

MIGRANT AND SEASONAL FARMWORKER
ENUMERATION PROFILES STUDY

TEXAS

FINAL

prepared for the

**Migrant Health Program
Bureau of Primary Health Care
Health Resources and Services Administration**

by

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PREFACE

The mission of the Bureau of Primary Health Care (BPHC), Health Resources and Services Administration, Department of Health and Human Services is to increase access to comprehensive primary and preventive health care and to improve the health status of under served and vulnerable populations. To achieve this mission the Migrant Health Program (MHP), BPHC provides support to organizations which offer technical assistance to or directly deliver primary health care services to migrant and seasonal farmworkers (MSFWs). In order to better plan, develop and evaluate health care service delivery and utilization, information is needed on the numbers and distribution of farmworkers at the national, state, and county levels. Moreover, the legislation which authorizes the Migrant Health Program, Section 330g of the Public Health Service Act, requires that priorities for assistance be assigned to areas where the greatest need exists. Therefore, the MHP periodically seeks to obtain updated information about MSFWs; where they are working and living and what crops are being harvested, in order to more appropriately target limited resources to areas of greatest MSFW need.

These MHP enumeration reports are some of the few sources offering MSFW estimates at the county level. The last time such data was published by the MHP was in March 1990 with "An ATLAS of State Profiles Which Estimate Number of Migrant and Seasonal Farmworkers and Members of Their Families." This time with the Office of Pesticide Programs, U.S. Environmental Protection Agency as a funding partner, the MHP awarded a grant to the National Center for Farmworker Health, Inc. (NCFH). The NCFH consequently contracted with Alice C. Larson, Ph.D. of Larson Assistance Services to research and develop state estimates.

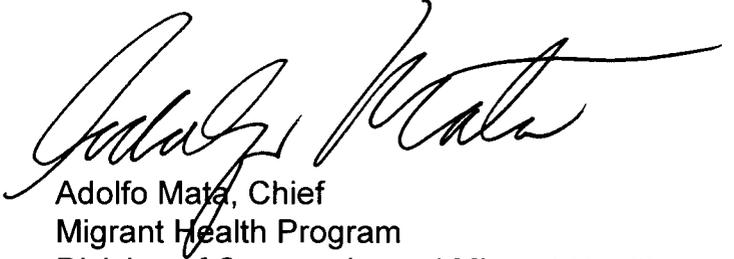
In the previous publication "ATLAS of State Profiles" the counting of MSFWs was done on a state-by-state basis which depended on the available data resources within each state, then a consultant was used to validate each state's submission. For this publication, Dr. Larson, assisted by a team of consultants, used a systematic approach to estimate the number of farmworkers included under the MHP definition. Please note that in this document farmworker dependents and family members within their households are labeled "non-farmworkers" although they are clearly included in the MHP definition. This research included the determination of the number of workers needed for specific seasonal hand labor tasks, and the examination of state employment records, local sources of information and large-scale databases (i.e., the National Agricultural Workers Survey of the U.S. Department of Labor, the National Farmworker Database of the Association of Farmworker Opportunity Programs, the Uniform Data System of the Bureau of Primary Health Care and

the Census of Agriculture of the Bureau of the Census and U.S. Department of Agriculture). A major part of this effort involved the review of draft estimates by local and national knowledgeable individuals.

In this document, the MHP presents currently updated MSFW information beginning with ten states: Arkansas, California, Florida, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, Texas and Washington. The MHP hopes to continue these collaborative efforts with other federal agencies and organizations in order to update the remaining states impacted and benefiting by the labor of our Nation's farmworkers.

Readers may wish to address questions or comments concerning these state estimates directly to Alice C. Larson, Ph.D., P.O. Box 801, Vashon Island, WA 98070 or via e-mail to las@wolfenet.com. It is our hope and expectation that all federal, state, local public and private entities providing services to MSFWs will use this state and county specific enumeration data to plan, develop and implement improved services to our Nation's farmworkers.

The Migrant Health Program, BPHC gratefully acknowledges the efforts of the many groups across the nation who have made this publication possible. Our thanks not only to those who directly reviewed and commented on the estimates, but to those who participated and assisted along the way.



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The research team is extremely grateful to the many people in Texas who offered information, data and suggestions that helped make this study possible. In addition, those who took the time to review draft documents offered a major contribution to improving the end result.

Estimating migrant and seasonal farmworkers and their non-farmworker household members is an extremely challenging task. This research has attempted to examine existing data and develop a reasonable approach to the estimation process. The user should carefully consider the description of study parameters to understand what is included or excluded from the final figures and the limitations of the research.

It is hoped this document will be found to be helpful in meeting the need for descriptive information on the migrant and seasonal farmworker population.

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DOCUMENT DESCRIPTION

A. BACKGROUND

The Migrant Health Program of the Bureau of Primary Health Care, Health Resources and Services Administration, U.S. Department of Health and Human Services has periodically undertaken an estimation of the population targeted for services by federally funded Migrant Health Centers. The results have helped better plan service utilization including determining if resources are appropriate to the need and identification of unserved areas. Four such studies have previously been undertaken; the last was published in 1990, *The Migrant Health Atlas*.

The Migrant Health Program is updating this information beginning with ten states: Arkansas, California, Florida, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, Texas and Washington. Final reports, titled “Migrant and Seasonal Farmworker Enumeration Profiles Study” (MSFW EPS) were prepared for each target state.

The National Center for Farmworker Health was engaged by the Migrant Health Program to act as its agent in securing, monitoring and finalizing an end product. In July 1998, agreement was reached with Larson Assistance Services to research and develop state estimates. Alice C. Larson, Ph.D., with the assistance of a team of consultants, is responsible for this document containing MSFW estimates for Texas.

B. STUDY PURPOSE

The MSFW EPS offers state-based information at the county level for the following three population sub-groups:

- Migrant farmworkers and seasonal farmworkers.
- Non-farmworkers present in the same household as migrant farmworkers and seasonal farmworkers (defined by the term “accompanied”).
- Number of people (“children and youth”) under age 20 in six age groups.

C. DEFINITION

The MSFW definition used for this study is that of the Migrant Health Program. It

describes a seasonal farmworker as:

“An individual whose principal employment [51% of time] is in agriculture on a seasonal basis, who has been so employed within the last twenty-four months.”

