refuses to come into compliance, then the permit could come before the planning commission and county board for revocation or a criminal action could be filed.

Johnson said trends in the types of CUP requests coming forward have included wind, solar, battery storage, and poultry facilities.

Moratoriums

Johnson said she is not aware of Lancaster County instituting a moratorium.

"Lancaster County's zoning regulations and our planning department's ability to work with prospective applicants have been sufficient to allow for development while addressing well-cited concerns," she said.

Public Hearings

To manage public hearings, Lancaster County utilizes a script that details the timeline that interested parties can expect.

"In Lancaster County we hold a public hearing and then we vote at the next meeting. This is explained to those in attendance. The Chair explains the order of operations for the hearing, i.e. the applicant goes first, then proponents, then opponents, then neutral, then the applicant has an opportunity at the end to respond to any questions that may have been raised during the hearing. The Chair also articulates expectations around behavior in the room, i.e. keeping to the time limit allotted, respectful tone, no booing/cheering, etc. We do have a Sheriff's Deputy in attendance," Johnson said.

Public input is important and Lancaster County works to address those concerns that would have a measurable impact on neighboring properties. For example, during a hearing for a solar project, a neighboring landowner raised concerns about erosion impacts to their property. The board added conditions to the permit around the erosion control plan and vegetation management plan to address this site-specific concern. The solar project existed and was coming before the county board because there were tax-paying landowners who had willingly signed up their land to participate.

"The county needed to balance the property rights of those landowners who wanted to lease a portion of their land for the solar project with the concerns of their neighbors. We worked to strike that balance with the special permit as best as we could," Johnson said.

Decision-Making Process

During the decision-making process, the Lancaster County Board works to identify what community impacts are measurable and work to address those measurable impacts through reasonable means in the conditions we apply. These projects exist because one or more landowners have signed up to participate and use his or her land for the purpose being applied for. Johnson said she thinks it's important for the County to take as little property through regulatory action as possible.

Solar Development/Wind Energy

Johnson said it is her view that the government should not take more land by regulatory restrictions than necessary. In regard to prime farmland, she tends to trust the landowner to use their land in the way they see as most beneficial for their own farming operation and for any future generations that may take over that responsibility.

"I keep in mind that with these projects, we're talking about willing landowners who have signed up their property to participate. There are other impacts of this type of development to consider and work to mitigate, but in terms of impact to prime farmland, those impacts are almost exclusively tied to the land that has been signed up for a lease. That said, both wind and solar are compatible with farmland at the site itself and neighboring property. With neighboring property, the county should ensure that the setback is at least far enough away that were a tower to fall, it would have zero impact on the neighbors. This of course does not address visual impacts, but it does address physical impacts to neighboring property," she said.

In regard to the participating landowner where the wind turbine is actually located, Johnson said that each turbine base takes up about 2-2.5 acres and the land can be farmed or grazed very close to the base, so minimal land is taken out of production. With solar, the land is taken out of production for the lease term, but if your vegetation management plan requires perennials that benefit pollinators, then you are likely to see improved soil conditions at the end of the project's life. Additionally, in places where this vegetation management approach has been used, there have been demonstrated increases in local pollinator populations which provide benefit to the surrounding area. Johnson noted that more solar projects are also starting to use agrivoltaics which allows farming and grazing to exist alongside the panels throughout the life of the project, which further enhances the agricultural compatibility.

Lancaster County has approved nearly 1 GW of energy facilities, which will provide the county with over \$5 million in tax revenue every year once operational. Johnson said that the solar project currently under construction has created jobs within the county, utilizing both local workers and workers from out-of-county, bringing in revenue for our shops, restaurants, and hotels – which also brings in sales tax revenue.

"As we look at budget cuts to keep our property tax request low, this additional revenue will be very helpful for continuing to provide important services in the county – particularly as we are seeing funding cuts at the state and federal levels," she said. "I try to look at the concerns holistically and work to mitigate the measurable impacts that could affect neighbors as well as the community as a whole. On principle I don't think it's right for a county to effectively take away someone's property rights through regulatory action without a strong rational nexus that is based in measurable, demonstrated impacts."

