

## II Fort Knox Military Reservation Profile

*This section of the plan lays out a history of Fort Knox and a picture of the installation today and in the future. It also describes the overall mission footprint, to include ground, air, and riverine operations. It will briefly examine the impacts that these various missions have on the surrounding communities and community impacts to the installation.*

### Overview

Fort Knox is located along the Ohio River in north-central Kentucky. Containing approximately 108,000 acres, it spreads south across portions of Hardin, Meade, and Bullitt Counties. It lies approximately 35 miles south of Louisville a major metro area which is ranked 29<sup>th</sup> by population in the US. There are multiple communities located around and contiguous to the post: West Point to the north, Shepherdsville to the northeast, Lebanon Junction to the southeast, Elizabethtown to the south, Radcliff and Vine Grove to the southwest, and Brandenburg to the northwest. Uniquely the City of Muldraugh is encompassed by the installation along a portion of US 31W near the northside of the cantonment area.

### Geography & Environment

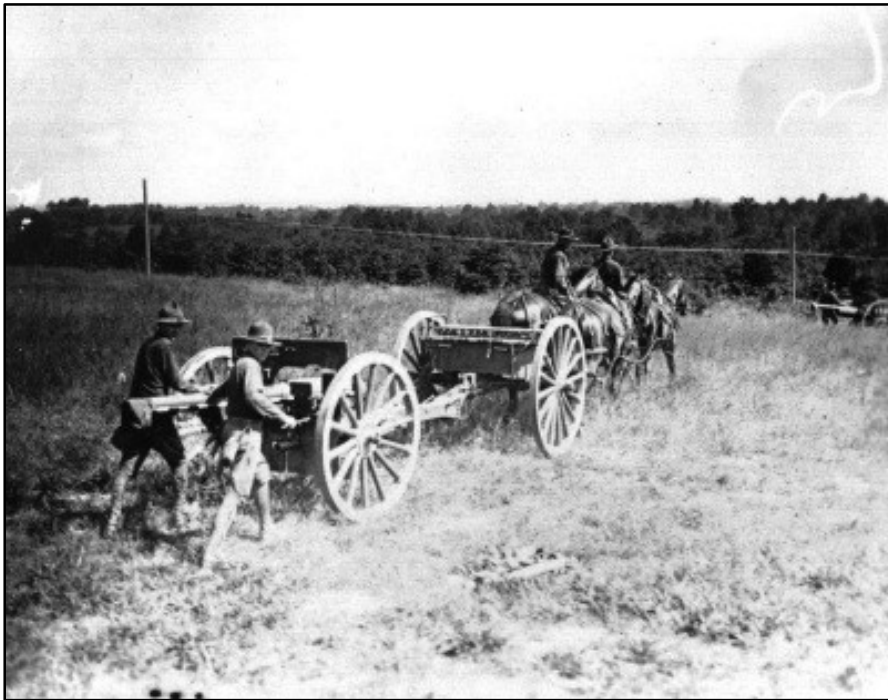
The Fort Knox installation sits at a confluence of multiple physiographic regions that are characteristic of its many neighbors. This includes the knob region of high ridges and steep hillsides, the Muldraugh hills region of varying hillsides and narrow valleys, and the Pennyroyal region that consists of karst landscapes. Meanwhile intersecting the installation and leading to the Ohio river to the north are the Salt River,

the Rolling Fork River, Otter Creek, Cedar Creek, and Mill Creek and their vast flood plains.

The western portion of the installation can be considered good or excellent for construction or as foundation material as it consists of dolomite or limestone. Meanwhile the eastern portion of the installation's land is only considered fair foundation material as it consists of gravel, siltstone, and sand. Like the surrounding region, the natural landscape of Fort Knox is associated with the natural hazards flooding, sinkholes, and landslides that are a risk to property and life. The installation also shares similarities with the surrounding area and the rest of the state in the type of flora and fauna that are in the installation. This includes forested areas, grasslands, bats, deer, diverse fish life, and bald eagles.

## History

The area around and containing Fort Knox has a military history dating back to fortifications built during the Civil War. The area hosted maneuvers in 1903 for both the Regular Army and National Guard units. In 1917, with the United States entry into World War I, there was a need for new military installations to stage training areas. Camp Zachary Taylor was established in Louisville to mobilize and train



**Figure 25 138th Field Artillery Regiment training at Ft. Knox c. 1917, Photo Credit: KY National Guard.**

soldiers. In December of that year, a new artillery range was established in nearby West Point on the site of former military maneuver grounds. In the summer of 1918 Stithton, a small farming

community south of West Point, was chosen to become the site of a Field Artillery Brigade Firing Center Cantonment for six brigades, a total of 45,000 soldiers.<sup>47</sup>



**Figure 26 - Stithton PO c.1918, Photo Credit: U.S. Army.**

More land was acquired from Bullitt and Meade Counties, and many buildings in Stithton were repurposed by the Army. In August of 1918, MG William J. Snow announced the official name of the cantonment would be Camp Knox, honoring Revolutionary War general and first US Secretary of War, Henry Knox. In 1922 it was determined that Camp Knox would close as a permanent installation but continued to host training of National Guard and Reserve Units.<sup>48</sup> In the interim the land was designated Camp Henry Knox National Forest until 1928 when infantry was once again stationed there.<sup>49</sup> In 1932 it was renamed Fort Knox, and the mechanized cavalry were established and based there. The area also became the location of a new depository built in 1936 for the US Treasury Department.

With the outbreak of World War II, the Army created the Armored Force and Fort Knox became its' headquarters. The Armored Force was responsible for creating the doctrine guiding use of armored vehicles and the establishment of armored formations.



*Figure 27 M-3 tanks in action, Ft. Knox, 1942, Photo Credit: Library of Congress.*

To support this Force, there was a very large construction boom and more land was acquired bringing the total to over 106,000 acres. Other highlights over the years include the 1949 establishment of the Patton Museum. The US Army Recruiting Command Headquarters was relocated to Fort Knox in 1992.

The 2005 Base Realignment and Closing (BRAC) Commission ushered in an era of change to the Fort. The Armor Center and School relocated off the post, and new formations were assigned. New units included Human Resources Command, Cadet Command to join Recruiting Command in formation of the Human Resource Command Center of Excellence.<sup>50</sup>

## Demographics

Fort Knox continued to see a decrease in population to 7,742 persons in 2020. This from 10,124 in 2010, 12,377 in 2000, and a high of 21,565 in 1990. The 2019 ACS 5-year average reported 2,473 households with 2.96 persons per household. The median household income of \$59,323 is 15% greater than the state's average of \$50,589 per the 2019 ACS. The daytime population increased from 19,975 in 2000 to 23,142 in 2010.<sup>51</sup> In 2021 the number stands at 26,260.<sup>52</sup>

The DoD Education Activity (DODEA) schools serve approximately 1,550 students in grades PreK-12.<sup>53</sup> They have built three new school facilities starting in 2009 with an additional elementary school scheduled to be replaced with construction starting in 2021-22 school year and scheduled to open in the 2024-25 school year at a cost of \$58.9 million.<sup>54</sup>

## Current Operations

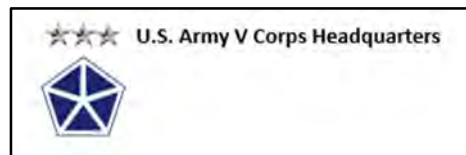
Today, Fort Knox is home to 1st Theater Sustainment Command, First U.S. Army Division East and 84th Training Command, U.S. Army Reserve Aviation Command and 100th Division and many other units.<sup>55</sup> On an



average workday, there are approximately 25,200 people working on the base, including about 9,600 active-duty military personnel.<sup>56</sup>

The Post has sole responsibility for the entirety of soldier career management, from swearing in to departing service. Fort Knox is also home to all ROTC Summer Cadet Training, which brings approximately 10,000 cadets to the Fort each summer. In addition, the Fort Knox range complex features one of the highest utilization rates of any military installation in the United States. In one year, there are more than 10,000 range utilization days.<sup>57</sup>

The V Corps was reactivated in February 2020 with Fort Knox serving as the headquarters location.<sup>58</sup> In total, approximately 630 soldiers will be a part of V Corps, with about 200 of them based at the forward command post in Poznan, Poland on a rotational basis, and with the rest remaining at Fort Knox.<sup>59</sup>



*Figure 28 V Corps*



*Figure 29 Major Units and Organizations - Adapted from Maj. Gen. John R. Evans Jr. presentation, 20 Sept. 2019.*

Continued growth has been sustained with new housing, new educational facilities, and continued positive relationships with the surrounding communities.

## Future Operations

Fort Knox will soon be home to a Digital Air-Ground Integration Range, or DAGIR. It will be only the second of its kind. This range will allow training for tanks, dismounted live-fire exercises, artillery, and aircraft. It will also allow for simultaneous air and ground training. Current construction has it on track for completion in 2023. It involves expending approximately \$52 million to convert the existing Yano Range.<sup>60</sup>

Fort Knox is well equipped to provide high quality training to the wide variety of units and personnel that come to train there. The following describes the various training assets the Fort has available. In addition, the impacts associated with that training are briefly discussed.

## Training Areas and Issues

### Ground / Maneuver Operations

Fort Knox features training areas for infantry, armor, and artillery. It has over 62,000 acres of land that can support maneuvers. These areas are spread across the entire installation and have many different types of topography to provide necessary challenges. See Map 22.