A migrant farmworker meets the same definition but “establishes for the purposes of such employment a temporary abode.” (*U.S. Code*, Public Health Services Act, “Migrant Health”)

Included in the scope of study are individuals engaged in field and orchard agriculture; packing and sorting procedures in food processing; horticultural specialties (including nursery operations, greenhouse activities and crops grown under cover); and reforestation. Excluded from study are those working with livestock, poultry, and fisheries.

D. LIMITATIONS

This study is limited in scope in that only secondary source material, including existing database information, and knowledgeable individuals, have been utilized to generate information. This has meant taking reports and databases prepared for other purposes and adjusting them, as possible, for the MSFW EPS. Limited resources and time have prohibited primary research directly with farmworkers.

In addition, by employing only secondary source information, the definition of who is included as a migrant or seasonal farmworker is often tied to the parameters used by the generating source. Wherever possible, screens were used to exclude those not covered by the Migrant Health Program definition.

E. GENERAL PROCESS

1. Basic Investigation Techniques

The research conducted within each state had four major phases:

- (1) Basic data gathering and preparation of First Draft Estimate.
- (2) Review by local knowledgeable individuals and revision of First Draft Estimate.
- (3) Completion of Second Draft Estimate and additional review by a wider audience of knowledgeable individuals.
- (4) Revision as necessary and issuance of Final Estimate.

2. National Databases

Prior to completion of any state profile, two national databases were analyzed specifically for this study. They represent the two largest continuous direct surveys of MSFWs in the country as of 1999.

The National Farmworker Database (NFD) of the Association of Farmworker Opportunity Programs contains information on clients eligible for services at job training programs targeted to MSFWs (Workforce Investment Act – WIA 167 Programs; formerly JTPA 402 Programs). This database, tied to programs throughout the country, contains 65,000 individuals and includes basic demographic, family characteristic and work history information. Figures from 1994 through August 1998 were used for this study and provided national and some state data.

The National Agricultural Workers Survey (NAWS) of the U.S. Department of Labor (coordinated by Aguirre International) is a survey conducted three times annually gathering similar information through random selection of targeted counties, employers and subjects. Demographic, family and work history information is similar to the NFD. Data for a five-year period (1993-97) were used in the MSFW EPS, which included over 11,000 respondents offering national and regional information.

A third national database used to develop factor information was Migrant Health Program statistics prepared annually by each federally funded migrant health center. These gave the number of migrant farmworker and seasonal farmworker patients served. Data for 1996 and 1997, where available, were averaged.

3. State Specific Steps

Work on each target state began with a mass mailing to identified service organizations assisting MSFWs, government agencies involved with agriculture, farm employer and crop commodity groups, special interagency MSFW committees and others. These included: migrant health centers, primary care associations, migrant education programs, migrant head start programs, legal services, job training programs, housing assistance centers, grower associations, extension service and agricultural economics departments of state land grant universities and other agents. State government agencies involved with agriculture, education, employment, forestry, health, labor and welfare were contacted.

Each was sent an introductory letter and questionnaire listing study factors for which information was sought. Those contacted were asked to provide anything they might have directly or list other resource documents or personnel.

Follow-up contacts were made with numerous individuals and internet sites from a variety of programs and agencies (a range of 14-54 for each of the ten target states) looking for state-specific information such as client-related demographics, enrollment data, crop production figures and acreage statistics. Although many different individuals, agencies, organizations and businesses were contacted, the list was in no way exhaustive of all of those involved with agriculture and MSFWs in each state. It is expected most of the key knowledgeable individuals were reached, many of whom were identified by questionnaire respondents.

Once all state specific information was received, factor information was extracted. Sources were compared and analyzed to account for any differences. Results were contrasted against national database information and conclusions drawn regarding the best factor, data range or average to use. Draft estimates and maps were then prepared for review.

4. Review of Draft Estimates

The Draft One document was sent out for review to knowledgeable individuals in the state who had provided information for preparation of the estimates, assisted in some other manner, or expressed an interest in receiving a copy.

Reviewers were asked to comment on methodological steps, resources utilized and factors employed. If they found something they felt was incorrect, they were requested to offer suggestions for improvement in the form of specific information which could be incorporated into the estimates. Where clarification was needed after receipt of comments, direct conversation or exchange of correspondence were utilized to assure a complete understanding of the issues raised or obtain additional information. Often additional research was necessary to determine the appropriate direction to correct the estimates.

After consideration of all issues raised from a variety of sources, revisions were made as necessary. Draft Two estimates, tables, maps and supporting documents were then prepared and shared with Draft One reviewers as well as other local and national sources. Comments were again incorporated into the Final Report. In all, eight people helped review and refine the Texas estimates and document.

5. Special Texas Considerations

MSFWs in Texas are difficult to estimate as it is a major sending state for migrants throughout the country. Many of these individuals are also employed in Texas at agricultural jobs available in the winter during the “off season” for work in other areas. However, a very large number of individuals are not employed in

agriculture in Texas but still meet the Migrant Health Program definition as they work as migrants in other states. Such workers are defined as “resident migrants” in the MSFW EPS, and county totals were increased in the migrant estimates to account for their presence in the state.

F. ENUMERATION METHODOLOGY

The four separate industry classifications within the study MSFW definition; field agriculture, nursery/greenhouse -- crops grown under cover, food processing and reforestation; were each addressed differently. An adjustment was made to final worker estimates to account for duplicate counts within and across counties. Finally, population sub-groups and children’s and youth’s ages were calculated.

1. Field Agriculture

The field agriculture estimate used a “demand for labor” (DFL) process that examines the number of workers needed to perform temporary agricultural tasks, primarily harvesting. The results estimate full-time equivalent (FTE) workers required for the task during the period of peak labor demand. Calculations, prepared for each county, are derived through a formula using four elements:

$$DFL = \frac{A \times H}{W \times S}$$

Where:

A = crop acreage.

H = hours needed to perform a specific task (e.g., harvest) on one acre of the crop.

W = work hours per farmworker per day during maximum activity.

S = season length for peak work activity.

2. Nursery/Greenhouse and Crops Grown Under Cover

Nursery/greenhouse workers and those involved in crops grown under cover were more difficult to estimate than workers in field agriculture as many different categories fall within these classifications. This includes: bedding plants, cut flowers, florist greens, floriculture, flower seed crops, foliage plants, greenhouse

vegetables, mushroom production, potted flowering plants, sod and vegetable seed crops. Some products are grown in covered structures while others are raised in open acreage. Tasks differ with product type and production needs.

