

factors, such as demography (for example, survivorship rates, fecundity), distribution of breeding groups across the landscape, flycatcher dispersal patterns, migration routes, the tendency for adults and surviving young to return to their previous year breeding site, and conspecific sociality also influence where flycatchers are found and what habitats they use (U.S. Fish and Wildlife Service, 2002).

It is critically important to recognize that the ultimate measure of habitat suitability is not simply whether or not a site is occupied. Habitat suitability occurs along a gradient from high to poor to unsuitable; the best habitats are those in which flycatcher reproductive success and survivorship result in a stable or growing population. Some occupied habitats may be acting as population sources, while others may be functioning as population sinks (Pulliam, 1988). Therefore, it can take extensive research to determine the quality of any given habitat patch. Furthermore, productivity and survival rates can vary widely among years (Paxton and others, 2007; Ellis and others, 2008; Ahlers and Moore, 2009), so conclusions based on short-term datasets or data extrapolated from one area to another may be erroneous. It also is important to note that not all unoccupied habitat is unsuitable; some sites with suitable habitat may be geographically isolated or newly established, such that they are not yet colonized by breeding flycatchers. There also may simply not be enough flycatchers in a given area to fill all available habitat in particular

locations (U.S. Fish and Wildlife Service, 2002). A better understanding of which habitats or sites are sinks or sources can be especially helpful in site conservation and restoration planning.

As described earlier, migrant Willow Flycatchers may occur in riparian habitats that are structurally unsuitable for breeding (for example, too sparse, smaller patch size, etc.), and in non-riparian habitats. Such migration stopover areas, even though not used for breeding, may be critically important resources affecting local and regional flycatcher productivity and survival (U.S. Fish and Wildlife Service, 2002, 2005).

Breeding Chronology and Biology

Unless otherwise noted, the information that follows and upon which the generalized breeding season chronology (fig. 8) is based comes from Unitt (1987), Whitfield (1990), Maynard (1995), Sogge and others (2003b), Paxton and others (2007), Schuetz and Whitfield (2007), and Ellis and others (2008). Extreme or record dates for any stage of the breeding cycle may vary by 1–2 weeks from the dates presented, depending on the geographic area, extreme weather events, yearly variation and other factors. Higher elevation areas, in particular, have delayed chronology (Ahlers and White, 2000).

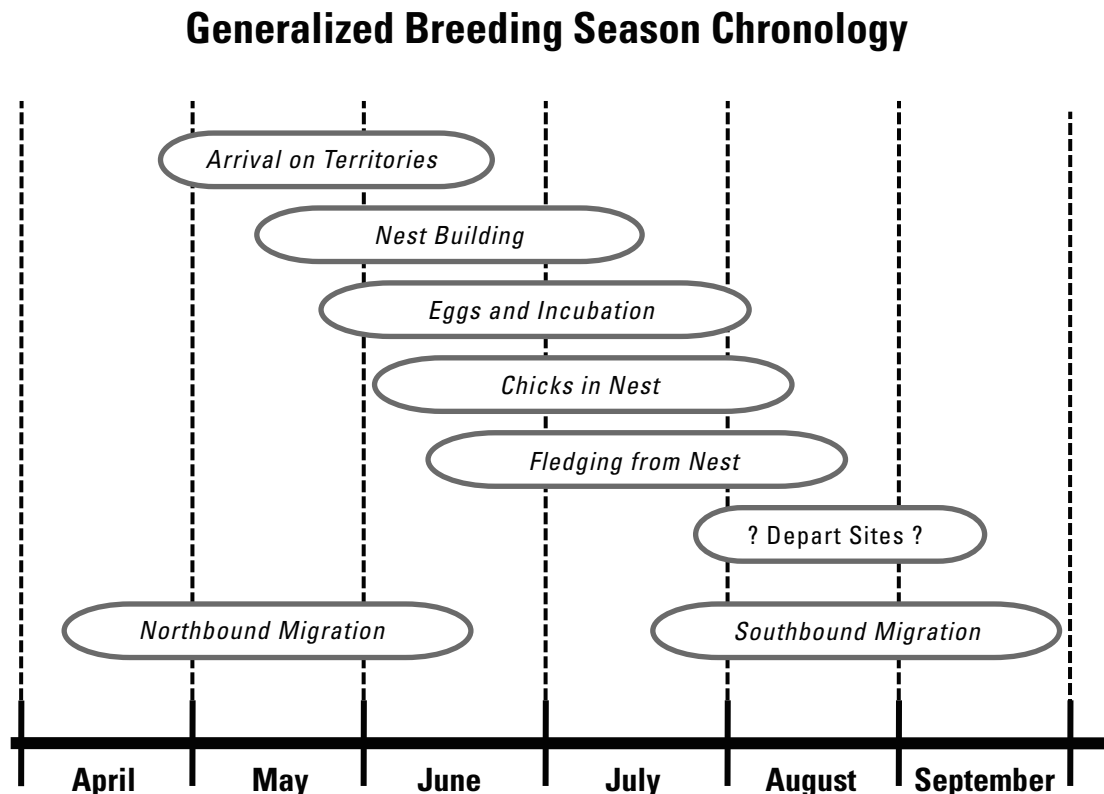


Figure 8. Generalized migration and breeding chronology for the Willow Flycatcher in the Southwest. Extreme or record dates may occur slightly earlier or later than indicated.

Both sexes can breed beginning in their second year. Male Southwestern Willow Flycatchers generally arrive at breeding areas first; older males typically arrive before younger ones. Although females usually arrive a few weeks after males, some older females are present at sites before late-arriving males. Adult flycatchers will sometimes wander extensively through large riparian sites before and after breeding, possibly as a way to evaluate potential breeding habitat (Cardinal and others, 2006).

Males establish and defend their territories through singing and aggressive interactions. Females settle on established territories, and may choose a territory more for its habitat characteristics than for the traits of its territorial male. Territory size tends to be larger when a male first arrives, then gets smaller after a female pairs with the male (Cardinal and others, 2006). Similarly, male song rate is very high early in the season, then declines after pairing (Yard and Brown, 2003). Not all males are successful in attracting mates in a given year, and as a result unpaired territorial males occur at many breeding sites. Unpaired males are usually a small percentage of any local population, but can comprise as much as 15–25 percent of the territories in some populations (Munzer and others, 2005; Ahlers and Moore, 2009).

Although the Willow Flycatcher as a species is considered predominantly monogamous during the breeding season (Sedgwick, 2000), some Southwestern Willow Flycatcher populations have a relatively high degree of polygyny whereby one male can have more than one breeding female in its territory. Polygynous males generally have two females in their territory, but up to four have been recorded (Davidson and Allison, 2003; Pearson and others, 2006). Polygyny rates can vary between sites, and among years at a given site. At some sites, polygynous males have much higher productivity than monogamous males (Paxton and others, 2007).

Nest building within the territory usually begins within a week or two after pair formation. Egg laying begins as early as mid-May, but more often starts in late May to mid-June. Chicks can be present in nests from late May through early August. Young typically fledge from nests from mid-June through mid-August; later fledglings are often products of re-nesting attempts. Breeding adults generally depart from their territories in early to mid-August, but may stay later if they fledged young late in the season. Males that fail to attract or retain mates, and males or pairs that are subject to significant disturbance, such as repeated nest parasitism or predation may leave territories by early July. Fledglings probably leave the breeding areas a week or two after adults, but few details are known.

Southwestern Willow Flycatcher territory size varies widely, probably due to differences in population density, habitat quality (including vegetation density and food availability), and nesting stage. Studies have reported estimated territory sizes ranging from 0.06 to 2.3 ha (Sogge

and others, 1995; Whitfield and Enos, 1996; Bureau of Reclamation, 2009). At Roosevelt Lake, Ariz., measurements of home ranges, which include the defended territory and sometimes adjacent use areas, averaged 0.4 ha for actively breeding males; home range can be much larger for pre- and post-breeding males (Paxton and others, 2007). During incubation and nestling phases territory size, or at least the activity centers of pairs, can be very small. Flycatchers may increase their activity area after young are fledged, and use non-riparian habitats adjacent to the breeding area (Cardinal and others, 2006). This variability among sites, individual territories, and over time illustrates the challenge of defining a minimum habitat patch size for breeding flycatchers, or estimating the number of territories based simply on the size of a given breeding site.

At some breeding sites, non-territorial adult “floaters” will be present among the territorial population. Floaters are quieter and less aggressive than territorial adults, and therefore are harder to detect and frequently overlooked. Most floaters are young males, and float for only a single year. At Roosevelt Lake, floaters typically accounted for 3–8 percent of the known adult population, although the rate was much higher in drought years when habitat quality was lower (Paxton and others, 2007). The presence of floaters in a population may indicate that there is not enough high quality habitat to support all potentially territorial individuals present in a given breeding season.

Nests and Eggs

Historically, 75–80 percent of reported Southwestern Willow Flycatcher nests were placed in willows (Phillips, 1948; Phillips and others, 1964; Hubbard, 1987; Unitt, 1987). Southwestern Willow Flycatchers still commonly place their nests in native plants, but will often build nests in exotics, such as saltcedar and Russian olive (Sogge and Marshall, 2000; Stoleson and Finch, 2003; Durst and others, 2008a). In Arizona, most nests are in saltcedar or willows (Paradzick and Woodward, 2003; McLeod and others, 2007). In a unique situation in San Diego County, Calif., the flycatcher nests in coast live oak (*Quercus agrifolia*) along the San Luis Rey River (Haas, 2003), where oak became the dominant plant species adjacent to the river following willow removal in the 1950s. In another unusual situation, flycatchers in the Cliff-Gila Valley in New Mex. nest in tall boxelder (Stoleson and Finch, 2003). Southwestern Willow Flycatcher nests also have been found in buttonbush, black twinberry (*Lonicera involucrata*), Fremont cottonwood (*Populus fremontii*), alder (*Alnus* spp.), blackberry (*Rubus ursinus*), baccharis (*Baccharis* spp.), and stinging nettle (*Urtica* spp.). Overall, flycatcher nest site selection appears to be driven more by plant structure than by species composition.

Southwestern Willow Flycatchers build open cup nests approximately 8 cm high and 8 cm wide (outside dimensions), exclusive of any dangling material at the bottom. Females build the nest with little or no assistance from the males. Nests typically are placed in the fork of a branch with the nest cup supported by several small-diameter vertical stems. Nest height is highly variable and depends on the available plant structure within the territory; nests have been found from 0.6 m to approximately 20 m above ground. In any given habitat type or nest substrate, nests can be placed wherever suitable twig structure and vegetative cover are present.

Egg laying generally begins from mid-May through mid-June, depending on the geographic area and elevation. Willow Flycatcher eggs are buffy or light tan, approximately 18 mm long and 14 mm wide, with brown markings in a wreath at the blunt end. Clutch size is usually three or four eggs for first nests. Only the female develops a brood patch and incubates the eggs. Incubation lasts 12–13 days from the date the last egg is laid, and all eggs typically hatch within 24–48 hours of each other.

Flycatcher chicks are altricial and weigh only about 1–2 g at hatching, but grow rapidly and are ready to leave the nest at 12–15 days of age (Sedgwick, 2000; Paxton and Owen, 2002). The female provides most or all initial care of the young, although the role of the male increases with the age and size of nestlings. After Willow Flycatchers fledge at 12–15 days of age, they stay close to the nest and each other for 3–5 days, and adults continue feeding the fledged young for approximately 2 weeks. Recently fledged birds may repeatedly return to and leave the nest during this period (Spencer and others, 1996). Both male and female adults feed the fledged young, which give frequent, loud “peep” calls.

Southwestern Willow Flycatchers readily re-nest following an unsuccessful nesting attempt, although rarely more than once (Ellis and others, 2008). They also will sometimes nest again (double brood) following a successful nesting attempt, although this is more uncommon than re-nesting and varies between sites and years. From 2002 to 2008 at Elephant Butte Reservoir, approximately 13 percent of the pairs produced two successful nests per year (Ahlers and Moore, 2009). The productivity gains from pairs having successful second nests are important drivers of positive population growth (Paxton and others, 2007; Moore and Ahlers, 2009).

Replacement nests are built in the same territory, either in the same plant or at a distance of as much as 20 m from the previous nest. Reuse of old nests is uncommon, but does occur (Yard and Brown, 1999; Darrell Ahlers, Bureau of Reclamation, unpub. data, 2009). Replacement nest building and egg laying can occur (uncommonly) as late as the end of July or early August. Pairs may attempt a third nest if the second fails. However, clutch size, and therefore potential productivity, decreases with each nest attempt (Whitfield and Strong, 1995; Ellis and others, 2008).

Food and Foraging

The breeding season diet of Southwestern Willow Flycatchers is relatively well documented (DeLay and others, 2002; Drost and others, 2003; Durst, 2004; Wiesenborn and Heydon, 2007; Durst and others, 2008b). Breeding flycatchers are exclusively insectivorous, and consume a wide range of prey taxa ranging in size from small leafhoppers (Homoptera) to large dragonflies (Odonata). Major prey taxa include bugs (Hemiptera), bees and wasps (Hymenoptera), flies (Diptera), and leafhoppers; however, diet can vary widely between years and among different habitat types. There is no known differences in diet by sex, but there are differences between adult and nestling diet in the proportions of some arthropod groups. Differences in the composition of arthropods in flycatcher diet have been documented between native and exotic habitats, and between years within particular breeding sites; however, flycatchers appear able to tolerate substantial variation in relative prey abundance, except in extreme situations such as severe droughts (Durst and others, 2008b).

Willow Flycatchers of all subspecies forage primarily by sallying from a perch to perform aerial hawking and gleaning (Sedgwick, 2000; Durst, 2004). Males and females forage with similar maneuvers, although males may forage higher in the tree canopy than females. Foraging frequently takes place at external edges or internal openings within a habitat patch, or at the top of the upper canopy.

Site Fidelity and Survivorship

Based on studies of banded birds, most adult Southwestern Willow Flycatchers that survive from one year to the next will return to the same river drainage, often in proximity to the same breeding site (U.S. Fish and Wildlife Service, 2002; McLeod and others, 2007; Paxton and others, 2007). However, it is common for individual flycatchers to return to different sites within a breeding area, and even to move between breeding areas, from one year to the next. Some of this movement may be related to breeding success and habitat quality. At Roosevelt Lake, those birds that moved to different sites within a breeding area had on average higher productivity in the year following the move than in the year before the move (Paxton and others, 2007). At Roosevelt Lake and on the San Pedro and Gila Rivers, movement out of breeding patches also increased with the relative age of a patch, which may indicate a preference for younger riparian vegetation structure.

In addition to movements within a breeding site, long-distance movements within and between drainages have been observed (Paxton and others, 2007), at distances up to approximately 450 km. Dispersal of first-year flycatchers is more extensive than adult birds, as typical for most bird species.

Survivorship within the breeding season can be very high, averaging 97 percent at Roosevelt Lake (Paxton and others, 2007). Between-year survivorship of adults can be highly variable, but appears to be similar to that of most small passerine birds studied, with estimates generally ranging from approximately 55 to 65 percent (Stoleson and others, 2000; McLeod and others, 2007; Paxton and others, 2007; Schuetz and Whitfield, 2007). Males and females have similar survivorship rates.

Estimated survivorship of young birds (from hatching to the next breeding season) is highly variable, depending in part on how the estimates are generated (Stoleson and others, 2000). Generally reported as between 15 and 40 percent, juvenile survivorship typically is lower than adult survivorship (Whitfield and Strong, 1995; Stoleson and others, 2000; McLeod and others, 2007). Early fledging young have higher survivorship than those that leave the nest later in the season (Whitfield and Strong, 1995; Paxton and others, 2007). Most flycatchers survive for only 1–2 adult years, and mean life expectancy in Arizona was estimated to be 1.9 years following fledging. However, some individuals live much longer. The maximum reported ages of banded Southwestern Willow Flycatchers are 9–11 years (Sedgwick, 2000; Paxton and others, 2007).

Overall, the Southwestern Willow Flycatcher population appears to persist as one or more widely dispersed metapopulations (Busch and others, 2000; U.S. Fish and Wildlife Service, 2002), with movement of individuals, and thus genetic exchange, occurring across the landscape. However, the amount of movement and interchange is lower among sites that are farther apart or more isolated. Some sites serve as population sources while others may be sinks; some sites will be ephemeral over periods of years or decades. Flycatcher movement and dispersal among sites is important for initial site colonization and subsequent recolonization.

There are few general predictors for the persistence of breeding sites. Relatively large populations, such as the Kern River Preserve, San Pedro River, Elephant Butte Reservoir, and the Gila River have persisted for 10 or more years. However, such large sites can be subject to major changes in population numbers, and even potential extirpation, due to changes in local hydrology, site inundation, drought, etc. (Moore, 2005; Paxton and others, 2007). Although some small populations may be ephemeral and last only a few years (Durst and others, 2008a), others have remained occupied for much longer periods (Kus and others, 2003). Breeding populations also may reappear at unoccupied sites following 1–5 year absences. Suitable flycatcher habitat also can develop—and poor quality habitat can improve—relatively quickly in some

sites, under favorable hydrological conditions. For example, at Roosevelt Lake and the San Pedro River (AZ), the age of riparian vegetation when first colonized was as young as 3 years (Paxton and others, 2007). In the same study, flycatchers moved back into older habitat patches when nearby younger, occupied habitat was inundated or scoured away.

Overall, the vegetation and flycatcher occupancy of a habitat patch or river drainage are often dynamic; few if any sites remain static over time. The amount of suitable flycatcher habitat can substantially increase or decrease in just a few years, at local and regional scales. Flycatchers can respond quickly to habitat changes, colonizing new sites if available and abandoning others. Therefore, one cannot assume that local, regional, or rangewide flycatcher population numbers will remain stable over time.

Threats to the Flycatcher and Habitat

The greatest historical factor in the decline of the Southwestern Willow Flycatcher is the extensive loss, fragmentation, and modification of riparian breeding habitat (U.S. Fish and Wildlife Service, 2002). Large-scale losses of southwestern wetlands have occurred, particularly the cottonwood-willow riparian habitats historically used by the Southwestern Willow Flycatcher (Unitt, 1987; General Accounting Office, 1988; Dahl, 1990; State of Arizona, 1990). Changes in the riparian plant community have frequently reduced, degraded, and eliminated nesting habitat for the flycatcher, curtailing its distribution and abundance.

Habitat losses and changes have occurred and continue to occur because of urban, recreational, and agricultural development, water diversion and impoundment, channelization, livestock grazing, and replacement of native habitats by introduced plant species (Marshall and Stoleson, 2000; U.S. Fish and Wildlife Service, 2002). Hydrological changes, natural or man-made, can greatly reduce the quality and extent of flycatcher habitat. Although riparian areas are often not considered as fire-prone, several Southwestern Willow Flycatcher breeding sites were destroyed by fire over the past decade (U.S. Fish and Wildlife Service, 2002), and others are at risk to similar catastrophic loss. Fire danger in these riparian systems may be exacerbated by increases in exotic vegetation, such as saltcedar, diversions or reductions of surface water, increased recreational activity, and drawdown of local water tables.

Although the degradation of many river systems and associated riparian habitat is a key cause of their absence, Southwestern Willow Flycatchers do not require free-running rivers or “pristine” riparian habitats. Most of the largest

Southwestern Willow Flycatcher populations in the last decade were found in reservoir drawdown zones, such as at Roosevelt Lake and Elephant Butte Reservoir. Many breeding populations are found on regulated rivers (Graf and others, 2002). In addition, the vegetation at many smaller flycatcher breeding sites is supported by artificial water sources such as irrigation canals, sewage outflow, or agricultural drainages (U.S. Fish and Wildlife Service, 2002). Although rising water levels could be detrimental to breeding flycatchers within a reservoir drawdown zone, reservoir fluctuations can simulate river dynamics with cycles of destruction and establishment of riparian vegetation, depositing rich sediments and flushing salt accumulations in the soil (Paxton and others, 2007). Therefore, managed and manipulated rivers and reservoirs have the potential to play a positive role by providing flycatcher breeding habitat. However, because rivers and reservoirs are not managed solely to create and maintain flycatcher habitat, the persistence of riparian vegetation in these systems—and any flycatchers breeding therein—is not assured.

Although the historic degradation and loss of native riparian negatively affected the Southwestern Willow Flycatcher, this species does not show an inherent preference for native vegetation. Instead, breeding habitat selection is based primarily on vegetation structure, density, size, and other stand characteristics, and presence of water or saturated soils (U.S. Fish and Wildlife Service, 2002). In fact, approximately 25 percent of known territories are found in habitat composed of 50 percent or greater exotic vegetative component—primarily saltcedar (Durst and others, 2008a). Saltcedar also can be an important habitat component in sites dominated by native vegetation (U.S. Fish and Wildlife Service, 2002, 2005). Despite suggestions that flycatchers breeding in saltcedar are suffering negative consequences and that removal of saltcedar is therefore a benefit (DeLoach and others, 2000; Dudley and DeLoach, 2004), there is increasing and substantial evidence that this is not the case. For example, Paxton and others (2007) found that flycatchers did not suffer any detectable negative consequences from breeding in saltcedar. This is consistent with the findings of Owen and others (2005) and Sogge and others (2006). Therefore, the rapid or large-scale loss of saltcedar in occupied flycatcher habitats, without rapid replacement of suitable native vegetation, could result in reduction or degradation of flycatcher habitat (U.S. Fish and Wildlife Service, 2002; Sogge and others, 2008).

In evaluating Southwestern Willow Flycatcher use of either native or exotic habitat, it is important to recognize that throughout the Southwest, there are many saltcedar-dominated and native-dominated habitats in which flycatchers do not breed (U.S. Fish and Wildlife Service, 2002; Sogge and others, 2006). Therefore, the use of any riparian patch—native or exotic—as breeding habitat will be site specific and will depend on the spatial, structural, and ecological characteristics of that particular patch and the potential for flycatchers to colonize and maintain populations within it.

Drought can have substantial negative effects on breeding flycatchers and their breeding habitat by reducing riparian vegetation vigor and density, and reducing prey availability (Durst, 2004; Paxton and others, 2007; Bureau of Reclamation, 2009). For example, the extreme drought of 2002 caused near complete reproductive failure of the large flycatcher population at Roosevelt Lake; among approximately 150 breeding territories, only two nests successfully fledged young in that year (Ellis and others, 2008). If future climate change produces more frequent or more sustained droughts, as predicted by many climate change models (for example, Seager and others, 2007), southwestern riparian habitats could be reduced in extent or quality. This scenario would present a challenge to the long-term sustainability of Southwestern Willow Flycatcher populations.

Brood parasitism by the Brown-headed Cowbird (*Molothrus ater*) was initially considered another significant threat to the Southwestern Willow Flycatcher (Whitfield, 1990; Harris, 1991; U.S. Fish and Wildlife Service, 1993, 1995; Whitfield and Strong, 1995; Sferra and others, 1997). Cowbirds lay their eggs in the nest of other species (the “hosts”), which raise the young cowbirds—often at the expense of reduced survivorship of their own young. Southwestern Willow Flycatchers seldom fledge any flycatcher young from nests that are parasitized by cowbirds (Whitfield and Sogge, 1999). Although parasitism negatively impacts some Southwestern Willow Flycatcher populations, especially at small and isolated breeding sites, it is highly variable and no longer considered among the primary rangewide threats to flycatcher conservation (U.S. Fish and Wildlife Service, 2002). Cowbird abundance, and therefore parasitism, tends to be a function of habitat type and quality, and the availability of suitable hosts, not specific to the flycatcher. Therefore, large-scale cowbirds control may not always be warranted unless certain impact thresholds are met (U.S. Fish and Wildlife Service, 2002; Rothstein and others, 2003; Siegle and Ahlers, 2004).

Section 2. Survey Protocol

The fundamental principles of the methodology described in this version have remained the same since the original Tibbitts and others (1994) and subsequent Sogge and others (1997a) protocols: the use of vocalization play-back, repeated site visits, and confirmation of flycatcher identity via the species-characteristic song. This newest protocol incorporates guidelines of the 2000 USFWS addendum, and includes changes based on our improved understanding of Willow Flycatcher biology and the significance of potential threats, and the availability of new survey technologies.

Several factors work together to make Southwestern Willow Flycatcher surveys challenging. Difficulties include the flycatcher's physical similarities with other species and subspecies; accessing the dense habitat they occupy; time constraints based on their breeding period; and vocalization patterns. Given these challenges, no methodology can assure 100-percent detection rates. However, the survey protocol described herein has proven to be an effective tool for locating flycatchers, and flycatchers generally are detectable when the protocol is carefully followed. Since 1995, hundreds of sites have been surveyed and thousands of flycatchers detected using the two previous versions of the survey protocol.

The Willow Flycatcher is 1 of 10 regularly occurring *Empidonax* flycatchers found in North America, all of which look very much alike. Like all *Empidonax*, Willow Flycatchers are nondescript in appearance, making them difficult to see in dense breeding habitat. Although the Willow Flycatcher has a characteristic *fitz-bew* song that distinguishes it from other birds (including other *Empidonax*), Willow Flycatchers are not equally vocal at all times of the day or during all parts of the breeding season. Because Southwestern Willow Flycatchers are rare and require relatively dense riparian habitat, they may occur only in a small area within a larger riparian system, thus decreasing detectability during general bird surveys. Migrating Willow Flycatchers (of all subspecies) often sing during their migration through the Southwest, and could therefore be confused with local breeders. In addition, Southwestern Willow Flycatchers are in breeding areas for only 3–4 months of the year. Surveys conducted too early or late in the year would fail to find flycatchers even at sites where they breed.

These life history characteristics and demographic factors influence how Southwestern Willow Flycatcher surveys should be conducted and form the basis upon which this protocol was developed. This protocol is based on the use of repeated call-playback surveys during pre-determined periods of the breeding season, to confirm presence or to derive a high degree of confidence regarding their absence at a site. Such species-specific survey techniques are necessary to collect reliable presence/absence information for rare species (Bibby and others, 1992).

The primary objective of this protocol is to provide a standardized survey technique to detect Southwestern Willow Flycatchers, determine breeding status, and facilitate consistent and standardized data reporting. The survey technique will, at a minimum, help determine presence or absence of the species in the surveyed habitat for that breeding season. Ultimately, the quality of the survey that is conducted will depend on the preparation, training, and in-the-field diligence of the individual surveyor.

This protocol is designed for use by persons who are non-specialists with *Empidonax* flycatchers or who are not expert birders. However, surveyors must have sufficient knowledge, training, and experience with bird identification and surveys to distinguish the Willow Flycatcher from other non-*Empidonax* species, and be able to recognize the Willow Flycatcher's primary song. A surveyor's dedication and attitude, willingness to work early hours in dense, rugged and wet habitats, and their ability to remain alert and aware of important cues also are important. Surveys conducted improperly or by unqualified, inexperienced, or complacent personnel may lead to inaccurate results and unwarranted conclusions.

Surveys conducted by qualified personnel in a consistent and standardized manner will enable continued monitoring of general population trends at and between sites, and between years. Annual or periodic surveys in cooperation with State and Federal agencies should aid resource managers in gathering basic information on flycatcher status and distribution at various spatial scales. Identifying occupied and unoccupied sites will assist resource managers in assessing potential impacts of proposed projects, avoiding impacts to occupied habitat, identifying suitable habitat characteristics, developing effective restoration management plans, and assessing species recovery.

The earlier versions of this protocol (Tibbitts and others, 1994; Sogge and others, 1997a) were used extensively and successfully for many years. Hundreds of flycatcher surveys conducted throughout the Southwest since 1994 revealed much about the usefulness and application of this survey technique. Three important lessons were: (1) the call-playback technique works and detects flycatchers that would have otherwise been overlooked; (2) multiple surveys at each site are important; and (3) with appropriate effort, general biologists without extensive experience with *Empidonax* can find and verify Willow Flycatcher breeding sites.

This revised protocol is still based on call-playback techniques and detection of singing individuals. However, it includes changes in the timing and number of surveys to increase the probability of detecting flycatchers and to help determine if they are breeders or migrants. It also incorporates the basic premise of the USFWS 2000 addendum to the 1997 protocol by requiring a minimum of five surveys in all "project-related" sites. A detailed description of surveys and

timing is discussed in section, “Timing and Number of Visits.” Changes in the survey data sheets make them easier to use and submit, and allow reporting all site visits within a single year on one form. The new survey forms also are formatted such that the data on the respective forms can be easily incorporated into the flycatcher range-wide database.

This protocol is intended to determine if a habitat patch contains territorial Southwestern Willow Flycatchers, and is not designed establish the exact distribution and abundance of flycatchers at a site. Determining precise flycatcher numbers and locations requires many more visits and additional time observing the behavior of individual birds. This survey protocol also does not address issues and techniques associated with nest monitoring or other flycatcher research activities. Those efforts are beyond the scope usually needed for most survey purposes, and require advanced levels of experience and skills to gather useful data and avoid potential negative effects to the flycatcher. If nest monitoring is a required component of your study, refer to Rourke and others (1999) for appropriate nest monitoring techniques (available for download at <http://sbosc.wr.usgs.gov/cprs/research/projects/swwf/reports.asp>).

Biologists who are not expert birders or specialists with regard to *Empidonax* flycatchers can effectively use this protocol. However, users should attend a U.S. Fish and Wildlife Service-approved Southwestern Willow Flycatcher survey training workshop, and have knowledge and experience with bird identification, surveys, and ecology sufficient to effectively apply this protocol.

Permits

Federal endangered species recovery permits are required for surveys in all USFWS regions where the Southwestern Willow Flycatcher breeds (application forms can be downloaded at <http://www.fws.gov/forms/3-200-55.pdf>). State permits also may be required before you can survey within any of the States throughout the Southwestern Willow Flycatcher’s range: be certain to check with the appropriate State wildlife agency in your area. It usually takes several months to receive permits, so apply early to avoid delays in starting your surveys. You also must obtain permission from government agencies and private landowners prior to conducting any surveys on their lands.

Pre-Survey Preparation

The degree of effort invested in pre-survey preparation will have a direct effect on the quality and efficiency of the surveys conducted. Pre-survey preparation is often overlooked, but can prove to be one of the more important aspects in achieving high-quality survey results.

Surveyors should study calls, songs, drawings, photographs, and videos of Willow Flycatchers. Several web sites describe life history requirements, and provide photographs and vocalizations. It is especially critical for surveyors to be familiar with Willow Flycatcher vocalizations before going in the field. Although the *fitz-bew* song is the basis of verifying detections using this protocol, Willow Flycatchers use many other vocalizations that are valuable in locating birds and breeding sites. We strongly encourage that all surveyors learn as many vocalizations as possible and refer to the on-line “Willow Flycatcher Vocalizations; a Guide for Surveyors” (available at <http://sbosc.wr.usgs.gov/cprs/research/projects/swwf/wiflvocl.asp>). Several commercial bird song recordings include Willow Flycatcher vocalizations, but these recordings typically have only a few vocalizations and the dialects may differ from those heard in the Southwest.

If possible, visit known Willow Flycatcher breeding sites to become familiar with flycatcher appearance, behavior, vocalizations, and habitat. Such visits are usually part of the standardized flycatcher survey workshops. All visits should be coordinated with USFWS, State wildlife agencies, and the property manager/owner, and must avoid disturbance to territorial flycatchers. While visiting these sites, carefully observe the habitat characteristics to develop a mental image of the key features of suitable habitat.

Surveyors must be able to identify, by sight and vocalizations, other species likely to be found in survey areas that may be confused with Southwestern Willow Flycatchers. These include Bell’s Vireo (*Vireo bellii*), Western Wood-pewee (*Contopus sordidulus*), young or female Vermillion Flycatchers (*Pyrocephalus rubinus*), and other *Empidonax* flycatchers. At a distance, partial song or call notes of Bell’s Vireo, Ash-throated Flycatchers (*Myiarchus cinerascens*) and some swallows can sound considerably like a *fitz-bew*. Surveyors also should be able to identify Brown-headed Cowbirds by sight and vocalizations. It is worthwhile to make one or more pre-survey trips to the survey sites or other similar areas to become familiar with the local bird fauna. You might consider obtaining a species list relative to your area and become familiar with those species by site and sound.

Prior to conducting any presence/absence surveys in your respective State or USFWS Region, contact the respective flycatcher coordinators to discuss the proposed survey sites and determine if the sites have been surveyed in prior years. If possible, obtain copies of previous survey forms and maintain consistency with naming conventions and site boundaries. Study the forms to determine if flycatchers have been previously detected in the site, record locations of any previous detections, and read the comments provided by prior surveyors. While surveying, be sure to pay special attention to any patches where flycatchers have previously been detected.

Familiarity with the survey site prior to the first surveys is the best way to be prepared for the conditions you will experience. Determine the best access routes to your sites and always have a back-up plan available in the event of unforeseen conditions (for example, locked gates, weather, etc.). Know the local property boundaries and where the potential hazards may be, including deep water, barbed wire fencing, and difficult terrain. Be prepared to work hard and remain focused and diligent in a wide range of physically demanding conditions. At many sites, these include heat, cold, wading through flowing or stagnant water, muddy or swampy conditions, crawling through dense thickets (often on hands and knees), and exposure to snakes, skunks, and biting insects.

It is imperative that all surveyors exercise the adage “safety first.” Be aware of safety hazards and how to avoid them, and do not allow the need to conduct surveys to supersede common sense and safety. Inform your coworkers where you will be surveying and when you anticipate returning. Always take plenty of water and know how to effectively use your equipment, especially compass, Global Positioning System (GPS), and maps.

Equipment

The following equipment is necessary to conduct the surveys:

1. **USGS topographic maps of the area:** A marked copy is required to be attached to survey data sheets submitted at the end of the season. Be sure to always delineate the survey area and clearly mark any flycatcher detections. If the survey area differed between visits; delineate each survey individually.
2. **Standardized survey form:** Always bring more copies than you think you need.
3. **Lightweight audio player:** Be sure the player has adequate volume to carry well; use portable speakers if necessary. Several digital devices, such as CD players and MP3 players, are currently available and can be connected to external amplified speakers for broadcasting the flycatcher vocalizations. However, not all are equally functional or effective in field conditions; durability, reliability, and ease of use are particularly important. Talk to experienced surveyors for recommendations on particular models and useful features.
4. **Extra player and batteries:** In the field, dirt, water, dust, and heat often cause equipment failure, and having backup equipment helps avoid aborting a survey due to equipment loss or failure.
5. **Clipboard and permanent (waterproof) ink pen:** We recommend recording survey results directly on the survey data form, to assure that you collect and record all required data and any field notes of interest.
6. **Aerial photographs:** Aerial photographs can significantly improve your surveys by allowing you to accurately target your efforts, thus saving time and energy in the field. Previously, aerial images were often expensive and difficult to obtain. However, it is now easy to get free or low-cost images from sources, such as Google® Earth. Even moderate resolution images generally are better than none. For higher resolution aerial photographs, check with local planning offices and/or State/Federal land-management agencies for availability. Take color photocopies, not the original aerial photographs, with you in the field. Aerial photographs also are very useful when submitting your survey results but cannot be substituted in lieu of the required topographic map.
7. **Binoculars and bird field guide:** Although this protocol relies primarily on song detections to verify flycatcher presence, good quality binoculars are still a crucial field tool to help distinguish between possible Southwestern Willow Flycatchers and other species. Use a pair with 7–10 power magnification that can provide crisp images in poor lighting conditions. A good field guide also is essential for the same reason.
8. **GPS unit:** A GPS unit is needed for determining survey coordinates and verifying the location of survey plots on topographic maps. All flycatcher detections should be stored as waypoints and coordinates recorded on the survey form. A wide variety of fairly inexpensive GPS units are currently available. Most commercially available units will provide accuracy within 10 m, which is sufficient for navigating and marking locations.
9. **Compass:** Surveyors should carry a compass to help them while navigating larger habitat patches. This is an important safety back-up device, because GPS units can fail or lose power. Most GPS units have a feature to provide an accurate bearing to stored waypoints (for example, previous flycatcher detections, your parked vehicle, etc.); however, many units do not accurately display the direction in which the surveyor is traveling slowly through dense vegetation. A compass set to the proper bearing provides a more reliable method to navigate the survey site and relocate previously marked locations.

The following equipment also is recommended:

10. **Camera:** These are very helpful for habitat photographs, especially at sites where flycatchers are found. Small digital cameras are easily portable and relatively inexpensive.
11. **Survey flagging:** Used for marking survey sites or areas where flycatcher are detected. Check with the local land owner or management agency before flagging sites. Use flagging conservatively so as to not attract people or predators.
12. **Field vest:** A multi-pocket field vest can be very useful for carrying field equipment and personal items. We recommend muted earth-tone colors.

13. **Cell phone and/or portable radio:** In addition to providing an increased level of safety, cell phones or portable radios may be used by surveyors to assist each other in identifying territories and pairs in dense habitats, or where birds are difficult to hear.

In addition to the necessary equipment mentioned above, personal items, such as food, extra water or electrolyte drink, sunscreen, insect repellent, mosquito net, first-aid kit, whistle, and a light jacket, also should be considered. Being prepared for unforeseen difficulties, and remaining as comfortable as conditions allow while surveying are important factors to conducting thorough and effective surveys.

All survey results (both negative and positive) should be recorded directly on data forms when possible. These data forms have been designed to prompt surveyors to record key information that is crucial to interpretation of survey results and characterization of study sites. Even if no flycatchers are detected or habitat appears unsuitable, this is valuable information and should be recorded. Knowing where flycatchers are not breeding can be as important as knowing where they are; therefore, negative data are important. Standardized data forms are provided in [appendix 1](#), or can be downloaded online. Always check for updated forms prior to each year's surveys.

Willow Flycatcher surveys are targeted at this species and require a great deal of focused effort. Surveyors must be constantly alert and concentrate on detecting a variety of flycatcher cues and responses. Therefore, field work, such as generalized bird surveys (for example, point counts or walking transects) or other distracting tasks, should not be conducted in conjunction with Willow Flycatcher surveys. Avoid bringing pets or additional people who are not needed for the survey. Dress in muted earth-tone colors, and avoid wearing bright clothing.

Willow Flycatcher Identification

The Southwestern Willow Flycatcher is a small bird, approximately 15 cm long and weighing about 11–12 g. Sexes look alike and cannot be distinguished by plumage. The upper parts are brownish-olive; a white throat contrasts with the pale olive breast, and the belly is pale yellow. Two white wing bars are visible (juveniles have buffy wing bars) and the eye ring is faint or absent. The upper mandible is dark and the lower mandible light. The tail is not strongly forked. When perched, the Willow Flycatcher often flicks its tail upward. As a group, the *Empidonax* flycatchers are very difficult to distinguish from one another by appearance. The Willow Flycatcher also looks very similar to several other passerine species you may encounter in the field.

Given that Willow Flycatchers look similar to other *Empidonax* flycatchers that may be present at survey sites, the most certain way to verify Willow Flycatchers in the field is by their vocalization. For the purpose of this protocol,

identification of Willow Flycatchers cannot be made by sight alone; vocalizations are a critical identification criterion, and specifically the primary song *fitz-bew*. Willow Flycatchers have a variety of vocalizations (see Stein, 1963; Sedgwick, 2000), but two are most commonly heard during surveys or in response to call-playback:

1. ***Fitz-bew***. This is the Willow Flycatcher's characteristic primary song. Note that *fitz-bews* are not unique to the southwestern subspecies; all Willow Flycatchers sing this characteristic song. Male Willow Flycatchers may sing almost continuously for hours, with song rates as high as one song every few seconds. Song volume, pitch, and frequency may change as the season progresses. During prolonged singing bouts, *fitz-bews* are often separated by short *britt* notes. *Fitz-bews* are most often given by a male, but studies have shown female Willow Flycatchers also sing, sometimes quite loudly and persistently (although generally less than males). Flycatchers often sing from the top of vegetation, but also will vocalize while perched or moving about in dense vegetation.
2. ***Whitt***. This is a call often used by nesting pairs on their territory, and commonly is heard even during periods when the flycatchers are not singing (*fitz-bewing*). The *whitt* call appears to be a contact call between sexes, as well as an alarm call, particularly when responding to disturbance near the nest. *Whitt* calls can be extremely useful for locating Willow Flycatchers later in the season when *fitz-bewing* may be infrequent, but are easily overlooked by inexperienced surveyors. When flycatcher pairs have active nests and particularly once young have hatched, *whitts* may be the most noticeable vocalization. However, many species of birds *whitt*, and a *whitt* is not a diagnostic characteristic for Willow Flycatchers. For example, the “*whitt*” of the Black-headed Grosbeak (*Phoebeastus melanocephalus*) and Yellow-breasted Chat (*Icteria virens*) are often confused with that of the flycatcher.

The *fitz-bew* and *whitt* calls are the primary vocalizations used to locate Willow Flycatchers. However, other less common Willow Flycatcher vocalizations can be very useful in alerting surveyors to the presence of flycatchers. These include twittering vocalizations typically given during interactions between flycatchers and sometimes between flycatchers and other birds, bill snapping, *britt*'s, and *wheeo*'s. Because these sounds can be valuable in locating territories (Shook and others, 2003), they should be studied prior to going in the field. Willow Flycatcher vocalization recordings are available from Federal and State agency contacts and online at <http://sbosc.wr.usgs.gov/cprs/research/projects/swwf/>. Standardized recordings of Southwestern Willow Flycatchers also are available online at <http://www.naturesongs.com/tyrrcert.html#tyrr>. Specifically, only *fitz-bews* and *britts* should be used for conducting surveys, to provide more robust comparative results among sites and years.

Willow Flycatcher song rates are highest early in the breeding season (late May–early June), and typically decline after eggs hatch. However, in areas with many territorial flycatchers or where an unpaired flycatcher is still trying to attract a mate, or where re-nesting occurs, singing rates may remain high well into July. Isolated pairs can be much quieter and harder to detect than pairs with adjacent territorial flycatchers. At some sites, pre-dawn singing (0330–0500 hours) appears to continue strongly at least through mid-July (Sogge and others, 1995). Singing rates may increase again later in the season, possibly coinciding with re-nesting attempts (Yard and Brown, 2003). The social dynamics of adjacent territories can strongly influence vocalization rates. A single “*fitz-bew*” from one flycatcher may elicit multiple responses from adjacent territories. When these interactions occur, it is a good opportunity to distinguish among territories and provides the surveyor with an estimate of territory numbers in the immediate area.

There are some periods during which Willow Flycatchers do not sing and even the use of call-playback sometimes fails to elicit any response. This can be particularly true late in the breeding season. Early and repeated surveys are the best way to maximize the odds of detecting a singing flycatcher and determining its breeding status.

Timing and Number of Visits

No survey protocol can guarantee that a Southwestern Willow Flycatcher, if present, will be detected on any single visit. However, performing repeated surveys during the early to mid-nesting season increases the likelihood of detecting flycatchers and aids in determining their breeding status. A single survey, or surveys conducted too early or late in the breeding cycle, do not provide definitive data and are of limited value.

For purposes of this survey protocol, we have divided the Southwestern Willow Flycatcher breeding season into three basic survey periods, and specified a minimum number of survey visits for each period (fig. 9). Although the Sogge and others (1997a) protocol recommended a minimum of one survey in each period, we now recommend a differing number of visits for general surveys versus project-related studies.

General surveys are conducted for the sole purpose of determining whether Willow Flycatchers are present or absent from a respective site, when there is no foreseeable direct or indirect impact to their habitat from a known potential project or change in site management. In such cases, a minimum of one survey visit is required in each of the three survey periods.

Project-related surveys are conducted to determine the presence or absence of Willow Flycatchers within a site when there is a potential or foreseeable impact to their habitat due to a potential project or change in site management. Additional surveys are required for project-related studies in order to derive a greater degree of confidence regarding the presence or absence of Willow Flycatchers.

All successive surveys must be at least 5 days apart; surveys conducted more closely are not considered to be separate surveys. Although a minimum of three or five surveys are required for general and project-related purposes, respectively, if the habitat patches are large, contiguous and extremely dense, additional surveys are strongly encouraged to ensure full coverage of the site.

If you are uncertain whether three general surveys or five project-related surveys are required for your respective study, contact your USFWS flycatcher coordinator. As noted earlier, this survey protocol will help determine if territorial flycatchers are present and their approximate locations; if your project requires fine-scale estimates of flycatcher numbers or distribution at a site, you may need to conduct more intensive efforts that include additional surveys, nest searches, and nest monitoring.

Survey Period 1: May 15–31.—For both general and project-related surveys: a minimum of one survey is required. The timing of this survey is intended to coincide with the period of high singing rates in newly arrived males, which tends to begin in early to mid-May. This is one of the most reliable times to detect flycatchers that have established their territories, so there is substantial value to conducting period 1 surveys even though not all territorial males may yet have arrived. Migrant Willow Flycatchers of multiple subspecies will likely be present and singing during this period. Because both migrant and resident Willow Flycatchers are present during this period, and relatively more abundant than in subsequent surveys, it is an excellent opportunity to hone your survey and detection skills and gain confidence in your abilities. Detections of flycatchers during period 1 also provide insight on areas to pay particular attention to during the next survey period.

Survey Period 2: June 1–24.—For general surveys: a minimum of one survey is required. For project-related surveys, a minimum of two surveys are required. Note that this differs from the minimum of one survey that was recommended in this period under the previous protocol (Sogge and others, 1997a). During this period, the earliest arriving males may already be paired and singing less, but later arriving males should still be singing strongly. Period 2 surveys can provide insight about the status of any flycatchers detected during survey period 1. For example, if a flycatcher is detected during survey period 1 but not survey period 2, the first detection may have been a migrant. Conversely, detecting a flycatcher at the same site during periods 1 and 2 increases the likelihood that the bird is not a migrant, although it does not necessarily confirm it. Survey period 2 also is the earliest time during which you are likely to find nesting activity by resident birds at most sites. Special care should be taken during this period to watch for activity that will verify whether the flycatchers that are present are attempting to breed. A little extra time and diligence should be spent at all locations where flycatchers were detected during survey period 1.

Survey Visit Timing, Numbers, and Detection Interpretation

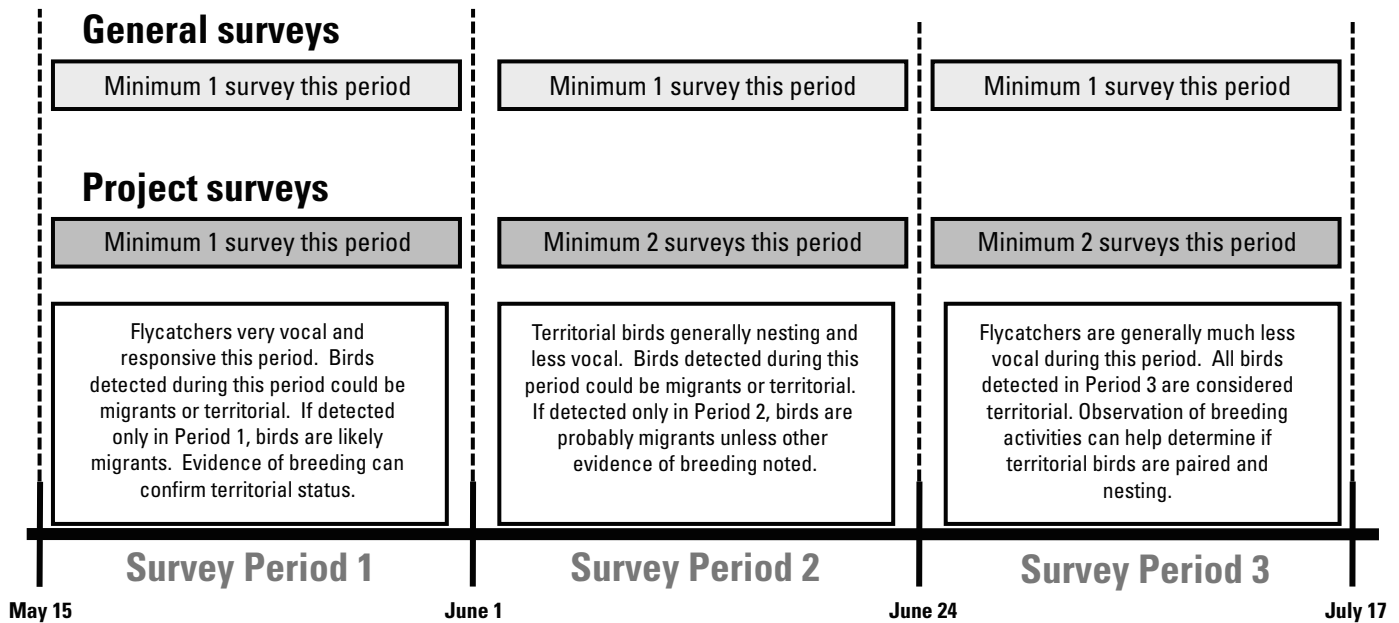


Figure 9. Recommended numbers and timing of visits during each survey period for general surveys and project surveys. General surveys are those conducted when there is no foreseeable direct or indirect impact to their habitat from a known potential project or change in site management. Project-related surveys are conducted when there is a potential or foreseeable impact to their habitat due to a potential project or change in site management.

Survey Period 3: June 25–July 17.—For general surveys, a minimum of one survey is required. For project-related surveys, a minimum of two surveys are required. Virtually all Southwestern Willow Flycatchers should have arrived on their territories by this time. Flycatcher singing rates probably have lessened, and most paired flycatchers will have initiated or even completed their first round of nesting activity. Migrant Willow Flycatchers should no longer be passing through the Southwest; therefore, any flycatchers that you detect are likely to be either territorial or nonbreeding floaters. Surveyors should determine if flycatchers detected during surveys in periods 1 or 2 are still present, and watch closely for nesting activity. Flycatchers that have completed a first nesting attempt may resume vigorous singing during this period. Extra time and diligence should be spent at all locations where flycatchers were detected during survey periods 1 or 2.

At high elevation sites (above 2,000 m), Southwestern Willow Flycatcher arrival and initiation of breeding activities may occur in early June, and possibly later in some years due to weather or migration patterns. Therefore, flycatcher breeding chronology may be delayed by 1 or 2 weeks at such sites, and surveys should be conducted in the latter part of each period.

It may not require multiple surveys to verify Southwestern Willow Flycatcher presence or breeding status. If, for example, Willow Flycatchers are observed carrying nest material during survey periods 1 or 2, this is conclusive verification they are breeders as opposed to migrants, regardless of what is found during period 3. However, it requires a minimum of three surveys for general studies and five surveys for project-related studies to determine with relative confidence that Southwestern Willow Flycatchers probably are not breeding at a site in that year, based on lack of detections.

We strongly encourage additional follow-up surveys to sites where territorial Southwestern Willow Flycatchers are verified or suspected. Extra surveys provide greater confidence about presence or absence of flycatchers at a site, as well as help in estimating the number of breeding territories or pairs, and determining breeding status and the outcome of breeding efforts. Pre-survey visits the evening before the survey or post-survey follow-up later in the morning can help confirm breeding status when surveyors are not under time constraints. However, avoid returning to a site so often as to damage the habitat, establish or enlarge trails, or cause undue disturbance to the flycatchers.

Survey Methods

The survey methods described below fulfill the primary objectives of documenting the presence or absence of Willow Flycatchers, and determining their status as territorial versus migrant. This protocol primarily is a call-playback technique, a proven method for eliciting response from nearby Willow Flycatchers (Seutin, 1987; Craig and others, 1992), both territorial and migrants. The premise of the call-playback technique is to simulate a territorial intrusion by another Willow Flycatcher, which generally will elicit a defensive response by the territorial bird, increasing its detectability. At each site, surveyors should broadcast a series of recorded Willow Flycatcher *fitz-bews* and *britts*, and look and listen for responses. In addition to maximizing the likelihood of detecting nearby flycatchers, this method also allows for positive identification by comparing the responding bird's vocalizations to the known Willow Flycatcher recording.

Documenting Presence/Absence—Begin surveys as soon as there is enough light to safely walk (about 1 hour before sunrise) and end by about 0900–1030 hours, depending on the temperature, wind, rain, background noise, and other environmental factors. Use your best professional judgment whether to conduct surveys that day based on local field conditions. If the detectability of flycatchers is being reduced by environmental factors, surveys planned for that day should be postponed until conditions improve. If observers are camped in or near potential Willow Flycatcher habitat, afternoons and evenings can be spent doing site reconnaissance and planning a survey strategy for the following morning. If camped immediately adjacent to survey sites, surveyors can awaken early and listen for flycatchers singing during the predawn period (0330–0500 hours), when territorial males often sing loudly.

Conduct surveys from within rather than from the perimeter of the sites, while limiting the breaking of vegetation or damaging the habitat. If surveys cannot be conducted from within the habitat, walk along the perimeter and enter the patch at intervals to broadcast the vocalizations and listen for responses. Flycatchers often respond most strongly if the recording is played from within the habitat and territory, rather than from the periphery. In addition, it can be surprisingly difficult to hear singing Willow Flycatchers that are even a short distance away amidst the noise generated by other singing and calling birds, roads, noisy streams, and other extraneous sounds. Therefore, it is preferable to survey from within the habitat, but always move carefully to avoid disturbing habitat or nests. Surveying from the periphery should not be conducted only for the sake of convenience, but is allowable for narrow linear reaches or when absolutely necessary due to safety considerations.

Because flycatchers may be clustered within only a portion of a habitat patch, it is critical to survey all suitable habitat within the patch. Small linear sites may be thoroughly

covered by a single transect through the patch. For larger sites, choose a systematic survey path that assures complete patch coverage throughout the length and breadth of the site. This may require multiple straight transects, serpentine, zig-zag, or criss-cross routes. Aerial photographs and previous survey forms are valuable tools to help plan and conduct surveys, and to assure complete coverage. Always move carefully through the habitat to avoid disturbing vegetation or nests.

Initially approach each site and stand quietly for 1–2 minutes or longer, listening for spontaneously singing flycatchers. A period of quiet listening is important because it helps acclimate surveyors to background noises that can be quite loud due to roads, aircraft, machinery, waterways, and other sounds. It also allows surveyors to recognize and shift attention away from the songs and calls of other bird species, letting them focus on listening for flycatchers. Although it happens rarely, some singing Willow Flycatchers will actually stop vocalizing and approach quietly in response to a broadcast song, perhaps in an effort to locate what they perceive as an intruding male. Therefore, playing a recording before listening for singing individuals has at least some potential of reducing detectability.

If you do not hear singing flycatchers during the initial listening period, broadcast the Willow Flycatcher song recording for 10–15 seconds; then listen for approximately 1 minute for a response. Repeat this procedure (including a 10-second quiet pre-broadcast listening period) every 20–30 m throughout each survey site, more often if background noise is loud. The recording should be played at about the volume of natural bird calls, and not so loud as to cause distortion of the broadcast. We recommend that the playback recording include a series of *fitz-bews* interspersed with several *britts*.

Response to the broadcast call could take several forms. Early in the breeding season (approximately May–mid-June), a responding Willow Flycatcher will usually move toward the observer and *fitz-bew* or *whitt* from within or at the top of vegetation. Territorial Willow Flycatchers almost always vocalize strongly when a recording is played in their territory early in the season. If there are several flycatchers present in an area, some or all may start singing after hearing the recording or the first responding individual. Flycatchers can often hear the recording from far away but will not usually move outside of their territory, so listen for distant responses. Also, stay alert and listen for flycatchers vocalizing behind you that may not have responded when you were first in their territory. Another common flycatcher response is alarm calls (*whitts*) or interaction twitters from within nearby vegetation, particularly once nesting has begun. Willow Flycatchers will often sing after a period of *whitting* in response to a recording, so surveyors hearing *whitts* should remain in the area and quietly listen for *fitz-bews* for several minutes. Because some flycatchers may initially respond by approaching quietly, particularly during periods 2 and 3, it is critical to watch carefully for responding birds.

If you detect flycatchers that appear particularly agitated, it is possible that you are in close proximity to their nest. Agitated flycatchers may swoop down at the surveyor, snap their beaks, and otherwise appear distressed. Exercise extreme caution so as to not accidentally disturb the nest, and move slowly away from the immediate area.

For the purpose of this protocol, detection of a *fitz-bew* song is essential to identify a bird as a Willow Flycatcher. Similar appearing species (including other *Empidonax* flycatchers) occur as migrants, and even breeders, at potential Willow Flycatcher sites. A few of these other species may even approach a broadcast Willow Flycatcher song and respond with vocalizations. In order to standardize interpretation of survey results and assure a high degree of confidence in surveys conducted by biologists of varying experience and skill, positive identification must be based on detection of the Willow Flycatcher's most unique characteristic—its song. It is important to remember that the *whitt* call is not unique to Willow Flycatchers, and therefore cannot serve as the basis of a positive identification. However, *whitts* are extremely useful for locating flycatchers and identifying areas needing follow-up visits. Loud, strong *whitting* may indicate a nearby nest, dictating that surveyors exercise extra caution moving through the area.

Whenever a verified or suspected Willow Flycatcher is detected, be careful not to overplay the song recording. Excessive playing could divert the bird from normal breeding activities or attract the attention of predators and brood parasites. Wildlife management agencies may consider overplaying the recording as “harassment” of the flycatcher, and this is not needed to verify species identification. Although flycatchers usually sing repeatedly once prompted, even a single *fitz-bew* is sufficient for verification. If you have played a recording several times and a bird has approached but has not *fitz-bewed*, do not continue playing the recording. If a potential Willow Flycatcher responds, approaches or *whitts* but does not sing, it is best to carefully back away and wait quietly. If it is a Willow Flycatcher, it probably will sing within a short time (5–10 minutes). Another option is to return to the same site early the following morning to listen for or attempt to elicit singing again. If you are still uncertain, record the location with your GPS, record comments on the survey form, and follow-up on the detection during subsequent surveys. If possible, request the assistance of an experienced surveyor to determine positive identification.

If more habitat remains to be surveyed, continue onward once a flycatcher is detected and verified. In doing so, move 30–40 m past the current detection before again playing the recording, and try to avoid double-counting flycatchers that have already responded. Willow Flycatchers, particularly unpaired males, may follow the broadcast song for 50 m or more.

Looking For and Recording Color Bands.—Several research projects have involved the capture and banding of Willow Flycatchers at breeding sites across the Southwest. In such projects, flycatchers are banded with one or more small colored leg bands, including a federal numbered band. As a result, surveyors may find color-banded individuals at their survey sites, and identification and reporting of the band combination can provide important data on flycatcher movements, survivorship, and site fidelity.

To look for bands, move to get a good view of the flycatcher's legs. This may be difficult in dense vegetation, but flycatchers commonly perch on more exposed branches at the edges of their territory or habitat patch. If bands are seen, carefully note the band colors. If there is more than one band on a leg, differentiate the top (farthest up the leg) from the bottom (closest to the foot), and those on the bird's left leg versus the right leg. If you are unsure of the color, do not guess. Instead, record the color as unknown. Incorrect color-band data are worse than incomplete data, so only record colors of which you are certain. The fact that a banded bird was seen, even without being certain of its color combination, is very important information. Record the color-band information on the survey form, and report the sighting to the appropriate State or Federal contact as soon as you return from the survey that day.

Determining the Number of Territories and Pairs.—

Accurately determining the number of breeding territories and pairs can be more difficult than determining simple presence or absence. Flycatcher habitat is usually so dense that visual detections are difficult, and seeing more than one bird at a time is often impossible. Flycatchers sing from multiple song perches within their territories, and may be mistaken for more than one flycatcher. A flycatcher responding to or following a surveyor playing a recording may move considerable distances in a patch and thus be counted more than once. Territorial male flycatchers often sing strongly, but so do many migrants and some females, particularly in response to call-playback (Seutin, 1987; Unitt, 1987; Sogge and others, 1997b). Rangewide, many territorial male flycatchers are unmated, particularly those in small breeding groups. For these reasons, each singing flycatcher may not represent a territory or a mated pair. Following the established survey protocol and carefully observing flycatcher behavior can help determine if you have detected migrants, territorial birds, breeders, unmated birds, or pairs.

