



G R E A T E R S A L T L A K E

Municipal Services District

To: Magna Council
From: Travis Hair, MSD Planner
Date: May 11, 2021
Re: OAM2021-000270- Overpressure Area Zone Code Amendment

Councilmembers,

During the April 27, 2021 Council meeting direction was given to legal counsel to make some revisions to the proposed overpressure zone. Jay Springer has made those changes in the attached document. The changes are in 16.02.130, Sections B, C, and G. This document is attached for your review and consideration. Essentially, these changes allow for the heights required for industrial uses and clarify how new developments will have notices provided stating that they are in the overpressure area zone.

The MSD staff recommends approval of the updated ordinance as per the outlined revisions.

Attachments:

Redlined section 16.02.130

Updated complete version of proposed 16.02

16.02.130 ZONING AND CONDITIONAL USES IN THE OVERPRESSURE AREAS

A. Noting the exceptions as stated in Section 16.02.220 relating to subdivisions in Overpressure Areas, no lot containing more than 10 percent (10%) of its area in the 0.5 psi Overpressure Area shall be allowed to be zoned as single-family or multi-family residential.

B. The following uses are prohibited in the 0.5 psi Overpressure Area:

1. Any residential, lodging, or sleeping use, whether of a temporary or permanent nature, including but not limited to any dwelling, hotel, motel, resort hotel, apartment hotel, boardinghouse, lodging house, tourist court, apartment court, guestroom, accessory dwelling unit, nursing home, protected living arrangement, residential facility, or other structure or portion thereof used for permanent or temporary residential or lodging use.
2. Any daycare, preschool, church, or educational use, including but not limited to daycare/preschool center, home daycare/preschool, and/or church.
3. Any non-residential outdoor use which would involve outdoor gatherings of people, unless the Director determines that such gatherings are sufficiently distanced and situated from structures to mitigate the risk to humans associated with the Overpressure Area to an acceptable and reasonable level. Such determination shall only be made after the pre-development meeting pursuant to Subsection F below.
4. Any structure having more than two floors above grade.

5. Any non-industrial structure having a height in excess of thirty feet above grade except as permitted by subsection 16.02.130(B)(6).

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5-6. Any single-story structure, or portions of a structure that are single-story, having a height in excess of sixty feet above grade provided that such structure or portion of a structure is used for industrial purposes.

C. The following uses are prohibited in the 0.3 PSI Overpressure Area:

1. Any residential use prohibited by Subsection B.1, above, except single-family residences having a density no greater than 6 lots per acre, with a minimum lot size of 75,000 square feet.
2. Any lodging or sleeping use prohibited by Subsection B.1, above, except residential uses allowed under Subsection C.1, above.
3. Any nonresidential use which would involve an outdoor gathering of people, unless the Director determines that such a gathering is sufficiently distant from structures to reasonably mitigate the risk associated with the Overpressure Area. Such determination shall only be made after the pre-development meeting pursuant to sub-Section D below.
4. Any structure having more than three floors above grade.

5. Any non-industrial structure having a height in excess of forty feet above grade except as permitted by subsection 16.02.130(C)(6).

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6. Any single-story structure, or portions of a structure that are single-story, having a height in excess of sixty feet above grade provided that such structure or portion of a structure is used for industrial purposes.

D. If a parcel lies in more than one Overpressure Area, each parcel portion is subject, respectively, to the provisions of this Code governing the Overpressure Area in which such portion is located.

E. The provisions of the Magna Municipal Code governing Overpressure Areas shall not apply to any parcel, or portion of a parcel, not located within any Overpressure Area.

F. Approval by the Director, or a qualified and licensed professional whom the Director has designated to perform the Director's duties in this Section, shall be obtained before any construction or development begins within any Overpressure Area or any permits are issued for construction or development activities. Upon designation of a qualified licensed designee, the designee shall have all powers as the Director, except the Director shall have the final authority to issue an approval based on the designee's recommendation. Development within the Overpressure Areas shall not be approved unless the applicant demonstrates that the design of the project sufficiently mitigates the risks associated with the Overpressure Areas. Applications and submissions for such approval shall be prescribed by the Director or the Director's designee, and may include:

1. Plans drawn to scale, showing the location, dimensions, and elevation of the area in question;
2. the nature, location, dimensions, and elevations of existing or proposed structures;
3. the dimensions and location of parking, walking, and gathering areas;
4. a survey to locate the exact location of proposed improvements and the over pressure zone lines; and
5. any other information the Director, or the Director's designee, may determine necessary or helpful to review an application. The applicant may be required to have submissions stamped and certified by an appropriate qualified professional licensed in the State of Utah.