Such measurable impacts include erosion impacts to neighboring property, which is why Johnson advocated for additional erosion control conditions to be placed on the solar project that most recently came before the county board.

Johnson noted that in Nebraska, we are more accustomed to seeing hedgerows than we are to seeing solar panels. While she doesn't think that visual preference is a strong rational nexus to take away someone's property rights, she

does think it's completely fair to try to mitigate and reduce the visual impacts as much as possible by requiring the developer to put enhanced visual screening in place – which was another condition that the county put on the solar developer in Lancaster County. She said that development of these projects can have impacts on roads and bridges – the developer should pay for any infrastructure changes that are needed as a result of their project and we require them to do so through our road use agreement.

"I also keep in mind what tax dollars mean in terms of services that we can provide to the community at large. These projects generate significant tax revenue which we then use to pay for gravel, necessary equipment, and public safety, which can allow for a smaller share of the pie to be taken from our residents in property tax," Johnson said.

NICK NOLTE – GIS ADMINISTRATOR, CITY OF GRAND ISLAND

Since the mid-1990s, Hall County and the City of Grand Island have had a shared services GIS model that extend resources and help save money on overhead costs. Grand Island GIS Administrator Nick Nolte said that the interlocal agreement gives counties access to the wider range of resources that the city has access to, like more server licenses, network analysts, 3D analysts, and much more.

“What it boils down to is that, before, the county was paying for individual licenses and their own GIS server, and so was the city. So, by combining the two, we could eliminate the cost of that and now the county just pays a portion of the cost of the enterprise agreement,” Nolte said. “We split the cost 75/25 with the county paying the smaller share because that’s equitable to what they’re using it for.”

Nolte said the shared model also gives both county and city residents access to a wider range of information. He said the most-used public service that the shared model provides is the public parcel viewer, which allows people to view aerial imagery, public layers, and any other public information. It also links to assessor and treasurer records.

But the impact of the shared service goes beyond servers and licenses. The city and county can also use it in emergency situations to more effectively share information between city and county personnel. Since everyone is on the same system, they can all enter information into one single place.

Nolte said that earlier this year, they practiced an emergency response scenario where a tornado went through town. They had a dashboard that city and county personnel could update with images, information about shelter availability, and other data from multiple different locations around the city and county.

There are numerous benefits to both parties participating in the shared services model. Nolte said that for the county, the savings are probably the biggest factor.

“I think for them to get access to the same GIS resources we have, they’d be paying 3 or 4 times more what they do with the shared model. It has worked out well for the last 30 years to defray those costs for both the city and the county,” he said.

Appendix E: Additional Primers and Templates



County Pet Regulations: This document provides Nebraska county officials with a concise, practical reference for developing and enforcing county pet regulations that comply with state law. It outlines the legal prerequisites for adopting animal-related ordinances, summarizes mandatory statutory duties and discretionary regulatory authority, highlights owner responsibilities, and summarizes key Nebraska court decisions affecting county authority.



CO₂ Pipelines: This document provides county officials with an overview of the legal framework governing CO₂ pipeline regulation in Nebraska, helping them distinguish between county zoning authority, eminent domain, and the limits imposed by federal law. The document also summarizes key Nebraska and regional court decisions, outlines common carrier and eminent domain principles, and includes a checklist to help county officials develop legally defensible pipeline regulations and permitting processes.



Haul Road Agreement: This document is an example contract that helps counties protect public roads and taxpayers when heavy construction traffic is associated with large development projects. It establishes clear responsibilities for contractors, including designated haul routes, pre-construction road condition assessments, required road maintenance and repairs, financial assurances, insurance, traffic control, safety standards, and procedures for documenting and restoring road conditions before maintenance responsibility returns to the county.

