

**Common Sense and Science:
New Directions in the
Regulation of
Temporary
Worker Housing**

December 1996



Common Sense and Science:

New Directions in the

Regulation of

Temporary

Worker Housing

December 1996



For more information or
additional copies of this report contact:

Facilities and Services Licensing
2725 Harrison Avenue NW, Suite 500
P.O. Box 47852
Olympia, Washington 98504-7852

(360)705-6618
FAX 705-6654

Bruce Miyahara
Secretary of Health

Executive Summary

What kind of program is the regulation of temporary worker housing? Is it a housing program? An occupational safety and health program? Or is it a public health program?

Farmworker advocates tend to view the regulation of temporary worker housing as the implementation of a social policy formulated to provide decent, affordable housing to those in need. In this view, the temporary worker housing standards require no more than the bare minimum level of decency, and strong enforcement is the way to achieve compliance. But the provision of housing is a voluntary act by the regulated community, and if the cost of compliance is too high, then the level of participation is likely to be too low. And duplicating the permanent housing of temporary workers as they move from job to job is an extremely expensive and inefficient means of reaching the policy goal.

Federal and state enforcement of the temporary worker housing regulations is the responsibility of occupational safety and health agencies. With their authority restricted to the employer-employee relationship, these agencies normally regulate the workplace, not the living environment. And in the context of all the occupational safety and health issues, the enforcement of temporary worker housing regulations has historically rated a relatively low priority.

The Department of Health, with its public health mission, views the regulation of temporary worker housing as a public health program. The Department's concerns extend to all the housing residents, regardless of the employment relationship, and to the community at large. Potable water and sanitation are the foundation of public health, and the absence of these protections in labor camps represents a serious public health problem. The Department is convinced that the temporary worker housing standards must strike a balance between the cost of the housing and the public health protection afforded by that housing.

Progress Report

- The pilot project allowing for the use of tents as shelter during the cherry harvest has increased the number of on-farm beds available to migrant farmworkers by 1,900.
- The economic incentives passed in the 1996 legislative session are helping growers to improve the condition of their on-farm housing.

- The Department of Health's epidemiological review of the farmworker housing standards provides the analytical basis for redefining the standards in the future.
- A new building code for temporary worker housing may make the development of on-farm housing less expensive.

Recommendations

- The state should maintain the status quo with regard to the administration of the temporary worker housing program, leaving the primary responsibility with the Department of Health, while continuing to allow local governments to operate their own programs at their discretion. The Departments of Health and Labor and Industries should prepare assessments of three other options: 1) placing sole responsibility with the Department of Health; 2) placing sole responsibility with the Department of Labor and Industries; and 3) giving the program to the federal authorities. The Departments of Health and Labor and Industries should develop proposals, as appropriate, for the legislature's consideration.
- Assuming that the legislature adopts the temporary worker housing building code proposed by the State Building Code Council, the legislature should place the code in the Department of Health, exempt the code from the state building code, authorize the Department to issue building permits for temporary worker housing, add provisions for enforcement, and provide the Department with the resources necessary to administer the program.
- The legislature should provide adequate resources (funding and positions) for technical assistance, outreach, compliance and enforcement activities, and the administration of temporary worker housing. The legislature should authorize the Department of Health to set licensing fees. To the extent that the legislature wants to minimize fees charged to growers, it should provide the Department the resources necessary to conduct the licensing program.
- The legislature should pass legislation that results in the development of one set of new rules that provide essential public health protections, that incorporate the findings of the pilot project and the epidemiological review, and that are as effective as the OSHA rules. This action should await a decision about the administration of the temporary worker housing program so that the legislature knows who should develop the new rules--the Board of Health, the Department of Health, Labor and Industries, or some combination. The legislature should also provide the agencies with the resources necessary to develop the rules.