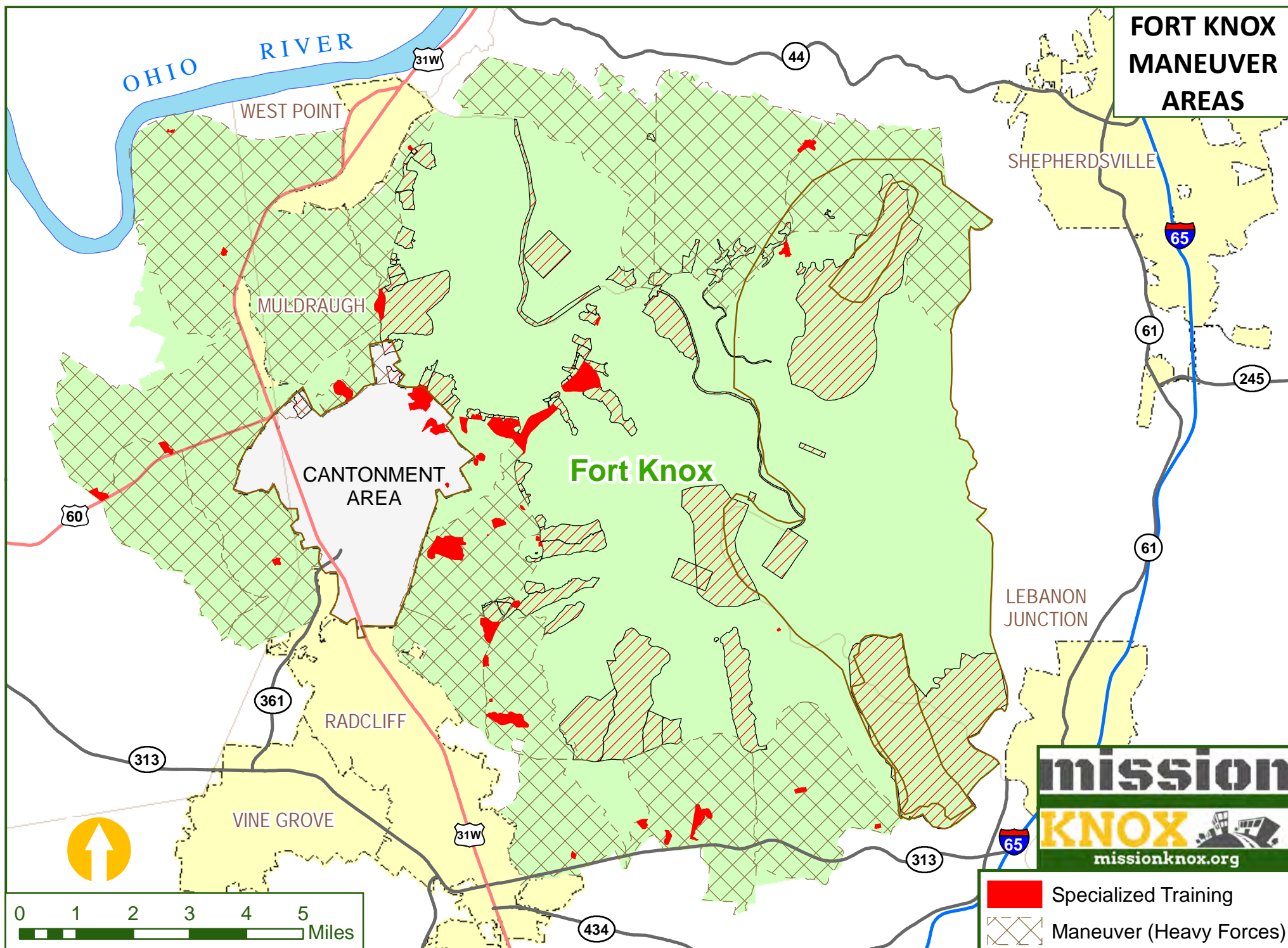
Training areas also include “village”, and, “city”, riverine, and amphibious areas for specialized training.



**Figure 30 Riverine Training.** Source: Fort Knox Garrison Command.



**Figure 31 Zussman Combined Arms Collective Training Facility.** Source" Fort Knox Garrison Command.





## Aerial Operations

### Airfields and Landing Strips

Godman Army Airfield (FKT) on post has operations capabilities for both fixed and rotary wing aircraft. Two runways, 5,184 and 4,853 ft. in length<sup>61</sup> assist in providing service and "...air traffic control operations in support of the Army Reserve Aviation Command (ARAC) and aviation multi-service joint training and operations. Provides Air Traffic and Airspace (AT&A) management and Weather Operations for the Installation and Fort Knox Mission Partners and MFGI units."<sup>62</sup> It can support airlift including C-130 and C-17 aircraft. Map 23 shows the Airfield and aerial ranges at Fort Knox.



Figure 32 Army Helicopter at Godman AAF. Photo Credit: Eric Pilgrim, Fort Knox News, 2020.

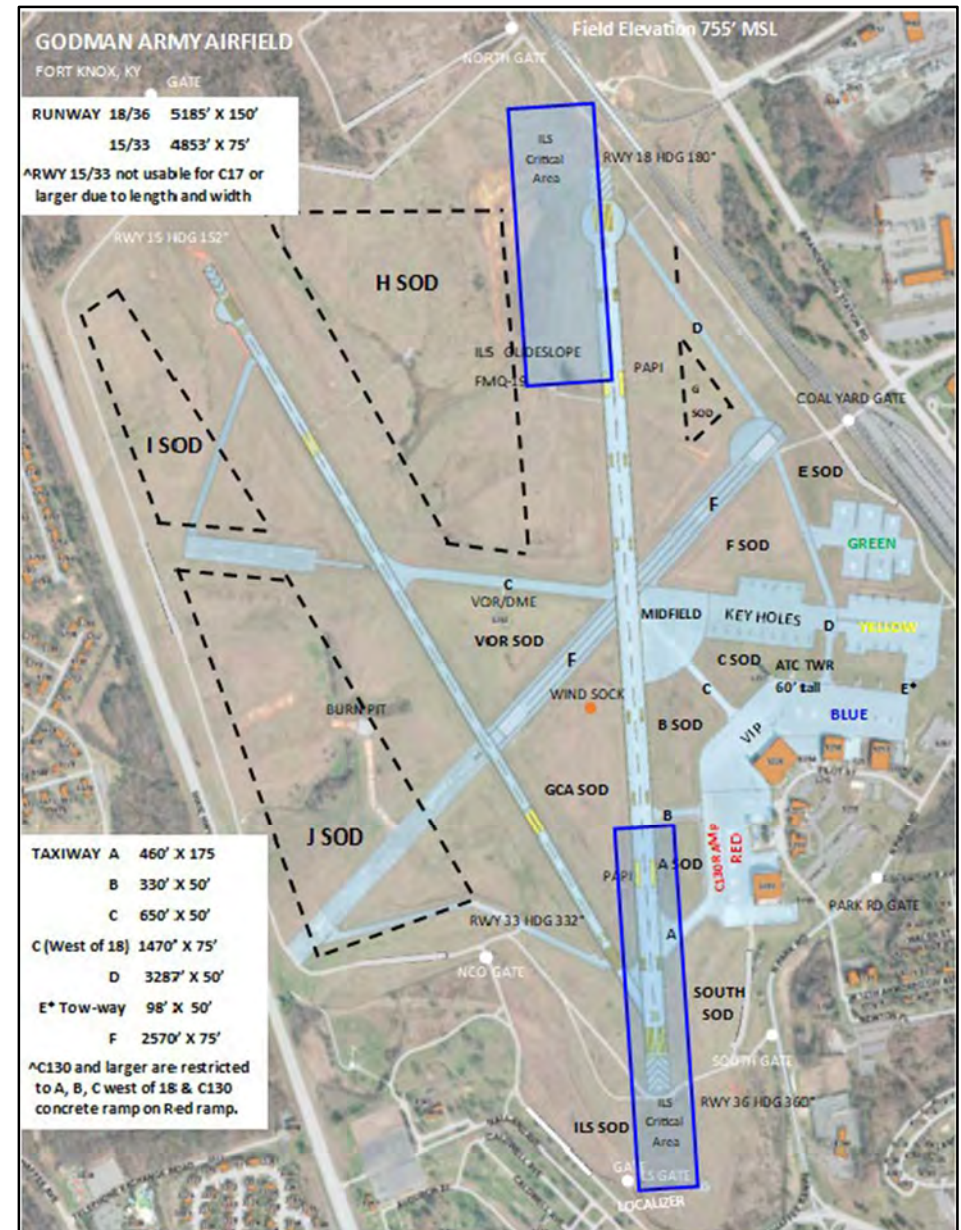
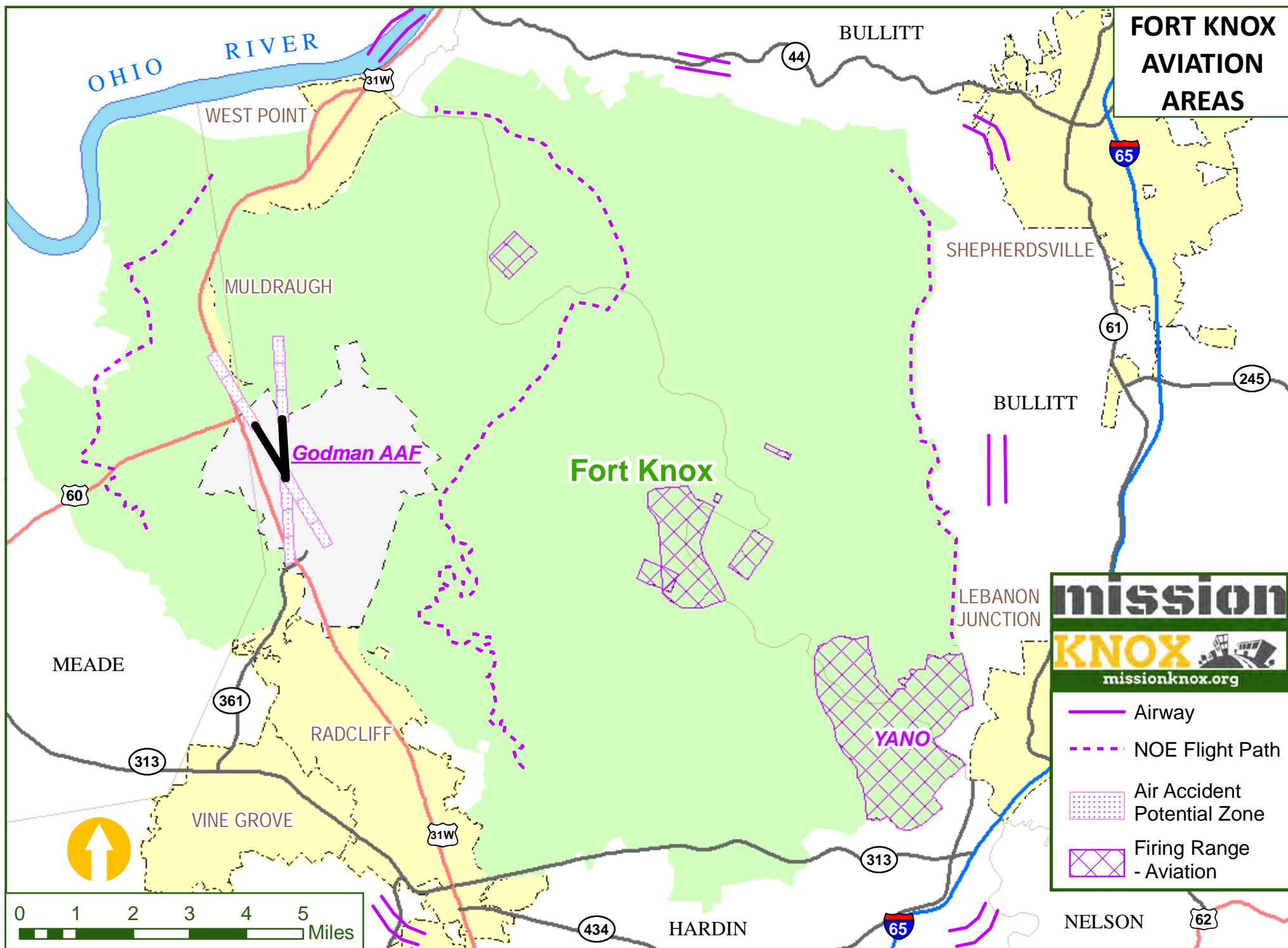