G. ~~The Director may require, as a condition of approval for any development application or building permit, the Director shall cause the recordation of to be recorded~~ covenants, conditions, and restrictions by plat, or otherwise, which ~~provide notice of the restricted the~~ use of property in the Overpressure Areas to the structures and uses approved in this Section. These covenants, conditions, and restrictions shall be enforceable by Magna. The right to so enforce the covenants, conditions, and restrictions may also be delegated and assigned by the Director to the then-current operator of the Northrop Grumman Bacchus Works property.

H. The Director or the Director's designee shall be responsible to:

1. Review all applications to determine whether a proposed development is located in an Overpressure Area.
2. For all proposed development located fully or partially within any Overpressure Area:
 - a. Review all applications to ensure that the overpressure requirements of this Chapter have been satisfied, including but not limited to Sections 16.02.220, 16.02.320, 16.02.330, 16.02.340, and this Section.
 - b. Conduct a predevelopment meeting with the applicant to review the application and

consider overpressure risks and design alternatives. The Director shall have the authority to require design modifications (i) to satisfy the overpressure requirements of the Magna Municipal Code and (ii) to reduce the risk associated with the Overpressure Areas to an acceptable and reasonable level.

- a. Provide the then-current operator of the Northrop Grumman Bacchus Works property with:
 - (1) a copy of the application, and

(2) not less than 14 days' advance notice of the pre-development meeting pursuant to section 16.02.130(F)(1)(b)(2). Notice shall be given to the following address:

Legal Counsel
Northrop Grumman Systems Corporation
P0 Box 98, UT03-E2W2
Magna, UT 84044-0098

or to any updated address provided in writing, delivered by certified mail to the Director by the Northrup Grumman Bacchus Works operator. The Northrup Grumman Bacchus Works operator shall be entitled to submit comments to the Director, and to participate in any pre-development meeting.

(3) Maintain an information file showing approved designs for structures in the Overpressure Areas.

MAGNA METRO TOWNSHIP

ORDINANCE NO.: _____

DATE: _____

OVERPRESSURE AREAS ORDINANCE CONSOLIDATION

AN ORDINANCE DELETING MAGNA MUNICIPAL CODE CHAPTER 15.14 AND SECTIONS 18.20.060 AND 19.76.270 AND ADOPTING THE CONSOLIDATED ORDINANCE ENNUMERATED AS CHAPTER 16.02: OVERPRESSURE AREAS REGARDING THE ZONING, SUBDIVIDING, AND BUILDING STANDARDS REQUIRED WITHIN AN OVERPRESSURE AREA

RECITALS

WHEREAS, Utah Code § 10-2a-414(3) provides that a Salt Lake County ordinance will remain in effect as the ordinance of the Magna Metro Township (“**Magna**”) “until the metro township council amends or repeals the ordinance;” and

WHEREAS, Magna adopted Ordinance No. 17-01-03 on January 17, 2017, adopting ordinances of Salt Lake County, including Chapter 15.14, Sections 18.20.060 and 19.76.270 regarding development in overpressure areas; and

WHEREAS, Magna is actively updating and revising its ordinances, including zoning, to better account for the health, welfare, and benefits to its residents; and

WHEREAS, Magna has determined that the ordinances regarding development in the overpressure areas should be consolidated and updated.

NOW THEREFORE, BE IT ORDAINED BY THE MAGNA METRO TOWNSHIP COUNCIL AS FOLLOWS:

1. Repeal of Prior Code Sections.
 - a. Chapter 15.14 is hereby repealed in its entirety.
 - b. Section 18.20.060 is hereby repealed in its entirety.
 - c. Section 19.76.270 is hereby repealed in its entirety.
2. Adoption of Consolidated and Amended Overpressure Ordinance
 - a. Chapter 16.02, entitled “Overpressure Areas,” attached as **Exhibit A**, is hereby ADOPTED.
3. This ordinance will become effective 20 days after publication pursuant to Utah Code Ann. § 10-3-711(1) and Utah Code Ann. § 10-3-712.