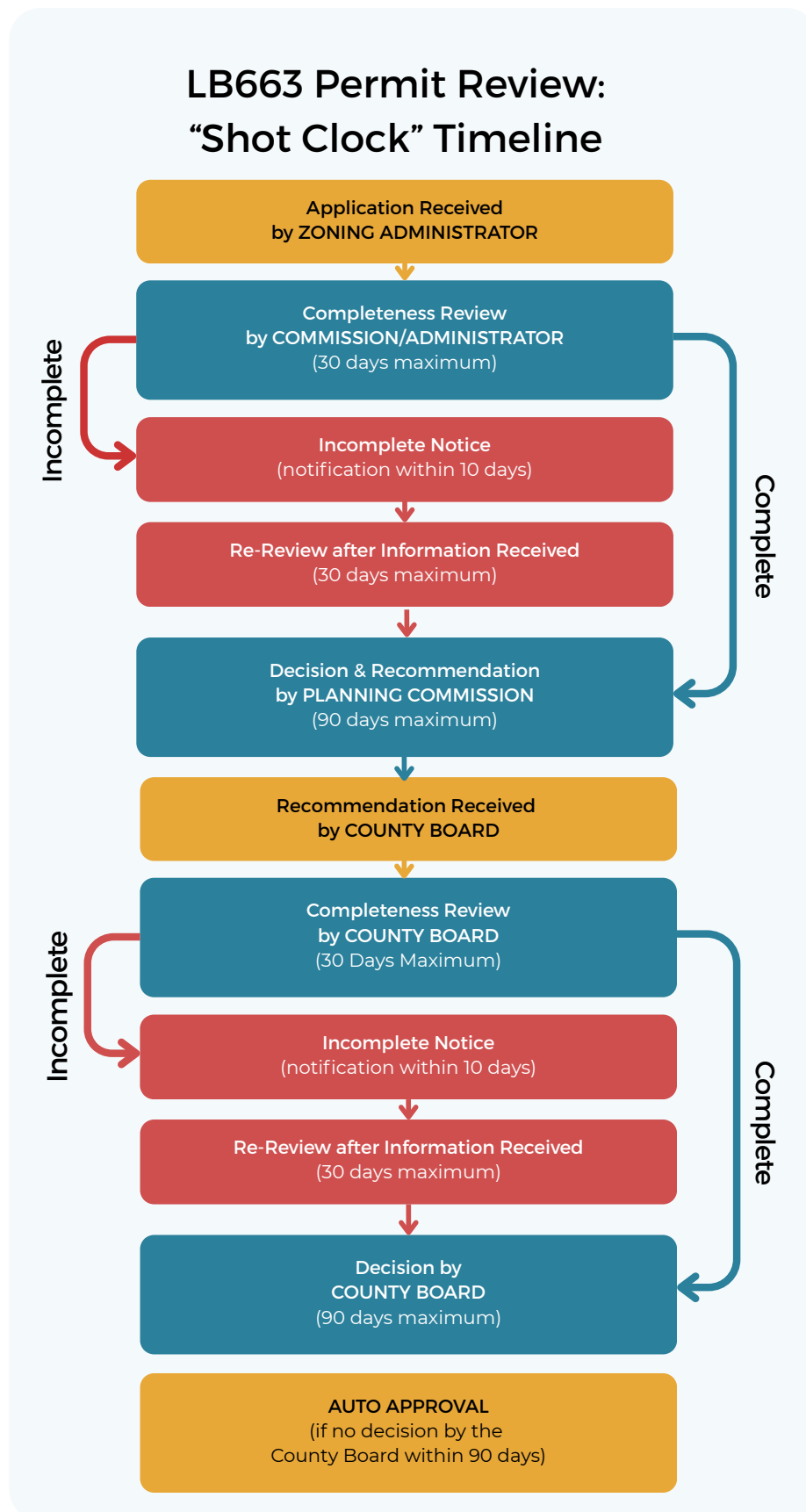


County Right-of-Way Permit Template: This document is a template that gives counties a standardized process for reviewing and approving broadband facilities (fiber optic) construction within county rights-of-way. Counties can adapt this template to set their own fee amounts, depth requirements, insurance requirements, and additional elements to match local conditions, while keeping the underlying framework consistent with county right-of-way standards. Counties should have their county attorney review the permit before use or submission.



