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Summary Form for Electronic Document Submittal

Form F

Lead agencies may include 15 hardcopies of this document when submitting electronic copies of Environmental Impact Reports, Negative Declarations, Mitigated Negative Declarations, or Notices of Preparation to the State Clearinghouse (SCH). The SCH also accepts other summaries, such as EIR Executive Summaries prepared pursuant to CEQA Guidelines Section 15123. Please include one copy of the Notice of Completion Form (NOC) with your submission and attach the summary to each electronic copy of the document.

SCH #: ____________________

Project Title: Water System Improvment & Treatment Project

Lead Agency: City of McFarland

Contact Name: Yerlys Hernandez

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Project Location: McFarland (*City*)   Kern (*County*)

Project Description (Proposed actions, location, and/or consequences).

See attached Project Description.

Identify the project's significant or potentially significant effects and briefly describe any proposed mitigation measures that would reduce or avoid that effect.

See attached list of mitigation measures for all potentially significant effects.

If applicable, describe any of the project's areas of controversy known to the Lead Agency, including issues raised by agencies and the public.

N/A

Provide a list of the responsible or trustee agencies for the project.

City of McFarland

CITY OF MCFARLAND
WATER SYSTEM IMPROVEMENT & TREATMENT PROJECT

I. PROJECT DESCRIPTION

The proposed project is for the City of McFarland (City) and involves drilling and equipping a new municipal water well, construction of an oxidation, coagulation, filtration iron removal water treatment system, construction of a welded steel water storage tank and booster station, and a connection to the existing City distribution system.

The well site property is approximately 100-ft by 400-ft or approximately 0.9-acres. The site is currently a vacant, unimproved lot. The earthwork will involve moving approximately 1,000 cubic yards which will be off-hauled for disposal off site as directed by the City.

The site grading is anticipated to involve approximately 20 working days. It is anticipated that the following pieces of equipment will be used during construction activities:

- Loader
- Backhoe
- Excavator
- Skip and Drag
- Sheepsfoot Compactor
- Rammax Compactor
- Whacker Packers

The site earthwork requirements include over-excavation to 18-inches below proposed concrete foundations and will be recompacted to 90% relative compaction to reduce the potential for settlement. Concrete foundations will be constructed for the deep well pump and motor, the booster pump foundations, the skid-mounted LayneOx treatment system, storage tank foundations, chemical building foundations, electrical foundation, and the hydropneumatic tank footings.

The well site property will be secured with approximately 930-ft of 8-ft tall masonry block wall and include drive gates and a personnel gate to Elmo Highway for site access. The well site will be surfaced with a combination of ¾" Class II aggregate base and hot mix asphalt paving, with the limits being the perimeter block wall.

The well is planned to be drilled to an approximate depth of 900-ft using the reverse rotary method. Water quality zone testing will be performed in the well pilot hole. The well construction work will include installing a 50-ft deep, 36-inch diameter steel conductor, drilling a 17 ½ - inch diameter pilot hole, performing geophysical logging, water quality depth sampling, reaming of the pilot hole to 28-inch diameter, installation of 16-inch diameter steel casing, installation of gravel pack, installation of a bentonite annular seal, and well development. The initial development water will be disposed of in a 20,000-gallon tank and removed from the site. The development water will then be discharged to the existing adjacent storm drain sump. It is expected that the completed well will exceed the secondary drinking water standard for iron and that well head treatment in the form of oxidation, coagulation, and filtration will be used to remove iron.

The production well drilling phase will involve the drilling, construction, and development of a new municipal water supply well. It is anticipated to involve approximately 90 working days with active well drilling taking place 24 hours per day, seven days per week for approximately 45 of those working days. It is anticipated that the following pieces of equipment will be used during construction activities:

- Well Drilling Rig with Pipe Trailer
- Mud Pits
- Backhoe
- Loader
- Forklift

The deep well will have a 10-ft by 10-ft by 30-in thick concrete foundation and be equipped with a vertical turbine pump and vertical hollowshaft electric motor with a variable speed drive. The well will have a 10-ft by 10-ft by 11-ft high removable metal enclosure building for noise attenuation. The 12-inch well discharge piping will be metered using an electromagnetic flow meter.