Given sufficient time, effort and observation, it is usually possible to approximate the number of territories and pairs. First, listen carefully for simultaneously singing flycatchers. Note the general location of each bird—especially concurrently singing individuals—on aerial photographs, map, or a site sketch. Spend some time watching each flycatcher to determine approximate boundaries of its territory, and how it interacts with other flycatchers. If one or more singing

birds stay primarily in mutually exclusive areas, they can be considered as separate territories. To determine if a flycatcher is paired, watch for interactions within a territory. Refer to the section, “Determining Breeding Status” for signs of pairing and breeding activity. Do not report a territorial male as a pair unless you observe one or more of the signs listed below. In some cases, it may be possible only to estimate the number of singing individuals. In other cases, it may take multiple site visits to differentiate territories or pairs.

Determining Breeding Status.—One way to determine if the flycatchers found at a particular site are migrants or territorial is to find out if they are still present during the “non-migrant” period, which generally is from about June 15 to July 20 (Unitt, 1987). A Willow Flycatcher found during this time probably is a territorial bird, although there is a small chance it could be a non-territorial floater (Paxton and others, 2007). If the management question is simply whether the site is a potential breeding area, documenting the presence of a territorial flycatcher during the non-migrant period may meet all survey objectives, and the site may not need to be resurveyed during the remainder of that breeding season.

However, in some cases, surveyors will be interested in knowing not only if territorial Southwestern Willow Flycatchers are present at a site, but also whether breeding or nesting efforts are taking place. Some males maintain territories well into July yet never succeed in attracting a mate, so unpaired males are not uncommon (McLeod and others, 2007; Ellis and others, 2008; Ahlers and Moore, 2009). Thus, an assumption that each singing male represents a breeding pair may not be well founded, especially in small populations. If it is important to determine whether a pair is present and breeding in that territory, move a short distance away from where the bird was sighted, find a good vantage point, and sit or lie quietly to watch for evidence of breeding. Signs of breeding activity include:

- a. observation of another unchallenged Willow Flycatcher in the immediate vicinity (indicates possible pair);
- b. *whitt* calls between nearby flycatchers (indicates possible pair);
- c. interaction twitter calls between nearby flycatchers (indicates possible pair);
- d. countersinging or physical aggression against another flycatcher or bird species (suggests territorial defense);
- e. physical aggression against cowbirds (suggests nest defense);
- f. observation of Willow Flycatchers copulating (verifies attempted breeding);
- g. flycatcher carrying nest material (verifies nesting attempt, but not nest outcome);
- h. flycatcher carrying food or fecal sac (verifies nest with young, but not nest outcome);
- i. locating an active nest (verifies nesting). Recall that general survey permits do not authorize nest searching or monitoring, and see section, “Special Considerations”;

- j. observation of adult flycatchers feeding fledged young (verifies successful nesting).

You may be able to detect flycatcher nesting activity, especially once the chicks are being fed. Adults feed chicks at rates of as many as 30 times per hour, and the repeated trips to the nest tree or bush are often quite evident. Be sure to note on the flycatcher survey form any breeding activity that is observed, including detailed descriptions of the number of birds, and specific activities observed. Also note the location of breeding activities on an aerial photograph, map, or sketch of the area.

The number of flycatchers found at a site also can provide a clue as to whether they are migrants or territorial birds. Early season detections of single, isolated Willow Flycatchers often turn out to be migrants. However, discovery of a number of Willow Flycatchers at one site usually leads to verification that at least some of them remain as local breeders. This underscores the importance of completing a thorough survey of each site to be confident of the approximate number of flycatchers present.

In some cases, regardless of the time and diligence of your efforts, it will be difficult to determine the actual breeding status of a territorial male. In these instances, use your best professional judgment, or request the assistance of an experienced surveyor or an agency flycatcher coordinator to interpret your observations regarding breeding status.

Reporting Results.—There is little value in conducting formal surveys if the data are not recorded and submitted. Fill in all appropriate information on the Willow Flycatcher survey form while still in the field, and mark the location of detections on a copy of the USGS topographic map. Make a habit of reviewing the form before you leave any site—trying to remember specific information and recording it later can lead to missing and inaccurate data. Note the location of the sighting on an aerial photograph or sketch of the site. Attaching photographs of the habitat also is useful. Whenever a Willow Flycatcher territory or nest site is confirmed, notify the USFWS or appropriate State wildlife agency as soon as you return from the field. The immediate reporting of flycatcher detections or nests may differ among USFWS regions and States—discuss these reporting procedures with your respective State and USFWS flycatcher coordinators.

Complete a survey form ([appendix 1](#)) for each site surveyed, whether or not flycatchers are detected. “Negative data” (that is, a lack of detections) are important to document the absence of Willow Flycatchers and help determine what areas have already been surveyed. Make and retain a copy of each survey form, and submit the original or a legible copy. Electronic copies of the survey forms also are acceptable and are available online (<http://sbsc.wr.usgs.gov/cprs/research/projects/swwf/>). All survey forms must be submitted to the USFWS and the appropriate State wildlife agency by the specified deadline identified in your permits. Timely submission of survey data is a permit requirement, and will ensure the information is included in annual statewide and regional reports.

Special Considerations

To avoid adverse impacts to Willow Flycatchers, follow these guidelines when performing all surveys:

1. Obtain all necessary Federal, State, and agency permits and permissions prior to conducting any surveys. Failure to do so leaves you liable for violation of the Endangered Species Act, various State laws, and prosecution for trespass.
2. Do not play the recording more than necessary or needlessly elicit vocal responses once Willow Flycatchers have been located and verified. This may distract territorial birds from caring for eggs or young, or defending their territory. If flycatchers are vocalizing upon arrival at the site, and your objective is to determine their presence or absence at a particular site—there is no need to play the recording. Excessive playing of the recording also may attract the attention of predators or brood parasites. Stop playing the survey recording as soon as you have confirmed the presence of a Willow Flycatcher, and do not play the recording again until you have moved 30–40 m to the next survey location.
3. Proceed cautiously while moving through Willow Flycatcher habitat. Continuously check the area around you to avoid disturbance to nests of Willow Flycatchers and other species. Do not break understory vegetation, even dead branches, to create a path through the surveyed habitat.
4. Do not approach known or suspected nests. Nest searches and monitoring require specific State and Federal permits, have their own specialized methodologies (Rourke and others, 1999), and are not intended to be a part of this survey protocol.
5. If you find yourself close to a known or suspected nest, move away slowly to avoid startling the birds or force-fledging the young. Avoid physical contact with the nest or nest tree, to prevent physical disturbance and leaving a scent. Do not leave the nest area by the same route that you approached. This leaves a “dead end” trail that could guide a potential predator to the nest/nest tree. If nest monitoring is a component of the study, but you are not specifically permitted to monitor the nest, store a waypoint with your GPS, affix flagging to a nearby tree at least 10 m away, and record the compass bearing to the nest on the flagging. Report your findings to an agency flycatcher coordinator or a biologist who is permitted to monitor nests.
6. If you use flagging to mark an area where flycatchers are found, use it conservatively and make certain the flagging is not near an active nest. Check with the property owner or land-management agency before flagging to be sure that similar flagging is not being used for other purposes in the area. Unless conducting specific and authorized/ permitted nest monitoring, flagging should be placed no closer than 10 m to any nest. Keep flagging inconspicuous from general public view to avoid attracting people or animals to an occupied site, and remove it at the end of the breeding season.
7. Watch for and note the presence of potential nest predators, particularly birds, such as Common Ravens (*Corvus corax*), American Crows (*Corvus brachyrhynchos*), jays, and magpies. If such predators are in the immediate vicinity, wait for them to leave before playing the recording.
8. Although cowbird parasitism is no longer considered among the primary threats to flycatcher conservation it remains useful to note high concentrations of cowbirds in the comment section of the survey form. While conducting surveys, avoid broadcasting the flycatcher vocalizations if cowbirds are nearby, especially if you believe you may be close to an active flycatcher territory. The intent of not broadcasting flycatcher vocalizations is to reduce the potential for attracting cowbirds to a flycatcher territory or making flycatcher nests more detectable to cowbirds.
9. Non-indigenous plants and animals can pose a significant threat to flycatcher habitat and may be unintentionally spread by field personnel, including those conducting flycatcher surveys. Simple avoidance and sanitation measures can help prevent the spread of these organisms to other environments. To avoid being a carrier of non-indigenous plants or animals from one field site to another visually inspect and clean your clothing, gear, and vehicles before moving to a different field site. A detailed description on how to prevent and control the spread of these species is available by visiting the Hazard Analysis and Critical Control Point Planning for Natural Resource Management web site (<http://www.haccp-nrm.org>). One species of particular interest is the tamarisk leaf-beetle (*Diorhabda* spp.). If you observe defoliation of saltcedar while conducting flycatcher surveys and believe that *Diorhabda* beetles may be responsible, notify your USFWS coordinator immediately. Other non-native species of concern in survey locations are the quagga mussel (*Dreissena rostriformis bugensis*), cheatgrass (*Bromus tectorum*), red brome (*Bromus rubens*), giant salvinia (*Salvinia molesta*), water milfoil (*Myriophyllum spicatum*), parrot’s feather (*M. aquaticum*), and amphibian chytrid fungus (*Batrachochytrium dendrobatidis*).

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Appendix 1. Willow Flycatcher Survey and Detection Form

Always check the U.S. Fish and Wildlife Service Arizona Ecological Services Field Office web site (<http://www.fws.gov/southwest/es/arizona/>) for the most up-to-date version.

Willow Flycatcher (WIFL) Survey and Detection Form (revised April 2010)

Site Name _____ State _____ County _____
 USGS Quad Name _____ Elevation _____ (meters)
 Creek, River, Wetland, or Lake Name _____
Is copy of USGS map marked with survey area and WIFL sightings attached (as required)? Yes ____ No ____

Survey Coordinates: Start: E _____ N _____ UTM Datum _____ (See instructions)
 Stop: E _____ N _____ UTM Zone _____

If survey coordinates changed between visits, enter coordinates for each survey in comments section on back of this page.

**** Fill in additional site information on back of this page ****

Survey # Observer(s) (Full Name)	Date (m/d/y) Survey time	Number of Adult WIFLs	Estimated Number of Pairs	Estimated Number of Territories	Nest(s) Found? Y or N If Yes, number of nests	Comments (e.g., bird behavior; evidence of pairs or breeding; potential threats [livestock, cowbirds, <i>Diorhabda</i> spp.]). If <i>Diorhabda</i> found, contact USFWS and State WIFL coordinator	GPS Coordinates for WIFL Detections (this is an optional column for documenting individuals, pairs, or groups of birds found on each survey). Include additional sheets if necessary.			
							# Birds	Sex	UTM E	UTM N
Survey # 1 Observer(s)	Date									
	Start									
	Stop									
	Total hrs ____									
Survey # 2 Observer(s)	Date									
	Start									
	Stop									
	Total hrs ____									
Survey # 3 Observer(s)	Date									
	Start									
	Stop									
	Total hrs ____									
Survey # 4 Observer(s)	Date									
	Start									
	Stop									
	Total hrs ____									
Survey # 5 Observer(s)	Date									
	Start									
	Stop									
	Total hrs ____									
Overall Site Summary Totals do not equal the sum of each column. Include only resident adults. Do not include migrants, nestlings, and fledglings. Be careful not to double count individuals. Total Survey Hrs _____		Total Adult Residents	Total Pairs	Total Territories	Total Nests	Were any Willow Flycatchers color-banded? Yes ____ No ____ If yes, report color combination(s) in the comments section on back of form and report to USFWS.				

Reporting Individual _____ Date Report Completed _____
 US Fish and Wildlife Service Permit # _____ State Wildlife Agency Permit # _____

Submit form to USFWS and State Wildlife Agency by September 1st. Retain a copy for your records.

32 A Natural History Summary and Survey Protocol for the Southwestern Willow Flycatcher

Fill in the following information completely. Submit form by September 1st. Retain a copy for your records.

Reporting Individual _____ Phone # _____
 Affiliation _____ E-mail _____
 Site Name _____ Date Report Completed _____

Did you verify that this site name is consistent with that used in previous years? Yes _____ No _____ Not Applicable _____

If site name is different, what name(s) was used in the past? _____

If site was surveyed last year, did you survey the same general area this year? Yes _____ No _____ If no, summarize below.

Did you survey the same general area during each visit to this site this year? Yes _____ No _____ If no, summarize below.

Management Authority for Survey Area : Federal _____ Municipal/County _____ State _____ Tribal _____ Private _____

Name of Management Entity or Owner (e.g., Tonto National Forest) _____

Length of area surveyed: _____ (meters)

Vegetation Characteristics: Mark the category that best describes the predominant tree/shrub foliar layer at this site (check one):

_____ Native broadleaf plants (entirely or almost entirely, > 90% native, includes high-elevation willow)

_____ Mixed native and exotic plants (mostly native, 50 - 90% native)

_____ Mixed native and exotic plants (mostly exotic, 50 - 90% exotic)

_____ Exotic/introduced plants (entirely or almost entirely, > 90% exotic)

Identify the 2-3 predominant tree/shrub species in order of dominance. Use scientific name.

Average height of canopy (Do not include a range): _____ (meters)

Attach copy of USGS quad/topographical map (REQUIRED) of survey area, outlining survey site and location of WIFL detections.

Attach sketch or aerial photo showing site location, patch shape, survey route, location of any WIFLs or WIFL nests detected.

Attach photos of the interior of the patch, exterior of the patch, and overall site; describe any unique habitat features.

Comments (attach additional sheets if necessary)

Territory Summary Table. Provide the following information for each verified territory at your site.

Territory Number	All Dates Detected	UTM N	UTM E	Pair Confirmed? Y or N	Nest Found? Y or N	Description of How You Confirmed Territory and Breeding Status (e.g., vocalization type, pair interactions, nesting attempts, behavior)

Attach additional sheets if necessary

Appendix 2. Willow Flycatcher Survey Continuation Sheet / Territory Summary Table

Always check the U.S. Fish and Wildlife Service Arizona Ecological Services Field Office web site (<http://www.fws.gov/southwest/es/arizona/>) for the most up-to-date version.

Willow Flycatcher Survey Continuation Sheet

(For reporting additional detections and territories; append to Survey and Detection form)

Reporting Individual _____ Phone # _____

Affiliation _____	E-mail _____
-------------------	--------------

Site Name _____ Date Report Completed _____

[illegible]

Comments

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.

Appendix 3. Instructions for Completing the Willow Flycatcher Survey and Detection Form and the Survey Continuation Sheet

These instructions are provided as guidance for completing the standard survey form. It is particularly important to provide the correct type and format of information for each field. Complete and submit your survey forms to both the appropriate State Willow Flycatcher coordinator and the U.S. Fish and Wildlife Service (USFWS) by September 1 of the survey year. You also may complete forms digitally (Microsoft® Word or Excel) and submit them via email with attached or embedded topographic maps and photographs.

Page 1 of Survey Form

Site Name. Standardized site names are provided by the flycatcher survey coordinators for each State and should be consistent with the naming of other sites that might be in the area. If the site is new, work with your State or USFWS flycatcher coordinator to determine suitable site names before the beginning of the survey season. If the site was previously surveyed, use the site name from previous years (which can be obtained from the State or USFWS flycatcher coordinator). If you are uncertain if the site was previously surveyed, contact your State or USFWS flycatcher coordinator.

USGS Quad Name. Provide the full quad name, as shown on the appropriate standard 7.5-minute topographic maps.

Creek, River, Wetland, or Lake Name. Give the name of the riparian feature, such as the lake or watercourse, where the survey is being conducted.

Survey Coordinates. Provide the start and end points of the survey, which will indicate the linear, straight-line extent of survey area, based on Universal Transverse Mercator coordinates (UTMs). California surveyors only: provide latitude/longitude geographic coordinates instead of UTMs in the UTM fields and identify them as such. If the start and end points of the survey changed significantly among visits, enter separate coordinates for each survey in the comments section on the back of the survey sheet. Note that we do not need the coordinates for the detailed path taken by the surveyor(s).

Datum. Indicate the datum in which the coordinates are expressed: NAD27, WGS84, or NAD83. The datum can be found in the settings of most GPS units. Note that Arizona prefers NAD27 and New Mexico prefers NAD83.

Zone. Provide the appropriate UTM zone for the site, which is displayed along with the coordinates by most GPS units. Zones for California are 10, 11, or 12. The zone for Arizona is 12. Zones for New Mexico are 12 or 13.

Survey #. Survey 1 – 5. See the protocol for an explanation of the number of required visits for each survey period. **Note:** A survey is defined as a complete protocol-based survey that occurs over no more than 1 day. If a site is so large as to require more than a single day to survey, consider splitting the site into multiple subsites and use separate survey forms for each. Casual site visits, pre-season or supplemental visits, or follow-up visits to check on the status of a territory should not be listed in this column, but should be documented in the Comments section on page 2 or in the survey continuation sheet.

Date. Indicate the date that the survey was conducted, using the format mm/dd/yyyy.

Start and Stop. Start and stop time of the survey, given in 24-hour format (e.g., 1600 hours rather than 4:00 p.m.).

Total hours. The duration of time (in hours) spent surveying the site, rounded to the nearest tenth (0.1) hour. For single-observer surveys, or when multiple observers stay together throughout the survey, total the number of hours from survey start to end. If two or more observers surveyed sections of the site concurrently and independently, sum the number of hours each observer spent surveying the site.

Number of Adult WIFLs. The total number of individual adult Willow Flycatchers detected during this particular survey. Do not count nestlings or recently fledged birds.

Number of Pairs. The number of breeding pairs. Do not assume that any bird is paired; designation of birds as paired should be based only on direct evidence of breeding behaviors described in the protocol. If there is strong evidence that the detected bird is unpaired, enter “0”. If it is unknown whether a territorial bird is paired, enter “–”. Note that the estimated number of pairs can change over the course of a season.

Number of Territories. Provide your best estimate of the number of territories, defined as a discrete area defended by a resident single bird or pair. This is usually evidenced by the presence of a singing male, and possibly one or more mates. Note that the estimated number of territories may change over the course of a season.

Nest(s) Found? Yes or No. If yes, indicate the number of nests. Renests are included in this total.

Comments about this survey. Describe bird behavior, evidence of pairs or breeding, evidence of nest building, evidence of nestlings/fledglings, nesting, vocalizations (e.g., interaction twitter calls, *whitts*, *britts*, *wheos*, *fitz-bews*/countersinging), potential threats (e.g., livestock, cowbirds, saltcedar leaf beetles [*Diorhabda* spp.] etc.). If *Diorhabda* beetles are observed, contact your USFWS and State flycatcher coordinator immediately. Please be aware that permits are needed for nest monitoring.

GPS Coordinates for WIFL Detections. Provide the number of birds (e.g., unpaired, paired, or groups of birds) and corresponding UTMs. If known, provide the sex of individuals.

Overall Site Summary. For each of these columns, provide your best estimate of the overall total for the season. Do not simply total the numbers in each column. In some cases where consistent numbers were detected on each survey, the overall summary is easy to determine. In cases where numbers varied substantially among the different surveys, use professional judgment and logic to estimate the most likely number of adults, pairs, and territories that were consistently present. Be careful not to double count individuals. Record only territorial adult Southwestern Willow Flycatchers, do not include migrants, nestlings, or fledglings in the overall summary. In complex cases, consult with your State or USFWS flycatcher coordinator.

Total Survey Hours. The sum of all hours spent surveying the site.

Were any WIFLs color-banded? Circle or highlight “Yes” or “No”. If yes, report the sighting and color combination (if known) in the comments section on back of form, and contact your USFWS coordinator within 48 hours after returning from the survey. Note that identifying colors of bands is difficult and might require follow-up visits by experienced surveyors.

Reporting Individual. Indicate the full first and last name of the reporting individual.

Date Report Completed. Provide the date the form was completed in mm/dd/yyyy format.

U.S. Fish and Wildlife Service Permit #. List the full number of the required federal permit under which the survey was completed.

State Wildlife Agency Permit #. If a State permit is required by the State in which the survey was completed, provide the full number of the State permit. State permits are required for Arizona and California. State permits are recommended for New Mexico.

Page 2 of Survey Form

Affiliation. Provide the full name of the agency or other affiliation (which is usually the employer) of the reporting individual.

Phone Number. Self-explanatory; include the area code.

E-mail. Self-explanatory.

Was this site surveyed in a previous year? Indicate “Yes”, “No”, or “Unknown.”

Did you verify that this site name is consistent with that used in previous years? Indicate “Yes” or “No”. This can be determined by checking survey forms from previous years or consulting with agency flycatcher coordinators.

If site name is different, what name(s) was used in the past? Enter the full site name that was used in previous years.

If site was surveyed last year, did you survey the same general area this year? Indicate “Yes” or “No”. If no, indicate the reason and how the survey varied in the Comments section.

Did you survey the same general area during each visit to this site this year? If no, indicate the reason in the Comments section and delineate the differing route of each survey on the topographical map.

Management Authority for Survey Area. Mark the appropriate management authority.

Name of Management Entity or Owner (e.g., Tonto National Forest). Provide the name of the organization or person(s) responsible for management of the survey site.

Length of area surveyed. Estimate the linear straight-line distance of the length of the area surveyed, in kilometers. This is not an estimate of the total distance walked throughout the survey site. Do not provide a range of distances.

Vegetation Characteristics: Mark only one of the categories that best describes the predominant tree/shrub foliar layer at the site.

Native broadleaf habitat is composed of entirely or almost entirely (i.e., > 90%) native broadleaf plants.

Mostly native habitat is composed of 50–90% native plants with some (i.e., 10–50%) non-native plants.

Mostly exotic habitat is composed of 50–90% non-native plants with some (i.e., 10–50%) native plants.

Exotic/introduced habitat is composed entirely or almost entirely (i.e., > 90%) of non-native plants.

Identify the 2–3 predominant tree/shrub species in order of dominance. Identify by scientific name.

Average height of canopy. Provide the best estimate of the average height of the top of the canopy throughout the patch. Although canopy height can vary, give only a single (not a range) overall height estimate.

Attach the following: (1) copy of USGS quad/topographical map (REQUIRED) of survey area, outlining survey site and location of WIFL detections; (2) sketch or aerial photo showing site location, patch shape, survey route, location of any detected WIFLs or their nests; (3) photos of the interior of the patch, exterior of the patch, and overall site. Describe any unique habitat features in Comments. Include the flycatcher territory number and GPS location. You also may include a compact disc of photographs.

Comments. Include any information that supports estimates of total territory numbers and breeding status. You may provide additional information on bird behavior, banded birds, evidence of pairs or breeding, nesting, potential threats (e.g., livestock, cowbirds, saltcedar leaf beetles [*Diorhabda* spp.] etc.), and changes in survey length and route throughout the season. Attach additional pages or use the continuation sheet if needed.

Table. If Willow Flycatchers are detected, complete the table at the bottom of the form. Identify flycatchers by territory number and include the dates detected, UTM coordinates, whether or not pairs were detected, and whether or not nests were located. Also describe the observation. For example, the surveyor might have observed and heard a bird *fitz-bew* from an exposed perch, heard and observed two birds interacting and eliciting a twitter call, heard a bird *fitz-bew* while observing another carrying nesting material, heard birds from territory 1 and 2 countersinging, etc. This information provides supporting information for territory and breeding status. Use the continuation sheet if needed.

Appendix 4. Example of a Completed Willow Flycatcher Survey and Detection Form (with map)

Willow Flycatcher (WIFL) Survey and Detection Form (revised April, 2010)

Site Name: DL-08 State: New Mexico County: Socorro
 USGS Quad Name: Paraje Well Elevation: 1,356 (meters)
 Creek, River, or Lake Name: Rio Grande
Is copy of USGS map marked with survey area and WIFL sightings attached (as required)? Yes X No
 Survey Coordinates: Start: E 306,009 N 3,715,506 UTM Datum: NAD 83 (See instructions)
 Stop: E 304,339 N 3,711,922 UTM Zone: 13

If survey coordinates changed between visits, enter coordinates for each survey in comments section on back of this page.

****Fill in additional site information on back of this page****

Survey # Observer(s) (Full Name)	Date (m/d/y) Survey Time	Number of Adult WIFLs	Estimated Number of Pairs	Estimated Number of Territories	Nest(s) Found? Y or N If Yes, number of nests	Comments (e.g., bird behavior; evidence of pairs or breeding; potential threats [livestock, cowbirds, <i>Diorhabda</i> spp.]). If <i>Diorhabda</i> found, contact USFWS and State WIFL coordinator.	GPS Coordinates for WIFL Detections (this is an optional column for documenting individuals, pairs, or groups of birds found on each survey). Include additional sheets if necessary.			
							# Birds	Sex	UTM E	UTM N
Survey # 1 Observer(s): D. Savage	Date: 5/24/2009	5	0	5	N	Suitable breeding habitat dispersed throughout site. WIFLs were very vocal, and covering large areas. No obvious signs of pairing were observed. Approximately 10 head of cattle were found within this site.				
	Start: 5:45						1	M	305,276	3,714,926
	Stop: 10:15						1	M	305,131	3,714,628
	Total hrs: 4.5						1	M	305,191	3,714,778
							1	M	305,394	3,715,009
Survey # 2 Observer(s): S. Kennedy	Date: 6/10/2009	11	4	7	Y (3)	Portions of site are flooded, 1-2 ft deep. Two males found during 1st survey appear unpaired. Three pairs confirmed based on nesting, and another pair suspected based on vocal interactions and nonaggressive behavior with another flycatcher. Two additional territories (1 pair and 1 unpaired male) found during this survey.				
	Start: 6:00						1	M	305,276	3,714,926
	Stop: 10:15						1	M	305,131	3,714,628
	Total hrs: 4.3						2	M/F	305,191	3,714,778
							2	M/F	305,394	3,715,009
Survey # 3 Observer(s): S. Kennedy	Date: 6/21/2009	12	5	7	Y (4)	Portions of site still flooded. All territories found in Survey 2 are still active. The two males found during Surveys #1 and #2, still believed to be unpaired. All other territories are believed to be paired. Several cows observed in vicinity of active territories.				
	Start: 5:30						1	M	305,276	3,714,926
	Stop: 10:00						1	M	305,131	3,714,628
	Total hrs: 4.5						2	M/F	305,191	3,714,778
							2	M/F	305,394	3,715,009
Survey # 4 Observer(s): D. Moore	Date: 7/1/2009	12	5	7	Y (4)	Site is no longer flooded, but saturated soils persist throughout most of site. No change in territory numbers or status. All SWFL pairs very quiet - only a few whiffs and fits-bows. Light rain over night, vegetation was saturated early in the morning. Lots of mosquitos!				
	Start: 6:00						1	M	305,276	3,714,926
	Stop: 10:00						1	M	305,131	3,714,628
	Total hrs: 4.0						2	M/F	305,191	3,714,778
							2	M/F	305,394	3,715,009
Survey # 5 Observer(s): D. Moore	Date: 7/10/2009	11	5	6	Y (4)	Site beginning to dry out, some portions still muddy. One of the unpaired males could not be detected. It was hard to hear SWFLs due to breezy conditions early in the morning.				
	Start: 5:30						2	M/F	305,191	3,714,778
	Stop: 10:00						2	M/F	305,394	3,715,009
	Total hrs: 4.5						2	M/F	305,084	3,714,732
							2	M/F	305,001	3,714,640
Overall Site Summary Totals do not equal the sum of each column. Include only resident adults. Do not include migrants, nestlings, and fledglings. Be careful not to double count individuals. Total survey hrs: <u>21.8</u>		Total Adult Residents	Total Pairs	Total Territories	Total Nests	Were any WIFLs color-banded? Yes <u> </u> No <u>X</u>				
		12	5	7	4	If yes, report color combination(s) in the comments section on back of form and report to USFWS.				

Reporting Individual: Darrell Ahlers Date Report Completed: 8/20/2009
 US Fish & Wildlife Service Permit #: TE819475-2 State Wildlife Agency Permit #: N/A

Submit form to USFWS and State Wildlife Agency by September 1st. Retain a copy for your records.

Fill in the following information completely. Submit form by September 1st. Retain a copy for your records.

Reporting Individual Darrell Ahlers Phone # (303) 445-2233
 Affiliation Bureau of Reclamation E-mail dahlers@usbr.gov
 Site Name DL-08 Date report Completed 8/20/2009
 Was this site surveyed in a previous year? Yes x No Unknown
 Did you verify that this site name is consistent with that used in previous yrs? Yes x No Not Applicable
 If name is different, what name(s) was used in the past? Not applicable
 If site was surveyed last year, did you survey the same general area this year? Yes x No If no, summarize below.
 Did you survey the same general area during each visit to this site this year? Yes x No If no, summarize below.
 Management Authority for Survey Area: Federal X Municipal/County State Tribal Private
 Name of Management Entity or Owner (e.g., Tonto National Forest) Bureau of Reclamation

Length of area surveyed: 2.5 (km)

Vegetation Characteristics: Check (only one) category that best describes the predominant tree/shrub foliar layer at this site:

- Native broadleaf plants (entirely or almost entirely, > 90% native)
X Mixed native and exotic plants (mostly native, 50 - 90% native)
 Mixed native and exotic plants (mostly exotic, 50 - 90% exotic)
 Exotic/introduced plants (entirely or almost entirely, > 90% exotic)

Identify the 2-3 predominant tree/shrub species in order of dominance. Use scientific name.

Salix Gooddingii, Populus spp., Tamarix spp.

Average height of canopy (Do not include a range): 6 (meters)

- Attach the following: 1) copy of USGS quad/topographical map (REQUIRED) of survey area, outlining survey site and location of WIFL detections;
 2) sketch or aerial photo showing site location, patch shape, survey route, location of any detected WIFLs or their nests;
 3) photos of the interior of the patch, exterior of the patch, and overall site. Describe any unique habitat features in Comments.

Comments (such as start and end coordinates of survey area if changed among surveys, supplemental visits to sites, unique habitat features).

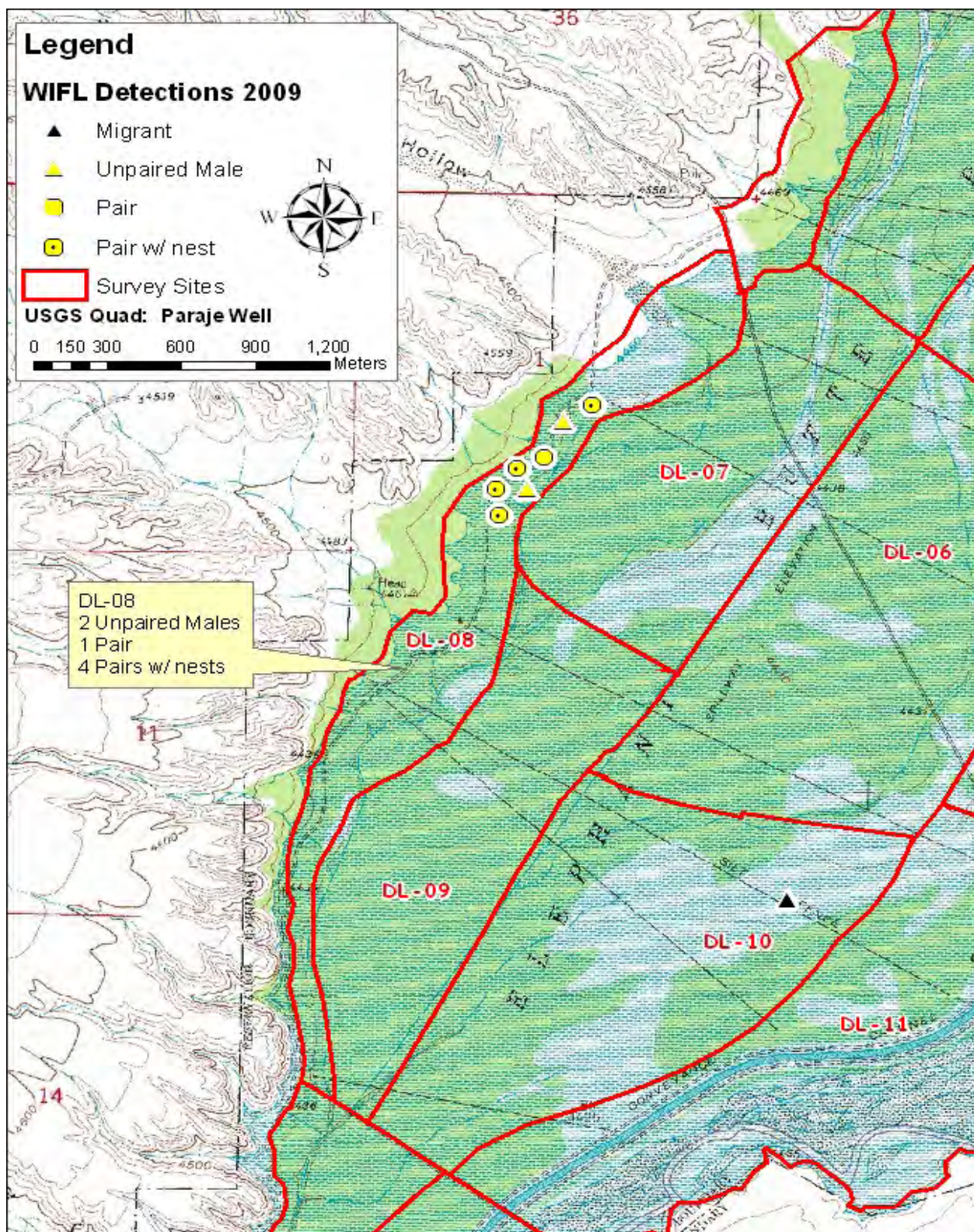
Attach additional sheets if necessary.

Great habitat with saturated or flooded soils throughout most of the site on 1st survey. Site began to dry by the end of the breeding season. SWFL territories are dominated by Gooddings willow, however Tamarix spp. tends to be increasing in density compared to previous years. Site is supported by flows from the Low Flow Conveyance Channel.

Territory Summary Table. Provide the following information for each verified territory at your site.

Territory Number	All Dates Detected	UTM E	UTM N	Pair Confirmed? Y or N	Nest Found? Y or N	Description of How You Confirmed Territory and Breeding Status (e.g., vocalization type, pair interactions, nesting attempts, behavior)
1 (Unpaired male)	5/24, 6/10, 6/21, 7/1	305,276	3,714,926	N	N	extended presence at site from 5/24 through 7/1, no evidence of pairing
2 (Unpaired male)	5/24, 6/10, 6/21, 7/1, 7/10	305,131	3,714,628	N	N	extended presence at site from 5/24 through 7/10, no evidence of pairing
3 (Pair)	5/24, 6/10, 6/21, 7/1, 7/10	305,191	3,714,778	Y	Y	Pair confirmed based on vocalizations and observation of unchallenged WIFL
4 (Pair w/nest)	5/24, 6/10, 6/21, 7/1, 7/10	305,394	3,715,009	Y	Y	Confirmed breeding status with nest
5 (Pair w/nest)	5/24, 6/10, 6/21, 7/1, 7/10	305,084	3,714,732	Y	Y	Confirmed breeding status with nest
6 (Pair w/nest)	6/10, 6/21, 7/1, 7/10	305,001	3,714,640	Y	Y	Confirmed breeding status with nest
7 (Pair w/nest)	6/10, 6/21, 7/1, 7/10	305,010	3,714,524	Y	N	Confirmed breeding status with nest

Attach additional sheets if necessary



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Final Report - NCCP/MSCP Raptor Monitoring
Project (January 1, 2001 – December 31, 2003)

for

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by

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March 31, 2005

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BACKGROUND

The Natural Communities Conservation Planning (NCCP) Raptor Monitoring Project is part of the urgent implementation tasks associated with the Multiple Species Conservation Program (MSCP). The MSCP is the local representation of the State's NCCP Program of which the City of San Diego is a participating member and the lead agency. The County of San Diego is also an active participant (County of San Diego 1997). The city adopted the MSCP on March 18, 1997 and entered into a binding contract on July 16, 1997 with the State of California Department of Fish and Game and the United States Fish and Wildlife Service to implement the MSCP.

Each habitat conservation plan (HCP) requires a monitoring program to determine the efficacy of that plan. The "Biological Monitoring Plan for the Multiple Species Conservation Program" (Ogden 1996) recommended monitoring for certain plant species, coastal sage scrub (Coastal California Gnatcatcher and Cactus Wren), herpetofauna, and grasslands (specifically, using raptors).

THE PROJECT AND ITS OBJECTIVES

Monitoring of raptors is a critical component of the MSCP. This project, specifically, addresses monitoring the raptor species identified as target species for MSCP monitoring with one exception--the Burrowing Owl (BO; *Athene cunicularia hypugaea*). In addition to the Burrowing Owl, the MSCP Biological Monitoring Plan (Ogden, 1996) identified the following raptor species (hereafter referred to as the "target" species) to be monitored: Golden Eagle (GE; *Aquila chrysaetos*), Bald Eagle (BE; *Haliaeetus leucocephalus*), Peregrine Falcon (PF; *Falco peregrinus*), Northern Harrier (NH; *Circus cyaneus*), Ferruginous Hawk (FH; *Buteo regalis*), Swainson's Hawk (SH; *Buteo swainsoni*), and Cooper's Hawk (CH; *Accipiter cooperii*). Prior to the subject work, no comprehensive study had been conducted for any of these species, within the geographical limits of the MSCP.

The Wildlife Research Institute, Inc. (WRI), a non-profit organization, has been working with all MSCP participants to identify appropriate long-term raptor monitoring locations (based on the results of the current WRI raptor surveys), develop a scientifically-based monitoring program (including survey locations and protocols), test the monitoring methods, and identify opportunities for population enhancements.

The original project objectives (taken from the contract's scope of work) are as follows:

- Determine where breeding and wintering individuals (of the target species) are located within the study areas.
- Wherever possible, document the breeding success of active pairs.
- Characterize situations of both successful and less successful or unsuccessful habitat.
- Identify, modify, or create, if necessary, survey raptor monitoring methods, based on scientific principles that would be appropriate to meet the objectives of the MSCP Monitoring Plan.
- Identify management, including research, needs and enhancement opportunities.

THIS REPORT

Constraints. This report covers WRI's raptor surveying activity for the three years of this project (January 1, 2001 through December 31, 2003), focusing on the breeding and wintering seasons. For the record, our work did not, officially, include the BO. Therefore, with few exceptions, surveys were not conducted during what would normally have been the most productive time for this species (i.e., early morning and early evening). Fieldwork was conducted during the daylight hours to maximize chances for seeing the diurnal raptors that were the focus of the contracted scope. Although nocturnal owls can be expected to nest and winter in many of the study sites, they would be expected to often escape observation under this temporal survey regime. However, our methods required documenting any raptor, regardless of whether or not it was a target species and, when a BO or any other owl was observed, it was noted.

A natural phenomenon created a situation that could be considered a constraint. This was the extreme drought that the region experienced for several years (1999-2004). Therefore, 2001 through 2003 may not have been the best of raptor breeding years. Drought clearly plays a significant factor in the density and reproductive success of raptors. This study was conducted during the worst drought for San Diego in over 160 years. This fact should be noted for future researchers and resource managers/planners. This kind of extreme drought has the potential effect of reducing the available prey biomass, which, in turn, can have at least two effects. First, it likely reduces the "attractiveness" of a habitat complex, partly because of low prey densities, and may encourage raptors and other predators to look elsewhere. Second, for those individuals that choose to stay in a less-than-ideal environment, the lack of prey often results in lowered reproductive success or even total nest failure (see Discussion, below). If a nest site is not successful, the birds are more likely to disperse, which leaves the historically active territories apparently, or actually, vacant.

Intent. It is the intent that this, the Final Report, will not only serve to (1) provide data analysis and interpretation but, importantly, it strives to (2) provide an initial baseline of information on many of the breeding and wintering raptors within the MSCP and environs, (3) identify resource management challenges and opportunities, and (4) recommend needed research and management, including what areas should be considered for the MSCP Long-term Raptor Monitoring Program (LRMP).

METHODS

LITERATURE REVIEW, INTERVIEWS, DATA SEARCHES, ETC.

We first contacted other professional biologists, regarding available literature and monitoring programs already in place. We acquired relevant literature, which we did not already have, and met with and/or phone-interviewed members of the outdoor-oriented public as well as key professionals in the San Diego ornithologist community (including Mr. John Oakley, Mr. David Mayer, Mr. Phil Unitt, Dr. Jim Hannan, and others listed in the Acknowledgements section) to inquire about raptor sightings. Using existing published and gray literature, the Natural Communities Data Base, museum collections, raw data from the San Diego County Bird Atlas (then in prep.), MSCP vegetation and sensitive species GIS data, and discussions with knowledgeable experts, a project bibliography, relevant to the MSCP and the target species, was produced (Appendix A).

STUDY SITES

The choice of *study sites* (i.e., those which would be the focus of the 2001-2003 field observations) began with the raptor monitoring locations proposed by the “Biological Monitoring Plan for the Multiple Species Conservation Program” (Ogden 1996). Through consultations with CDFG staff and other knowledgeable biologists, we initially identified 22 sites. After some consolidation and the addition of several sites, including control sites and five sites recently acquired by the state or federal government (numbers 34, and 39 through 43), this number was, ultimately, increased to 45 locations within, and juxtaposed to, the MSCP (hereafter referred to as “study sites”; Figure 1 and Table 1). These became the sites, which were surveyed and considered as *potential* sites, or components of sites, for the Long-term *Monitoring Plan*. The basis for choosing the study sites included that they (1) could be expected to support raptors, (2) were part of an area which was managed by a public or private organization or, alternatively, could serve as a control site over time, (3) were accessible by vehicle and could be safely surveyed with repeatability, (4) contained grassland and/or other relevant habitat which was representative of the MSCP area, and (5) were within or immediately juxtaposed to the MSCP area. We considered all ten sites recommended by the Ogden (1996) report. Of those ten sites, we believe all are covered by one or more of the above 45 locations unless they did not meet the above criteria.

MONITORING SITES

The parameters considered in order to make the recommendations for monitoring sites (i.e., those which would be used in the MSCP Long-term Monitoring Program; LRMP) were discussed at a meeting with representatives of CDFG, USFWS, the City of San Diego and the County of San Diego, on January 27, 2002, at the CDFG San Diego office. It was agreed that the following were important when reviewing each study site as a potential MSCP LRMP site:

- Number of individual raptors documented at a site
- Number of raptor species
- Number of target raptor species
- Diversity of raptors and/or target raptor species
- Number of raptor territories
- Number of crows and/or ravens
- Incidence and/or expectation of management/enforcement problems
- Likely changes in habitat and disturbance over time

In order to identify which sites are the most appropriate for the MSCP LRMP during the breeding season, each site was examined, based on two species diversity parameters (number of total raptors and number of target raptors, both of which were normalized by level of effort) and a third parameter for evenness (Probability of an Interspecific Encounter or PIE; Hurlburt, 1971). The analysis for evenness provided a logical break between the top 19th and 20th sites. All sites were then arranged in descending order for each of these three parameters. If any site came out in the top 19 for any two of the three parameters, it was considered a candidate for the MSCP LRMP. Seventeen sites met this requirement. Each site was reviewed, based on our biological knowledge of that site and how it fit into the geographic distribution of recommended monitoring sites. Finally, juxtaposed sites were combined and sites and site boundaries were adjusted based on historic raptor numbers and improved geographic coverage.

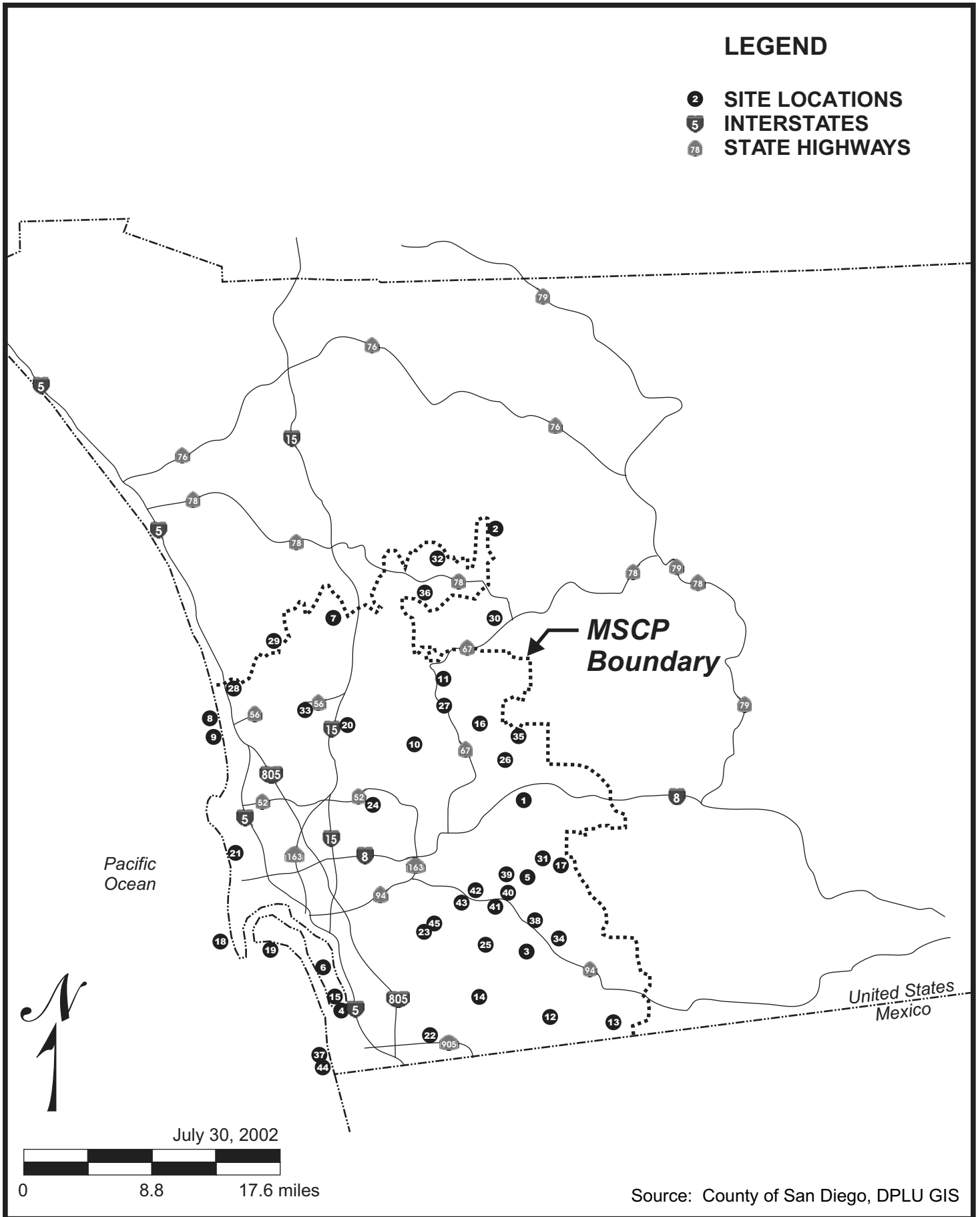


Table 1. Raptor Study Sites (2001-2003)

NOTE TO READER: In order to facilitate the reader's access to the following topographic maps, they are listed below alphabetically and by site number.

<u>Number</u>	<u>Name</u>	<u>Name</u>	<u>Number</u>
1	Crestridge	Boden Canyon	2
2	Boden Canyon	Border Fields	44
3	Jamul Ranch	Brown Field Complex	22
4	SDNWR*/Salt Works/Egger Ghio	Crestridge	1
5	McGinty Mountain Complex	Grasslands/Route 67	30
6	San Diego Bay NWR (winter only)	Hollenbeck Canyon	34
7	Lake Hodges	Immenschuh	39
8	Penasquitos Lagoon	Iron Mountain	11
9	Torrey Pines	Jamul Ranch	3
10	Sycamore Canyon	Lake Hodges	7
11	Iron Mountain	Los Montanas (North)	40
12	Otay Mountain	Los Montanas (South)	41
13	Marron Valley	Marron Valley	13
14	Otay Lakes	McGinty Mountain Complex	5
15	SDNWR* Sweetwater Marsh	Miramar Reservoir	20
16	San Vicente	Mission Bay	21
17	Sycuan Peak	Mission Trails	24
18	Point Loma	North Island	19
19	North Island	Otay Lakes	14
20	Miramar Reservoir	Otay Mountain	12
21	Mission Bay	Penasquitos Canyon	33
22	Brown Field Complex	Penasquitos Lagoon	8
23	SDNWR*/San Miguel Mountain	Point Loma	18
24	Mission Trails	Proctor Valley	25
25	Proctor Valley	Rancho San Diego (East)	42
26	San Diego River	Rancho San Diego (West)	43
27	Route 67 South	Rock Mountain	35
28	San Dieguito Lagoon	Rockwood Canyon	32
29	Route S-6 (deleted/safety issue)	Route 67 South	27
30	Grasslands/Route 67	Route 94 (North and South)	38
31	Sloan Canyon	Route S-6	29
32	Rockwood Canyon	San Diego Bay NWR (winter only)	6
33	Penasquitos Canyon	San Diego River	26
34	Hollenbeck Canyon	San Dieguito Lagoon	28
35	Rock Mountain	San Pasqual	36
36	San Pasqual	San Vicente	16
37	SDNWR*Tijuana Slough	SDNWR* Sweetwater Marsh	15
38	Route 94 (North and South)	SDNWR*/Salt Works/Egger Ghio	4
39	Immenschuh	SDNWR*/San Miguel Mountain	23
40	Los Montanas (North)	SDNWR*Tijuana Slough	37
41	Los Montanas (South)	Sloan Canyon	31
42	Rancho San Diego (East)	Sweetwater Reservoir	45
43	Rancho San Diego (West)	Sycamore Canyon	10
44	Border Fields	Sycuan Peak	17
45	Sweetwater Reservoir	Torrey Pines	9
*San Diego National Wildlife Refuge			

After completing the above analysis, it became clear that the coastal portions of the MSCP were excluded from the proposed breeding season monitoring because the vast majority and greatest diversity of raptor species breed somewhat inland of the coast. In addition, our data showed that the MSCP area supported a sizable wintering PF population, most of which would be excluded without a coastal component to the MSCP LRMP. Therefore, a winter monitoring route was established that included a good sampling of the coastal wintering raptor habitat that could be driven safely and consistently.

FIELD SURVEYS

By way of clarification, we will be discussing two kinds of raptor searching and documentation. The first is the *survey*—the approach we took to investigate each of the 45 study sites, some of which we are recommending for the MSCP LRMP. This approach utilized several techniques in order to capture a maximum amount of raptor data on sites of considerable environmental variation. The second kind of raptor searching and documentation is the *monitoring protocol*, which will be recommended for MSCP LRMP. This was based on which *survey* techniques were most useful, what has become standardized for raptors, and what will meet the objectives of a monitoring program (discussed below).

Based on a review of the MSCP Biological Monitoring Plan, discussions with the Contract Manager, and our knowledge of survey techniques that are widely accepted, we established guidelines for WRI biologists to follow for the breeding and wintering surveys (WRI 2004, Appendices A and B). As discussed in the Year 1 and 2 reports (WRI 2002, 2004), because of latitude, and the resulting mild climate of the MSCP area, raptor nesting activities can start as early as December and run into August. However, wintering raptors are commonly observed in this region December through February, with some remaining (or migrating through) into mid-March. Therefore, we have, somewhat arbitrarily, called field observations made December through February “winter” survey data. However, “breeding” season data are not limited to a specific timeframe, often overlap with the “winter” observation, and are based on observed behavior (e.g., copulation, nest building, incubation, bringing food to the nest, presence of young).

Table 1 provides a reminder of all the sites that were in the original list of those to be examined. One of the objectives of the 2003 fieldwork was to fill in some data gaps. We had difficulty gaining access to one site (San Diego National Wildlife Refuge/San Miguel Mountain, Site 23) because it involved the use of an access across private property. Table 1 does not reflect surveys that were conducted for the GE or numerous surveys conducted by WRI volunteers and cooperators. During this last year of study, we also continued our coordination with individuals responsible for managing the study sites to keep them apprised of project progress, maintain a point of contact, enlist their input, coordinate access, etc.

Although most of the fieldwork was conducted by vehicle and on foot, as described in WRI (2004, Appendices A and B), some observations, which were focused on the GE, were conducted by helicopter (WRI 2005).

RESULTS

LITERATURE REVIEW

The Project Bibliography has been completed (Appendix A); although, we would welcome any additions from those who review it. This bibliography is not intended to be comprehensive but is intended to provide the reader and local resource manager with important references that relate to: (1) relevant natural history of the target raptors; (2) the presence or distribution of the target raptors within the MSCP, and/or (3) survey or monitoring techniques that could be applied to the target raptor resources by land and wildlife managers within the MSCP. It is arranged by sections for each raptor target species, followed by a section on general raptor literature, with a focus on raptor management.

FIELD SURVEYS

The GE and the PF are addressed separately below because they are unique in both their biological status and their potential for being disturbed. The PF was only recently removed from the listing category and the GE has shown a marked (approximately 50 percent), and well-documented, decline in San Diego County.

Golden Eagle

The GE has been reported on separately (WRI 2005) for a number of reasons relating to resource protection. The detailed site-specific maps are provided in that document so that CDFG has the option of distributing those data separate from the other, less sensitive, raptor data depending on the recipient's need to know.

As an overview, however, after 16 years of consistent monitoring, we estimate that thirty one (31) pairs formerly occupied the San Diego MSCP. Today, fifteen (15) pairs are still active and sixteen (16) pairs have been extirpated. Most of these extirpations occurred in the last 35 years. The fifteen (15) breeding pairs of Golden Eagles remaining in the SD MSCP represent 30 percent of all the breeding Golden Eagles in San Diego County. Seven (7) of the fifteen (15) remaining active pairs within the SD MSCP are in serious jeopardy of being extirpated in the next 5-10 years. Three (3) of the seven (7) pairs predicted to become extirpated may, in fact, already be lost.

The first changes of significance that affected the SD MSCP Golden Eagle population were from intensive agriculture such as avocado and citrus groves. This agriculture replaced cattle grazing and grasslands. Some extirpations were documented to occur in San Diego County in the 1950s and 1960s, after the build-up of military personnel post-WWII, but most disappeared after the 1970s, when major freeways opened land for development that was formerly cattle ranches. Interstate and local freeways made access easy and allowed development to proceed.

Extirpated Golden Eagle territories were primarily located on private land (56 percent). Currently only three (20 percent) of the remaining pairs of Golden Eagles core nesting areas remain on private lands. Twelve (80 percent) of the currently active Golden Eagles within the SD MSCP nest on public land. *This is a significant and valuable opportunity for the future management and survival of Golden Eagles within the SD MSCP.*

In order to properly manage this far-ranging species, specific information about their ecological needs is required, including the limits of the core area around the nest, the primary foraging areas, and the limits of the defendable territory. These are provided in the Golden Eagle report (WRI 2005).

Peregrine Falcon

Breeding Season Results

Of the 12 current and/or historic PF territories known for the county, nine were (and, in five cases, are) located within the MSCP boundaries. Of the five territories located within the MSCP, only one territory is located at one of the study sites (Point Loma, Site 18; see Table 2). The status of that territory and others that we are aware of, within the MSCP, is as follows: Point Loma—active (likely produced young, 2002; was active, 2003); downtown San Diego—active (nest success not known, 2001-2003); La Jolla Cove—active (thought to have produced young, 2002); La Jolla Cliffs—active (nest success not known, 2001-2003); Downtown El Cajon—active (2002) but nest success not known.

Winter Results

A total of 14 PFs were documented during the winter months of 2002 and we believe this was typical for the study period (2001-2003). These were observed at ten study sites (Table 3). One individual was observed at each of nine sites, 2 at one site, and 3 were noted at, or near, another site (Point Loma; site 18). Most birds were observed along the coast or associated with large bodies of water, where shorebirds and other water-associated birds were abundant. Based on other observations, and input from knowledgeable raptor biologists, it is likely that there were roughly 20 PFs wintering in San Diego County during each of the period 2001-2003.

Other Raptors

Breeding Raptors

The raptor breeding season data, by study site, presented in Table 2 and Appendix B provides a picture of what each of the study sites can be expected to support under conditions of average-to-poor precipitation. Maps of all 45 study sites are provided. In cases where no data were collected, or data were combined between two sites, a note on the map provides that explanation. During the period 2001-2003, we examined 44 out of 45 sites (land access was not possible at SDNWR/San Miguel Mountain, Site 23 although we were able to survey a nearby GE nest by helicopter). We documented a total of 15 raptor species and 539 raptor breeding territories (excluding the CR but including 78 stick nests, which we could not positively identify as to raptor species). Of the 539 raptor breeding territories, 96 were target species (all but the BE, SH, and FH, which do not, currently, breed in the MSCP area). Sites varied greatly in their ability to support breeding raptors. Some sites didn't support more than one or two territories, while, others, like the Ramona Grasslands, supported almost 90 territories. Four sites supported no breeding raptors (see those with note "NBR"), while one site (Ramona Grasslands) supported 9 raptor species, including three target species.

The RT was the most commonly documented nesting raptor species, with a total of 177 nests and/or territories located on 34 sites. The next most commonly documented raptor

TABLE 2. Number of Raptor Nests and/or Territories by Site (2001-2003)

SITE		SPECIES**																Stick	Target	Total	Notes	Site			
		AK	BE	BR	BO	CH	CR	FH	GE	GO	LO	NH	OS	PF	RS	RT	SO	SH	TV	WK	Nest	Spp.	Spp.		No.
1	Crestridge	1				1	2								3	2						1	9		1
2	Boden Canyon					2									2	2						2	6		2
3	Jamul Ranch					2	2			1					1	13				2	15	2	36		3
4	SDNWR*/Salt Works/Egger Ghio																					0	0	NBR	4
5	McGinty Mountain Complex					1									1	5						1	7		5
6	San Diego Bay NWR		1				1								1						2	0	5	Note 1	6
7	Lake Hodges	1	2	2	1			1	2						5	8			1		3	3	23		7
8	Penasquitos Lagoon																					0	0	Note 5	8
9	Torrey Pines						6									1						0	7	Note 5	9
10	Sycamore Canyon		1								3				1	1	1					0	7		10
11	Iron Mountain			2		4	1		1	1			1		11	13			1	2		5	37	Note 2	11
12	Otay Mountain						2		2						1	5					1	2	11		12
13	Marron Valley						2		1							6					10	1	19		13
14	Otay Lakes	1				2	2			1		2				4				1	4	4	17		14
15	SDNWR* Sweetwater Marsh											2				1						2	3	NBR	15
16	San Vicente								1				3			2			2			1	8		16
17	Sycuan Peak																					0	0	NBR	17
18	Point Loma													1		1						1	2		18
19	North Island				6								1		1	1					1	6	9		19
20	Miramar Reservoir					1							1			1						1	3		20
21	Mission Bay																					0	0	NBR	21
22	Brown Field Complex	1			4		1					1				5					1	5	13		22
23	SDNWR*/San Miguel Mountain								1													1	1	NSC	23
24	Mission Trails					1									1	2				1	1	1	6		24
25	Proctor Valley	3				1										3					1	1	8		25
26	San Diego River	1				3	1		1	1					3	9						4	19		26
27	Route 67 South/Iron Mtn #11																					0	0	Note 2	27
28	San Dieguito Lagoon											1				4				1		1	6		28
29	Route S-6																					0	0	Note 4	29
30	Grasslands/Route 67	10			1	1	1		1	6					25	41			1	3		3	90		30
31	Sloan Canyon						7		1						2	4				1	2	1	17		31
32	Rockwood Canyon					1	1		1						1	4						2	8		32
33	Penasquitos Canyon	3										2			9	4			1	6		9	37		33
34	Hollenbeck Canyon	4				1	4					2			2	4				1	4	3	22		34
35	Rock Mountain						1		1						1	2						1	5		35
36	San Pasqual	1		4		2	2			3					9	16			1	2	7	2	47		36
37	SDNWR*/Tijuana Slough	1										2										2	3		37
38	Route 94 (North and South)																					0	0	Note 3	38
39	Immenschuh					1															1	1	2		39
40	Los Montanas (North)														1	1					1	0	3		40

TABLE 2. Number of Raptor Nests and/or Territories by Site (2001-2003)

SITE		SPECIES**																			Stick Nest	Target		Total	Notes	Site No.
		AK	BE	BR	BO	CH	CR	FH	GE	GO	LO	NH	OS	PF	RS	RT	SO	SH	TV	WK		Spp.	Spp.			
41	Los Montanas (South)															2						0	2			41
42	Rancho San Diego (East)	1				1										3				1		1	1	11		42
43	Rancho San Diego (West)					2									1							2	2	11		43
44	Border Fields	1		2		6				1		13			2	1				2	12	19	40			44
45	Sweetwater Reservoir					5	3			2					1	5				1	2	5	19			45
Total		29	0	14	11	47	41	0	12	20	3	25	6	1	83	177	1	0	6	25	78	96		579		

* San Diego National Wildlife Refuge.
 NBR No breeding raptors observed.
 NSC No formal raptor surveys conducted (see notes on topo report maps).
 (1) Breeding raptors and ravens observed in residential areas to east of study area.
 (2) Data for Route 67 South (# 27) and Iron Mountain (#11) were combined. See Iron Mountain (#11).
 (3) The Route 94 transect overlaps other study sites. Data from this transect were assigned to other appropriate sites.
 (4) No data collected due to safety and access issues.
 (5) Data for Penasquitos Canyon (#8) combined with Torrey Pines (#9). See Torrey Pines (#9).