For these industry categories, the best resource was found to be direct employment reports. Statewide monthly figures were used to subtract the lowest employment month from the highest month to obtain a rough estimate of “temporary” laborers. Results for a three-year period were averaged to avoid any aberration attributable to a single year.

Across Texas, not all nursery/greenhouse operations are working at peak capacity simultaneously. This may mean that one county employs a larger number of workers at a different time of year than another. When these counties are combined in a statewide total, their different employment peaks and valleys overlap giving a false estimate of temporary workers. A county comparative study was found to provide a factor for this variation.

The last step involved calculating the county proportion of the state acreage and enclosed space total for nursery/greenhouse operations and crops grown under cover and multiplying by the adjusted statewide employment estimate to determine each county’s temporary worker share.

3. Food Processing

Those employed temporarily in the food processing industry are also very difficult to estimate. Examination was made of many sources to assess both the extent of employment and distribution by county.

Three Standard Industrial Classification (SIC) codes were identified as most likely to meet the Migrant Health Program definition used in this study. Information specific to relevant companies in each county was pulled from a national directory of food processors. This provided estimates of total number of employees.

The same source used to estimate nursery/greenhouse workers provided the average highest and lowest monthly employment figures for food processing employees. This information was only available statewide. Calculations were made to determine the percent of temporary to permanent workers. This percentage was applied to each county in the respective state to estimate the number of temporary food processing workers.

4. Reforestation

Reforestation activity is different from work in the other industry classifications as

stands of trees are left to grow from five to forty-five years or longer. This means only a proportion of timberland in a state is engaged by tree planters each year. As the exact location of this labor differs annually, a worker estimate can only be provided on a statewide basis.

A DFL approach was taken to estimate tree planters using statewide data. Research found two different sets of factors for the DFL elements. Accordingly, two estimates were prepared resulting in a range. The final worker figure became the midpoint of this estimation range.

5. Adjustment for Duplication

An adjustment was made to account for those employed in more than one job covered by the MSFW definition. This involved dividing all worker estimates by a factor for average jobs per MSFW. These adjusted county estimates could then be more appropriately added to develop a state total.

6. Sub-Group Estimates

Sub-groups estimated for the study included migrant farmworkers, seasonal farmworkers, non-farmworker family members accompanying farmworkers and children and youth in specified age groups. Migrant farmworkers encompassed individuals who migrated only within the state (intrastate migrants), and those who traveled out-of-state for farm work (interstate migrants).

Both “non-farmworkers” and “children and youth” were estimated. The first group included anyone of any age in the household who was not employed in farm work. The latter group covered anyone in the household from ages less than one through nineteen. Although the category “children and youth” involves those of a young age who would be considered non-farmworkers, it also includes older individuals who may be farmworkers.

Sub-group calculations were made, at a county level, as follows:

- Apply percent identified as migrant workers and percent identified as seasonal workers to adjusted MSFW estimates.
- Determine the percent of each sub-group, migrant workers and seasonal workers, accompanied. This is as opposed to workers who represent single person households; for example, 14 unrelated men living in one household would represent 14 single person households.
- Divide the group of accompanied workers by the average number of farmworkers per household to determine the number of accompanied households.

- Multiply the number of accompanied households by the average number of other members per household to derive the number of “non-farmworkers.”

The following age groupings were determined to be the most useful descriptors for the population considered “children and youth,” given the needs of funding sources and health care programs: under 1 year, 1-4, 5-12, 13-14, 15-18, and 19. Factors were found for the number of individuals in each accompanied household who were less than 20 years old. These were multiplied by the estimate of accompanied migrant and seasonal households to find total number of migrant and seasonal children and youth. A variety of sources were then examined to derive percent of the population in each age group.

7. Adjustments to the Base Migrant Estimates

An additional adjustment was made to the migrant worker estimate to account for workers who live but do not perform farm work in Texas (“resident migrants”). The first screening applied this increase uniformly in every county; however, in reality, not every county has resident migrants. To verify locations where such an increase would be justified, a comparison was made between MSFW EPS first screening migrant estimates and actual enrollment in a particular county’s Migrant Education Program. This comparison resulted in both decreases and increases to the final migrant worker county estimates.

G. RESOURCES UTILIZED FOR TEXAS ESTIMATES

Factor information was gathered from the primary sources listed below. In addition and where available, local information was utilized as a check or as a replacement for broader national or regional data.

1. Field Agriculture

Crops Requiring Temporary Hand Laborers: NFD and NAWS direct survey data on respondent work history were examined on a state basis (NFD) and at the regional level (NAWS) to determine the crops and tasks worked. This information was then discussed with local knowledgeable experts including individuals from Texas A&M, the Texas Agricultural Statistics Service and the Texas Department of Agriculture.

Acreage: 1997 Census of Agriculture (COA) acreage for identified hand labor crops by county were used. This included cut Christmas trees. After discussion with agricultural experts and others, it was determined crops of fewer than ten

acres are less likely to employ hired workers and more likely to use family members. Accordingly, any crop in a county with such small acreage was dropped.

Hours for Task: “Crop budgets” and other special reports prepared by agricultural economists and extension specialists as a guide to crop production were utilized to determine hours needed to perform major hand labor tasks on each crop. For Texas, this included 1998 *Texas Crop Enterprise Budgets* prepared by Texas A&M.

In addition, the *Migrant Enumeration Project, 1993* (Larson and Plascencia) had updated earlier 1970s-80s estimates. These were supplemented through a search of other budgets specific to the study target states.

Where state specific information was available and determined to be reasonably accurate for a given crop, it was used. Otherwise an average of other sources was applied. The results vary per crop.

Work Hours: The NAWS was found to be the only national source for hours per week and days per week worked by MSFWs. The latest five-year averages showed 38.6 hours/week during a five-day work week. The resulting 7.7 hours/day factor was used in the calculation.

Season Length: Peak hand labor season dates specific to field crops in Texas were obtained from “Usual Planting and Harvesting Dates” (National Agricultural Statistics Service, USDA web site). Season lengths for other crops were taken from the *Migrant Enumeration Project* with updates from state specific publications of the U.S. Department of Agriculture. Calendar days were converted to work days by dividing the total number by seven to determine number of weeks and then multiplying by five for number of average MSFW work days per week (as noted in NAWS data).