Land Use Presumption: This report by the National Association of Counties (NACo) analyzes more than 500 bills preempting county land use authority introduced across 40 states in 2025, to understand the drivers, passage rates and big-picture trends surrounding this national shift in our federalist system.

Appendix F: LB663 Permit Review Timeline Graphic



Glossary of Terms

Accessory Use

A use or structure that is subordinate and incidental to the principal use of a property.

Accessory Wind System

A small wind energy system intended primarily to serve the electricity needs of the property on which it is located.

Accessory Solar System

A solar energy system that is secondary to the primary use of a property.

Agrivoltaics

The co-location of solar panels with agricultural uses such as crop production, grazing, or pollinator habitat.

Aviation Activated Lighting System (AALS)

A wind turbine lighting system that activates only when aircraft are detected nearby, reducing nighttime visual impacts.

Battery Energy Storage System (BESS)

A facility that stores electrical energy for later use, typically using rechargeable battery technology.

Buffer Area

Land between a project and adjacent properties intended to reduce visual, noise, or operational impacts.

Building Code (IBC)

The International Building Code governing structural design, safety, and construction standards.

Capacity Factor

The ratio of actual energy production compared to the maximum possible production over a given period.

Community Benefit Agreement

An agreement identifying specific benefits a developer will provide to a community, such as infrastructure improvements, workforce development, public services, or other measures intended to address project impacts or support community goals

Community Solar

A shared solar project that provides electricity or energy credits to multiple subscribers or customers.

Conditional Use Permit (CUP)

Approval allowing use subject to specific conditions and review criteria established by a zoning ordinance.

Cooling System

Equipment used to regulate temperature within a data center or battery storage facility.

Data Center

A facility that houses computer servers, networking equipment, and related infrastructure used to store, process, and transmit digital information.

Decommissioning

The removal of a facility and restoration of the site after operations have ceased.

Decommissioning Plan

A document outlining procedures, costs, and responsibilities for facility removal and site restoration.

Distributed Generation

Electricity generated near the point of consumption rather than at a centralized power plant.

Easement

A legal right allowing use of another person's property for a specific purpose.

Electrical Code (NEC)

The National Electrical Code governs safe electrical installation and operation.

Emergency Response Plan

A document outlining procedures for responding to fires, hazardous conditions, accidents, or other emergencies.

Energy Storage

Technology used to capture and store energy for later use.

FAA Determination

A review by the Federal Aviation Administration regarding potential impacts of structures on aviation safety.

Fencing Requirement

Standards requiring facilities to be enclosed or secured for safety and security purposes.

Fiber Connectivity

High-speed communications infrastructure used to transmit digital information.

Financial Assurance

A bond or letter of credit, or other financial instrument guaranteeing funds for decommissioning or site restoration.

Glare

Reflection of sunlight from solar panels or other surfaces.

Ground-Mounted Solar

Solar panels installed on the ground rather than on rooftops.

Habitat Corridor

A pathway that allows wildlife movement between habitats.

Height Restriction

A zoning limitation on the maximum height of structures.

Hyperscale Data Center

A very large data center designed to support cloud computing, artificial intelligence, and large-scale digital services.

Ice Throw

The shedding or projection of ice from wind turbine blades during operation.

Interconnection

The process of connecting a project to the electrical transmission or distribution system.

Inverter

Equipment that converts direct current (DC) electricity into alternating current (AC) electricity.

Land Use Compatibility

The degree to which a proposed use is consistent with surrounding uses and development patterns.

Lithium-Ion Battery

A common rechargeable battery technology used in many energy storage systems.