**Species:

AC	American Crow	CR	Common Raven	NH	Northern Harrier	SO	Screech Owl
AK	American Kestrel	FH	Ferruginous Hawk	OS	Osprey	SS	Sharp-shinned Hawk
BE	Bald Eagle	GE	Golden Eagle	PF	Peregrine Falcon	SH	Swainson's Hawk
BH	Black Hawk	GO	Great-horned Owl	PR	Prairie Falcon	TV	Turkey Vulture
BR	Barn Owl	HH	Harris' Hawk	RS	Red-shouldered Hawk	WK	White-tailed Kite
BO	Burrowing Owl	LO	Long-eared Owl	RT	Red-tailed Hawk		
CH	Cooper's Hawk	MR	Merlin				

Table 3. Number* of raptors observed during the winter (primarily January, February, and December) surveys--2001-2003.

SITE	SPECIES***																					Total Target Spp.	Total Raptors	Notes	Site No.	
	AK	BE	BR	BO	CH	CR	FH	GE	GO	LO	MR	NH	OS	PF	PR	RS	RT	SO	SS	SH	TV					WK
1					1	19										3	4				1		28	1		1
2					2			2								2	6				3		15	2		2
3	5					6						1				7						1	19	3		3
4	2				1	2	1			1	4	3	1			4					1	7	20	4		4
5						2										2	5					0	9	5		5
6	3					1	1				1	1	1	1								3	8	6		6
7	5	4			3	2		2	2		1	2	1	1		8	36				2	3	71	7		7
8																						0	0	8		Note 1
9						12								2			2					2	16	9		Note 1
10			2							6						2	2	2				0	14	10		10
11			4		8	2		1	2			2				22	18			2	4	9	65	11		Note 2
12	2					18		1			1					5						2	27	12		12
13	1				1	14										1	6			1	1	1	24	13		13
14	5				3	10					2	2	1	1		1	5			1		6	30	14		14
15	2				1	1				1	3	1				5					1	4	15	15		15
16																4					2	0	6	16		16
17																						0	0	17		Note 3
18	1				1	3								3			3					4	11	18		Note 4
19	2			3		6						2				3						3	16	19		Notes 3 & 5
20					2							2									2	2	8	20		20
21	2					2										2						0	6	21		21
22	4			3	1	8					4						7				2	8	29	22		22
23																						0	0	23		NWC
24	1				2	6										3	3			1	2	2	18	24		24
25	3				1	132								1		8						2	145	25		25
26	5				6	2			2		1	1				7	22				2	7	48	26		26
27																						0	0	27		Note 2
28											2						8				2	2	12	28		28
29	2																2					0	4	29		Note 4
30	7			2	1	3	9	3	6	1		1		1		4	12	1		40		16	91	30		
31						5		1								2	1					1	9	31		Note 3
32					2	2		2								6						4	12	32		32
33	6	4			14	2		4			4	2				18	8			2	12	22	76	33		33
34					1	13		2			3				1	3	5					6	35	34		34
35								3														3	3	35		35
36	11		7		2	6		2	6		1		1	1		16	57	1		3	8	6	121	36		36
37	3				1	4		1		1	2	1	1	1			4					5	18	37		37
38																						0	0	38		Note 6
39					1																	1	1	39		39
40																	3					0	3	40		40
41						4										3						0	7	41		41
42	2				3	6										4					1	3	16	42		42
43						3										1						0	4	43		43
44	8										6					1	13				3	6	31	44		44

Table 3. Number* of raptors observed during the winter (primarily January, February, and December) surveys--2001-2003.

45	Sweetwater Reservoir	9	2			3	38			2	1		1	1						1	1			64		45
Total		98	2	21	8	61	334	11	24	20	6	5	36	21	14	1	95	291	5		0	2	2	1155		

- * Numbers refer to maximum number of birds observed.
- *** San Diego National Wildlife Refuge.
- (1) Data for Penasquitos Lagoon (#8) and Torrey Pines (#9) combined. See Torrey Pines (#9).
- (2) Data for Route 67 South (# 27) and Iron Mountain (#11) were combined. See Iron Mountain (#11).
- (3) Includes March survey.
- (4) Two PFs were observed to the north of this site, near the S.D. Airport.
- (5) Seven widely-spaced active burrows suggested that there were at least seven B0s on this study site.
- (6) The Route 94 transect overlaps other study sites. Data from this transect were assigned to other appropriate sites.

***Species

AK American Kestrel	CR Common Raven	MR Merlin	RS Red-shouldered Hawk	TV Turkey Vulture
BE Bald Eagle	FH Ferruginous Hawk	NH Northern Harrier	RT Red-tailed Hawk	WK White-tailed Kite
BR Barn Owl	GE Golden Eagle	OS Osprey	SO Screech Owl	
BO Burrowing Owl	GO Great-horned Owl	PF Peregrine Falcon	SS Sharp-shinned Hawk	
CH Cooper's Hawk	LO Long-eared Owl	PR Prairie Falcon	SH Swainson's Hawk	

nests/territories were those of the RS with 83 and the CH with 47. The CR (a non-raptor, but a species that can have an impact on raptors) was fourth in frequency with 41 nests/territories. The next level of frequency was shared by AK (29), NH (25), WK (25), and GO (20). To a great extent, this frequency distribution is a function of site size, amount of appropriate habitat, and sometimes local conditions on the respective sites.

Of the eight project target species, nesting was documented for five—CH, NH, GE, BO, and, PF. CH nesting was observed at the highest number of study sites, with nests and/or territories documented at 21 sites (48 percent of the 44 sites surveyed). GE was observed nesting at 11 sites (25 percent); while NH was documented at only 8 sites (18 percent) with 13 of the 25 territories found at Border Fields. BO were found nesting at only 3 (7 percent) of the sites and PF at only 1 (0.23 percent) of the sites.

The CH nested, primarily, at those sites that contain healthy riparian habitat; however, this species has become somewhat of a generalist and also nests elsewhere (see Discussion). GEs limited their nesting to sites with sheer cliffs away from human activity and close to nearby grasslands for hunting (see below). The NH and the PF were concentrated primarily along the coast. However, one PF pair attempted nesting in downtown El Cajon and a few scattered NHs were observed nesting at more inland sites. NHs nested in mostly coastal marsh and open field habitat; although we have observed NHs nesting in ruderal areas (J. Oakley, pers. comm.). PFs utilized mostly man-made structures, along the coast, with nearby sources of shorebirds and other prey. Most of BOs, located on the study sites, were found in sandy soil with low grass and open areas (see also WRI 2003, Lincer and Bloom 2003, in prep.). BE and FH winter within the MSCP but are not known to breed there. SHs only pass through during migration, are infrequently documented, and when they are, they are usually not within the MSCP. Some of the SH migrants seen are in the Ramona area and large numbers (over 5,200) have been recently documented migrating along the desert front to the east of the MSCP during the spring (Unitt 2004).

Based on the number of *all* nesting raptor species (plus the CR) and all the sites surveyed during the 2001-2003 breeding seasons, Site 30 (Ramona Grasslands/Route 67) contained the most nests/territories of all sites surveyed. Eighty-nine nests/territories were documented, representing nine raptor species (and 1 CR). The site to show the next highest number of territories was San Pasqual (Site 36) with 47 territories (including two CR and 7 unidentified stick nests that were not duplications of known territories). Border Fields State Park (Site 44) showed the next highest number of territories with 40 territories (including 12 non-duplicative unidentified stick nests).

Site 44 (Border Fields) contained the highest number of *target* species nests/territories of all sites surveyed (19). Penasquitos Canyon (Site 33) supported 9 target species territories while North Island (Site 19) supported 6 and Brown Field Complex (Site 22) and Iron Mountain (Site 11) tied, with both supporting 5 nests of the target raptor species.

Wintering Raptors

A total of 20 raptor species were documented on our study sites during the winter months (January, February, and December) of 2001-2003 (Table 3). Of course, at San Diego's latitude, a number of the resident breeders are actively nesting while many of the wintering birds are still on site. All target raptors, but the SH, were documented during the winter observation period (December-February). Numbers ranged from 0 to 22 individual target raptors per site for a total of 154 individuals for all study sites. Comparable numbers for all raptors (plus the Common Raven) were 0 to 145 as a range. A total of 1,153 wintering individuals were documented (or 819, without the ravens).

The CR was, clearly, the most common wintering bird of those surveyed for. The three most commonly documented wintering raptors were the RT, AK, and RS, with totals of 291, 98, and 95, respectively. Of those sites surveyed in this study, the following held the highest number of wintering individuals (raptors and ravens): Site 25 (Proctor Valley) – 145, Site 36 (San Pasqual) – 121, Site 30 (Ramona Grasslands) – 91 (which included 9-16 FHs; with 20 documented in 2005), Site 33 (Penasquitos Canyon) – 76, and Site 7 (Lake Hodges) – 71.

DISCUSSION

Weather as a Factor

In reviewing any body of data, it is important to consider how typical the sampling period was. So just how “typical” were 2001 through 2003? Drought plays a significant factor in the density and reproductive success of raptors and other predators. During the El Nino of 1998/99, NHs were breeding in areas where they have not bred since and in lower numbers in other locations. The demonstrable impacts of drought on GEs and Prairie Falcons, throughout southern California, were presented by Bittner et al. (2003). This study was conducted during the worst drought for San Diego in 160 years. This should be noted for future researchers.

Management and Enforcement Issues

Table 4 is a summary of management and enforcement issues by site. Clearly, some study sites are substantially impacted, either directly or indirectly, by human activities. Some sites are currently without major impacts. Unfortunately, many of the more diverse and potentially productive sites are the same ones that are experiencing multiple management and enforcement challenges. Of those that are obviously impacted, the following activities are the most common: humans walking or hiking (36 out of 45 sites or 80%) and pets, primarily dogs being allowed to run free, (26 out of 45 sites or 57 %).

Table 4. Management Enforcement Issues Identified by Raptor Study Site

Site No.	Name	Humans Walking/Hiking	Rock Climbing	Off-road Vehicle Use	Pets	Disking, etc. Agricultural Activities	Rodent/Ground Squirrel Poisoning	Construction/Development	Newly-developed Access Road(s)	Other
1	Crestridge	X								
2	Boden Canyon	X		X	X				X	6
3	Jamul Ranch									6?
4	SDNWR*/Salt Works	X								
5	McGinty Mountain Complex			X	X					
6	San Diego Bay NWR	X			X					
7	Lake Hodges	X	X	X	X			X	X	6
8	Penasquitos Lagoon	X			X					
9	Torrey Pines	X			X					7
10	Sycamore Canyon	X		X	X				X	
11	Iron Mountain	X	X	X	X				X	
12	Otay Mountain	?	X	X						1
13	Marron Valley	X	X	X	X					1
14	Otay Lakes	X			?				X	8
15	SDNWR* Sweetwater Marsh	X		X	X					
16	San Vicente	X	X		X				X	
17	Sycuan Peak									
18	Point Loma	X								
19	North Island	X								2
20	Miramar Reservoir	X						X		
21	Mission Bay	X		X	X			X		
22	Brown Field Complex	X		X	X			X		1,3,4
23	SDNWR*/San Miguel Mountain	X		X	X				X	
24	Mission Trails	X	X		X					
25	Proctor Valley	X		X	X		X	X		
26	San Diego River	X	X		X		X			7
27	Route 67 South	X		X				X	X	
28	San Dieguito Lagoon	X				X		X		
29	Route S-6	X						X		
30	Grasslands/Route 67	X	X		X	X	X	X	X	
31	Sloan Canyon	X			X					
32	Rockwood Canyon	X	X					X		
33	Penasquitos Canyon	X		X	X				X	
34	Hollenbeck Canyon									6
35	Rock Mountain	X	X							5
36	San Pasqual	X		X	X	X	X	X		5
37	SDNWR*Tijuana Slough	X		X	X	X	?			

Table 4. Management Enforcement Issues Identified by Raptor Study Site

38	Route 94 (North and South)									
39	Immenschuh									
40	Los Montanas (North)									
41	Los Montanas (South)									
42	Rancho San Diego (East)	X			X					
43	Rancho San Diego (West)	X			X					
44	Border Fields	X			X					1
45	Sweetwater Reservoir									

*San Diego National Wildlife Refuge

- (1) Border Patrol and illegal alien activities.
- (2) Conflicts with Navy goals and endangered species recovery program.
- (3) Potential conflict with future Navy goals at Satellite Surveillance Station.
- (4) Heavy predation by Coyotes and Barn owls.
- (5) Future threats from proposed trail construction and associated access to rock climbers, ORVs, etc. activities.
- (6) Shooting (legal and illegal).
- (7) Paragliding.
- (8) Cattle grazing.

Management Conflicts

The following are observed management conflicts, which lead to our recommended management and research (see Recommendations):

- As indicated above, human uses [rock-climbing, hiking, jogging, walking dogs (often without leashes), vehicular use, etc.] impact the normal behavior of raptors (and other wildlife).
- In many cases, the size of protected parcels is substantially smaller than that required by a raptor's functional territory, including foraging areas.
- The public/political pressure to create new trails into MSCP preserve lands provides a path for, and encourages, increased disturbance to raptors (and other wildlife).
- The public/political perception that MSCP preserve lands have been created primarily for active, and in some cases, consumptive, recreation, sets up an obvious conflict for managing raptors (and other wildlife).
- The constraint of using fire as a management tool in proximity to human habitation limits habitat management tools.
- Inadequate funding to both acquire important lands and properly manage MSCP lands which are acquired.

Raptor Monitoring

The following is a reiteration of considerations, regarding the MSCP Long-term Raptor Monitoring Program, that were presented previously (WRI 2004) and discussed elsewhere (Lincer and Bittner 2002; Lincer et al. 2003). For further reading, relevant issues are proposed and discussed by Oakley, Thomas, and Fancy (2003).

Sample Design

The ideal sample design should be:

1. Representative of the study area and the issues at hand. (e.g., habitat loss, disturbance, etc.) ;
2. Representative of the habitats of interest and the seasons during which those habitat support the monitored species (e.g., the MSCP not only provides important breeding habitat for numerous raptor but it is also a significant habitat for several wintering raptors, including some that are considered target raptors, like the PF, BE, FH, and BO);
3. Inclusive of all focus species or represent them in some functional way;
4. Sensitive to the objectives of the MSCP monitoring requirements;
5. Sensitive to logistics;
6. Statistically appropriate (which may be compromised by above logistics);
7. Able to predict, and take into consideration, *detectability* (i.e., how counts relate to the actual number of raptors in the sampled area; one approach is to use a "double count" approach). This objective may also be compromised by above logistics.

Questions to be Answered and Objectives to be Met

How will the data be used by the various management entities? When do they need what? An example of a clear monitoring objective would be, "Be able to detect a 25% change in population (individual species or overall raptor group?), in each chosen habitat, in 10 years." This is the approach that is being attempted by NARMS (North American Monitoring Strategy) but some of the best raptor monitoring minds are having a serious challenge addressing these objectives. It is entirely possible that we won't have enough observations for some species to detect a significant change in a timely manner.

Possible Monitoring Approaches

Levels of effort and *agency commitment* are, integrally tied. For instance, the MSCP program could adopt a:

1. Highly rigorous, scientific approach that would be costly but could withstand the most challenging statistical/legal tests, or
2. More practical, less expensive approach that would be more likely to be funded, and therefore carried out, but would stand the chance of being successfully, challenged at some time in the future.

As to *which, and how many, species* should be involved, the program could use a:

1. Multiple species approach, using selective target species only,
2. Multiple species approach, using selective target species, but recording all raptors (and ravens) observed,
3. Single species approach, using a keystone species, like the Golden Eagle or
4. Combination of the above.

Target Species and Other Multiple Species Approaches

A monitoring approach that focuses on one or more so-called "target" species has the appeal of apparent simplicity and the implication that these target species will, somehow, reflect a broader suite of species and be sensitive to whatever perturbations are experienced. Having surveyed raptors for many years, it is apparent that each species often responds to similar impacts differently. Although GOs and RTs might show similar population changes in response to small mammal population changes, and most raptors will show some response to a record-breaking drought, such as we have just experienced, there are likely more differences than similarities between species. Those differences are not only in *degree* but also in *direction*. For instance, GEs and PRs responded to the recent drought to different degrees (Bittner et al. 2003), with the PR being less impacted by presumed small mammal population decreases because it takes a wider range of prey species than the GE, which is heavily dependent on jackrabbit and ground squirrel populations. In addition, some raptors (e.g., GE) are far more negatively responsive to human activity than others (e.g., AKs, RTs, RSs, and some CHs). There are also differences in response, both within and between species, depending on the time of year (e.g., during the

breeding season vs. the wintering season) and where a disturbance occurs (e.g., on the hunting grounds or within the nest territory).

Regarding raptors responding in a different direction, one only needs to recognize that many different raptors require different habitats and, although not many species will persist if usable habitat is replaced with a development (although some CHs and RSs may defy this simplification), a conversion from one habitat/land use to another will often affect different species in different ways. For instance, if an extensive riparian habitat were to be replaced by an agricultural land use, and some hedge rows were to be left/created, we could expect that there would be a decrease in RSs, CHs, and several owl species. But, at the same time, there would likely be an increase in AKs, RTs, and perhaps WKs.

The point to the above exercise is that, if an arbitrary few species are chosen as “target” species, and the other raptors are not monitored, there will be a good chance that only some kinds of impacts will be reflected in the population trends of those raptors monitored. In our opinion, the MSCP Long-term Monitoring Program should include a broad-based approach, which documents all raptors observed and uses observed changes/trends to identify appropriate adaptive management strategies.

Single Species Monitoring Approach

Having sung the praises of a multiple raptor species approach (above), there is at least one raptor species in the western United States that has the ability to reflect regional trends in environmental health. This is the Golden Eagle. The attraction of using the GE, as a regional “miner’s canary,” is that (1) it requires a reasonably large and intact territory, and (2) there exists, in San Diego County, a unique and relevant historical regional database for this species. The Wildlife Research Institute has a long history of investigating the historical presence of GE in southern California, which includes the MSCP and environs (Bittner and Oakley 1999; WRI 2005). This collection of records has been compiled to reflect past documentation of GE pairs, their nesting success, hunting territories, and numbers of egg and /or young. The WRI database includes both active and extirpated territories beginning with records as early as 1864. WRI became involved in 1987 with the start of the San Diego GE Project (see Discussion in WRI 2005). *This project, in total, represents the longest such study of any eagle population in the Western Hemisphere, and is the second to longest in the world, next to one study in Switzerland.*

Providing this historical information, in conjunction with current trend data, is critical to managing the GE into the future. Only if we understand the extant population (within the context of the historical variation) can we properly evaluate the population and meet the needs of the species under current and future changing environmental and land-use conditions. If this is accomplished, it will reflect the success of the MSCP program.

RECOMMENDATIONS

Long-term MSCP Raptor Monitoring

Long-term monitoring is recommended under three categories: (1) Breeding Season, (2) Winter Season, and (3) Single Species Monitoring Program.

Breeding Season Monitoring Program

Twelve areas are recommended for breeding season portion of a Long-term Raptor Monitoring Program (Figure 2 and Table 5). Each Raptor Monitoring Area (RMA) consists of one to four of the individual raptor study sites that were surveyed during the period 2001-2003, the analysis of which led up to these recommendations. The choices of RMAs were based on a number of biological parameters (e.g., raptor diversity and population parameters, known history of raptor use), logistical considerations (how a monitor would move efficiently through a monitoring area), and a reasonable geographic coverage of the MSCP study area (see Methods). The Breeding Season Monitoring Program should, initially, be conducted every two years and encompass all 12 RMAs each time (i.e., don't conduct different portions of the total every other year). After a maximum of 5 monitoring events (i.e., 10 years), a statistical trend analysis should be conducted to determine if the frequency of every two years is adequate or, perhaps, unnecessarily frequent. Depending on the data, it may make sense to conduct this analysis earlier.

Raptor monitoring for the Breeding Season Monitoring Program should follow the protocol provided in Appendix C. This monitoring should be conducted by qualified raptor biologists with several years of relevant regional experience with the raptors found in the MSCP and proper training in the specific techniques necessary to conduct this monitoring.

Thanks to a grant from the San Diego Foundation, for post- (2003) fire studies, WRI was able to test this monitoring program on seven RMAs, representing varying degrees of being burned:

- B. Ramona Grasslands (Control Area)
- D. Iron Mountain (Burned)
- E. San Diego River (Burned)
- F. Sloan Canyon (Burned)
- H. Proctor Valley (Partially Burned)
- I. Rancho Jamul (Partially Burned)
- L. Otay Mountain (Burned)

The results of this monitoring effort were reported to the San Diego Natural History Museum (Lincer 2005).

Winter Season Monitoring Program

Because (1) the MSCP provides important wintering grounds for many raptors (some of which are *only* here during the winter), (2) coastal portions of the MSCP are not captured by the above breeding season monitoring approach, and (3) it is important to track at least three raptor species, that are primarily coastal in the MSCP, which have proven to be ideal bioindicators (PF, NH, and Osprey), we recommend conducting a winter monitoring program that focuses on the coastal portions of the MSCP (Figure 3). This, like the Breeding Season Monitoring program, should be conducted every two years (alternating years with the breeding season monitoring would be acceptable). After a maximum of 5 monitoring events (i.e., 10 years), a statistical trend analysis

should be conducted to determine if the frequency of every two years is adequate or, perhaps, unnecessarily frequent. Depending on the data, it may make sense to conduct this analysis earlier.

TABLE 5. Proposed MSCP Areas for Long-term Raptor Monitoring (Breeding Season)

<u>Area</u>	<u>Name</u>	<u>Study Sites* (original number(s))</u>
A	San Pasqual	San Pasqual (36), Lk. Hodges (7), Boden Cyn. (2), Rockwood (32)
B	Ramona Grasslands	Ramona Grasslands (30)
C	Penasquitos Canyon	Penasquitos Canyon (33)
D	Iron Mountain Complex	Iron Mountain**(11), San Vicente (16), Route 67 (27)
E	San Diego River	San Diego River (26)
F	Sloan Canyon	Sloan Canyon (31), McGinty Mtn. North (5), Sycuan Mtn. North (17)
G	Sweetwater River	Sweetwater Reservoir (45), Rcho. S.D. East (42), Rcho. S.D. West (43), San Miguel Mtn. North (23)
H	Proctor Valley	Proctor Valley (25), San Miguel Mtn. South (23), Upper Otay Lk.(14)
I	Rancho Jamul	Jamul Ranch (3), Hollenbeck Canyon (34)
J	Border Fields	Border Fields (44), Tijuana River (part)
K	Brown Field Complex	Brown Field (22), Otay River, Spring Cyn. (part), Dennery Cyn. (part)
L	Otay Mountain	Otay Mountain (12), Marron Valley (13), Lower Otay Lake (14)

* In some cases, only a portion of a study site is included because of access, visibility, or some other reason (see detailed maps, Appendix C, for details).

** Including Monte Vista Ranch.

Raptor monitoring for the Winter Season Monitoring Program should follow the protocol provided in Appendix C. This monitoring should be conducted from a vehicle, following the route depicted by Figure 3, and be conducted by qualified raptor biologists with several years of relevant regional experience with the raptors found in the MSCP.

Single Species Program

For the reasons covered in the Discussion section, we recommend that the GE (breeding season only) be used for the Single Species Program. Because of the dynamic nature of the GE pairs and the use of their territory, including their primary foraging area, these surveys should be conducted *every year* as they have been by WRI's biologists for the last 16 years. GE monitoring should follow the protocol that has been used for the San Diego GE Study for the last 16 years (Bittner and Oakley 1999, WRI 2005). WRI (2005) provides the details of both the breeding history of the GEs in the MSCP and recommendations on monitoring and future research. WRI (2005) is provided as a separate report for the protection and proper management of the GE. As an overview, observations must begin in December and go through June of each year. GEs begin courtship and nest building in December and January. They lay eggs in February and early March, hatch young in late March and April and fledge young in May and June. Therefore, it is essential that monitoring biologists be in the field for critical portions of the entire season (six months) to obtain all the data needed to monitor the GE population properly.

Aerial surveys have been a crucial part of the current study providing new insight into once-difficult areas to investigate potential territories. Patagial tags (and soon radio transmitters) placed on the GE's wings are now also an integral part of the eagle tracking process. Territory

Fig. 2. Prop'd RMAs (breeding)

Contact WRI for maps

integrity is fairly well documented in the San Diego MSCP and is being refined. See MSCP (2005) for more details.

Consistency in Monitoring

If data to be collected for this, or *any* monitoring program, are to have any utility in showing trends, they must be collected in a consistent fashion. As discussed above, the areas and routes to be monitored should be monitored frequently enough to reveal a complete picture of what is breeding and wintering on those respective areas and routes but these data are only a *sampling* of the entire MSCP. Therefore, it is extremely important that monitoring protocol is consistent both between sites/areas and over time (i.e., between years). To do this, a significant effort will have to go into selecting qualified raptor biologists, making sure that they are familiar with the required protocol, geography and species, and ensuring consistency between sites and years.

Other Recommendations

Management Needs and Enhancement Opportunities

- Restriction of inappropriate human activities where they are in conflict with, especially nesting, raptors.
- Apply the lessons learned in the development of the MSCP to the North and East County MSCPs and other HCPs.
- Develop a comprehensive management plan for the dwindling Burrowing Owl population within the MSCP.
- Selectively install artificial burrows, for BOs, and nest boxes for AKs, BRs, and Screech Owls (SOs). Keep in mind that BRs are an effective predator on not only small mammals but also medium size raptors, like the BO.
- Consider the use of grazing and/or fire as appropriate management tools to maintain grasslands, maintain/improve biological diversity, and manage fire fuel loading.

Recommended Research

- Transmitter study to better define the use of MSCP lands by GEs (initial studies in progress).
- Investigate the feasibility of reintroducing SHs into historical sites within the MSCP.
- Investigate the most efficient approaches to captive rearing and hacking BOs into appropriate habitat (either as is or as it can be modified and managed) within the MSCP.
- In order to prioritize the management of raptors that winter within the MSCP, but breed elsewhere (e.g., FH, MR, OS, BE, and some of the WK), determine the natal areas for these birds. If the natal areas have substantial threats, then no amount of MSCP management will have substantial positive impact.
- Document the growing OS population and determine emigration and immigration.
- Document the presence of, and habitat use by, crepuscular (BO) and nocturnal raptors (e.g., BR, SO, GO, Long-eared Owl).
- Document the recovery of raptors after the November 2003 fires and apply findings to future management strategies.

Fig. 3. Prop'd Winter Monit. Areas.

Contact WRI for Maps

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APPENDIX A

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APPENDIX B

BREEDING SEASON RAPTOR NESTS AND TERRITORIES BY SITE (2001-2003)

The following pages reflect raptor breeding territories which were typical of the below study sites for the period 2001-2003. To facilitate the reader's access to the following topographic maps, they are listed below alphabetically and by site number.

<u>Number</u>	<u>Name</u>	<u>Name</u>	<u>Number</u>
1	Crestridge	Boden Canyon	2
2	Boden Canyon	Border Fields	44
3	Jamul Ranch	Brown Field Complex	22
4	SDNWR*/Salt Works/Egger Ghio	Crestridge	1
5	McGinty Mountain Complex	Grasslands/Route 67	30
6	San Diego Bay NWR (winter only)	Hollenbeck Canyon	34
7	Lake Hodges	Immenschuh	39
8	Penasquitos Lagoon	Iron Mountain	11
9	Torrey Pines	Jamul Ranch	3
10	Sycamore Canyon	Lake Hodges	7
11	Iron Mountain	Los Montanas (North)	40
12	Otay Mountain	Los Montanas (South)	41
13	Marron Valley	Marron Valley	13
14	Otay Lakes	McGinty Mountain Complex	5
15	SDNWR* Sweetwater Marsh	Miramar Reservoir	20
16	San Vicente	Mission Bay	21
17	Sycuan Peak	Mission Trails	24
18	Point Loma	North Island	19
19	North Island	Otay Lakes	14
20	Miramar Reservoir	Otay Mountain	12
21	Mission Bay	Penasquitos Canyon	33
22	Brown Field Complex	Penasquitos Lagoon	8
23	SDNWR*/San Miguel Mountain	Point Loma	18
24	Mission Trails	Proctor Valley	25
25	Proctor Valley	Rancho San Diego (East)	42
26	San Diego River	Rancho San Diego (West)	43
27	Route 67 South	Rock Mountain	35
28	San Dieguito Lagoon	Rockwood Canyon	32
29	Route S-6 (deleted/safety issue)	Route 67 South	27
30	Grasslands/Route 67	Route 94 (North and South)	38
31	Sloan Canyon	Route S-6 (deleted/safety issue)	29
32	Rockwood Canyon	San Diego Bay NWR (winter only)	6
33	Penasquitos Canyon	San Diego River	26
34	Hollenbeck Canyon	San Dieguito Lagoon	28
35	Rock Mountain	San Pasqual	36
36	San Pasqual	San Vicente	16
37	SDNWR*Tijuana Slough	SDNWR* Sweetwater Marsh	15
38	Route 94 (North and South)	SDNWR*/Salt Works/Egger Ghio	4
39	Immenschuh	SDNWR*/San Miguel Mountain	23
40	Los Montanas (North)	SDNWR*Tijuana Slough	37
41	Los Montanas (South)	Sloan Canyon	31
42	Rancho San Diego (East)	Sweetwater Reservoir	45
43	Rancho San Diego (West)	Sycamore Canyon	10
44	Border Fields	Sycuan Peak	17
45	Sweetwater Reservoir	Torrey Pines	9

*San Diego National Wildlife Refuge

LEGEND

Symbols

Center of raptor/corvid territory or assumed or documented nest site.

Note: Above symbol without an acronym following it indicates that a stick nest was documented but species was not determinable. If species was known for the nest or territory, the above symbol is followed by the appropriate acronym (see below).

Acronyms for Raptor and Corvid Species

AC	American crow
AK	American kestrel
BE*	BALD EAGLE
BH	Black hawk
BR	Barn owl
BO*	BURROWING OWL
CH*	COOPER'S HAWK
CR	Common raven
FH*	FERRUGINOUS HAWK
GE*	GOLDEN EAGLE
GO	Great-horned owl
HH	Harris' hawk
LO	Long-eared owl
MR	Merlin
NH*	NORTHERN HARRIER
OS	Osprey
PF*	PEREGRINE FALCON
PR	Prairie falcon
RS	Red-shouldered hawk
RT	Red-tailed hawk
SE	Short-eared owl
SO	Screech owl
SS	Sharp-shinned hawk
SH*	SWAINSON'S HAWK
TV	Turkey vulture
UA	Unidentifiable accipiter
UB	Unidentifiable buteo
UF	Unidentifiable falcon
UR	Unidentifiable raptor
WK	White-tailed kite
WH	White-tailed hawk
ZH	Zone-tailed hawk

* MSCP target species.

APPENDIX C

LONG -TERM RAPTOR MONITORING PROTOCOL

BACKGROUND

The Multiple Species Conservation Program (MSCP) is a comprehensive, long-term habitat conservation plan that addresses the needs of multiple species and the preservation of natural vegetation in San Diego County (County of San Diego 1997). The size and configuration of the preserve network is continually evolving but it may ultimately encompass approximately 172,000 acres. In order to determine if the MSCP or any management area, for that matter, is functioning correctly, a meaningful monitoring plan must be in place. A vast area, such as the MSCP, cannot be comprehensively monitored for any but a few species with very limited and specific habitat requirements. Raptor species will, therefore, be monitored using a reproducible sampling approach. Details of this approach are described below after reminding the reader of the ultimate monitoring objectives.

OBJECTIVES

The overall goal of the MSCP monitoring is to detect changes in habitat quality and population trends in those habitats and species covered by the MSCP (Ogden 1996). Specific objectives, as they relate to raptors, are as follows:

1. Document the protection of target species as specified in subarea plans and implementing agreements.
2. Document changes in preserved populations of covered species.
3. Describe new biological data collected.
4. Evaluate impacts of land uses and construction activities in and adjacent to the preserve.
5. Evaluate management activities and identify enforcement difficulties.

The purpose of this document is to provide guidance for consistency in the approach to surveying for raptors *during the breeding season and during the wintering period*. The below protocol is generic in nature but site-specific details, as to route, viewshed locations, and other important site features, are provided for each Raptor Monitoring Area (RMA) in Appendix C-1.

APPROACH

The following provides methodological details for the professional, with adequate raptor expertise, to conduct the breeding season and wintering period raptor monitoring in a consistent manner. The ability to detect trends (e.g., in raptor numbers, distribution, diversity, etc.) will be extremely important in order that adaptive management decisions be made in a timely manner. If trend analyses are to be interpretable, it is essential that the same locations within the preserve be monitored in a consistent manner. This would best be accomplished if the same individual or team monitored all locations, for all surveys.

ACRONYMS AND DEFINITIONS

Acronyms and definitions are attached (Appendix C-2). Use them consistently in order that there be continuity and clarity in all observations and record keeping.

SPECIES

Although all raptor species will be noted, there are eight MSCP, so-called “target,” raptor species: Bald Eagle (BE), Burrowing Owl (BO), Cooper’s Hawk (CH), Ferruginous Hawk (FH), Golden Eagle (GE), Northern Harrier (NH), American Peregrine Falcon (PF), and the Swainson’s Hawk (SH). Although you will not, necessarily, be searching for the BO at the most desirable time of day (early morning/early evening), any observations of BO or any other raptor species should be documented. Raptors will be the focus of the surveys but any observed sensitive species (regardless of taxa), interesting road kill, unusual biological observation, breeding colony, bird roost site, or other unique resource should also be noted on the WRI “Field Datasheet” (Appendix C-3).

TIMING AND FREQUENCY OF SURVEYS

Although it is common for ornithologists to identify a specific time of year as the “breeding season,” it is not possible to specify a timeframe, for our local raptors, that does not overlap with what is considered the wintering period. Because of the latitude of the MSCP, raptors are not restricted to a brief portion of the spring within which to breed. Many of our local raptors start breeding while other wintering and migrating raptors are still in the MSCP study area and environs. Therefore, the time of year that we call the “breeding season” could span December through August but varies considerably by species. Some GEs, for instance, can start nest building as early as December and still have nestlings in that nest as late as June. BOs, on the other hand, can start laying eggs in early April but fledge some young as late as August.

EQUIPMENT/SUPPLIES

Field vehicles should have 4WD capability if terrain requires. Binoculars, a camera, and a spotting scope of sufficient power for raptor observations are required. A magnification of 10X for binoculars and a range of approximately 20-60X for scopes are recommended. A cell phone may be very helpful in some locations, as could a set of “walkie-talkies” if more than one investigator will be in the field at the same time. Bring these survey guidelines, a copy of any authorization letters from resource agencies, any windshield placards (that indicates that you are under contract to conduct these surveys), local and project-generated site maps, and an adequate supply of “Transect Data Sheets” (Appendix C-3). To this, add your standard field equipment and supplies (field guides, hat, water, snacks, etc.). Although observers should be thoroughly familiar with all the local raptors, field guides that should be helpful include the Peterson guide, *Hawks* (Clark and Wheeler 1987) and the accompanying photographic guide (Wheeler and Clark 1999).

WEATHER

Monitoring should be conducted only during certain desirable weather conditions to maximize chances of documenting raptors. Inclement weather (rain, fog, winds greater than 20 mph, etc.) should be avoided. Occasional drizzle and winds up to 20 mph will not normally affect most raptor behavior. Observation in cold or wet weather should be done very carefully or completely discouraged. If an incubating bird is accidentally flushed during surveys, total nest failure could result for that season.

TIME OF DAY

The time of day, during which observations are made, is more important during the breeding season surveys than for the winter surveys (for most raptor species). Monitoring should take place from dawn through 1200, although professional experience may allow for some flexibility. Although BOs are not, necessarily, most active during this timeframe, you may note them and they should be documented as indicated below, as you would any raptor species. Since this is a crepuscular species, however, schedule sites that may support BOs for the early morning and/or early evening, whenever possible, to maximize chances of seeing this crepuscular species.

TWO TYPES OF OBSERVATIONS

Observations will be made two ways: (1) in vehicles, along established routes, and (2) at designated viewshed (i.e., observation) points. In addition, all reliable reports provided by interested individuals and cooperators will be verified and included in the data set but noted as “personal communications” with the appropriate documentation.

Vehicular Transects

Many of the breeding season raptor observations, and all those for the winter period, will be conducted from a vehicle. Therefore, vehicle speed will be an important variable. Speed will vary between road transects, depending on the road conditions, including traffic, and weather. That speed, however, should be consistent (year-to-year) for a particular transect in order that meaningful data comparisons can be made over time. Speed on a busy highway will have to be adequate to safely keep up with traffic. Some highway transects, that were deemed too dangerous, were removed from consideration. On a backcountry road, however, 10 mph may be the right speed. Safety should be the highest priority, and for that reason, an assistant to the driver is recommended to make observations and take notes, especially on busy roads.

Point/View shed Observations

Observation points have been established along some vehicle routes and at other desirable view shed locations for breeding season monitoring (see Appendix C-1). These will be especially important for riparian areas and inaccessible mountainous, and other, areas, where limited vehicle access prevents a reasonable survey of a RMA. At observation points along vehicle routes, a minimum of 10 minutes of actual observation is required. This means allowing whatever time is necessary to stop the vehicle in a safe, repeatable location, get out of the vehicle, and set up equipment (spotting scope, etc.) before starting the formal ten-minute observation (i.e., watching *and* listening). In situations where the observer is driving *through* the relevant habitat, a 5-minute observation period may be adequate. At some viewshed locations (like the top of a mountain), the observation time will be longer (perhaps 30 minutes). The most important issue here is that, once a viewing time period has been established for a particular RMA, it is maintained for consistency each year.

WHAT TO NOTE

All relevant data must be documented (see Transect Data Sheet, Appendix C-3). Sightings for *all* raptors will be documented. Note specific location of the raptor species *the first time it is observed* on each day of observation. Note age, sex, and any unusual plumage (if relevant) and

describe location(s) of any band(s) (metal right or metal left and sequence and numbers of any color bands), transmitter, or patagial wing markers. Avoid duplicate counts by noting unique characteristics of an individual and, when a bird is moving, its direction and relative speed. Record courtship and nesting behavior. If a nest is observed during the “winter” surveys, note its location on the topo map, what species of tree its in, height, size of nest, composition, and whether you consider it active. Indicate the basis for assumed activity (for instance, presence of an adult or pair near the nest, young, recent whitewash or greenery in /around nest).

CONTROL NUMBERING

Each control number for a study site and day of observation will be alphanumeric. For each species observed, the control number will start with the acronym for that species (see Appendix C-2) and be followed by “01.” The following control numbers, for that species, will end with 02, 03, etc., in the sequence in which the observations take place. This number is entered on the field data sheet (with all of its associated observations) and on the topo survey map, on which is always placed the survey date and the name(s) of the biologist(s). For instance, if the first observation of the day, at Mission Trails Regional Park, is a RT (Red-tailed Hawk), the control number will be “RT01.” The second RT will receive the control number “RT02.” If the next observation were a Cooper’s Hawk, it would be “CH01.” It will simplify records if each Transect Data Sheet and topo map is only used for one day’s observation at each site. However, there may be situations (such as when it takes more than one day to adequately survey a site or when it may lead to duplication or confusion later) when it makes sense to enter more than one day’s information on the same data sheet/map. It may also be beneficial to have all the breeding data on one map which keeps the picture in front of the observer at all times. This allows the observer to see gaps for certain species and explore areas not previously covered. The most important objective is to make sure the record is clear as to the date of each observation/set of observations and the name of the investigator so that clarification can be sought, if necessary.

Raptor, and other, nests are often less visible later in the breeding season, when deciduous trees have regained their foliage. However, note any stick nests in the area as “SN” followed by the appropriate observation number. Indicate on the data sheet if you know or suspect what species it belongs to and why. When summarizing yearly data, it will be important to determine which nests are alternate nests of the same pair and which represent additional pairs/territories. Do not get close enough to potentially disturb any nests, without approval from the Project Manager (PM) and Management Unit administrator.

Keep careful track of miles driven and times spent during vehicle transects and point location observations. Deduct any miles/time not spent on monitoring. These details are very important in order to allow data to be normalized over both time and distance to properly analyze for trends. There may be situations when you will not be able to track mileage or the miles you track are complicated by circling back through a study area to recheck a nest to confirm nesting, etc. Just keep good records that can be interpreted by someone else.

ENFORCEMENT/MANAGEMENT ISSUES

Note any enforcement or management problems or opportunities. Suggest corrective action or adaptive management, as appropriate, to the PM. Report any significant enforcement problems to the PM as soon as possible, but no later than within 24 hours of the observation.

RECORDS MANAGEMENT

Management of records is extremely important. Two-hole punched field forms and computer-generated project topo maps must be kept in Study Site folders (in a hard plastic or other secure file box provided) unless being copied. Field forms and topo maps must be attached to the inside of the Study Site folders using the two-hole clips at the end of each field day. Unless other provisions are made, field record copying should be done no less frequently than once a week, during the active field season, with copies placed in the appropriate administration project file for security.

THE SURVEYS

Breeding Season

In some management units, where a fulltime knowledgeable biologist is on staff, daily observations may be made, thereby providing greater potential for trend detection. However, the objective of these guidelines is to conduct up to 6 surveys at each of 12 RMAs (Figure C-1) for the breeding season raptor monitoring, where the assemblage of species dictates the actual number of replicates. Many stick nests will be located during the winter when the deciduous trees have lost their leaves. The next best opportunity to survey will often be early in the breeding season (December through April) when the adult raptors are establishing their territories and courting. Note that each species has a chronology for these behaviors. Some (like the GE, RT, and RS) will start breeding-related behaviors in December or January, while others (like the CH) may not display until April. At this time, they are obvious and concentrating their activities around the likely, and alternative, nest sites. In order to adequately characterize the raptor species present throughout the breeding season, the initial surveys at each site should be separated by 10-14 days, if possible. Subsequent surveys should be scheduled based on the raptor species present and where they are in their reproductive cycle. There will be a period, during which one of the adults will be incubating eggs or sheltering young, while the other adult is off hunting. During this time, it will be difficult to document many raptors and fieldwork may not be the best use of your time for that RMA. The next logical time to concentrate on conducting breeding season surveys will be when the young have fledged but are still dependent on the adults for food. At this time, there is a lot of activity and an increased chance of spotting a family unit because of the increased number of individuals per territory and, in some cases, the young will call attention to themselves by begging and/or calling to the parents.

The following times are recommended for the (breeding season) Raptor Monitoring Program:

- Late-December
- Mid-January
- Mid-February
- March
- Mid-April
- Mid-May

There are 12 RMAs that will be surveyed (Table C-1).

TABLE C-1. MSCP Raptor Monitoring Areas (Breeding Season)

<u>Area</u>	<u>Name</u>	<u>Study Sites* (original number(s))</u>
A	San Pasqual	San Pasqual (36), Lk. Hodges (7), Boden Cyn. (2), Rockwood (32)
B	Ramona Grasslands	Ramona Grasslands (30)
C	Penasquitos Canyon	Penasquitos Canyon (33)
D	Iron Mountain Complex	Iron Mountain** (11), San Vicente ((16), Route 67 (27)
E	San Diego River	San Diego River (26)
F	Sloan Canyon	Sloan Canyon (31), McGinty Mtn. North (5), Sycuan Mtn. North (17)
G	Sweetwater River	Sweetwater Reservoir (45), Rcho. S.D. East (42), Rcho. S.D. West (43), San Miguel Mtn. North (23)
H	Proctor Valley	Proctor Valley (25), San Miguel Mtn. South (23), Upper Otay Lk.(14)
I	Rancho Jamul	Jamul Ranch (3), Hollenbeck Canyon (34)
J	Border Fields	Border Fields (44), Tijuana River (part)
K	Brown Field Complex	Brown Field (22), Otay River, Spring Cyn. (part), Dennery Cyn. (part)
L	Otay Mountain	Otay Mountain (12), Marron Valley (13), Lower Otay Lake (14)

* In some cases, only a portion of a study site is included because of access, visibility, or some other reason (see detailed maps, Appendix C-1, for details).

** Including Monte Vista Ranch.

Each study site is followed by a number, which corresponds to the original study site number that was assigned to it (WRI 2002, 2004).

Winter Surveys

In keeping with the timing of many “winter” surveys (e.g., County Bird Atlas), the MSCP winter raptor surveys will occur primarily from *mid-December through February*, with possible changes in response to changes in weather conditions (i.e., global warming, cycles, etc.). This “winter” time period is somewhat arbitrary and we are not suggesting that raptors observed during this period are, necessarily, only birds that have migrated in and are wintering within the MSCP and environs. Similarly, the winter visit by some species may extend before and/or after this timeframe. The FH, for instance, can arrive on its MSCP wintering grounds by mid-September and not leave until mid-March. Many of the birds that you observe will be the same ones that you document during the “breeding season” surveys. The objective is to conduct three (3) vehicle-based surveys, along the coastal route depicted by Figure C-2. In order to adequately characterize the raptor species present throughout the winter season, the three surveys should be conducted according to the following schedule:

- Late December
- Mid-to-late January
- Mid-to-late February

Raptor, and other, nests are often more visible in the winter, when deciduous trees have lost their foliage. Knowledge about nest and breeding pair locations will help the monitor separate wintering birds from resident pairs. When summarizing yearly data, it will also be important to determine which nests are alternate nests of the same pair and which represent additional pairs/territories. Note any raptor nests in the area and/or if any nesting behavior is observed. Do not approach any nests, without approval from the PM and Management Unit administrator.

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APPENDIX C-2

ACRONYMS AND DEFINITIONS

Raptor and Corvid Species

AC	American crow
AK	American kestrel
BE*	BALD EAGLE
BH	Black hawk
BR	Barn owl
BO*	BURROWING OWL
CH*	COOPER'S HAWK
CR	Common raven
FH*	FERRUGINOUS HAWK
GE*	GOLDEN EAGLE
GO	Great-horned owl
HH	Harris' hawk
LO	Long-eared owl
MR	Merlin
NH*	NORTHERN HARRIER
OS	Osprey
PF*	PEREGRINE FALCON
PR	Prairie falcon
RS	Red-shouldered hawk
RT	Red-tailed hawk
SE	Short-eared owl
SO	Screech owl
SS	Sharp-shinned hawk
SH*	SWAINSON'S HAWK
TV	Turkey vulture
UA	Unidentifiable accipiter
UB	Unidentifiable buteo
UF	Unidentifiable falcon
UR	Unidentifiable raptor
WK	White-tailed kite
WH	White-tailed hawk
ZH	Zone-tailed hawk

Other Abbreviations

AB	Active burrow
Ad	Adult
CDFG	California Department of Fish and Game
CN	Cavity nest
F	Female
HY	Hatching year (when a bird is in its first year; i.e., the same calendar year as hatched).
Imm	Immature (a non-specific term that means "not adult").
M	Male
Mel	Melanistic (black/dark)
Ruf	Rufous/reddish
Sa	Sub adult (plumage that precedes adult plumage and appears much like it but with some characters that are not in adult plumage; used only for species, like the Golden Eagle, that can be distinguished at this age).
SN	Stick nest.
U	Unknown (e.g., unknown species, age, or sex).
USFWS	U.S. Fish and Wildlife Service

* MSCP target species.

APPENDIX C-3

TRANSECT DATA SHEET													
Wildlife Research Institute, Inc.							BIOLOGIST(S):						
		TIME (24hr)	Start	Finish	(minus time out) = TOTAL TIME:								
		TEMP (F):			OTHER WEATHER INFO.:								
DATE:	PAGE ___ OF ___	CLOUD CVR (%):			TRANSECT MILEAGE BEGIN:								
TRANSECT NAME & NUMBER:		WIND (mph):			TRANSECT MILEAGE END:								
		VISIBILITY (mi):			SUBTRACT MILEAGE:								
#		PRECIP:			TRANSECT TOTAL MILEAGE:								
WAYPOINTS (Start/End Points of Transects, Road Names, etc.)	SPECIES	TIME DURATION	SEX	AGE	PAIR	PERCHING	HUNTING	FEEDING	COURTSHIP	SOAPING	NESTING	COMMENTS, MILEAGE, TIME, ETC.	
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COMMENTS: (USE REVERSE FOR DRAWINGS OR ADDITIONAL NOTES)													

LEAST BELL'S VIREO

Vireo bellii pusillus

Author: Michael A. Patten, Department of Biology, University of California, Riverside, California 92521

Management Status: Federal: Endangered
California: Endangered (CDFG, 1998)

General Distribution:

The Least Bell's Vireo is a subspecies of the Bell's Vireo. The Bell's Vireo breeds in the southwestern United States and northwestern Mexico, northward through the Great Plains of the central United States to the southwestern fringe of the Great Lakes (Brown, 1993). This species winters in southern Baja California, on the Pacific slope of mainland Mexico from Sonora south through northern Nicaragua (Brown, 1993), and on the Atlantic slope from Veracruz south to Honduras (AOU, 1998).

Distribution in the West Mojave Planning Area:

The Least Bell's Vireo breeds in southwestern California and adjacent northwestern Baja California (Wilbur, 1980, Garrett and Dunn, 1981); it largely occurs in cismontane southern California, but it does extend into transmontane areas along the western flank of the Anza-Borrego Desert (San Diego County; Unitt, 1984), in the vicinity of Palm Springs (Riverside County; C. McGaugh pers. comm.), at Leona Valley (Los Angeles County; summering, breeding not proven; K.L. Garrett in litt.), and in San Bernardino County at Morongo Valley and along the Mojave River (Patten, 1995; S. J. Myers in litt.). There are breeding records for this subspecies just north of the WMPA in the southern Owens Valley of Inyo County and it regularly breeds just northwest of the WMPA at the South Fork of the Kern River Preserve (Kern County; M.T. Heindel pers. comm.). Elsewhere within the WMPA, the Bell's Vireo is an occasional migrant.

The eastern limit of the range of the Least Bell's Vireo in California is contentious, in that the ranges of the Least Bell's Vireo and the Arizona Bell's Vireo (*V. b. arizonae*) in California are based more on supposition than on direct evidence. It is generally believed that the Arizona Bell's Vireo is confined to the Lower Colorado River Valley, whereas the Least Bell's Vireo occurs in cismontane southern California and on the western edge of the deserts, extending north up the Mojave River into the Owens Valley, and eastward into Death Valley National Park, along the Amargosa River (Inyo County) and at Fort Piute in the East Mojave Desert (Goldwasser, 1978; Goldwasser et al., 1980; Garrett and Dunn, 1981; Regional Environmental Consultants, 1986; Franzreb, 1987a, 1987b, 1989; Brown, 1993; Small, 1994). Considering the biogeography of similarly-distributed cismontane and transmontane species pairs (Grinnell and Miller, 1944; Garrett and Dunn, 1981), such as California (*Callipepla californica*) and Gambel's quail (*C. gambelii*), Nuttall's (*Picoides nuttallii*) and Ladder-backed woodpeckers (*P. scalaris*), and California (*Toxostoma redivivum*) and Crissal thrashers (*T. crissale*), it is probable that Arizona Bell's Vireo is in fact the subspecies occurring in the East Mojave Desert (including Fort Piute and the Amargosa River) northward through Death Valley, and this subspecies may occasionally occur in the extreme eastern portion of the WMPA. Data to support this contention is provided

by the observations that spring birds in Death Valley and at Fort Piute are more brightly-colored (i.e., they have a greener back and yellower flanks), and thus more like *V. b. arizonae*, than are birds along the Mojave River or at Morongo Valley, which are grayer and thus more like *V. b. pusillus* (M.A. Patten pers. obs.). Also, there is a late February specimen of the Arizona Bell's Vireo taken in the Anza-Borrego Desert (Unitt, 1985; Phillips, 1991), showing that this subspecies can occur well west of its described range.

Natural History:

The Bell's Vireo is a conspicuous member of riparian habitats where it occurs because of its lively, complex song. However, given its penchant for dense vegetation, it is far more often heard than seen. Its song belies its rather subtle, drab plumage: this small passerine is basically olive-gray (with emphasis on the latter in *V. b. pusillus*) above with a single faint wingbar, a thick bill, thin but distinct "spectacles," and a long tail that is flipped expressively from side-to-side. In overall plumage and behavior, this species most closely resembles a Gray Vireo (*V. vicinor*), a species with a very different song that occurs in pinyon-juniper and redshank-chaparral associations.

The Least Bell's Vireo and the Arizona Bell's Vireo differ slightly in size and subtlety of color, with the latter being slightly smaller and more brightly colored (Ridgway, 1904; Phillips, 1991). Specimens of Bell's Vireo from eastern California (e.g., Death Valley) were identified as Least Bell's Vireo (Ridgway, 1904; Grinnell, 1923). However, these specimens were taken in spring (Fisher, 1893; Grinnell, 1923), when the plumage of a Bell's Vireo can be quite worn (Unitt, 1985), thus confounding subspecific identification. An examination of specimens at the Natural History Museum of Los Angeles County, the Museum of Vertebrate Zoology, University of California, Berkeley, and elsewhere indicates that evidence for defining the eastern extent of the range of Least Bell's Vireo is weak (M.A. Patten unpubl. data; A.R. Phillips in litt.; N.K. Johnson in litt.). Seven external characters have proven useful in distinguishing these subspecies (Ridgway, 1904; Phillips, 1991): exposed culmen length, wing chord, tail length, rump color, flank color, mantle color, and undertail covert color. These subspecies may also have slight differences in song (L.R. Hays pers. comm.), and they apparently differ in habitat choice (see below).

The Least Bell's Vireo arrives on its breeding grounds in mid-March (Brown, 1993), with males arriving slightly before females (Nolan, 1960; Barlow, 1962). This vireo shows a high degree of nest site tenacity (Greaves, 1987). Most individuals depart by September (Brown, 1993), although some individuals remain on their breeding grounds into late November (Rosenberg et al., 1991). This subspecies winters primarily in Baja California, with occasional individuals remaining through the winter in cismontane southern California (there is also a record for the Sonoran Desert at this season, although the subspecies is not known). Nesting takes place from early April through the end of July, with two broods usually being attempted. Nests are suspended from forks in dense bushes or small trees; over 60 species of plants have been used by Bell's Vireos for nest sites (Brown, 1993), but the Least Bell's Vireo predominantly uses willows (*Salix* spp.). The Bell's Vireo feeds almost exclusively on arthropods, with insects and spiders comprising over 99% of their diet (Brown, 1993).

Habitat Requirements:

The Bell's Vireo occurs in riparian habitats. The Least Bell's Vireo typically breeds in willow riparian forest supporting a dense, shrubby understory of mulefat (*Baccharis salicifolius*) and other mesic species (Goldwasser, 1981; Gray and Greaves, 1984; Franzreb, 1989). Oak woodland with a willow riparian understory is also used in some areas (Gray and Greaves, 1984), and individuals sometimes enter adjacent chaparral, coastal sage scrub, or desert scrub habitats to forage (Brown 1993; L.R. Hays pers. comm.). The Least Bell's Vireo and the Arizona Bell's Vireo probably have different habitat requirements. Least Bell's Vireos in cismontane California occur in riparian forest dominated by willows (Goldwasser, 1981; Gray and Greaves, 1984), whereas Arizona Bell's Vireos tend to occur in riparian woodland dominated by mesquite (*Prosopis* sp.; Rosenberg et al., 1991; Brown, 1993; L.R. Hays pers. comm.; M.A. Patten pers. obs.). Similar habitats are used during the winter months. Although the Arizona Bell's Vireo will use non-native salt cedar (*Tamarix* spp.) in parts of its range (Brown, 1993), the Least Bell's Vireo avoids riparian areas dominated by these plants.

Population Status:

The most recent published population censuses for the Least Bell's Vireo indicated that this subspecies was critically endangered, with a total population estimated to be only a few hundred pairs (Goldwasser, 1978; Goldwasser et al., 1980; Wilbur 1980). Primarily as a result of extensive efforts to restore riparian habitat and to remove Brown-headed Cowbirds (*Molothrus ater*) from breeding areas, populations of the Least Bell's Vireo have increased dramatically at several locations in cismontane southern California (L.R. Hays pers. comm.; Brown, 1993), particularly at the two core population sites of the Santa Margarita River, San Diego County (± 400 pairs) and the Prado Basin, Riverside County (± 150 pairs). The total population breeding within the WMPA is much smaller, with only a 1-3 pairs at Morongo Valley and 1-2 pairs along the Mojave River (M.A. Patten pers. obs.; S.J. Myers in litt.).

Threats Analysis:

Loss of habitat, combined with increased brood parasite pressure from Brown-headed Cowbirds (Goldwasser, 1978; Beezley and Rieger, 1987), has led to the two breeding subspecies in California, Least Bell's Vireo and Arizona Bell's Vireo, being listed as Endangered by the State of California and, for *V. b. pusillus*, by the federal government (Franzreb, 1989; Franzreb et al., 1992; Salata, 1992; U.S. Fish and Wildlife Service, 1992). Losses of habitat similarly have affected the Bell's Vireo throughout its range (Brown, 1993). Habitat loss within the WMPA probably most often results from flood control efforts (e.g., stream channelization or vegetation clearing along the Mojave River). Conversion of occupied habitat to parks or golf courses is generally less of a problem, if only because it occurs more rarely.

Although Brown-headed Cowbirds are perhaps less prevalent in transmontane sites occupied by this vireo, cowbirds nevertheless can have a huge negative impact on the breeding success of the Least Bell's Vireo (Goldwasser, 1978; Beezley and Rieger, 1987; Clark, 1988), and they have increased dramatically in California in the past century (Laymon, 1987; Rothstein, 1994). Populations of the Least Bell's Vireo have responded dramatically to efforts to remove cowbirds from breeding areas (see above), underscoring the severe impact of brood parasitism. The recent, albeit slow, northwesterly range expansion of the Bronzed Cowbird (*M. aeneus*), could present this vireo with yet another brood parasite (M.A. Patten unpubl. data).

Biological Standards:

Much effort has been expended to maintain minimum viable populations of the Least Bell's Vireo at certain core population sites in cismontane southern California (e.g., the Santa Margarita River, the Prado Basin, and the Santa Ynez drainage in Santa Barbara County). Recovery efforts have generally been extremely successful; prospects for the long-term survival of the Least Bell's Vireo are much better now than they were 15-20 years ago when recovery was initiated (L.R. Hays pers. comm.). However, even historically this vireo has occurred only in low numbers within the WMPA, and in few locations, so management of vireo habitat within its boundary likely will not have a substantial effect on the subspecies as a whole. Nevertheless, conservation and sustainable management of the small breeding populations at Morongo Valley and along the Mojave River could be accomplished through (1) limiting the destruction of riparian habitat in these areas, including less invasive flood control management activities, (2) eradication of non-native salt cedar, giant reed (*Arundo donax*), and Russian olive (*Elaeagnus angustifolius*) from sites occupied by the vireo, with willows and mulefat planted in their place, (3) extensive trapping and removal of Brown-headed Cowbirds from breeding areas, and (4) restoration of riparian habitats, because cowbird parasitism is reduced woodland habitats with lower edge to area ratios (Laymon 1987). An additional measures could be the limiting access of both cattle and humans (hikers and off-highway vehicle users) to prime nesting areas.