Poverty and Prejudice

Agricultural production all across America depends upon the availability of a large work force of migrant laborers. This work force is available because migrant farm work is the best opportunity that thousands of individuals have to support themselves and their families. This means that the alternatives available to them are *worse* than the hardships they endure as migrant farmworkers. The President's Commission on Migratory Labor describes the situation this way: "We depend on misfortune to build up our force of migratory workers, and when the supply is low because there is not enough misfortune at home, we rely on misfortune abroad to replenish the supply." The president who appointed this commission was President Truman, and the report was written in 1951.

Nine presidents and 45 years later not much has changed. A 1990 U.S. Department of Labor survey found that about half of the nation's migrant farmworkers had incomes below the poverty level, and according to the Washington State Employment Security Department, the average annual income for farmworkers in Washington in 1993 was \$7,000. Health status is highly correlated with income, so it is no surprise that the health status of migrant farmworkers is poor relative to the general population. But poverty is not the only explanation for the poor health status of migrants. Their "normal" working and living conditions include exposure to workplace hazards, improper field sanitation, substandard housing, and poor access to health care. A wide variety of adverse health effects are commonly associated with these problems.

A review of Washington workers' compensation claims for a five-year period in the 1980s found the claims rate for all agricultural workers (including migrants and others) to be 50 percent higher than the rate for non-agricultural workers. Farmworkers experienced substantially more sprains and strains, fractures, dislocations, concussions, amputations, dermatitis, systemic poisoning, tendonitis, respiratory disease, and fatalities. A recent report by the U.S. Government Accounting Office (GAO) finds that pesticide and field sanitation protections for farmworkers are inadequate, and concludes that the health and well-being of farmworkers is at risk. And the National Advisory Council on Migrant Health, in a 1993 report, documents high rates among farmworkers for tuberculosis, intestinal parasitic infection, skin diseases, influenza, pneumonia, malnutrition, and gastrointestinal diseases, along with lower life expectancy and higher infant mortality. In its evaluation of health risks, the Council finds the distinction between environmental and occupational risks difficult to draw, and includes the health risks associated with migration among its considerations. In addition to the physical risks of frequent travel, the Council identifies as migration risks the psychosocial risks related to hunger, long hours of work, crowding, homelessness, and the stress of travel and poverty.

Migration is also an important factor in limiting farmworkers' access to health care, though not the only one. Poverty is an obvious barrier--most farmworkers cannot afford private care, and only a very few farmworkers have any health insurance. According to the National Council on Migrant Health, physical isolation and cultural differences are also barriers to health care, as are eligibility requirements and application procedures for Medicaid. The GAO report supports these findings and notes that fewer than 15 percent of the nation's migrant farmworkers (by a U.S. Department of Health and Human Services estimate) receive medical services from the federal Migrant Health Program's rural clinics.

The National Council on Migrant Health says that migrant farmworkers "...often are living by survival economics." To characterize their marginal existence as some kind of freely-chosen opportunity is to ignore the reality of society's reliance on their misfortune to maintain the supply of migrant farmworkers. The Council suggests that myths perpetuated by the general public diminish the seriousness of the effects of the migrant life on the workers and their families, and quotes some frequently expressed sentiments as examples: "'Farmworkers like to travel--they are like gypsies.' 'They are used to these conditions--why they're better off here than they are at home.' 'It's just a summer vacation to them--they get to travel across the country and earn extra spending money on top of their regular jobs.' 'It's like going camping.'"

"...it is not necessary to deny the hardships of the migrants' lives to support the idea that the growers are not exploiting them."

Growers across the state vigorously denounce any allegation that they are unfairly exploiting the workers for their own profit, and countless acts of consideration testify to the growers' goodwill. But the use of these myths by some growers as evidence that migrant conditions are acceptable to the workers undermines the growers' credibility for no good reason--it is not necessary to deny the hardships of the migrants' lives to support the idea that the growers are not exploiting them. The perpetuation of these myths helps no one, and whether they are born of ignorance of the real conditions of migrant farmworkers' lives, or of cynicism, or of prejudice is beside the point.

