

## Light Subzone

An important part of the Camp's training occurs at night and requires darkness. In addition, certain types of lights can be a hazard to aviation.

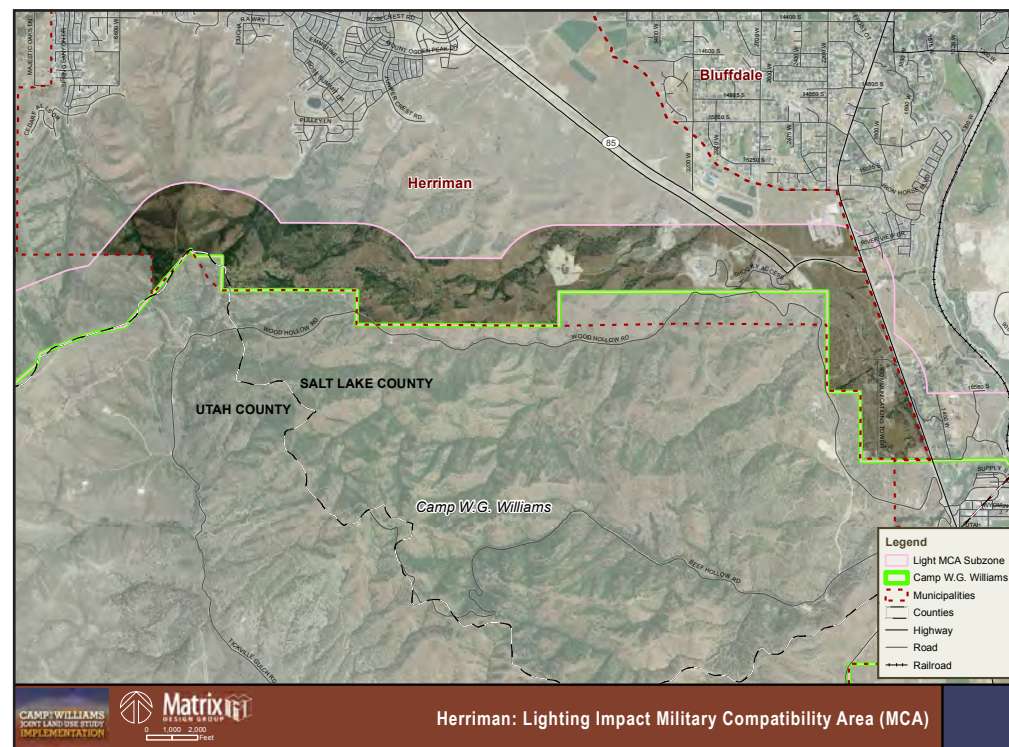
Excessive light impacts the Camp in two ways. "Point" light comes from a specific source and is directed into the Camp. These light sources are generally located in close proximity to the Camp, perhaps even directly bordering the Camp. The second source of light that impacts Camp operations is "sky glow." Sky glow is the aggregated light from all sources in an area that "bounces around" (refracts) in the atmosphere. The management of sky glow requires a more comprehensive, community-wide response, but the good news is that if individual owners apply some simple techniques on their land, those individual contributions will add up to help address the larger "light pollution" problem.

There are two areas of concern. The first is land within ½ mile of the Camp and has to do with both "point source" lighting and general lighting practices. The second area includes the entire City and how lighting practices contribute to sky glow.

In terms of "point source" light trespass directly into the Camp, owners of land in close proximity to the Camp (within ½ mile) should do the following. Keep in mind these are simple ways to cut your electric bill too!!

- Inspect the property's exterior lighting to determine if any lights are pointed at, or in the direction of, the Camp.
- If so, determine the purpose of the lighting and if it is necessary. If it can be eliminated entirely, remove the fixture.
- If the light source is necessary, use the minimum foot candles (brightness) necessary for the purpose. Install a dimmer as an option.
- Use a full cut off fixture that directs the light downward and/or at the specific area where the lighting is needed.
- Put the light on a timer, so it automatically shuts off at a designated time.
- For detailed information and fixture options, consult sources such as the International Dark Sky Association (IDSA).