[signature pages follow]

APPROVED and ADOPTED this _____ day of _____, 2021.

MAGNA METRO TOWNSHIP COUNCIL

By: _____
Dan Peay, Mayor

ATTEST

APPROVED AS TO FORM:

Sherrie Swensen, Clerk/Recorder

METRO TOWNSHIP ATTORNEY

VOTING

Council Member Steve Prokopis voting
Council Member Brint Peel voting
Mayor Dan Peay voting
Council Member Trish Hull voting
Council Member Audrey Pierce voting

(Complete as Applicable)

Summary of ordinance published in newspaper: _____

Date of publication: _____

Effective date of ordinance: _____

SUMMARY OF
MAGNA METRO TOWNSHIP ORDINANCE NO. _____

On the _____ day of _____, 2021, the Magna Metro Township Council adopted Ordinance No. _____, enacting a new Chapter 16.02 of the Magna Metro Township Code and consolidated, with amendments to address development standards in the overpressure areas within Magna.

MAGNA METRO TOWNSHIP COUNCIL

By: _____
Dan Peay, Mayor

ATTEST

Sherrie Swensen, Clerk

VOTING

Council Member Steve Prokopis voting

Council Member Brint Peel voting

Mayor Dan Peay voting

Council Member Trish Hull voting

Council Member Audrey Pierce voting

APPROVED AS TO FORM:

METRO TOWNSHIP ATTORNEY

A complete copy of Ordinance No. _____ is available in the office of the Magna Metro Township Clerk, 2001 South State Street, N2-700, Salt Lake City, Utah.

EXHIBIT A

DRAFT

Chapter 16.02: OVERPRESSURE AREAS

16.02.005 SHORT TITLE

This Chapter shall be known as "Overpressure Areas." This Chapter shall also be known as 16.02 of the Magna Municipal Code. This Chapter may be cited under either designation.

16.02.010 AUTHORITY

The Municipality promulgates this Ordinance pursuant to Utah Code §§ 10-3-701, 10-3- 702, 10-3-707, 10-9a-102, 10-9a-104, 10-9a-501, and any other applicable law or successor statute(s).

16.02.020 DECLARATION OF PURPOSE

Magna finds that, for the general health and safety of its residents, it must identify certain areas of the municipality where development of real property, and more specifically certain types of development, are not desirable due to possible hazards inherent with the manufacture and/or storage of highly explosive materials. Property within the overpressure areas may be subject to significant overpressure waves and fragments in the event of an accidental explosion of energized materials which are manufactured, stored or handled.

It is based on this potential scenario that Magna chooses to impose certain regulations on the development, building construction, building design standards, and the types of land uses allowed on properties located within these areas of Magna.

16.02.030 DEFINITIONS

- A. "Council" means the Council of Magna, a municipal corporation pursuant to state law.
- B. "Director" means the Director of Planning and Development Services, or designee.
- C. "Overpressure Areas" means any land in the Magna Township that is located within the following distances from the closest of the center points identified as Area #1, Area #2, or Area #3, below, which center points are within the Northrop Grumman Bacchus Works Property located south of 4100 South and west of 6400 West, Salt Lake County: 5,200 ft. to 8,300 ft. (the 0.2 PSI Overpressure Area), 3470 to 5200 ft. (the 0.3 PSI Overpressure Area), and 3470 ft. or less (the 0.5 PSI Overpressure Area). The Overpressure Areas are based on the expected force from an explosion equivalent to that of 20,000 pounds of TNT. For general reference, the 0.2 psi, 0.3 psi, and 0.5 psi overpressure forces in these areas are roughly equivalent to forces generated by wind speeds of 130 mph, 167 mph, and 192 miles per hour, respectively. The Overpressure Areas are also shown on the map entitled Overpressure Areas Map, adopted and incorporated by this reference and included in

Appendix A of the Magna Municipal Code. The three center points for the Overpressure Areas are located at the following GPS coordinates:

Area #1— N40°40'38.3" W112°04'20.0";
Area #2— N40°40'05.5" W112°05'04.7"; and
Area #3— N40°39'31.8" W112°06'19.8".