Lot Size (Minimum)

The minimum parcel size required for a particular use or development.

Microgrid

A localized electrical system capable of operating independently from the larger electric grid.

Mitigation Measure

An action or requirement intended to reduce or offset adverse impacts from development.

Nameplate Capacity

The maximum rated electrical output of a generation or storage facility under specified conditions.

National Fire Protection Association (NFPA) 855

The national standard governing the installation and safety requirements of stationary energy storage systems.

Noise Study

An analysis used to evaluate existing and projected sound levels associated with a proposed development.

Non-Participating Landowner

A property owner who is not involved in a project but owns nearby property that may be affected by it.

Overlay District

A zoning district that applies additional regulations to a defined geographic area.

Permitted Use

A use allowed by right within a zoning district without requiring a conditional use permit.

Pollinator-Friendly Solar

Solar development designed to support pollinator species through native vegetation and habitat enhancements.

Power Purchase Agreement (PPA)

A contract under which electricity generated by a facility is sold to a utility or other purchaser.

Rational Nexus

The legal requirement that permit conditions and regulations have a reasonable relationship to a legitimate public purpose and project impacts.

Renewable Energy

Energy generated from naturally replenishing resources such as sunlight, wind, water, or biomass.

Right-of-Way (ROW)

Land reserved for transportation, utility, or public infrastructure purposes.

Road-Use Agreement:

An agreement between a developer and a local government establishing haul routes, infrastructure protection measures, repair responsibilities, and other requirements associated with construction traffic

Screening

Vegetation, fencing, berms, or structures used to reduce visibility of a development.

Setback

The required distance between a structure and property lines, roads, residences, or other features.

Shadow Flicker

The moving shadow created when rotating wind turbine blades pass between the sun and an observer.

Solar Access

The ability of a property to receive unobstructed sunlight.

Solar Easement

A legal agreement protecting access to sunlight for a solar energy system.

Substation

A facility used to transform, regulate, or distribute electrical power.

Thermal Runaway

A condition in which a battery cell experiences uncontrolled heat generation that can lead to fire or failure.

Topography

The physical features and contours of land.

Transmission Infrastructure

High-voltage transmission lines, substations, and related facilities used to transport electricity.

Utility-Scale Solar

A large solar energy facility designed to generate electricity for sale to the electrical grid.

Utility-Scale Wind

A large wind energy facility designed to generate electricity for sale to the electrical grid.

Variance

A limited exception to one or more zoning regulations granted by a board of adjustment to alleviate unnecessary hardship affecting a specific property; a variance applies only when the statutory criteria established under Nebraska law are met and does not permit a use otherwise prohibited by the zoning regulations

Waiver

An approved exception from a zoning or regulatory requirement.

Water Balance Study

An analysis evaluating anticipated water use, discharge, and impacts associated with a development.

Wind Turbine

A machine that converts wind energy into electricity.

Zoning District

A geographic area with specific land use and development regulations.

Zoning Ordinance

A local law regulating land use, development standards, and permitted activities within a jurisdiction.