In terms of "sky glow" the same general recommendations apply, but even more can be done at a much greater scale. These measures will not only reduce light pollution, in doing so they'll preserve the beauty of the night sky, protect the rural character of the community, and reduce energy costs for homeowners, business owners, local governments and consumers. Lower energy bills mean lower taxes. In fact, some area communities have already begun to evaluate the potential "city-wide" adoption of "Dark Sky"



standards and practices. In the meantime, citizens can volunteer to do the following (in addition to the steps noted above):

- Never use laser lights, strobes, search lights or other high intensity lights.
- Coordinate the approved use of fireworks and pyrotechnic shows with the Camp.
- Avoid flood lighting that projects above a horizontal plane.
- Limit use of "architectural" lighting (luminous tube lighting).
- Avoid or minimize excessive lighting of exterior signage.
- Light exterior signage with "top down" directed/shielded fixtures.
- Use low pressure sodium lighting when possible (parking areas, etc.).
- Use only full cut off fixtures for parking area and street lighting.
- Light levels should not exceed two "foot candles" at the property line.
- Shut off parking area lighting after business hours (or reduce to the minimum necessary).
- Gas canopy lighting should be fully recessed and not exceed 10 foot candles.
- Where possible, use non-reflective surface materials and colors to minimize refraction.
- Site and design recreational sports fields so that lighting impacts are minimized.
- Tower lighting should be the minimum required by Federal mandate.

### For Additional Information Contact:



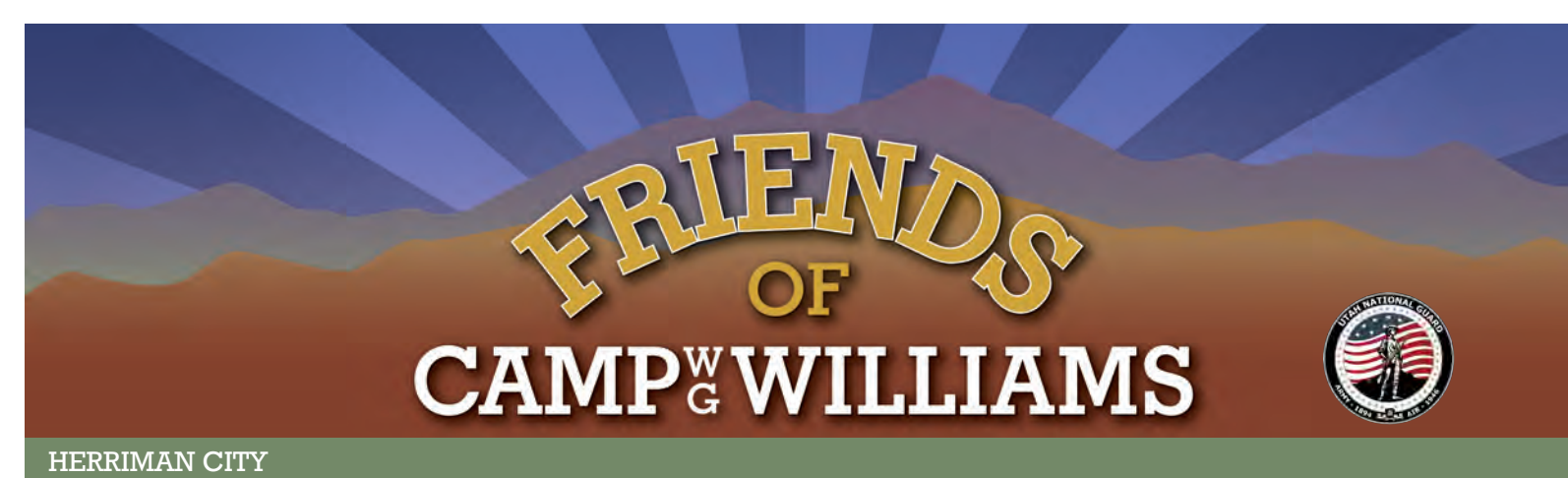

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*This study was prepared under contract with Eagle Mountain City, with financial support from the Office of Economic Adjustment, Department of Defense. The content reflects the views of the key JLUS partners involved in the development of this study and does not necessarily reflect the views of the Office of Economic Adjustment.*



Rev. 2014 09 04

The issues or "factors" affecting compatibility around Camp Williams vary by geography. On the following pages you'll find a map and text for each factor. The maps show the geographic areas in the community where the particular factor is most relevant. The associated text briefly describes the compatibility factor shown in the map and suggests things people can do to be a good neighbor. Note that what you can do varies by who you are. For instance, homeowner options differ from what a business owner might be able to do, and both of those are different from what a land developer might be able to do. Regardless, the important thing is that everybody can do something!