Figure 33 Godman AAF, Source: Local Flight Rules, Fort Knox Reg. 95-1.



MAP 23 - AVIATION AREAS



## Ranges and Noise

Fort Knox maintains over 38,000 acres of range and impact areas. The utilization rates rank among the highest in CONUS. Typical use includes over 10,000 range days annually and support of 100 plus training events during some days during summer.<sup>63</sup> See Map 24.

Of particular concern over the years has been complaints due to noise. Two recent studies have been done, in 2009 and 2018.

Noise is typically measured in decibels (dB) but since sounds vary and the effects upon humans it is graded by different methods. One, Peak Noise, exceeded by 15% metric or “PK15 (met)”, is a single event noise of the firing of a single weapon once. The peak level is exceeded only 15% of the time.<sup>64</sup> Also this type of noise may be measured by the Day-Night Level (DNL) metric. It is also useful for quantifying other loud blast noises, e.g., bombs or high explosives. This allows for averaging the noise over a longer duration (24-hour day) vs. the single instance “peak” noise. DNL adds 10 dB to “nighttime” measurement to account for less ambient noise masking that may occur during the day. Often the DNL is weighted over time to account for the peaks using an “A” or “C” weighting. The A is designed to mimic the human ear’s response to loudness. It does not however do well with low frequency sounds. The C accounts for how the human ear responds to different frequencies, especially at levels greater than 100dB.<sup>65</sup> C weighting measures uniformly across a frequency range of 30 to 10,000 Hz allowing better understanding of noises that are “felt” as well as heard due to vibrations.<sup>667</sup> Thus the CDNL metric gives a better evaluation of how the human ear will respond to loud noises over a longer duration. It should be noted that weather and atmospheric conditions play a large role in what is heard and if it is deemed to be annoying. Noise level

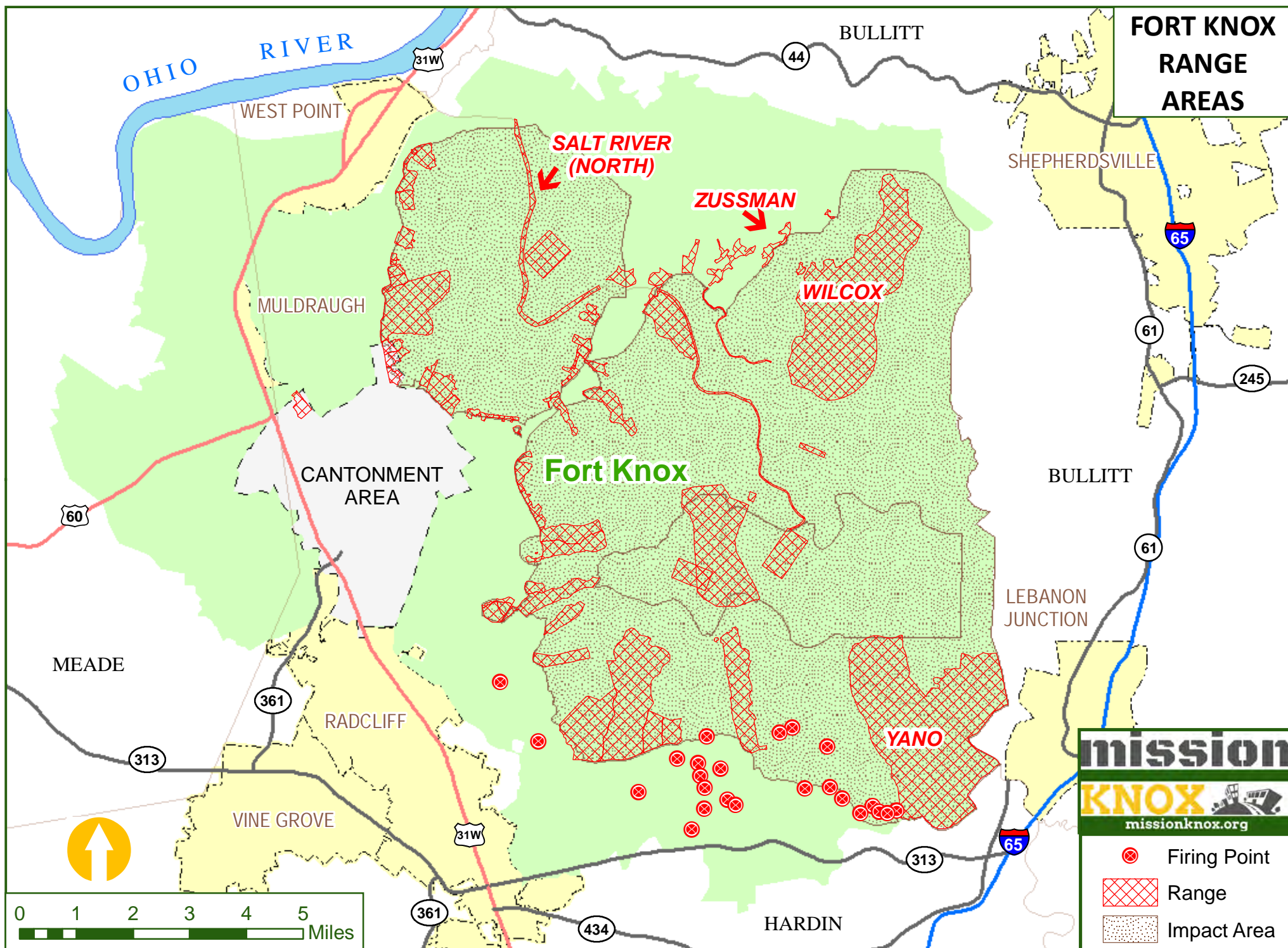
variations by up to 50dB have been noted in experiments.<sup>68</sup> The PK15 (met) works to account for the weather-related statistical variations.<sup>69</sup>

In turn the understanding of the measurements regarding what land use is compatible with this exposure must be considered. If we look at Table 12 we see a breakout across dB levels for the various Noise Zones and their limits based on the metrics used.

**Table 12 Noise Limits for Noise Zones<sup>70</sup>**

Noise Limits for Noise Zones			
Noise zone	Noise limits (dB)	Noise limits (dB)	Noise limits (dB)
	Aviation ADNL	Impulsive CDNL	Small arms — PK 15(met)
LUPZ	60 - 65	57 - 62	N/A
I	< 65	< 62	<87
II	65 - 75	62 - 70	87 - 104
III	>75	>70	>104
Legend for Table 14-1: dB=decibel LUPZ=land use planning zone ADNL=A-weighted day-night levels CDNL=C-weighted day-night levels PK 15(met)=Single event peak level exceeded by 15 percent of events <=less than >=greater than N/A=Not Applicable			

The zones are defined by compatible use in Table 13. Comparing these uses with the Zone type, percent “highly annoyed” (%HA) and the CDNL range provides insight on acceptable land use for areas covered by these zones. Thus, in a Zone II, the noise has the potential to highly annoy 15 to 39% of persons exposed. It illustrates possible land use issues for specific zones and their respective metrics.



MAP 24 - RANGE AREAS

**Table 13 Noise & Land Use Zones (AR200-1<sup>71</sup>)**

Noise Zone	%HA	CDNL	Compatible for residential use (schools, housing, and medical)
Zone I	< 15%	<65	Yes
Zone II	15-39%	65-75	Not normally recommended
Zone III	>39%	>75	Not recommended

Table 14 also list the levels of complaints that are risked by an area’s inclusions in areas of a particular decibel level.