- D. “Overpressure Areas Map” means the map, included in Appendix A hereto, designating the Overpressure Areas as approved and adopted by the Council. The Overpressure Areas Map shall be on file with the Planning and Development Services Department, or designated agency providing planning and development services to the municipality.
- E. “Planning and Development Services” means the Municipality’s Planning and Development Services Department, or designated agency providing planning and development services to Magna.
- F. “Planning Commission” means the Magna Planning Commission.
- G. “Subdivision” means any land that is divided, re-subdivided or proposed to be divided into two or more lots, parcels, sites, units, plots, or other division of land for the purpose, whether immediate or future, for offer, sale, lease, or development. Subdivision does not include a bona fide division or partition of agricultural land for agricultural purposes, provided that such agricultural land shall be subject to the requirements of the subdivision ordinance upon the conversion of the land from agricultural use to residential, commercial, or manufacturing use.

PART 1 – ZONING IN OVERPRESSURE AREAS

16.02.110 AUTHORITY

The authority for adopting this land use ordinance is derived from Utah Code Ann. Section 10-9a-102 and related statutes.

16.02.120 DECLARATION OF PURPOSE

The purpose of Part 1 is to identify and clarify acceptable land uses for the Overpressure Areas that recognize safety and to minimize or mitigate harms to life and health in the event of an accidental explosion occurring on the Bacchus Works property.

16.02.130 ZONING AND CONDITIONAL USES IN THE OVERPRESSURE AREAS

- A. Noting the exceptions as stated in Section 16.02.220 relating to subdivisions in Overpressure Areas, no lot containing more than 10 percent (10%) of its area in the 0.5 psi Overpressure Area shall be allowed to be zoned as single-family or multi-family residential.

B. The following uses are prohibited in the 0.5 psi Overpressure Area:

1. Any residential, lodging, or sleeping use, whether of a temporary or permanent nature, including but not limited to any dwelling, hotel, motel, resort hotel, apartment hotel, boardinghouse, lodging house, tourist court, apartment court, guestroom, accessory dwelling unit, nursing home, protected living arrangement, residential facility, or other structure or portion thereof used for permanent or temporary residential or lodging use.
2. Any daycare, preschool, church, or educational use, including but not limited to daycare/preschool center, home daycare/preschool, and/or church.
3. Any non-residential outdoor use which would involve outdoor gatherings of people, unless the Director determines that such gatherings are sufficiently distanced and situated from structures to mitigate the risk to humans associated with the Overpressure Area to an acceptable and reasonable level. Such determination shall only be made after the pre-development meeting pursuant to Subsection F below.
4. Any structure having more than two floors above grade.
5. Any structure having a height in excess of thirty feet above grade except as permitted by subsection 16.02.130(B)(6)
6. Any single-story structure, or portions of a structure that are single-story, having a height in excess of sixty feet above grade provided that such structure or portion of a structure is used for industrial purposes.

C. The following uses are prohibited in the 0.3 PSI Overpressure Area:

1. Any residential use prohibited by Subsection B.1, above, except single-family residences having a density no greater than 6 lots per acre, with a minimum lot size of 75,000 square feet.
2. Any lodging or sleeping use prohibited by Subsection B.1, above, except residential uses allowed under Subsection C.1, above.
3. Any nonresidential use which would involve an outdoor gathering of people, unless the Director determines that such a gathering is sufficiently distant from structures to reasonably mitigate the risk associated with the Overpressure Area. Such determination shall only be made after the pre-development meeting pursuant to sub-Section D below.
4. Any structure having more than three floors above grade.
5. Any structure having a height in excess of forty feet above grade except as permitted by subsection 16.02.130(C)(6).

6. Any single-story structure, or portions of a structure that are single-story, having a height in excess of sixty feet above grade provided that such structure or portion of a structure is used for industrial purposes.

D. If a parcel lies in more than one Overpressure Area, each parcel portion is subject, respectively, to the provisions of this Code governing the Overpressure Area in which such portion is located.

E. The provisions of the Magna Municipal Code governing Overpressure Areas shall not apply to any parcel, or portion of a parcel, not located within any Overpressure Area.