Most of the migrant farmworkers in Washington are Mexican or of Mexican descent, and over the past three years the Department of Health's farmworker housing staff could not help but notice numerous indications of racism towards the workers. The Department does not know the extent to which racism may contribute to the intractability of the farmworker housing problem, but notes that cooperation among many groups is necessary to improve conditions, and warns that the potential for bias against the farmworkers may be an important consideration. The Department does not

suggest that resolution of the housing problem depends on an environment free of prejudice, but does suggest that racism is part of the problem, and that the awareness of racism may be part of the solution.

What Is Public Health?

In a recently published short essay, Lawrence Wallack, a Doctor of Public Health teaching at the School of Public Health at the University of California at Berkeley, asks the question, What is public health? In response to his own question, Dr. Wallack writes:

“Recently, the Institute of Medicine published a report, ‘The Future of Public Health.’ This report defined the mission of public health as ‘the fulfilment of society’s interest in assuring the conditions in which people can be healthy.’ This is potentially a very radical concept because we know from a great deal of research that the major determinants of health in a society are social and economic variables. For example, poverty, unemployment, and inadequate housing are the most important risk factors for disease. Let’s face it, exercise and diet won’t do a whole lot of good when people are poor, unemployed, or without shelter. You can have the best, most expensive care in the world but, as we have found out, this can’t compensate for the adverse effects of poor living and working conditions. In fact, research over the past century has indicated that social changes, not medical care and technology, have been most responsible for increases in life expectancy.”

Policy Perspectives

The protection of the public health is a longstanding and legitimate public interest, and the federal and state policy on farmworker housing fits comfortably in the public health tradition of illness prevention. The growers who employ migrant farmworkers are not obligated to provide them housing, but if a grower does provide housing, then the housing must meet standards covering site conditions, potable water, sanitation and waste disposal, food storage and preparation, and shelter. The absence of the proper protections can result in gastroenteritis, diarrhea, dysentery, cholera, and typhoid fever. If this list sounds like a set of third world problems, it is because third world countries do not have safe drinking water and adequate sanitation practices. As a matter of public policy, such conditions are not normally tolerated here.

When agricultural employment reaches a peak during the summer harvest months, as many as 35,000 migrant farmworkers travel to jobs in Washington and take up temporary residence while they bring in the state's asparagus, cherries, apples, and other crops. Year-round Washington residents constitute between one-quarter and one-third of the migrant work force. The remaining migrant farmworkers come from Texas, California, Mexico, and other places. Whether these workers are intra-state or inter-state migrants, they all must find a temporary place to stay while they are working away from their homes.

The growers and the workers routinely make economic decisions with public health consequences. The growers weigh the benefits of having the workers on hand against the costs of providing the housing, including the costs of complying with the various regulations. The workers evaluate the wages they will receive, including a consideration of the condition of the crop and the amount the growers pay per unit, and balance those questions against the prospective living conditions--whether they can camp for free or must rent space. In some cases the workers prefer higher income to housing, choosing to work where the harvest is robust or where the price per unit is higher if they can camp for free. This preference, which workers make even when the camp is illegal and without the basic amenities of potable water and sanitation, reflects the limits of the workers' choices and the hardships inherent in their lives. The choice of good pay *and* good housing rarely exists.

Any expectation that growers or workers can or should take the public interest into account when they make their economic choices is misplaced. They are not experts in occupational or public health, they may have little or no understanding of how their practices can affect their health or the health of others, and their interests may be in conflict with the public interest. Migrant farmworkers are among the working poor, and, given the opportunity to earn money, will accept unsafe and unsanitary living conditions. This situation makes them vulnerable to exploitation, but even growers with the best intentions are unlikely to understand the nuances of disease transmission. Nor

are they likely to take measures to protect against any adverse off-site effects of unsanitary practices. And regardless of the growers' knowledge or intentions, the responsibility to protect the public health is not theirs.