**Table 14 Risk of Noise Complaints by Level of Noise<sup>72</sup>**

Risk of Noise Complaints by Level of Noise	
Risk of Noise complaints	Large caliber weapons noise limits (dB) PK 15(met)
Low	< 115
Medium	115 - 130
High	130 - 140
Risk of physiological damage to unprotected human ears and structural damage claims	> 140

See further details on Table 14 in Appendix B “Noise and Encroachment Complaints” recounting the need for adjustments in building codes for Zone II should undesired uses be determined to be of value.

#### Small Arms Noise

The noise levels associated with small arms fire can be seen in Map 25. As illustrated, all Zone III noise levels that result from small arms fire remain on the base itself, and do not impact the communities near and around the base. However, the Zone II noise levels, which have a mean of 87 dB per PK15 (met), do extend past the installation boundaries at several locations. These include portions of Hardin and Bullitt Counties including the cities of Lebanon Junction, Radcliff, and West Point. These are contained in the one-mile study buffer. As referenced in

Table 13 residential development is not recommended, however it does exist.

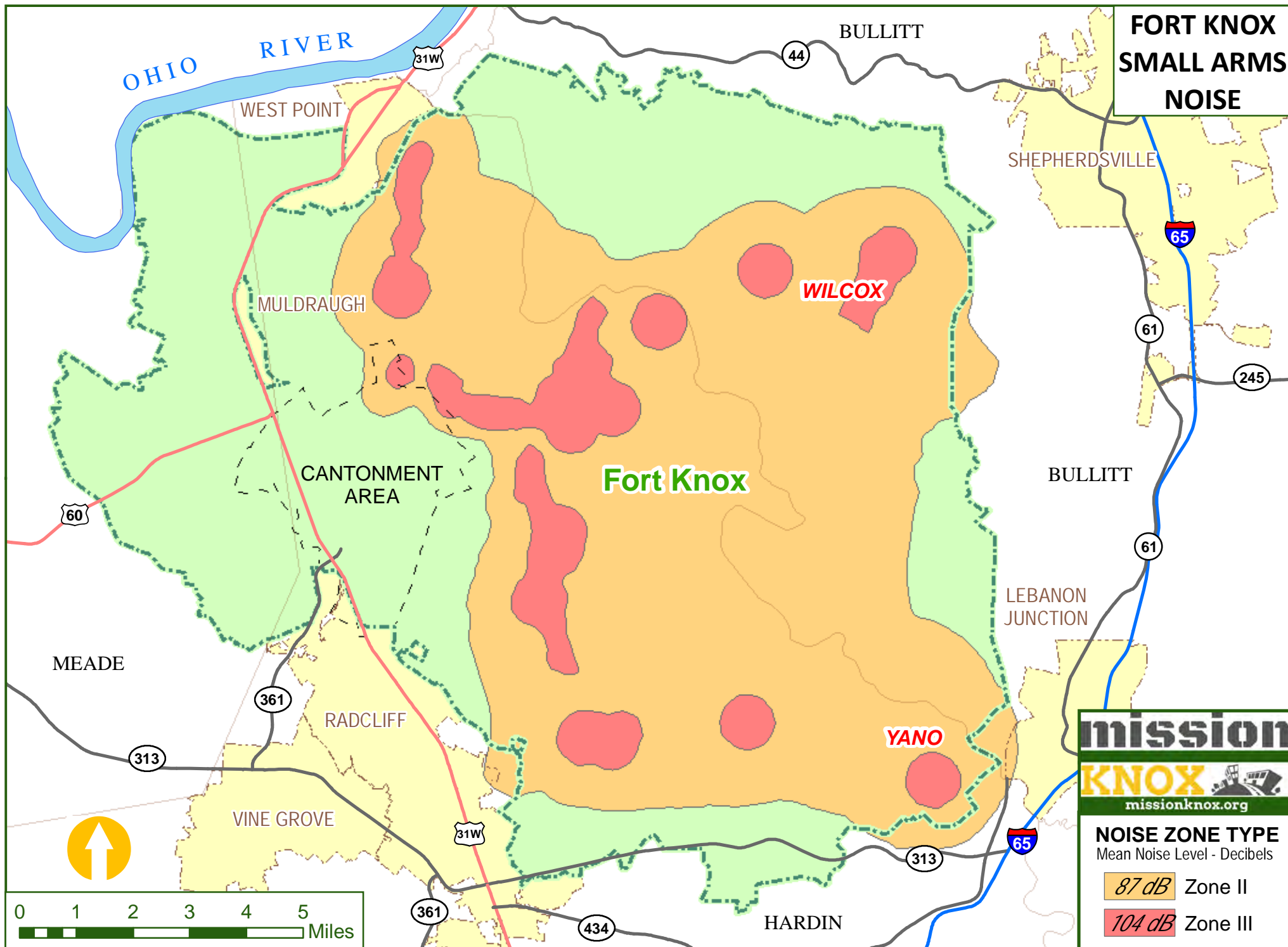
#### Large Caliber Weapons Noise

The noise levels associated with large caliber weapons can be accessed by both risk complaint level using PK15 (met) and with CDNL due to the studies that have been done. The risk complaint is highlighted on Map 26 and elevated noise does extend outside the boundaries of the base. Large areas of the one-mile buffer area are within the 115 dB PK15 (met) zone. In some cases, it also extends almost two miles into the five-mile buffer. This area is associated with a moderate risk of complaints due to noise. All four counties in the study area are crossed by this zone. Several incorporated cities including the entirety of Muldraugh, and the bulk of Lebanon Junction, Radcliff, and West Point. Sections of Vine Grove are also in this zone. At the south end of Yano Range, portions of the area known as Cartwright Estates lay within the 130 dB PK15 (met) zone. This area would be associated with a high risk of complaints.

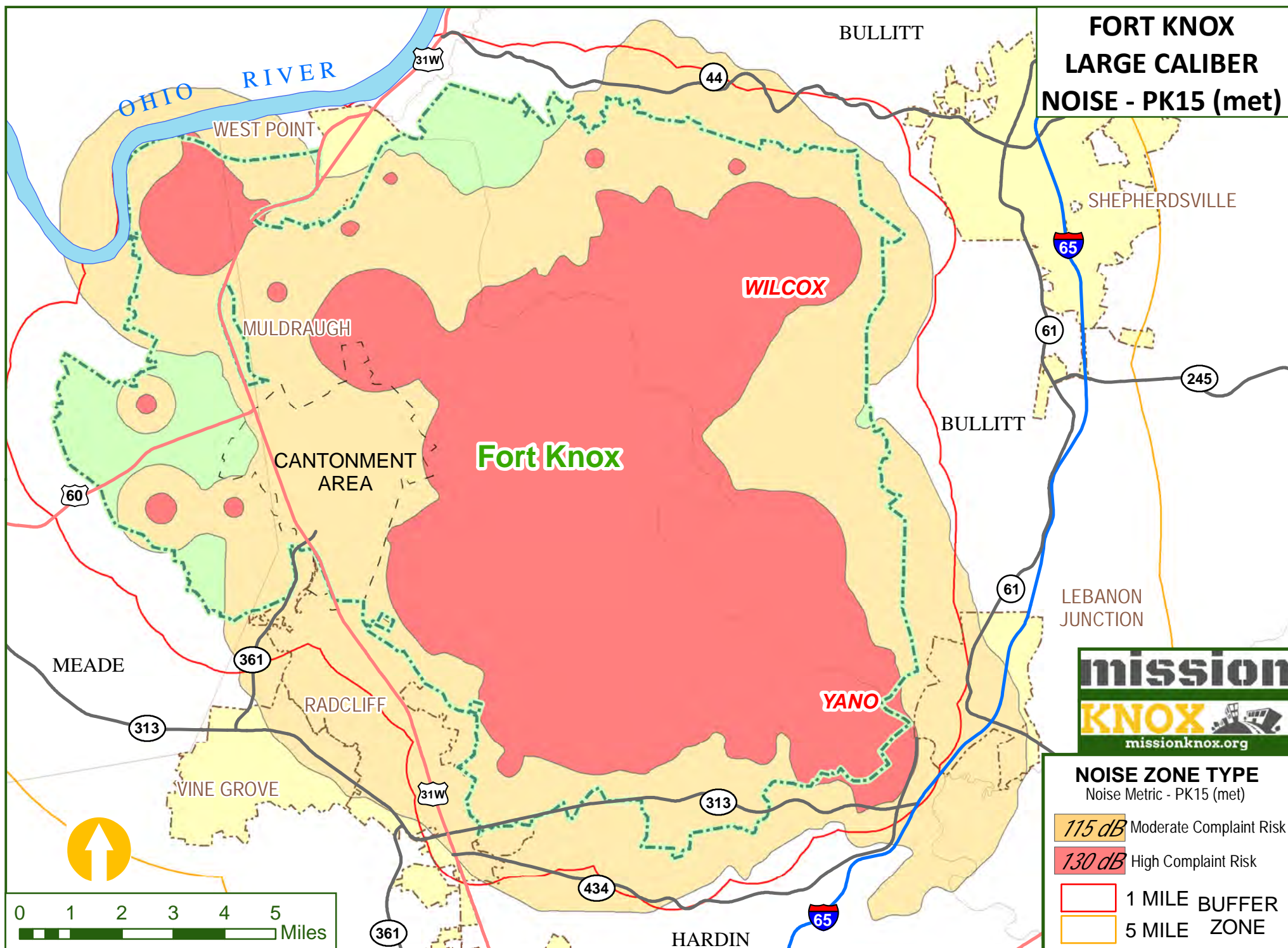


**Figure 34 M1 Abrams Tank firing at range. Source: Fort Knox Garrison Command, Directorate of Public Works, Environmental Management Division, c. 2007.**