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Comment Letter 35 – Friends of Riverside's Hills

35

3 Oct 2016

To: Patricia Brenes, Principal Planner, City of Riverside

From: Friends of Riverside's Hills

Re: DEIR for Sycamore Canyon Business Park Buildings 1 and 2

Thank you for the opportunity for Friends of Riverside's Hills to raise some of the important points of concern regarding this DEIR.

35-A

The project is located in an environmentally sensitive location next to Sycamore Canyon Park, a core area of the Western Riverside County MSHCP. Thus the conformance of the project with all aspects of the "Guidelines Pertaining to the Urban/Wildlands Interface" (sec 6.1.4 of the MSHCP document) must be evaluated. This goal is codified in City Policy OS-5.2: Continue to participate in the MSHCP Program and ensure all projects comply with applicable requirements. Project compliance is summarized in Table 5.4-B of the DEIR. Points of serious concern relate to drainage, lighting, and noise.

(i) Drainage: the project run-off will be discharged into an existing water quality basin; however, the ability of the existing water quality basin to handle the additional storm run-off was not examined. Thus in Table 1-B it is stated with no justification that the potential impact of exceeding the capacity of existing or planned stormwater drainage systems is less than significant. It is noted that excess run-off will drain into "the marsh" (Basin A; see p5.9-7 to 5.9-8 of the DEIR) without any evaluation of the capacity of the marsh to retain and purify the additional run-off before it flows into Sycamore Canyon Park (the park). The analysis presented (5.9-15 to 5.9-16) considers the flow as far as the offsite storm drain but no further. The only reference is that the facilities have been "deemed sufficient by the City" (p5.9-27) but no data supporting this statement are provided.

(ii) Lighting. The MSHCP requires that there is no increase in ambient lighting in the conservation area. In the DEIR (Table 5.4-B) it is stated that MM BIO7 will minimize impacts. However MM BIO7 only requires that "any night lighting shall be directed away from natural open space areas and directed downward and towards the center of the development. Energy efficient LPS or HPS lamps shall be used exclusively to dampen glare." This will certainly reduce the light spreading into the Conservation Area (Sycamore Canyon Park) relative to what it could have been, but it does not, in and of itself, ensure that there is no increase in ambient light. As noted in Table 5.4-B, the height of some of the light poles will be 32-34 feet and given the application of the City's lighting standards (designed for general urban use throughout the City, and not specifically for light-sensitive areas) light pollution appears inevitable. In this context, it needs to be noted that many of the species within our area, such as Stephens' kangaroo rat, a Federally endangered species conserved within the park, are nocturnal. Feeding behavior of these nocturnal rodents and the behavior of their owl predators is altered by increased ambient light.

35-B

(iii) Noise. It is stated in Table 5.4-B that the truck yards and loading/docking areas will be surrounded by walls; however, it is repeatedly stated in the DEIR that while there will be a block wall adjacent to the residential areas to the N and NW, there will be an opaque 8ft high

35-C

tubular steel fence adjacent to the park (e.g. p5.1-8). Such a fence is an ineffective sound barrier relative to a block wall, resulting in better sound reduction in the residential area than in the conservation area, contrary to MSHCP requirements.

↑ 35-C
cont'd

The project also proposes building over a blue-line stream, necessitating mitigation for approximately 2 acres of jurisdictional riparian habitat. This is to be achieved with a 2.96 acre stream-like depression planted with riparian vegetation. However, there is no analysis of how much water this depression would receive and whether this amount of water would be adequate to support the riparian vegetation. In the absence of such an analysis, and if the water supply is inadequate (as seems likely), then no amount of management will result in a stable area of riparian habitat, and the mitigation will fail.

35-D

The project is located next to a residential neighborhood. It will produce various forms of pollution (including light, sound, particulates). Thus the necessity of siting such a development in this location needs to be considered in the light of alternative land uses. But no economically realistic alternatives are considered in the DEIR. This is a prime site for a set of office/high tech building overlooking the park. Such a project would buffer the park and the residential area from the other warehouses in the area, and provide a pleasant working environment. It would also allow conformance with policies that the current project ignores: City Policy LU-8.2: Avoid density increases or intrusion of non-residential uses that are incompatible with existing neighborhoods.

35-E

City Policy N-1.8: Continue to consider noise concerns in evaluating all proposed development decisions and roadway projects.

City Policy AQ-1.3: Separate, buffer and protect sensitive receptors from significant sources of pollution to the greatest extent possible.

City Policy AQ-1.1: Ensure that all land use decisions, including enforcement actions, are made in an equitable fashion to protect residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status or geographic location, from the health effects of air pollution.

The project is designed with roofs that are "solar ready". This is a good feature, but why will it not be built with solar included? City Policy AQ-8.6 states that development should "Promote Riverside as a Solar City through the implementation of programs for residential and commercial customers that will increase solar generation in the City to 1 MW by 2015 (enough for 1,000 homes), and 3 MW by 2020". For no good reason, the current project fails to conform to this policy.

35-F

Thanks for your attention to these issues.

Len Nunney, Secretary,
Friends of Riverside's Hills
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35-G

Response to Comment Letter 35 – Friends of Riverside's Hills

Response to Comment 35-A:

The City appreciates the Friends of Riverside's Hills review of the Draft Environmental Impact Report (DEIR).

Compliance with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Section 6.1.4: The City adopted the MSHCP on September 23, 2003 (Riverside Municipal Code, Chapter 16.72) and the federal and state Wildlife Agencies approved permits required to implement the MSHCP on June 22, 2004. Implementation of the MSHCP will conserve approximately 500,000 acres of habitat into a reserve system, including land already in public or quasi-public ownership (PQP Lands) and approximately 153,000 acres of land in private ownership that will be purchased or conserved through other means such as land acquisition and conservation easements. The money for purchasing private land comes from development mitigation fees imposed on new development within the boundaries of the MSHCP, as well as state and federal funds.

As a signatory to the MSHCP, the City adopted Ordinance No. 6709 (which is codified as Chapter 16.72 of the Riverside Municipal Code) and established a Local Development Mitigation Fee (LDMF) to be used by the Western Riverside County Regional Conservation Authority (RCA) to implement the MSHCP. The Project will participate in the MSHCP through the payment of the LDMF at the time building permits are issued pursuant to the provisions of Ordinance No. 6709.

As stated in the DEIR, the Project site is located within the MSHCP Plan Area. The site is not located in a Criteria Cell. The Project site is flanked PQP Lands within the Sycamore Canyon Wilderness Park, which is located directly west of the site. In addition to paying the appropriate LDMF, the MSHCP requires projects comply with Sections 6.1.2 (Protection of Species within Riparian/Riverine Areas and Vernal Pools), 6.1.3 (Protection of Narrow Endemic Plant Species), 6.1.4 (Urban and Wildlands Interface), 6.3.2 (Additional Survey Needs and Procedures), Appendix C (Standard Best Management Practices), and Section 7.5.3 (Construction Guidelines). (DEIR, p. 5.4-23.)

The MSHCP Urban/Wildland Interface Guidelines are intended to address indirect effects associated with locating development in proximity to the MSHCP Conservation Area. The Project is adjacent to the Sycamore Canyon Wilderness Park, identified in the MSHCP as Existing Core D. To minimize Edge Effects MSHCP Section 6.1.4 identifies guidelines applicable to Projects adjacent to Conservation Areas. The City, as MSHCP Permittee, is to consider these guidelines in reviewing the Project. The MSHCP Urban/Wildland Interface Guidelines address: drainage, toxics, lighting, noise, invasives, barriers, and grading and are discussed in DEIR **Table 5.4-B – Project Compliance with MSHCP Urban/Wildlands Interface Guidelines**.

DEIR Table 5.4-B – Project Compliance with MSHCP Urban/Wildlands Interface

Guidelines incorrectly indicates there will be a wall surrounding the truck yards and loading/docking areas and will be revised in the Final Environmental Impact Report as follows:¹

MSHCP Guidelines	Project Features
Noise	
Proposed noise generating land uses affecting the MSHCP Conservation Area shall incorporate setbacks, berms or walls to minimize the effects of noise on MSHCP Conservation Area resources pursuant to applicable rules, regulations and guidelines related to land use noise standards. For planning purposes, wildlife within the MSHCP Conservation Area should not be subject to noise that would exceed residential noise standards.	As discussed in Section 5.13 – Noise, the Project will install a temporary construction noise barrier along its western boundary to minimize the effect of noise on the Sycamore Canyon Wilderness Park. <u>Once the Project is operational, noise at the boundary between the Park and the Project site will not exceed the City’s “Normally Acceptable” compatibility criteria for neighborhood parks land uses.</u> Once completed, the Project will include walls surrounding the truck yards and loading/docking areas. Therefore, the Project is consistent with the MSHCP Urban/Wildlands Interface Noise Guidelines.

The Project’s consistency with City Policy OS-5.2, “Continue to participate in the MSHCP program,” is described in DEIR Appendix M and a discussion of the Project’s consistency with the MSHCP is included in DEIR Section 5.4 – Biological Resources. The Project has complied with the MSHCP by completing the requisite biological surveys and preparing a *Determination of Biologically Equivalent or Superior Preservation* (DBESP). As required by the MSHCP the DBESP was reviewed by the Wildlife Agencies was provided to the Wildlife Agencies for a 30-day review and response period from May 20, 2016 through June 20, 2016. CDFW had the following comments on the Project’s DBESP: (i) that the Project applicant provide all relevant burrowing owl survey information and reports to show compliance with Section 6.3.2 of the MSHCP, and (ii) that additional copies of the Habitat Mitigation Management Plan be submitted to the wildlife agencies, USFWS and CDFW, for their records. The burrowing owl survey (DEIR Appendix C.6) was reviewed by the CDFW and USFWS and the City received confirmation that agencies have not further questions or comments regarding the DBESP. (DEIR, pp. 5.4-23–5.4-30.)

The Project will implement mitigation measures **MM BIO 6** through **MM BIO 8** to further ensure compliance with a variety of best management practices to reduce impacts to biological resources during construction and operation of the Project. (DEIR, p. 5.4-33.)

MM BIO 6: The Project shall be required to comply with the following standard best management practices (BMPs) outlined in Volume I, Appendix C of the MSHCP:

¹ Deletions are shown with strikethrough text (~~example text~~) and additions are shown with double underline text (example text).

- A condition shall be placed on grading permits requiring a qualified biologist to conduct a training session for project personnel prior to grading. The training shall include a description of the species of concern and its habitats, the general provisions of the Endangered Species Act (Act) and the MSHCP, the need to adhere to the provisions of the Act and the MSHCP, the penalties associated with violating the provisions of the Act, the general measures that are being implemented to conserve the species of concern as they relate to the project, and the access routes to and project site boundaries within which the project activities must be completed.
- Projects that cannot be conducted without placing equipment or personnel in sensitive habitats should be timed to avoid the breeding season of riparian species identified in MSHCP Global Species Objective No. 7.
- The qualified project biologist shall monitor construction activities for the duration of the project to ensure that practicable measures are being employed to avoid incidental disturbance of habitat and species of concern outside the project footprint.
- Construction employees shall strictly limit their activities, vehicles, equipment, and construction materials to the proposed project footprint and designated staging areas and routes of travel. The construction area(s) shall be the minimal area necessary to complete the project and shall be specified in the construction plans. Construction limits will be fenced with orange snow screen. Exclusion fencing should be maintained until the completion of all construction activities. Employees shall be instructed that their activities are restricted to the construction areas.
- The Permittee, City of Riverside, shall have the right to access and inspect any sites of approved projects including any restoration/enhancement area for compliance with project approval conditions including these BMPs. (DEIR, p. 5.4-30–5.4-31.)

MM BIO 7: The Project shall also comply with the following BMPs, not outlined in Volume I, Appendix C of the MSHCP:

- Any night lighting shall be directed away from natural open space areas and directed downward and towards the center of the development. Energy-efficient LPS or HPS lamps shall be used exclusively to dampen glare.
- During construction, equipment storage, fueling, and staging areas will be located on areas of the site with minimal risks of direct drainage into riparian areas or other sensitive habitats. These designated areas will be located in such a manner as to prevent any runoff from entering sensitive habitat. Necessary precautions will be taken to prevent the release of cement or other toxic

substances into surface waters. Project related spills of hazardous materials will be reported to appropriate entities including but not limited to applicable jurisdictional City, UFWS, and CDFW, RWQCB regulated areas and will be cleaned up immediately and contaminated soils removed to approved disposal areas.

- To avoid attracting predators of the species of concern during site grading and construction activities, the Project site will be kept clean of debris. All food related trash items will be enclosed in sealed containers and regularly removed from the site(s). This requirement will be addressed by the biologist conducting the training session prior to site grading. (DEIR, p. 5.4-31.)

MM BIO 8: To avoid impacts to the Sycamore Canyon Wilderness Park resulting from construction activity such as compaction and erosion. The Project developer shall provide a temporary barrier along the western portion of the Project site. Prior to issuance of a grading permit, the developer shall identify the type and location of this barrier to the City of Riverside Parks, Recreation, and Community Development Department for review and approval. (DEIR, p. 5.4-31.)

Responses to the commenter's concerns related to drainage are addressed below. Responses to comments regarding lighting, and noise are Response to Comments 35-B and 35-C.

Drainage: The proposed Project is located within the watershed tributary to the Storm Water Runoff Treatment Basin ("the marsh"). This marsh was constructed in accordance with the design document prepared by Pacific Southwest Biological Service, Inc. entitled "Storm Water Runoff Treatment Basins at the Sycamore Canyon Business Park and Sycamore Canyon Business and Wilderness Park, Riverside, California" dated May 19, 1992, as well as the "Hydrology & Hydraulic Study for the Storm Water Runoff Treatment Basin for CFD No. 92-1 Sycamore Canyon" dated October, 1993 prepared by Albert A. Webb Associates, Inc. (These studies can be made available upon request to the City of Riverside, Public Works Department.) This basin has the storage capacity to retain the 2-year rainfall event (treatment volume) of the Sycamore Canyon Business Park water shed tributary to this area as well as a spillway designed to handle the 100-year rainfall event for the same area. In addition to the marsh, the Project will be required to provide 10% of the developed area on-site for implementation of Low Impact Development principles.

A Preliminary Hydrology Calculations Report was prepared for the Project. (Thienes Engineering, Appendix H of DEIR) Information from the Preliminary Hydrology Calculations Report was summarized in Section 5.9 – Hydrology and Water Quality, of the DEIR.

A large portion of the storm water drainage system for the Sycamore Canyon Business Park Specific Plan (SCBPSP), which includes the Project site, is designed to drain to the 120-inch diameter storm drain in Eastridge Avenue that outlets to the marsh (aka Basin A or Northern Basin). The "As-Built" plans in Appendix A of the Preliminary Hydrology Calculations report (Thienes Engineering, DEIR Appendix H.1) show a future 69-inch diameter storm drain

connecting to the 120-inch diameter storm drain at Lance Drive and Eastridge Avenue (Sheet 3, Drawing D-615). This future 69-inch storm drain was sized to convey the estimated 500 cubic feet per second (cfs) of stormwater (100-year storm event) from the tributary area immediately surrounding and including the project (Sheet 3, Drawing D-615). However, in 2006, a 48-inch storm drain was constructed, as part of the Parcel Map 33246 development, not the 69-inch storm drain that was planned. The 48-inch storm drain that was installed, only has the capacity of approximately 100 cfs from the tributary area immediately surrounding and including the project site, and cannot accommodate the projected stormwater volumes during a 100-year storm event. Therefore, the Project includes the construction of an additional new offsite 60-inch diameter storm drain in Lance Drive, which is sized to convey the 175 cfs (100-year storm event) from the tributary area immediately surrounding and including the project site.

As discussed in Section 5.9.4 (Project Design Features) of the DEIR, Building 2, its southerly truck yard and adjacent parking lots would drain to catch basins in the truck yard and parking lots (16.3 acres). Runoff would then be conveyed easterly, via the proposed onsite storm drain, then southerly via the proposed public storm drain in Lance Drive to the existing 120-inch offsite storm drain in Eastridge Avenue. The 100-year peak flow rate for the Building 2 area is estimated at 36.7 cfs. (DEIR, p. 5.9-15.)

Vehicle parking lots located north of Building 1 (3.65 acres) would drain to catch basins in the parking lots. Runoff would then be conveyed easterly via another proposed onsite storm drain to Lance Drive and then conveyed southerly via the same proposed public storm drain to the existing 120-inch offsite storm drain in Eastridge Avenue. The 100-year peak flow rate for Building 1 parking lots is estimated at 10.4 cfs. (DEIR, p. 5.9-15.)

A vehicle parking lot to the southeast corner of Building 1 would drain to a catch basin in the parking lot. This runoff would then be conveyed easterly via a private storm drain to the back of a proposed street catch basin, which accepts runoff from the west half of Lance Drive and adjacent onsite side slope. From the street catch basin, runoff would then be conveyed southerly via a lateral to the proposed public storm drain in Lance Drive, which drains to the existing 120-inch offsite storm drain in Eastridge Avenue. The 100-year peak flow rate for these areas is estimated at 9.4 cfs. (DEIR, p. 5.9-15.)

The existing residential development located northwest of the Project site and several small offsite dirt areas along the westerly property line would drain to a proposed onsite vegetated swale adjacent to the westerly property line, the Mitigation Area. Runoff would be conveyed southerly in the vegetated swale, then easterly landscaped area, as well as Building 1 and the small parking lot at the southeast corner of the proposed site. Runoff from these areas is conveyed easterly to the same proposed public storm drain in Lance Drive, then southerly to the existing 120-inch offsite storm drain in Eastridge Avenue. The 100-year peak flow rate for these onsite and offsite areas is estimated at 125.3 cfs. (DEIR, pp. 5.9-15–5.9-16.)

The landscaped area east of Building 2 and adjacent to the easterly property line would surface drain to Dan Kipper Drive. Likewise, the southerly entry driveway to Building 1 and the adjacent landscape fronting Lance Drive would surface drain easterly to Lance Drive.

The proposed condition 100-year peak flow rate for the proposed Project to the existing 120-inch offsite storm drain in Eastridge Avenue is estimated at 175 cfs. This includes the Project site, the offsite residential area to the northwest and the dirt lots to the west that are tributary to the Project site. (DEIR, p. 5.9-16; DEIR **Figure 5.9-4 – Proposed Condition Hydrology Map.**)

As mentioned above, based on the Preliminary Hydrology Calculations (DEIR Appendix H) and discussed in Section 5.9 – Hydrology and Water Quality, of the DEIR, the existing public storm drain located in Lance Drive is not adequately sized to carry discharge from the Project site. Therefore, the Project proposes a 60-inch storm drain in Lance Drive that is sized to handle the estimated 175 cfs during a 100-year storm event, which will be adequate to capture Project runoff and the offsite residential area to the northwest. The proposed 60-inch storm drain would continue southerly past Sierra Ridge Drive and through the western parking lot of the warehouse located at 1680 Eastridge Avenue to connect to the existing 120-inch storm drain in Eastridge Avenue. This existing storm drain pipe drains to the west and outlets into the marsh, which captures the volume and slowly releases into Sycamore Canyon. (DEIR, p. 5.9-18; DEIR **Figure 5.9-5 – Proposed Offsite Storm Drain and Marsh.**)

Additionally, site design stormwater best management practices (BMPs) are included to protect downstream water quality by minimizing the amount of urban runoff, minimizing the impervious footprint of the Project, and minimizing directly-connected impervious areas. The Project will include 10.69 acres of “self-treating” areas (i.e., natural areas that do not drain to stormwater BMPs, but rather drain directly offsite or to the MS4 facility, rather than having the runoff coningle with runoff from the Project’s impervious surfaces) and 7.07 acres of ornamental landscaping. (DEIR, p. 5.9-20.)

Operational source BMPs for the Project will include on-site storm drain inlet maintenance and stormwater pollution prevention information to new occupants; annual inspections of interior floor drains and elevator shaft sump pumps; landscape maintenance with minimal pesticide use and providing Integrated Pest Management information to new occupants; daily maintenance or repair of waste receptacles; moving loaded and unloaded items indoors as soon as possible; monthly parking sweeping and inspection, and maintenance of the on-site drainage system. (DEIR, p. 5.9-21.)

The Project will include treatment control BMPs which are engineered systems designed and constructed to remove pollutants from urban runoff. The SCBPSP includes three “drainage-siltation basins” identified as Basin “A” (“the marsh”), “B”, and “C”. The marsh will receive runoff from the Project site. The marsh was designed as a stormwater runoff treatment basin per the design guidelines of the time, and constructed in the mid-1990s. The marsh is not considered a Low-Impact Development (LID) BMP; however, the City has accepted that the marsh will handle both the “Design Capture Volume (DCV)” from Project development, and

mitigate the “Hydrologic Condition of Concern (HCOC).” The DCV is the volume of runoff generated by the area tributary to the marsh during a “design storm” event (i.e., the 85th percentile, 24-hour storm). A HCOC exists when a site’s hydrologic regime is altered and there are significant impacts on downstream channels and habitats, alone or in conjunction with impacts of other projects. This typically occurs when the post-construction runoff rates are greater than the pre-development runoff rates. The storm drain pipe feeding into the basin is sized for a 100-year storm event. The marsh is one of three basins that have been designed to capture the volume of runoff from build-out of the Sycamore Canyon Business Park, including the Project site, in order to slow runoff velocities and treat for pollutants using a sand filter mechanism.

Thus, based on the above discussion, the proposed Project will comply with Section 6.1.4 of the MSHCP related to drainage features as Project design features incorporate several measures to reduce the release of toxins and mimicked existing drainage conditions onsite. (DEIR, p. 5.4-25.) This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 35-B:

The MSHCP guidelines for lighting state: “Night lighting shall be directed away from the conservation area...” and “Shielding shall be incorporated to ensure ambient lighting in the conservation area is not increased.” The Project does not propose any direct lighting into the Sycamore Canyon Wilderness Park. All Project lighting will be directed away from the park and shall incorporate shielding as required by Chapter 19.556 of the City’s Municipal Code and the City’s standard lighting conditions.

To ensure that light spill will not take place, **MM AES 10** will be revised in the FEIR as follows:

MM AES 10: To ~~eliminate~~ reduce light spill and glow into the residential backyards to the north, lighting mounted on the north wall of Building 2 shall be placed on this wall as low as feasible to provide the required security lighting.

With regard to lighting and the height of any light poles adjacent to the residences to the north, the third paragraph under the subheading “Lighting” on DEIR page 5.1-10 will be modified as follows in the FEIR:

The City will require the following: An exterior lighting plan shall be submitted ~~for Planning Division to Design Review~~ staff for review and approval. A photometric study ~~with~~ and manufacturer's cut sheets of all exterior lighting on the buildings, in the landscaped areas, and in the parking lot shall be submitted with the ~~study~~ exterior lighting plan. All on-site lighting shall provide a minimum intensity of one foot-candle and a maximum of ten foot-candles at ground level throughout the areas serving the public and used for parking, with a ratio of average light to minimum light of four to one (4:1). Light sources shall be hooded and shielded to minimize off-site glare, shall not direct light skyward and shall be directed away from adjacent properties, and public rights-of-ways. No light

shall be permitted on the MSHCP Conservation Area (Sycamore Canyon Wilderness Park). If lights are proposed to be mounted on buildings, down-lights shall be utilized. Light poles shall not exceed ~~twenty feet (20)~~fourteen (14) feet in height in height, including the height of any concrete or other base material within the 100-foot setback between Building 2 and the residential properties to the north and shall not exceed 20 feet in height, including the height of any concrete or other base material elsewhere on the property.

Implementation of mitigation measure **MM AES 10** as revised, **MM BIO 7** (listed above) in conjunction with the modified Condition of Approval will ensure that site lighting is designed to prevent impacts on the Sycamore Canyon Wilderness Park. Additionally, a photometric study with manufacturer's cut sheets of all exterior lighting on buildings, in landscaped areas, and in parking lots will be submitted to City staff for review and approval to ensure no light spillage onto adjacent properties, including the Sycamore Canyon Wilderness Park. Based on the above discussion, the Project is consistent with Section 6.1.4 of the MSHCP related to lighting. This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 35-C:

According to page 5.12-26 and as shown on **Figure 5.12-5 – Operational Noise Levels (Leq)** **No Mitigation** of the DEIR, the operational noise level at the property line between the Project site and the Sycamore Canyon Wilderness Park is 55 dBA L_{eq} , which is below the Municipal Code noise standard for public recreational facilities (65 dBA L_{eq}). Consequently, as such, a wall (instead of a fence) is not necessary because this noise level is less than the City Municipal Code noise standard for public recreational facilities.

With regard to the use of a fence instead of a wall adjacent to the Sycamore Canyon Wilderness Park, the Sycamore Canyon Wilderness Park Stephens' Kangaroo Rat Management Plan and Updated Conceptual Development Plan (the SKR Management Plan) calls for installation of *either* a 7-foot high masonry wall or fence constructed per City of Riverside Parks, Recreation, and Community Services Department Standard Detail No. 5520 and specifications with a 100-foot wide stubble management zone, or firebreak, on the park side of the fence to be maintained by the City. (DEIR, p. 5.15-6.) The SKR Management Plan indicates that the masonry wall acts as a heat deflector from wildfires and eliminates any need for fuel management along the boundary of the Park. The wall also serves to screen the adjacent industrial/commercial service areas. The SKR Management Plan also allows for the possible substitution of the wall with a 6-foot high open iron fence. If the City permits an open iron fence, a 100-foot wide stubble management zone shall be maintained in between the industrial property and wilderness park. The City elected to condition the alternative iron fence for the following reasons: (i) the development includes a Mitigation Area in between the park and development which will provide an effective screen and buffer, (ii) the fence is not subject to constant graffiti, and (iii) as a whole the City's Parks, Recreation, and Community Services Department felt it would be more visually pleasing than the block wall. Also, the City already maintains a large stubble management area which would meet the 100-foot wide zone.

The revision to mitigation measure MM AES 10 the Condition of Approval does not constitute significant new information that would require recirculation of the DEIR. (CEQA Guidelines, § 15088.5.) This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 35-D:

Prior to ground disturbance, a Habitat Mitigation Management Plan (HMMP) for the Mitigation Area will be prepared by the applicant which will be reviewed by the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife. The HMMP will describe the habitat creation and establish long-term success criteria, including irrigation along the Mitigation Area. Maintenance of the Mitigation Area will be funded from a non-wasting endowment in perpetuity. (DEIR, p. 5.4-18.) Additionally, implementation of **MM BIO 4** will ensure that prior to issuance of any occupancy permit, the Project Applicant will provide evidence to the City Planning Division that the Mitigation Area has been placed under a conservation easement and dedicated to an approved mitigation entity to be managed in perpetuity. This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

MM BIO 4: Prior to the issuance of any occupancy permit, the Project proponent shall provide evidence to the City Planning Division that the Mitigation Area has been placed under a conservation easement and dedicated to an approved mitigation entity to be managed in perpetuity. (DEIR, pp. 5.4-30–5.4-31.)

Response to Comment 35-E:

A number of different issues are raised in this comment. Subheadings have been used in this response for the ease of the reader.

Light

Refer to Response to Comment 35-B. All building and parking lot lighting is required to conform to the SCBPSP guidelines, the City Municipal Code, the standards and specifications of the City's Park, Recreation, and Community Service Department, and the Sycamore Canyon Wilderness Park Stephens' Kangaroo Rat Management Plan, and Updated Conceptual Development Plan. Project lighting will comply with the City's Zoning Code, Riverside County Airport Land Use Commission' conditions of approval and all other applicable lighting requirements and regulations applicable to the proposed Project. (DEIR, p. 5.1-10.) Since the northern wall of Building 2 will be the closest building wall to the residences north of the site, wall lights along this side will be lowered to a level to provide safety while not producing glow into the neighboring yards to the maximum extent feasible. Parking lot lighting adjacent to residential uses are limited to 14 feet in height which is six feet lower than the City's 20 foot height limit. The Project also proposes 64 feet of landscaping, a 30-foot wide drive aisle (vehicles only, no trucks) and an additional 6-foot wide landscape area for a total 100 foot setback between Building 2 and the northern property line of the Project site which will provide further minimize light and glare impacts onto residential properties. (DEIR, p. 3-35, **DEIR Figure 3-10 – Proposed Site Plan, DEIR Figure 3-11 – Conceptual Landscape Plan.**) A

photometric study with manufacturer's cut sheets of all exterior lighting on buildings, in landscaped areas, and in parking lots will be submitted to City staff for review and approval to ensure no light spillage onto adjacent properties, including residential neighborhoods. This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Noise

Construction noise of up to 80 dBA L_{eq} at the westerly property line will exceed the City's daytime exterior standard for residential property of 55 dBA L_{eq} and the standard for public recreational facilities of 65 dBA L_{eq} . (DEIR, p. 5.12-22.) These standards were in effect at the time of the Notice of Preparation for this DEIR. To reduce construction noise to the extent feasible, the Project will implement mitigation measures **MM NOI 1** through **MM NOI 12**, below: (DEIR, pp. 5.12-45–5.12-46.) It should be noted that on August 18, 2016, the City of Riverside City Council adopted Ordinance 7341 amending the City's Noise Code to exempt construction noise between the hours of 7:00 a.m. and 7:00 p.m. on weekdays and between the hours of 8:00 a.m. and 5:00 p.m. of Saturdays from the standards of the Noise Code.

MM NOI 1: To reduce noise impacts to the surrounding residences and Sycamore Canyon Wilderness Park, prior to any Project-related construction or site preparation, a 12-foot tall temporary noise barrier shall be installed along the Project site's northern and western property line. The barrier shall be continuous without openings, holes or cracks and shall reach the ground. The barrier may be constructed with 1-inch plywood and provide a transmission loss of at least 23 dBA to ensure construction noise levels do not exceed 75 dBA at single-family residential units located near the proposed project. Other materials providing the same transmission loss shall also be permitted with the approval of the City Planning Division.

MM NOI 2: To attenuate initial impact noise generated when an excavator drops rock and debris into a truck bed, heavy grade rubber mats/pads shall be placed within the bed of the trucks. These mats shall be maintained and/or replaced as necessary.

MM NOI 3: During all Project-related excavation and grading, construction contractors shall equip all construction equipment, fixed and mobile, with properly operating and maintained mufflers, consistent with manufacturer standards.

MM NOI 4: All stationary construction equipment shall be located so that emitted noise is directed away from the residences to the north and west and from the Sycamore Canyon Wilderness Park to the west.

MM NOI 5: All construction equipment shall be shut off and not left to idle when not in use.

MM NOI 6: All equipment staging during all phases of construction shall be located in areas that will create the greatest distance between construction-related noise/vibration

sources and the residences to the north and west and the Sycamore Canyon Wilderness Park to the west.

MM NOI 7: The use of amplified music or sound is prohibited on the Project site during construction.

MM NOI 8: Haul truck deliveries shall be limited to the same hours specified for construction equipment.

MM NOI 9: It is acknowledged that some soil compression may be necessary along the Project boundaries; however, the use of heavy equipment or vibratory rollers and soil compressors along the Project site's north and western boundaries shall be limited to the greatest degree feasible.

MM NOI 10: Jackhammers, pneumatic equipment, and all other portable stationary noise sources shall be shielded and noise shall be directed away from the residences to the north and west and Sycamore Canyon Wilderness Park to the west.

MM NOI 11: For the duration of construction activities, the construction manager shall serve as the contact person should noise levels become disruptive to local residents. A sign shall be posted at the Project site with the contact phone number.

MM NOI 12: No blasting shall take place on the Project site.

Even with implementation of feasible mitigation measures **MM NOI 1** through **MM NOI 12**, which will reduce construction noise by approximately 10 dBA, Project-related construction activities will result in temporary and periodic exposure of persons to and generation of noise levels in excess of standards established in the Riverside Municipal Code at the time of the Notice of Preparation, which is considered a significant and unavoidable impact. (DEIR, p. 5.12-34.)

Noise levels from Project operation will not exceed the City's daytime residential exterior noise standard of 55 dBA L_{eq} at any of the residences adjacent to the Project site. (DEIR, p. 5.12-26, DEIR **Figure 5.12-5 – Operational Noise Levels (Leq) No Mitigation.**) To reduce noise from nighttime operations, the Project will implement mitigation measures **MM NOI 13** through **MM NOI 15** and **MM AQ 14**, below: (DEIR, p. 5.12-46.)

MM NOI 13: To reduce noise associated with the use of back-up alarms, either ambient-sensitive self-adjusting backup alarms or manually adjustable alarms shall be used on all equipment in use on the Project site that requires a backup alarm. Ambient-sensitive self-adjusting backup alarms increase or decrease their volume based on background noise levels. The alarm self-adjusts to produce a tone that is readily noticeable over ambient noise levels (a minimum increment of 5 decibels is typically considered readily noticeable), but not so loud as to be a constant annoyance to neighbors. Close attention shall be given to the alarm's mounting location on the

machine in order to minimize engine noise interference, which can be sensed by the alarm as the ambient noise level. These alarms shall be mounted as far to the rear of the machine as possible. An alarm mounted directly behind a machine radiator will sense the cooling fan's noise and adjust accordingly.

If manually-adjustable alarms are used, each alarm shall be set at the beginning of each day and night shift. The manual setting feature eliminates the machine mounting location problem of the ambient-sensitive self-adjustable backup alarms. Alternatively, back-up movements can be supervised with a guide and flagging system.

MM NOI 14: To reduce operational noise at the residences located west of the Project site, no trucks shall use the northern access road or regular sized vehicle sized parking areas at Building 2 for site access, parking, queuing, or idling.

MM NOI 15: A restriction of nighttime use between the hours of 10:00 PM to 7:00 AM shall be implemented for the portion of the loading area and trailer parking located just south of Building 2 and within 360 feet of the western property line as shown on **Figure 5.12-6 – Operational Noise Levels (L_{eq}) with Mitigation**.

MM AQ 14: Electrical hookups shall be installed at all loading docks to allow transport refrigeration units (TRUs) with electric standby capabilities to plug in when TRUs are in use. Trucks incapable of using the electrical hookups shall be prohibited from accessing the site as set forth in the lease agreement. The City shall verify electrical hookups have been installed prior to occupancy and shall confirm lease agreement language.

With implementation of mitigation measures **MM NOI 13** through **MM NOI 15**, and **MM AQ 14**, noise from nighttime operations at the Project site will be reduced to acceptable levels for all receptors except two residences located northwest of the Project site. Because these two residences are at a higher elevation than the Project site, a noise barrier as described in **MM NOI 16**, below, is required to reduce nighttime noise to below the City's nighttime noise standard of 45 dBA L_{eq} . (DEIR, pp. 5.12-26–5.12-28, 5.12-47, DEIR **Figure 5.12-6 – Operational Noise Levels (L_{eq}) with Mitigation**.)

MM NOI 16: Prior to finalization of building permit, the temporary 12-foot noise barrier shall be removed and the Project applicant shall work with City Design Review staff and the property owners of receptor location 3 (6063 Bannock) and receptor location 4 (6066 Cannich) to determine the design and materials for a noise barrier that is mutually acceptable to the Project Applicant, City Design Review staff, and the property owners. The noise barrier shall be ten-foot high installed at the top of the slope of the residential properties west of the Project site. The designed noise screening will only be accomplished if the barrier's weight is at least 3.5 pounds per square foot of face area without decorative cutouts or line-of-site openings between the shielded areas and the project site. Noise control barrier may be constructed using one, or any combination of the following materials: masonry block; stucco veneer over wood framing (or foam

core), or 1-inch thick tongue and groove wood of sufficient weight per square foot; glass (1/4 inch thick), or other transparent material with sufficient weight per square foot; or earthen berm.

Prior to the issuance of a Certificate of Occupancy for the Project, the Project applicant shall construct said noise barrier provided all of the property owners upon whose property the barrier is proposed to be constructed provide written authorization for such construction. The Project applicant shall provide written notice to the property owners of its intent to commence wall construction at least 90-days prior to the anticipated construction date. If all of the property owners do not authorize the construction of the wall in writing, including providing the applicant with all requisite legal access to the affected properties, within 60 days of applicant's written notice, the applicant shall instead pay to the property owners the equivalent cost to construct the wall, based on applicants good faith estimate. (DEIR, pp. 1-48-1-49, 5.12-47.)

With the installation of a ten-foot tall noise barrier at the two locations where the property owners will permit the noise barrier wall per mitigation measure **MM NOI 16**, operational noise will not exceed the City's nighttime noise standard of 45 dBA. However, because the noise barrier outlined in **MM NOI 16** would be on private property, the installation of this mitigation measure is dependent on the two-individual property owner authorizing the installation, not the Project Applicant. For this reason, impacts are significant and unavoidable with feasible mitigation and a Statement of Overriding Considerations will be required should the City choose to approve the Project. (DEIR, p. 5.12-48.)

This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Air Quality

The South Coast Air Quality Management District (SCAQMD) is responsible for monitoring air quality, as well as planning, implementing, and enforcing programs designed to attain and maintain state and federal ambient air quality standards. Accordingly, SCAQMD has developed regional thresholds that can be used to determine if a project will have significant air quality impacts. The Air Quality Report (AQ Report, Appendix B to the DEIR) modeled Project-related emissions and compared estimated emissions to the SCAQMD thresholds.

The Project's short-term emissions are below regional and localized thresholds. However, the Project's long-term Oxides of Nitrogen (NO_x) emissions of 339.39 lbs/day in the winter and 325.95 lbs/day in the summer will exceed the SCAQMD regional threshold of 55 lbs/day even after incorporation of Project design features and feasible mitigation measures **MM AQ 1** through **MM AQ 15**, **MM AQ 18**, and **MM AQ 19** as well as additional **MM AQ 22** through **MM AQ 25** (DEIR, p. 5.3-27). (DEIR, pp. 5.3-26, 5.3-30, 5.3-35-5.3-40.) Hence, regional air quality impacts from long-term operation are significant and unavoidable and the Project is considered to have a cumulatively considerable net increase on non-attainment pollutants in the region under applicable state and federal standards.

MM AQ 1: Solar or light-emitting diodes (LEDs) shall be installed for outdoor lighting. Prior to building permit issuance, the City shall verify building plans contain these features.

MM AQ 2: Indoor and outdoor lighting shall incorporate motion sensors to turn off fixtures when not in use. The site and buildings shall be designed to take advantage of daylight, such that use of daylight is an integral part of the lighting systems. Prior to building permit issuance, the City shall verify building plans contain these features.

MM AQ 3: Trees and landscaping shall be installed along the west and south exterior building walls to reduce energy use. Vegetative or man-made exterior wall shading devices or window treatments shall be provided for east, south, and west-facing walls with windows. Landscaping and/or building plans shall contain these features and are subject to City verification prior to building permit issuance.

MM AQ 4: Light colored “cool” roofs shall be installed over office area spaces and cool pavement shall be installed in parking areas. Prior to building permit issuance, the City shall verify building plans contain these features.

MM AQ 5: Energy efficient heating and cooling systems, appliances and equipment, and control systems that are Energy Star rated shall be installed in future office improvement plans. Refrigerants and heating, ventilation, and air conditioning (HVAC) equipment shall also be selected to minimize or eliminate the emission of compounds that contribute to ozone depletion and global warming. The efficiency of the building envelope shall also be increased (i.e., the barrier between conditioned and unconditioned spaces). This includes installation of insulation to minimize heat transfer and thermal bridging and to limit air leakage through the structure or within the heating and cooling distribution system to minimize energy consumption. The City shall verify tenant improvement plans include these features. The City shall verify these features are installed prior to issuance of occupancy permits.

MM AQ 6: Energy Star rated windows, space heating and cooling equipment, light fixtures, appliances, or other applicable electrical equipment shall be installed. Prior to building permit issuance, the City shall verify building plans contain these features.

MM AQ 7: All buildings shall be designed with “solar ready” roofs that can structurally accommodate future installation of rooftop solar panels. Prior to building permit issuance, the City shall verify roofs are “solar ready.” If future building operators are providing rooftop solar panels, they shall submit plans for solar panels to the City prior to occupancy.

MM AQ 8: The Project’s landscaping plans shall incorporate water-efficient landscaping, with a preference for xeriscape landscape palette. Landscaping plans shall be approved by the City prior to building permit issuance.

MM AQ 9: All building owners shall provide education about water conservation and available programs and incentives to building operators to distribute to employees.

MM AQ 10: Interior and exterior waste storage areas shall be provided for recyclables and green waste. Prior to occupancy permits, the City shall verify interior and exterior storage areas are provided for recyclables and green waste. The property operator will also provide readily available information provided by the City for employee education about reducing waste and available recycling services.

MM AQ 11: Up to three electric vehicle charging stations shall be provided to encourage the use of low or zero-emission vehicles. Prior to building permit issuance, the City shall verify building plans contain electric vehicle charging stations.

MM AQ 12: Adequate bicycle parking near building entrances shall be provided at the site. Facilities that encourage bicycle commuting (e.g., locked bicycle storage or covered or indoor bicycle parking) shall be provided. Prior to building permit issuance, the City shall verify building plans contain adequate bicycle parking.

To reduce vehicle idling time to three minutes, mitigation measures **MM AQ 13** will be revised in the FEIR as shown below.²

MM AQ 13: All facilities shall post signs informing users of requirements limiting idling to ~~three~~five minutes or less ~~in excess of pursuant to~~ Title 13 of the California Code of Regulations, Section 2485. The City shall verify signage has been installed prior to occupancy.

MM AQ 14: Electrical hookups shall be installed at all loading docks to allow transport refrigeration units (TRUs) with electric standby capabilities to plug in when TRUs are in use. Trucks incapable of using the electrical hookups shall be prohibited from accessing the site as set forth in the lease agreement. The City shall verify electrical hookups have been installed prior to occupancy and shall confirm lease agreement includes such language.

MM AQ 15: Service equipment (i.e., forklifts) used within the site shall be electric or compressed natural gas-powered.

MM AQ 18: Locally produced and/or manufactured building materials shall be used for at least 10% of the construction materials used for the Project. Verification shall be submitted to the City prior to issuance of a building permit.

MM AQ 19: “Green” building materials shall be used where feasible, such as those materials that are resource efficient and recycled and manufactured in an

² . Deletions are shown with strikethrough text (~~example text~~) and additions are shown with double underline text (example text).

environmentally friendly way. Verification of the feasibility or infeasibility of securing these materials shall be submitted to the City prior to issuance of a building permit.

To reduce vehicle idling time to three minutes, mitigation measures **MM AQ 22** will be revised in the FEIR as shown below.

MM AQ 22: The Project shall implement the following measures to reduce emissions from on-site heavy duty trucks within six months after operations commence:

- a) Post signs informing truck drivers about the health effects of diesel particulates, the requirement that CARB diesel idling times cannot exceed three minutes regulations, and the importance of being a good neighbor by not parking in residential areas.
- b) Tenants shall maintain records on its fleet equipment and vehicle engine maintenance to ensure that equipment and vehicles serving the building are in good condition, and in proper tune pursuant to manufacturer's specifications. The records shall be maintained on site and be made available for inspection by the City.
- cb) The facility operator will ensure that site enforcement staff in charge of keeping the daily log and monitoring for excess idling will be trained/certified in diesel health effects and technologies, for example, by requiring attendance at California Air Resources Board approved courses (such as the free, one-day Course #512).

Because the Project incorporates a design feature to require all medium- and heavy-duty trucks entering the Project site to meet or exceed 2010 engine emissions standards, **MM AQ 23** will be revised in the FEIR as shown below.

MM AQ 23: In order to promote alternative fuels, and help support "clean" truck fleets, the developer/successor-in-interest shall provide building occupants with information related to SCAQMD's Carl Moyer Program, or other such programs that promote truck retrofits or "clean" vehicles and information including, but not limited to, the health effect of diesel particulates, benefits of reduced idling time, CARB regulations, and importance of not parking in residential areas. ~~If trucks older than 2007 model year will be used at a facility, the developer/successor in interest shall require, within one year of signing a lease, future tenants to apply in good faith for funding for diesel truck replacement/retrofit through grant programs such as the Carl Moyer, Prop 1B, VIP, HVIP, and SOON funding programs, as identified on SCAQMD's website (<http://www.aqmd.gov>). Tenants will be required to use those funds, if awarded.~~

MM AQ 24: Any yard trucks used on-site to move trailers in or around the loading areas shall be electric in place of traditional diesel powered yard trucks.

MM AQ 25: The building operator shall provide signage or flyers that advise truck drivers of the closest restaurants, fueling stations, truck repair facilities, lodging, and entertainment. (DEIR, pp. 5.3-35–5.3-39.)

Therefore, the impact is considered significant and unavoidable and a Statement of Overriding Considerations will be required should the City choose to approve the Project. (DEIR, p. 5.3-40.)

SCAQMD has also developed localized significance thresholds (LSTs), which represent the maximum emissions from a project that would not cause or contribute to an exceedance of the most stringent applicable state or federal ambient air quality standards. Based on the air quality analysis prepared for this Project, neither the short-term construction nor long-term operation of the Project will exceed SCAQMD LST at sensitive receptors, such as the residences, within the Project vicinity for any criteria pollutants. (DEIR, p. 5.3-29.) The amount of pollution that would be released from the outside of the walls would be negligible.

This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Alternatives

The City has determined the alternatives presented in the EIR are adequate and suitable. Proposing an office building as the commenter suggested would not meet the Project objectives. This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Land Use

The City of Riverside General Plan 2025 (the GP 2025) designates the Project site as Business/Office Park (B/OP) and the site is zoned Business and Manufacturing Park and Sycamore Canyon Business Park Specific Plan Zones (BMP-SP). (DEIR, **Figure 3-4 – Land Use Designation Map**, DEIR **Figure 3-5 – Zoning Map**.) Development of the Project site is also guided by the City's SCBPSP, which was adopted in 1984 by the City in order to encourage and provide incentives for economic development in the area. The site is designated as Industrial in the SCBPSP. (DEIR, p. 3-14.)

The distribution center Project currently proposed at the site is consistent with the planned use at the site in both the GP 2025 and SCBPSP and would not be in conflict with these plans. This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Buffer

The western wall of Building 2 is located approximately 138 feet from the rear property line of the residences located northwest of the site. The Project proposes a 100-foot setback (64 feet of landscaping, a 30-foot wide drive aisle (vehicles only, no trucks) and an additional 6-foot wide landscape area) between Building 2 and the northern property line. (DEIR, p. 3-35, **DEIR Figure 3-10 – Proposed Site Plan**, **DEIR Figure 3-11 – Conceptual Landscape Plan**.) This

comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Consistency with City's GP 2025 Policies:

- *City Policy LU-8.2: Avoid density increases or intrusion of non-residential uses that are incompatible with existing neighborhoods.*

The Project would be consistent with the land use designations in the GP 2025 and the SCBPSP, and would not increase planned densities beyond what was considered and approved in those plans. The convergence of a Wilderness Area, Industrial Specific Plan, and a Residential Specific Plan in the Project area is the result of thirty years of complex circumstances and City planning efforts since the early 1980s. As discussed in DEIR Section 3.1.1 (Economic Revitalization Studies and Specific Plans in the Project Area), these factors and planning efforts include: the 1979 Amendment to the Air Installation Compatible Use Zones (AICUZ) report for March Air Force Base, the Southeast Study Report (adopted 1980), a conditional use permit for surface mining (CU-013-812, approved in 1982 and amended several times between 1982 and 1987, the SCBPSP (adopted April 1984), the Sycamore Highlands Specific Plan (adopted 1990), The Sycamore Canyon Wilderness Park Stephen's Kangaroo Rat Management Plan and Updated Conceptual Development Plan (March 1999), and the March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan (adopted November 2014. (DEIR, pp. 3-1–3-8.) Please also refer to the discussion under the subheadings "Land Use" and "Buffers" in Response to Comment 35-E. The compatibility of non-residential uses with residential neighborhoods can be achieved with correct design features, including the City's Good Neighbor Guidelines, of which the Project is consistent, as shown in Appendix M of the EIR. As such, the Project would be consistent with Policy LU-8.2.

- *City Policy N-1.8: Continue to consider noise concerns in evaluating all proposed development decisions and roadway projects.*

A noise impact analysis entitled, *Sycamore Canyon Business Park Warehouse Noise Impact Analysis* (the NIA), was prepared for the proposed Project and is included in DEIR Appendix I. The information in the DEIR Section 5.12 – Noise and the NIA provides the information needed by the City's decision makers to consider noise concerns in evaluating the proposed Project. (DEIR Appendix M, p. M-54.) Please also refer to the discussion under the subheading "Noise" in Response to Comment 35-E.. As such, the Project would be consistent with Policy N-1.8.

- *City Policy AQ-1.3: Separate, buffer, and protect sensitive receptors from significant sources of pollution to the greatest extent possible.*

As stated in DEIR Appendix M, this is a municipal measure that is not directly applicable to the Project. (DEIR Appendix M, p. M-59.) In accordance with the City's Good Neighbor Guidelines, because since residences will be located within 1,000 feet from the proposed Project, a Health Risk Assessment (HRA) was prepared in June 2016

(included in Appendix B of the DEIR) and a refined HRA was prepared in November 2016 (included as Attachment A.1 of the Final EIR) to evaluate cancer and non-cancer risks associated with the proposed Project. The November HRA was prepared in response to comments received from SCAQMD on the DEIR regarding the June HRA, and is consistent with the requested SCAQMD guidance and methodology. Subsequently, on December 23, 2016, SCAQMD prepared a letter requesting updated modeling (hereinafter referred to as the “New Modeling”). The New Modeling was prepared following the SCAQMD guidance and the results documented in a January 9, 2017 letter responding to the December 23, 2016 SCAQMD letter (included as Attachment A.2 to the FEIR). According to the June Screening HRA, the November Refined HRA, and the New Modeling, none of the SCAQMD cancer or non-cancer thresholds are exceeded as a result of Project construction or operation for either workers or residents within the Project site and vicinity. (DEIR, p. 5.3-34, FEIR Attachment A.1, FEIR Attachment B.2.) As such, the Project would be consistent with Policy AQ-1.3. In fact, the estimated maximum cancer risk reduced from 5.3 in one million as reported in the June HRA (DEIR, **Table 5.3-J**) to 4.87 in one million in the vicinity of the Project as a result of the New Modeling. The New Modeling was transmitted to SCAQMD for review on January 9, 2017. On January 18, 2017, SCAQMD transmitted an email to the City indicating they have no further comments on the HRA analysis.

- *City Policy AQ-1.1: Ensure that all land use decisions, including enforcement actions, are made in an equitable fashion to protect residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status or geographic location, from the health effects of air pollution.*

As stated in DEIR Appendix M, this is a municipal measure that is not directly applicable to the Project. (DEIR Appendix M, p. M-58.) Nevertheless, the Project site is designated for Light Industrial in the GP 2025 and the proposed Project is consistent with this designation. (DEIR Appendix M, p. M-28; Refer to Response to Comment 35-E for a discussion regarding air quality and HRA. In accordance with State CEQA Guidelines Section 15093, if the agency determines that significant impacts cannot be reduced to less than significant, the lead agency must assess whether the benefits of the proposed Project outweigh unmitigated significant environmental effects, and the agency will be required to adopt a statement of overriding considerations stating the reasons supporting their action notwithstanding the proposed Project’s significant environmental effects.

The public will have an opportunity to comment on the merits of the Project itself at a Planning Commission hearing and at a City Council hearing. Notice of the Planning Commission and City Council hearings on this Project will be published at least 10 days prior to the hearing date in accordance with relevant provisions of the Government Code. The agenda for Planning Commission and City Council hearings can be found

at: <http://riversideca.legistar.com/Calendar.aspx>. As such, the Project would be consistent with Policy AQ-1.1.

The New Modeling does not constitute significant new information that would require recirculation of the DEIR pursuant to CEQA Guidelines, § 15088.5 because there are no new significant impacts identified. In-fact, there is a reduction in the impacts as a result of additional analysis performed at the request of and in accordance with SCAQMD Guidance. Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 35-F:

GP 2025 Policy AQ-8.6 states:

Promote Riverside as a Solar City through the implementation of programs for residential and commercial customers that will increase solar generation in the City to 1 MW by 2015 (enough for 1,000 homes) and 3 MW by 2020. (GP 2025, p. AQ-38.)

The City's Public Utilities Department has exceeded the 3 MW goal set forth in Policy AQ 8-6. In addition to a 20.70 kilowatt (kW) system at the City's wastewater treatment facility on Acorn Street and a 19.20 kW facility at the Marcy Branch Library,³ Riverside Public Utilities recently completed a 7.5 MW solar facility on the Tequesquite landfill. (DEIR, p. 7-1.) Thus, the proposed Project does not need to include a rooftop solar panel energy system in order for the City to achieve the goals set for in policy AQ-8.6. Nonetheless, the Project includes a design feature to provide "solar-ready" roofs to accommodate installation of rooftop solar panels by future building tenants. Building operators providing rooftop solar panels will submit plans for solar panels prior to occupancy. (DEIR, pp. 1-23, 3-41, 5.3-21, 5.3-36, 5.7-32, 6-37, 7-13.) This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 35-G:

Your comments and these responses have been incorporated into the Final EIR. In addition, your contact information has been included in the distribution list for further information. This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

³ Source: City of Riverside Public Utilities, News Release, *Riverside Solar Projects Now Generating Over 3 Megawatts*, May 3, 2011. (Available at <http://www.riversidepublicutilities.com/news-display.asp?newsid=274>, accessed June 22, 2016.)

Comment Letter 36 – South Coast Air Quality Management District

36



South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

SENT VIA E-MAIL AND USPS:
pbrenes@riversideca.gov

October 5, 2016

Ms. Patricia Brenes, Principal Planner
City of Riverside – Planning Division
3900 Main St., 3rd Floor
Riverside, CA 92522

**Draft Environmental Impact Report (DEIR) for the Proposed
Sycamore Canyon Business Park Buildings 1 and 2 Project**

The South Coast Air Quality Management District (SCAQMD) appreciates the opportunity to comment on the above-mentioned document. The following comments are meant as guidance for the Lead Agency and should be incorporated into the Final EIR.

36-A

In the project description, the Lead Agency proposes the construction of two buildings for warehouse distribution and office space uses totaling approximately 1,433,599 square feet on an 80 acre site. Based on the Project's traffic study, the Project will result in 917 daily trucks operating at the site. In the Air Quality Section, the Lead Agency quantified the project's construction and operation air quality impacts and has compared those impacts with the SCAQMD's recommended regional and localized daily significance thresholds. Based on its analyses, the Lead Agency has determined that operational air quality impacts will exceed the recommended regional daily significance threshold for NOx.

On August 28, 2015, SCAQMD staff provided comments to the Lead Agency on the Notice of Preparation, which included guidance and recommendations on performing a Health Risk Assessment (HRA). However, in the DEIR, the HRA did not follow the SCAQMD's recommended methodology and SCAQMD staff has concerns that the HRA underestimated emissions and health risks to the surrounding residents. Additionally, since the proposed project will result in significant NOx impacts, all feasible mitigation measures should be included in the Final EIR to further reduce the significant impacts. Details are included in the attachment.

36-B

Pursuant to Public Resources Code Section 21092.5, SCAQMD staff requests that the Lead Agency provide the SCAQMD with written responses to all comments contained herein prior to the adoption of the Final EIR. The SCAQMD staff is available to work with the Lead Agency to address these issues and any other air quality questions that may arise. Please contact Gordon Mize, Air Quality Specialist CEQA Section, at (909) 396-3302, if you have any questions regarding the enclosed comments.

36-C

Sincerely,

Jillian Wong

Jillian Wong, Ph.D.
Planning and Rules Manager
Planning, Rule Development & Area Sources

Attachment
JW:GM:JC
RVC160811-02
Control Number

Patricia Brenes

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Attachment

Health Risk Assessment (HRA) and Localized Significance Threshold (LST) Analysis

- | | |
|--|------|
| 1. As indicated in our comment letter on the Notice of Preparation/Initial Study dated August 28, 2015, SCAQMD recommends the Lead Agency revise the HRA by using the guidance provided in the <i>Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis</i> :
http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis . | 36-D |
| 2. The Lead Agency used AERSCREEN (version 15181) to conduct a screening level health risk assessment and stated that the assessment is conservative. However, a screening level assessment is inappropriate here and likely not conservative due to the modeling complexity of the proposed project (idling at loading bays, on-site travel, and truck routes) and the location of sensitive receptors. AERSCREEN is intended for a single emission source and not for multiple emission sources. The proposed project has several non-uniform emissions throughout the site that should not be generalized as a single volume source. SCAQMD staff recommends using AERMOD to properly model individual emission sources, discrete receptor locations, wind data, and terrain data. | 36-E |
| 3. The Lead Agency used a single 8.92 acre volume source placed in the center of the site to represent all project emissions. However, truck idling, on-site travel, and truck route emissions should be modeled as separate emission sources with individual emission rates to accurately reflect the emission profile of the proposed project. The SCAQMD staff recommends using multiple line sources or smaller volume sources as well as specific emission rates to represent loading docks and travel routes. Receptors should also be placed along the fence line to estimate risks to the adjacent sensitive receptors. Due to the proximity of adjacent sensitive receptors, care should be taken to ensure that no receptors are placed within the volume source exclusion zone. | 36-F |
| 4. The Lead Agency used an average composite distance (450 meters) to determine emission concentrations at receptor locations. The average composite distance was derived by averaging the distances from the centroid of each volume source (eight zones) to the closest sensitive receptor of each zone. The composite distance is not conservative and underestimates impacts to receptors closest to the proposed project (residential receptors immediately adjacent to the north and west). The proposed site plan indicates that truck loading docks are located along the western edge of the project site and closer to receptors than the average composite distance. Furthermore, the average composite distance and methodology used is inconsistent with the <i>Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis</i> and does not accurately represent the proposed project. SCAQMD staff recommends that the Lead Agency revise the model and health risks using the recommended guidelines. | 36-G |
| 5. On-site Heavy Duty Truck emissions were based on CalEEMod's operational emission calculations. CalEEMod uses emissions data from aggregated vehicle speeds typically found on highway travel. The HRA does not account for vehicles idling or traveling at low speeds, which generate greater emissions and therefore underestimates health risks. SCAQMD staff recommends incorporating 15 minutes idling and on-site travel (low speed travel – 5-10 mph) emissions into the revised HRA and recalculate the health risks. | 36-H |
| 6. The Lead Agency failed to include emissions from truck routes along local roads in the HRA, which underestimates health risk impacts. Roadways used by project-generated trucks should be modeled from the project site to where the trucks enter the freeway. SCAQMD staff recommends revising the HRA to include roadways used for truck travel. | 36-I |

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Mobile Source Operational Mitigation Measures

7. Because the Lead Agency has determined that operational emissions exceed the SCAQMD recommended level of significance for Oxides of Nitrogen (NOx), mainly from truck operations, SCAQMD staff recommends the following mitigation measures in addition to the measures included in the Draft EIR starting on page 5.3-35 in order to reduce these significant operational impacts:

36-J

Recommended additions – Truck Activities

36-K

- Trucks that can operate at least partially on electricity have the ability to substantially reduce the significant NOx impacts from this project. Further, trucks that run at least partially on electricity are projected to become available during the life of the project as discussed in the 2012 and 2016 Regional Transportation Plan. It is important to make this electrical infrastructure available when the project is built so that it is ready when this technology becomes commercially available. The cost of installing electrical charging equipment onsite is significantly cheaper if completed when the project is built compared to retrofitting an existing building. Therefore, the SCAQMD staff recommends the Lead Agency require the proposed warehouse and other plan areas that allow truck parking to be constructed with the appropriate infrastructure to facilitate sufficient electric charging for trucks to plug-in.
- Consistent with the advisory recommendations from the California Air Resources Board's Land Use Handbook^[1] provide minimum buffer zone of 1,000 feet between truck traffic and sensitive receptors if significant health risk impacts are determined by a project specific HRA.
- Limit the daily number of trucks allowed at each facility to levels analyzed in the Final SEIR. If higher daily truck volumes are anticipated to visit the site, the Lead Agency should commit to re-evaluating the project through CEQA prior to allowing this higher activity level.
- Similar to the City of Los Angeles requirements for all new projects, the SCAQMD staff recommends that the Lead Agency require at least 5% of all vehicle parking spaces (including for trucks) include EV charging stations^[2].
- Have truck routes clearly marked with trailblazer signs, so trucks will not enter residential areas or restricted routes.