2. Nursery/Greenhouse and Crops Grown Under Cover

The “Employment and Wages Monthly Employment,” *ES 202* report (U.S. Department of Labor, Bureau of Labor Statistics) provided monthly employment totals for SIC 0181: nursery/greenhouse – ornamental floriculture and nursery products; and SIC 0182: food crops grown under cover including mushrooms. The estimate used the difference between highest and lowest monthly employment figures averaged for the three year period, 1995-1997. The result yielded a statewide figure.

A 1992 study conducted by Texas Rural Legal Assistance compared the *ES 202* statewide high/low temporary worker estimate to a similar figure created by adding individual county high/low temporary worker calculations. The result

found 89.1% more temporary workers when counties were looked at individually as opposed to the statewide method utilized in MSFW EPS research. Post-1992 county-level information was not available with which to make a similar comparison for 1995-1997; however, when examined statewide it was found the 1992 and 1995-1997 average calculated temporary worker estimates were very similar. Given this, the factor found in the Texas Rural Legal Assistance study (89.1%) was used to increase the statewide nursery/greenhouse estimate of temporary workers for the MSFW EPS.

County data from the 1997 COA for nursery and greenhouse acres in the open and square feet under glass were used to proportion the state nursery/greenhouse worker estimate into counties. COA figures for mushroom and greenhouse vegetable acreage and square feet under glass were similarly used to proportion the statewide estimate for crops grown under cover.

3. Food Processing

Two separate methods were used for estimating food processing workers within the three SICs.

ES 202 reports for SIC 2033 (canned fruits and vegetables) and SIC 2037 (frozen fruits, fruit juices and vegetables) were utilized in a technique similar to the estimate for nursery/greenhouse workers but to derive the percent difference between high and low monthly employment. This was taken to represent percent of total employed that could be considered temporary workers within these two SIC industry classifications.

Information from the *Directory of Canning, Freezing, Preserving Industries, 1998-99* (Edward E. Judge and Sons) determined companies engaged in activities within these two SICs and a range for total employment at each site. The mid-point of this range was used to represent exact number of employees. City locations were attributed to counties as cross-referenced in *Bullinger's 1997 Postal and Shippers Guide* (Alfer Leland). Total food processing employment per county was tabulated, and the percent calculated to be temporary workers within each county was applied.

For SIC 0723 (crop preparation for market), the ES 202 high/low employment reports were utilized to determine number of statewide temporary workers, similar to the nursery/greenhouse estimation process. This was then allocated to counties on the percentage share used for the other two food processing SICs.

4. Reforestation

For each of the two different estimates made for reforestation workers, the same

resource was used for two of the DFL factors:

Acreage information was obtained from *Tree Planting in the United States*, an annual publication of the United States Department of Agriculture, Forest Service. The years 1992-1996 created a five-year average.

Work Hours were generally agreed to be eight per day as reported by various forestry experts.

The DFL factors “hours for task” and “season length” differed for each estimate and came from the following two sources.

(1) *Number and Characteristics of Migrants in Mississippi* (Larson, 1992), presented tree planting DFL characteristics from field research discussion with knowledgeable experts. This source reported: 1½ acres of seedlings planted per 8 hour day or 5.33 hours/acre; 73 days peak season length, calculated at 13 weeks working an average 6 days/week minus 5 days during the season in which weather conditions would prohibit work.

(2) Conversation with Michael Economopoulos, South Eastern Forestry Contractors Association (1998), reported the following factor information: 3 acres planted per 8 hour day or 2.67 hours/acre; 40 days season length, calculated at 8 weeks for an average of 5 days/week.

5. Adjustment Factors

No data on jobs per county or jobs per state could be located. The only information found was from both NFD and NAWS for average jobs/worker for approximately a twelve-month period. For lack of better factor information, the resulting figures from these two sources, at a national level, were averaged to derive a factor of 1.665 jobs/worker.

6. Sub-Groups

Migrant/Seasonal: Three sources were averaged to provide the base migrant/seasonal farmworker split: NAWS regional percents, NFD Texas percents and adjusted figures from 15 federally funded health centers or service sites assisting MSFWs in Texas. The result was 45.7% migrant, 54.3% seasonal.

NAWS and NFD both supplied a calculated percent of all workers nationally who indicate Texas as a home-base but perform no farm work in Texas. By averaging these two sources, it was determined every migrant worker employed in agriculture in Texas represents 1.6122 migrant workers when

those who live but do not perform farm work in the state are included. The base migrant number figures were increased by this factor.

County Migrant Education Program enrollment figures for 1997-98 were compared to these adjusted county estimates (converted into migrant children) to determine differences. Migrant Education enrollment data were first reduced to account for children whose eligibility comes from their parents employment in industries not included in the Migrant Health Program definition; e.g., work with livestock, poultry and fisheries (Martin, 1998). Specific county migrant estimates increased or decreased in relation to the results. This process caused the migrant/seasonal split to vary per county.

Accompanied: An average of NAWS regional and NFD Texas sources were used for percent of migrant workers accompanied by relatives and seasonal workers residing in multiple person families. The results found 50.5% accompanied migrant worker and 68.0% accompanied seasonal worker.

Farmworkers Per Household: NAWS regional information was used for the number of farmworkers per accompanied household: 1.93 for migrants and 1.36 for seasonals.

Non-Farmworkers Per Household: An average of NAWS regional and NFD Texas specific factors were used to determine total household size. Farmworkers per household were subtracted to calculate non-farmworkers per household: 2.26 for migrants and 2.67 for seasonals.

7. Children and Youth by Age Groups

“Children and youth,” as defined in the MSFW EPS are those ages infant through 19. Whether or not these individuals perform farm work does not matter for purposes of this calculation, and therefore, the group “MSFW farmworkers” and the group “children and youth” are not mutually exclusive.

NAWS regional figures on children and youth per household were used for the number of those under 20 years of age (2.19 for migrants; 1.65 for seasonals). The result found 75,660 migrant and 53,931 seasonal children and youth.

These individuals were divided into the following age groups using percentages from regional NAWS information:

Migrants: under 1 = 4.2%, ages 1-4 = 22.0%, ages 5-12 = 41.3%, ages 13-14 = 9.4%, ages 15-18 = 21.4%, and age 19 = 1.7%.

