

Final Work Plan - California Regional PM10/PM2.5 Air Quality Study Ammonia Emissions Improvement Projects in Support of CRPAQS Aerosol Modeling and Data Analyses: Draft Ammonia Inventory Development (page 2-9)

Recommendations for Agricultural Burning

As with fertilizer application, the team will disaggregate this category into a number of subcategories by assigning new EIC and CES codes specific to crop type (since activity will vary spatially and temporally by crop type). An example is shown in Table 2-4 below. Spatially, the same coverages developed above for fertilizer application will be used (from shape files developed by Krauter and Potter). As mentioned under the fertilizer application section above, alternate sources of activity and spatial allocation data include the CDPR pesticide usage database and land use/land cover data (e.g., CDWR and USGS).

Table 2-4. Suggested EIC/CES codes for agricultural burning.

EIC Description¹	EIC	CES
Existing Code		
Agricultural Burning - Field Crops	670-662-0262-0000	47258
Proposed Codes		
Agricultural Burning – Crop A	670-662-0262-0001	47259
Agricultural Burning – Crop B	670-662-0262-0002	47260
Agricultural Burning – Crop C	670-662-0262-0003	47261
Agricultural Burning – Crop D	670-662-0262-0004	47262

¹ Crop names and number of categories to be determined.

There are no other known sources of activity data for this source category (emissions are not in the current inventory; STI, 1998). EPA currently does not have information for estimating ammonia emissions. We will adopt surrogate emission factors from AP-42 (e.g., for CO) and the information sources noted under prescribed burns/wildfires above.

Temporal allocation will be based on information gathered from Les Fife. Mr. Fife reports that his database will be complete for the Sacramento and San Joaquin Valleys by Spring of 2001 (Fife, 2000). Since his data will not cover the entire CRPAQS domain, the Team will ascertain whether there is a need to adjust the temporal profiles for any crop type to be more representative of the domain. This will be done with telephone contacts to county agricultural extension offices outside of the Sacramento and San Joaquin Valleys.

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4.0 Agricultural Burning

A similar method to that used above for wildfires/prescribed burns was used to estimate emissions for agricultural burning. We used the NH₃ to CO molar ratio for “overall grasslands and sage” as a surrogate for agricultural burning emissions (EPA, 2002). This led to a mass ratio of 0.0158 (NH₃:CO). The monthly allocation submitted by the air quality districts into CEIDARS was retained in the CRPAQS inventory. Where no monthly data were provided, a uniform distribution was assumed. A daily TAF was assigned based on an assumption that activity only occurs during daylight hours. Weekly, the activity is assumed to occur 7 days per week.