^[1] CARB Air Quality and Land Use Handbook, April 2005, Page 4. <http://www.aqmd.gov/docs/default-source/ceqa/handbook/california-air-resources-board-air-quality-and-land-use-handbook-a-community-health-perspective.pdf>

^[2] http://ladbs.org/LADBSWeb/LADBS_Forms/Publications/LAGreenBuildingCodeOrdinance.pdf.

Response to Comment Letter 36 – SCAQMD (Jillian Wong)

Response to Comment 36-A:

The City appreciates the South Coast Air Quality Management District's (SCAQMD's) review of the Draft Environmental Impact Report (DEIR). The comment offers introductory remarks and describes the Project. Comment noted. This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 36-B:

The comment expresses concern over the preparation of the Screening Health Risk Assessment (HRA) prepared in June 2016 and included as Appendix B to the DEIR. The comment suggests that since the June Screening HRA did not follow the SCAQMD's recommended methodology, SCAQMD staff has concerns that the June Screening HRA underestimated emissions and health risks to the surrounding residents. The comment also requests that all feasible mitigation measures should be included in the Final Environmental Impact Report to further reduce significant NO_x impacts based on details included in the comment letter's attachment. Per SCAQMD's comments, a Refined HRA to evaluate cancer and non-cancer risks associated with the proposed Project was prepared in November 2016 (included as Attachment A.1 to the FEIR) and submitted to SCAQMD on November 9, 2016 for review. The November Refined HRA is consistent with the requested SCAQMD guidance and methodology. In both the June Screening HRA and the November Refined HRA, none of the SCAQMD cancer or non-cancer thresholds are exceeded as a result of Project operation for either workers or residents within the Project site and vicinity. (DEIR, p. 5.3-34.) The comments are noted, and comments on the HRA methodology and the recommended mitigation, representing all feasible mitigation measures, will be addressed in the response to the attachment's comments below.

This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 36-C:

Comment noted. Pursuant to Section 21092.5 of the California Public Resources Code, the City will provide a written response to the SCAQMD at least 10 days prior to certifying the Final EIR.

This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 36-D:

Pursuant to SCAQMD's comments, a Refined HRA was prepared in November 2016 (included as Attachment A.1 to the FEIR) and is consistent with the requested SCAQMD guidance and methodology. The November Refined HRA was submitted to SCAQMD on November 9, 2016, for review. This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 36-E:

Pursuant to SCAQMD's comments, a Refined HRA was prepared in November 2016 (included as Attachment A.1 to the FEIR) and is consistent with the requested SCAQMD guidance and methodology. This November Refined HRA was submitted to SCAQMD on November 9, 2016, for review. The November Refined HRA was prepared using AERMOD, as recommended by SCAQMD staff to properly model individual emission sources, discrete receptor locations, wind data, and terrain data. Vehicle diesel particulate matter (DPM) emissions were estimated using emission factors for PM-10 generated with the 2014 version of the Emission Factor model (EMFAC) developed by the Air Resources Board (FEIR Attachment A.1, p. 12). The EMFAC model was run for speeds traveled near the Project, which represent conservative assumptions because lower speeds result in higher emission rates. Each roadway was modeled as a line source (made up of multiple adjacent volume sources) and the DPM emission rate for each volume source was calculated by multiplying the emission factor by the number of trips and the distance traveled along each roadway segment and dividing the result by the number of volume sources along that roadway. (FEIR Attachment A.1, p. 14.)

This comment does not identify any significant new environmental issues or impacts that were not already discussed in the DEIR.

Response to Comment 36-F:

Pursuant to SCAQMD's comments, a Refined HRA was prepared in November 2016 (included as Attachment A.1 to the FEIR) and is consistent with the requested SCAQMD guidance and methodology. The November Refined HRA was submitted to SCAQMD on November 9, 2016, for review.

Response to Comment 36-G:

Pursuant to SCAQMD's comments, a refined HRA was prepared in November 2016 (included as Attachment A.1 to the FEIR) and is consistent with the requested SCAQMD guidance and methodology. The November Refined HRA was submitted to SCAQMD on November 9, 2016, for review.

Response to Comment 36-H:

Pursuant to SCAQMD's comments, a Refined HRA was prepared in November 2016 (included as Attachment A.1 to the FEIR) and is consistent with the requested SCAQMD guidance and methodology. The November Refined HRA was submitted to SCAQMD on November 9, 2016, for review.

Response to Comment 36-I:

Pursuant to SCAQMD's comments, a Refined HRA was prepared in November 2016 (included as Attachment A.1 to the FEIR) and is consistent with the requested SCAQMD guidance and methodology. The November Refined HRA was submitted to SCAQMD on November 9, 2016, for review.

Response to Comment 36-J:

Comment noted. This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 36-K:

The comment recommends additional mitigation to reduce significant operational impacts. Each of the recommended mitigation is listed and discussed below:

Recommended Mitigation No. 1.: Trucks that can operate at least partially on electricity have the ability to substantially reduce the significant NOx impacts from this project. Further, trucks that run at least partially on electricity are projected to become available during the life of the project as discussed in the 2012 and 2016 Regional Transportation Plan. It is important to make this electrical infrastructure available when the project is built so that it is ready when this technology becomes commercially available. The cost of installing electrical charging equipment onsite is significantly cheaper if completed when the project is built compared to retrofitting an existing building. Therefore, the SCAQMD staff recommends the Lead Agency require the proposed warehouse and other plan areas that allow truck parking to be constructed with the appropriate infrastructure to facilitate sufficient electric charging for trucks to plug-in.

This recommendation suggests allowing truck parking to be constructed with the appropriate infrastructure to facilitate sufficient electric charging for trucks that run at least partially on electricity to plug-in. Although the Project involves a spec building, there is a possibility that the future logistics center tenant will require refrigeration/freezing capability and storage use. If so, Project compliance with mitigation measure **MM AQ 14** will ensure that electrical infrastructure will be in place.

As outlined in Section 5.3 of the DEIR, per **MM AQ 14**, (listed below) electrical hookups shall be installed at all loading docks to allow transport refrigeration units (TRUs) with electric standby capabilities to plug in when TRUs are in use. (DEIR, p. 5.3-37.) Therefore, electrical infrastructure will be in place at the loading docks.

MM AQ 14: Electrical hookups shall be installed at all loading docks to allow transport refrigeration units (TRUs) with electric standby capabilities to plug in when TRUs are in use. Trucks incapable of using the electrical hookups shall be prohibited from accessing the site as set forth in the lease agreement. The City shall verify electrical hookups have been installed prior to occupancy and shall confirm lease agreement includes such language.

Recommended Mitigation No. 2.: Consistent with the advisory recommendations from the California Air Resources Board's Land Use Handbook^[1] provide minimum buffer zone of 1,000 feet between truck traffic and sensitive receptors if significant health risk impacts are determined by a project specific HRA.

This recommendation suggests providing a minimum buffer zone of 1,000 feet between truck traffic and sensitive receptors if significant health risk impacts are determined by a project specific HRA. According to CARB's *Air Quality and Land Use Handbook*, CARB recommends to avoid the placement of new sensitive land uses within 1,000 feet of a distribution center (accommodating more than 100 trucks per day, 40 trucks with transport refrigeration units (TRUs), or where TRUs operate more than 300 hours a week) and to take into account the configuration of existing distribution centers and avoid locating residences and other sensitive land uses near entry and exit points. However, these are recommendations, not mandates, and land use decisions ultimately lie with the local agency which needs to balance other considerations. (DEIR, p. 5.3-18.) Since the Project involves the construction of a logistics center approximately 100 feet (30 meters) from the nearest sensitive receptor, a more detailed Screening HRA was prepared in 2016 for the Project (included in Appendix B of the DEIR) and a refined HRA was prepared in November 2016 to address the SCAQMD comments (included as Attachment A.1 to the FEIR). The refined HRA is consistent with the requested SCAQMD guidance and methodology. According to both the June Screening HRA and Refined November HRA, none of the cancer or non-cancer thresholds will be exceeded as a result of Project construction or operation for workers or residents within the proposed Project vicinity. Therefore, the Project will not result in the exposure of sensitive receptors to substantial pollutant concentrations during Project construction or operation. (DEIR, p. 5.3-34.)

CARB's guidance, on page 5 of the handbook, acknowledges that the recommendations are in fact advisory, and "to determine the actual risk near a particular facility, a site-specific analysis would be required. Risk from diesel PM will decrease over time as cleaner technology phases in." The handbook further goes on to state that "these recommendations are designed to fill a gap where information about existing facilities may not be readily available and are not designed to substitute for more specific information if it exists." Therefore, the FEIR and underlying technical study is actually consistent with the CARB handbook. The FEIR includes a site-specific health risk assessment based on the geospatial location of the proposed development and existing sensitive land uses in the vicinity of the Project site and the truck travel routes that are expected to be utilized. As shown in the FEIR, the Project would not pose a significant health risk associated with diesel particulate matter (DPM) to sensitive receptors in the Project vicinity.

As stated previously, the CARB recommends, but does not mandate, that new sensitive land uses should not be placed within 1,000 feet of a distribution center. As discussed in Section 5.10 – Land Use and Planning of the DEIR, the Project is consistent with both the existing land use designation in the GP 2025 and SCBPSP. Furthermore, Appendix M of the DEIR identifies applicable City of Riverside General Plan 2025 objectives and policies and the Project's consistency level with those objectives and policies. The Project was found to be consistent with the General Plan Air Quality Element Objectives and Policies. (DEIR Appendix M, pp. M-58-65.)

Recommended Mitigation No. 3: Limit the daily number of trucks allowed at each facility to levels analyzed in the Final SEIR. If higher daily truck volumes are anticipated

to visit the site, the Lead Agency should commit to reevaluating the project through CEQA prior to allowing this higher activity level.

This recommendation suggests limiting the daily number of trucks allowed at each facility to levels analyzed in the Final EIR. According to Section 5.16 of the DEIR, approximately 917 daily truck trips are anticipated. (DEIR, p. 5.16-28.) It is not feasible to limit the number of trucks allowed at each facility since the Project is a “spec” building and does not have any known tenants. Future tenants are unknown, as are the vendors of future tenants, and it is also unknown if these future tenants would have any control over the number of trucks servicing the businesses.

Recommended Mitigation No. 4: Similar to the City of Los Angeles requirements for all new projects, the SCAQMD staff recommends that the Lead Agency require at least 5% of all vehicle parking spaces (including for trucks) include EV charging stations.

This recommendation suggests the requirement of at least 5 percent of all vehicle parking spaces (including for trucks) to include EV charging stations, similar to the City of Los Angeles requirements for all new projects. Per **MM AQ 11** (listed below), up to three electric vehicle charging stations shall be provided to encourage the use of low or zero-emission vehicles. Additionally, per **MM AQ 14** (listed previously) electrical hookups shall be installed at all loading docks to allow transport refrigeration units (TRUs) with electric standby capabilities to plug in when TRUs are in use. (DEIR, p. 5.3-37) Therefore, electrical infrastructure will be in place at the loading docks and in parking lots.

MM AQ 11: Up to three electric vehicle charging stations shall be provided to encourage the use of low or zero-emission vehicles. Prior to building permit issuance, the City shall verify building plans contain electric vehicle charging stations.

The City of Los Angeles and the City of Riverside have differing requirements for new projects based on their respective municipal codes and conditions within the cities. It is not reasonable to assume that the need and conditions requiring 5 percent of all vehicle parking spaces (including for trucks) to include EV charging stations in Los Angeles applies to the City of Riverside. The City of Los Angeles and City of Riverside differ greatly in their parking availability. Additionally, unlike the City of Riverside, the City of Los Angeles does not have the land availability to build a project of this size. Therefore, requiring 5 percent of all vehicle parking spaces (including for trucks) to include EV charging stations is not a feasible mitigation measure.

Recommended Mitigation No. 5: Have truck routes clearly marked with trailblazer signs, so trucks will not enter residential areas or restricted routes.

This last recommendation suggests having truck routes clearly marked with trailblazer signs so trucks will not enter residential areas or restricted routes. The City does not have designated truck routes, and the Project Applicant is not responsible for establishing these routes. Nonetheless, Chapter 10.56 of the Riverside Municipal Code prohibits commercial vehicles

over 10,000 pounds from traveling on Fair Isle Drive, Lochmoor Drive, and Sycamore Canyon Boulevard, between El Cerrito Drive and University Drive.

The Project has an established connection between the Project site and the freeways in that the Project site is accessed from Sycamore Canyon Boulevard, a 4-lane divided major arterial. Further, the “urban intersect” as described in the Sycamore Canyon Business Park Specific Plan at the Interstate 215 and Eastridge Avenue has since been constructed, allowing for a direct connection to Interstate 215. (DEIR Appendix M, p. M-70.)

Additionally, as discussed in Section 5.16.4 of the DEIR, the Project will limit passenger car and truck egress onto Dan Kipper Drive by posting signs at all Project driveways that state “right-turn only” onto Lance Drive. In addition to signage, traffic delineators (pork chops) will be placed at the all three driveways which will direct only right-turns onto Lance Drive. This will force both outbound (i.e. leaving the Project site) passenger cars and trucks to turn south onto Lance Drive to Sierra Ridge Drive and then east on Sierra Ridge Drive to Sycamore Canyon Boulevard. (DEIR, p. 5.16-26.)

The City has imposed all feasible mitigation measures that would substantially reduce the proposed Project’s potentially significant impacts. Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

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Response to Comment Letter 37 – Johnson & Sedlack

Note: The two exhibits attached to this letter follow the responses.

37

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VIA E-MAIL and U.S. MAIL

October 7, 2016

City of Riverside
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To the City of Riverside:

On behalf of the Sycamore Highlands Community Action Group, a group of local residents, I submit these comments regarding the Draft Environmental Impact Report ("DEIR") for the Sycamore Canyon Business Park Buildings 1 and 2 Project ("the Project").

The Project proposes the construction of two industrial warehouse buildings within the Sycamore Canyon Business Park: Building 1 will be approximately 1,002,995 square feet in size; Building 2 will be approximately 362,174 square feet in size. Combined, the buildings propose up to 1,355,169 square feet of logistics space, approximately 20,000 square feet of office space, 589 parking stalls and 342 trailer stalls. The Project site is immediately adjacent to existing single-family homes in Riverside's established Sycamore Highlands community, and it is adjacent to the Sycamore Canyon Wilderness Park, which is also a habitat area under the Western Riverside County Multiple Species Habitat Conservation Plan ("MSHCP"). In fact, the wall of Building 2 will be located 100 feet from the property line of residences to the north of the Project site. As a result of siting a large industrial-type building that will generate substantial truck traffic immediately adjacent to sensitive receptors, residents are deeply concerned that this Project will bring permanent air quality, noise, and other adverse impacts to their community, and that the Project will compound the adverse effects of existing warehouse projects in the immediate area.

Regarding the DEIR, for the reasons set forth below, additional analysis and further mitigation is required in accordance with the California Environmental Quality Act ("CEQA").

37-A

Page 2

1) Project Description

CEQA requires that an EIR contain a description of the proposed project, and that the description be accurate and complete. The DEIR fails to accurately and completely define the Project including with respect to Building 2. The Project Objectives state that Building 2 will be for the “operation of a use consistent with those uses permitted in the Business Manufacturing Park Zone.” The DEIR’s Project Description states that Building 2 will be built for “logistics/industrial” use. The lack of certainty as to the intended use or purpose of Building 2 prevents meaningful analysis and evaluation of Project impacts. 37-B

Also, the Project Description and Executive Summary state that 917 daily truck trips are anticipated (p. 3-43, p.1-7). The Project Description and Executive Summary should be revised to include that the *total* number of daily trips is anticipated to be 2,409 (2,686 pce) (DEIR, p. 5.16-27–29). 37-C

2) Aesthetic Impacts

The Project site is currently vacant and contains hilly land that is primarily undisturbed. A USGS blue line stream with dense riparian vegetation runs through the central areas of the site. The site is immediately adjacent to the Sycamore Canyon Wilderness Park to the west. The site photos indicate that current views across the Project site from adjacent residences are unobstructed. The Project proposes to cover the site with buildings, parking areas and infrastructure, while reserving a very narrow portion for a biological “Mitigation Area” and a separate area for a public trail/Fire Access area. Contrary to the DEIR’s conclusions, the radical and irreversible changes to the physical landscape due the Project represent significant aesthetic impacts. 37-D

More specifically, Building 1 will be located 256 feet from the Sycamore Canyon Wilderness Park. Despite on-site landscaping, Building 1 will be visible from users of the Wilderness Park (p. 3-35). The impact is also significant because the Wilderness Park is considered one of the City’s “notable scenic vistas.” In total, the Project replaces a vacant and natural area with two large industrial buildings, thus fundamentally altering the visual setting. The DEIR also indicates that Building 1 will be visible from westerly residences (“Building 1 is located downslope from and south of Building 2 and is not expected to be visible from the residential area *to the north*” p. 5.1-8 [emphasis added]). There is the claim that views of Building 1 from westerly residences will be “softened” by landscaping but this does not provide assurance that views of Building 1 will be lessened below significance thresholds (*id.*). 37-E

With respect to Building 2, the DEIR describes that the northern *wall* will be located just 100 feet south of the residential lots north of the Project site. The DEIR states there will 37-F

Page 3

be 64 feet of landscaping, a 30-foot wide drive aisle and an additional 6-foot wide landscape area between the drive aisle and the building. Nevertheless, the monolithic, 40-foot wall of Building 2 will be visible from northern residences, thus representing a significant adverse change to the existing visual environment. The rendering of the "North Elevation" (Figure 3-12b) evidences significant visual impacts insofar as the view from northern residences will be of a long, flat, high wall *where none presently exists*. The attached photos (Exhibit "A") show recently constructed warehouses located approximately 100 feet from existing homes. ↑ 37-F

With respect to westerly residences, the DEIR acknowledges that these homes have a "direct view of the Project site from backyards." (Figure 5.1-1) The DEIR speculates that "at maturity" landscaping will block views of Buildings 1 and 2 from westerly homes (pp. 3-35 – 36)¹. However, given the size of Building 2, this cannot be accurate. At a minimum, impacts are significant in the *short-term* until such time that landscaping reaches maturity. 37-G

The DEIR's visual simulations confirm significant visual impacts. Figures 5.1-2a, - 2b, - 2c show that views of a rolling field are replaced with that of expansive, high wall(s). Also the visual simulations depict mature landscaping, meaning that visual impacts will be much greater unless and until the landscaping reaches maturity (approximately 15 years for many species). Also, while Table 5.1-A refers to a number of cross sections these do not appear in the DEIR (*i.e.*, E-E, F-F, H-H, J-J and K-K). Also, Figures 3-13a and 3-13b are difficult to read, and in fact, it appears the DEIR mistakenly references 3-14a and 3-14b at p. 3-35, when the document intends to refer to Figures 3-13a and 3-13b. 37-H

Furthermore, the extent of Project impacts is not even known at this time. The DEIR notes that landscape plans will have to be *redesigned* to address the fact that trees are proposed within the trail and the Fire Access/Parks Maintenance Road. The DEIR discloses that further changes to Project plans are necessary to address aesthetic impacts insofar as it states that the west elevation of Building 1 "will be readily visible from the residences to the northwest and as such warrants more articulation." (p. 5.1-9) Similarly with respect to Building 2, the EIR states "the north elevation is immediately adjacent to residences to the north needs to be articulated in the same manner as the front elevation." *Id.* All together, there is a need for further analysis and mitigation. 37-I

In fact, proposed mitigation is uncertain and ineffective. MM AES -1 does not mitigate impacts where, logically, an 8-foot tall wall along the Project's northern property line ↓ 37-J

¹ It is difficult from the DEIR to determine from which homes the "views" are supposed to be depicting; it is safe to assume that this was a best case scenario (from a westernmost home on Sutherland Drive) rather than depicting views from a home on the eastern side of Sutherland Drive, since Sutherland drops in elevation from west to east while the warehouse building would retain the same elevation.

Page 4

will not shield or even screen the view of Building 2's nearly 40-foot wall(s). MM AES-2 indicates that fencing of some sort may be constructed but this does nothing to minimize views of buildings and largely seems irrelevant. MM AES-3 relates to the developer's option to build a fence along the edge of the trail on the north side of the property, which does nothing to address impacts as to views from neighboring residences. MM AES 4, 5, 6 and 7 represent deferred mitigation and do not appear to be related to addressing the Project's visual impacts relative to adjacent residences. Also, MM AES-7 may affect whether Project landscaping can adequately screen Project buildings. MM AES 9 also represents uncertain and deferred mitigation. Thus, apart from the (ineffective) 8-foot wall, there are no measures designed to lessen impacts to views from northerly and westerly residences. The alleged fact that the wall will create a "better visual appearance" is not adequate mitigation for fundamental changes to the visual landscape.

37-J
cont'd

Changes to the site's topography are proposed through the Project's grading plan. In westerly areas, the slopes on the Project site are quite steep yet substantial grading is proposed in this area (*see* Figure 3-9). Impacts due to landform alteration have not been evaluated.

37-K

Finally, lighting should be limited to 1-foot candle unless there is a specific need for more intense lighting, such as security lighting in specific areas. The DEIR states that lighting is limited to a "maximum of ten-foot candles." Also, light poles should be limited to 15 feet.

37-L

3) Air Quality Impacts

The Project sites industrial warehouse distribution facilities in close proximity to homes, and in particular Building 2 is within 100 feet of homes. There is no justification for locating a major source of pollution practically in the backyards of residences. It is widely accepted that exposure to significant concentrations of air pollution can cause a host of health problems including respiratory diseases and cancer, and that children are particularly susceptible to the harmful effects of air pollution. This is why the California Air Resources Board's "*Air Quality and Land Use Handbook: A Community Health Perspective (2005)*" recommends that distribution centers like the proposed Project should not be within 1000 feet of residences. How can this Project be reconciled with the recommendation from the State's authority on air quality? The DEIR lists that one "Project Objective" is to "enable trucks servicing the site to achieve a minimum of two roundtrips per day." Thus it is an actual *objective to maximize* truck trips. Unfortunately, because of the Project's *location*, the community will pay the price for the Project's alleged efficiency.

37-M

Page 5

According to the DEIR, the Project will exceed the threshold for NOx. Specifically, the Project will generate 338 lbs/per day of NOx which is roughly *six times* the SCAQMD threshold of 55 lbs/day. Astoundingly, the DEIR proposes virtually no mitigation aimed at reducing operational air quality impacts relating to diesel emissions, a significant source of NOx. The air quality study (DEIR, Appendix B) confirms that the Project's operational NOx emissions are unchanged between the mitigated and unmitigated scenario. However, since the exposure to diesel can increase the incidence of diseases and deteriorate the quality of life additional mitigation is warranted.

37-N

Additional mitigation would include a lease requirement *requiring* owners/tenants to mandate the use of cleaner trucks by operators. The City as the lead agency for CEQA compliance should investigate such a measure. As written, MM AQ 23 states that if trucks older than 2007 model year will be used that future tenants shall apply in good-faith for funding for diesel truck replacement/retrofit through grant programs. This measure falls well short of guaranteeing that cleaner trucks will be used. Moreover, because the Project will involve the operation of drayage trucks (*i.e.*, trucks transporting goods to or from the Ports of Los Angeles and Long Beach), MM AQ 23 may be largely irrelevant². Feasible mitigation would include *requiring* that (a) all trucks accessing the Project must meet 2010 standards or better at opening; or (b) if the above mitigation is not fully feasible, the tenant(s) shall be required to phase-in trucks beginning with 30% 2010 standards or better at opening and continually improving, to introduce newer trucks *faster than regulatory standards*. 2010 truck models reduce NOx emissions to a greater extent than even the 2007 models.³ Requiring the use of 2010 model engines is consistent with regulations aimed at drayage trucks and therefore should be a feasible mitigation measure.⁴

37-O

Other feasible mitigation includes revising MM AQ 7 to require the *use* of solar energy not merely providing "solar ready" roofs. MM AQ 14 should be revised to require that the electrical hookups shall be used - not merely that they be provided. Additional mitigation would also include establishing and enforcing a specified truck route as part of the CEQA mitigation program, in order to ensure that diesel trucks are not using residential streets. Traffic patterns modeled do not match the neighborhood's experience for truck travel. The DEIR claims that trucks will follow a truck route to the south of the facility to access the I-215 interchange, *to then travel north*. Common sense and the personal observation of residents is that trucks will actually bypass the interchange, ✓

37-P

² <https://www.arb.ca.gov/msprog/onroad/porttruck/regfactsheet.pdf> (This hyperlink and all hyperlinks in this letter are incorporated herein by reference.)

³ Under the Environmental Protection Agency's 2007/2010 heavy-duty engine and highway diesel fuel sulfur control requirements, beginning with the 2007 model year, 100 percent of the new on-road diesel trucks were required to meet the near zero particulate emissions standards and 50 percent were required to meet the lower NOx exhaust standards. Beginning with the 2010 model year, 100 percent of the new on-road heavy-duty diesel engines were required to meet the NOx exhaust standards.

⁴ <https://www.arb.ca.gov/msprog/onrdiesel/documents/multirule.pdf>

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taking the shortest route to I-215 by heading north instead of south out of the Project site. Residents already observe major truck traffic on streets to the north of the Project site, and they expect truck traffic to increase with the proposed Project.

↑ 37-P
cont'd

The air quality analysis has flaws as well.

37-Q

First, air quality modeling assumes clean fleets coming to the warehouse over the next few years. A short-term analysis should be performed for *short-term* exposure (*i.e.*, high emitting trucks that are 10 years old prior to significant NOx controls). In other words, the analysis should assume that pre-2007 vehicles will access the facility; in fact, the mitigation program assumes this is the case.

Second, the analysis does not account for the “canyon” or hillside effect created by having emission sources immediately below the elevation of homes. This can have a major effect on the accurate estimation of emission impacts and health effects.

37-R

Third, the analysis must accurately account for all development within the Sycamore Canyon Business Park, the currently operating facilities and future anticipated facilities. The DEIR’s assumption is that the totality of development will cause significant impacts. The EIR must provide more concrete information as to cumulative air quality effects.

37-S

Fourth, the DEIR states that the grading plan has been “designed so that all earthwork will be balanced” on-site (p. 3-36). The air quality study (DEIR, Appendix B) assumes *zero* haul trips. Therefore, the Project must be conditioned to prohibit import or export of soils. Additionally, the air quality study (Appendix B) assumes that the warehouse uses will be non-refrigerated. As such the Project must be conditioned to restrict use to non-cold storage operations. The South Coast AQMD has found that the typical approach to calculating truck traffic at warehouse projects usually underestimates the actual amount of traffic generated, because the typical approach assumes that the warehouses will store non-refrigerated goods.

37-T

Fifth, the air quality study (Appendix B) is confusing to the reader, specifically regarding “trip type information.” For instance, Section 4.3 assumes 16.60 “miles” for “H-W” or “C-W” and states that the associated “trip %” is 61.93 for unrefrigerated uses. It is difficult to understand this information. Again for instance, the analysis indicates that 76.30 miles are assumed for the “H-O” and “C-NW” categories and that these comprise 38.07% of Project-related trips. Is this realistic or appropriate?⁵ The DEIR’s air quality section states that, “CalEEMod truck trip length defaults were increased and it was conservatively assumed that all truck trips are traveling to and from the ports of Los Angeles and Long Beach” (p. 5.3-26). But there is no citation for this information. And, do the air quality study’s inputs reflect that truck trips to and from the Ports of Los

37-U
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⁵ See, <http://www.aqmd.gov/docs/default-source/caleemod/caleemod-appendixa.pdf?sfvrsn=2>

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Angeles and Long Beach are the majority (or all) of the truck trips and that the miles traveled is roughly 70-80 miles to/from the Ports? In other words are the trip types and corresponding percentage of Project trips accurate or realistic in view of this Project as an industrial warehouse distribution center which will service the Ports? Without more information or certainty in this area, the DEIR does not serve its informational purpose.

37-U
cont'd

Also, the conclusions regarding mobile emissions are based on the traffic study (Appendix J). This, too, is confusing to the reader. The DEIR, Table 5.26-F, breaks down the Project's trip generation rates and includes a certain "fleet mix", namely the analysis assumes a certain percentage of (a) passenger cars; (b) 2 axle trucks; (c) 3 axle trucks; and (d) 4 axle trucks. Is this fleet mix accurate in view of the Project's purpose as a logistics center where (heavy duty) trucks will primary travel to and from the Ports? Appendix J, Table 4-1 also breaks down the trip-generation rate by fleet mix. It notes that the "split" is from the 2003 City of Fontana *Truck Trip Generation Study*. This study has "limited applicability" according to the South Coast AQMD. (Exhibit "B" hereto.) The AQMD found that the "Fontana Study, by itself, is not characteristic of high cube warehouses." (*Id.*)

37-V

Finally, it does not appear that NO₂ exposures were evaluated for vehicles in close proximity to receptors. Exposure to NO₂ causes acute health impacts.

37-W

4) Biological Impacts

The DEIR finds that biological impacts are potentially significant with respect to the fact that the Project will eliminate the existing blue line stream and associated 1.91-acre riparian area that traverses the Project site. The riparian area is not only habitat for several plant species but also the area provides drainage benefits for the adjacent Sycamore Canyon Wilderness Park, which is also a MSHCP Conservation Area. As mitigation, the Project proposes the establishment of a 2.96-acre Mitigation Area along the western edge of the Project site adjacent to the Sycamore Canyon Wilderness Park "to replace the existing blueline stream that runs diagonally across the property from northwest to southeast." The DEIR states that the Mitigation Area will be planted with native riparian and riparian scrub habitat and will meander like a naturally occurring drainage. The Mitigation Area will vary from 52 to 72 feet wide with a length of 2008 linear feet, totaling 2.96 acres. It will contain a 10-25 foot wide low-flow drainage feature.

37-X

First with respect to the Mitigation Area, the DEIR represents that the Mitigation Area has been determined to be superior to the existing riparian area as described in the applicant's Determination of Biologically Equivalent or Superior Preservation ("DBESP"). In support, the DEIR apparently relies on the response by the Wildlife Agencies/California Department of Fish & Wildlife to the DBESP. The Wildlife Agencies' letter response does not appear with the DEIR. To the extent that the DBESP

37-Y

Page 8

has not been “determined” by the resource agencies to be “superior,” biological impacts remain potentially significant.

37-Y
cont'd

Second, the Project’s landscape area, which is meant to screen Buildings 1 and 2 from the Sycamore Canyon Park as well as westerly residences, “doubles” as the Mitigation Area. Is landscaping that is intended to minimize noise, lighting, and visual impacts consistent with the purposes and nature of the replacement riparian area? And, functionally, can the area be *both* a Mitigation Area and a landscape area? That is, are the species needed for biological mitigation consistent with those needed to address views? Also, as designed, the Project involves a wall of truck docks along the westerly side of Building 1 directly adjacent to the Mitigation Area. How does the Mitigation Area itself function when it is in close proximity to areas where substantial noise, nighttime lighting and human activity will be present 24 hours per day seven days a week? Can the Mitigation Area adequately function to provide habitat for plant and animal species as well as maintain its riparian drainage functions when it will be continually subjected to the lighting, noise and human activity of the Project? The present, on-site riparian area is physically separated from such intrusions. Moreover, due to the intervening proposed fence, the Mitigation Area is “cut-off” from the adjacent Sycamore Canyon Wilderness Park.

37-Z

Third, the “edge effects” associated with the Project have not been adequately considered or mitigated. There is only 50 feet between the truck yard and Sycamore Canyon Wilderness Park. The Park is also a Western Riverside County MSHCP conservation area. For instance, the noise study discloses that Project noise impacts to the Wilderness Park will be significant in that Project noise as to the Park will be increased by 10 dBA, which is considered a “substantial increase,” and, therefore, significant. (Table 5.12-J) And this noise exposure may compromise the Park’s integrity for species and users. The proposed “open” wall on the western side of the building adjacent to the Wilderness Park will likely not alleviate the significant noise impacts.

37-AA

Next, the Mitigation Area represents uncertain or deferred mitigation in the following respects:

37-BB

First, the DEIR asserts that a Habitat Management Plan (HMMP) “will be prepared by the applicant” to ensure the long-term success of the Mitigation Area, and that the HMMP will be submitted to the resource agencies for review prior to ground disturbance. This constitutes uncertain mitigation because there is no guarantee that the HMMP will be approved, despite the fact that certain criteria are set forth. Furthermore, why cannot the HHMP be prepared and circulated to the resource agencies concurrently with the preparation and circulation of the DEIR? This would enable the public to review and comment on it. Additionally, MM BIO 3 states that the Mitigation Area shall be monitored by a qualified biologist for a minimum of five (5) years and monitoring reports shall be provided to resource agencies and the City, but there is no *action* required on the basis of the reports. That is, if a report indicates that the Mitigation Area is not

Page 9

functioning as intended, there is no action-forcing mechanism to ensure that the issue is remedied.

37-BB

Second, the DEIR repeatedly asserts that the “Conservation Area will be managed in perpetuity by a non-wasting endowment and protected from future development by a conservation easement.” The DBESP (May 2016) repeats this statement (p. 5-7). But this is misleading where MM BIO 4 does not require or even propose any funding for the “approved mitigation entity” in order to manage or monitor the Mitigation Area.

37-CC

5) Land Use Impacts and Inconsistency

The Project requires a Minor Conditional Use Permit (“MCUP”) because it proposes industrial warehouse distribution buildings greater than 400,000 square feet. Thus, the Project is not an *outright* permitted use in the underlying zone. In order to approve a MCUP, the City must make certain findings.⁶ These findings cannot be made, where, among other things, the Project is demonstrably not “compatible with other uses in the area,” to wit, the immediately adjacent residential properties.

37-DD

Additionally, the Project has significant CEQA land use impacts. First, the Project conflicts with a number of City of Riverside General Plan policies that are described in Appendix M, including but not limited to: LU-7.1, LU-7.1 and 7.2, LU-9.7, LU-79.2, LU-80.3, CCM-12.1, CCM-12.2, CCM 12.4, OS-5.4, OS-6.3, OS-6.4, N-1.2, N-1.3, AQ-1.3, AQ-3.7. Many of these conflicts could be avoided by the adoption of a Project alternative that moves development away from northerly and westerly residences. The fact that the applicants(s) desire a particular development(s) does not justify the significant impacts stemming from incompatible uses. For instance, Policy LU-80.3 states that the City shall “**minimize any adverse land use conflicts between industrial uses and the residential and open space properties that abut specific plan areas.**” Other specific policies are discussed below.

37-EE

⁶ City of Riverside, Municipal Code, Title 19, Section 19.730.040 “Required Findings” states, “The Development Review Committee may grant a minor conditional use permit, in whole or in part, and including appropriate conditions of approval if, from the facts available in the application and determined by investigation, all of the following written findings can be made: (1) The proposed use is **substantially compatible with other uses in the area**, including factors relating to the nature of its location, operation, building design, site design, traffic characteristics and environmental impacts. (2) The proposed use will not be materially detrimental to the health, safety and general welfare of the public or otherwise injurious to the environment or to the property or improvements within the area. (3) The proposed use will be consistent with the purposes of the Zoning Code. (4) The proposed use is in conformance with specific site location, development and operation standards as may be established in the Zoning Code for the particular use.” (emphasis added)

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- LU-7.1 and LU-7.2. Are noise levels (+10 db) in MSHCP areas acceptable and therefore “consistent” as stated in DEIR Appendix M? MSHCP section 6.1.4 states, “Proposed noise generating land uses affecting the MSHCP Conservation Area shall incorporate setbacks, berms or walls to minimize the effects of noise on MSHCP Conservation Area resources pursuant to applicable rules, regulations and guidelines related to land use noise standards. For planning purposes, wildlife within the MSHCP Conservation Area should not be subject to noise that would exceed residential noise standards.”

↑ 37-EE
cont'd

- LU-9.7. “Protect residentially designated areas from encroachment of incompatible land-uses....” The DEIR claims this is consistent, yet building mega-warehouses within 100 feet of residential areas is clearly incompatible due to noise, traffic, air quality, and aesthetics. Riverside Good Neighbor Policies (City of Riverside, City of Riverside Good Neighbor Guidelines for Siting New and/or Modified Warehouse Distribution Facilities, October 14, 2008 ⁷ and the California Air Resource Board’s “Air Quality and Land Use Handbook: A Community Health Perspective,” April 2005 designate distribution centers of this size as incompatible with residential neighborhoods. The logic provided in DEIR is that mitigation is being used; however, MM-NOI 16 is not reasonable because it places the mitigation burden on homeowners, yet is required for the industrial project to be compatible in such close proximity to the residential neighborhood.

37-FF

- LU-30.3. “Ensure that the distinct character of each of Riverside’s neighborhoods is respected and reflected in all new development, especially infill development”. This is infill development and the presence of such large buildings in close proximity to residential neighborhoods destroys the aesthetics of the neighborhood as witnessed with the CP buildings directly to the east of the currently proposed project. Further, high sound walls at the property line will unduly enclose the residential neighborhood (the height of the wall exceeds that typically allowed in residential areas). Finally, the addition of noise to neighborhood, especially at nighttime, will destroy the livability of the area and its distinct character.

37-GG

- LU-79.2. Impacts of noise will be significant based on MSCHP section 6.1.4. Noise is already higher than residential nighttime standards and +10 db expected based on noise modeling.

37-HH

- LU-80.3. “Minimize any adverse land use conflicts between industrial uses and the residential and open space properties that abut specific plan areas.” The Project

37-II
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⁷ <https://www.riversideca.gov/planning/pdf/good-neighbor-guidelines.pdf>, accessed October 23, 2015

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is not consistent. The analysis only discusses abutment of northern residences and ignores residences to the west of the property, which are the ones most impacted by noise. Further, claims consistency with MSCHP section 6.1.4 are false.

37-II

- LU-80.6. "Promote the development of Sycamore Canyon to achieve economic success defined by a diverse and compatible industrial base that provides economic opportunities for all its citizens. The City preferred outcome is to promote light industrial/flex space to maximize employment opportunities and utilization of the limited land supply. To achieve this goal, the City must first overcome complex infrastructure issues that limit development in the area. *Large "big box" distribution or warehouse facilities will be necessary on a limited basis* to create the critical mass required to solve some of these infrastructure issues." There are numerous (nearly entirety of build-out), not limited, "Large "big box" distribution or warehouse facilities" already built in Sycamore Canyon Business Park. Addition of yet another such facility is not consistent with "limited basis".

37-JJ

- CCM-2.2-2.4. The DEIR states, "[t]he majority of passenger cars and truck traffic is expected to use Sierra Ridge Drive to Sycamore Canyon Drive to Eastridge Avenue which will provide on/off-ramp access to I-215." This is not consistent with expectations of residences based on observed behaviors. For access to I-215 North, travel on Sycamore Canyon Drive in the opposite direction to Fair Isle is expected as it is shorter, takes less time, and allows the cars and trucks to bypass congested interchange.

37-KK

- CCM-2.7-2.8. There is no mention or evaluation of the likely left turn onto Sycamore Canyon heading toward Fair Isle. Heavy truck traffic already impacts this roadway from build-out of warehouses further away.

37-LL

CCM-12.2. The neighborhood and public streets are already experiencing heavy parking on public streets. Therefore, simply stating that it is not permitted means very little. It is reasonable to expect trucks accessing this new facility will act like other trucks accessing the Sycamore Canyon Business Park – which to mean that they will park (and idle) on public streets.

37-MM

- CCM-12.4. It is unreasonable to expect that trucks leaving this facility will make right turns on Sycamore Canyon to enter I-215 at Eastridge, as left turns on Sycamore Canyon will take trucks to the Fair Isle onramp to enter I-215, allowing trucks to not backtrack and also bypass major congested intersection.

37-NN

- OS-6.4. "Continue with efforts to establish a wildlife movement corridor between Sycamore Canyon Wilderness Park and the Box Springs Mountain Regional Park as shown on the MSHCP. New developments in this area shall be

37-OO

Page 12

conditioned to provide for the corridor and Caltrans shall be encouraged to provide an underpass at the 60/215 Freeway.” This Project further impedes the establishment of a wildlife movement corridor between the Parks.	37-OO cont'd
- N-1.1 “Continue to enforce noise abatement and control measures particularly within residential neighborhoods.” However, this is only arguably possible with implementation of Mitigation Measure (MM) NOI-16, which is highly impracticable and unreasonable. <i>Without</i> MM NOI-16, significant noise impacts are expected (though they have not measured, as discussed further below).	37-PP
- N-1.2. “Require the inclusion of noise-reducing design features in development consistent with standards in Figure N-10 (Noise/Land Use Compatibility Criteria), Title 24 California Code of Regulations and Title 7 of the Municipal Code.” MM-AES-1 requires the building of a very high boundary wall (8 foot) typically not allowed in residential areas due to aesthetics. Noise/Land use compatibility criteria may not be met once CNEL estimates are provided without reference to MM NOI-16.	37-QQ
- N-1.3. “Enforce the City of Riverside Noise Control Code to ensure that stationary noise and noise emanating from construction activities, private developments/residences and special events are minimized.” For impacts to be “consistent”, MM NOI-16 is required, which does not appear to be reasonable given impacts to property.	37-RR
- N-1.4. “Incorporate noise considerations into the site plan review process, particularly with regard to parking and loading areas, ingress/egress points and refuse collection areas.” The residential neighborhood to the west is not properly considered unless unreasonable MM NOI-16 is implemented.	37-SS
- N-1.5. “Avoid locating noise sensitive land uses in existing and anticipated noise-impacted areas.” However, there are already sensitive land-uses (residential) areas adjacent to the Project and these areas are already noise-impacted. The addition of significant noise (unless unreasonable MM NOI-16 is employed) is projected.	37-TT
- N-1.8. “Continue to consider noise concerns in evaluating all proposed development decisions and roadway projects.” The DEIR states that MM NOI-16 will be implemented to achieve this, yet there is no guarantee that homeowners will allow for such intrusive measures to be placed on their private properties. Therefore, operational noises expected to be significant.	37-UU
Second, the DEIR does not demonstrate conformance with the City of Riverside’s “ <i>Good Neighbor Guidelines for Siting New and/or Modified Warehouse Distribution Facilities.</i> ”	37-VV

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The Good Neighbor Guidelines apply to any industrial-type building which is over 400,000 square feet. The Project does not conform to even Goal 1, which states, “Minimize exposure to diesel emissions to neighbors that are situated in close proximity to the warehouse/distribution center” (emphasis added). The Project will generate significant and unmitigated levels of NOx emissions. Where impacts are *significant*, and given the proximity of the Project site to existing homes, the Project is not in conformance with Goal 1. Other Goals are not met such as Goal 2a, which is to “require warehouse/distribution centers to establish a specific truck route between the warehouse/distribution center and the SR-60 and I-215 freeways.” The Project allegedly contains design controls to direct trucks to streets away from residences; but there is nothing prescribing or requiring the use of a particular truck route. And, as discussed below, residents believe it is likely that trucks will utilize residential streets for access to I-215 North. The DEIR’s discussion also ignores the proximity of the Sycamore Canyon Wilderness Park which is arguably covered by the guidelines as a “public place[] where residents are most likely to spend time.” Building 1 sites more than 70 loading docks within 250 feet of the Wilderness Park. The noise and light from the truck docks will impact the users of the Park. 37-VV

Third, the Project has significant land use impacts due to the Project’s proposed grading exceptions and variance. While the DEIR asserts that three grading exceptions “are needed to implement the Project’s proposed grading plan,” the Project deviates from the Hillside/Arroyo grading standards, which represents a conflict with an adopted land use plan – the City’s Municipal Code, Title 17. Likewise, the variance related to parking standards represents a conflict with an adopted land use plan, the City’s Zoning Code, Title 19. The variance will allow a substantial reduction in on-site parking, presumably because of the proposed use and building(s) size. The result of the variance from the Zoning Code is larger buildings with more truck loading docks, and accordingly greater CEQA impacts. 37-WW

Finally, the Project may conflict with MSHCP Section 6.1.2 (Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools) because it is not shown that the Mitigation Area is an adequate substitute for the existing riparian area. 37-XX

6) Noise Impacts

The noise analysis is flawed and further analysis and mitigation is required for at least the following reasons. 37-YY

The noise measurement locations are not adequate to fully assess Project impacts (Figure 5.12-1). In fact, significant concerns arise about the location of the two sound measurement sites. The increase in noise (especially at nighttime) from the Sycamore Canyon Business Park can be best understood by walking down the northwestern/western property lines in a southerly direction. However, the sound receptors were placed in the

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most northerly location of the Project property. ST1 and ST2 are not near the site for the anticipated greatest impacts for noise and are therefore not representative of actual noise impacts. Indeed the greatest Project impacts are shown at westerly residences, but these sites were not modeled for existing noise levels. Further, sound impacts as modeled are expected to be largest at the northern locations (Bannoch and further North Cannich residences) yet these locations were not evaluated for impacts.

↑ 37-YY
cont'd

The noise study must also be expanded. The DEIR states that short-term monitoring consisted of *three, 10-minute* ambient noise measurements while long-term monitoring consisted of *two, 24-hour* periods. Also, long-term monitoring was conducted on December 29 and 30, thus over winter holidays, which is not representative of actual noise conditions when surrounding industrial operations are at their peak. Two days in December cannot possibly account for typical measurements given variability in noise transmission. Why are the worst case scenarios not accounted for in this study as opposed to a single day (*i.e.*, longer term noise analysis is needed, especially at most relevant locations)?

37-ZZ

In order to fully disclose Project impacts, the noise analysis should be conducted without reference to MM AES-1—the eight-foot wall.

37-AAA

The analysis does not appear to account for the amphitheater effect that should be anticipated by building the proposed distribution center below the neighborhood. It is not reasonable to assume the *standard* 6 dbA decrease per doubling of distance for noise is realistic for this Project, when noise will emanate between two large concrete walls and subsequently travel up an amphitheater-like area. The DEIR needs to more robustly account for the acoustics of the actual geography of this area.

37-BBB

The DEIR states that impacts are significant at nighttime as to receptor Nos. 3 and 4 as shown on Figure 5.12-5. However, it appears that receptor 5 may also exceed the 45 dBA nighttime threshold. And at least two other receptors appear to be *at* the 45 dBA nighttime threshold based on Figure 5.12-5.

37-CCC

Figure 5.12-9 refers to “Leq” noise levels but p. 5.12-34 refers to measurement of “Lmax.” Are these the same noise standards? That is, Figure 5.12-5 states that it depicts “Operational Noise Levels [Leq] No Mitigation” and it contains certain noise conclusions; yet Figure 5.12-8 “Dock Areas Operational Noise Levels [Leq] With No Mitigation” also purports to depict Leq from operational activities. Can these figures be reconciled? Figure 5.12-8 shows much louder noise conditions with the Project. In this regard also, do the operational conditions which are reflected in Figure 5.12-5 reflect “dock activities”? Residents expect loading dock activities to be very loud and disruptive.

37-DDD

Shockingly, the DEIR proposes that individual homeowners mitigate the impacts of the Project by allowing the installation of a 10-foot wall *in their backyards*, thereby reducing

37-EEE
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the size of and fundamentally altering their properties *in order to accommodate the Project*. (MM NOI 16) The Project's applicant– not individual homeowners – should be required to adopt all feasible mitigation *and evaluate alternatives* to the Project which lessen significant noise impacts below significance thresholds. Putting the burden on homeowners is completely unacceptable. Also, the construction of the block wall itself will create impacts that must be evaluated. The DEIR notes there are steep slopes along the northern boundary of the Project site, adjacent to the residential area. Placing a 10-foot wall at the top of the slope will obscure the views from homes of the Box Spring Mountains, Sycamore Canyon Wilderness Park, and Moreno Valley. The Riverside Municipal Code restricts boundary walls to six feet in residential areas. The 10-foot noise wall is not mentioned in the DEIR's aesthetics section yet it has the potential for significant aesthetic impacts due to view obstruction.

↑ 37-EEE

The need for accurate noise assessment is particularly alarming given the alleged 360-foot mitigation setback for use of loading docks between the hours of 11 pm and 7 am. The model must account for the real decrease of noise that will occur within the tunnel created by being between two very large building walls. Therefore, it would seem more reasonable to model the source as a line source, as the soundwave energy will only dissipate between the two large building walls, by assuming the noise will travel parallel to the walls directly toward the homes to the northwest/western property line, similar to the expected perpendicular propagation of energy from a line source. Given that the drop-off in noise is logarithmic as stated in the DEIR, and a line source has a 3 dBA versus 6 dBA decrease per doubling of distance, this appears to have a monumental impact of noise impacts at the residential property line and nearest residences. Therefore, the decrease modeled by the 360-foot mitigation far underestimates the real distance necessary to mitigate noise.

37-FFF

Noise modeling should also look at maximum noise expected from the proposed development. This is expected to be between the residences and their property line (on the line, the model shows benefit of wall, but what about a short distance from the wall above the height of the wall (remember, there is a slope in the yard). Impacts at the residential (property) line as city noise ordinances/violations are measured at the property line (Title 7 of Riverside Municipal Code). Using DEIR statements of 6 dBA decrease per doubling of distance, the residential property line should be at least 6 dBA higher. Noise model should include worst-case scenario of back-up beepers as vehicles from outside the facility will likely have no "noise mitigation" ambient sensors installed.

37-GGG

Following basic engineering scaling analysis provided in the DEIR of reductions of 6 dBA per doubling of distances, it seems reasonable to assume that a development that is 9 times closer than a project that had significant impacts on residences (the Big 5 distribution center) should have far greater impacts at the property lines and at the residences. Even taking an extremely conservative estimate of 5 times closer, the loudness of this proposed development should be 2⁵ or at least 32 times louder. Or, using rough engineering estimates of 10 dB reduction of sound via the distribution sound wall,

37-HHH
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the expected increase should be on the order of 5*6dBA – 10 dBA, or approximately 20 dBA. For an area already above Riverside Municipal Code levels of 45 dBA nighttime noise, as measured in the likely quietest location of the neighborhood, this means that the impacts should be far greater than stated in the noise analysis.

37-HHH

The description of background does not fairly represent the short-term noises of even existing noises. These include the loud “beeping”, crashes and bangs associated with loading and unloading, hitching and unhitching, and short-term noises associated with the vehicles (e.g., horns). These are the loud, very brief sounds that are associated with sudden waking/sleep disturbance and prevention of sleep as opposed to the general, loud, white noise from other operations that is represented by “average” noise measurements. The statement that the noise associated with the operations of the proposed site will not interfere with sleep is fallacious when existing noise already interferes with sleep. The noise analysis appears to assume that single-event noise activities will exist in isolation and does not consider that, for instance, multiple back-up beepers will be used at the same time. At the least the disruption factor is very high when there are multiple trucks moving around the site at the same time and multiple loading and unloading activities occurring simultaneously. Also, what noise impacts do “cross docking” activities have relative to Building 1? Are these activities appropriately modeled?

37-III

With respect to Threshold C, the DEIR states the impact is considered significant if the noise increase is considered “substantial”, which is defined as “a clearly perceptible increase (+5 dB) in noise of exposure of sensitive receptors” (p. 5.12-38). First, impacts are significant as to the Sycamore Canyon Wilderness Park, where the Project results in a 10 dBA noise level increase (Table 5.12-J). Second, the Project skews the analysis and masks impacts by measuring Project noise levels on other receptors *with mitigation* (Table 5.12-J). Table 5.12-J must be revised to include noise levels without mitigation, particularly as “with mitigation” presumably refers to the construction of the 10-foot wall, which the DEIR acknowledges elsewhere is entirely dependent on whether homeowners would permit the construction of such a wall. When compared with *non-mitigated* Project impacts (which is a reasonable assumption), the “difference” in dBA between the Project and existing conditions may be a “substantial increase.” At the least, *both* unmitigated and non-mitigated conditions must be disclosed. Also, the existing CNEL of 60 CNEL dBA and 52 CNEL dBA (Table 5.12-J) are not adequately explained so it is difficult to assess the Project’s contribution to noise conditions. That is, Table 5.12-J refers in a footnote to Table 5.12-C, but Table 5.12-C and the supporting discussion do not explain how the 60 CNEL dBA and 52 CNEL dBA levels were determined.

37-JJJ

Impacts are also significant as to roadway noise as to Dan Kipper Drive west of Sycamore Canyon Boulevard. The DEIR states there will be an approximate 7.2 dBA increase in noise along this segment. The DEIR dismisses this impact because noise

37-KKK

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levels will not exceed the 70 dBA GP 2025 “Normally Acceptable” compatibility criteria for Industrial and Manufacturing land uses. However, impacts are significant per the adopted threshold of significance (Threshold C).

37-KKK
cont

The noise impact of the proposed distribution center is performed piecemeal and does not take into account the total impacts of the developments within the Sycamore Canyon Business Park. A significant amount of development has occurred within the Sycamore Canyon Business Park, which should be expected to further increase noises within the residential zones. By looking at the Project in isolation with respect to noise the DEIR fails to acknowledge and properly account for additional cumulative noise impacts. Residents have noted significant and measurable impacts from the nearby Big 5 distribution center and the Krogers and Pepsi distribution centers. Residents have experienced substantial increases in noise levels (loading/unloading of trucks, truck noise, backup beeper noise) in the last couple of years, especially at night, as activities in area have increased. Further, the build-out and full operational capacity of Sycamore Canyon Business Park is not complete. Further noise impacts should be anticipated as the recent build-out comes to full operation conditions. Indeed where existing noise conditions exceed applicable thresholds (Table 5.12-C), the impact of the Project in combination with these cumulative projects/conditions must be deemed a *significant* cumulative impact.

37-LLL

In addition, noise mitigation is ineffective and impermissibly vague. MM NOI-1 is vague to the extent that the word “equipment” is not defined. Does “equipment” include the heavy duty trucks that visit the site? It must be assumed that only on-site equipment will be equipped with the particular sound-reducing measures. As to MM NOI-15, the DEIR does not contain evidence to show that the 360-foot separation is sufficient to reduce impacts to less-than-significant levels. Figure 5.12-8 indicates significant impacts without mitigation. MM NOI-15 also states that nighttime “use” shall be restricted between the hours of 10 p.m. to 7:00 a.m. “for the portion of the loading area and trailer parking located just south of Building 2 and within 360 feet of the western property line as shown on Figure 5.12-6.” Thus, NOI 15 refers the reader to Figure 5.12-6 of the DEIR, which is not included within the mitigation program. Figure 5.12-6 indicates a “restricted area” in red, and presumably this is the area to which NOI-15 refers. Even so, there is nothing in the mitigation program explaining the location of the “restricted area.” At the very least, further description of the restricted area within the mitigation program is required.

37-MMM

7) Transportation Impacts

The DEIR does not accurately reflect truck travel already occurring in the area using Sycamore Canyon to Fair Aisle. The DEIR states that the design of the streets will have large trucks exiting at a light at Sierra Ridge; however, mitigation strategies do not really prevent left turns onto Sycamore Canyon with access at Fair Aisle. Trucks planning to

37-NNN

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go north cannot be reasonably anticipated to turn right on Sycamore Canyon to enter I-215 at Eastridge. The current analysis assumes only 5% of truck traffic will turn left onto Sycamore Canyon to enter the I-215 at Fair Isle. Why is this assumption made when it is a shorter distance to enter I-215 North/60 West from Fair Isle, which also lets trucks avoid the largely impacted interchange located between Eastridge and Fair Isle? It is the experience of the homeowners that vehicles originating from locations from Eastridge do enjoy the shortcut, impacting the Fair Isle intersection (and even the Central Intersection) with Sycamore Canyon Blvd. Without far greater mitigation, it is unreasonable to expect that drivers will take the long (distance and time) route to Eastridge and head through a freeway interchange rather than bypass the interchange and access at Fair Isle when heading north back toward the Los Angeles and Long Beach Port areas. More appropriately estimating the likely truck traffic will then show even greater impacts than stated and may further influence noise and air quality impacts.

37-NNN
cont

8) Project Alternatives

CEQA mandates that an EIR evaluate a reasonable range of alternatives to the proposed project that are designed to meet basic project objectives and lessen significant project impacts. (State CEQA Guidelines, § 15126.6.) The DEIR fails this mandate.

37-000

First, the "Project Objectives" are tailored in such a manner to prohibit the meaningful consideration of true alternatives to the proposed Project. Virtually all of the Project Objectives relate to the development of a "logistics center," meaning that no alternative to the proposed use would satisfy the Project Objectives. CEQA mandates an impartial review of Project alternatives, and the Project Objectives cannot be designed in such a way as to make the proposed Project the only viable option. In fact, there are a number of uses (smaller and less intense) which are consistent with underlying zoning and land use designations which should be evaluated as Project alternatives. For example, a business office use is an allowable use within the Sycamore Canyon Business Park Specific Plan. Besides reducing significant Project impacts, this type of development could provide more high quality jobs for the surrounding community and be more consistent with "smart growth" principles.

Also, CEQA dictates that alternatives must be evaluated which are designed to minimize the Project's environmental impacts, regardless of the desire of the applicant to develop its property to obtain a certain financial return. An alternative that eliminates or vastly reduces the size of Building 2 would eliminate many of the adverse effects of the proposed Project. This should be considered irrespective of the applicant's interests in a particular use for the site. Moreover, here, the alternatives analysis is complicated by the fact that the "Project site" is owned by two unrelated owners, meaning that *each* owner wants to maximize their respective property's value. This fact undermines the purpose of the alternatives analysis which to *meaningfully* explore options to the Project which reduce impacts. Also, as mentioned, the analysis of alternatives is based on the fact that

37-PPP

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the applicant(s) desire a “logistics center.” Yet currently the site consists of 17 existing parcels (the Project includes a request for a tentative parcel map to combine these parcels to two parcels and three lettered lots). Thus, the Project *could* be developed with other types of uses, consistent with applicable land use designations and zoning. In other words, the site need not necessarily be developed with two enormous industrial warehouse buildings on just two parcels. In fact, the need for this Project is questionable when over 20 million square feet of major distribution centers have been recently built in the nearby area. The DEIR notes that “there is a high availability of buildings in the 700,000 SF and 300,000 SF range” (p. 8-32). Thus there is no demonstrated need for the Project - particularly Building 2 which is in the 300,000-400,000 square foot range.

37-PPP
cont

Alternative 2 - “the Specific Plan Build Alternative” - assumes a manufacturing use which is an allowable use under the Sycamore Canyon Business Park Specific Plan. While Alternative 2 represents a different use for the site, Alternative 2 would develop the site with 1.3 million square feet of manufacturing uses and cover the site much like the Project. There is no rendering of Alternative 2, or descriptive information as to how Alternative 2 would compare to the Project in terms of building site design, but the DEIR indicates that Alternative 2’s building footprint would be the same or similar to the Project, and it is noted that the Project site would be developed with two manufacturing buildings and supporting infrastructure. Thus, Alternative 2 would be similar to the Project in terms of site coverage and building footprint. Also, Alternative 2 would result in a more than *doubling* of the total vehicle trips per day including a massive increase in the number of trucks. Clearly this alternative is not designed to reduce or eliminate significant project impacts – namely NOx impacts. Moreover, the DEIR states that Alternative 2 would fail to meet Project Objectives, which are largely to develop a “logistics center,” thus meaning that Alternative 2 is not designed to meet even “basic” Project objectives as required by CEQA.