Seasonals: under 1 = 5.3%, ages 1-4 = 18.2%, ages 5-12 = 38.4%, ages 13-14 = 14.9%, ages 15-18 = 19.5%, and age 19 = 3.7%.

TABLE ONE
TEXAS MSFW ENUMERATION PROFILES ESTIMATES
FINAL

FIELD AGRICULTURE, NURSERY/GREENHOUSE AND FOOD PROCESSING

County	Adjusted MSFW Farmworker Estimate	Migrant Farmworkers	Seasonal Farmworkers	Non-Farmworkers In Migrant Households	Non-Farmworkers In Seasonal Households	MSFW Farmworkers And Non-Farmworkers
Anderson	110	50	60	30	80	219
Andrews	314	166	148	98	197	610
Angelina	48	43	5	25	7	80
Archer	62	56	6	33	8	103
Armstrong	1	1	0	1	0	2
Atascosa	671	307	364	181	487	1,339
Austin	119	72	47	42	63	224
Bailey	1,306	763	543	451	726	2,483
Bandera	22	10	12	6	16	43
Bastrop	322	236	86	139	115	577
Baylor	91	44	47	26	62	180
Bee	114	88	26	52	35	201
Bell	214	147	67	87	89	390
Bexar	3,441	3,004	437	1,777	583	5,801
Blanco	59	45	14	27	19	104
Borden	261	119	141	70	189	520
Bosque	101	85	16	50	22	173
Bowie	117	81	36	48	48	213
Brazoria	665	542	123	321	164	1,150
Brazos	67	31	36	18	49	134
Brewster	56	56	0	33	0	90
Briscoe	448	205	243	121	325	894
Brooks	251	196	55	116	74	441
Brown	267	144	123	85	164	516
Burleson	245	112	133	66	177	488
Burnet	120	100	21	59	28	207
Caldwell	214	163	51	96	68	378
Calhoun	174	79	94	47	126	347
Callahan	47	24	23	14	31	92
Cameron	9,219	8,012	1,207	4,738	1,612	15,568
Camp	182	136	45	81	61	323
Carson	9	9	0	5	0	14
Cass	212	190	22	113	29	354
Castro	1,229	786	443	465	592	2,285
Cherokee	279	159	120	94	160	534
Childress	540	247	293	146	391	1,077
Clay	143	65	78	39	104	285
Cochran	1,502	693	808	410	1,079	2,991
Coke	12	6	6	3	8	23
Coleman	43	22	21	13	28	84
Collin	213	108	105	64	140	417
Collingsworth	949	462	487	273	650	1,871
Colorado	69	31	37	19	50	137

County	Adjusted MSFW Farmworker Estimate	Migrant Farmworkers	Seasonal Farmworkers	Non-Farmworkers In Migrant Households	Non-Farmworkers In Seasonal Households	MSFW Farmworkers And Non-Farmworkers
Comal	239	236	3	139	5	383
Comanche	1,708	791	917	468	1,224	3,400
Concho	209	96	114	57	152	417
Cooke	59	33	26	20	35	113
Coryell	103	65	39	38	52	193
Cottle	270	123	147	73	196	539
Crockett	1	1	0	1	0	2
Crosby	2,672	1,301	1,371	770	1,830	5,272
Culberson	83	41	42	24	56	163
Dallam	364	247	117	146	157	666
Dallas	1,403	1,214	188	718	251	2,372
Dawson	3,549	1,669	1,880	987	2,510	7,046
De Witt	1,722	1,691	30	1,000	41	2,762
Deaf Smith	465	213	253	126	337	929
Delta	216	202	13	120	18	353
Denton	137	65	72	39	95	271
Dickens	287	131	156	77	208	572
Dimmit	769	609	161	360	215	1,344
Donley	475	217	258	128	344	947
Duval	760	406	354	240	473	1,472
Eastland	653	334	319	198	426	1,276
Ector	348	340	8	201	11	560
Edwards	25	15	10	9	13	47
El Paso	2,378	1,087	1,291	643	1,724	4,745
Ellis	3,491	3,288	203	1,944	271	5,706
Erath	390	327	63	193	84	668
Falls	177	113	64	67	85	329
Fannin	433	198	235	117	314	863
Fayette	152	123	29	73	38	263
Fisher	717	328	389	194	520	1,430
Floyd	2,135	1,180	955	698	1,275	4,107
Foard	81	40	41	24	54	159
Fort Bend	666	304	362	180	483	1,329
Franklin	120	71	49	42	65	227
Freestone	75	34	41	20	55	150
Frio	3,299	1,508	1,791	892	2,392	6,582
Gaines	6,105	2,790	3,315	1,650	4,426	12,181
Galveston	43	19	23	11	31	85
Garza	472	216	256	128	342	941
Gillespie	352	172	180	102	240	694
Glasscock	942	430	511	255	683	1,879
Goliad	15	8	7	5	9	29
Gonzales	432	297	135	176	181	789
Gray	19	19	0	11	0	30
Grayson	177	87	90	52	120	349
Grimes	37	25	12	15	16	68
Guadalupe	516	444	72	263	96	874
Hale	3,641	2,008	1,634	1,187	2,181	7,009
Hall	1,069	588	481	348	642	2,059