Agency and Technical Resource Directory

AGENCY / ORGANIZATION	WEBSITE
Bureau of Indian Affairs	https://www.bia.gov
County Attorneys	https://necaa.org/board-of-directors
County Boards	https://nebraskacounties.org/nebraska-counties/county-chairs.html
County Highway Department / Highway Superintendent	https://nebraskacounties.org/about_naco/affiliates/highway-superintendents-engineers-surveyors.html
Emergency Management	https://nema.nebraska.gov
Federal Aviation Administration (FAA)	https://www.faa.gov
Lincoln Electric System (LES)	https://www.les.com
Nebraska Chapter, American Planning Association	https://nebraska.planning.org
Nebraska Association of County Officials (NACO)	https://www.nebraskacounties.org
Nebraska Association of Resources Districts (NARD)	https://www.nrdnet.org
Nebraska Association of Agriculture	https://nda.nebraska.gov
Nebraska Department of Transportation (NDOT)	https://dot.nebraska.gov
Nebraska Department of Water, Energy, and Environment (DWEE)	https://dwee.nebraska.gov
Nebraska Game and Parks	https://outdoornebraska.gov
Nebraska Planning and Zoning Association	https://npza.org/
Nebraska Power Review Board (NPRB)	https://powerreview.nebraska.gov
Nebraska Public Power District (NPPD)	https://www.nppd.com
Nebraska Rural Electric Association	https://www.nrea.org
Nebraska State Historic Preservation Office (SHPO)	https://history.nebraska.gov/historic-preservation
Omaha Public Power District (OPPD)	https://www.oppd.com
Rural Fire Districts	https://sfm.nebraska.gov/fire-departments/general-information
Southwest Power Pool (SPP)	https://www.spp.org
University of Nebraska–Lincoln Extension	https://extension.unl.edu
U.S. Army Corps of Engineers	https://www.usace.army.mil
U.S. Department of Agriculture (USDA)	https://www.usda.gov
U.S. Environmental Protection Agency (EPA)	https://www.epa.gov
U.S. Fish & Wildlife Service	https://www.fws.gov

Sources

The following sources informed the development of this toolkit's discussions, Key Takeaways, and recommendations concerning emerging land use issues. Counties should consult county attorneys, planning professionals, utility providers, emergency responders, and other subject-matter experts when developing or implementing local regulations.

Battery Energy Storage Systems (BESS)

National Fire Protection Association (NFPA)

- NFPA 855: Standard for the Installation of Stationary Energy Storage Systems
- Website: <https://www.nfpa.org>

American Planning Association (APA)

- Battery Energy Storage Systems, Zoning Practice, March 2024
- Website: <https://www.planning.org>

American Clean Power Association (ACP)

- Model Ordinance: Utility-Scale Battery Energy Storage Systems
- Website: <https://cleanpower.org>

Environmental Protection Agency

- Website: <https://www.epa.gov/electronics-batteries-management/battery-energy-storage-systems-main-considerations-safe>

Energy Information Administration

- Website: <https://www.eia.gov/todayinenergy/detail.php?id=66464>

Nebraska Economic Developers Association

- Economic development opportunities, workforce impacts, infrastructure considerations
- Website: <https://www.neda1.org>

Pacific Northwest National Laboratory (PNNL)

- Local zoning and permitting considerations for battery energy storage systems
- Energy storage planning resources
- Website: <https://www.pnnl.gov>

University of Michigan Graham Sustainability Institute

- Planning & Zoning for Battery Energy Storage Systems
 - Website: <https://graham.umich.edu>
-

Comprehensive Planning and Land Use Regulation

American Planning Association (APA)

- Planning Advisory Service publications
- Zoning Practice series
- Comprehensive planning and land use management guidance
- Website: <https://www.planning.org>

National Association of Counties (NACo)

- County planning, land use, and economic development resources
- Website: <https://www.naco.org>

County Planning and Zoning

Nebraska Revised Statutes

- Neb. Rev. Stat. §§ 23-114 through 23-174 (County Planning and Zoning Authority)
- Neb. Rev. Stat. § 23-114.01 (Conditional Use Permits and Special Exceptions)
- Neb. Rev. Stat. § 23-114.03 (Comprehensive Development Plans and Zoning Regulations)

Nebraska Legislation

- LB 663 (2026) – Conditional Use Permit and Special Exception Review Procedures

Nebraska Attorney General

- Nebraska Attorney General Opinion No. 44 (1997) – Moratoriums, County Zoning Authority, and Constitutional Considerations

Nebraska Case Law

- Nebraska Supreme Court decisions addressing zoning authority, police powers, due process, equal protection, and regulatory takings.