F. Approval by the Director, or a qualified and licensed professional whom the Director has designated to perform the Director's duties in this Section, shall be obtained before any construction or development begins within any Overpressure Area or any permits are issued for construction or development activities. Upon designation of a qualified licensed designee, the designee shall have all powers as the Director, except the Director shall have the final authority to issue an approval based on the designee's recommendation. Development within the Overpressure Areas shall not be approved unless the applicant demonstrates that the design of the project sufficiently mitigates the risks associated with the Overpressure Areas. Applications and submissions for such approval shall be prescribed by the Director or the Director's designee, and may include:

1. Plans drawn to scale, showing the location, dimensions, and elevation of the area in question;
2. the nature, location, dimensions, and elevations of existing or proposed structures;
3. the dimensions and location of parking, walking, and gathering areas;
4. a survey to locate the exact location of proposed improvements and the over pressure zone lines; and
5. any other information the Director, or the Director's designee, may determine necessary or helpful to review an application. The applicant may be required to have submissions stamped and certified by an appropriate qualified professional licensed in the State of Utah.

G. As a condition of approval for any development application or building permit, the Director shall cause to be recorded covenants, conditions, and restrictions by plat, or otherwise, which provide notice of the restricted use of property in the Overpressure Areas to the structures and uses approved in this Section. These covenants, conditions, and restrictions shall be enforceable by Magna. The right to so enforce the covenants, conditions, and restrictions may also be delegated and assigned by the Director to the then-current operator of the Northrop Grumman Bacchus Works property.

H. The Director or the Director's designee shall be responsible to:

1. Review all applications to determine whether a proposed development is located in an Overpressure Area.
2. For all proposed development located fully or partially within any Overpressure Area:
 - a. Review all applications to ensure that the overpressure requirements of this Chapter have been satisfied, including but not limited to Sections 16.02.220, 16.02.320, 16.02.330, 16.02.340, and this Section.
 - b. Conduct a predevelopment meeting with the applicant to review the application and consider overpressure risks and design alternatives. The Director shall have the authority to require design modifications (i) to satisfy the overpressure requirements of the Magna Municipal Code and (ii) to reduce the risk associated with the Overpressure Areas to an acceptable and reasonable level.
- a. Provide the then-current operator of the Northrop Grumman Bacchus Works property with:
 - (1) a copy of the application, and
 - (2) not less than 14 days' advance notice of the pre-development meeting pursuant to section 16.02.130(F)(1)(b)(2). Notice shall be given to the following address:

Legal Counsel
Northrop Grumman Systems Corporation
P0 Box 98, UT03-E2W2
Magna, UT 84044-0098

or to any updated address provided in writing, delivered by certified mail to the Director by the Northrup Grumman Bacchus Works operator. The Northrup Grumman Bacchus Works operator shall be entitled to submit comments to the Director, and to participate in any pre-development meeting.

- (3) Maintain an information file showing approved designs for structures in the Overpressure Areas.

PART 2 – SUBDIVISION OF REAL PROPERTY IN OVERPRESSURE AREAS

16.02.210 DECLARATION OF PURPOSE

Real property located in an Overpressure Area requires development rules to balance development with personal safety. Part 2 strives to achieve this balance in the layout of subdivisions in the Overpressure Areas.

16.02.220 SUBDIVISIONS IN OVERPRESSURE AREAS

- A. The side yard of lots in subdivisions within the 0.2 psi, 0.3 psi, and 0.5 psi overpressure areas as defined in Section 16.02.030(C) and shown on the Overpressure Areas Map described in Section 16.02.030(D), shall be designed, to the extent possible, to orient side yards of the lots toward the center of the Overpressure Areas. This lot orientation (in conjunction with the manner in which the structure is placed on the lot, the design of the structure, and type, location, and size of glass surfaces in the structure) is intended to reduce the possibility of damage within the Overpressure Areas in the event of an accidental explosion.
- B. New residential subdivisions shall not be approved in the 0.5 psi Overpressure Area, except that a residential subdivision partially located in the 0.5 psi Overpressure Area may be approved if:
 1. No particular lot will be located with more than ten percent (10%) of said lot within the 0.5 psi Overpressure Area;
 2. no more than twenty percent (20%) of the residential subdivision will be partially located in the 0.5 psi Overpressure Area;
 3. the final plat prohibits any structure, as defined in Section 19.04.520, from being located in the 0.5 psi Overpressure Area; and
 4. the requirements Section 16.02.130 are satisfied.
- C. The recorded subdivision plat for a new subdivision containing property in any Overpressure Area shall:
 1. identify the lots within each Overpressure Area, including a designation of the zone (0.2, 0.3, or 0.5); and
 2. specifically list those uses prohibited in the Overpressure Areas in which such lots lie, under Section 16.02.130 of the Magna Municipal Code, and reference the specific sections of the Magna Municipal Code which are applicable to the subdivision or lots within the subdivision.
- D. The current adopted Overpressure Areas Map is available for review and inspection in the Planning and Development Services office during regular business hours.