County	Adjusted MSFW Farmworker Estimate	Migrant Farmworkers	Seasonal Farmworkers	Non-Farmworkers In Migrant Households	Non-Farmworkers In Seasonal Households	MSFW Farmworkers And Non-Farmworkers
Hamilton	127	88	39	52	52	232
Hansford	191	191	0	113	0	303
Hardeman	91	49	43	29	57	177
Hardin	78	35	42	21	56	155
Harris	1,888	1,696	192	1,003	256	3,147
Harrison	62	28	34	17	45	124
Hartley	76	38	38	23	51	149
Haskell	1,142	522	620	309	828	2,278
Hays	136	104	32	62	42	240
Henderson	171	78	93	46	124	340
Hidalgo	40,500	31,894	8,606	18,861	11,489	70,850
Hill	349	196	153	116	205	669
Hockley	2,839	1,511	1,327	894	1,772	5,504
Hood	120	55	65	33	87	240
Hopkins	344	304	41	180	54	578
Houston	459	210	249	124	332	915
Howard	1,125	515	610	305	814	2,243
Hudspeth	2,117	967	1,149	572	1,535	4,223
Hunt	233	107	127	63	169	465
Hutchinson	16	16	0	10	0	26
Irion	6	3	3	2	5	13
Jack	35	32	3	19	5	58
Jackson	249	114	135	67	181	497
Jasper	61	28	33	17	44	122
Jeff Davis	12	6	6	3	8	24
Jefferson	58	40	18	24	24	105
Jim Hogg	44	44	0	26	0	70
Jim Wells	1,141	768	373	454	498	2,094
Johnson	225	201	24	119	33	376
Jones	895	409	486	242	649	1,786
Karnes	55	50	5	30	7	92
Kaufman	43	27	16	16	22	80
Kendall	11	5	6	3	8	22
Kent	65	30	35	18	47	130
Kerr	13	6	7	4	10	27
Kimble	34	15	18	9	24	67
King	30	14	17	8	22	61
Kinney	52	49	3	29	5	86
Kleberg	793	419	374	248	500	1,541
Knox	319	166	153	98	204	620
La Salle	495	236	259	139	346	981
Lamar	954	685	269	405	359	1,719
Lamb	2,055	939	1,116	555	1,489	4,099
Lampasas	161	127	34	75	46	281
Lavaca	67	31	37	18	49	134
Lee	171	109	62	65	82	318
Leon	220	100	119	59	159	438
Liberty	35	16	19	10	26	71
Limestone	99	45	54	27	72	197

County	Adjusted MSFW Farmworker Estimate	Migrant Farmworkers	Seasonal Farmworkers	Non-Farmworkers In Migrant Households	Non-Farmworkers In Seasonal Households	MSFW Farmworkers And Non-Farmworkers
Lipscomb	124	124	0	73	0	198
Live Oak	28	24	4	14	6	48
Llano	19	12	7	7	9	36
Lubbock	3,580	1,727	1,853	1,021	2,474	7,075
Lynn	3,025	1,383	1,643	818	2,193	6,036
Madison	21	14	7	8	10	39
Marion	43	20	23	12	31	86
Martin	1,632	746	886	441	1,183	3,257
Mason	115	53	63	31	83	230
Matagorda	460	210	250	124	333	917
Maverick	2,859	2,733	126	1,616	169	4,644
McCulloch	135	103	33	61	44	239
McLennan	203	137	66	81	88	371
McMullen	4	4	0	2	0	6
Medina	1,067	488	580	288	774	2,130
Menard	46	21	25	12	33	92
Midland	897	721	175	426	234	1,557
Milam	355	176	179	104	239	698
Mills	163	87	76	52	101	316
Mitchell	646	295	351	175	468	1,289
Montague	405	185	220	109	293	808
Montgomery	54	26	28	16	37	107
Moore	1,673	1,673	0	989	0	2,662
Morris	50	50	1	29	1	80
Motley	459	210	249	124	333	916
Nacogdoches	148	121	27	71	36	255
Navarro	467	287	180	169	240	876
Nolan	544	273	271	161	362	1,068
Nueces	4,282	3,696	586	2,185	782	7,249
Ochiltree	105	105	0	62	0	167
Oldham	14	14	0	8	0	22
Orange	28	28	0	16	0	44
Palo Pinto	91	51	40	30	53	174
Panola	30	14	16	8	22	60
Parker	275	126	150	74	200	549
Parmer	1,473	903	570	534	761	2,768
Pecos	439	316	123	187	164	789
Potter	1,442	1,442	0	852	0	2,294
Presidio	923	610	313	361	417	1,701
Rains	187	85	102	51	136	373
Randall	24	24	0	14	0	38
Reagan	477	257	220	152	293	922
Real	13	7	6	4	8	25
Red River	159	127	32	75	43	278
Reeves	842	441	401	261	535	1,637
Refugio	226	103	122	61	164	450
Roberts	44	44	0	26	0	69
Robertson	202	119	83	71	111	384
Rockwall	1	1	0	0	0	1

County	Adjusted MSFW Farmworker Estimate	Migrant Farmworkers	Seasonal Farmworkers	Non-Farmworkers In Migrant Households	Non-Farmworkers In Seasonal Households	MSFW Farmworkers And Non-Farmworkers
Runnels	519	238	281	141	375	1,036
Rusk	507	232	275	137	368	1,012
San Augustine	93	43	51	25	68	186
San Jacinto	9	4	5	2	6	17
San Patricio	2,042	1,566	476	926	635	3,604
San Saba	218	100	118	59	158	435
Schleicher	72	33	39	19	52	143
Scurry	649	296	352	175	470	1,294
Shackelford	26	12	14	7	19	52
Shelby	574	323	251	191	336	1,101
Sherman	159	159	0	94	0	252
Smith	382	175	208	103	277	763
Somervell	27	12	15	7	20	54
Starr	5,045	4,467	578	2,641	772	8,458
Stephens	11	11	0	7	0	18
Sterling	7	7	0	4	0	11
Stonewall	91	41	49	25	66	181
Sutton	6	6	0	4	0	10
Swisher	850	498	352	295	469	1,614
Tarrant	292	184	107	109	144	544
Taylor	240	127	112	75	150	465
Terry	3,620	1,684	1,936	996	2,585	7,200
Throckmorton	77	35	42	21	55	153
Titus	734	734	0	434	0	1,168
Tom Green	989	535	454	317	606	1,911
Travis	506	454	52	268	69	844
Trinity	10	4	5	3	7	19
Tyler	31	19	13	11	17	60
Upshur	39	18	21	11	28	78
Upton	165	83	82	49	110	324
Uvalde	3,181	1,880	1,301	1,112	1,737	6,030
Val Verde	2,221	2,221	0	1,314	0	3,535
Van Zandt	477	218	259	129	346	952
Victoria	125	63	62	37	83	245
Walker	119	119	0	71	0	190
Waller	122	56	66	33	89	244
Ward	29	22	8	13	10	52
Washington	36	17	20	10	26	73
Webb	944	939	5	555	7	1,507
Wharton	1,020	519	501	307	668	1,995
Wheeler	93	45	48	27	64	184
Wichita	104	47	56	28	75	207
Wilbarger	598	327	271	193	362	1,153
Willacy	2,190	1,420	770	840	1,028	4,058
Williamson	766	550	216	325	288	1,379
Wilson	486	222	264	131	352	970
Winkler	166	166	0	98	0	264
Wise	297	179	118	106	158	560
Wood	299	137	162	81	217	596