37-QQQ

Alternative 3 - “the Reduced Density Alternative” – also fails CEQA’s requirements for analysis of Project alternatives where it fails to meet basic Project objectives. The DEIR finds that Alternative 3 is not consistent with the majority of Project Objectives because the DEIR states that *any* logistics center must be greater than 1 million square feet to be marketable (p. 8-31 – 32). (This claim undercuts the viability of Building 2 as a separate “logistics center” when that building is far less than one million square feet.) Again, an alternative must be evaluated which eliminates or greatly reduces the size of Building 2. Such an alternative would presumably meet basic Project Objectives, which are to develop a logistics center. And again, alternatives should be evaluated which develop *less intensive* uses for the Project site, such as a business and professional office park.

37-RRR

Finally, the DEIR rejects Alternative 3 as “infeasible.” It is the job of the lead agency to independently review the EIR and to make conclusions as to the infeasibility of Project alternatives and mitigation measures. (State CEQA Guidelines, § 15091 (a)(3), (b).) It is

37-SSS

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not the role of the applicant (and/or its consultant) to declare that an alternative is infeasible within the meaning of CEQA.

37-SSS
cont

9) Cumulative Impacts

The Project's cumulative impacts on sensitive receptors have not been reasonably estimated but rather the analysis takes a piecemeal approach (this single Project only raises impacts below threshold values, yet the entire baseline is already raised to unreasonable levels). First, only a small fraction of existing distribution centers/warehousing impacts are accounted for; rather, impacts of banks and donut shops further away appear to be the focus (Table 6-A). Noise from the CP facility (not operating yet) is not discussed or evaluated (number 10 on Figure 6-1) despite its close proximity. There has been over 20,000,000 feet of distribution centers/warehouse construction built into the Sycamore Canyon Business Park and their cumulative impacts on noise appear to be glossed over. A simple look at Figure 6-1 in the DEIR shows how few of the distribution centers and other operations were even considered for noise (including Big 5, Ralphs, and Pepsi) next to the sensitive receptors. Instead, the focus was on properties much further from the receptor sites. As noted in the DEIR, distance is important when assessing noise. The noise of the existing and projected projects must be fairly considered. Even existing measures of traffic and noise cannot adequately reflect their impact as many properties remain vacant or have not been brought up to full capacity. Cumulative impacts on noise and traffic of the Sycamore Canyon Business Park needs to be carefully and not anecdotally accounted for to accurately reflect impacts on sensitive neighboring properties. Cumulative impacts of both the adjacent Sycamore Canyon Business Park and the approved Moreno Valley logistics center must be accounted for with respect to cumulative air quality and traffic impacts.

37-TTT

The argument made in the DEIR demonstrates the lack of understanding of the general canyon effects by sampling stating the 0.5 mile is too far to have a cumulative impact on noise. Prior to build-out that has already occurred, significant noise, especially at nighttime was heard from the Kroger (1.0 miles to nearest residence) and Pepsi distribution centers (>1.0 miles). Noises, more noticeable at night, included horns in the middle of the night, bangs from loading and unloading, and incessant backup beeper noises. Therefore, all noise generating sources within a minimum of 1.0 miles should be considered in this analysis and not simply discounted including the Pepsi distribution center, the Kroger distribution center, the Big 5 distribution center complex, and other major properties between marker 5 and the residential neighborhoods. The DEIR needs to account for the largest warehouses already present or planned in the area. *As noted in discussion on noise, the noise abatement proposed on the private property is unreasonable and should be assumed to not occur.* Simple statements that single projects have minimal sound impacts are insufficient and misleading as the entirety of this build-out (cumulative effects) must be considered when evaluating the new project.

37-UUU

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In conclusion, the EIR must be revised, re-circulated, and additional mitigation proposed.
Thank you for the consideration of these comments.

↑ 37-UUU
cont

Sincerely,

Abigail Smith

Abigail Smith
JOHNSON & SEDLACK

Enclosures

Response to Comment Letter 37 – Johnson & Sedlack

Response to Comment 37-A:

The comment incorrectly identifies the size of Building 1 as approximately 1,002,995 square feet. Building 1 is proposed to be approximately 1,012,995 square feet. (DEIR, pp. 1-6, 3-26, 5.16-1.) With regard to the commenter's assertion that additional CEQA analysis and mitigation is required, the responses to the remainder of the comments in this letter establish that no further analysis or mitigation is warranted. This comment does not identify any significant new environmental issues or impacts that were not already addressed in the Draft Environmental Impact Report (DEIR).

Response to Comment 37-B:

The information required to be included in an EIR's Project Description is set forth in Section 15124 of the State CEQA Guidelines. The following table presents the text of Section 15124 and where the information is contained within the DEIR.

State CEQA Guidelines Section 15124	Location in the DEIR
<p><i>The description of the project shall contain the following information but should not supply extensive detail beyond that needed for evaluation and review of the environmental impact.</i></p> <p>(a) <i>The precise location and boundaries of the proposed project shall be shown on a detailed map, preferably topographic. The location of the project shall also appear on a regional map.</i></p>	<p>The precise location and boundaries of the proposed Project are described in Section 3 – Project Description, specifically subsection 3.1.1. DEIR Section 3 also includes the following figures that show the location of the proposed Project: Figures 3-1 – Vicinity Map, 3-2 – Location Map, 3-8 – Tentative Parcel Map, and 3-10 – Proposed Site Plan.)</p>
<p>(b) <i>A statement of the objectives sought by the proposed project. A clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project.</i></p>	<p>The Project's objectives are set forth in DEIR Section 3.2.6 and clearly indicate the underlying purpose of the Project is to create two parcels of land with a building on each parcel for the construction and operation of a logistics center in one building and construction and operation of a second building consistent with uses permitted in the Business and Manufacturing Park Zone.</p>
<p>(c) <i>A general description of the project's technical, economic, and environmental characteristics, considering the principal</i></p>	<p>The proposed Project's characteristics are described in detail in Section 3.2. Each of the entitlements sought are described in detail</p>

State CEQA Guidelines Section 15124	Location in the DEIR
<i>engineering proposals if any and supporting public service facilities.</i>	with accompanying figures to facilitate the readers' understanding of the Project.
<p>(d) <i>A statement briefly describing the intended uses of the EIR.</i></p> <p>(1) <i>This statement shall include, to the extent that the information is known to the Lead Agency,</i></p> <p>(A) <i>A list of the agencies that are expected to use the EIR in their decision making, and</i></p> <p>(B) <i>A list of permits and other approvals required to implement the project.</i></p> <p>(C) <i>A list of related environmental review and consultation requirements required by federal, state, or local laws, regulations, or policies. To the fullest extent possible, the lead agency should integrate CEQA review with these related environmental review and consultation requirements.</i></p> <p>(2) <i>If a public agency must make more than one decision on a project, all its decisions subject to CEQA should be listed, preferably in the order in which they will occur. On request, the Office of Planning and Research will provide assistance in identifying state permits for a project</i></p>	DEIR Section 3.2.7 identifies how the DEIR will be used and identifies the discretionary actions and approvals to be carried out by the City and identifies the permits required from the California Department of Fish and Wildlife, State Water Resources Control Board, Santa Ana Regional Water Quality Control Board, and U.A. Army Corps of Engineers.

With regard to the use of Building 2, the Project Objectives state: "...One of the buildings will be for the operation of a logistics center and the other building will be for the operation of a use consistent with those uses permitted in the Business Manufacturing Park Zone." (DEIR, p. 3-44.) As explained in Section 3.1.4 of the DEIR, per the City's Zoning Map, the Project site is zoned BMP-SP (Business and Manufacturing Park and Sycamore Canyon Business Park Specific Plan Zones). The BMP zone is one of four industrial zones within the City. (DEIR, p. 3-14.) According to Section 19.130.010 of the Riverside Municipal Code, typical uses in the BMP Zone include: research and development facilities and laboratories; administrative, executive

and professional offices; small-scale warehouses; light manufacturing; and support commercial. The *Sycamore Canyon Business Park Specific Plan (SCBPSP)* designates the land use for the Project site as Industrial. According to Section 2.1 of the *SCBPSP* the Industrial land use category is generally described as: "...Appropriate land uses include light industrial, distribution and warehousing, and product assembly..." These uses are consistent with the description of Building 2 provided in the third paragraph on page 3-26 of the DEIR which states that Building 2 will be approximately 362,174 square feet in size and consist of up to approximately 10,000 square feet of office space and approximately 352,174 square feet of logistics/industrial use. Although the specific tenant and precise use of Building 2 is unknown at this time, the conceptual site plan and identification of allowable uses in the City's zoning code and the *SCBPSP* provide sufficient information for the DEIR to thoroughly evaluate potential impacts.

This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-C:

The comment notes that the Project Description and Executive Summary state that 917 daily truck trips are anticipated and that these sections should be revised to include the total number of daily trips anticipated by the Project. The total number of Project-generated trips in both vehicular count and passenger car equivalent (PCE) is disclosed in **Table 5.16-F – Project Trip Generation Rates** and **Table 5.16-G – Project Trip Generation in PCE** on pages 5.16-28–5.16-29 of the DEIR. The total number of trips per day by vehicle type is also disclosed in **Table 8-B – Comparison of Alternative 2 (No Project/Reduced Density Alternative) to the Proposed Project** and **Table 8-D – Comparison of Alternative 3 (Reduced Density Alternative)**, (DEIR, pp. 8-17, 8-25.) Nonetheless, to amplify the discussion regarding Project-generated trips, the last paragraph on DEIR page 1-7 will be revised in the Final Environmental Impact Report (FEIR) as follows:¹

Construction is anticipated to begin in the first quarter of 2017 and take approximately 12 months. Therefore, the Project is anticipated to open in the first quarter of 2018. The Project proposes to operate 24 hours a day, 7 days a week. Approximately 917 daily truck trips and 1,497 daily passenger car trips for a total of 2,409 trips are anticipated. In terms of passenger car equivalency (PCE) this results in 3,801 PCE.

To amplify the discussion regarding Project-generated trips the last paragraph on DEIR page 3-43 will be revised in the FEIR as follows

Construction is anticipated to begin in the first quarter of 2017 and take approximately 12 months. Therefore, the Project is anticipated to open in the first quarter of 2018. The Project proposes to operate 24 hours a day, 7 days a week. Approximately 917 daily truck trips and 1,497 daily passenger car trips for

¹ The new text is shown as double underlined.

a total of 2,409 trips are anticipated. In terms of passenger car equivalency (PCE) this results in 3,801 PCE.

These revisions to the DEIR do not change the significance conclusions of the DEIR or result in the need for additional mitigation. Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-D:

With regard to the existing condition of the Project site, Section 3.1.3 of the DEIR states (emphasis added):

The Project site currently consists of vacant and hilly land that is primarily undisturbed with the exception of:

1. a USGS blue line stream with dense riparian vegetation that begins in the northwest runs through the central area of the site then traverses the property in a southeasterly direction across the site. It is fed by a culvert that collects stormwater flows from the homes in the Sycamore Highlands Specific Plan area at the northwest corner of the property and then collects water that sheet flows across the existing property;
2. a man-made earthen trail across the middle of the subject site in an east to west direction that leads into the adjacent Sycamore Canyon Wilderness Park to the west of the Project site;
3. the lower southeastern area of the site, which consists of disturbed land that was utilized for rock crushing, sand stockpiling, and construction equipment storage. As part of the on-site rock crushing operation, there is a stockpiled cluster of rocks in the southern area of the site that appears to have been intended for crushing. It is anticipated that these rocks will be crushed during Project construction and used on site;
4. a concrete V-ditch that commences approximately 235 feet south of the northeast corner of the Project site and curves to the west in an approximately semicircular shape that returns to the Project's eastern boundary at a point approximately 488 feet south of the northeast corner. The V-ditch then continues south approximately 405 feet to an outlet structure that connects to a V-ditch located on western side of the Ralph's Distribution Center;
5. a small earthen check dam starting about 100-feet above the termination point of the existing Lance Drive that curves to the west in an approximately semicircular shape and returns to the Project's eastern boundary at the knuckle of Lance Drive and Sierra Ridge Drive. Adjacent to the earthen dam and V ditch is a dirt road beginning at Dan Kipper Drive and following the earthen dam, breaking off into another dirt road, both circling back to Sierra Ridge Drive;

6. except for the riparian habitat and disturbed southeastern area, the Project site consists of non-native grasslands with evidence of recent discing in areas along the perimeter and bicycle and off-road motorized vehicular use in several places throughout the Project site;
7. there is also an isolated man-made depression in the southern area of the Project site which is a remnant from prior uses; (DEIR, pp. 3-8–3-9.)

Thus, although much of the Project site may be undisturbed, it is not in a pristine condition. It is also important to note that the Project site is not designated as open space, although it is adjacent to the Sycamore Canyon Wilderness Park.

The commenter's assertion that proposed Project represents a significant aesthetic impact because buildings would cover the Project site is a distorted interpretation of what constitutes an aesthetic impact. Following this logic, any building constructed on any vacant land would constitute a significant impact for which an EIR and statement of overriding considerations would be required.

Aesthetic effects relate to obstruction of scenic vistas or views, creation of a negative aesthetic effect, and creation of light or glare. Important criterion for visual impacts is visual consistency. Project design should be consistent with natural surroundings and adjacent land uses. (DEIR, p. 5.1-1.)

The only natural surroundings adjacent to the Project site is the Sycamore Canyon Wilderness Park. The Project proposes a 2.96-acre Mitigation Area along the western side of the Project site in proximity to the Sycamore Canyon Wilderness Park (see DEIR **Figure 3-11 – Conceptual Landscape Plan**). The Mitigation Area will be planted with native riparian and riparian scrub habitat and meander like a naturally occurring drainage. (DEIR, p. 3-29.) In addition to the Mitigation Area on the western side of the Project site, the Project proposes landscaping on all sides, including a 64-foot wide landscape area along the northern boundary of the Project site to provide separation from the residential area to the north.

The Project's proposed structures consist of designs that are architecturally consistent with modern light industrial logistics centers and other structures within the *SCBPSP*. The proposed buildings will consist of concrete tilt-up paneling with a color palette largely consisting of grays as well as accented use of white, brown, and blues. Window treatments will include the use of spandrel glass, tempered vision glass, and vision glass and with blue reflective glazing. The building and screen wall elevations will be required to include articulation and design that is intended to decrease the feeling and appearance of massing or bulkiness. All roof-mounted equipment will be screened from view as required by Riverside Municipal Code Section 19.555. (DEIR, p. 3-29.) Furthermore, to make sure that all roof-mounted equipment is adequately screened and people viewing the proposed Project are not exposed to views of long expanses of wall surface, the Project will implement mitigation measures **MM AES 8** and **MM AES 9**, below: (DEIR, p. 5.1-35.)

MM AES 8: To ensure that all roof-mounted equipment shall be adequately screened, prior to the issuance of a grading permit as part of the Design Review process, the proposed screening shall be reviewed and approved by Design Review staff.

MM AES 9: To offset the long expanses of wall surfaces on Building 1 and Building 2, prior to the issuance of a grading permit as part of the Design Review process, revised architectural plans and elevations shall be submitted for review and approval by the City of Riverside Design Review staff.

- a. The revised architectural plans and building elevation for the west elevation of Building 1 shall include some of the same elements used on the front elevation to offset the long (1,394 feet) expanse of wall surface, including providing design techniques like those at the office areas on every corner of Building 1. The new design shall implement articulation to create pockets of light and shadow.
- b. The revised architectural plans and building elevation for the north elevation of Building 2 shall be articulated in the same manner as the front elevation and shall include the same elements used on the east elevation to offset the long (978 feet) expanse of wall surface. The exterior features provided at the office areas shall be provided on every corner of Building 2. The new design shall implement articulation to create pockets of light and shadow.

The buildings proposed at the Project site are consistent with the existing industrial uses to the south and east. Additionally, existing views from the residences and businesses in the Project area already include views of industrial buildings. The views of the Project's parking lots and truck yards will be screened from adjacent areas by walls, fencing, and landscaping. Several design features are also included as mitigation, to ensure that the aesthetic character of the Project site is considered. Thus, although the Project's buildings will be visible, the introduction of additional industrial buildings into an existing industrial area does not constitute a substantial change in the viewshed. For these reasons the DEIR appropriately concluded that all potential Project-related impacts to aesthetics will be reduced to less than significant with mitigation. (DEIR, p. 5.1-36.)

Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-E:

Sycamore Canyon Wilderness Park is considered a scenic vista because at approximately 1,420 acres in size with over 3 miles of biking and hiking trails² it provides long distance view of

² City of Riverside, *General Plan 2025 Parks and Recreation Element*, November 2012. (Available at http://www.riversideca.gov/planning/gp2025program/GP/15_Park_and_Recreation_Element.pdf, accessed October 27, 2016.)

natural terrain. The Proposed Project site is adjacent to the Sycamore Canyon Wilderness Park is not a scenic vista but is zoned for industrial development (See Response to Comment 37B for discussion on zoning). The views from the eastern and southern edges of the park already contains views of the existing warehouses and distribution centers within the Sycamore Canyon Business Park and of the residences adjacent to the Park along other edges. Thus, although Building 1 will be visible from users of the Sycamore Canyon Wilderness Park, this does not constitute a significant impact to this scenic vista because the Project does not constitute a new type of view from the Wilderness Park or propose any development within the Wilderness Park. (DEIR, pp. 5.1-10–5.1-11.) For these reasons, the DEIR appropriately concluded that, construction and operation of the Project does not represent a significant change in the viewshed from what currently exists in the area. (DEIR, p. 5.1-12.)

The proposed Project is not introducing a new type of structure into the viewshed. The proposed tilt-up construction is consistent with the existing industrial buildings within the Project area that are currently visible from the homes located northwest of Building 1. The proposed site landscaping complies with the City's Water Efficient Landscaping and Irrigation Ordinance. In addition, the Mitigation Area located along the western boundary of the Project site will be planted with native riparian and riparian scrub habitat. The landscaped area, combination of the mitigation area and landscape area, ranges from 100 feet with to the north to approximately 67 feet wide at the south (see DEIR **Figure 3-10 – Proposed Site Plan**) which provides the softening effect referenced by the commenter. Finally, as discussed in Response to Comment 37-D, the Project will implement mitigation measure **MM AES 9** (See Response to Comment 37-D for copy of **MM AES 9**), which requires the west elevation of Building 1 (the side facing the residences) to include some of the same elements used on the front elevation to offset the long (1,394-foot) expanse of wall surface. (DEIR, pp. 5.1-13, 5.1-28.) For these reasons, the DEIR appropriately concluded that the views of Building 1 will be reduced to less than significant. Thus, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-F:

See Response to Comment 37-D. The commenter's opinion regarding the CT Sycamore Center Project is noted. The CT Sycamore Center Project on Dan Kipper Drive, was constructed with a fifty-foot setback from the northerly property lines, adjacent to the residential properties and the buildings range from 37-feet to 41-feet in height. The CT Sycamore Center Project warehouses referenced in this comment are separate and independent from the proposed Project and were approved by the City after undergoing their own environmental review and public hearing process, including analysis of impacts related to aesthetics and building heights. The existence of these warehouses is addressed in the proposed Project's environmental analysis, specifically, in the aesthetics, air quality, greenhouse gas emissions, noise, traffic and cumulative impacts sections of the DEIR. It should be noted that the proposed Project will be setback 100 feet from the residential property line, twice the distance than the CT Sycamore Center Project.

The DEIR includes line-of-sight and photo simulations of the existing and future views from some of the residences. As shown on DEIR **Figure 3-13a – Line of Sight Exhibit** and **Figures 5.1-2b and 5.1-2c – Photo Simulations**, the top of Building 2 will be visible from the residences to the north of the Project site, even once landscaping is mature. The building walls shown in these figures is flat and does not include any design techniques or architectural elements as required by mitigation measure **MM AES 9** (listed in Response to Comment 37-D), which requires the west elevation of Building 1 and the north elevation of Building 2 to be articulated to create pockets of light and shadow which will break up the long expanse of the walls visible by the residences to the north and west of the Project site. (DEIR, pp. 5.1-28–5.1-29.)

The City of Riverside General Plan 2025 (the GP 2025) designates the Project site as Business/Office Park (B/OP) and the site is zoned Business and Manufacturing Park and Sycamore Canyon Business Park Specific Plan Zones (BMP-SP). (DEIR, **Figure 3-4 – Land Use Designation Map**, DEIR **Figure 3-5 – Zoning Map**.) The City of Riverside Municipal Code Chapter 19.130, established development standards for the BMP-SP and limits building heights to a maximum of 45 feet in height. (DEIR, p. 5.1-11.) The proposed Project complies with the height restriction of the BMP-SP. Building 1 is proposed to be approximately 41 feet in height and Building 2 will be approximately 37 feet in height. Further, the elevation and building height differences between Building 1 and Building 2 will minimize the view of these buildings from the adjacent neighborhood as shown in the above referenced photo simulations. Note that Building 1 is located downslope from and south of Building 2 and is not expected to be visible from the residences north of the Project site. Additionally, Building 1 is setback approximately 256 feet from the Sycamore Canyon Wilderness Park and views of this building from the park will be softened by on-site landscaping and the Mitigation Area.

Lastly, as discussed above, the proposed Project has increased the building setback for Building 2. Building 2 is setback 100 feet from the property line abutting the residential lots north of the Project site. Within this 100-foot setback, the Project proposes 64 feet of landscaping, a 30-foot wide drive aisle (vehicles only, no trucks) and a 6-foot wide landscape planter adjacent to Building 2. This enlarged setback and enhanced landscaping will provide screening between Building 2 and the residences to the north. (DEIR, p. 3-35, **DEIR Figure 3-10 – Proposed Site Plan**, **DEIR Figure 3-11 – Conceptual Landscape Plan**.) Thus, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-G:

See Response to Comment 37-D. At maturity, the landscaping will greatly limit direct views of the buildings, although the tops of each building will still be visible from these residences even after the landscaping is mature. As discussed in Response to Comment 37-F the proposed project has a minimum of a 100-foot setback from the residents to the north and west and within each of these setback areas there will be extensive landscaping. The amount of screening will increase as the landscaping matures. The installation of the 8-foot wall required by mitigation measure **MM AES 1** goes towards reducing the visual impacts during the short-

term period. In addition, the Project will implement mitigation measure **MM AES 8** and **MM AES 9** (See Response to Comment 37-D for **MM AES 8** and **MM AES 9**), through which the aesthetic impacts will be reduced to less than significant. Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-H:

See Response to Comments 37-D, 37-F and 37-G.

The commenter correctly points out that two figures were incorrectly labeled. To address the incorrect labeling, the last full paragraph that commences on DEIR page 3-35 and concludes on page 3-36 will be revised in the FEIR to clarify the figure numbers and that landscaping will screen the views of Buildings 1 and 2 as follows:

Figures 3-1413a and 3.1413b – Line of Sight Exhibit illustrates how the proposed landscaping and siting of the buildings will minimize views of Buildings 1 and 2 from areas adjacent to the Project site. Additionally, as shown on **Figure 3-11 – Conceptual Landscape Plan**, the topography surrounding the Project site also serves to minimize direct views of Buildings 1 and 2. Steep slopes along the northern boundary of the Project site, adjacent to the residential area, greatly limit views of the logistics center. In other areas, landscaping is strategically placed so that at maturity it will ~~block views~~ screen the appearance of the Buildings 1 and 2. Nevertheless, views of Buildings 1 and 2 are reduced in these locations by landscaping.

This clarification does not change the significance conclusions of the DEIR or result in the need for additional mitigation.

The construction of the proposed Project on vacant property zoned for the proposed used in and of itself does not constitute a significant visual impact (refer to Response to Comment 37-E). The homeowners in the Project vicinity already have views of warehouse and distribution center buildings so the Project is not introducing a new type of building into the viewshed. Although the proposed buildings will be closer to the residences, this does not represent a significant change to the overall visual character of the area. The Project has been designed to minimize the visibility of the buildings to the greatest extent feasible given the topography of the Project site and existing streets that will serve the Project.³ In addition, the Project will be required to implement mitigation measure **MM AES 9** (listed in Response to Comment 37-D), which requires the elevations of the buildings adjacent to the residences to include articulation and some of the same elements used on the office portions of the buildings to offset the long expanses of wall surface. Thus, when combined with the proposed landscaping,

³ See Response to Comment 7-B for a discussion regarding the topography of the Project site in relation to lowering the elevation of Buildings 1 and 2.

the Mitigation Area, and design of the site grading plan the impacts are reduced to less than significant.

The location of the cross sections in DEIR **Table 5.1-A – Line of Site Analysis** is shown on DEIR **Figure 3-10 – Proposed Site Plan**, (DEIR, p. 5.1-13.) and described in DEIR **Table 5.1-A** in the column named “Cross Section Description.” (DEIR, pp. 5.1-14–5.1-23.) All of the cross sections identified in Table 5.1-A are shown on either DEIR **Figure 3-13a or 3-13b – Line of Sight Exhibit**. Cross Sections E-E, F-F, H-H, J-J, and K-K are shown on DEIR **Figure 3-13b**. Visual simulations were only prepared for those residential locations that are located at an equal elevation or higher elevation than the proposed project.

The comment with regard to the commenter’s difficulty in reading **Figures 3-13a and 3-13b** is noted. The comment regarding the DEIR’s reference to Figures 3-14a and 3-14b instead of Figures 3-13a and 3-13b is correct and, as discussed above will be clarified in the FEIR.

This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-I:

CEQA Guidelines Section 15151 provides that an EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of the environmental consequences. The analysis in the DEIR is based on the Project’s Conceptual Landscape Plan, which is included as DEIR **Figure 3-11**. The conceptual landscape plan provides sufficient information with regard to the number, size, and species of landscaping proposed for the Project. In the Landscape plans included in DEIR **Figure 3-11 – Conceptual Landscape Plan** it appears that certain trees may encroach on the Fire Access/Parks Maintenance Road. Part of the typical entitlement and project approval process with the City requires the preparation and approval of detailed landscape plans showing the location of each plant in relation to the Project’s built components (i.e. trails, buildings, parking lots, etc.) at the time the building construction plans are prepared. As part of the final Design Review process, detailed landscaping and irrigation plans shall be submitted to Planning staff for review and approval. The City reviews the plot plans, building elevations, grading, etc. plans as part of the Plan Check process prior to Building Permit issuance. The review ensures that the plans are in substantial conformance with those reviewed under the EIR and that all conditions and Mitigation Measures have been complied with as necessary. Since the conceptual landscape plan approval is part of the City’s typical Design Review process and this EIR, the City included mitigation measure **MM AES 7** to disclose to the public that landscaping along the Fire Access/Parks Maintenance Road will be installed and maintained in such a manner as to provide adequate clearance for the fire vehicles. (DEIR, p. 5.1-34.)

MM AES 7: To ensure there is adequate clearance for the fire vehicles, prior to building permit issuance the landscape plans shall be revised to relocate the trees shown on the trail and the Fire Access/Parks Maintenance Road such that all trees shall be setback from the trail and Fire Access/Parks Maintenance Road easements a minimum of 5 feet.

Once planted, the developer shall maintain all trees such that a minimum 13.5-foot vertical clearance over the Fire Access/Parks Maintenance Road and a minimum 8.5-foot vertical clearance over the trail is provided and maintained. The revised landscape plans shall be designed per the City's Water Efficient Landscape and Irrigation Ordinance adopted on December 1, 2015

(<http://aquarius.riversideca.gov/clerkdb/0/doc/215696/Page1.aspx>). The revised landscape plans shall be reviewed and approved by City Design Review staff and Western Municipal Water District as part of Design Review prior to the issuance of a grading permit.

Mitigation measure **MM AES 7** requires the landscape plans to be revised to relocate the trees shown in proximity to the trail and Fire Access/Parks Maintenance Road to provide the City-required setback from the edge of the trail and Fire Access/Parks Maintenance Road. These updated plans, and all design related plans are subject to the approval of the City Design Review staff and Western Municipal Water District, which will ensure that changes are made appropriately. (DEIR, pp. 5.1-28, 5.1-34, 5.1-36–5.1-37.)

CEQA does not require a Project to have the final architectural plans designed for a building in order to prepare an EIR. During the preparation of the DEIR, the City determined that additional design features on the west elevation of Building 1 and the north elevation of Building 2 were needed to reduce aesthetic impacts to less than significant; thus, the Project is required to implement **MM AES 9** (listed in Response to Comment 37-D). (DEIR, pp. 5.1-28, 5.1-35–5.1-37.)

Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-J:

See Response to Comment 37-D. The mitigation measures included in DEIR Section 5.1 – Aesthetics are not uncertain or ineffective but will ensure the project does not result in a significant aesthetic impact. Instead of conditioning the Project to install an 8-foot tall wall, the City elected to include this requirement as mitigation measure **MM AES 1** for disclosure purposes. The 8-foot wall required by mitigation measure **MM AES 1** is not intended to screen views of the top of Building 2; rather, it provides a more permanent physical separation between the Project site and adjacent residential uses. (DEIR, p. 5.1-27, 5.1-31–5.1-32.) Likewise, the fencing adjacent to the Sycamore Canyon Wilderness Park described in mitigation measure **MM AES 2** and the fencing along the onsite trail described in mitigation measure **MM AES 3** are not intended to screen views of the buildings from neighboring residences, but rather to manage access to the park area and to provide another line of sight into the park for safety reasons. These mitigation measures are included in the Aesthetics section of the DEIR, because the appearance of these fences and design consistency with City standards are important. (DEIR, p. 5.1-27, 5.1-32, 5.1-36–5.1-37.)

MM AES 1: To provide separation between the Project site and the adjacent residential uses and to be consistent with the wall constructed on the project located east of the

Project site and north of Dan Kipper Drive, the developer shall install an 8-foot tall wall constructed of two-sided decorative masonry material along the Project site's northern property line and that portion of the Project's westerly property line adjacent to existing residential uses. As part of the Design Review process and prior to the issuance of a grading permit, the Project developer shall submit a revised site plan showing the 8-foot tall wall and the proposed materials and decorative treatment for such wall to the City of Riverside Community and Economic Development Department, Planning Division and the Parks, Recreation, and Community Services Department for review and approval.

MM AES 2: For consistency with the Sycamore Canyon Wilderness Park Management Plan, the Project developer shall install fencing along the western boundary of the Project site. The fence and gate shall be constructed per the specifications of the City of Riverside Parks, Recreation, and Community Services Department Standard Detail No. 5520 and specifications. If the developer chooses to install a taller fence, a maximum 8-foot high fence is permitted. Note that increased fence height may require increased post, footing and rail sizes, which shall be engineered and stamped approved by a structural engineer. As part of Design Review and prior to the issuance of a grading permit, the developer shall submit a revised site plan showing this fence, the modified standard detail (if a fence taller than 8 feet is proposed), and specifications to the City of Riverside Community and Economic Development Department, Planning Division and the Parks, Recreation, and Community Services Department for review and approval.

MM AES 3: If the Project developer wants to construct a private 8-feet tall tubular steel fence along the northern boundary of the trail, such fence shall be installed a minimum of three-feet from the edge of the trail and clear of the Fire Access/Parks Maintenance Road easement. If the Project developer chooses to construct said private fence, as part of Design Review and prior to the issuance of a grading permit the developer shall submit a revised site plan showing this fence as a separate graphic fence line and a materials board showing the proposed design and materials to the Community and Economic Development Department, Planning Division and the Parks, Recreation, and Community Services Department for review and approval. If the Project developer chooses not to construct this private fence, this mitigation measure does not apply.

Mitigation measures **MM AES 4** through **MM AES 7** do not relate to addressing the Project's visual impacts relative to adjacent residences; however, they do minimize the Project's visual impacts to the overall Project vicinity. In particular, mitigation measure **MM AES 4** relates to views of the parking lot, loading docks, and trailer parking areas from the public right-of-way, mitigation measure **MM AES 5** relates to design of the trail, and **MM AES 6** and **MM AES 7** relate to design of the Fire Access/Parks Maintenance Road. **MM AES 7** requires revision to the landscape plan to relocate the trees currently shown in the Fire Access/Parks Maintenance Road to ensure compliance with City standards, regardless, the total number of trees within this area will not change. (5.1-28, 5.1-32-5.1-34, 5.1-36-5.1-37.)

MM AES 4: In order to screen views of the parking lot, loading docks, and trailer parking areas from the public right-of-way, the on-site fencing securing the trailer parking areas and the metal, manual operated gates that permit access to these areas shall incorporate an opaque layer (i.e. mesh or screening) that will withstand wind loads of 85 miles per hour. As part of Design Review and prior to the issuance of a grading permit, a revised site plan and materials board showing the proposed screening shall be submitted to the Community and Economic Development Department, Planning Division for review and approval.

MM AES 5: To provide safe and controlled pedestrian and bicycle access to the Sycamore Canyon Wilderness Park in a manner consistent with the design and materials of the fence in mitigation measure MM AES 2, the Project developer shall:

- a. Construct the proposed trail and access gates consistent with the City of Riverside Parks, Recreation, and Community Services Department trail and gates details and specifications and subject to the review and approval by the City of Riverside Parks, Recreation, and Community Services Department, As part of Design Review and prior to the issuance of a grading permit, a revised site plan that identifies this standard and shows the Parks, Recreation, and Community Services Department Standard Trail Construction detail shall be submitted to the Parks, Recreation, and Community Services Department for review and approval.
- b. Install a galvanized steel swing arm gate access gate that locks in the open and closed positions at the trail and parking lot driveway entry. As part of Design Review and prior to the issuance of a grading permit, a revised site plan that shows the detail for this gate and Standard Detail No. 5110 shall be submitted to the City of Riverside Community and Economic Development Department, Planning Division and the Parks, Recreation, and Community Services Department for review and approval.
- c. Install pedestrian/bicycle gates between the trail and parking lot and the beginning of the trail and between the western terminus of the trail and the Sycamore Canyon Wilderness Park per the City's standard pedestrian/bicycle gate. These gates shall be minimum 4-feet wide and constructed of material to match Standard Detail No. 5520 identified in mitigation measure MM AES 2. The pedestrian/bicycle gates shall be lockable in the open and closed position. As part of Design Review and prior to the issuance of a grading permit, a revised site plan that shows the detail for these gates shall be submitted to the City of Riverside Community and Economic Development Department, Planning Division and the Parks, Recreation, and Community Services Department for review and approval.
- d. Install Parks, Recreation, and Community Services Department Standard PVC trail fence along the northern side of the trail in-between the Fire Access/Parks Maintenance Road and along those portions of the southern

side of the trail where the grade drops 3 feet or more. As part of Design Review and prior to the issuance of a grading permit, a revised site plan that references the Standard 3-rail PVC fence detail only and includes Parks, Recreation, and Community Services Department Standard PVC trail fence shall be submitted to the Parks, Recreation, and Community Services Department for review and approval.

- e. Install Parks, Recreation, and Community Services Department standard trail sign at the Project's western property line and at the proposed parking lot on Lot B of Tentative Parcel Map 36879. As part of Design Review and prior to the issuance of a grading permit, a revised site plan that includes a note that states "PRCSD standard trail sign" and Parks, Recreation, and Community Services Department standard trail sign detail 12 shall be submitted to the Parks, Recreation, and Community Services Department for review and approval.

MM AES 6: To provide access for fire and parks maintenance vehicles consistent with the intent of the Sycamore Canyon Wilderness Park Stephens' Kangaroo Rat Management Plan and Updated Conceptual Development Plan, the Project developer shall:

- a. Design and construct the Fire Access/Parks Maintenance Road per the City of Riverside Fire Department requirements, including but not limited to, providing a 36,000 pound wheel load. As part of Design Review and prior to the issuance of a grading permit, the Fire Access/Parks Maintenance Road detail shall be submitted to the Community and Economic Development Department, Planning Division, the Parks, Recreation, and Community Services Department, and the City Fire Department for review and approval.
- b. Install vehicular gates between the vehicular access road on the south end of the Project site and the eastern terminus of the Fire Access/Parks Maintenance Road and between the western terminus of the Fire Access/Parks Maintenance Road and the Sycamore Canyon Wilderness Park. The vehicular gates shall be double galvanized steel swing arm gates a minimum of 12-feet in width and provided with a Knox padlock. The gates shall lock in the open and closed positions per Park Standard Detail No. 5110. The gate at the western property line shall be constructed to match Standard Detail No. 5520. As part of Design Review and prior to the issuance of a grading permit, a revised site plan that shows the details of these gates and Park Standard Detail No. 5110 shall be submitted to the Community and Economic Development Department, Planning Division and the Parks, Recreation, and Community Services Department for review and approval.

See Response to Comment 37-I for **MM AES 7**.

Mitigation measure **MM AES 9** requires the west elevation of Building 1 and the north elevation of Building 2 to implement articulation to create pockets of light and shadow to break up the long expanses of wall surface. Although the exact specifications are not listed, the new designs are subject to the City's Design Review process and will be reviewed by Design Review staff prior to Grading Permit issuance to ensure that the intent of this mitigation measure is fulfilled. This mitigation measure (See Response to Comment 37-D for **MM AES 9**), the 8-foot wall required in mitigation measure **MM AES 1**, the 100-foot setback of Building 2 and extensive landscaping along the north and west property boundaries work together to lessen impacts to views of Buildings 1 and 2 from the northerly and westerly residences to below a level of significance.

This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-K:

Comment noted, the DEIR Section 5.1 – Aesthetics, discusses topographic changes proposed as a result of the preliminary Grading Plan and grading exceptions shown in DEIR **Figure 3-9 – Grading Exception**. The DEIR line of sight exhibits (Figures 3-13a and 3-13b) show the changes in elevation due to the site grading and are discussed and described in DEIR **Table 5.1-A – Line of Sight Analysis** in the Aesthetics section. (DEIR, pp. 5.1-14–5.1-23.) This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-L:

Comment noted, this comment represents an opinion, but does not provide any explanation, information, specific examples, or other support for the comment. A comment which draws a conclusion without elaborating on the reasoning behind, or the factual support for, those conclusions does not require a response. Under CEQA, the lead agency is obligated to respond to timely comments with “good faith, reasoned analysis.” (CEQA Guidelines, § 15088(c).) These responses “shall describe the disposition of the significant environmental issues raised . . . [and] giv[e] reasons why specific comments and suggestions were not accepted. (CEQA Guidelines, § 15088(c).) To the extent that specific comments and suggestions are not made, specific responses cannot be provided and, indeed, are not required. (*Browning-Ferris Industries of California, Inc. v. City Council of the City of San Jose* (1986) 181 Cal.App.3d 852 [where a general comment is made, a general response is sufficient].) Nonetheless, to clarify the lighting requirements, the third paragraph under the subheading “Lighting” will be modified on DEIR page 5.1-10 as follows:⁴

The City will require the ~~“Standard Lighting Condition” which reads as follows~~
following: An exterior lighting plan shall be submitted ~~for Planning Division to~~
Design Review staff for review and approval. A photometric study ~~with and~~

⁴ Deletions are shown with strikethrough text (~~example text~~) and additions are shown with double underline text (example text).

manufacturer's cut sheets of all exterior lighting on the buildings, in landscaped areas, and in the parking lots shall be submitted with the study exterior lighting plan. All on-site lighting shall provide a minimum intensity of one-foot candle and a maximum of ten-foot candles at ground level throughout the areas serving the public and used for parking, with a ratio of average light to minimum light of four to one (4:1). Light sources shall be hooded and shielded to minimize off-site glare, shall not direct light skyward, and shall be directed away from adjacent properties and public rights-of-ways. No light shall be permitted on the MSHCP Conservation Area (Sycamore Canyon Wilderness Park). If lights are proposed to be mounted on buildings, down-lights shall be utilized. Light poles shall not exceed ~~twenty feet (20)~~ fourteen (14) feet in height, including the height of any concrete or other base material within the 100-foot setback between Building 2 and the residential properties to the north and shall not exceed twenty (20) feet in height, including the height of any concrete or other base material elsewhere on the property.

As indicated above, light poles adjacent to the north property line shall not exceed 14 feet in height. In addition, **MM AES 10**, which will be modified in the FEIR as shown below to clarify that there will be no light spill into residential backyards to the north of the Project site, requires the building mounted lighting on the north elevation of Building 2 to be mounted as low as possible, while still providing the needed security lighting.

MM AES 10: To eliminate ~~reduce~~ light spill and glow into the residential backyards to the north, lighting mounted on the north wall of Building 2 shall be placed on this wall as low as feasible to provide the required security lighting.

The clarification of lighting requirements does not constitute significant new information that would require recirculation of the DEIR. (CEQA Guidelines, § 15088.5.) Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-M:

According to the CARB's *Air Quality and Land Use Handbook*, CARB recommends to avoid the placement of new sensitive land uses within 1,000 feet of a distribution center (accommodating more than 100 trucks per day, 40 trucks with transport refrigeration units (TRUs), or where TRUs operate more than 300 hours a week) and to take into account the configuration of existing distribution centers and avoid locating residences and other sensitive land uses near entry and exit points. However, these are recommendations, not mandates, and land use decisions ultimately lie with the local agency which needs to balance other considerations. (DEIR, p. 5.3-18.)

Since the Project involves the construction of a logistics center approximately 30 meters from the property line of the nearest sensitive receptor, a Screening Health Risk Assessment (HRA) was prepared for the Project in June 2016 (included in Appendix B of the DEIR) and a Refined HRA was prepared in November 2016 to address comments from SCAQMD (included as

Attachment A.1 to the FEIR).. Subsequently, on December 23, 2016, SCAQMD prepared a letter requesting updated modeling (hereinafter referred to as the “New Modeling”). The New Modeling was prepared following the SCAQMD guidance and the results documented in a January 9, 2017 letter responding to the December 23, 2016 SCAQMD letter (included as Attachment A.2 to the FEIR). According to the June Screening HRA, the November Refined HRA, and the New Modeling, none of the cancer or non-cancer thresholds will be exceeded as a result of Project operation for workers or residents within the proposed Project vicinity.) In fact, the estimated maximum cancer risk reduced from 5.3 in one million as reported in the June Screening HRA (DEIR, **Table 5.3-J**) to 4.87 in one million in the vicinity of the Project as a result of the New Modeling. The New Modeling was transmitted to SCAQMD for review on January 9, 2017. On January 18, 2017, SCAQMD transmitted an email to the City indicating they have no further comments on the HRA analysis. Therefore, the Project will not result in the exposure of sensitive receptors to substantial pollutant concentrations during Project operation. (DEIR, p. 5.3-34, FEIR Attachment A.1, FEIR Attachment A.2.)

As stated previously, CARB recommends, but does not mandate that new sensitive land uses not be placed within 1,000 feet of a distribution center. As discussed in DEIR Section 5.10 – Land Use and Planning, the Project is consistent with both the land use designation in the GP 2025 and SCBPSP. Furthermore, Appendix M of the DEIR identifies applicable GP 2025 objectives and policies and the Project’s consistency level with those objectives and policies. The Project was found to be consistent with the General Plan Air Quality Element Objectives and Policies. (DEIR Appendix M, pp. M-58-65.)

CARB’s guidance, on page 5 of the handbook, acknowledges that the recommendations are in fact advisory, and “to determine the actual risk near a particular facility, a site-specific analysis would be required. Risk from diesel PM will decrease over time as cleaner technology phases in.” The handbook further goes on to state that “these recommendations are designed to fill a gap where information about existing facilities may not be readily available and are not designed to substitute for more specific information if it exists.” Therefore, the DEIR and underlying technical study is actually consistent with the CARB handbook. The DEIR includes a site-specific health risk assessment based on the geospatial location of the proposed development and existing sensitive land uses in the vicinity of the Project site and the truck travel routes that are expected to be utilized. As shown in the DEIR, the Project would not pose a significant health risk associated with diesel particulate matter (DPM) to sensitive receptors in the Project vicinity.

The City adopted *Good Neighbor Guidelines Siting New and/or Modified Warehouse/Distribution Facilities* to provide the City and developers with a variety of strategies that can be used to reduce diesel emissions from heavy-duty trucks that deliver goods to and from warehouse and distribution centers, such as the proposed Project. (DEIR, p. 5.3-16.) As discussed in DEIR Appendix M, the proposed Project is consistent with all of the goals and strategies outlined in the City’s *Good Neighbor Guidelines*. (DEIR Appendix M, pp. M-66–M-72.) Because each Project and property have different characteristics and circumstances, the City’s *Good Neighbor Guidelines* do not include recommendations regarding setbacks

between distribution center buildings and adjacent residential uses. Rather, it recommends that a HRA be prepared for any warehouse project within 1,000-feet of residential properties. The site has been designed in order to minimize impacts on the adjacent residential area including placement of driveways and onsite parking areas away from the adjacent residential areas, consistent with the policies contained in the City's *Good Neighbor Guidelines*. As discussed in Response to Comment 37-M, consistent with the *Guidelines*, the June Screening HRA, the November Refined HRA, and the New Modeling were prepared for the Project and as discussed, all conclude that the Project will not result in a significant impact to either the residents or workers.

Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-N:

Comment noted, DEIR Section 5.3.12 properly discloses under Threshold B, that long-term Project operational emissions will exceed the threshold for NO_x, even with the incorporation of proposed mitigation measures **MM AQ 1** through **MM AQ 15**, **MM AQ 18**, and **MM AQ 19**, as well as **MM AQ 22** through **MM AQ 25** and Project design features. Because long-term operation of the proposed Project will exceed the SCAQMD threshold for NO_x, impacts are considered to be significant and unavoidable after implementation of mitigation, and a Statement of Overriding Considerations will be required should the City choose to approve the Project. (DEIR, p.5.3-30.)

MM AQ 1: Solar or light-emitting diodes (LEDs) shall be installed for outdoor lighting. Prior to building permit issuance, the City shall verify building plans contain these features.

MM AQ 2: Indoor and outdoor lighting shall incorporate motion sensors to turn off fixtures when not in use. The site and buildings shall be designed to take advantage of daylight, such that use of daylight is an integral part of the lighting systems. Prior to building permit issuance, the City shall verify building plans contain these features.

MM AQ 3: Trees and landscaping shall be installed along the west and south exterior building walls to reduce energy use. Vegetative or man-made exterior wall shading devices or window treatments shall be provided for east, south, and west-facing walls with windows. Landscaping and/or building plans shall contain these features and are subject to City verification prior to building permit issuance.

MM AQ 4: Light colored "cool" roofs shall be installed over office area spaces and cool pavement shall be installed in parking areas. Prior to building permit issuance, the City shall verify building plans contain these features.

MM AQ 5: Energy efficient heating and cooling systems, appliances and equipment, and control systems that are Energy Star rated shall be installed in future office improvement plans. Refrigerants and heating, ventilation, and air conditioning (HVAC)

equipment shall also be selected to minimize or eliminate the emission of compounds that contribute to ozone depletion and global warming. The efficiency of the building envelope shall also be increased (i.e., the barrier between conditioned and unconditioned spaces). This includes installation of insulation to minimize heat transfer and thermal bridging and to limit air leakage through the structure or within the heating and cooling distribution system to minimize energy consumption. The City shall verify tenant improvement plans include these features. The City shall verify these features are installed prior to issuance of occupancy permits.

MM AQ 6: Energy Star rated windows, space heating and cooling equipment, light fixtures, appliances, or other applicable electrical equipment shall be installed. Prior to building permit issuance, the City shall verify building plans contain these features.

MM AQ 7: All buildings shall be designed with “solar ready” roofs that can structurally accommodate future installation of rooftop solar panels. Prior to building permit issuance, the City shall verify roofs are “solar ready.” If future building operators are providing rooftop solar panels, they shall submit plans for solar panels to the City prior to occupancy.

MM AQ 8: The Project’s landscaping plans shall incorporate water-efficient landscaping, with a preference for xeriscape landscape palette. Landscaping plans shall be approved by the City prior to building permit issuance.

MM AQ 9: All building owners shall provide education about water conservation and available programs and incentives to building operators to distribute to employees.

MM AQ 10: Interior and exterior waste storage areas shall be provided for recyclables and green waste. Prior to occupancy permits, the City shall verify interior and exterior storage areas are provided for recyclables and green waste. The property operator will also provide readily available information provided by the City for employee education about reducing waste and available recycling services.

MM AQ 11: Up to three electric vehicle charging stations shall be provided to encourage the use of low or zero-emission vehicles. Prior to building permit issuance, the City shall verify building plans contain electric vehicle charging stations.

MM AQ 12: Adequate bicycle parking near building entrances shall be provided at the site. Facilities that encourage bicycle commuting (e.g., locked bicycle storage or covered or indoor bicycle parking) shall be provided. Prior to building permit issuance, the City shall verify building plans contain adequate bicycle parking.

The City and Applicant have agreed to reduce vehicle idling time to three minutes, as such mitigation measures **MM AQ 13** and **MM AQ 22** will be revised in the FEIR as shown below.

MM AQ 13: All facilities shall post signs informing users of requirements limiting idling to three five minutes or less in excess of pursuant to Title 13 of the California Code of

Regulations, Section 2485. The City shall verify signage has been installed prior to occupancy.

MM AQ 14: Electrical hookups shall be installed at all loading docks to allow transport refrigeration units (TRUs) with electric standby capabilities to plug in when TRUs are in use. Trucks incapable of using the electrical hookups shall be prohibited from accessing the site as set forth in the lease agreement. The City shall verify electrical hookups have been installed prior to occupancy and shall confirm lease agreement includes such language.

MM AQ 15: Service equipment (i.e., forklifts) used within the site shall be electric or compressed natural gas-powered.

MM AQ 18: Locally produced and/or manufactured building materials shall be used for at least 10% of the construction materials used for the Project. Verification shall be submitted to the City prior to issuance of a building permit.

MM AQ 19: “Green” building materials shall be used where feasible, such as those materials that are resource efficient and recycled and manufactured in an environmentally friendly way. Verification of the feasibility or infeasibility of securing these materials shall be submitted to the City prior to issuance of a building permit.

The City and Applicant have agreed to reduce vehicle idling time to three minutes, as such mitigation measure **MM AQ 22** will be revised in the FEIR as shown below

MM AQ 22: The Project shall implement the following measures to reduce emissions from on-site heavy duty trucks within six months after operations commence:

- a) Post signs informing truck drivers about the health effects of diesel particulates, the requirement that ~~CARB diesel idling times cannot exceed three minutes~~ regulations, and the importance of being a good neighbor by not parking in residential areas.
- b) Tenants shall maintain records on its fleet equipment and vehicle engine maintenance to ensure that equipment and vehicles serving the building are in good condition, and in proper tune pursuant to manufacturer’s specifications. The records shall be maintained on site and be made available for inspection by the City.
- ~~c)~~ The facility operator will ensure that site enforcement staff in charge of keeping the daily log and monitoring for excess idling will be trained/certified in diesel health effects and technologies, for example, by requiring attendance at California Air Resources Board approved courses (such as the free, one-day Course #512).

Because the Project incorporates a design feature to require all medium- and heavy-duty trucks entering the Project site to meet or exceed 2010 engine emissions standards, **MM AQ 23** will be revised in the FEIR as shown below.

MM AQ 23: In order to promote alternative fuels, and help support “clean” truck fleets, the developer/successor-in-interest shall provide building occupants with information related to SCAQMD’s Carl Moyer Program, or other such programs that promote truck retrofits or “clean” vehicles and information including, but not limited to, the health effect of diesel particulates, benefits of reduced idling time, CARB regulations, and importance of not parking in residential areas. ~~If trucks older than 2007 model year will be used at a facility, the developer/successor in interest shall require, within one year of signing a lease, future tenants to apply in good faith for funding for diesel truck replacement/retrofit through grant programs such as the Carl Moyer, Prop 1B, VIP, HVIP, and SOON funding programs, as identified on SCAQMD’s website (<http://www.aqmd.gov>). Tenants will be required to use those funds, if awarded.~~

MM AQ 24: Any yard trucks used on-site to move trailers in or around the loading areas shall be electric in place of traditional diesel powered yard trucks.

MM AQ 25: The building operator shall provide signage or flyers that advise truck drivers of the closest restaurants, fueling stations, truck repair facilities, lodging, and entertainment.

The DEIR requires the Project implement **MM AQ 22** through **MM AQ 24** to aid in the reduction of NO_x emissions during Project operations. **MM AQ 22** will reduce emissions from on-site heavy duty trucks by: posting signs informing truck drivers about a) the health effects of diesel particulates b) the CARB diesel idling regulations, and c) the importance of being a good neighbor by not parking in residential areas; and by requiring future tenants to maintain records on its fleet equipment and vehicle engine maintenance to ensure that equipment and vehicles serving the building are in good condition, and in proper tune pursuant to manufacturer’s specifications; and ensuring that site enforcement staff in charge of keeping the daily log and monitoring for excess idling will be trained/certified in diesel health effects and technologies.

MM AQ 23 supports “clean” truck fleets, by providing the future building occupants with information related to SCAQMD’s Carl Moyer Program, or other such programs that promote truck retrofits or “clean” vehicles. In addition, mitigation measure **MM AQ 24** requires all yard trucks used on-site to move trailers in or around the loading areas shall be electric in place of traditional diesel powered yard trucks. Lastly, mitigation measure **MM AQ 25** will also make certain that signage or flyers advising truck drivers of the closest restaurants, fueling stations, truck repair facilities, loading, and entertainment are provided. (DEIR, p. 503-39.)

In addition to the specific mitigation measures designed to reduce the impacts of operational NO_x emissions, the Project is subject to state and federal regulations and programs that would reduce Project-related NO_x emissions over time. (DEIR, pp. 5.3-11-19.)

This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-O:

The Commenter's recommended mitigation measure to require future owners/tenants mandate require use of cleaner trucks by operators is noted. The Project has incorporated a design consideration that requires all medium- and heavy-duty trucks entering the Project site meet or exceed 2010 engine emission standards. Therefore, the bottom of DEIR page 5.3-21 will be modified in the FEIR as follows:

Transportation and Motor Vehicles

- Limit idling time for commercial vehicles to no more than threefive minutes.
- All medium and heavy duty diesel trucks that enter the Project site shall that meet or exceed 2010 engine emission standards as specified in California Code of Regulations Title 13, Article 4.5, Chapter 1, Section 2025 or be powered by natural gas, electricity, or other diesel alternative shall be permitted to enter the Project site. Facility operators shall maintain a log of all trucks entering the facility to document that the truck usage meets these emission standards. This log shall be available for inspection by City staff at any time.
- Provide up to three electric vehicle charging facilities to encourage the use of low or zero-emission vehicles.

Because the Project will require all medium and heavy duty vehicles entering the Project site to meet or exceed 2010 engine emissions standards, this feature has also been included as a mitigation measure for consistency with other project design features that were also included as mitigation. (DEIR, p. 5.3-35.) Accordingly, mitigation measure **MM AQ 17** will be renumbered to **MM AQ 17a** and **MM AQ 17b** will be added to DEIR page 5.3-37. Because Project Design Features are also listed as mitigation measures in the DEIR mitigation measure **MM AQ 17** will be renumbered to **MM AQ 17a** in the FEIR and **MM AQ 17b** will be included in the FEIR and Mitigation Monitoring and Reporting Program (MMRP) as follows:

MM AQ 17a: During grading, all off-road diesel-powered construction equipment greater than 50 horsepower shall meet or exceed United States Environmental Protection Agency (EPA) Tier 3 off-road emissions standards. Proof of compliance shall be reviewed by the City prior to issuance of a grading permit.

MM AQ 17b: All medium and heavy duty diesel trucks entering logistics sites shall meet or exceed 2010 engine emission standards specified in California Code of Regulations Title 13, Article 4.5, Chapter 1, Section 2025 or be powered by natural gas, electricity, or other diesel alternative. Facility operators shall maintain a log of all trucks entering the facility to document that the truck usage

meets these emission standards. This log shall be available for inspection by City staff at any time.

The renumbering of a mitigation measure and the addition of this mitigation does not raise any new significant environmental effects of the project but merely clarifies and makes an insignificant modification to the EIR to include a project design feature that the Project will require the use newer truck engines than is currently required by law. Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-P:

The comment proposes a revision to **MM AQ 7** (See Response to Comment 37-N for **MM AQ 7**) to require the use of solar energy instead of only providing solar ready roofs but provides no justification or reasoning for this change. The DEIR includes mitigation measures to reduce NO_x emissions from the operation of the proposed Project. The Project will implement **MM AQ 23** through **MM AQ 25** (See Response to Comment 37-N for **MM AQ 23** through **MM AQ 25**) that would substantially reduce significant impacts to air quality, as described in Response to Comment 37-N. Additionally, greenhouse gas (GHG) emissions from energy consumption were small (11%) and impacts related to GHG emissions were determined to be less than significant with the implementation of Project design features listed as **MM AQ 1** through **MM AQ 16**, **MM AQ 18**, **MM AQ 19**, and additional mitigation measures **MM AQ 22** through **MM AQ 24** (See Response to Comment 37-N for **MM AQ 1** through **MM AQ 15**, **MM AQ 18**, **MM AQ 19**, and **MM AQ 22** through **MM AQ 24**) listed in Section 5.3.15 of the DEIR. (DEIR, p. 5.7-50 and 5.7-55) Therefore, requiring the use of rooftop solar is not warranted.

MM AQ 16: The Building Operator shall support and encourage ridesharing and transit for the construction crew and regular employees by providing information on ridesharing and transit opportunities.

The comment also proposes a revision to **MM AQ 14** (See Response to Comment 37-N for **MM AQ 14**) to require that electrical hookups at the loading dock doors be used instead of only being provided. The commenter misinterprets the mitigation measure, as **MM AQ 14** states that when TRUs are in use, trucks incapable of using the electrical hookups shall be prohibited from accessing the site as set forth in the lease agreement.

The comment also suggests additional mitigation to enforce a specified truck route to ensure that diesel trucks are not using residential streets. The City does not have designated truck routes, and the Project proponent is not responsible for establishing these routes. Nonetheless, pursuant to Chapter 10.56 of the City's Municipal Code commercial vehicles (trucks) over 10,000 pounds are prohibited from using Lochmoor Drive, Fair Isle Drive and Sycamore Canyon Boulevard, between El Cerrito Drive and University Drive. People observing commercial vehicles exceeding ten thousand pounds (5 tons) gross weight in locations where these restrictions are in place may call 311 to report the incident. The 311 call will be routed to

the Traffic Department and Police Department so that the appropriate response can be coordinated.

The proposed Project has an established connection between the Project site and the freeways in that the Project site is accessed from Sycamore Canyon Boulevard, a 4-lane divided major arterial. Further, the “urban intersect” as described in the *SCBPSP* at the Interstate 215 and Eastridge Avenue has since been constructed, allowing for a direct connection to Interstate 215. (DEIR Appendix M, p. M-70.) With regard to the trip distribution (i.e. the trip directional orientation of Project-generated traffic), the *Revised Traffic Impact Analysis, Sycamore Canyon Industrial Buildings 1&2* (TIA, Appendix J) was prepared by a registered professional traffic engineer with local experience and expertise in traffic modeling. The trip distribution used in the TIA is based on professional engineering standards and was approved by the City as part of the TIA scoping agreement. (See Appendix A of the TIA.) Factors taken into consideration in developing the trip distribution model include: the existing roadway system, existing traffic patterns, and existing and future land uses.

Additionally, as discussed in DEIR Section 5.16.4, the Project will prevent passenger car and truck egress onto Dan Kipper Drive by 1) posting signs at all Project driveways that indicate only right turns onto Lance Drive are permitted and 2) installation of traffic delineators (“pork chops”) at the all three exits that prevent left-out turns onto Lance Drive. This will force both outbound (i.e. leaving the Project site) passenger cars and trucks to turn south onto Lance Drive to Sierra Ridge Drive and then east on Sierra Ridge Drive to Sycamore Canyon Boulevard. (DEIR, p. 5.16-26.)

The City has imposed all feasible mitigation measures that would reduce the proposed Project’s potentially significant impacts to less than significant. Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-Q:

The comment alleges that the air quality monitoring assumed clean fleets coming to the Project over the next few years. Consistent with standards for preparing Air Quality Impact Analysis, CalEEMod defaults were used in determining the emissions factors for proposed Projects vehicles. According to Appendix A of the CalEEMod User’s Guide, CalEEMod calculates the emissions from mobile sources with the trip rates, trip lengths, and emissions factors for running from EMFAC2011. EMFAC 2011 incorporates emissions from a range of vehicle model years based on an average age distribution of vehicles to account for turnover in the statewide fleet as older vehicles are replaced by newer ones. Therefore, the AQ Report and corresponding DEIR analysis did not assume only post-2007 clean fleets would be coming to the Project site, but a mix of vehicle ages consistent with the modeling protocols.

Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-R:

The modeling assumed a ground-level volume source in flat terrain with no vertical velocity or buoyancy component (i.e., not a hot point source such as a vertical engine exhaust pipe). In effect, the volume source modeling dispersed “cold” pollutants horizontally directly into receptors, which represents a conservative impact assessment.

Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-S:

The comment expresses concern over the cumulative air quality effects due to the Project. As discussed in Section 5.3 – Air Quality of the DEIR, SCAQMD considers the thresholds for project-specific impacts and cumulative impacts to be the same. Therefore, projects that exceed project-specific significance thresholds are considered by SCAQMD to be cumulatively considerable. Based on SCAQMD’s regulatory jurisdiction over regional air quality, it is reasonable to rely on the SCAQMD thresholds to determine whether there is a cumulative air quality impact. (DEIR, p. 5.3-31.)

Additionally, cumulative impacts were analyzed in Section 6.1.5 of the DEIR (Cumulative Impacts – Air Quality). In terms of localized air quality impacts, construction of the Project would not have a cumulatively considerable impact due to criteria pollutant emissions. However, because the Project’s emissions exceed SCAQMD thresholds during operation due to Project-related to NO_x, the Project will result in significant and unavoidable cumulative impacts to air quality. (DEIR, p. 6-9-10.) Therefore, the DEIR properly analyzed the proposed Project cumulative impacts on air quality and consistent with SCAQMD thresholds, determined the cumulative impacts to Air Quality to be significant and unavoidable.

This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-T:

Comment noted. The Project Developer will be required to submit construction plans, including grading plans, to the City of Riverside to review and approval with both applicable City codes, conditions of approval and DEIR mitigation measures as verified through the Mitigation Monitoring and Reporting Program to be included in the Final EIR. Any deviations from the Project as analyzed in the DEIR will require the Developer to seek an amendment to the plans and any additional environmental review will have to be included as part of the review of that alteration.

Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-U:

Comment noted, according to Appendix A of the CalEEMod User's Guide, two sets of trip type breakdown are used in CalEEMod, depending on the type of project being evaluated—residential breakdown and commercial breakdown.

Commercial trip types include commercial-customer (C-C), commercial-work (C-W) and commercial-nonwork (C-NW). A commercial-customer trip represents a trip made by someone who is visiting the commercial land use to partake in the services offered by the site. The commercial-work trip represents a trip made by someone who is employed by the commercial land use sector. The commercial-nonwork trip represents a trip associated with the commercial land use other than by customers or workers. An example of C-NW trips includes trips made by delivery vehicles of goods associated with the land use⁵.

As shown in the CalEEMod modeling files included as Appendix A of the AQ Report included as Appendix B of the DEIR, a 61.93 non-residential C-W trip percentage was used to account for the distribution of passenger car related traffic (61.93%) estimated in the TIA⁶. A 38.07 non-residential C-NW trip percentage was used to account for the distribution of truck related traffic (38.07%), also estimated in the TIA. The non-residential C-NW trip length was adjusted to 76.3 miles to account for the distance from the Ports of Los Angeles and Long Beach to the Project site, where 100 percent of the trips made by Project operations were conservatively assumed to originate. This is a one-way trip length, and therefore it is assumed that all truck traffic would be coming to and from the Ports. In reality, trucks that will serve the proposed Project may have a portion of trips that originate from the Ports, but will also be served by surrounding distribution centers, airports, and rail transfer stations, all which may be closer (i.e. shorter trip lengths) than what was evaluated in the AQ Report and DEIR.

Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-V:

Comment noted, CalEEMod estimates the emissions from Project-related vehicle usage based on trip generation data contained in defaults or in project-specific traffic analyses. The trip generation rate and fleet mix were adjusted based on the rates and ratios found in the Project-specific Traffic Study.

According to the CalEEMod User's Guide Appendix E, the fleet mix used in the URBEMIS model used in CalEEMod is derived from the regional average distribution of trips obtained from the EMFAC model. While this fleet mix may be appropriate for the majority of land uses, it may not be appropriate for specialized uses such as warehouses. As such, the City agreed that the use of the Fontana study was appropriate to capture and study the types of trucks that use these types of uses. The Fontana study found that trucks make up approximately 20% of total

⁵ <http://www.aqmd.gov/docs/default-source/caleemod/caleemod-appendixa.pdf?sfvrsn=2>

⁶ The TIA is included as Appendix J of the DEIR. Refer to DEIR Section 5.10 for methodology on assumptions in the TIA for trucks and trip generation.

trips for the four warehouses evaluated. This study also broke down the trip distribution among 2, 3, and 4+ axle trucks (3.46%, 4.64%, 12.33%, respectively)⁷.

Based on DEIR **Table 5.16-F – Project Trip Generation Rates** (and Table 4-2 – Project Trip Generation in Appendix J of the DEIR), passenger cars represent 61.93% of Project-related traffic and trucks (2, 3, and 4+ axle) represent 38.07% of Project-related traffic which is much more conservative than the trip distribution in the Fontana study, and consistent with SCAQMD recommendations cited in the comment. Two axle trucks represent 6.48%, three axle trucks represent 8.63%, and four plus axle trucks represent 22.96% of Project traffic.

According to Appendix E of the CalEEMod User's Guide, the fleet mix from the Fontana study as quoted above may be used to determine the distribution of truck type. This truck fleet mix is based upon the Fontana Study because ITE's trip generation manual does not include a breakdown of truck type. Each truck type was modeled as a heavy-duty diesel truck consistent with this guidance. Therefore, the fleet mix is an accurate representation of Project-related passenger car and truck traffic.

Additionally, trip length data was based on CalEEMod defaults and the distance from the Ports of Los Angeles and Long Beach to the Project site. This was a conservative assumption in that it assumed all truck traffic would be coming to and from the Ports. In reality, trucks that will serve the Project may have a portion of trips that originate from the Ports, but will also be served by surrounding distribution centers, airports, and rail transfer stations, all which may be closer (i.e. shorter trip lengths) than what was evaluated in the AQ Report and DEIR.

Appendix J – Traffic/Transportation of the DEIR states that the trip generation rates for high-cube warehousing are based on the weighted average trip generation rates provided in the *Trip Generation Manual (9th Edition)* by the Institute of Transportation Engineers (ITE), 2012. The Fontana study was used to determine the split of 2, 3, and 4+ axle trucks. The comment notes that the AQMD found that the "Fontana Study, by itself, is not characteristic of high cube warehouses." The TIA is consistent with this statement in that the 9th Edition ITE rates were used to determine trip generation. The split of truck types was the only parameter used from the Fontana study and the split was applied to the generation rates from the ITE and therefore, the TIA does not solely rely on the Fontana study.

Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-W:

The comment identifies concern over potential Project-related NO₂ exposure to sensitive receptors and related health effects. As identified in Section 5.3 of the DEIR, oxides of nitrogen (NO_x) contribute to air pollution include nitric oxide (NO) and nitrogen dioxide (NO₂). NO₂ at atmospheric concentrations is a potential irritant and can cause coughing in healthy people, can alter respiratory responsiveness and pulmonary functions in people with preexisting

⁷ <http://www.aqmd.gov/docs/default-source/caleemod/caleemod-appendixe.pdf?sfvrsn=2>

respiratory illness, and potentially lead to increased levels of respiratory illness in children. The Federal Clean Air Act of 1970 established the National Ambient Air Quality Standards (NAAQS) for six criteria pollutants including NO_x in order to regulate air quality and protect public health. The State of California has adopted the same six chemicals as criteria pollutants, but has established different allowable levels. (DEIR, p. 5.3-4.)

The DEIR evaluated NO_x emissions on both a regional level and a localized level to determine impacts to sensitive receptors. Localized significance thresholds represent the maximum emissions from a project that would not cause or contribute to an exceedance of the most stringent applicable state or federal ambient air quality standards. Localized significance thresholds were developed in recognition of the fact that criteria pollutants such as NO_x can have local impacts at nearby sensitive receptors as well as regional impacts. Based on the LST analysis, neither the short-term construction nor long-term operation of the Project will exceed SCAQMD LST at sensitive receptors within the Project vicinity for any criteria pollutants, including NO_x. (DEIR, p.5.3-27-29.)

The Air Quality Study and DEIR analyzed and concluded the Project does not exceed any SCAQMD LST for NO_x during construction or operation of the Project including NO₂ exposure. Additionally, the DEIR includes a project design features that requires the Project to use Tier 3 equipment during Project grading to reduce NO_x and diesel particulate matter (DPM) impacts to nearby receptors. Refer to Response to Comment 37-O for a discussion regarding the Project's design consideration that requires all medium- and heavy-duty trucks entering the Project site meet or exceed 2010 engine emission standards.

Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-X:

The comment accurately reflects the information provided in the DEIR. Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-Y:

The comment notes that the California Department of Fish and Wildlife (CDFW) response letter to the Project's DBESP should be included in the DEIR to support the finding that the Mitigation Area will be biologically superior to the existing drainage areas. Prior to development of the DBESP document, the City met with the Regional Conservation Authority (RCA), the agency responsible for determining MSHCP compliance, the California Department of Fish and Wildlife (CDFW) and the US Fish and Wildlife Service (USFWS) on December 9, 2015, and February 10, 2016. (DEIR, Appendix C.4, p. 5-7.) The purpose of these meetings was to discuss the location and the characteristics of the drainage and proposed Mitigation Area that would fulfill the requirements of Section 6.1.2 of the MSHCP. The CDFW and USFWS were given an opportunity to review and comment on the DBESP from May 20, 2016 through June 20, 2016. On June 6, 2016 Kimberly Freeburn Marquez of CDFW on behalf of CDFW and USFWS informed sent email to Patricia Brenes (City of Riverside Principal Planner) indicating (i)

that a burrowing owl survey report is needed (included in the DEIR as Appendix C.6) and (ii) a Habitat Mitigation Management Plan (HMMP) and subsequent annual monitoring reports are to be submitted to the Regional Conservation Agency (RCA) for review with copies mailed to the Wildlife Agencies. On November 22, 2016, Ms. Freeburn sent email confirmation to Ms. Brenes that the CDFW and USFWS reviewed the focused burrowing owl survey and have no further questions or comments regarding the DBESP. That is, none of the agencies requested changes to the text of the DBESP, and the DBESP determined that the habitat that will be created in the Mitigation Area is considered biologically superior in comparison to the existing drainage. (DEIR, p. 5.4-21.)

Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-Z:

Section 3 – Project Description of the DEIR describes the landscaping and on-site Mitigation Area. The location and size of the Mitigation Area was recommended by the RCA, CDFW and USFWS at the December 9, 2015 meeting discussed in Response to Comment 37-Y. The Project site will be landscaped with drought-tolerant and climate appropriate trees, shrubs and ground cover that will meet or exceed the City's requirements. The landscape plan is designed to provide visual appeal and screen the views of Buildings 1 and 2 from the adjacent residential areas and the Sycamore Canyon Wilderness Park. (DEIR, p. 3-29.)

The Mitigation Area will include a low-flow channel designed to meander; thus, creating a natural sinuosity to mimic a naturally occurring drainage. Vegetation within the Mitigation Area will be dominated by willow riparian scrub habitat with upland scrub and oaks along the upper banks. (DEIR, p. 5.4-18.) As shown in Appendix D of the DBESP (Appendix C.4 of the DEIR), the Mitigation Area will include trees and shrubs to replace lost riparian habitat. Trees include coast live oak, toyon, California sycamore, arroyo willow, and Mexican elderberry. These trees will serve the purpose of the landscape plan and will aid in providing visual appeal and screening views.

Additionally, the comment notes that the Mitigation Area is “cut-off” from the Sycamore Canyon Wilderness Park. Much of the area immediately surrounding the Project site is already developed; the site does not currently provide a link between the Sycamore Canyon Wilderness Park and the Box Springs Mountain. (DEIR, p. 5.4-22.)

Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-AA:

The comment identifies concern over edge effects between the proposed Project to the Sycamore Canyon Wilderness Park including noise impacts. The only receptor location that will experience a CNEL increase of 5 dBA or greater is located approximately 10 feet east of the westerly Property line in the Sycamore Canyon Wilderness Park. Because the change in noise levels resulting from Project operations will be perceptible (i.e. 5 dBA or greater at certain

receptors), this is considered a substantial increase. However, this increase is not a significant impact, because there are no sensitive receptors at receptor location 34, the Sycamore Canyon Wilderness Park and the Project's mitigated noise levels are within the General Plan 2025 "Normally Acceptable" compatibility criteria (55-70 dBA) for neighborhood park land uses. (DEIR, p. 5.12-40.)

Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-BB:

Comment noted, the Mitigation Area is not deferred mitigation but a specific area with specific criteria and location for the relocation of the blueline stream that includes specific measurements to confirm the health and wellbeing of the area to be created.

MM BIO 3 reads as follows:

MM BIO 3: As required by the Project's DBESP, prior to issuance of grading permits the Project proponent shall provide evidence to the City Planning Division that a Habitat Mitigation and Monitoring Plan (HMMP) has been approved by the USFWS and CDFW for the Mitigation Area. Success criteria for the HMMP will include: 85% percent coverage of the existing riparian habitat, no more than 10% cover of non-native species, and reduction of supplemental watering during the last two years of monitoring. The Mitigation Area shall be monitored by a qualified biologist retained by the Project proponent for a minimum of five (5) years and monitoring reports shall be provided to the City, RCA, USFWS, and CDFW. (DEIR, p. 5.4-30.)

MM BIO 3 outlines specific implementation of the requirements of the DBESP and is not uncertain. Additionally, the HMMP must be approved by the United States Fish and Wildlife Service (USFWS) and CDFW before grading permits can be issued by the City for the Project, thereby not deferring mitigation. If the HMMP is not approved the Project cannot move forward. City and agency review of monitoring report will ensure that the HMMP and Mitigation Area are functioning according to design.

Therefore, with implementation of mitigation measure **MM BIO 3**, which requires a Habitat Mitigation Management Plan (HMMP) be prepared describing the habitat creation and establishment of success criteria, there will be no net loss of riparian/riverine habitat as a result of the proposed Project. (DEIR, p. 5.4-21.)

Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-CC:

The conservation easement including management and monitoring of the Mitigation Area is clearly defined and guaranteed with mitigation measure **MM Bio 4**.

MM BIO 4: Prior to the issuance of any occupancy permit, the Project proponent shall provide evidence to the City Planning Division that the Mitigation Area has been placed under a conservation easement and dedicated to an approved mitigation entity to be managed in perpetuity. (DEIR, p. 5.4-31.)

MM BIO 4 ensures that the Mitigation Area will be placed under a conservation easement and will be managed in perpetuity. Conservation easements are accepted with proper funding and management plans through an agreement on behalf of the applicant and the mitigation entity. Since an easement must be secured prior to the issuance of occupancy permits for the Project, the Mitigation Area will be adequately protected in perpetuity.

Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-DD:

As discussed in Section 3 – Project Description and 5.10 – Land Use Planning of the DEIR, a Minor Conditional Use Permit (MCUP) is required to allow for warehouses greater than 400,000 square feet pursuant to City of Riverside Municipal Code, Title 19, Zoning Code, Chapter 19.150, Base Zones Permitted Land Uses. This requirement is to provide for a discretionary review that looks at both the City of Riverside Good Neighbor Guidelines in terms of the proposed use's compatibility and whether the proposed use can provide significant jobs to warrant the number of truck trips a building of such a size will generate. (DEIR, pp. 3-22, 5.10-5.) According to Appendix M of the DEIR, the Project is consistent with the City's Good Neighbor Guidelines. The Findings required for the MCUP will be presented to the Planning Commission and City Council under separate cover.

Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-EE:

Although Project-related construction activities will result in temporary and periodic exposure of the Sycamore Canyon Wilderness Park to noise levels in excess of standards established in the Riverside Municipal Code, these impacts are short-term in nature and will not result in long-term impacts to the Sycamore Canyon Wilderness Park. According to DEIR page 5.12-26 and as shown on **Figure 5.12-5 – Operational Noise Levels (Leq) No Mitigation** of the DEIR, the operational noise level at the property line between the Project site and the Sycamore Canyon Wilderness Park is 55 dBA L_{eq} , which is below the Municipal Code noise standard for public recreational facilities (65 dBA L_{eq}). Consequently, the proposed setback and fencing between the Project buildings and the Sycamore Canyon Wilderness Park is sufficient because the noise level is below the City Municipal Code noise standard for public recreational facilities. Thus, the Project is consistent with GP 2025 Policies LU-7.1 and LU 7.2.

This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-FF:

Land Use: The City of Riverside General Plan 2025 (the GP 2025) designates the Project site as Business/Office Park (B/OP) and the site is zoned Business and Manufacturing Park under the Sycamore Canyon Business Park Specific Plan Zoning (BMP-SP). (DEIR, **Figure 3-4 – Land Use Designation Map**, DEIR **Figure 3-5 – Zoning Map**.) Development of the Project site is also guided by the City's *Sycamore Canyon Business Park Specific Plan* (SCBPSP), which was adopted in 1984 by the City in order to encourage and provide incentives for economic development in the area. The site is designated as Industrial in the SCBPSP. (DEIR, p. 3-14.)

The proposed Project is consistent with the planned land use for the site in both the GP 2025 and SCBPSP. This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

With respect to the Good Neighbor Guidelines, refer to Response to Comment 37-M for a discussion of the City adopted *Good Neighbor Guidelines Siting New and/or Modified Warehouse/Distribution Facilities* and the results of the June Screening HRA, the November Refined HRA, and the New Modeling prepared for the Project and reviewed by SCAQMD.

With regard to air quality: The (SCAQMD) is responsible for monitoring air quality, as well as planning, implementing, and enforcing programs designed to attain and maintain state and federal ambient air quality standards. Accordingly, SCAQMD has developed regional thresholds that can be used to determine if a project will have significant air quality impacts. The Air Quality Report (AQ Report, Appendix B to the DEIR) modeled Project-related emissions and compared estimated emissions to the SCAQMD thresholds.

The Project's short-term emissions are below regional and localized thresholds. However, the Project's long-term Oxides of Nitrogen (NO_x) emissions of 339.39 lbs/day in the winter and 325.95 lbs/day in the summer will exceed the SCAQMD regional threshold of 55 lbs/day even after incorporation of Project design features and feasible mitigation measures **MM AQ 1** through **MM AQ 15**, **MM AQ 18**, and **MM AQ 19** as well as additional **MM AQ 22** through **MM AQ 25** (listed in Response to Comment 37-N). (DEIR, pp. 5.3-26, 5.3-27, 5.3-30, 5.3-35–5.3-40.)

Based on the above and as concluded in the DEIR Section 5.3 and DEIR Section 6.1.5, regional air quality impacts from long-term operation are significant and unavoidable and the Project is considered to have a cumulatively considerable net increase on non-attainment pollutants in the region under applicable state and federal standards. Therefore, the impact is considered significant and unavoidable and a Statement of Overriding Considerations will be required should the City choose to approve the Project. (DEIR, p. 5.3-40.)

SCAQMD has also developed localized significance thresholds (LSTs), which represent the maximum emissions from a project that would not cause or contribute to an exceedance of the most stringent applicable state or federal ambient air quality standards. Based on the air quality analysis prepared for this Project, neither the short-term construction nor long-term operation of the Project will exceed SCAQMD LST at sensitive receptors, such as the

residences, within the Project vicinity for any criteria pollutants. (DEIR, p. 5.3-29.) This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

With regard to aesthetics, although a 1,000-foot buffer has not been included in the Project, certain features of the site design and location do minimize aesthetic impacts. The site has been designed to incorporate a 100-foot buffer, including 64 feet of landscaping, between the northern wall of Building 2 and the north property line adjacent the residences. This increased buffer zone, enhanced landscaping and that Building 2 was designed with no loading docks or parking located on its north side (between Building 2 and the residences to the north), all work to minimize impacts to these residents.

The proposed Project, as originally submitted and presented at the August 26, 2015 scoping meeting for the DEIR, proposed two buildings totaling 1.43 million square feet (SF) with the northern building (Building 2) setback 60 feet from the northerly property line. (DEIR, **Figure 8-1 – Original Project.**) As discussed on page 8-3 of the DEIR, during preparation of the DEIR, the Project applicant received feedback from the City, encouraging additional setback and landscaping along the northern portion of the Project site and a reduction in the size of the Building 2. As a result, the proposed Project was revised by the Project applicant so that the northern wall of Building 2 is located 100 feet south of the residential lots north of the Project site.

As discussed above, the 100-foot setback between Building 2 and the northern property line will encompass 64 feet of landscaping, a 30-foot wide drive aisle (vehicles only, no trucks) and a 6-foot wide landscape planter adjacent to Building 2. (DEIR, p. 3-35, **DEIR Figure 3-10 – Proposed Site Plan, DEIR Figure 3-11 – Conceptual Landscape Plan.**) Additionally, there are no dock doors or parking on the northern side of Building 2, closest to the residences to the north.

The western wall of Building 2 is located approximately 138 feet from the rear property line of the residences located northwest of the site. There is an approximately 101-foot wide Mitigation Area, consisting of native landscaping materials, that provides additional screening and buffer from the residences to the northwest (DEIR, **Figure 3-10 – Proposed Site Plan and Figure 3-11 – Conceptual Landscape Plan**).

Building 1 is located downslope from and south of Building 2 and is not expected to be visible from the residential neighborhood to the north. (DEIR, p. 5.1-8.) The Project will also, implement mitigation measures **MM AES 1** (See Response to Comment 37-J for **MM AES 1**). (DEIR, pp. 5.12-19, 5.12-31–5.12-33.)

Furthermore, as discussed in Response to Comment 37-N, mitigation measures **MM AQ 13** and **MM AQ 22** will be revised in the FEIR to limit truck idling at the Project site to three minutes or less, which exceeds the requirements of the California Air Resources Board (CARB).

The Project includes additional City Design Review and will implement mitigation measure **MM AES 9** (See Response to Comment 37-D for **MM AES 9**.) to ensure that the buildings are designed in accordance with this measure. (DEIR, p. 5.1-35.)

Aesthetic impacts of the Project were found to be less than significant in the DEIR through the incorporation of Project design features and mitigation measures. This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

With regard to noise, with implementation of mitigation measure **MM NOI 15** (listed below), which is within the control of the City and the Project Applicant, noise from Project operations would only exceed the City's nighttime noise standard at only two receptors (nos. 3 and 4), which would not result in the Project being inconsistent with GP 2025 Policy LU-9.7.

MM NOI 15: A restriction of nighttime use between the hours of 10:00 PM to 7:00 AM shall be implemented for the portion of the loading area and trailer parking located just south of Building 2 and within 360 feet of the western property line as shown on **Figure 5.12-6 – Operational Noise Levels (L_{eq}) with Mitigation**. (DEIR, p. 5.12-46.)

With regard to traffic: A Traffic Impact Analysis (TIA) was prepared for the Project to analyze Project-related impacts to roadway and freeway segments in the Project vicinity. Implementation of the Project will introduce additional traffic to the study area. All study area intersections and freeway segments will continue to operate at an acceptable level of service (LOS) when Project-related traffic is added to the existing traffic, traffic from ambient growth, and traffic from cumulative development projects except for the Eastridge-Eucalyptus I-215 Northbound off-ramp, the intersection of Sycamore Canyon Boulevard/Dan Kipper Drive, and the Fair Isle/Box Springs I-215 northbound ramp. In order for the freeway segments to operate at an acceptable LOS, improvements to the freeway would be required. However, freeway facilities are under the jurisdiction of Caltrans and there is no mechanism for the City or Project proponent to contribute fair share fees or implement improvements to change the LOS from unsatisfactory to satisfactory. For these reasons, Project impacts are considered significant and unavoidable until improvements are funded or constructed by Caltrans. (DEIR, p. 5.16-52.) Although this impact is significant and unavoidable, the City has the discretion to adopt a Statement of Overriding Considerations and move forward with the Project if there is evidence to support such action. Based on the above discussion from the DEIR, the Project will be consistent with the City's GP 2025 Policy LU-9.7.

The revision to mitigation measures **MM AQ 13** and **AQ 22** to change the idling time from five minutes to three minutes does not constitute significant new information that would require recirculation of the DEIR. Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-GG:

The comment specifically calls out Policy LU-30.3. With regard to aesthetics, the Project includes additional City Design Review and will implement mitigation measure **MM AES 9**

(listed in Response to Comment 37-D) to ensure that the buildings are designed in accordance with this measure. (DEIR, p. 5.1-35.)

Aesthetic impacts of the Project were found to be less than significant in the DEIR through the incorporation of Project design features and mitigation measures. This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Traffic: A Traffic Impact Analysis (TIA) was prepared for the Project to quantify Project-related impacts to roadway and freeway segments in the Project vicinity. Implementation of the Project will introduce additional traffic to the study area. All study area intersections and freeway segments will continue to operate at an acceptable level of service (LOS) when Project-related traffic is added to the existing traffic, traffic from ambient growth, and traffic from cumulative development projects except for the Eastridge-Eucalyptus I-215 Northbound off-ramp, the intersection of Sycamore Canyon Boulevard/Dan Kipper Drive, and the Fair Isle/Box Springs I-215 northbound ramp. In order for the freeway segments to operate at an acceptable LOS, improvements to the freeway would be required. However, freeway facilities are under the jurisdiction of Caltrans and there is no mechanism for the City or Project proponent to contribute fair share fees or implement improvements to change the LOS from unsatisfactory to satisfactory. For these reasons, Project impacts are considered significant and unavoidable until improvements are funded or constructed by Caltrans. (DEIR, p. 5.16-52.) Although this impact is significant and unavoidable, the City has the discretion to adopt a Statement of Overriding Considerations and move forward with the Project if there is evidence to support such action.

Additionally, the Project approval process involves an additional City Design Review component to ensure that new building designs, wall designs, site design, landscaping and irrigation plans, lighting plans, parking plans, open space areas, and pedestrian areas are reviewed to confirm compliance with the DEIR and City codes and to avoid monotonous repetition, but allowing, when feasible, for originality of design. (DEIR, p. 3-26.)

With regard to Project-generated nighttime noise, implementation of mitigation measures **MM NOI 13** (listed below) through **MM NOI 15** (See Response to Comment 37-FF for **MM NOI 15**), and **MM AQ 14** (See Response to Comment 37-N for **MM AQ 14**), noise from nighttime operations at the Project site will be reduced to acceptable levels for all receptors except two residences located northwest of the Project site. Because these two residences are at a higher elevation than the Project site, a noise barrier as described in **MM NOI 16**, below, is required to reduce nighttime noise to below the City's nighttime noise standard of 45 dBA L_{eq} . (DEIR, pp. 5.12-26-5.12-28, 5.12-47, DEIR **Figure 5.12-6 – Operational Noise Levels (L_{eq}) with Mitigation.**)

MM NOI 13: To reduce noise associated with the use of back-up alarms, either ambient-sensitive self-adjusting backup alarms or manually adjustable alarms shall be used on all equipment in use on the Project site that requires a backup alarm. Ambient sensitive self-adjusting backup alarms increase or decrease their

volume based on background noise levels. The alarm self-adjusts to produce a tone that is readily noticeable over ambient noise levels (a minimum increment of 5 decibels is typically considered readily noticeable), but not so loud as to be a constant annoyance to neighbors. Close attention shall be given to the alarm's mounting location on the machine in order to minimize engine noise interference, which can be sensed by the alarm as the ambient noise level. These alarms shall be mounted as far to the rear of the machine as possible. An alarm mounted directly behind a machine radiator will sense the cooling fan's noise and adjust accordingly.

If manually-adjustable alarms are used, each alarm shall be set at the beginning of each day and night shift. The manual setting feature eliminates the machine mounting location problem of the ambient-sensitive self-adjustable backup alarms. Alternatively, back-up movements can be supervised with a guide and flagging system.

MM NOI 16: Prior to finalization of building permit, the temporary 12-foot noise barrier shall be removed and the Project applicant shall work with City Design Review staff and the property owners of receptor location 3 (6063 Bannock) and receptor location 4 (6066 Cannich) to determine the design and materials for a noise barrier that is mutually acceptable to the Project Applicant, City Design Review staff, and the property owners. The noise barrier shall be ten-foot high installed at the top of the slope of the residential properties west of the Project site. The designed noise screening will only be accomplished if the barrier's weight is at least 3.5 pounds per square foot of face area without decorative cutouts or line-of-site openings between the shielded areas and the project site. Noise control barrier may be constructed using one, or any combination of the following materials: masonry block; stucco veneer over wood framing (or foam core), or 1-inch thick tongue and groove wood of sufficient weight per square foot; glass (1/4 inch thick), or other transparent material with sufficient weight per square foot; or earthen berm.

Prior to the issuance of a Certificate of Occupancy for the Project, the Project applicant shall construct said noise barrier provided all of the property owners upon whose property the barrier is proposed to be constructed provide written authorization for such construction. The Project applicant shall provide written notice to the property owners of its intent to commence wall construction at least 90-days prior to the anticipated construction date. If all of the property owners do not authorize the construction of the wall in writing, including providing the applicant with all requisite legal access to the affected properties, within 60 days of applicant's written notice, the applicant shall instead pay to the property owners the equivalent cost to construct the wall, based on applicant's good faith estimate.

With the installation of a ten-foot tall noise barrier at the locations where the property owners will permit per mitigation measure **MM NOI 16**, operational noise will not exceed the City's nighttime noise standard of 45 dBA. However, because the noise barrier outlined in **MM NOI 16** would be on private property, the installation of this mitigation measure is dependent on the individual property owner to authorize, not the Project Applicant. For this reason, impacts are significant and unavoidable with feasible mitigation, and a Statement of Overriding Considerations will be required should the City choose to approve the Project. (DEIR, p. 5.12-48.)

Based on the above discussion and as analyzed in the DEIR, the Project will be consistent with the City's GP 2025 Policy LU-30.3.

This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-HH:

The comment specifically calls out Policy LU-79.2. The Commenter incorrectly references the residential noise standard for the Sycamore Canyon Wilderness Park. Although Project-generated noise impacts during construction will be significant to the Sycamore Canyon Wilderness Park, the Project has been designed to be screened from and not disrupt the Sycamore Canyon Wilderness Park in accordance with GP 2025 Policy LU-79.2. This includes installation of a temporary noise barrier during Project construction as well as fencing and landscaping to create a buffer between the Project site and adjacent Park area.

MM NOI 1: To reduce noise impacts to the surrounding residences and Sycamore Canyon Wilderness Park, prior to any Project-related construction or site preparation, a 12-foot tall temporary noise barrier shall be installed along the Project site's northern and western property line. The barrier shall be continuous without openings, holes or cracks and shall reach the ground. The barrier may be constructed with 1-inch plywood and provide a transmission loss of at least 23 dBA to ensure construction noise levels do not exceed 75 dBA at single-family residential units located near the proposed project. Other materials providing the same transmission loss shall also be permitted with the approval of the City Planning Division. (DEIR, p. 5.12-45.)

The DEIR analyzed and concluded operational noise impacts to the Sycamore Canyon Wilderness Park are less than significant because Project-generated noise will be below the City's noise standard for regional parks. The Urban/Wildlife Interface Guidelines set forth in MSCHP Section 6.1.4 state MSCHP Conservation Areas *should* (emphasis added) not be subject to noise that would exceed residential noise standards. That is a guideline, not a requirement. As shown on DEIR Figure 5.12-6 – Operational Noise Levels (Leq) with Mitigation, noise at the property line between the Project site and the Sycamore Canyon Wilderness Park (receptor no. 34) will be 55 dBA, which is below the Municipal Code noise standard for public recreational facilities (65 dBA L_{eq}). Consequently, the proposed setback and fencing between the Project buildings and the Sycamore Canyon Wilderness Park is sufficient because the noise level is below the City Municipal Code noise standard for public recreational facilities.

Based on the above discussion and analysis in the DEIR, the Project will be consistent with the City's GP 2025

This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-II:

The comment specifically calls out Policy LU-80.3. The Project's proposed walls, fencing and landscaping will minimize aesthetic and noise impacts to the adjacent residences and the Sycamore Canyon Wilderness Park. The Project has been designed to incorporate several design features and the mitigation measures intended to minimize adverse land use conflicts between industrial uses and the residential and open space properties that abut the specific plan area, are consistent with General Plan 2025 Policy LU-80.3. The following design features are discussed on DEIR page 5.10-9:

Design features refer to ways in which the proposed Project will avoid or minimize potential impacts through the design of the Project. The proposed Project has been designed with sensitivity to the adjacent land uses, particularly Sycamore Canyon Wilderness Park to the west, and the existing residential neighborhoods to the north and northwest.

With regard to the Sycamore Canyon Wilderness Park, the Project includes a Mitigation Area and landscaping along its westerly boundary (**Figure 3-11 – Conceptual Landscape Plan**) to transition from the docks and trailer parking area to the Wilderness Park. The Project also includes a trail to provide controlled access for pedestrians and bicyclists to the park and a Fire Access/Parks Maintenance Road so emergency and maintenance vehicles can access the park when needed.

With regard to the adjacent residential neighborhood, the Project proposes a 64-foot wide landscaped buffer between Building 2 and the residences to the north and a minimum of 100-feet of landscaping along the western boundary adjacent to the residences (**Figure 3-11 and Figure 3-10 – Proposed Site Plan**). Additionally Building 2 does not propose any dock doors or parking on the north side of the building, so as to locate those activities away from the Sycamore Highlands residential neighborhood. As shown on Figure 3-10 all of Building 2's docks and trailer parking are south of the building. Vehicular parking is located on the east and south of Building 2.

The discussion under Policy GP LU 80.3 on DEIR page M-16 and M-17 will be amplified in the FEIR as shown below.

Policy LU-80.3	Minimize any adverse land use conflicts between industrial uses and the residential and	The proposed Project is located within the Sycamore Canyon Business Park Specific Plan and abuts residential land uses to the
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	open space properties that about specific plan areas.	north <u>and northwest</u> and the Sycamore Canyon Wilderness Park to the west. Project design will ensure that the residential neighborhood located to the north <u>and northwest</u> will be protected from development of the proposed Project. As a result, the Project Proponent did not propose parking along the northern side of Building 2, has designed Building 2 with no cross dock facilities, and has set the building back 100-feet from the nearest residential property line. Additionally, the Project proposes an on-site trail easement which will provide connectivity for recreational users of the Sycamore Canyon Wilderness Park and a parking lot for the users to safely park and access the trail. Fencing, <u>the Mitigation Area</u> , and on-site landscaping will provide visual appeal, functionality, and will act as a buffer which will shield the Project site from the surrounding land uses. Finally, the Project is required to comply with MSHCP Section 6.1.4 (Urban/Wildlands Interface) which will reduce land use conflicts between the proposed Project operations and the park.
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The amplification of the discussion in Appendix M does not constitute significant new information that would require recirculation of the DEIR. This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-JJ:

Comment noted, this comment represents an opinion, but does not provide any explanation, information, specific examples, or other support for the comment. A comment which draws a conclusion without elaborating on the reasoning behind, or the factual support for, those conclusions does not require a response. Under CEQA, the lead agency is obligated to respond to timely comments with “good faith, reasoned analysis.” (CEQA Guidelines, § 15088(c).) These responses “shall describe the disposition of the significant environmental issues raised . . . [and] giv[e] reasons why specific comments and suggestions were not accepted. (CEQA Guidelines, § 15088(c).) To the extent that specific comments and suggestions are not made, specific responses cannot be provided and, indeed, are not required. (*Browning-Ferris Industries of California, Inc. v. City Council of the City of San Jose* (1986) 181 Cal.App.3d 852 [where a general comment is made, a general response is sufficient].) Nonetheless, the proposed logistics center at the Project site will contribute to the economic success of the Sycamore Canyon Business Park by constructing a project that is allowed by the zoning and turning a vacant site into a Project that will create jobs for residents

of the City. The Project site is currently served by water, sewer, regional stormwater, telephone lines, cable lines, and natural gas service. The construction of the proposed Project completed the City's development plan of the SCBPSP in this portion of the Plan Area. (DEIR, p. 3-40.)

The Project is consistent with the GP 2025 Policy LU-80.6 and this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-KK:

Comment noted, the DEIR analyzed and concluded that Project-generated traffic will not have a significant impact on local roadways (DEIR, pp. 5.16-56 – 5.16-57.)

With regard to the trip distribution (i.e. the trip directional orientation of Project-generated traffic) used in the TIA, the TIA was prepared by a registered professional traffic engineer with local experience and expertise in traffic modeling. The trip distribution used in the TIA is based on professional engineering judgement and was approved by the City as part of the scoping agreement. (See Appendix A of the TIA.) Factors taken into consideration in developing the trip distribution model include: the existing roadway system, existing traffic patterns, and existing and future land uses. The Project will prevent passenger car and truck egress onto Dan Kipper Drive by installing small barriers (referred to as "pork chops") at all three Project driveways that will limit left-out turns onto Lance Drive. (DEIR pp. 5.16-26.) This will force both outbound (i.e. leaving the Project site) passenger cars and trucks to turn south onto Lance Drive to Sierra Ridge Drive and then east on Sierra Ridge Drive to Sycamore Canyon Boulevard (see **DEIR Figure 5.16-3 – Project Trip Distribution (Passenger Cars – Outbound)**, and **DEIR Figure 5.16-5 Project Trip Distribution (Trucks – Outbound)**). From the intersection of Sierra Ridge Drive and Sycamore Canyon Boulevard, outbound vehicles will either turn north or south to travel to I-215 or other surrounding roadways. (DEIR, pp. 5.16-26.) From the intersection of Sierra Ridge Drive/Sycamore Canyon Road, it is approximately 0.7 miles to the Eastridge-Eucalyptus interchange and approximately 0.9 miles to the Fair-Isle Drive/Box Springs Road interchange. Thus, it is reasonable to expect that outbound cars and trucks will use the Eastridge Avenue-Eucalyptus Avenue interchange

These trip distribution assumptions are supported by the traffic counts taken for the TIA, which indicate 5% of the vehicles using the Fair Isle Drive-Box Springs Road/I-215 interchange are trucks and that 9% of the vehicles using the Eucalyptus Avenue-Eastridge Avenue/I-215 interchange are trucks. That is, nearly twice the number of trucks using the Eucalyptus Avenue-Eastridge Avenue/I-215 interchange as the Fair Isle Drive-Box Springs Road/Interchange. (Detailed AM and PM classification intersection counts taken for the TIA can be found in the Appendix C of the TIA, which is part of DEIR Appendix J.)

Although southbound cars and trucks will reach the Fair Isle Drive-Box Springs Road interchange from southbound Interstate 215 (I-215) first, the Eastridge Avenue-Eucalyptus Avenue interchange is closer to the Project site and would involve less driving on surface streets. Additionally, the Eastridge-Eucalyptus interchange is geometrically easier for trucks to

turn at than the Fair Isle-Box Springs interchange. The Eastridge-Eucalyptus interchange is a single point interchange (SPI) which has large sweeping radii for all turning movements. The Fair Isle-Box Springs interchange is a partial diamond/partial hook ramp design with relatively small radii for many turning movements.

Therefore, the Project is consistent with the GP 2025 Policies CCM 2.2, CCM 2.3, and CCM 2.4 and this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-LL:

Comment noted, as discussed in Appendix M of the DEIR, the Project is consistent with Policies CCM-2.7 and CCM-2.8 as summarized below.

The intersection of Sycamore Canyon Boulevard and Sierra Ridge Drive was included as one of the study intersections in the TIA prepared to analyze Project-related impacts to roadways in the Project vicinity (Study Intersection No 6 (DEIR **Figure 5.16-1** and DEIR page 5.16-4). This intersection will operate at acceptable level of service with the existing plus ambient growth plus Project plus cumulative conditions without any improvements to the intersection. (DEIR, p. 5.16-57.) The Project does not propose any driveway or local road access to Sycamore Canyon Boulevard. Further, as the main north-south roadway through the SCBPSP, Sycamore Canyon Boulevard was designed as a 4-lane north/south divided roadway in the Project area between Fair Isle Drive and Eucalyptus Avenue. Sycamore Canyon Boulevard is designated as an Arterial Street (4-lanes divided, 110-foot right-of-way) in the GP 2025 Circulation and Community Mobility Element. (DEIR, p. 5.16-3.) Thus, it was intended to be used by trucks servicing the warehouses within the SCBPSP. Also, refer to Response to Comment 37-KK above.

Therefore, the Project is consistent with the GP 2025 Policies CCM-2.7 and CCM-2.8. This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-MM:

Comment noted, as discussed in Appendix M of the DEIR, the Project is consistent with ensuring that new development projects provide adequate truck loading and unloading facilities in accordance with Policy CCM-12.2 as summarized below.

It is anticipated that the site will operate 24/7 in which case queuing would not be an issue. However due to issues with other projects within the City, a queuing analysis was performed in the event the Project is not a 24/7 operation. If the Project does not operate as proposed, the potential for queuing would be greatest during the morning, before the site gates open. The queuing capacity for Building 1 is approximately 32 to 35 semi-truck with trailers, which is greater than the anticipated number of trucks expected to arrive during the AM peak hour. The Building 2 queuing capacity is approximately 5 to 6 semi-trucks with trailers, which is slightly less than the 9 trailer trucks anticipated to arrive during AM peak hours. (DEIR Appendix M, p. M-23.)

It is unlawful to park commercial trailers or semi-trailers on any public street, highway, road, or alley within the City except at specific designated locations, such as the designated commercial vehicle parking located on Box Springs Boulevard near the Project site. (DEIR, p. 5.16-49.) It can be reasonably assumed that trucks visiting the Project site would follow these regulations and not park on neighborhood streets. However, if trucks are observed parking illegally, residents may call 311 and will be routed to the Traffic Department and Police Department so that the appropriate response can be coordinated.

Therefore, the Project is consistent with the GP 2025 Policy CCM-12.2. This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-NN:

Comment noted, this comment represents an opinion, but does not provide any explanation, information, specific examples, or other support for the comment. A comment which draws a conclusion without elaborating on the reasoning behind, or the factual support for, those conclusions does not require a response. Under CEQA, the lead agency is obligated to respond to timely comments with “good faith, reasoned analysis.” (CEQA Guidelines, § 15088(c).) These responses “shall describe the disposition of the significant environmental issues raised . . . [and] giv[e] reasons why specific comments and suggestions were not accepted. (CEQA Guidelines, § 15088(c).) To the extent that specific comments and suggestions are not made, specific responses cannot be provided and, indeed, are not required. (*Browning-Ferris Industries of California, Inc. v. City Council of the City of San Jose* (1986) 181 Cal.App.3d 852 [where a general comment is made, a general response is sufficient].) Nonetheless as discussed in Appendix M of the DEIR and DEIR Section 5.15-7, the Project is consistent with striving to minimize through truck traffic in residential areas, and enforce City codes that restrict trucks on certain streets consistent with Policy CCM-12.4.

Refer to Responses to Comments 37-KK and 37-LL. This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-OO:

Comment noted, as discussed in Appendix M of the DEIR and Section 5.4, the Project is consistent with continuing efforts to establish a wildlife movement corridor between Sycamore Canyon Wilderness Park and the Box Springs Mountain Regional Park as shown on the MSHCP.

The Multiple Species Habitat Conservation Plan (MSHCP) identifies Criteria Cell areas to be set aside for conservation, including providing linkages between habitat areas. Because the Project site is not within an identified MSHCP Criteria Cell, it is not intended to be a part of the habitat linkage between the Sycamore Canyon Wilderness Park and the Box Springs Mountain. (DEIR, p. 5.4-22.) Therefore, development of the Project site will not conflict with efforts to establish a wildlife movement corridor between Sycamore Canyon Wilderness Park and the

Box Springs Mountain Regional Park as shown on the MSHCP and as a result of this the Project is consistent with the GP 2025 Policy OS-6.4. Thus, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-PP:

Comment noted, as discussed in Section 5.12 and Appendix M of the DEIR, the Project is consistent with continuing to enforce noise abatement and control measures particularly within residential neighborhoods within Policy N-1.1.

Ambient noise monitoring locations that would be quieter were intentionally selected to avoid the perception that ambient noise was measured at the noisiest spots in order to understate the Project's impacts with regard to operational noise. The purpose of the ambient noise measurements is to provide a basis for the comparison of noise impacts with and without the Project. **DEIR Table 5.12-J – Pre- and Post-Project Noise Levels (in CNEL)** compares the Community Noise Equivalent Level (CNEL) of the monitored ambient noise calculated from the 24-hour noise measurements set forth in **DEIR Table 5.12-C – Existing 24-Hour Noise Levels in Project Vicinity** with the mitigated operational noise levels in CNEL assuming a uniform L_{eq} for a 24-hour operation,

The CNEL is a 24-hour weighted average measure of community noise. To account for increased human sensitivity at night, the CNEL scale includes a 5-dB weighting penalty on noise occurring during the 7:00 p.m. to 10:00 p.m. time period, and a 10-dB weighting penalty on noise occurring during the 10:00 p.m. to 7:00 a.m. time period. (DEIR, p. 5.12-3.) The CNEL values reported in **DEIR Table 5.12-J**, were calculated using the L_{dn} , L_{den} , CNEL Community Noise Calculators, available at <https://www.noisemeters.com/apps/ldn-calculator.asp>.

If, as the comment states, the 24-hour ambient noise measurements taken at Monitoring Locations ST1 and ST2 (as shown on **DEIR Figure 5.12-1 – Noise Measurement Locations**) are lower than the existing ambient noise as asserted by the commenter, the calculated CNEL would be higher than what is reported in **DEIR Table 5.12-J**. Consequently, this would mean that the difference between the Project's operational noise CNEL and the ambient noise levels, shown in the column entitled "Difference in dBA", would be less than what is reported in **DEIR Table 5.12-J**. To the extent that the difference reported in **DEIR Table 5.12-J** is greater than what the commenter asserts, the DEIR constitutes a conservative analysis.

With regard to the comparing the pre- and post-Project CNEL without implementation of mitigation measure **MM NOI 16**, this would only change the results for receptor nos. 3 and 4 as shown in the table below because implementation of mitigation measure **MM NOI 15** is within the control of the City and the Project Applicant. The mitigated operational noise levels for receptor nos. 3 and 4 with mitigation measure **MM NOI 15** only (i.e., no noise barrier as required by **MM NOI 16**) is shown below.

Monitored Location ^a	Measured Noise Level (CNEL ^b) In dBA	Receptor No. ^c	Mitigated Operational Noise Level (with MM NOI 15 only) (CNEL) In dBA	Difference In dBA	Substantial Increase?	Mitigated Operational Noise Level (includes MM NOI 15 and MM NOI 16) (CNEL) In dBA	Difference In dBA	Substantial Increase?
ST2/LT2	52	4 (1 st floor)	52	0	No	46	-6	No
		4 (2 nd floor)	54	2	No	51	-1	No
		3 (1 st floor)	51	-1	No	46	-6	No
		3 (2 nd floor)	54	2	No	50	-2	No

Thus, as shown in the above table, even if the noise barrier identified in mitigation measure **MM NOI 16** is not constructed, with implementation of mitigation measure **MM NOI 15**, there will be a less than substantial increase (i.e., less than 5 dBA) from the Project's operational noise on receptor nos. 3 and 4.

This clarification of the noise analysis to show how the removal of mitigation measure **MM NOI 16** changes the resulting noise levels on the two receptors on whose property the noise wall would be constructed, does not constitute significant new information that would require recirculation of the DEIR. (CEQA Guidelines, § 15088.5.) Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-QQ:

Comment noted, the Project is consistent with General Plan Policy N-1.2 because it has been designed to include noise-reducing design features, to the extent feasible, consistent with Figure N-10 of Title 24 of the California Code of Regulations to reduce noise impacts including barriers, and site design to locate noise-generating activities at the Project site away from the residences.

The noise barrier described in mitigation measure **MM NOI 16** (See Response to Comment 37-GG for **MM NOI 16**) would only be installed at two residences (6063 Bannock Drive and 6066 Cannich Road) to reduce nighttime noise impacts to those residences. Installation of this noise barrier (wall) is under the discretion of the two property owners, and the property owners will have the opportunity to work with the Project Applicant and City Planning staff to determine the design and materials of this proposed wall. **MM NOI 16** includes specific design specifications the wall must meet to attenuate noise from the proposed Project including a list of possible materials, including glass or other transparent materials. (DEIR, p. 5.12-47.) Therefore, the specific design of this wall has not yet been determined at this time, but the wall could include transparent materials so long as they meet the noise reductions requirement from the mitigation measure.

Because installation of this barrier would have to be agreed upon between the property owners and Project Applicant, the conclusion contained in the DEIR assumes that this wall is not in place. For this reason, noise impacts associated with the Project are significant and unavoidable. However, with implementation of mitigation measures **MM NOI 1** through **MM NOI 16** as well as **MM AQ 14** (See Response to Comment 37-N for **MM AQ 14**) and **MM HAZ 3**, Project-related noise would be reduced to an acceptable level.

MM NOI 1: To reduce noise impacts to the surrounding residences and Sycamore Canyon Wilderness Park, prior to any Project-related construction or site preparation, a 12-foot tall temporary noise barrier shall be installed along the Project site's northern and western property line. The barrier shall be continuous without openings, holes or cracks and shall reach the ground. The barrier may be constructed with 1-inch plywood and provide a transmission loss of at least 23 dBA to ensure construction noise levels do not exceed 75 dBA at single-family residential units located near the proposed project. Other materials providing the same transmission loss shall also be permitted with the approval of the City Planning Division. (DEIR, p. 5.12-45.)

MM NOI 2: To attenuate initial impact noise generated when an excavator drops rock and debris into a truck bed, heavy grade rubber mats/pads shall be placed within the bed of the trucks. These mats shall be maintained and/or replaced as necessary. (DEIR, p. 5.12-45.)

MM NOI 3: During all Project-related excavation and grading, construction contractors shall equip all construction equipment, fixed and mobile, with properly operating and maintained mufflers, consistent with manufacturer standards. (DEIR, p. 5.12-45.)

MM NOI 4: All stationary construction equipment shall be located so that emitted noise is directed away from the residences to the north and west and from the Sycamore Canyon Wilderness Park to the west. (DEIR, p. 5.12-45.)

MM NOI 5: All construction equipment shall be shut off and not left to idle when not in use. (DEIR, p. 5.12-45.)

MM NOI 6: All equipment staging during all phases of construction shall be located in areas that will create the greatest distance between construction-related noise/vibration sources and the residences to the north and west and the Sycamore Canyon Wilderness Park to the west. (DEIR, p. 5.12-45.)

MM NOI 7: The use of amplified music or sound is prohibited on the Project site during construction. (DEIR, p. 5.12-45.)

MM NOI 8: Haul truck deliveries shall be limited to the same hours specified for construction equipment. (DEIR, p. 5.12-45.)

MM NOI 9: It is acknowledged that some soil compression may be necessary along the Project boundaries; however, the use of heavy equipment or vibratory rollers and soil compressors along the Project site's north and western boundaries shall be limited to the greatest degree feasible. (DEIR, p. 5.12-46.)

MM NOI 10: Jackhammers, pneumatic equipment, and all other portable stationary noise sources shall be shielded and noise shall be directed away from the residences to the north and west and Sycamore Canyon Wilderness Park to the west. (DEIR, p. 5.12-46.)

MM NOI 11: For the duration of construction activities, the construction manager shall serve as the contact person should noise levels become disruptive to local residents. A sign shall be posted at the Project site with the contact phone number. (DEIR, p. 5.12-46.)

MM NOI 12: No blasting shall take place on the Project site. (DEIR, p. 5.12-46.)

See Response to Comment 37-GG for **MM NOI 13**.

MM NOI 14: To reduce operational noise at the residences located west of the Project site, no trucks shall use the northern access road or regular sized vehicle sized parking areas at Building 2 for site access, parking, queuing, or idling. (DEIR, p. 5.12-45.)

See Response to Comment 37-FF for **MM NOI 15**.

See Response to Comment 37-GG for **MM NOI 16**.

See Response to Comment 37-N for **MM AQ 14**.

MM HAZ 3: The following deed notice and disclosure text shall be provided to all potential purchasers of the Project site property and tenants of the buildings:

NOTICE OF AIRPORT IN VICINITY. This property is presently located in the vicinity of an airport, within what is known as an airport influence area. For that reason, the property may be subject to some of the annoyances or inconveniences associated with proximity to airport operations (for example: noise, vibration, or odors). Individual sensitivities to those annoyances can vary from person to person. You may wish to consider what airport annoyances, if any, are associated with the property before you complete your purchase and determine whether they are acceptable to you. Business & Professions Code Section 11010 (b) (13)(A). (DEIR, pp. 5.12-47–5.12-48.)

Regarding the comment that the "...study should emphasize noise impacts assuming the barrier is not in place" both the NIA and DEIR disclose construction and operational noise levels without mitigation. As stated in the DEIR:

Because of the topographical differences between the Project site and the location of sensitive receptors, the SoundPLAN Noise Model⁸ was used to calculate a worst-case construction noise scenario. The scenario modeled assumes the use of a grader, a rubber tired dozer, a D10 dozer, two water trucks (modeled as dump trucks), two loaders, and 10 scrapers all operating between 40 and 444 feet from the nearest sensitive receptors. Because the Project site contains large rocks, an active rock crusher was also modeled in the southeastern corner of the Project site. (KA, ⁹ p. 18) As shown on **Figure 5.12-3 – Worst Case Construction Noise Scenario (L_{eq}) with No Temporary Barrier**, unmitigated noise levels may reach up to 80 dBA L_{eq} at the nearest single-family detached residential dwelling units north of the Project site. According to Table 7.25.010A (**Table 5.12-E – Riverside Municipal Code Exterior Nuisance Sound Level Limits**), the daytime exterior noise standard for residential property is 55 dBA. Because construction noise will exceed 55 dBA at the property lines of the residential units adjacent to the Project site, this impact is considered **significant** and feasible mitigation is required. (DEIR, p. 5.12-22.)

The Sycamore Canyon Wilderness Park is located west of the Project site and as such will be exposed to construction noise. According to Riverside Municipal Code Table 7.25.010A (**Table 5.12-E**), the exterior noise standard for public recreation facilities is 65 dBA. Since the construction equipment will be in use throughout the entire Project site, unmitigated construction noise levels at the property line between the Park and the Project site may also reach up to 80 dBA L_{eq} . This impact is considered significant and feasible mitigation is required. (DEIR p., 5.12-22.)

As further discussed in the DEIR:

Mitigation measure **MM NOI 1** requires the installation of a 12-foot high temporary noise barrier at the Project site's northern and western boundaries. As shown on **Figure 5.12-4 – Worst Case Construction Noise Scenario (L_{eq}) with 12-Foot High Temporary Barrier**, construction noise levels at the residential property lines at the northern and western boundaries of the Project site are not expected to exceed 70 dBA. (KA, pp. 18, 29 (Figure 5), 30 (Figure 6)) Because some of these noise levels exceed 55 dBA, additional mitigation is required to further reduce construction noise. Thus, the Project will implement mitigation measures **MM NOI 2** through **MM NOI 12**. These measures require: the use of heavy grade rubber mats within the bed of trucks; properly operating mufflers on all construction equipment; placement of stationary construction equipment away from the residential uses; no idling of equipment when not in

⁸The SoundPLAN Noise Model was used for this analysis as this model can consider differences in topography between a noise source and a receptor.

⁹ KA refers to the *Noise Impact Analysis for the Sycamore Canyon Business Park Warehouse*, August 1, 2016. Prepared by Kunzman Associates, Inc. and included as Appendix I to the DEIR.

use; staging of equipment at the greatest distance feasible from the sensitive receptors; prohibition of music or amplified sound on the Project site during construction; limiting haul truck deliveries to the same hours for construction equipment; limiting the use of heavy equipment, vibratory roller, and soil compressors to the greatest degree possible, shielding of jackhammers, pneumatic equipment, and all other portable stationary noise sources to direct noise away from sensitive receptors. Signage will also be placed on the project site with a contact phone number for complaints. Implementation of **MM NOI 1** through **MM NOI 12** is expected to yield up to an additional 10 dBA in noise reduction to minimize maximum noise events (KA, p. 18). Even with implementation of feasible mitigation measures, temporary impacts from construction noise on the adjacent residences and Sycamore Canyon Wilderness Park will be significant and unavoidable. (DEIR, p. 5.12-24.)

Regarding the noise resulting from Project operations, the DEIR contains a thorough analysis of the noise resulting from the following operational sources: semi-trucks (tractor-trailers) entering and exiting the Project site and accessing dock areas, removal and hook-up of trailers, idling trucks, loading and unloading activities, occasional truck air brakes, vehicle movements within the proposed parking areas, trash compactors, and rooftop HVAC systems. (DEIR, p. 5-12-26.) The DEIR concluded that, although unmitigated operational noise will not exceed the City's daytime noise standard of 55 dBA L_{eq} , it will exceed the nighttime noise standard of 45 dBA L_{eq} along the western project boundary and at certain residences adjacent to the northwest corner of the Project site. Thus, the Project is required to implement mitigation measures **MM NOI 13** through **MM NOI 16** (see Response to Comments 37-GG, 37-QQ, 37-FF) to reduce operational noise impacts. However, as discussed in Response to Comment 37-GG, because the noise barrier outlined in **MM NOI 16** would be on private properties and neither the City nor Project Applicant has control over construction of the noise barrier, the DEIR concluded operational noise impacts are significant even with incorporation of feasible mitigation. (DEIR, pp. 5.12-24–5.12-34.)

This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-RR:

The comment specifically calls out Policy N-1.3. As discussed in Appendix M of the DEIR, the Project is consistent with enforcing the City of Riverside Noise Control Code to ensure that stationary noise and noise emanating from construction activities, private developments/residences and special events are minimized.

Enforcement of the noise control code is a municipal responsibility. However, even with implementation of feasible mitigation measures **MM NOI 1** through **MM NOI 12** (see Response to Comment 37-QQ), which will reduce construction noise by approximately 10 dBA, Project-related construction activities will result in temporary and periodic exposure of persons to and generation of noise levels in excess of standards established in the Riverside Municipal Code.

The DEIR analyzed construction per the Noise Code standards that were in effect at the time of the Notice of Preparation for DEIR.

On August 18, 2016 (taking effect 30-days later) the City of Riverside City Council adopted Ordinance 7341, amending the Noise Code to exempt construction noise between the hours of 7:00 a.m. and 7:00 p.m. on weekdays and between the hours of 8:00 a.m. and 5:00 p.m. of Saturdays from the standards of the Noise Code. Under these new provisions construction noise would be less than significant.

Unmitigated operational noise will not exceed the daytime noise standard of 55 dBA Leq. However, it will exceed the nighttime noise standard of 45 dBA Leq along the western project boundary and at certain residential units adjacent to the northwest corner of the Project site. Implementation of **MM NOI 13** through **MM NOI 16** will reduce operational noise impacts; however, because the noise barrier outlined in **MM NOI 16** would be on private properties, the Project proponent does not have control over construction of the noise barrier. For this reason, impacts are significant even with incorporation of feasible mitigation. (DEIR Appendix M, p. M-53.)

It should be emphasized that the noise barrier described in mitigation measure **MM NOI 16** would only be installed at two residences (6063 Bannock and 6066 Cannich) to reduce the nighttime noise impacts to those residences. Installation of the noise barrier is subject to permission of the property owners and so these property owners will have the choice to either install the barrier, or accept with elevated noise levels due to operation at the Project site. The nighttime noise levels from the proposed Project meet the City's nighttime standard at all other residences evaluated in the Noise Impact Study and DEIR with implementation of mitigation measure **MM NOI 15** (See Response to Comment 37-FF).

Because installation of this barrier is not under the jurisdiction of the City or the Project proponent, analysis contained in the Draft Environmental Impact Report assumes that this noise barrier is not in place. For this reason, noise impacts associated with the Project are significant and unavoidable. However, with implementation of mitigation measures **MM NOI 1** through **MM NOI 16** as well as **MM AQ 14** and **MM HAZ 3**, Project-related noise would be reduced to an acceptable level.

Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-SS:

Comment noted, the Project site will not have any parking and there will be no dock doors on the northern edge of Building 2, the side of the building closest to the residences. Additionally, Building 2 will be setback 100-feet from the residential property line. This 100-foot setback will include 64-feet of landscaping to further reduce noise impacts. Likewise, refuse collection areas are not located near the northern or northwestern edges of the Project site and have been placed in locations further from the residences.

As discussed in Response to Comment 37- KK Egress from the Project site will be limited to right-turns only from all of the Project driveways in order to direct truck and passenger vehicle traffic away from the residences.

Although noise impacts will remain significant and unavoidable, the Project is consistent with General Plan Policy N-1.4 because the Project been designed to include noise-reducing design features, to the extent feasible, consistent with Figure N-10 of Title 24 of the California Code of Regulations to reduce noise impacts including barriers, and site design to locate noise-generating activities at the Project site away from the residences including the DEIR mitigation measures **MM NOI 1** through **MM NOI 16**.

This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-TT:

Comment noted, General Plan Policy N-1.5 requires consideration when siting *noise sensitive land uses* to ensure that they are not placed in existing noise-impacted areas. However, the Project itself involves construction and operation of a logistics center which is not a noise sensitive land use. Therefore, the Project is consistent with Policy N-1.5. Refer to Response to Comments 37-GG and 37-QQ regarding noise attenuation and Project siting away from sensitive land uses to the extent feasible. Thus, the Project is consistent with the GP 2025 Policy N-1.5 and this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-UU:

Comment noted, as discussed in Section 5.12 and Appendix M of the DEIR, the Project is consistent with the City's efforts to consider noise concerns in evaluating all proposed development decisions and roadway projects; thus, the Project is consistent with Policy N-1.8.

The Project includes various noise-reducing design features to minimize noise impacts, to the extent feasible, from construction, operation, and Project-related traffic and concludes that the nighttime operational noise will exceed the City's nighttime noise standard at two residents in mitigation measure **MM NOI 16** is not constructed. Refer to Responses to Comments 37-GG and 37-QQ regarding noise impacts and specifically the discussion on **MM NOI 16**. Pursuant to *State CEQA Guidelines* Section 15093, the City can adopt a Statement of Overriding Considerations if findings can be made that the benefits of the Project outweigh the unavoidable adverse environmental impacts. Thus, based on the analysis and discussion in the DEIR, the Project is consistent with the GP 2025 Policy N-1.8. Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-VV:

Comment noted. Refer to Response to Comment 37-M for a discussion regarding the City's adopted *Good Neighbor Guidelines Siting New and/or Modified Warehouse/ Distribution*

Facilities and a discussion regarding the June Screening HRA, the November Refined HRA, and the New Modeling prepared for the Project.

The SCAQMD Governing Board adopted a methodology for calculating localized air quality impacts through localized significance thresholds (also referred to as a LST analysis). Localized significance thresholds represent the maximum emissions from a project that would not cause or contribute to an exceedance of the most stringent applicable state or federal ambient air quality standards. Localized significance thresholds were developed in recognition of the fact that criteria pollutants such as NO_x can have local impacts at nearby sensitive receptors as well as regional impacts. Based on the LST analysis, neither the short-term construction nor long-term operation of the Project will exceed SCAQMD LST at sensitive receptors within the Project vicinity for any criteria pollutants. (DEIR, p.5.3-27-29.)

Since the Project does not exceed any SCAQMD LST for NO_x during construction or operation of the Project, potential Project-related NO_x and thereby NO₂ exposure was adequately analyzed in the DEIR. Additionally, **MM AQ 17a** (see Response to Comment 37-W for **MM AQ 17a**) was included that requires the Project to provide Tier 3 grading equipment will be used during Project grading to reduce NO_x and diesel particulate matter (DPM) impacts to nearby receptors. As discussed in Response to Comment 37-W, the Project has incorporated a design feature that requires all medium-and heavy-duty trucks entering the Project site to meet or exceed 2010 engine emission standards. Because Project Design Features are also listed as mitigation measures in the DEIR (DEIR, p. 5.3-35), mitigation measure **MM AQ 17b**, will be included in the FEIR and Mitigation Monitoring and Reporting Program (MMRP).

In terms of Good Neighbor Guideline Strategy 2a, the Project has a direct route between the Project site and the freeways in that the Project site is accessed from Sycamore Canyon Boulevard, a 4-lane divided major arterial. Further, the “urban intersect” as described in the Sycamore Canyon Business Park Specific Plan at the Interstate 215 and Eastridge Avenue has since been constructed, allowing for a direct connection to Interstate 215. Therefore, the Project is consistent with this Strategy. (DEIR Appendix M, p. M-70.) In the City of Riverside, trucks are generally not restricted to specific roadways; however, the majority of trucks will use the I-215 Ramps at Eastridge Ave-Eucalyptus Ave since it utilizes the “urban intersect”. Nonetheless, pursuant to Chapter 10.56 of the City’s Municipal Code commercial vehicles (trucks) over 10,000 pounds are prohibited from using Lochmoor Drive, Fair Isle Drive and Sycamore Canyon Boulevard, between El Cerrito Drive and University Drive. Based on the average daily trip calculations from the traffic study, truck traffic is anticipate to account for approximately 5 percent of total trips on Fair Isle Drive from Sycamore Canyon Boulevard to the I-215 Northbound Ramps for existing plus Project conditions.

Light and noise impacts to Sycamore Canyon Wilderness Park were analyzed in Appendix M of the DEIR under Policy LU-79.2 and Section 5.1 – Aesthetics and Section 5.12 – Noise in the DEIR. The Project does not propose any direct lighting into the Sycamore Canyon Wilderness Park. All Project lighting will be directed away from the Park and shall incorporate shielding as required by the Chapter 19.556 of the City’s Municipal Code. As discussed in Section 5.12 –

Noise, the Project will install a temporary construction noise barrier along its western boundary to minimize the effect of noise on the Sycamore Canyon Wilderness Park. Once completed, the Project will include fencing and landscaping surrounding the trailer parking and docking area. (DEIR Appendix M, pp. M-14-15.)

The proposed Project is consistent with the City's *Good Neighbor Guidelines*. This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-WW:

Comment noted. With respect to the grading exceptions, the grading of the Project site is regulated by Title 17 of the City of Riverside Municipal Code (RMC) (Grading Code), which sets forth rules and regulations placed on grading to control erosion, grading, and earthwork construction, including fills and embankments. One of the purposes of the Grading Code is to regulate grading in a manner that minimizes the adverse effects of grading on natural landforms, soil erosion, dust control, water runoff, and construction equipment emissions. (DEIR, p. 5.10-7.)

Section 17.28.020 of the Grading Code applies to any parcel having an average natural slope of 10 percent or greater, or that is located within or adjacent to a delineated arroyo or a blue-line stream identified on USGS map. Although the Project site does not contain any designated arroyos and its average natural slope is less than 10 percent, it is subject to Section 17.28.020 because the site contains a blue-line stream. Therefore, grading must be confined to the minimum amount necessary and the ungraded terrain must be left in its natural form on the remainder of the site. This section also requires the use of contour grading such as rounded and blended slopes; grading that fits into the natural terrain; structures designed to fit with the contours of the hillside; pad size limitations; and grading in blue-line streams limited to the minimum necessary for access or drainage. (RMC) To accommodate the proposed grading plan, exceptions to RMC Section 17.28.020 are proposed. (DEIR, p. 5.6-10.) The grading exceptions make the Project consistent with Title 17.

With respect to the parking variance, development of the Project site is regulated by the City of Riverside, Zoning Code, Title 19, a key tool to implement the policies of the General Plan 2025. Many of the goals, policies, and actions of the General Plan 2025 are achieved through zoning, which regulates public and private development. The Zoning Code contains the regulatory framework that specifies allowable uses for property and development intensities; the technical standards such as site layout, building setbacks, heights, lot coverage, parking, etc.; and the aesthetic impacts related to physical appearance, landscaping, lighting; site design, building design are aspects of the Zoning Code. The Project as proposed complies with the Zoning Code. (DEIR, p. 5.10-5.)

Because the City's Municipal Code does not have a parking standard specific to logistics centers, a variance is needed to permit Parcel 1/Building 1 to provide 446 parking stalls where 1,043 stalls are required and to permit Parcel 2/Building 2 to provide 143 parking stalls where 393 stalls are required. (DEIR, p. 3-23.) The City must make findings prior to the approval of

the Variance, the findings are not a part of the DEIR, but are related to the zoning. The facts and conclusions of the DEIR may be used by the City in their evaluation of the Variance. Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-XX:

Comment noted, the Project is consistent with MSHCP Section 6.1.2 (Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools). The Project site was found to have suitable habitat for wildlife species that commonly occur in riparian/riverine habitats associated with Section 6.1.2 of the MSHCP. Because the requisite focused surveys were completed for the Project site, and only common fairy shrimp were observed, the Project proposes an on-site Mitigation Area to replace lost riparian habitat and as such the Project will be compliant with Section 6.1.2 of the MSHCP. (DEIR, p. 5.4-24.)

The DBESP determined that the habitat that will be created in the Project's Mitigation Area is considered biologically superior in comparison to the existing drainage. Therefore, with implementation of mitigation measure **MM BIO 3** (See Response to Comment 37-BB for MM BIO 3), which requires a Habitat Mitigation Management Plan (HMMP) be prepared describing the habitat creation and establishment of success criteria and **MM BIO 4** (See Response to Comment 37-BB for MM BIO 4), which requires recordation of a conservation easement, there will be no net loss of riparian/riverine habitat. (DEIR, p. 5.4-21.)

Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-YY:

Comment noted. As described in Appendix I of the DEIR, noise measurements were taken near existing noise sensitive areas surrounding the project site. (DEIR Appendix I, p. 9.) Ambient noise measurements were taken to determine the existing noise setting for purposes of comparing Project-generated noise to quantify the extent, if any, that construction and operation of the proposed Project would result in a noise increase. If, as asserted by the commenter, the ambient noise levels reported in the NIA and DEIR are too low, the result would be that change in the noise levels resulting from Project implementation would be overstated. Noise impacts due to Project operation are anticipated to be the greatest for two residences located at 6063 Bannock and 6066 Cannich. Although noise measurements were not taken specifically at these residences to quantify existing ambient noise, the NIA modeled 30 receptors to thoroughly evaluate the proposed Project's operational noise impacts on the surrounding residences. Of the 30 receptors modeled only two residences will be impacted by Project-generated noise during Project operation. (DEIR, Figure 5.12-5.) The NIA and DEIR included noise mitigation to reduce noise impacts. As previously discussed in Responses to Comments 37-GG and 37 QQ, if all of the noise mitigation measures are implemented, the noise impacts would be less than significant; however, because installation of the 10-foot noise barrier mitigation under **MM NOI 16** is subject to the approval of the two property owners on whose land the proposed barrier will be installed, and such approval may or may not be

provided, the noise impact is considered significant and unavoidable. (DEIR, pp. 5.12-34, 5.12-48.)

Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-ZZ:

CEQA Guidelines Section 15151 provides that an EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of the environmental consequences.

Ambient noise measurements were taken to determine the existing noise setting for purposes of comparing Project-generated noise to quantify the extent, if any, that construction and operation of the proposed Project would result in a noise increase. If, as asserted by the commenter, the ambient noise levels reported in the NIA and DEIR are too low, the result would be that change in the noise levels resulting from Project implementation would be overstated. Existing noise levels in the Project vicinity were measured on five separate days in December 2015. (DEIR, Table 5.12-B.) These measurements consist of three 10-minute, short-term, noise measurements and two 24-hour, long-term, noise measurements. Noise measurement locations were chosen to reflect different existing noise environments from the residents to the northwest of the Project site as well as residents to the north of the Project site. It is important to note, that in selecting the locations for ambient monitoring, locations that would be quieter were intentionally selected to avoid the perception that ambient noise was measured at the noisiest spots in order to understate the Project's impacts with regard to an increase in noise associated with the Project. Again, the purpose of the ambient noise measurements is to provide a basis for the comparison of noise with and without the Project; thus, longer term measurements are not necessary. Ambient noise measurements were not taken for purposes of determining whether existing operations in the Project area are in violation of the City's Noise Ordinance or applicable standards.

With regard to meteorological conditions, precipitation, rain, snow, or fog, has an insignificant effect on sound levels although the presence of precipitation will affect humidity and may also affect wind and temperature gradients. (Sound Propagation.¹⁰) As sound travels through the atmosphere, it is affected by temperature, humidity, and wind currents, which can change the speed and direction of sound. Just as light bends when traveling through a prism, sound bends as a result of the varying atmospheric properties. Sound waves tend to bend toward cooler temperatures and away from warmer temperatures. For example, on a typical summer afternoon, because air temperatures generally decrease with altitude, sound generated at ground level would bend upward towards the cooler air. For a person at the same level as the sound, the sound waves are bending up and over the person listening, creating what is known as a shadow zone. When this occurs, a noise source may be visible at a distance but be perceived as quieter than expected. When the air temperature is cooler close to the ground

¹⁰ Sound Propagation website. (Available at https://www.sfu.ca/sonic-studio/handbook/Sound_Propagation.html, accessed November 27, 2016.)

than it is at higher altitudes, such as late at night or over calm lakes or icy surfaces, the sound waves bend closer to the ground and if the ground is reflective, the sound bounces off the ground and may propagate (travel) further than expected. (Cowan,¹¹ pp. 11, 19-21.) Because the effects of temperature gradients are more important over long distances (Caltrans TeNS¹²), these gradients would not substantially change the results of the NIA.

Generally speaking, wind currents allow sound to travel further than expected when the sound is being emitted in the same direction as the wind (downwind) and sound will travel a shorter distance than expected when the sound is being emitted in the direction against the wind (upwind). (Cowan, p. 21.) Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-AAA:

Comment noted, **MM AES 1** (See Response to Comment 37-J for MM AES 1) requires an eight-foot tall wall constructed of two-sided decorative masonry material along the Project's northern property line and that portion of the Project's westerly property line adjacent to existing residential uses to provide separation between the Project site and the adjacent residential uses. (DEIR, p. 5.1-31-32.) Construction of this wall will be required of the Project; therefore, including the wall in the noise impact analysis was justified to model appropriate Project conditions.

Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-BBB:

Comment noted, as stated on page DEIR, 5.12-22, because of the topographical differences between the Project site and the location of sensitive receptors (i.e., adjacent residences), the SoundPLAN Noise Model was used to model construction and operational noise generated on the Project site. The modeling included existing and proposed elevation lines and points within the Project site and adjacent residential uses to account for the effects of topography on noise levels as a result of the proposed Project. (DEIR, p. 5.12-24.) The noise modeling and anticipated noise impacts reflect the acoustics and geography of the area.

The hour with the highest on site Project operational noise was also modeled utilizing the SoundPLAN model. Existing and proposed elevation lines and points on the Project site and adjacent residential uses were uploaded into the model in order to take into account the effects of topography. (DEIR, p. 5.12-24.)

In addition, the ambient noise measurements were taken near sensitive receptors adjacent to the project site as these are the most likely to be affected by project noise. The noise model, SoundPLAN, is a three-dimensional noise model that takes into consideration the acoustic

¹¹ Cowan refers to the *Handbook of Environmental Acoustics*, published by John Wiley & Sons, Inc., 1994.

¹² Caltrans TeNS refers to the Technical Noise Supplement to the Traffic Noise Analysis Protocol, September 2013. (Available at http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013B.pdf, accessed November 27, 2016.)

effects of existing and proposed topography as well as existing and proposed buildings. So, any sound reflection associated with the topography and the proposed buildings was taken into consideration with the noise modeling. It is also important to understand that existing ambient noise levels were taken to document existing ambient noise levels and were not taken as representative noise measurements to be utilized in the noise model. The SoundPLAN noise model has an expansive library with a variety of construction, industrial and recreational noise reference levels. Appropriate assumptions were entered for project operations, including back-up beeper noise, trailer drop noise, HVAC noise etc.

Meteorological effects were taken into account in the noise model. SoundPLAN allows the user to input temperature, humidity and air pressure. The following meteorological parameters were entered: humidity 49%, average annual temperature 66F, air pressure 985 mbar. In response to comments raised regarding the noise impacts during other time of the year, additional model runs were made to account for different meteorological conditions. According to Weather Underground, the average temperature for the City of Riverside is 69° F and average humidity is 49.7 percent. Between November 2015 and November 2016, the highest temperature in Riverside was 114° F and the lowest temperature was 33° F. To evaluate the effects of changes in temperature and humidity referenced in the commenter's comment, four new modeling runs were prepared, in response to comments received, assuming: (i) temperature at 33° F and 0% humidity, (ii) temperature at 33° F and 100% humidity, (iii) temperature at 114° F and 0% humidity, and (iv) temperature at 114° F and 100% humidity. The results of this analysis, which does not change or materially impact the conclusions set forth in the NIA and DEIR, is summarized in the table below.

Receptor No. per DEIR Figure 5.12-5	Noise Level per DEIR Figure 5.12-5	Noise Level at 33° F and 0% humidity	Noise Level at 33° F and 100% humidity	Noise Level at 114° F and 0% humidity	Noise Level at 114° F and 100% humidity
1 first floor	43	42	43	41	41
1 second floor	45	44	45	43	44
2 first floor	30	30	30	30	30
2 second floor	32	32	32	32	32
3 first floor	45	45	45	44	44
3 second floor	49	48	49	48	48
4 first floor	48	47	48	47	47
4 second floor	52	51	52	51	51
5 first floor	49	49	49	49	49
5 second floor	50	49	50	49	49
6 first floor	43	43	43	43	43
6 second floor	44	43	44	43	43
7 first floor	38	38	38	38	38
7 second floor	39	39	39	39	39
8 first floor	33	33	33	33	33
8 second floor	35	35	35	35	35
9 first floor	35	35	35	34	35
9 second floor	37	37	37	36	36
10 first floor	39	38	39	37	38
10 second floor	41	40	41	39	40

Receptor No. per DEIR Figure 5.12-5	Noise Level per DEIR Figure 5.12-5	Noise Level at 33° F and 0% humidity	Noise Level at 33° F and 100% humidity	Noise Level at 114° F and 0% humidity	Noise Level at 114° F and 100% humidity
11 first floor	33	33	33	33	33
11 second floor	35	35	35	35	35
12 first floor	31	31	32	31	32
12 second floor	34	34	34	34	34
13 first floor	30	30	30	30	30
13 second floor	32	32	32	32	32
14 first floor	31	31	31	31	31
14 second floor	33	33	33	33	33
15 first floor	32	31	32	32	32
15 second floor	34	34	34	34	34
16 first floor	31	31	31	31	31
16 second floor	34	33	34	34	34
17	30	30	30	30	30
18 first floor	44	43	44	43	43
18 second floor	45	44	45	44	44
19 first floor	43	43	43	42	42
19 second floor	43	43	43	43	43
20 first floor	31	31	31	31	31
20 second floor	37	37	37	37	37
21 first floor	34	34	34	34	34
21 second floor	39	39	39	38	38
22	36	36	36	36	36
23 first floor	36	36	36	35	36
23 second floor	37	37	38	37	37
24 first floor	33	32	33	32	32
24 second floor	35	34	35	34	34
25 first floor	31	30	31	30	31
25 second floor	34	34	34	34	34
26 first floor	29	29	29	29	29
26 second floor	32	32	32	32	32
27 first floor	32	32	32	32	32
27 second floor	34	33	33	33	33
28 first floor	31	31	31	31	31
28 second floor	34	34	34	34	34
29 first floor	30	30	30	30	30
29 second floor	33	33	33	33	33
30 first floor	31	31	31	31	32
30 second floor	35	35	35	34	35
31	48	48	48	48	48
32	47	47	47	47	47
33	38	38	38	37	37
34	55	54	54	54	54

The amplification of the effects of meteorological conditions on sound does not constitute significant new information that would require recirculation of the DEIR. Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Noise events that occur within the line of sight of the homes on the ridge west of the project site are expected to be more audible than those events that may be closer in distance but not within a direct line of sight which is why there were noise modeling done for both the first and second story of each of the sensitive receptors. The NIA and DEIR evaluated the elevational differences. This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-CCC:

According to **Figure 5.12-5 – Operational Noise Levels (Leq) No Mitigation**, receptors 3, 4, and 5 exceed the nighttime exterior noise standard of 45 dBA Leq. Section 5.12 of the DEIR states that unmitigated operational noise will not exceed the daytime noise standards of 55 dBA Leq. However, they will exceed the nighttime 45 dBA Leq along the western project boundary and at the single-family detached residential dwelling units adjacent to the northwest corner of the site. (DEIR, p. 5.12-26.) The omission of receptor 5 in the DEIR text was a typographical error and does not change the results of the analysis or the placement of the noise wall required by **MM NOI 16**. As noted in the comment two other receptors (i.e. 1 and 18) are at 45 dBA Leq, but do not exceed this standard.

Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-DDD:

The comment requests clarification of the Leq and Lmax noise terminology used. Leq refers to the equivalent noise level. Lmax refers to the maximum level of noise. (DEIR Appendix I, Appendix A) **Figures 5.12-5 – Operational Noise Levels (Leq) No Mitigation** and **5.12-6 – Operational Noise Levels (Leq) with Mitigation** are represented in Leq to capture the operational noise or the equivalent noise level. These figures encompass all operational noise including dock activities averaged over a one-hour period. **Figures 5.12-7 – Back Up Beeper Operational Noise Levels (Lmax) with No Mitigation** and **5.12-8 – Dock Areas Operational Noise Levels (Lmax) with No Mitigation** refer to maximum noise events associated with back up beepers and dock area activities representing more isolated noise events. Therefore, Lmax was used to capture these noise events. **Figure 5.12-8** is titled as Leq; however, this is a typographical error that will be revised in the Final EIR and does not have an impact on the results of the analysis.

Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-EEE:

The noise barrier described in mitigation measure **MM NOI 16** (See Response to Comment 37-GG for **MM NOI 16**) would only be installed at two residences (6063 Bannock Drive and 6066 Cannich Road) to reduce nighttime noise impacts to those residences. Installation of this noise barrier (wall) is under the discretion of the two property owners, and the property owners will have the opportunity to work with the Project Applicant and City Planning staff to determine

the design and materials of this proposed wall. **MM NOI 16** includes specific design specifications the wall must meet to attenuate noise from the proposed Project including a list of possible materials, including glass or other transparent materials. (DEIR, p. 5.12-47.) Therefore, the specific design of this wall has not yet been determined at this time, but the wall could include transparent materials so long as they meet the noise reductions requirement from the mitigation measure.

Because installation of this barrier is not under the jurisdiction of the City or the Project proponent, analysis contained in the Draft Environmental Impact Report assumes that this noise barrier is not in place. For this reason, noise impacts associated with the Project are significant and unavoidable. Implementation of mitigation measure **MM NOI 16** as well as implementation of mitigation measures **MM NOI 13** through **MM NOI 16** and **MM AQ 14** (See Responses to Comments 37-GG, 37-QQ, 37-N), will reduce the noise impacts from operation of the Project to below the City's nighttime noise standards; however, because implementation of **MM NOI 16** is dependent on the consent of private property owners, this mitigation measure is considered not feasible and operational noise impacts must remain significant and unavoidable. (DEIR, pp. 5.12-28, 5.12-34, 5.12-48.) Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Views of Box Springs Mountains, Sycamore Canyon Wilderness Park, and Moreno Valley are partially obscured from existing walls at the rear property line and accessory structures of the private residences. If the 10-foot wall is placed at the top edge of the rear yard of the two residences mentioned above, which are at an approximately 1,650-foot elevation, partial views of the Box Springs Mountains would remain visible from both the first-story and second-story homes given the approximate 3,100 feet elevation of the Box Springs Mountains (Google Earth 2016). In addition, **MM NOI 16** does allow for the noise barrier to be constructed from transparent materials so long as they meet the design requirement of the mitigation measure. Since Sycamore Canyon Wilderness Park is situated at a lower elevation and some parts of Moreno Valley are situated at a lower elevation and in the distant viewscape, the views from the first floor may already be obscured. The aesthetic impacts of the Project were properly addressed in the DEIR and the design flexibility of the noise barrier required in **MM NOI 16** will prevent the wall from creating significant obstructions as claimed by the commenter.

Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-FFF:

See Response to Comment 37-BBB for information on how the noise model works. According to the United States Department of Transportation, a line source consists of "multiple point sources moving in one direction radiating sound cylindrically."¹³ Therefore, although the space between the buildings will create a "line," analysis of noise generated between these two buildings as a "line source" would not be appropriate. The noise modeling prepared to analyze

¹³ U.S. DOT, *Terminology*, <http://www.fhwa.dot.gov/environment/noise/measurement/mhrrn02.cfm>, accessed October 13, 2016.

noise impacts due to operation of the Project did take into account the topography of the site and its vicinity and existing and proposed structures; therefore, the recommendations included in mitigation measure **MM NOI 15** (See Response to Comment 37-FF for **MM NOI 15**) referenced in this comment would contribute to a reduction in the noise impacts on the adjacent residences.

Nevertheless, because the noise barrier in mitigation measure **MM NOI 16** requires permission from private property owners for installation, noise impacts from Project operation remain significant and unavoidable. (DEIR, p. 5.12-48.)

This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-GGG:

The noisiest hour on-site Project operational noise was modeled using the SoundPLAN model. To evaluate the proposed Project's operational noise impacts on the surrounding residences, a total of 30 receptors were modeled and anticipated noise levels on the first and second floors of each receptor were quantified. (DEIR, p. 5.12-26.) Therefore, the noise modeling was sure to quantify maximum expected noise from the proposed development both above and below the proposed 8-foot wall between the Project site and residences to the north as well as above and below the 10-foot noise barrier proposed at two residences to the northwest of the Project site as part of mitigation measure **MM NOI 16** (See Response to Comments 37-GG for **MM NOI 16**).

Assuming noisiest conditions, noise levels at the first floor and second floor of all of the receptors to the north and northwest of the Project site will not exceed the City's daytime noise standard of 55 dBA Leq. The City's nighttime noise standard will only be exceeded from the second floor of two residences to the northwest of the Project site; however, implementation of mitigation measure **MM NOI 16**, with permission from the property owners, would reduce operational noise levels to below the City's standard. However, because neither the City nor the Project proponent has the authority to implement this mitigation measure, impacts will remain significant and unavoidable. (DEIR, pp. 5.12-26 – 5.12-28.)

Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-HHH:

Operational noise impacts from the Project site will be significant and unavoidable because the City's nighttime noise standard will be exceeded for two residences to the northwest of the Project site. The installation of a noise wall as required by mitigation measure **MM NOI 16** will reduce the noise levels to below a level of significance; however, because neither the City nor the Project applicant has the authority to require installation of a 10-foot tall noise barrier at these properties the noise impact must be left significant and unavoidable.

As previously discussed, background noise readings were taken at two locations to represent a conservative estimate of the existing ambient noise environment at the Project site. If these noise measurements are too low, as alleged in this comment, this would over-emphasize the impact of Project-related noise to the surrounding sensitive receptors. As well, the construction of the proposed Project will block some of the sound from the Big 5 distribution center referenced by the Commenter.

It is also important to note that the existing warehouses referenced in the comment are separate and independent from the proposed Project and were approved by the City after undergoing their own environmental review and public hearing processes, including analysis of impacts related to noise. The existence of these warehouses is addressed in the proposed Project's environmental analysis, specifically, in the aesthetics, air quality, health risk assessment, greenhouse gas emissions, noise, traffic, and cumulative impacts sections of the DEIR.

Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-III:

Comment noted, the 24-hour noise measurements take into account the existing noise environment in the Project vicinity, including any beeping, crashes, and bangs associated with operations at nearby warehouses or distribution centers that may have occurred during the measurement period as well as noises from the adjacent residences like barking dogs, street and traffic noise and sirens. The existing noises near the project site were captured during this 24-hour noise measurement period.

Project operations will generate noise from vehicle movements within the proposed parking areas, idling trucks, loading and unloading activities, trash compactors and rooftop HVAC systems. The dominant operational noise will generally include noise associated with semi-trucks (tractor-trailers) entering and exiting the Project site and accessing dock areas, removal and hook-up of trailers, occasional truck air brakes, and vehicles associated with employees. (DEIR, p. 5.12-24.) These factors were taken into account in the noise modeling completed as part of the Noise Impact Analysis. Chapter 5.12 and Appendix I of the DEIR reports that operational on-site noise is not expected to result in sleep disruption. (DEIR Appendix I, p. 20-21.)

Please refer to Response to Comment 37-BBB for a detailed discussion about ambient noise and the effect that meteorology has on noise.

The Project site has been arranged so that there are no dock doors on the north side of Building 2. In addition, no truck traffic is allowed to use the drive-aisle along the north side of Building 2 (**MM NOI 14**) therefore, homes located north of the Project site will not be affected by noise associated with truck trailers.

Noise associated with tractor trailers including attaching and dropping trailers was included in the modeling assumptions for the peak hour analysis. A mitigation measure restricting access to the loading area and trailer parking located just south of Building 2 between the hours of 10:00 PM to 7:00 AM has been included in the technical noise study and the EIR (**MM NOI-15**) This mitigation measure will reduce the nighttime noise impacts to less than significant to all but two of the residences. Refer to discussion on these two residences and mitigation measure **MM NOI 16** in Response to Comments 37-GG, 37-PP and 37-QQ.

This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-JJJ:

There is only one receptor location that will experience a CNEL increase of 5 dBA or greater. The receptor is located approximately 10 feet west of the westerly Property line in the Sycamore Canyon Wilderness Park, this receptor is the park, no homes will see this level of increase because the change in noise levels resulting from Project operations will be perceptible at this location (i.e. 5 dBA or greater at certain receptors), this is considered a substantial increase. However, this increase is not a significant impact, because there are no sensitive receptors (i.e. residents) at receptor location 34, it is the Sycamore Canyon Wilderness Park and the Project's mitigated noise levels are within the GP 2025 "Normally Acceptable" compatibility criteria (55-70 dBA) for neighborhood park land uses. (DEIR, p. 5.12-40.)

With respect to the Noise analysis please refer to Response to Comments 37-GG, 37-PP and 37-QQ. This comment does not identify any significant new environmental issues or impacts that were not already discussed in the DEIR.

Response to Comment 37-KKK:

Comment noted, Project-generated traffic is projected to result in an approximate 7.2 dBA increase along Dan Kipper Drive west of Sycamore Canyon Boulevard. Although this increase is greater than 5 dBA and, as such, substantial, this impact is less than significant because the noise levels, even after this increase, will only be 47.2 CNEL (DEIR Table 5.12K) and will not exceed the 70 dBA General Plan 2025 "Normally Acceptable" compatibility criteria for Industrial and Manufacturing land uses (**Figure 5.12-2 – Noise/Land Use Compatibility Criteria**). In addition, the General Plan 2025 FEIR states that "a clearly perceptible increase (+5 dB) in noise exposure of sensitive receptors could be considered significant". Again, while this increase is greater than 5 dBA, there are no sensitive receptors adjacent to this road segment, therefore the increase would not be considered significant. (DEIR, p. 5.12-41.)

This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-LLL:

Comment noted. See Response to Comment 37-BBB for information on how the noise model works. A discussion of cumulative noise impacts is included in Section 6.1.14 of the DEIR. Because the Project's construction noise impacts are significant even with incorporation of feasible mitigation measures, the Project's contribution to short-term noise is considerable and cumulative impacts from construction noise are considered significant and unavoidable. The DEIR analyzed construction per the Noise Code standards that were in effect at the time of the Notice of Preparation for DEIR. On August 18, 2016 (taking effect 30-days later), Ordinance 7341 was adopted by the City of Riverside City Council amending the City's Noise Code to exempt construction noise between the hours of 7:00 a.m. and 7:00 p.m. on weekdays and between the hours of 8:00 a.m. and 5:00 p.m. of Saturdays from the standards of the Noise Code. Under these new provisions construction noise impacts would be less than significant.

Of the 15 cumulative development projects within the City identified in DEIR Table 6-A (see Response to Comment 37-KKK), the following five projects are within the SCBPSP: No. 5 – Health and Fitness Center, No. 8 – Alessandro Business Center, No. 10 – CT Sycamore Center, No. 12 – Mt. Baldy Drive/San Gorgonio Drive Industrial Project, and No. 14 – Sycamore Canyon Industrial Warehouse Development. With regard to including buildout of the entire SCBP in the cumulative noise analysis, DEIR Figure 8-4 – Alternative Location 3 identifies the location of all vacant property within the SCBPSP area. Because the City does not have any pending entitlement applications and is not currently processing any plans for these properties it would be speculative to assume what the future uses would be and the types of noise produced by such uses. For this reason, the DEIR does not consider the anticipated noise impacts associated with the future build-out of the SCBP in the DEIR. At the time development on these vacant parcels, the City and applicant(s) for these projects will be required to comply with CEQA and evaluate the environmental impacts associated with their respective proposed projects, including noise and cumulative impacts.

The DEIR utilized the “list method” approach in the cumulative analysis and focuses on whether the impacts of the proposed Project are cumulatively considerable within the context of combined impacts caused by other past, present, or future projects. The cumulative impact scenario considers other projects proposed within the Project area that have the potential to contribute to cumulatively considerable impacts. Based on discussions with City staff, a list of projects that may have the potential to contribute to cumulative effects was identified and included in DEIR **Table 6-A – Cumulative Development Projects** shown below. (DEIR, p. 6-2.)

Table 6-A – Cumulative Development Projects

No. on Figure 6-1	Project (Case Number) Project Location	Land Use	Project Size	Status
Projects within the City of Riverside				
1	Auto Parts Store in Mission Plaza P07-1181/P07-0593 381 Alessandro Blvd	Auto parts store	1,500 SF	Approved (5/6/2008) Not constructed
2	Proposed bank in Canyon Crossings Shopping Center P08-274/P08-0275 2570 Canyon Springs Pkwy	Commercial bank with drive-thru lane	2,746 SF	Approved (9/9/08) Not constructed
3	ARCO and <i>ampm</i> Market P10-0090/P10-0091 6287 Day Street	Gasoline station with convenience market	2,700 SF	Approved (6/8/2010) Open
4	Chase Bank (P12-0419/P12-0557/ P12-0558/P12-0559) 360 Alessandro Boulevard	Bank with two-lane drive-thru	3,100 SF	Approved (5/7/2013) Not constructed
5	Health and Fitness Center (P14-0457) 6465 Sycamore Canyon Boulevard	Interior remodel for a health and fitness center within existing 92,410 SF two-story office building	4,000 SF	Approved (6/30/2014) Constructed
6	Steak and Shake (P14-0536/P14-0537) Northwesterly corner of Valley Springs Parkway and Corporate Center Drive	Fast food restaurant with drive-thru restaurant	3,750 SF	Application submitted
7	Tract Map 32180 (P07-1073) North of the intersection of Moss Road and Pear Street	Nine lot subdivision for single family residences	9 DU	Approved (6/5/2008) Construction has not started
8	Alessandro Business Center (P07-1028/P06-0416/ P06-0418/P06-0419/ P06-0421/P07-0102) Northwest corner of Alessandro Boulevard and San Gorgonio Drive	Four industrial/manufacturing buildings.	662,018 SF	Approved (3/9/2010) Construction complete
9	Tract Map 36641 (P13-0665) Southwest corner of Wood Road and Moss Street	Eight lot subdivision for single family residences	8 DU	Approved (4/17/2014) Construction has not started

No. on Figure 6-1	Project (Case Number) Project Location	Land Use	Project Size	Status
10	CT Sycamore Center (P14-1053/P14-1054) Northwest corner of Dan Kipper Drive and Sycamore Canyon Boulevard	Five buildings with warehouse and office space in each building.	230,420 SF total (205,4720 SF warehouse and 25,000 SF office)	Approved (4/30/2015) Construction complete
11	Sycamore Canyon Apartments (P13-0553/P13-0554/ P13-0583/P14-0065) 5940 – 5980 Sycamore Canyon Boulevard (Between Raceway Ford and Raceway Nissan)	Multi-family residential	275 DU	Approved (10/9/2014) Construction has not started
12	Mt. Baldy Drive/San Gorgonio Drive Industrial Project (P14-0600/P14-0601/ P14-0602/P15-0044) Southeast corner of Mt. Baldy Drive and San Gorgonio Drive	Multiple-tenant industrial building	121,390 SF	Approved (6/9/2015) Under construction
13	Street Vacation for an Apartment Project (P12-0309) Monte Vista Drive and Pollard Street	Apartment building	88 DU	Construction of apartment project has not started
14	Sycamore Canyon Industrial Warehouse Development (P13-0607/P13-0608/ P13-0609/P13-0854) 6150 Sycamore Canyon Boulevard	Industrial building	171,616 SF	Approved (5/13/2014) Construction complete
15	Annexation 118 (P14-0246/P14-1059/ P14-0901) Northwest corner of Sycamore Canyon Boulevard and Central Ave.	Annexation, GPA, and Pre-Zoning for a retail commercial shopping center	102,000 SF	Approved (7/28/2015) Construction has not started
16	Quail Run Apartments (P14-0683/P14-0684/P14-0685/P15-1080/P15-1081/P15-1082) Northwest corner of Quail Run Road and Central Avenue)	Multi-family residential	216 DU	Approved (07/26/16)

No. on Figure 6-1	Project (Case Number) Project Location	Land Use	Project Size	Status
Projects within the City of Moreno Valley				
17	Status Nightclub and Lounge Canyon Springs Plaza	Nightclub	11,000 SF	Open for business
18	O'Reilly Automotive 23334 Sunnymead Boulevard	Auto parts store	7,500 SF	Open for business
19	Available Restaurant Space Plaza Del Sol Shopping Center 23060 Alessandro Boulevard	Restaurant	9,000 SF	Available
20	Rivals Sports Bar & Grill TownGate Promenade	Sports bar & grill	6,452 SF	In plan check
21	Aldi Market 12630 Day Street (TownGate Promenade)	Grocery market	20,300 SF	Open for business
22	Yum Yum Donut Shop Northwest corner of Day Street and Alessandro Boulevard	Donut shop and convenience store	4,351 SF	In planning
23	Hawthorn Inn & Suites Cactus Commerce Center Cactus Avenue	Four-story Hotel	79 guest rooms	Approved Not constructed
24	Sleep Inn Suites Olivewood Plaza Sunnymead Boulevard	Three-story Hotel	66 guest rooms	Approved Not constructed
25	Moreno Valley Professional Center Alessandro Boulevard east of Ellsworth Street	Four Office buildings	84,000 SF	Approved
26	Gateway Business Park South of Alessandro Boulevard west of Day Street	34 Industrial condominiums between 5,000 and 10,000 SF	184,000 SF	Approved
27	Veterans Way Logistics Center	Distribution facility	366,698 SF	Under construction
28	World Logistics Center	Corporate park specific plan	41 million SF total	Approved (8/26/2015) Construction has not started

The location of the cumulative development projects in relation to the Project site is shown on DEIR **Figure 6-1 – Cumulative Development Location Map**. The cumulative development projects located nearest the proposed Project site are No. 5 – Health and Fitness Center, No. 10 – CT Sycamore Center, No. 11 – Sycamore Canyon Apartments, and No. 14 – the Sycamore Canyon Industrial Warehouse Development. (DEIR, pp. 6-2–6-5.)

In evaluating cumulative impacts, the geographic scope (or cumulative impact area) used for each environmental issue (i.e., air quality, biological resources, cultural resources, noise, etc.) is different depending upon the potential area of effect. For example, the geographic scope for air quality would be the South Coast Air Basin (Basin), while the geographic scope for cumulative aesthetics impacts would be the viewshed, and the geographic scope for traffic/circulation would be the intersections in the Project vicinity that could be affected by the cumulative projects. (DEIR, p. 6-5.)

The DEIR Section 6.1.14 discusses cumulative noise impacts from: (i) construction of the proposed Project plus applicable cumulative development projects, (ii) operation of the proposed Project plus applicable cumulative development projects, and (iii) traffic from the cumulative development projects. Each of these will be discussed below.

Construction Noise

Potential impacts from Project-related construction will be significant, even with implementation of feasible mitigation measures. Additional potential cumulative impacts from construction noise could result if construction of the proposed Project and one or more of the three cumulative development projects within 0.5 miles of the Project site occurred simultaneously. Because project Nos. 10 and 14 have already been constructed (**Table 6-A – Cumulative Development Projects**), project No. 11 – Sycamore Canyon Apartments is the only project with the potential to be constructed at the same time as the proposed Project. As shown on DEIR **Figure 6-1**, project No. 11 is located east of Sycamore Canyon Boulevard and there are intervening structures between this site and the Project site, which would block some of the noise from this site. Further, the Draft Mitigated Negative Declaration for the Sycamore Canyon Apartments Project concluded that construction noise impacts from this project would be less than significant with regard to direct, indirect and cumulative impacts (SCA Draft MND, pp. 32, 40–41.) Nonetheless, because the Project’s construction noise impacts are significant even with incorporation of feasible mitigation measures, the Project’s contribution to short-term noise is considerable and cumulative impacts from construction noise are considered significant and unavoidable. (DEIR, p. 6-19.)

Operational Noise

Because noise is a localized phenomenon and drastically reduces in magnitude as the distance from the noise sources increases, the geographic scope for noise impacts associated with Project operations are the sensitive receptors adjacent to the Project site. For this reason, only cumulative development projects within the immediate vicinity of the Project site are likely to contribute to cumulative operational noise impacts. There are only three cumulative development Projects within one-half mile of the Project site: CT Realty Sycamore Center (No.

10 as shown on **DEIR Figure 6-1**), Sycamore Canyon Apartments (No. 11 as shown on **DEIR Figure 6-1**, and Sycamore Canyon Industrial Warehouse Development (No. 14 as shown on **DEIR Figure 6-1**). (DEIR, p. 6-18.) Because of the intervening structures between the Sycamore Canyon Apartments and the Sycamore Canyon Industrial Warehouse Development, only the CT Realty Sycamore Center would be anticipated to contribute to cumulative noise impacts at certain sensitive receptors.

With regard to noise from existing development within the Sycamore Canyon Business Park (SCBP), noise sourced from existing operations, including the Big 5 Distribution Center, Ralph's Distribution Center, and the Pepsi Bottling Group facility would be reflected in the ambient noise measurements taken in December 2015. Since in the current condition there are no intervening structures between the Big 5 and Ralph's facilities and the residences adjacent to the Project site, it is not unexpected that residents hear noise from these operations. It is important to note that CEQA does not require a Project to mitigate for pre-existing impacts and conditions. That is, the proposed Project need not account for and/or mitigate non-Project related noise that may exceed current standards.

As discussed in the DEIR, unmitigated operational noise will not exceed the daytime noise standards of 55 dBA L_{eq} . However, the exterior nighttime standard of 45 dBA L_{eq} will be exceeded at two single-family detached residential dwelling units adjacent to the northwest corner of the site. In order to mitigate nighttime Project operational noise levels to the nighttime standard of 45 dBA L_{eq} at affected sensitive receptors (i.e., receptor nos. 3 and 4 as shown on **DEIR Figure 5.12-6 – Operational Noise Levels (Leq) with Mitigation**) a ten-foot noise barrier is required along the perimeter of the outdoor use areas per mitigation measure **MM NOI 16**. In addition to the noise barrier wall, the use of the western portion of the dock doors and trailer parking area for Building 2 as shown on **Figure 5.12-6 – Operational Noise Levels (L_{eq}) with Mitigation** will be limited as indicated in mitigation measure **MM NOI 14**. The ten-foot tall noise barriers are required at the eastern edge of the residential lots (i.e., private property) and not at the property line at the bottom of the slope (i.e. the Project site). The noise barrier required under **MM NOI 16** would be installed on private property and is therefore dependent on the individual property owners authorizing the installation of the barrier wall. As such, neither the City nor the Project Applicant has control over the barrier wall will ultimately be constructed and **MM NOI 16** is considered infeasible. Because mitigation measure **MM NOI 16** is considered infeasible, Project-specific impacts are significant. However, because noise is such a localized phenomenon, the Project's operational noise contribution to cumulative noise impacts is not considerable; therefore, cumulative impacts with regard to operational noise are not significant. (DEIR, p. 6-20.)

The geographic scope for noise impacts associated with Project-generated vehicular noise is the roadways that will be used by Project-generated traffic in combination with traffic from the cumulative development projects. As shown in **DEIR Table 5.12-M – Change in Future Noise Levels at 50 Feet from Centerline (Existing Plus Ambient Plus Project Condition)**, the Project's contribution to future (cumulative) noise levels on area roadways is less than 1 dBA for all roadway segments except for Sierra Ridge Drive west of Sycamore Canyon Road, where

Project-related noise is expected to result in a 2.6 dBA increase. Because the City considers a 5 dBA increase to be substantial this is not considered a substantial increase and the Project's contribution to cumulative traffic noise is not considerable. Thus, cumulative impacts with regard to traffic noise are not significant. (DEIR, pp. 5.12-40–5.12-44, 6-19.)

Response to Comment 37-MMM:

Comment noted. **MM NOI 1** does not refer to equipment as the comment suggests. **MM NOI 1** involves the construction of a 12-foot tall temporary noise barrier for use during construction.

MM NOI 15 would prohibit the use of the loading and trailer parking area that is on the south side of Building 2 and within 360 feet of the western property line between the nighttime hours of 10:00 PM and 7:00 AM.

MM NOI 15: A restriction of nighttime use between the hours of 10:00 PM to 7:00 AM shall be implemented for the portion of the loading area and trailer parking located just south of Building 2 and within 360 feet of the western property line as shown on **Figure 5.12-6 – Operational Noise Levels (L_{eq}) with Mitigation**. (DEIR, p. 5.12-46.)

The distance identified in mitigation measure **MM NOI 15** was determined by the SoundPlan model to be sufficient to reduce nighttime Project operational noise levels to all residences adjacent to the Project site, except for two, to less than the City's maximum interior noise standard of 35 dBA L_{eq} . (DEIR, p. 5.12-34.) Additionally, as discussed in Response to Comments 37-GG, 37-PP, 37-QQ and 37-DDD above, **Figure 5.12-6** is represented in L_{eq} to capture the operational noise or the equivalent noise level. These figures encompass all operational noise including dock activities. **Figure 5.12-8** refers to maximum noise events associated with back up beepers and dock area activities representing more isolated noise events. Therefore, L_{max} was used to capture these noise events.

Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-NNN:

Comment noted, a comment which draws a conclusion without elaborating on the reasoning behind, or the factual support for, those conclusions does not require a response. Under CEQA, the lead agency is obligated to respond to timely comments with "good faith, reasoned analysis." (CEQA Guidelines, §15088(c).) These responses "shall describe the disposition of the significant environmental issues raised . . . [and] giv[e] reasons why specific comments and suggestions were not accepted. (CEQA Guidelines, §15088(c).) To the extent that specific comments and suggestions are not made, specific responses cannot be provided and, indeed, are not required. (*Browning-Ferris Industries of California, Inc. v. City Council of the City of San Jose* (1986) 181 Cal.App.3d 852 [where a general comment is made, a general response is sufficient].)

Nonetheless, the *Revised Traffic Impact Analysis for the Sycamore Canyon Industrial Buildings 1 & 2* (the TIA), which is, DEIR Appendix J, included traffic counts by vehicle type (i.e.,

passenger car, 2 axle truck, 3 axle truck, and 4+ axle trucks) that were conducted for a number of intersections including Fair Isle Drive-Box Springs Road from Sycamore Canyon Boulevard to the I-215 Northbound Ramps, Sycamore Canyon Boulevard, from Fair Isle Drive to Eastridge Avenue, and Eastridge Avenue from Sycamore Canyon Boulevard to Box Springs Boulevard. **(DEIR Figure 5.16-1 – Study Area.)** The results of these counts are included in Appendix C of the TIA. The table below presents the existing condition for the portion of Sycamore Canyon Boulevard within the study area of the TIA and the trips generated by the proposed Project.

Segment of Sycamore Canyon Boulevard		Existing Condition (ADTs) by Vehicle Type					Project Trips Only (ADTs) by Vehicle Type				
From	To	Passenger Cars	2 Axle Trucks	3 Axle Trucks	4 Axle Trucks	Total All Trucks	Passenger Cars	2 Axle Trucks	3 Axle Trucks	4 Axle Trucks	Total All Trucks
Fair Isle Drive	I-215 Southbound Ramps	14530	400	25	200	625	335	4	5	14	23
I-215 Southbound Ramps	Dan Kipper Drive	12785	200	100	305	605	372	8	10	28	46
Dan Kipper Drive	Box Springs Boulevard	12340	200	90	295	585	223	4	5	14	23
Box Springs Boulevard	Sierra Ridge Drive	9425	150	35	330	515	223	4	5	14	23
Sierra Ridge Drive	Eastridge Avenue	10715	140	60	305	505	1120	148	198	526	872

Source: Roadway Segment Average Daily Traffic (not PCE) from Appendix C of the TIA.

The Project Design Features are discussed in DEIR Section 5.16.4, which states:

The proposed Project has been designed to facilitate traffic in an efficient manner using the existing roadway network. The majority of passenger cars and truck traffic is expected to use Sierra Ridge Drive to Sycamore Canyon Drive to Eastridge Avenue which will provide on-/off-ramp access to I-215. (DEIR, p. 5.16-26.)

Building 1 will have two driveways along Lance Drive and Building 2 will have one driveway along Lance Drive. Building 1 and Building 2 will have full ingress and partial right-out only egress at each of their individual project driveways. (DEIR, p. 5.16-26.)

The Project will limit passenger car and truck egress onto Dan Kipper Drive by posting signs at all Project driveways that indicate only right turns onto Lance Drive are permitted. In addition to signage, small barriers will be placed at the all three driveways which will aid in limiting left-out turns onto Lance Drive. This will

force both outbound (i.e. leaving the Project site) passenger cars and trucks to turn south onto Lance Drive to Sierra Ridge Drive and then east on Sierra Ridge Drive to Sycamore Canyon Boulevard (see **Figure 5.16-3 – Project Trip Distribution (Passenger Cars – Outbound)**, and **Figure 5.16-5 Project Trip Distribution (Trucks – Outbound)**). From the intersection of Sierra Ridge Drive and Sycamore Canyon Boulevard, outbound vehicles will either turn north or south to travel to I-215 or other surrounding roadways. Partial width improvement on the westerly side of that portion of Lance Drive that is currently in place will be constructed by the Project at its ultimate cross-section. The Project will construct the full-width improvements to the remaining portion of Lance Drive to Dan Kipper Road. The Project proposes a slight realignment to that portion of Lance Drive shown as Lot A on TPM 36879. (**Figure 3-8 – Tentative Parcel Map.**) Per the *Sycamore Business Park Specific Plan*, existing Lance Drive is designated as a 2-lane 74-foot Collector Street. (DEIR, p. 5.16-26.)

As part of the TIA scoping process, a preliminary analysis was done in regard to the proposed Project using Dan Kipper Drive as a point of egress for passenger cars and/or trucks. Based on future development in the area, the existing and the geometry of the intersection of Dan Kipper and Sycamore Canyon, the City determined that traffic leaving the Project site would have a right-out-only egress onto Lance Drive. (DEIR, pp. 5.16-10, 5-16-26.)

With regard to the trip distribution (i.e. the trip directional orientation of Project-generated traffic) used in the TIA, the TIA was prepared by a registered professional traffic engineer with local experience and expertise in traffic modeling. The trip distribution used in the TIA is based on professional engineering judgement and was approved by the City as part of the TIA scoping agreement. (See Appendix A of the TIA.) Factors taken into consideration in developing the trip distribution model include: the existing roadway system, existing traffic patterns, and existing and future land uses. The Project will prevent passenger car and truck egress onto Dan Kipper Drive by installing small barriers (referred to as “pork chops”) at all three Project driveways that will limit left-out turns onto Lance Drive. (DEIR pp. 5.16-26.) This will force both outbound (i.e. leaving the Project site) passenger cars and trucks to turn south onto Lance Drive to Sierra Ridge Drive and then east on Sierra Ridge Drive to Sycamore Canyon Boulevard (see **DEIR Figure 5.16-3 – Project Trip Distribution (Passenger Cars – Outbound)**, and **DEIR Figure 5.16-5 Project Trip Distribution (Trucks – Outbound)**). From the intersection of Sierra Ridge Drive and Sycamore Canyon Boulevard, outbound vehicles will either turn north or south to travel to I-215 or other surrounding roadways. (DEIR, pp. 5.16-26.) From the intersection of Sierra Ridge Drive/Sycamore Canyon Road, it is approximately 0.7 miles to the Eastridge-Eucalyptus interchange and approximately 0.9 miles to the Fair-Isle/Box Springs interchange. Thus, it is reasonable to expect that outbound cars and trucks will use the Eastridge-Eucalyptus interchange.

With regard to the existing condition of trucks using Fair Isle Drive for any reason other than to turn onto Sycamore Canyon Road, Chapter 10.56 of the Riverside Municipal Code prohibits

the use of Fair Isle Drive, Lochmoor Drive, and Sycamore Canyon Boulevard between El Cerrito Drive and University Drive, by commercial vehicles exceeding ten thousand pounds (5 tons) gross weight. Residents observing commercial vehicles exceeding ten thousand pounds (5 tons) gross weight in these restricted locations may call 311 and will be routed to the Traffic Department and Police Department so that the appropriate response can be coordinated. To inform drivers that commercial vehicles exceeding ten thousand pounds (5 tons) gross weight are prohibited from using these streets, the Project will be conditioned to:

Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-000:

CEQA Guidelines Section 15124(b) states, “A clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project.” The Project Objectives listed in Section 3.2.7 of the DEIR and were developed by City staff comply with the *CEQA Guidelines*.

As explained in Section 8.3 of the DEIR, the City as lead agency, is responsible for selecting a range of Project alternatives for examination, and there is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the “rule of reason” (*CEQA Guidelines* Section 15126.6(a)). The “no project” alternative could take two forms: 1) no change from the existing uses (vacant land); or 2) development per the approved *Sycamore Canyon Business Park Specific Plan* (no Specific Plan amendment, no General Plan amendment, and no parcel map). Because both “no project” alternatives are significantly different, both are evaluated. Pursuant to State *CEQA Guidelines* Section 15126.6(e)(3)(C), the impacts of the No Project Alternative should be evaluated by projecting what would reasonably be expected to occur in the foreseeable future if the proposed Project were not approved. The other alternatives evaluated in the EIR were selected based on their ability to reduce or avoid air quality, noise (construction and operations), and traffic (freeway segment) impacts.

This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-PPP:

CEQA Guidelines states: “The EIR need examine in detail only the alternatives that the lead agency determines could feasibly attain most of the basic objectives of the project” (*CEQA Guidelines* Section 15126.6(f)). Evaluating an alternative that essentially cuts out one of the property owners and does not meet one of the primary objectives of the project would be not be consistent with *CEQA Guidelines* to evaluate project alternatives and beyond the “rule of reason.”

It is true that the property could be developed with other types of uses that are consistent with the land use designations and zoning, which could be said of any development proposal on

any site. However, the City, as lead agency, desires to maintain consistency with the intentions of the Sycamore Canyon Business Park Specific Plan to focus similar industrial land uses (warehousing and logistics centers in this case) in this locale and take advantage of existing infrastructure and other surrounding similar uses.

The purpose of an EIR is to identify the significant environmental effects on the environment of a project, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided (*CEQA Statute* Section 21002.1). This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-QQQ:

The Project site is zoned Business and Manufacturing Park (BMP) on the City's Zoning Map, consistent with the SCBPSP, which is only one of four industrial zones within the City. Manufacturing was evaluated in the DEIR as Alternative 2. Alternative 2 would result in twice as many trips as the proposed Project and none of the environmental impacts would be decreased in comparison to the proposed Project. Impacts would remain significant and unavoidable in relation to air quality, noise, and transportation/traffic. Further, impacts related to air quality, greenhouse gas emissions, noise and transportation/traffic would be greater under this alternative in comparison to the proposed Project due to the increased vehicle traffic associated with Alternative 2. (DEIR, pp. 8-17–8-22.)

Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-RRR:

Alternative 3 – Reduced Density would reduce development by 30 percent in comparison to the proposed Project; however, it would meet the Project objectives to a lesser degree and due to the scarcity of sites of this size, the attendant land costs of sites of this size, and the low Inland Empire market lease rates for products of this type, the rate of return from the lease would be too low to justify the cost and risk of investment under the reduced density alternative. Further, this alternative would also result in significant and unavoidable impacts to air quality, noise, and transportation/traffic (DEIR, p. 8-26 – 8-30.)

Therefore, this comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-SSS:

CEQA Guidelines Section 15126.6 does not prohibit discussion of infeasibility by the lead agency. The alternatives were developed, independently reviewed, and determined infeasible by the lead agency during the EIR process. As stated on the cover page of the EIR: "This DEIR has been prepared in compliance with the California Environmental Quality Act and City of Riverside CEQA Resolution No. 21106, and reflects the independent judgment of the City of Riverside." This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-TTT:

Comment addresses cumulative noise impacts. First, all surrounding land uses that were currently operating at the time the noise measurements were taken (December 15, 18, 28, and 29, 2015) were included in the measurement of “ambient” noise. The CT Facility (No. 10 on Fig. 6-1) was finishing construction when the ambient noise measurements were taken.

Construction noise levels are greater than operating noise levels. The cumulative impacts of the existing surrounding distribution centers/warehouses are considered in the ambient noise level measurements, which were taken while nearby construction was active, inactive and for two 24-hour periods. (Appendix I – Noise Impact Analysis, page 9.) The warehouses closely surrounding the Project are not identified in Figure 6-1 because they are not under construction, nor proposed for future construction. Their contribution to cumulative noise is included in the ambient noise measurements. If ambient noise levels were underestimated in this analysis, the Project’s construction and (nighttime) operational noise levels are nonetheless estimated to result in significant impacts (Section 5.12 – Noise). Please refer to Response to Comments 37-DDD, 37-QQ, 37-PP and 37-GG for detailed discussion on noise.

This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

Response to Comment 37-UUU:

Surrounding sources of noise generators that are currently operational or under construction were measured and captured as part of the ambient noise measurements taken for the Noise Impact Analysis. It is not the purpose of this DEIR to discuss the operational noise levels of other properties. Probable future developments on vacant or redevelopment properties in the surrounding area were considered as part of the Cumulative Impact Analysis in Section 6.1. In addition, DEIR **Table 6-A** and **Figure 6-1** are future developments in the area and are based on input from the City of Riverside and City of Moreno Valley. The geographic scope for noise impacts is the immediate vicinity of the Project site because noise by definition is a localized phenomenon, and drastically reduces in magnitude as the distance from the noise sources increases. Consequently, only those cumulative development projects within the immediate vicinity of the proposed Project will be likely to contribute to cumulative noise impacts resulting from Project construction or operation. (EIR page 6-18.)

Please refer to Response to Comments 37-GG, 37-PP and 37-QQ for a detailed discussion on Noise and the noise analysis prepared for the DEIR.

The comment incorrectly states the distance between the Kroger (assumed to be the Ralph’s Distribution Center located south of the Project site) and Pepsi (assumed to be the Pepsi Bottling Group located at the southeast corner of Eastridge Avenue/Sycamore Canyon Road) facilities and the residences. As measured from Google Earth, the northern boundary of the Big 5 Sporting Goods Distribution Center is less than 0.10 miles south of the residences to the north and approximately 0.3 miles east of the residences to the west. As measured from Google Earth, the northern boundary of the Ralphs Distribution Facility is approximately 0.3 miles from the rear lot line of nearest residential property on Bannock Drive and less than one-

half mile from the residences to the north, not 1 mile as asserted in this comment. As measured from Google Earth, the northern boundary of the Pepsi Bottling Group is approximately 0.8 miles south of the nearest residences (the Sycamore Canyon Apartments) and the same distance from the northwest corner of the Pepsi facility to the nearest residential property on Bannock Drive. The noise measurements taken and used in the noise modeling account for these existing warehouse uses and are based on accurate measurements as discussed in the Response to Comments referenced above.

This comment does not identify any significant new environmental issues or impacts that were not already addressed in the DEIR.

EXHIBIT A