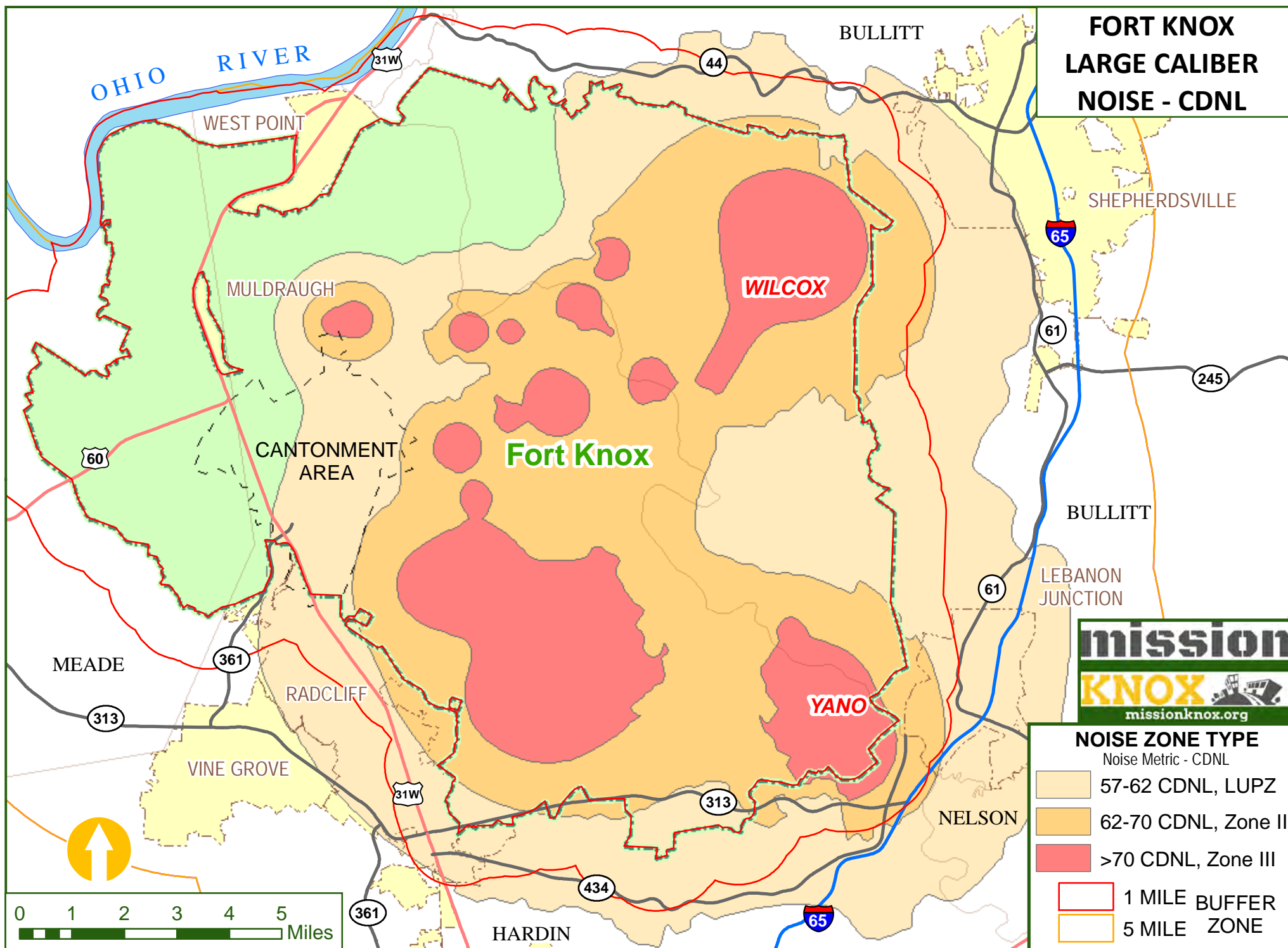




MAP 25 - SMALL ARMS NOISE



MAP 26 - LARGE CALIBER, NOISE - PK15 (met)



MAP 27 - LARGE CALIBER, NOISE - CDNL



Review of Map 27 shows the noise as classified by the CDNL criteria. This reveals the extension of potential problems even further east than the PK15 (met) method. Here Zone I is defined as the Land Use Planning Zone (LUPZ). Because of varying perspectives on what is acceptable noise, this zone provides the ability to intercept problems. Going beyond a concept that uses such as residential may be compatible, local planning agencies have or should implement additional planning strategies in this zone. This can provide a buffer against future noise conflicts. Almost the entire one-mile buffer in Bullitt and Hardin County are covered by Zone I. In portion it extends over two miles into the five-mile buffer. This includes into Nelson County. Zone II, which is of concern regarding residential use covers large sections of the one-mile buffer including portions of Lebanon Junction and Radcliff. Again, at the south end of Yano Range, Zone III crosses the post boundary into an area with 15 existing residences.

#### DAGIR Noise

Once the DAGIR range is operational, nearby residents will experience increased noise levels. Currently Wilcox Range has absorbed some of the training load which has shifted some noise levels to the north. Communications with officials outside the post have been ongoing but the change can be expected to of concern and will hopefully be assuaged via open dialogue and use of media.<sup>73</sup> The new range will be constructed over the top of the existing Yano Range. Map 28. At over 3,600 acres it is easily the largest range on post. One factor of consideration is the higher level of use will increase air traffic both at Godman AAF and in the surrounding area due the uptick in training flights.<sup>74</sup>

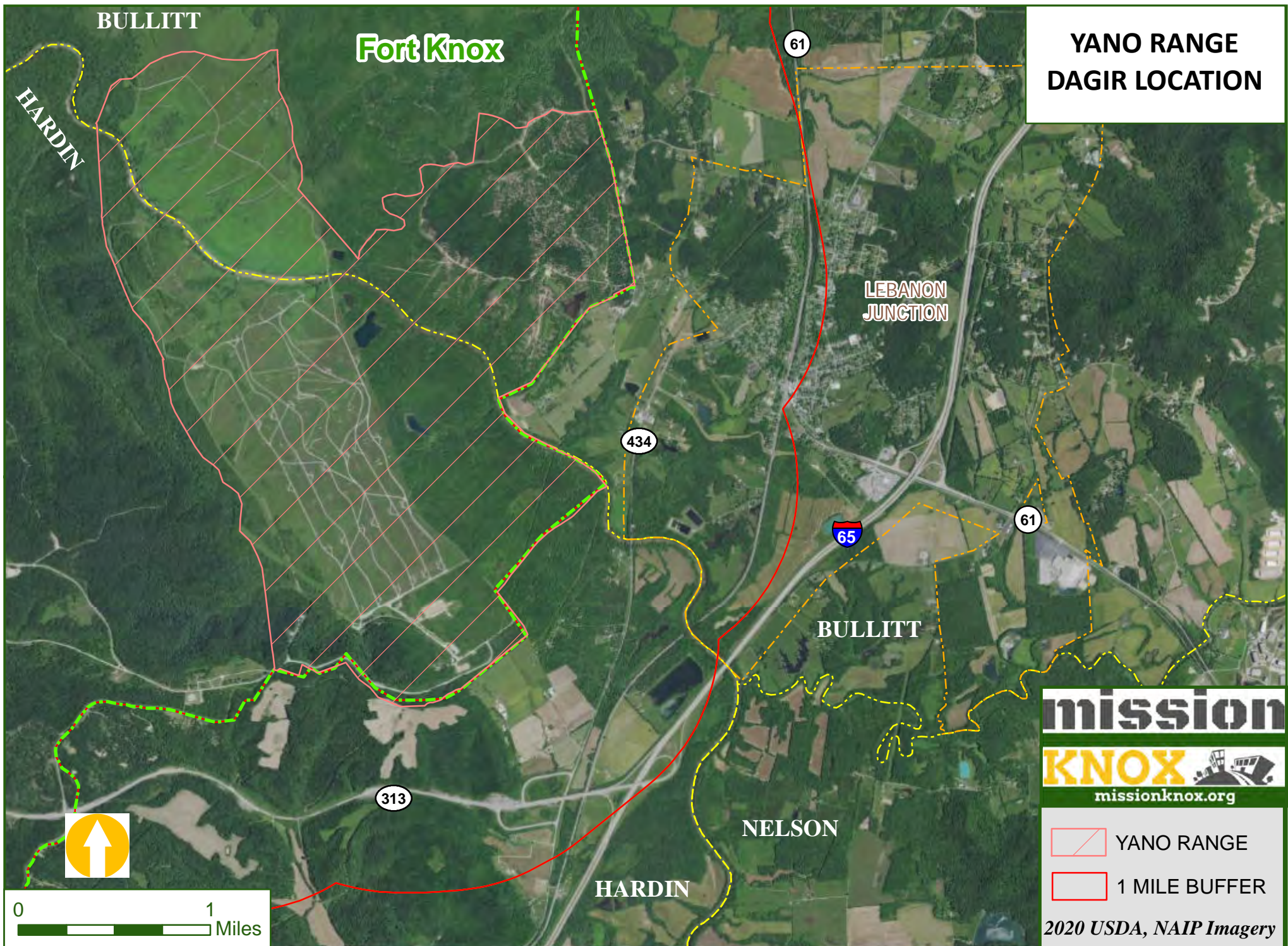


**Figure 35 Yano Range looking northwest. Source: Fort Knox, Directorate of Public Works, Environmental Management Division, c. 2007.**

#### Aircraft Noise & Encroachment

The airfield and numerous aerial training ranges create overflight concerns and issues. Map 29 show that Godman AAF itself has all noise buffers contained within the reservation boundaries. There is a small Air Accident potential zone that extends across US 31W in two places and into portions of Muldraugh. The more general concern is the overflights by rotary aircraft during unit transitions or training patterns that take routes over the surrounding communities. There are several documented complaints that are discussed in more detail in Section III, Compatibility Issues.