County	Adjusted MSFW Farmworker Estimate	Migrant Farmworkers	Seasonal Farmworkers	Non-Farmworkers In Migrant Households	Non-Farmworkers In Seasonal Households	MSFW Farmworkers And Non-Farmworkers
Yoakum	2,357	1,112	1,244	658	1,661	4,676
Young	103	69	35	41	46	190
Zapata	122	122	0	72	0	194
Zavala	2,925	1,721	1,204	1,018	1,607	5,550
Total State	196,704	131,638	65,066	77,844	86,863	361,411
Reforestation						
Total State	689	396	292	234	390	1,313
Grand State Total	197,393	132,034	65,358	78,078	87,253	362,724

NOTES:

County numbers have been rounded and, therefore, may not exactly add to totals.

The following counties have no MSFWs: Aransas, Chambers, Crane, Gregg, Hemphill, Kenedy, Loving, Newton, Polk, Sabine and Terrell.

CHILDREN AND YOUTH BY AGE GROUPS (STATEWIDE)

Age Groups	Migrant Percent	Number of Migrant Children And Youth	Seasonal Percent	Number of Seasonal Children And Youth
< 1	4.2%	3,178	5.3%	2,858
1-4	22.0%	16,645	18.2%	9,815
5-12	41.3%	31,248	38.4%	20,710
13-14	9.4%	7,112	14.9%	8,036
15-18	21.4%	16,191	19.5%	10,517
19	1.7%	1,286	3.7%	1,995
Total	100.0%	75,660	100.0%	53,931

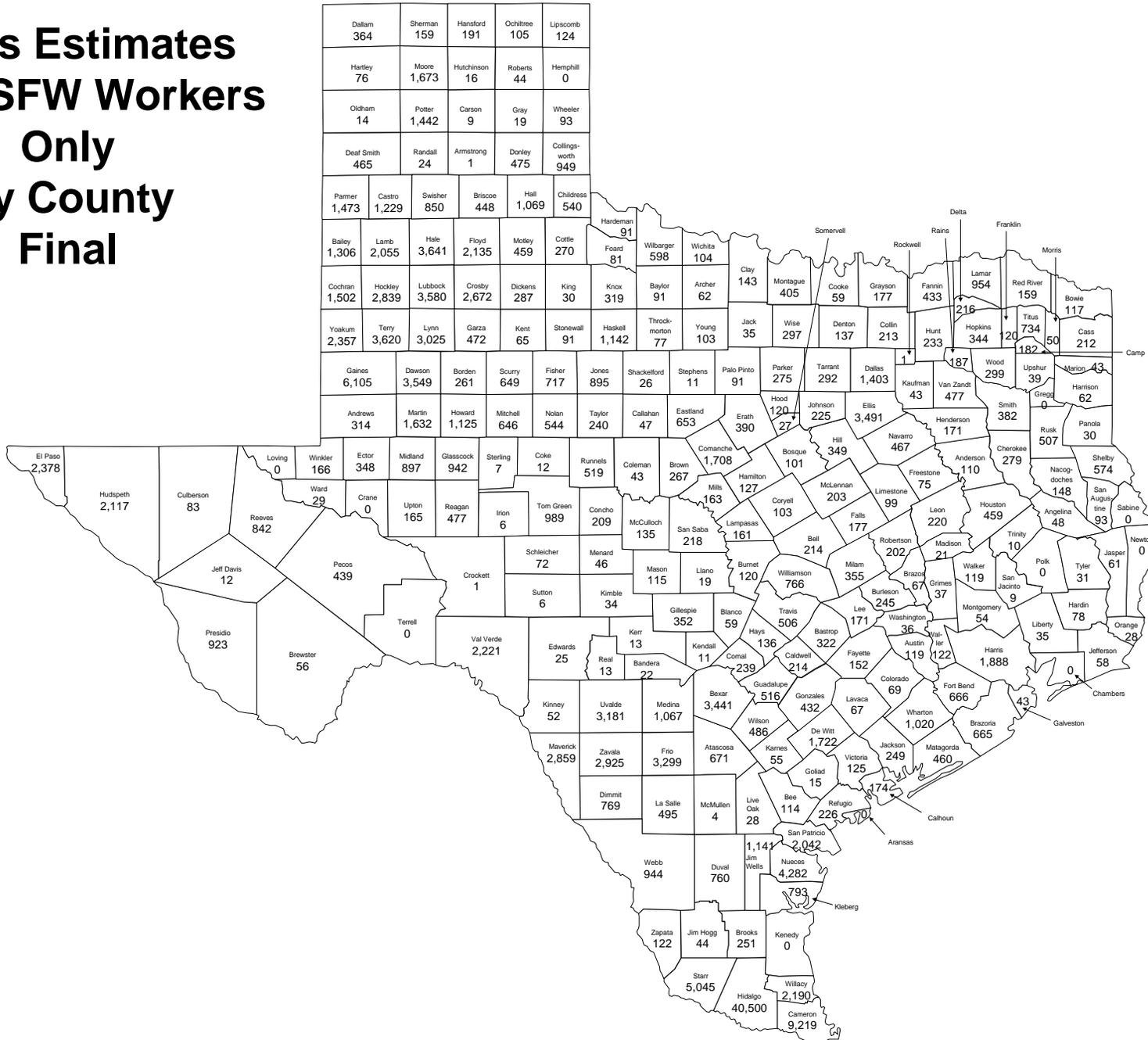
NOTE: "Children and Youth" are defined as those under 20 years of age. Some may be farmworkers