If you want more detailed information or have questions, you can consult the point of contact for your city which is listed in the last part of this brochure.

**Q:** What can you do to help make sure Camp Williams continues to thrive?  
**A:** PLENTY!!

Build a partnership with your neighbor, Camp Williams. This brochure highlights recommended guidance to achieve compatibility with Camp Williams.

Thank you for your interest! We hope you find this informational brochure helpful. As you probably know, Camp Williams has been a part of your community for over 100 years. The Camp is a major employer, each year pumping millions of dollars into the local economy. And, most importantly, Camp Williams trains the best fighting men and women in the world, dedicated warriors who keep us safe and free.

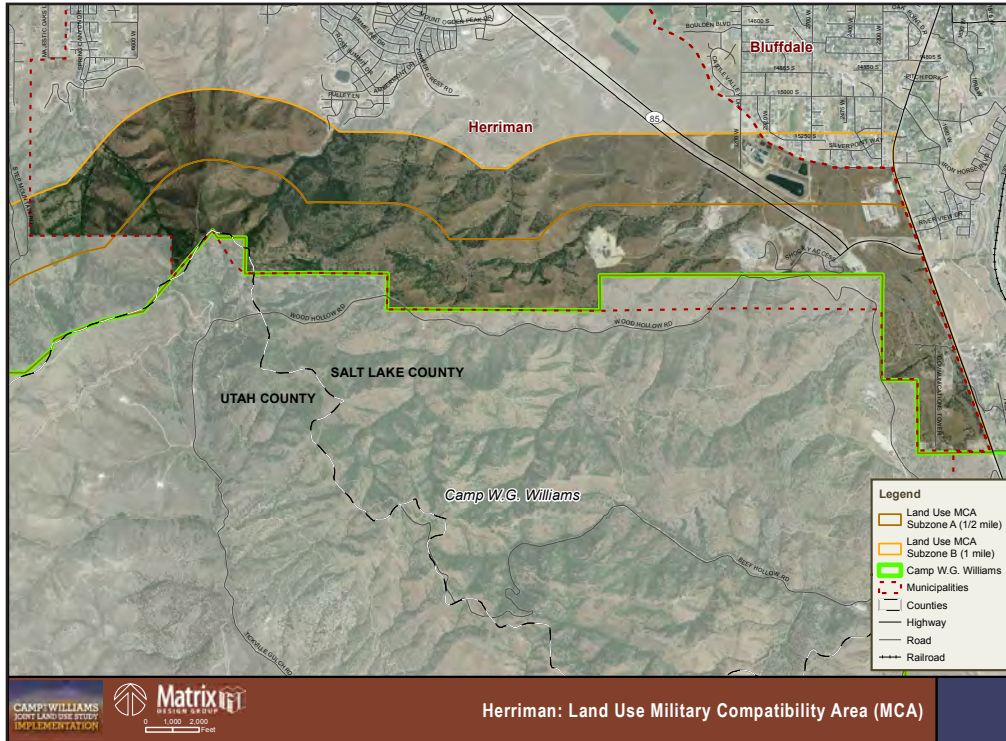
But as your community grows, the things we do and the decisions we make can have negative impacts on the Camp's ability to operate. This can jeopardize the Camp's future. The sad fact is that military facilities around the US have lost major mission elements or have even been closed entirely, when these conflicts become significant. We simply cannot let that happen here.