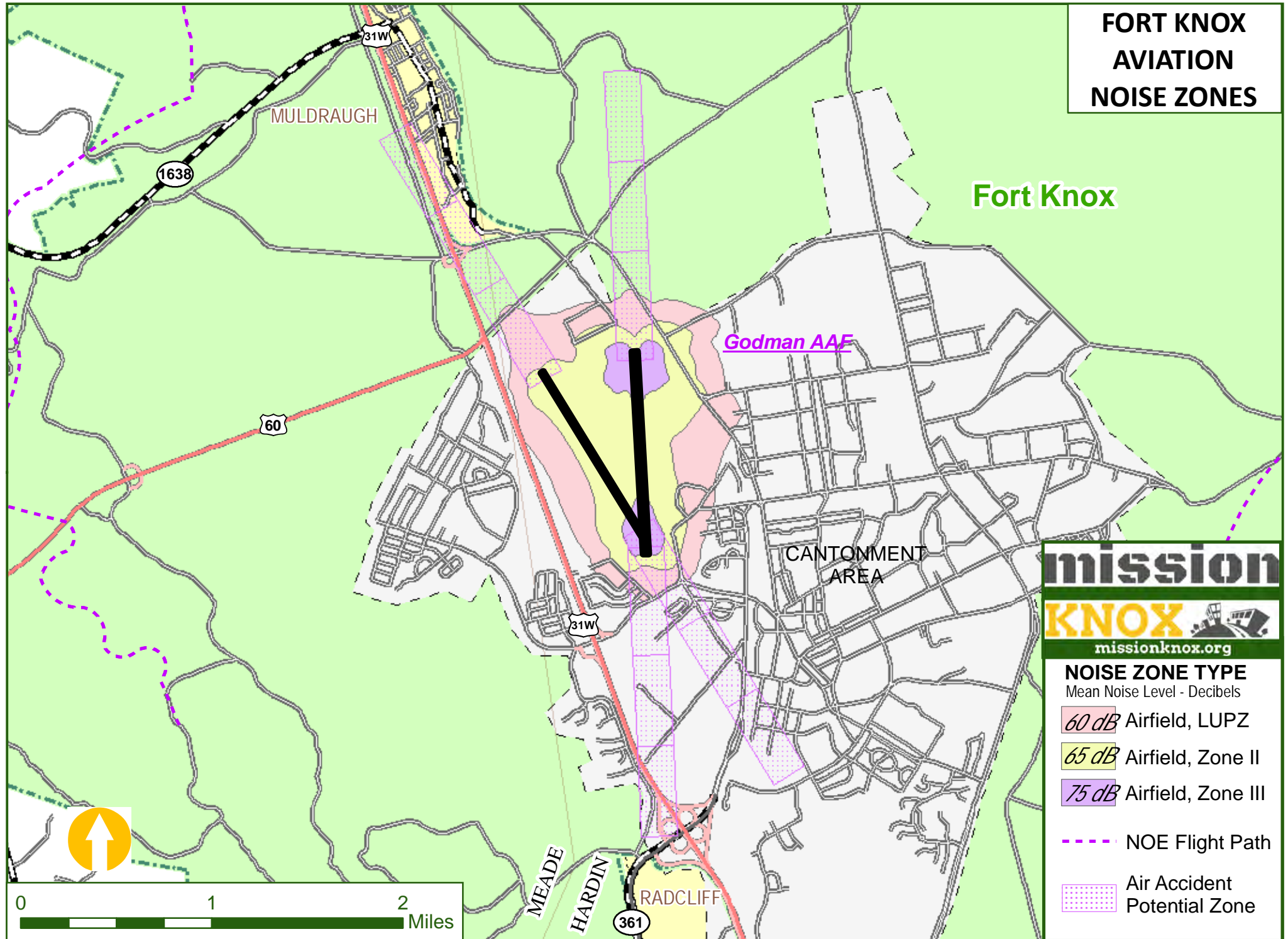




MAP 28 - YANO RANGE - DAGIR LOCATION



# FORT KNOX AVIATION NOISE ZONES



- NOISE ZONE TYPE**  
Mean Noise Level - Decibels
- 60 dB Airfield, LUPZ
  - 65 dB Airfield, Zone II
  - 75 dB Airfield, Zone III
  - NOE Flight Path
  - Air Accident Potential Zone



## Internal Land Use Planning

(in work, waiting for FK Real Property Master Plan due Sept. 2021)

### General Infrastructure

To rebuild the existing on-post infrastructure is estimated at over \$10 billion. The installation contains over 11 million sq ft of buildings not including housing with over 2,300 structures total.<sup>75</sup> It also has the various support infrastructure of required of any city, including roads, water, sewer, telecommunications, and energy. Fort Knox also has a community clinic, various convenience stores, the post exchange, and several parks and recreational facilities.

### Housing on the Installation

A crucial aspect to the success of the military operations in Fort Knox is ensuring there is ample and adequate housing for those soldiers and their families who need it on the installation. Fort Knox operations benefit from soldiers having secured housing; they offer services and advice to soldiers through the Housing Division Office. Additionally, Soldiers are provided “basic allowance for housing” to offset costs for their housing needs. This fund can be utilized on either on off-post or on-post housing.<sup>76</sup> Historically, Fort Knox has had high satisfaction rates for their on-post housing. According to a 2019 survey, the Fort Knox private military housing partner received “good” or “very good” ratings in every category.<sup>77</sup> Housing on post was privatized in 2006.

A recent trend that has emerged has been a limit on the availability of affordable housing in the study area. At time of writing, home prices in the area and across the country have risen to undesirable levels and the quantity has also gone down. This situation is worsened for Fort Knox

soldiers as a shortage of houses on the installation is more apparent and a deteriorating satisfaction with on post housing is becoming an issue. In a March 2021 speech, Fort Knox’s Garrison Deputy Commander, Jim Bradford pointed out that the installation was short nearly 200 houses for families.<sup>78</sup> Meanwhile, Fort Knox leaders have been working on a plan to address complaints of residence, that include uncontrolled pets and landscaping issues.<sup>79</sup> Issues with living on the post may force soldiers and their families to look outside of the installation for homes. But as the market outside continues to become unstable or unreliable, the situation for soldiers and their families becomes more complicated and less secure.

Per the 2010 Census, there were 2,969 Housing Units at Fort Knox. There are currently over 2,300 homes on post.<sup>80</sup> This does not include the barracks areas for single soldiers which number 672 and an additional 168 single-occupant studio style apartments. There are also over 12,000 guest barracks rooms for the large number of trainee’s that transient through the installation.<sup>81</sup>

Housing as a compatibility issue is discussed further in Section III. This includes review of projects to improve and expand available housing both on and off post.

### Transportation

Through the three entrance gates arrived over 25,000 people per day.<sup>82</sup> This involves transiting the roadways leading to the post and the primary access road US 31W. See Map 19. The creation of the Bullion Blvd connector road (KY 361) in conjunction with KY 313 has allowed some easing of congestion on 31W as described in Section I.

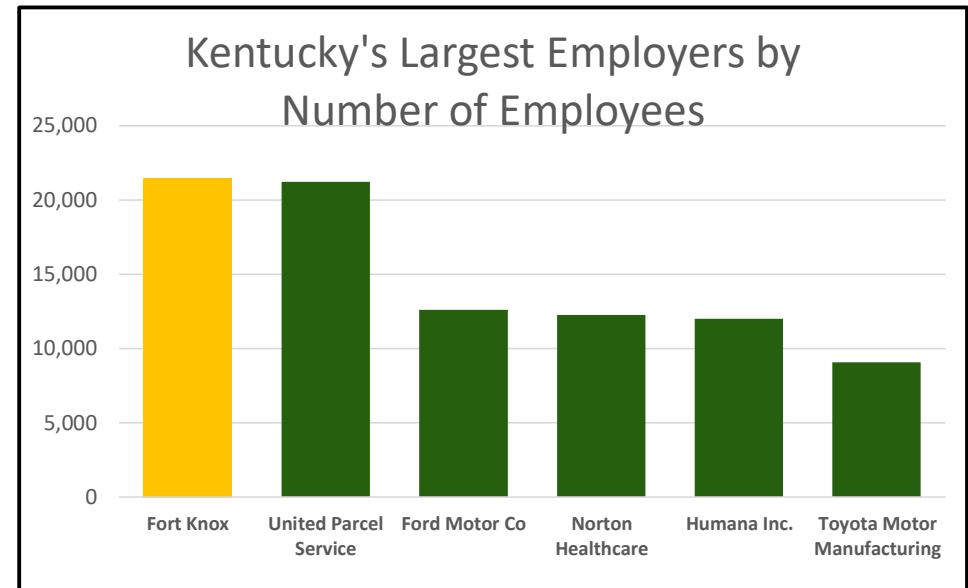
## Economic Influence

As a “city” with a typical daytime population of over 26,000, Fort Knox is a community like no other in the state. It has an annual economic output of \$2.6 billion, which includes a payroll of \$750 million.<sup>83</sup> The impact to the region as an employer and neighbor is broad in scope. Fort Knox the “city” would be the 16<sup>th</sup> largest in the state by population, between Frankfort and Paducah.<sup>84</sup> The 170 mi<sup>2</sup> area of responsibility would make in the 3<sup>rd</sup> largest in the state by land area behind Metro-Louisville and Lexington-Fayette Urban County Government.

If considered a single enterprise, Fort Knox is also one of the larger employers in the state. To understand its full scope a comparison of its relative size in the state as a whole will help provide context. Chart 7 illustrates the largest employers in the state by number of personnel based on late 2019 numbers. They can be compared to Fort Knox as an employment destination.