Data Centers

Berkeley Lab

- 2024 United States Data Center Energy Usage Report
- Website: https://eta-publications.lbl.gov/sites/default/files/2024-12/lbnl-2024-united-states-data-center-energy-usage-report_1.pdf

National Academies Press

- Implications of Artificial Intelligence–Related Data Center Electricity Use and Emissions: Proceedings of a Workshop (2025)
- Website: <https://www.nationalacademies.org/read/29101/chapter/4>

National Association of Counties (NACo)

- NACo Informational Primer and County Considerations: Data Centers (2026)

Lawrence Berkeley National Laboratory (LBNL)

- 2024 United States Data Center Energy Usage Report

U.S. Department of Energy (DOE)

- Clean Energy Resources to Meet Data Center Electricity Demand
- Website: <https://www.energy.gov>

Additional Industry Resources

- Data center planning and infrastructure materials provided by industry experts and practitioners
- Loudoun County, Virginia data center planning experience and best practices

Livestock Siting Resources

Nebraska Department of Agriculture (NDA)

- Nebraska Livestock Siting Assessment Matrix
- Livestock development guidance and educational resources
- Animal health and livestock regulatory information
- Assistance with livestock siting evaluations and agricultural development
- Website: <https://nda.nebraska.gov>

Nebraska Livestock Siting Assessment Matrix

- Objective, research-based livestock siting evaluation tool
- Evaluates separation distances, prevailing winds, animal units, and site characteristics
- Assists counties in developing consistent findings of fact and permit evaluations
- Website: https://nda.nebraska.gov/promotion/livestock_matrix

University of Nebraska–Lincoln (UNL) Ag Site Planner

- Risk Management Tool
- Regulatory Guidance Tool
- Odor Footprint Tool
- Site-specific livestock planning and evaluation resources
- Website: <https://agsiteplanner.unl.edu>

Nebraska Department of Water, Energy and Environment (DWEE)

- Livestock Waste Control Facility permits
- CAFO permitting guidance
- Water quality and nutrient management resources
- NPDES permit information
- Website: <https://dwee.nebraska.gov>

Nebraska Association of Resources Districts (NARD) / Natural Resources Districts (NRDs)

- Groundwater management resources
- Nutrient management information
- Drainage, erosion, and water resource planning
- Local NRD contact information
- Website: <https://www.nrdnet.org>

USDA Natural Resources Conservation Service (NRCS)

- Conservation planning assistance
- Nutrient management resources
- Soil and water conservation programs
- Agricultural best management practices
- Website: <https://www.nrcs.usda.gov>

USDA Animal and Plant Health Inspection Service (APHIS)

- Animal disease prevention and response programs
- Biosecurity guidance
- Livestock health and emergency preparedness resources
- Website: <https://www.aphis.usda.gov>

U.S. Environmental Protection Agency (EPA)

- CAFO regulatory guidance
- Clean Water Act resources
- NPDES permitting information
- Environmental compliance assistance
- Website: <https://www.epa.gov/npdes/animal-feeding-operations-afos>

Nebraska Extension

- Livestock production resources
- Manure management guidance
- Odor management information
- Facility design and operational best practices
- Website: <https://extension.unl.edu>

USDA Census of Agriculture (National Agricultural Statistics Service)

- Comprehensive agricultural data available at the national, state, county, and local levels
- Provides information on livestock inventories, farm numbers, agricultural land use, producer demographics, economic activity, and long-term agricultural trends
- Website: <https://www.nass.usda.gov/AgCensus/>

Additional Livestock Planning Resources

- American Society of Agricultural and Biological Engineers (ASABE)
 - Livestock facility engineering and design standards
 - Website: <https://www.asabe.org>
- National Pork Board
 - Environmental stewardship and odor management resources
 - Website: <https://www.pork.org>
- National Cattlemen's Beef Association (NCBA)
 - Beef industry best practices and educational materials
 - Website: <https://www.ncba.org>

Property Rights, Constitutional Issues, and Landowner Protections

United States Constitution

- Fifth Amendment (Takings Clause)
- Website: <https://constitution.congress.gov/constitution/amendment-5/>
- Fourteenth Amendment (Due Process and Equal Protection)
- Website: <https://constitution.congress.gov/constitution/amendment-14/>

Nebraska Constitution

- Article I, Section 21 (Takings and Damages)
- Website: <https://nebraskalegislature.gov/laws/articles.php?article=1§ion=21>

Nebraska Supreme Court Decisions (various cases addressing zoning authority, police powers, land use regulation, regulatory takings, due process, equal protection, and private property rights).