The U.S. Congress and the Washington Legislature have identified the public interest in farmworker housing, and have adopted a policy to protect the public health: if growers provide housing for their workers, then that housing must meet certain standards of health and safety. The implementation of this policy, however, has been anything but smooth and effective.

Federal standards, promulgated under the Occupational Safety and Health Act of 1970, are administered by the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA). The Washington State Department of Labor and Industries (L&I), under authority of the Washington Industrial Safety and Health Act (WISHA), maintains an agreement with OSHA that allows the state to administer its own occupational health and safety standards, which must be as effective as the OSHA standards at a minimum. The Washington Legislature, in separate statutes, identifies the Department of Health (DOH) as the primary inspector of labor camps, and directs the State Board of Health (SBOH) to write rules consistent with the WISHA rules (and, by inference, the OSHA rules).

The OSHA standards are based on a USA Standard, "Minimum Requirements for Sanitation in Temporary Labor Camps," approved by the USA Standards Institute in 1968. This USA Standard prescribes the minimum requirements necessary to protect the health and safety of temporary labor camp residents and others residing in the vicinity of such camps, an approach consistent with traditional public health practice. The OSHA and WISHA application of these requirements, however, takes the somewhat narrower *occupational* health and safety approach in that OSHA and WISHA rules apply only where an employer-employee relationship exists. This means that OSHA and WISHA take an interest in temporary labor camps only where such housing is a condition of employment.

The State Board of Health rules, administered by the Department of Health, apply to temporary worker housing regardless of whether or not the housing residents have an employment relationship with the housing owner or operator. This is a public health approach that is consistent with the roles and responsibilities of both the Board and the Department. This difference in perspectives between the occupational health and safety interests of OSHA and Labor and Industries, and the public health and safety interests of the State Board of Health and the Department of Health is modest but important. The occupational approach provides the labor camp protections to workers for the duration of their employment, while the public approach provides the protections to all the camp residents--both the workers and those family members and dependents traveling with the workers--for the entire time a

camp is open, regardless of whether or not the employment relationship is still in effect. In addition, the public health responsibility extends to the community at large, so, for example, the Department of Health would be concerned about any adverse downstream effects caused by deficient sanitation practices in a labor camp, and by the potential for the spread of disease from labor camp residents to residents of the community.

In the context of all the occupational health and safety rules administered by the Department of Labor and Industries, enforcement of the labor camp rules has historically rated a relatively low priority. L&I's compliance and enforcement efforts focus on such high-hazard activities as construction and logging, where injuries can result in dismemberment or death. Even within the narrower context of agricultural activities, L&I concentrates on accidents and pesticide exposures rather than on housing because the adverse outcomes are more acute and better documented, and because occupational health and safety are traditionally regulated in the workplace rather than in the living environment.

"...the Department of Health considers the provision of such basic services as potable water and sanitation facilities to be essential public health priorities."

The Department of Health acknowledges the validity of L&I's considerations in setting its occupational health and safety compliance priorities. Nevertheless, from the public health perspective, DOH finds that the prevalent conditions in farmworker housing represent a potentially serious public health problem. Safe drinking water and effective sanitation systems are the very foundation of public health; they have become so commonplace that most of the state's residents can take them for granted. But migrant farmworkers in Washington frequently find themselves living in conditions of privation--drinking contaminated water, urinating and defecating on the ground, sleeping in cars or makeshift shelters, bathing in rivers or irrigation ditches. The increased health risks associated with these conditions are well understood by public health officials, and the Department of Health considers the provision of such basic services as potable water and sanitation facilities to be essential public health priorities.

Where Labor and Industries reads the labor camp standards as occupational health and safety policy, and the Department of Health interprets the standards as public health policy, the various advocates for farmworkers--such as labor organizations and legal services--appear to view the standards as housing policy. While this perspective may be perfectly valid, the agencies responsible for administration of the labor camp standards are not housing agencies, and the differences in perspectives place the agencies at odds with the advocates. The pilot project providing for the use of tents for the cherry harvest is a case in point.