The well discharge flow will be divided so that approximately two-thirds of the flow is conveyed to a skid-mounted LayneOx iron treatment system with a concrete foundation that is 68-ft by 19-ft by 24-in thick. The remaining one-third of the well flow will bypass the LayneOx iron treatment system. The bypass flow rate will be regulated using an automatic modulating control valve and will be blended with the treated flow from the LayneOx iron removal treatment system.

The blended flow will be conveyed into an AWWA D100 welded steel storage tank that will be constructed with a concrete ringwall foundation and oiled sand cushion. The storage tank dimensions will be 60-ft diameter and 24-ft side shell height. The storage tank outlet piping will be 18-inch diameter steel piping that feeds the suction header for three horizontal centrifugal split-case booster pumps. Each booster pump will have a concrete foundation that is 3-ft by 6-ft by 36-in thick. The booster pumps are each equipped with variable speed drives. Two of the pumps are 50hp and the third pump is 100hp. The pump discharge piping then enters a 12-in diameter discharge header. The discharge header enters a 3,000-gallon hydropneumatic pressure vessel which will be anchored to two concrete footings each 13-ft long by 5-ft wide by 24-in thick. The 12-inch diameter booster station piping will transition below ground after the pressure vessel and transition to 12-inch C900 PVC pipe that will connect to the existing 12” PVC City distribution system water main that runs along the north side of the well site on the south side of Elmo Highway.

In addition, there will be a 144,000-gallon backwash tank with dimensions of 32-ft diameter and 24-ft side shell height. The tank will be an AWWA D100 welded steel storage tank on a concrete ringwall foundation and oiled sand cushion. The backwash tank will drain the supernatant back to the well discharge for treatment and/or drain to the City sewer.

There will be two fiber-reinforced polymer (FRP) chemical enclosure buildings to house the dual-walled chemical storage tanks, duplex chemical feed pump skids, and the continuous reagent-free pH and chlorine analyzer.

The first FRP building (18 ft × 12 ft) will provide protection for the 550-gallon chlorine storage tank, the 150-gallon ferric chloride storage tank, and the duplex chemical feed pump skids. These pumps will inject chlorine and ferric chloride for chemical pre-treatment of the raw groundwater prior to filtration through the LayneOx media.

The second FRP building (10 ft × 12 ft) will house the 550-gallon sulfuric acid storage tank and the duplex chemical feed pump skid used for sulfuric acid injection. This system will provide pre-treatment pH adjustment upstream of the LayneOx filter media vessels.

The well and treatment facility will be painted a neutral color (tan) and site landscaping installed around the perimeter of the site for it to be aesthetically pleasing and blend in with the adjacent community and neighborhood.

The well equipping and site development phase is anticipated to involve approximately 12 months. However, the equipment will not run continually or daily throughout this entire construction period. It is anticipated that the following heavy pieces of equipment will be used for approximately 180 working days during construction activities:

- Excavator
- Loader
- Backhoe
- Crane
- Concrete Trucks
- Generator
- Air Compressor
- Small Tools
- Service Trucks

Construction of the project is anticipated to span an approximate 18-to-24-month period.

The well site will be routinely visited by a City operator – typically once per day to check on the operation and inspect for any issues along with the preparation of a daily report. Routine maintenance operations will include:

- Well Lubrication Check - daily
- Chlorine Tank Level Check – daily
- Sulfuric Acid Tank Level Check – daily
- Ferric Chloride Tank Level Check – daily
- Chlorine Residual Check – daily
- pH Check – daily
- Iron Level Check – daily
- Water Production Reading Check – daily
- Booster Pump check – monthly
- Well water level measurements – monthly
- Air Conditioning service – annually
- Site Cleanup - quarterly

A back-up emergency generator will also be installed as part of this project.

IV. MITIGATION MEASURES

AESTHETIC MITIGATION MEASURES

AES-1 The project lighting will be less than 20-ft tall and the light fixtures shielded and directed downward to comply with the Kern County "Dark Skies Ordinance".

AES-2 The site will be painted a neutral color (tan), be screened with an 8-ft tall masonry block wall, and have landscaping installed around the perimeter of the site.

AIR QUALITY MITIGATION MEASURES

AQ-1 Water will be applied to the project site during construction grading, trenching, and backfilling operations to control dust and keep the project area clean.

AQ-2 The contract documents will require the Contractor to obtain and comply with a San Joaquin Valley Air Pollution Control District Authority to Construct and Permit to Operate permits for the emergency backup diesel generator.