- Available through the Nebraska Judicial Branch Opinions Database
- Website: <https://supremecourt.nebraska.gov/courts/supreme-court/opinions>

Public Hearings and Administrative Procedures

Nebraska Open Meetings Act

- Website: <https://nebraskalegislature.gov/laws/statutes.php?statute=84-1407>
- Website: <https://nitc.nebraska.gov/docs/nebraskaopenmeetingsact-current.pdf>

Nebraska County Planning and Zoning Statutes

- Nebraska Legislature – Chapter 23 (County Government and Officers)
- Website: <https://nebraskalegislature.gov/laws/browse-chapters.php?chapter=23>

Nebraska Revised Statute § 23-114.03 (Comprehensive Plans and Zoning Regulations)

- Website: <https://nebraskalegislature.gov/laws/statutes.php?statute=23-114.03>

NACO County Planning and Zoning Statutes Summary

- Website: https://nebraskacounties.org/file_download/inline/38c7c5e7-2a42-4503-9ba0-abf0dbf4cc4b

American Planning Association (APA)

- Website: <https://www.planning.org>

Planning Advisory Service (PAS)

- Website: <https://www.planning.org/pas>

Zoning Practice Publications

- Website: <https://www.planning.org/zoningpractice>

Solar Energy Facilities

National Association of Counties (NACo)

- Primer for Counties: Renewable Energy in Farm Country

National Lab of the Rockies

- Utility-scale solar development
- Agrivoltaics
- Solar siting and land use compatibility
- Solar decommissioning and reclamation
- Website: <https://www.nlr.gov>

U.S. Department of Energy Solar Energy Technologies Office (SETO)

- Solar permitting and siting guidance
- Community solar resources
- Local government planning considerations
- Website: <https://www.energy.gov/eere/solar>

American Clean Power Association (ACP)

- Utility-scale solar development guidance
 - Model local government practices
 - Website: <https://cleanpower.org>
-

Wind Energy Facilities

U.S. Department of Energy Wind Energy Technologies Office

- Wind energy siting
- Community impacts
- Wildlife considerations
- Transmission planning
- Website: <https://www.energy.gov/eere/wind>

National Lab of the Rockies

- Wind development best practices
- Land-use compatibility
- Decommissioning and reclamation
- Website: <https://www.nlr.gov>

Federal Aviation Administration (FAA)

- Obstruction evaluation
- Aviation lighting requirements
- Aviation Activated Lighting Systems (AALS)
- Website: <https://www.faa.gov>

American Clean Power Association (ACP)

- Wind energy development guidance
 - Industry best practices
 - Website: <https://cleanpower.org>
-

Additional General Resources

National Association of Counties (NACo)

- Website: <https://www.naco.org>
- Rural Energy Academy: <https://www.naco.org/program/rural-energy-academy>

American Planning Association (APA)

- Website: <https://www.planning.org>

National Renewable Energy Laboratory (NREL)

- Website: <https://www.nrel.gov>

U.S. Department of Energy (DOE)

- Website: <https://www.energy.gov>

American Clean Power Association (ACP)

- Website: <https://cleanpower.org>

National Fire Protection Association (NFPA)

- Website: <https://www.nfpa.org>

Federal Aviation Administration (FAA)

- Website: <https://www.faa.gov>

Nebraska Accountability and Disclosure Commission

- Website: <https://nadc.nebraska.gov>

Nebraska Open Meetings Act

- Website: <https://ago.nebraska.gov/outline-nebraska-open-meetings-act>



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