For the 1995 and 1996 cherry harvests, the Department of Health, in cooperation with Labor and Industries, granted provisional licenses allowing growers to meet the shelter provisions in the housing standards with worker-supplied tents if the housing otherwise meets all of the basic health and safety requirements of the rules. Columbia Legal Services has opposed this pilot project on the grounds that it does not require growers to come into full compliance with the standards within a specified period. Columbia and others also argue that lowering the standards for this specific purpose may lead to a more general degradation of the standards over time. The improvement in the workers' living conditions is insufficient to persuade these advocates to compromise the shelter standards. From the agencies' perspective, however, the increased occupational and public health benefits easily justify the project.

Tent Camps for the Cherry Harvest

The provisional licensing pilot project allowing for the use of tents in the cherry harvest is premised on the unique conditions of the cherry harvest, and the Department of Health has no intention of ever licensing tent camps for other crops or conditions except where the tents meet the OSHA/WISHA shelter requirements. Despite the Department's repeated assertions to this effect, however, critics continue to challenge the use of tents for the cherry harvest on the basis that the Department may expand the project to other crops. The Department, therefore, once again states for the record: The unique conditions that justify the use of tents for the cherry harvest exist for no other crops, and the Department will not expand the tent project beyond the cherry harvest.

The growers generally support the tent camp pilot project because it allows them to provide housing at a lower cost. But many growers continue to express their dissatisfaction with government regulation, and the complex regulatory environment of farmworker housing only exacerbates the situation. The fact that the Department of Health is conducting the pilot project conveys the message to some growers that the Department can change the regulations if it chooses. The restrictions imposed on state government by the federal laws and regulations are not well understood, and the Department is working with grower associations to explain to growers the somewhat limited range of the state's discretion.

The state's best opportunity to change the farmworker housing rules entails amending the WISHA standards. To amend the standards successfully, the state must demonstrate to OSHA that the state's standard is as effective as

OSHA's. If the criteria for determining the effectiveness of the standards include a consideration of how well the standards protect the entire population of workers, then the state may be able to compromise on strict adherence to OSHA and still meet the "as effective as OSHA" test. Here's how: if more workers are protected under the state standards because more housing is available, then the protection of the population may be better under the state standards than under the current OSHA standards.

In considering prospective changes to the WISHA standards, the Department of Health is concentrating on several specific provisions in the standards--the ratios of workers to facilities (toilets, handwashing basins, showers), the food storage and preparation requirements, and the use of tents for shelter during the cherry harvest. OSHA's acceptance of any state-proposed changes in these provisions depends upon the state's having an analytical basis for its proposals, and the Department is pursuing two separate strategies to meet this demand--an epidemiological review of the current standards, and the gathering of field experience through the tent camp pilot project, and through an examination of practices in other states.

"...the standards must strike a particular balance between the cost of housing and the public health protection afforded by that housing."

The Department is convinced that the standards must strike a particular balance between the cost of housing and the public health protection afforded by that housing. As standards become more stringent, the costs associated with meeting the standards go up, and the number of growers providing housing goes down. At the no-cost end of this spectrum, there would be no standards, and no public health protections. At the highest-cost end of the spectrum, no one could afford to meet the standards, and so there would be no housing and no public health protections. Somewhere between these extremes, where the standards offer adequate protections and the growers can afford to meet the requirements, lies the greatest protection of the public health. The Department of Health is determined to find that portion of the spectrum.

Columbia Legal Services and other farmworker advocates argue that the current standards already strike the proper balance, that the housing required under the current rules is bare minimum, and that strong enforcement efforts would lead to the success of the standards. The Oregon experience, where in the opinion of federal and state officials the aggressive enforcement of the rules has led to more and better housing, supports this argument. In Colorado, on the other hand, strict enforcement of the labor camp standards resulted in camp closures, and according to the National Advisory Council on Migrant Health, caused a deterioration rather than an improvement in the standard of

living for migrant farmworkers. And in Oregon the farmworkers are in essence paying for the housing in the form of lower wages.