BIOLOGICAL RESOURCES MITIGATION MEASURES

BIO-1 A biological resource pre-activity survey conducted by a qualified biologist no more that 30- days before the start of construction activities.

Biological resource monitoring shall be conducted during each initial phase of ground disturbance.

Compliance reporting shall be provided to the required oversight agencies for all biological resource field surveys, monitoring, and additional tasks as warranted.

BIO-2 All personnel entering the project site should attend a Worker Environmental Awareness Program. The Worker Environmental Awareness Program will present measures required to avoid, minimize, and mitigate impacts to biological resources and will include, at a minimum, the following: an outline of special-status species that may access, use or otherwise transverse the project area, federal and state endangered species acts; biological survey results for the current construction area; life history information for the species of concern; biological resource avoidance, minimization, and mitigation requirements; consequences for failure to successfully implement requirements; and procedures to be followed if dead or injured wildlife are located during project activities. Upon completion of the orientation, employees should sign a form stating that they attended the program and understand all biological resource mitigation measures and receive a hard hat sticker or other means of identifying that they have attended the worker orientation. Forms verifying worker attendance should be filed at the applicant's office and be accessible to county, USFWS and CDFW staff. No untrained personnel will be allowed to work onsite with the exception of delivery trucks that are only onsite for one day or less, and are under the supervision of a trained employee.

BIO-3 If known or natal SJKF dens are identified at any time during construction, protocols enumerated in the *USFWS Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (2011) should be implemented, and the appropriate agencies contacted for guidance.

BIO-4 Vertical sided trenching deeper than 2-feet will include escape ramps at no more than a 1:1 ratio every 100 feet.

Vertical sided holes that are not capable of being ramped should be covered or otherwise secured to the greatest extent practicable.

BIO-5 All construction pipes, poles, culverts, hoses or similar structures stored at the construction site for one or more overnight periods should be capped or the ends covered in a way that prevents wildlife entrapment. Unburied pipes laid in trenches overnight should be capped. If a kit fox or other listed species is discovered inside a pipe, that section of pipe will not be moved until the animal leaves on its own, or the USFWS and the CDFW have been consulted.

In addition to the above recommended species-specific protection measures, the following additional general measures should be adopted that represent best management practices:

BIO-6 Traffic restraints and signs should be established to minimize temporary disturbances during construction. All construction traffic should be restricted to designated access roads and routes, project site, storage areas, and staging and parking areas. Off-road traffic outside designated project boundaries will be prohibited. A 15 mile-per-hour (32 kilometer-per-hour) speed limit should be observed in all project construction areas, except as otherwise posted on county roads and state and federal highways.

BIO-7 All equipment storage and parking during construction activities should be confined to the designated construction area or to previously disturbed off-site areas that are not habitat for listed species.

BIO-8 All project construction activities involving excavation or surface disturbance should be limited to daylight hours with the exception of well drilling activities.

BIO-9 Trenches should be inspected for entrapped wildlife each morning, prior to the onset of construction. Before such holes or trenches are filled, they should be thoroughly inspected for entrapped animals. Any animals so discovered shall be allowed to escape voluntarily, without harassment, before construction activities resume, or removed from the trench or hole by a qualified biologist and allowed to escape unimpeded.

BIO-10 All food-related trash items such as wrappers, cans, bottles and food scraps generated by project activities shall be disposed of in closed containers and removed at least once each week from the site. Deliberate feeding of wildlife is prohibited.

BIO-11 To prevent harassment of special-status species, construction personnel should not be allowed to have firearms or pets on the project site.

BIO-12 All equipment and work-related materials shall be contained in closed containers either in the work area or on vehicles. Loose items (e.g., rags, hose, etc.) should be stored within closed containers or enclosed in vehicles when on the work site.

BIO-13 All liquids should be in closed, covered containers. Any spills of hazardous liquids should not be left unattended until cleanup has been completed.

BIO-14 Use of rodenticides and herbicides on the project site should be prohibited unless approved by the USFWS and the CDFW. This is necessary to prevent primary or secondary poisoning of special-status species using adjacent habitats, and to avoid the depletion of prey upon which they depend. Label restrictions and other restrictions imposed by the U.S. Environmental Protection Agency (EPA), the California Department of Food and Agricultural (CDFA), and other state and federal legislation shall be implemented. If rodent control must be conducted, zinc phosphide shall be used because of its proven lower risk to kit foxes.