The purpose of this brochure is to describe the types of actions that can create incompatible development and to offer recommended strategies as to things you can do to mitigate or prevent encroachment. That's important, because a viable Camp Williams contributes to both our local economy and to our Nation's defense. Working together, we can make sure Camp Williams is here for another 100 years!





### Land Use Subzone



The map above shows certain areas within 1/2 mile of the Camp Williams boundary, as well as certain areas between 1/2 to one mile of the Camp boundary. These areas typically experience the most impact from Camp Williams operations and in turn, private actions carried out in these areas also tend to have the most impact on Camp Williams.

Certain types of land uses are more sensitive to things like noise and vibration. Others might be at greater risk due to the population served. For instance, families want to live in safe and quiet neighborhoods, therefore, developing dense neighborhoods in close proximity to Camp Williams creates a “land use” conflict. Also, certain uses serve groups that are likely to be more susceptible to the impacts or potential impacts of Camp Williams operations. These typically include “public assembly” uses like commercial recreation, churches, elderly housing, hospitals and elementary schools.

If you’re a home or business owner, check to see if you’re located within the area shown above. If you’re not, it doesn’t mean you won’t occasionally experience the effects of Camp operations, but the attributes of your particular use are less of a threat to Camp Williams’ long term viability.

- If you’re “inside” this area, there are actions you can take to limit potential conflicts and reduce impacts. Some of these have to do with noise mitigation and lighting. Those are described in those sections of the brochure.
- As to land use, if you’re a homeowner already located within the one mile land use area, hopefully you understand that Camp

Williams will have impacts and that some of these are not conducive to the peaceful enjoyment of your home and neighborhood. Try to be aware of scheduled operations, so you can plan accordingly.

If you’re a commercial property owner, developer or builder:

- Try to use the site for compatible land uses, like farming, industrial and commercial uses.
- See if the City has a “transfer of development rights” ordinance (as to residential uses).
- Avoid establishing land uses that typically serve groups of people like the elderly, infirm and very young, especially in assembly type settings, where large groups congregate in one location.
- Within the 1/2 mile area, residential uses should have no more than two units per acre.
- In the 1/2 to one mile area, the maximum should be six residential units per acre.
- Commercial “FAR” should not exceed 0.25 (i.e. 5000 feet of floor area on a 1/2 acre lot).
- Structure heights should be no more than two stories.
- Increase structure “setbacks” if the property directly abuts the Camp.
- Include noise attenuation features into the design and construction (see below).
- If feasible, use “cluster” development, with groups of units separated by open space.
- Provide buyers and tenants with “disclosure” so they are aware of the Camp’s impacts.

### Noise Subzone



One of the most obvious Camp impacts is the noise and vibration associated with ordinance training, aircraft operations or both. The characteristics of sound and how it travels through the atmosphere can vary greatly, depending on wind, weather, humidity and other factors. As a consequence, the same “event” may be perceived in very different ways at the same location on two different occasions.

Nonetheless, the location of certain operations on the Camp do allow for modeling of noise impacts. In combination with field testing of actual decibel levels during events, accumulated data was used to create the map provided below. The map shows the boundary of the 65 decibel level. This “noise” level is generally considered to be the threshold between acceptable noise levels and those that are potentially harmful to human health.

Being outside the boundary does not mean you will never experience noise or perhaps even vibration impacts, it simply means that the likelihood of your experiencing significant (unhealthy) levels of noise and excessive vibration over extended periods of time or on a consistent basis, is lower.

Homes or businesses that are or will be located within the boundary can reduce or “mitigate” the level of interior noise you will experience, by doing some simple things:

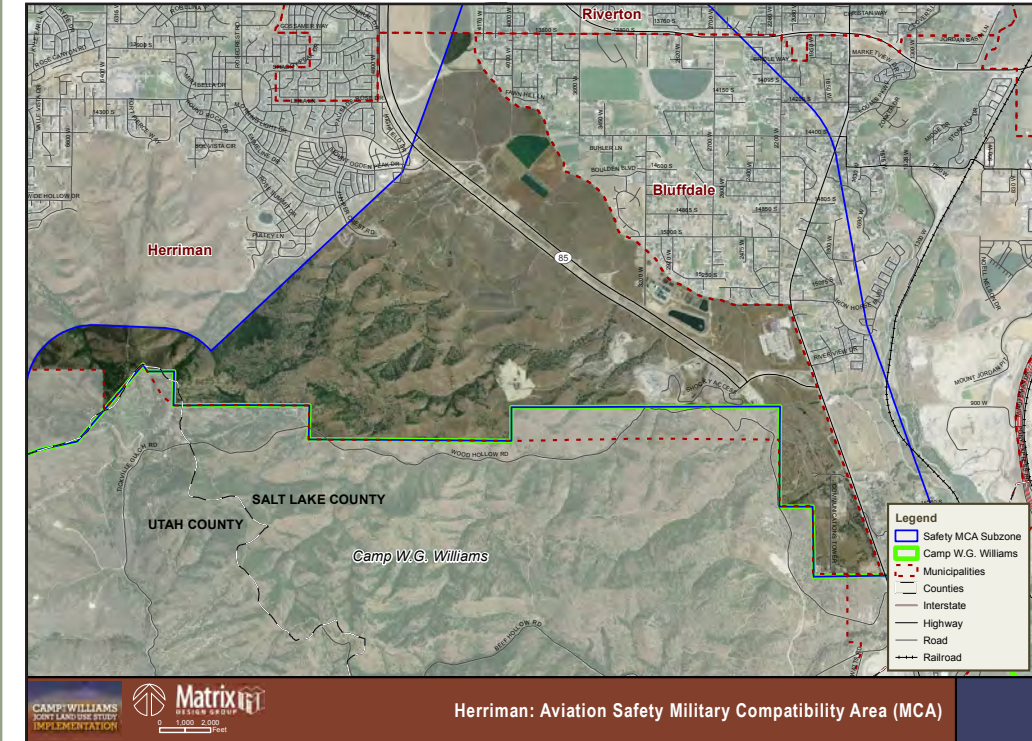
- Increase insulation levels, caulking and weatherproofing doors and windows.
- Install doors and windows designed to meet specific noise attenuation levels.
- Use sheet rock that is more dense, or “double up” sheet rock widths.

- Use masonry construction for exterior walls.
- Locate garages, interior storage, bathrooms to “buffer” living/sleeping areas.
- Depending on your lot’s location and specific attributes, you may be able to reduce perceived noise levels by planting landscaping or “hardscape” features like solid fencing.
- Stay informed of scheduled testing and training events, and to plan accordingly. The Camp publishes the dates of scheduled events well in advance for this very purpose. Use the contact information at the end of this brochure and check the dates frequently.

Business owners, developers and builders can also help by taking the following actions:

- Avoid locating moderate or high density residential uses in these areas.
- Avoid locating assembly uses that serve sensitive populations in these areas (i.e. elderly, infirm, very young, etc.).
- If such uses cannot be avoided, provide sufficient early “disclosure” of the Camp’s location, operations and potential impact.
- Any structures to be occupied by these users should be designed to have a maximum interior day/night decibel level of 45 decibels.

### Aviation Safety



Camp Williams is an essential training facility for aviation, primarily for rotary craft (helicopters). Although these aircraft are more mobile than fixed wing aircraft, they do use established flight corridors to move to and from the Camp. In addition, certain training exercises require low level flight.

The map above shows the locations of the established flight corridors in your community. While structure heights are obviously a concern, certain land uses are also at greater risk, due to the populations served. For the most part, decisions and actions impacting this factor will be made by local governments, land developers and specific interests like telecommunication companies (cell towers) and alternative energy developers (wind powered turbines).

If your site is located within the area shown above, considering the following will enhance compatibility:

- Structures within one mile of the Camp should not exceed 50 feet in height.
- All other structures should not exceed 199 feet.
- Where applicable, structures shall seek and receive FAA review.
- Cell towers, wind energy towers and similar structures should not be located in these areas.
- Utility lines should be installed underground.
- Where possible, land uses such as elderly housing, hospitals, nursing homes, convalescent homes, nursery schools, housing for the physically handicapped, assembly and similar uses should not be established in these areas.
- Non-residential uses should not exceed an FAR of 0.25.