TABLE TWO
TEXAS DEMAND FOR LABOR FACTORS
FINAL

Crop	Hours For Task	Daily Work Hours	Peak Season Length (Work Days)
Apples	91	7.7	27.45
Avocados	69.5	7.7	87.50
Beets	8.425	7.7	20.00
Berries	172	7.7	23.25
Blackberries	60	7.7	15.00
Blueberries	181.5	7.7	28.09
Broccoli	161.54	7.7	26.43
Cantaloupes	96.92	7.7	17.14
Carrots	59.08	7.7	21.79
Christmas Trees	31.7	7.7	21.43
Collards	94.81	7.7	26.43
Corn for seed	71.6 acres per worker		
Cotton	2.945	7.7	21.43
Cucumbers	118.41	7.7	21.91
Dry Cowpeas	9	7.7	19.91
Dry Beans	15	7.7	23.19
Dry Onions	160	7.7	24.52
Eggplant	151.2	7.7	58.21
Grapefruit	49	7.7	42.14
Grapes	48.75	7.7	15.73
Green Onions	293.3	7.7	17.14
Green Peas	28	7.7	19.91
Guar	4.53	7.7	23.57
Head Cabbage	118.46	7.7	34.29
Herbs	293	7.7	33.57
Hot Peppers	159.8	7.7	14.29
Kale	180	7.7	33.57
Lemons	30	7.7	112.57
Mustard Greens	178	7.7	26.43
Okra	156.6	7.7	21.43
Oranges	26.67	7.7	30.00
Parsley	293	7.7	33.57
Peaches	81.65	7.7	37.04
Peanuts	8.05	7.7	25.71
Pears	85	7.7	44.29
Pecans	15	7.7	43.57
Persimmons	90	7.7	30.00
Plums and Prunes	34	7.7	19.80
Potatoes	21.96	7.7	45.00
Pumpkins	27.33	7.7	12.86
Snap Beans	37.92	7.7	22.14
Southern Peas	6	7.7	19.91
Spinach	218	7.7	17.62
Squash	69.54	7.7	61.43

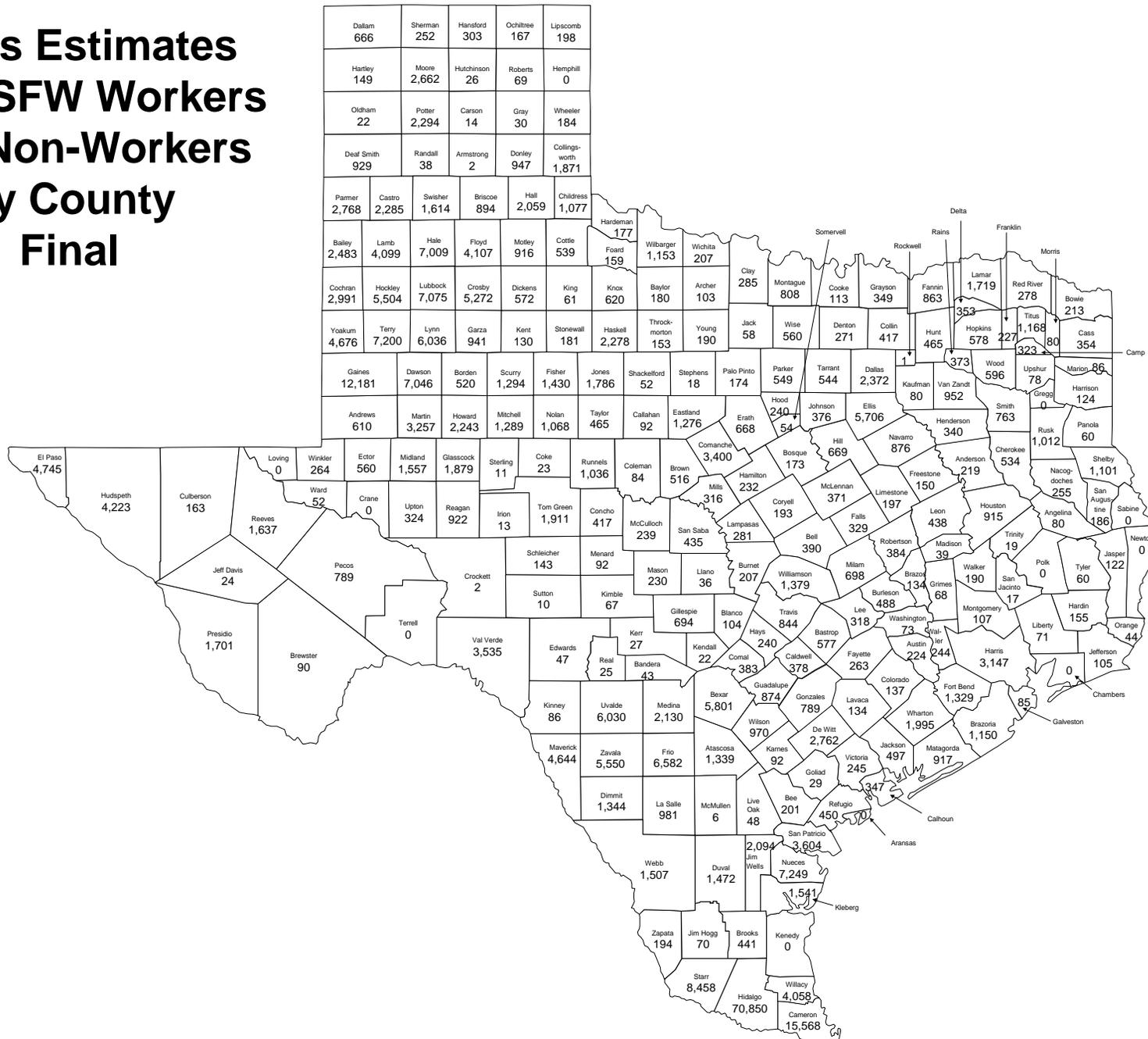
Crop	Hours For Task	Daily Work Hours	Peak Season Length (Work Days)
Strawberries	355.1	7.7	26.66
Sugar Beets	18.5	7.7	22.14
Sugarcane	15.5	7.7	37.86
Sweet Corn	35.95	7.7	32.50
Sweet Peppers	141	7.7	22.14
Sweetpotatoes	52.56	7.7	43.57
Tangerines	35	7.7	43.50
Tomatoes	280	7.7	46.43
Turnip Greens	119.5	7.7	26.43
Turnips	26	7.7	21.43
Watermelon	67.31	7.7	16.43

Texas Estimates For MSFW Workers Only By County Final



Reforestation Statewide: 689
Grand Total -- MSFWs in Texas: 197,393

Texas Estimates For MSFW Workers And Non-Workers By County Final



Reforestation -- Workers and Non-Workers Statewide: 1,313
 Grand Total -- MSFW Workers and Non-Workers in Texas: 362,724

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