BIO-15 Any employee who inadvertently kills or injures a listed species, or who finds any such animal dead, injured, or entrapped, shall be required to report the incident immediately to a designated site representative (e.g., foreman, project manager, environmental inspector, etc.), except animals killed on state and county roads when such mortality is not associated with project traffic. In the case of entrapped animals that are listed species, escape ramps or structures shall be installed immediately, if possible, to allow the subject animal(s) to escape unimpeded.

BIO-16 In the case of injured special-status wildlife, the CDFW shall be notified immediately. During business hours, Monday through Friday, the phone number is (559) 243-4017. For non-business hours, report to (800) 952-5400. Notification shall include the date, time, location, and circumstances of the incident. Instructions provided by the CDFW for the care of the injured animal shall be followed by the contractor onsite.

BIO-17 In the case of dead animal(s) that are listed as threatened or endangered, the USFWS and the CDFW shall be immediately (within 24 hours) notified by phone or in person and shall document the initial notification in writing within two working days of the findings of any such animal(s). Notification shall include the date, time, location and circumstances of the incident.

BIO-18 Prior to commencement of construction on any phase of work, work areas should be clearly marked with fencing, stakes with rope or cord, or other means of delineating the work area boundaries.

BIO-19 To protect nesting birds (covered by the MBTA) and all raptors, the following measures should be implemented:

- Pre-construction nesting bird surveys for the well area and within a 250-foot (76- meter) buffer around the perimeter should be conducted no more than one week prior to the commencement of ground disturbing activities, for project activities occurring between February 1 and August 31. If nesting birds are present, no new construction or new ground disturbance should occur within an appropriate avoidance area for the specific species until young have fledged, unless otherwise approved and monitored by a qualified onsite biologist. Avoidance zones should be implemented as follows:
  1. Ground or low-shrub nesting non-raptors – 300 feet (91 meters);
  2. Burrowing owl – as appropriate based on nest location, existing surrounding activity, and evaluation of owl behavior. Coordination with CDFW may be warranted.

3. Sensitive raptors (e.g., prairie falcon, golden eagle) – 0.5 mile (811 meters)
4. Other raptors – 500 feet (152 meters). Once young have fledged, avoidance zones can be removed.

- Activities on existing roads shall not be restricted as a result of implementation of this measure, unless those activities may result in direct impacts to nesting birds.
- All determinations regarding protection of nesting birds included in this measure should be made by a qualified biologist.

CULTURAL RESOURCES MITIGATION MEASURES

CUL-1 An unexpected discovery of cultural resources during any phase of the project shall result in an immediate work stoppage in the vicinity of the find until the resources can be evaluated by a professional archaeologist. If the resource is deemed to be an "important" cultural resource, impacts will be mitigated by avoidance, where feasible.

CUL-2 Contractor shall provide a Cultural Resource Sensitivity Training Course to all personnel prior to any ground-disturbing activities associated with this project.

HYDROLOGY AND WATER QUALITY MITIGATION MEASURES

HYD-1 The City of McFarland regularly monitors the groundwater levels in their wells to ensure the wells are not excessively lowering groundwater levels in the area. Well monitoring will continue in nearby wells during construction activity.

NOISE IMPACT MITIGATION MEASURES

NOI-1 Noise levels will be increased on a temporary basis during construction activities. Installation of sound barrier walls will be installed around the south, west, and east sides of the well site during well drilling activities to reduce noise and light to nearby residents.

NOI-2 The temporary noise impacts attributed to construction will be mitigated for all construction, with the exception of the well drilling activities, by limiting the hours of construction on-site to weekdays, Monday thru Friday, from 7 am to 5 pm.

NOI-3 The well will be equipped with an insulated motor enclosure to mitigate motor noise. The booster pumps are equipped with variable speed drives to help run at optimum efficiency and shorter, quieter run times. The well site will be secured with an 8-ft masonry wall, which is 2-ft taller than normal, to help reduce the overall noise impact.

TRANSPORTATION/TRAFFIC MITIGATION MEASURES

TRA-1 During construction there will be an increase in traffic as a result of material deliveries and construction crews, however construction signage will be provided to alert people around the construction activity, as needed.

TRA-2 All necessary encroachment permits for any proposed work within the City road right-of-way will be obtained.