PART 3 – CONSTRUCTION STANDARDS IN OVERPRESSURE AREA

16.02.310 DECLARATION OF PURPOSE

Property within the Overpressure Areas may be subject to significant overpressure waves and fragments in the event of an accidental explosion of energized materials which are manufactured, stored, or handled. In order to provide for the health, safety, and welfare of residents within the Overpressure Areas, Part 3 provides construction standards for all property located within the Overpressure Areas.

16.02.320 APPLICABILITY OF STANDARDS

The standards in Part 3 shall be applicable to all new construction requiring a building permit within the Overpressure Areas as shown on the Overpressure Areas Map. Such construction shall include new buildings and/or modification or additions to existing buildings.

16.02.330 STANDARDS

A. Commercial and industrial buildings, where permitted in the 0.2, 0.3, and 0.5 psi Overpressure Areas, shall:

1. Be certified by structural engineer, licensed in the State of Utah, that the proposed structures are designed to withstand the blast overpressure loads of the Overpressure Area in which they are located (0.2, 0.3, or 0.5 psi);
2. Conform to the glass standards contained in Section 16.02.350.

B. Residential buildings, where permitted in the 0.2, 0.3 and 0.5 psi Overpressure Areas, shall:

1. Be certified by structural engineer, licensed in the State of Utah, that the proposed structures are designed to withstand the blast overpressure loads of the Overpressure Area in which they are located (0.2, 0.3, or 0.5 psi);
2. Be designed, where feasible, with windowless walls or minimum glass surfaces facing towards the center of the Overpressure Areas. Where possible, the garage or carport shall be placed on the side of the building facing the center of the Overpressure Areas;
3. Conform to the Overpressure Areas glass standards contained in Section 16.02.350.

C. Design application of overpressure force:

1. For the design of the structure or element, the overpressure forces shall be considered to act uniformly on all exterior vertical and horizontal surfaces individually and all surfaces in each orthogonal direction when designing the lateral force resisting system.

2. For checking the capacity of the structure or structural element to withstand the effect of the 0.2 psi, 0.3 psi, or 0.5 psi overpressure force (OP), the force shall be considered to act in whichever load combination produces to the most unfavorable effect, considering the following load combinations:

a. For allowable stress design:

$$0.6D + OP$$

$$D + OP + 0.4L + 0.3S$$

b. For strength design or load and resistance factor design:

$$0.9D + 1.6OP$$

$$1.2D + 1.6OP + 0.5L + 0.2S$$

16.02.340 GLASS REQUIREMENTS IN OVERPRESSURE AREAS

A. The windowpane size requirements in the Overpressure Areas shall be as follows:

Overpressure Area as Shown on Map (psi)	Maximum Size of Windowpane (sq. ft.)
0.50	9.0
0.30	12.0
0.20	15.0

B. Additional requirements in the Overpressure Areas:

1. All windows shall be double glazed.
2. Each layer of glass shall be a minimum thickness of one-eighth inch (1/8") thick.
3. The size of pane is measured between mullions.
4. Each building located in the Overpressure Areas shall be designed, where feasible, to minimize the amount of glass facing the center of the Overpressure Areas.
5. The maximum width of any windowpane shall be four feet, measured between mullions.
6. All windowpanes within the Overpressure Areas shall be tempered or laminated glass.

MAGNA OVERPRESSURE AREA

OP Sites



OP Areas by Distance and Type

- 3,470' - 0.5 PSI
- 5,200' - 0.3 PSI
- 8,300' - 0.2 PSI

Municipal Boundary

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