UPS, Ford, Norton, and Humana are primarily resident in Louisville, with Toyota being located in Georgetown. For reference, Wal-Mart employs 31,646 individuals however they are dispersed across the state in 102 retail outlets and 2 distribution centers.<sup>85</sup> The University of Kentucky has 14,000 employees in their system, the vast majority located in Lexington.<sup>86</sup>

**Chart 7 Kentucky's Largest Employers**

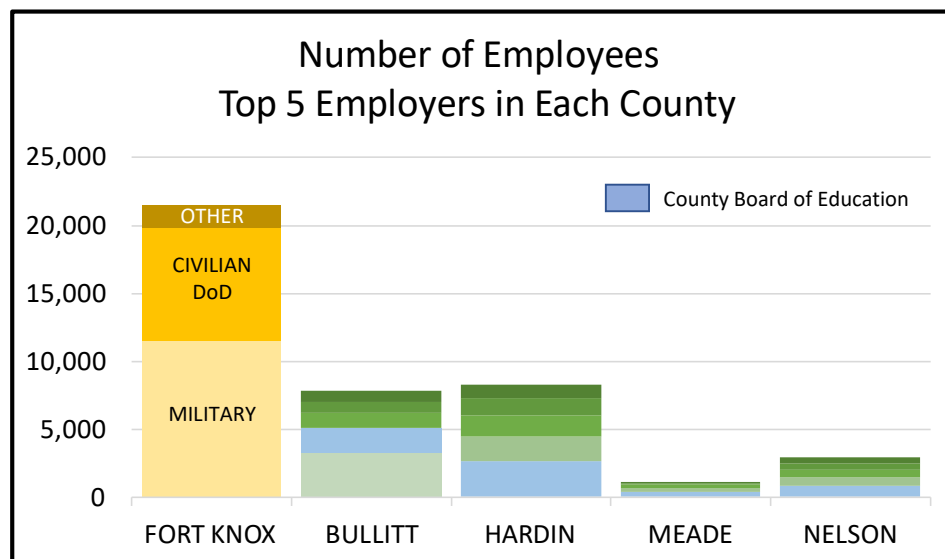


*Excludes Education and Retail*

*Sources: KY Cabinet for Economic Development, Dun & Bradstreet, Greater Louisville Economic Development*

In looking closer at the study region, Fort Knox is by far the largest single employer. The over 20,000 employees it has serve as a magnet for commerce, traffic, and housing. Chart 8 compares Fort Knox to the other top five employers in each county. These are provided in detail in Table 1. The region is currently experiencing a growth pattern and these numbers will be changing. The largest current project is in Meade County where Nucor has broken ground on a \$1.7 billion dollar steel plant that will create 400 jobs when in operation.<sup>87</sup> Numerous warehousing and distribution centers are being created in Bullitt County and both Bullitt and Nelson are continuing to experience the expansion of the bourbon industry. All this creates additional opportunities for growth in the study area.

**Chart 8 Top 5 Employers by County**



Sources: KY Cabinet for Economic Development, Dun & Bradstreet, Bullitt County Board of Education

Thus, Fort Knox is a formidable economic engine for the entire region, even beyond the study area. The ability to sustain current operations at Fort Knox with a growth-positive outlook is key from a continued economic success perspective. It is vital for study area communities, being in close proximity to Fort Knox, to factor this into any decision-making process. Incoming personnel continue to reside in the local area, bring an influx of families who may also desire employment, and add to the overall economic prosperity of the area.

**Table 15 Top 5 Employers by County**

FORT KNOX	Military	11,600
	Civilian DoD	8,200
	All Others	1,673
BULLITT	Amazon	3,300
	Bullitt BoE	1,800
	LSC Communications	1,100
	Louisville Seating	825
	Geek Squad	800
HARDIN	Hardin BoE	2,650
	Metalsa	1,875
	HMH*	1,470
	Akebono	1,300
	Baptist Healthcare	1,005
MEADE	Meade BoE	412
	Lusk Group	250
	Monument Chemical	242
	Fiscal Court	130
	Meade RECC	114
NELSON	Nelson BoE	896
	American Fuji Seal	593
	Tower Automotive	537
	Sazerac Distillers	473
	Heaven Hill	413

Sources: KY Cabinet for Economic Development, Dun & Bradstreet, Bullitt County Board of Education, 2019 data.

\*Hardin Memorial Health was absorbed by Baptist Healthcare in Sept. 2020.

The payroll from Fort Knox plays an important role in the region's economy. The combined military and civilian workforce payroll spreads across and beyond the region. The data in Chart 9 illustrates the geographical spread of this money as a portion of the total number of military members on post. The active-duty, base pay rate total of \$223.3 million, includes only permanent stationed members and not



any training or temporary duty population nor reserve component military. These additional transient personnel would more than double the number. The base resident population comprises 54% of this payroll. An additional 24% of active duty personal live off post in the study area and the remaining 22% living within commuting distance.<sup>88</sup>

Chart 9 Military Payroll

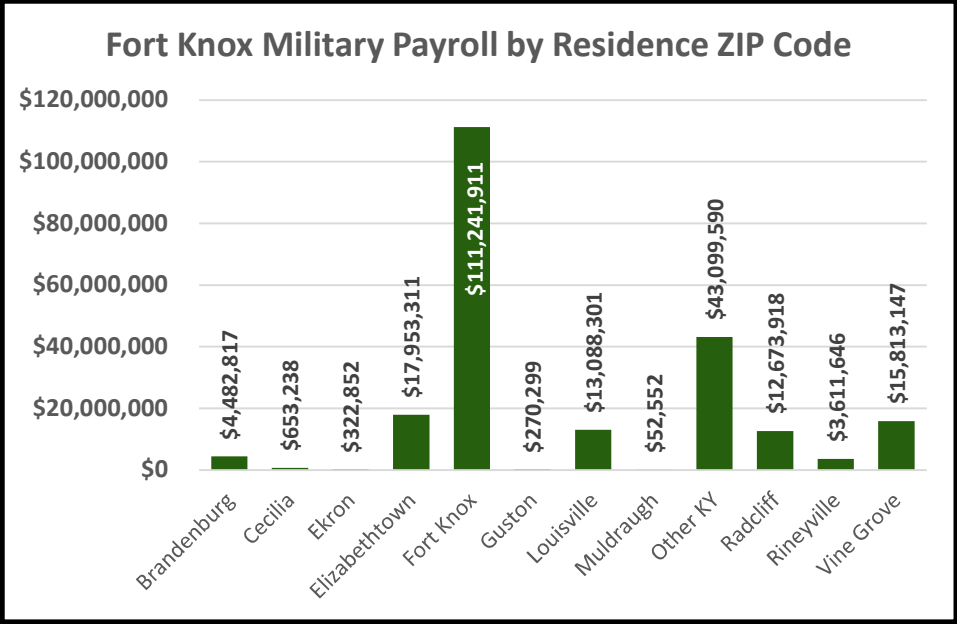
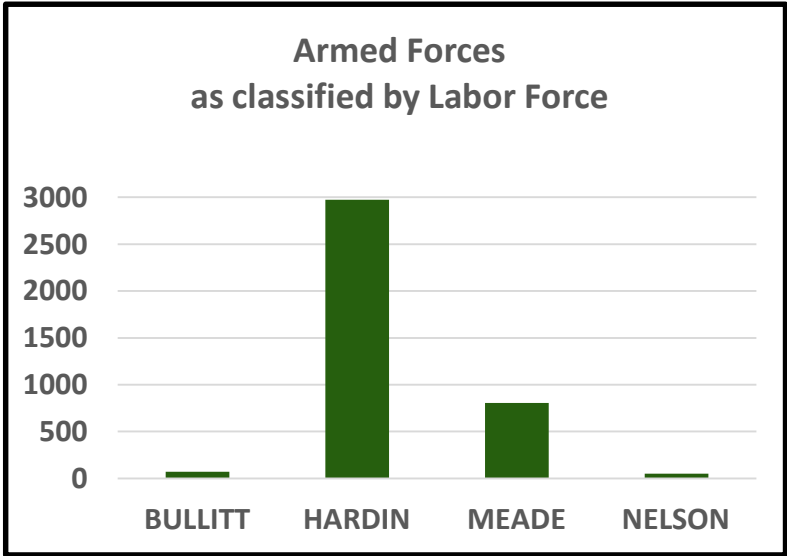


Chart 10 provides another perspective by using the Census “labor force” category to portray the numbers of employees classified as “armed forces” in the four-county study area. Since this is an estimate and a “snap-shot” in time many may be missed. This is relevant to Fort Knox because of the transient nature due to the training load in any given week. These numbers represent 3.6% of Meade and 3.5% of Hardin County’s labor force and less than 1% of Bullitt and Nelson County’s.

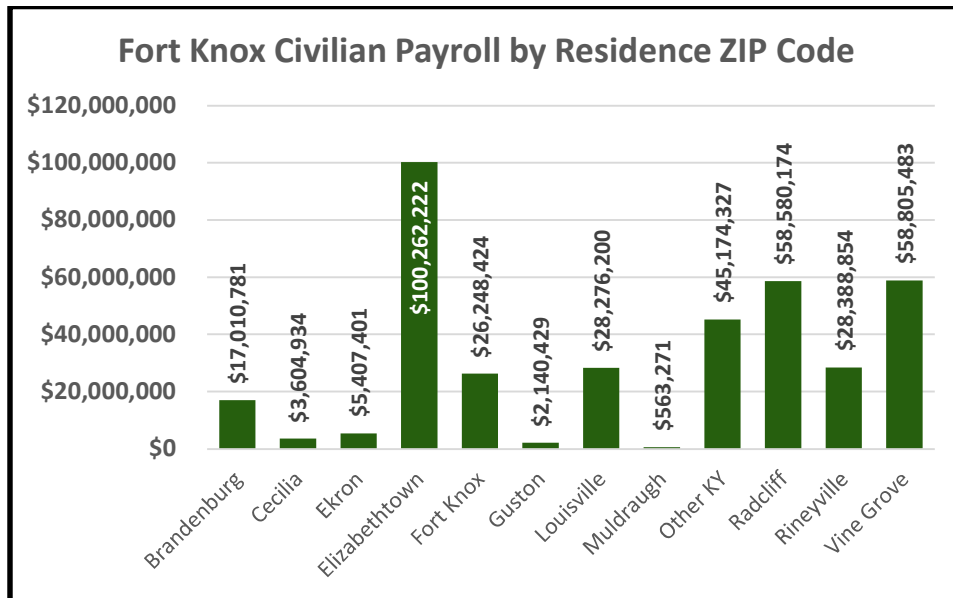
Chart 10 Armed Forces in Labor Force



U.S. Census, American Community Survey, 2019, Table DP03, 5-Year Estimate.

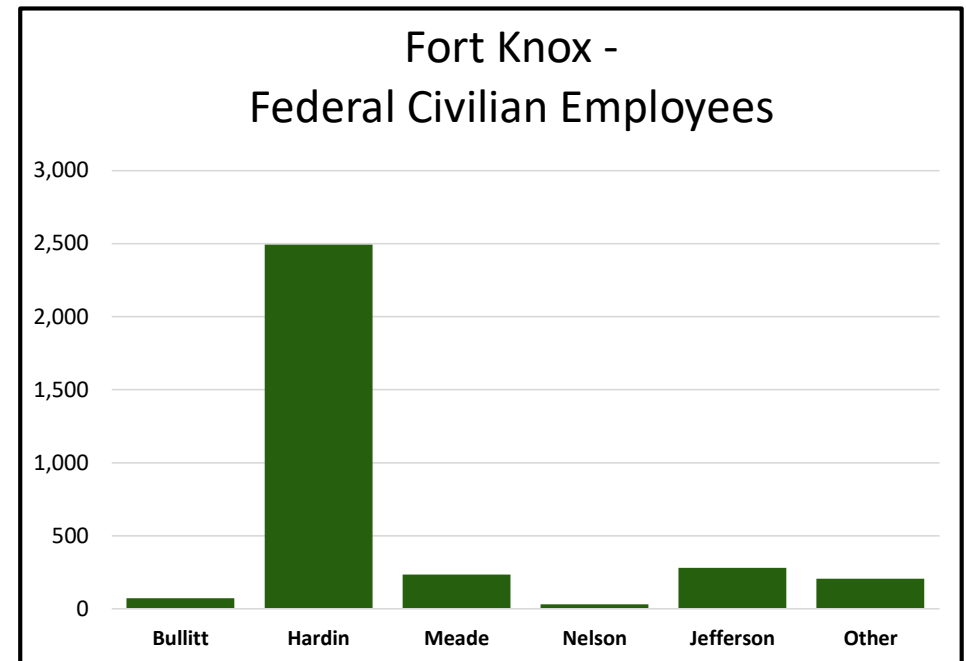
The civilian payroll recipients (Chart 11) live across the region with the highest total being in the 42701 ZIP Code (Elizabethtown). This \$364.5 million does not include many civilian employees such as reserve component civilian personnel, Department of Defense Education Activity (DoDEA) (300+), Medical and Dental Activity (MEDDAC) (750+), U.S. Mint/Treasury (200+), U.S. Army Corps of Engineers (50+), Defense Commissary Agency (DeCA) (100+), and non-appropriated funds employees.<sup>8990</sup> These would add over 3,000 additional employees and millions of dollars to this list.

**Chart 11 Civilian Payroll**



Another snapshot of the general geographic dispersal of some employees is portrayed in Chart 12.

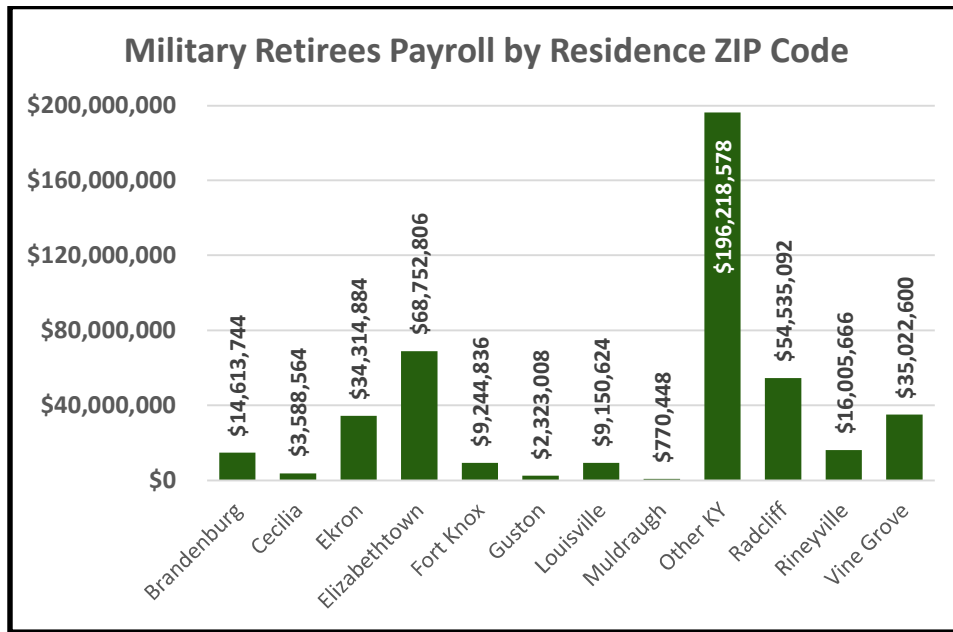
**Chart 12 Federal Civilians by County of Residence**



Source: Fort Knox Garrison Command, Public Relations Office, December 2019  
Only includes employees processed through Fort Knox Personnel Advisory Center.

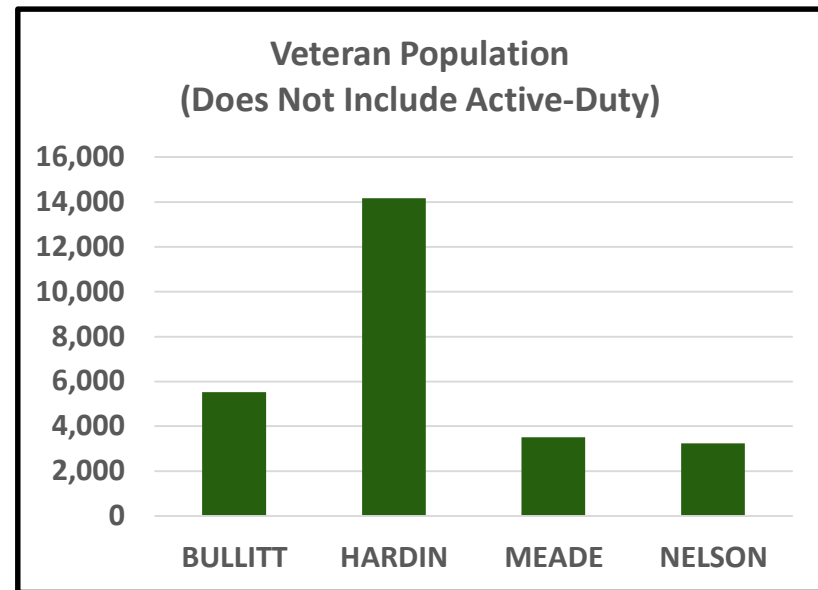
An additional component of this regional impact is the income received by military retirees. Chart 13 displays the payments of over \$444 million to retirees residing within 40 miles of Fort Knox and over \$239 million of that amount being paid to retirees living in the ZIP Codes of the study area.

**Chart 13 Military Retirees Payroll**



The total number of military retirees in the region form a large cohort of the permanent residents. The 2019 ACS numbers are show in Chart 14. For comparison, Veteran’s constitute 18% of Hardin County’s total population. They are also a large constituency for Bullitt – 9%, Meade - 17%, and Nelson 9%. Garrison Command puts the number of Military Retirees within 40 miles of Fort Knox at 12,686 plus an additional 45,451 dependents.<sup>91</sup>

**Chart 14 Veteran Population by County**

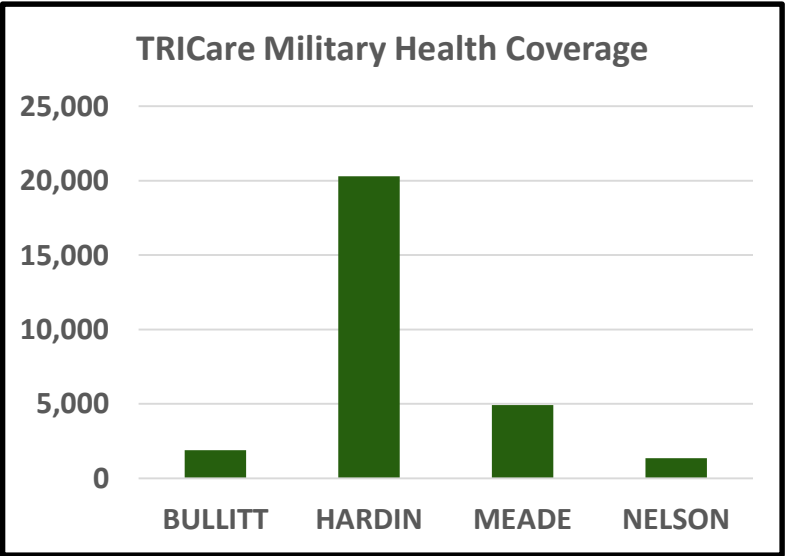


U.S. Census, American Community Survey, 2019, Table S2101, 5-Year Estimate.

The prevalence of health insurance provides through the Tricare, Military health program is another revealing factor related to the presence of Fort Knox in the region. See Chart 15. This coverage is available for various groups including active-duty, retirees, national guard member and others including families. Covering 11% of the population, it forms a large part of the health care system in the region.



Chart 15 *Tricare Health Insurance*



U.S. Census, American Community Survey, 2019, Table C27008, 5-Year Estimate.