The Washington experience tells a different story: the minimal enforcement effort over recent years has produced bitterness and resistance among the growers, and not much housing. The Department of Health is persuaded by its pilot project experience and its discussions with growers that strong enforcement of the existing rules would result in more bitterness and resistance and less housing. In this era of regulatory reform, broad support for vigorous enforcement may be hard to find unless the enforcement effort is combined with reasonable, affordable rules and a technical assistance and education program.

The reluctance among growers to provide licensed on-farm housing because of concerns about enforcement is fueled by somewhat misplaced fears, and informed largely by myth and misconception. Growers have three basic housing choices--provide no housing; provide housing that fails to meet the applicable standards; or provide housing that meets the standards. In the face of these choices, growers express their concerns about being fined by regulators and being sued by Columbia Legal Services for some minor violation of some arcane rule. These concerns bear examination.

Labor and Industries has penalty authority under WISHA, and enforces the labor camp rules when it receives a complaint or a referral, or when housing is in evidence during its routine agriculture inspections. L&I's record confirms the low ranking of housing standards in the agency's overall enforcement priorities--over the past seven years L&I has fined a total of three growers for violations of the housing standards, and those growers have paid a total of \$3,675 in penalties. The most recent case occurred this summer when L&I fined a grower \$1,500; on appeal, the hearing examiner increased the fine to \$2,500. In spite of the very low probability of enforcement action, growers continue to cite the prospect of L&I fines as a reason for not providing housing. The explanation for this disproportionate grower response to the actual threat of fines probably lies in the confusing of other L&I agricultural enforcement efforts--in such areas as pesticide exposure and field sanitation--with housing enforcement. Some growers may be unaware of this distinction, and some may simply be indifferent to it. In any case, not providing housing for their workers is one sure way that growers can avoid the possibility of being fined for violations of the housing standards.

The issue of Columbia Legal Services lawsuits is much more sensitive, and growers' emotions tend to run high when they discuss the subject. Many growers express the conviction that if they provide housing, then they are inviting a Columbia lawsuit. They believe that by providing housing they are granting Columbia permission to come on to their property to "recruit" clients, and they are convinced that Columbia is willing and able to press lawsuits,

while the growers cannot afford to defend themselves. Grower associations are working to limit the threat they perceive in Columbia's activities, and the agencies working with both groups are cognizant of the sensitivities on both sides.

“The best legal protection for growers who provide housing is for the growers to ensure that the housing meets the standards.”

From the Department of Health's perspective, the growers are vulnerable to potential legal penalties, through fines or lawsuits, only when they provide housing that is unsafe or unsanitary. There are no legal risks in not providing housing, but some growers seem to think that not providing licensed housing affords them the same protection as not providing any housing. This mistaken impression may be based on the notions that getting a license not only alerts L&I to inspect the housing, but also encourages Columbia to come on the property to conduct outreach with prospective clients. But, in fact, the very presence of housing, whether or not it is licensed, creates those liabilities. L&I can enforce WISHA labor camp standards wherever labor camps exist, and has not used the list of licensed housing to identify places to inspect, and Columbia can visit workers wherever they are living. The best legal protection for growers who provide housing is for the growers to ensure that the housing meets the standards, and the best way to ensure that the housing meets the standards is to get a license.

The problems associated with unlicensed housing are further exacerbated by the belief among some growers that simply allowing workers to camp on their property does not mean that they are providing housing. For many growers this is a practice of long standing--they do not provide housing (because of the cost or other reasons) but they have a site on their property where workers can camp. The growers tell the workers that they do not provide housing, but the workers can find no other place to stay, and they ask the growers for permission to camp on the growers' property. When the growers grant this permission, regardless of their motivations, they are in effect providing housing, and according to federal law, they are responsible for meeting the housing standards. Case law upholds this requirement in the federal statute.

The growers' associations and the agencies are working to correct these enforcement-related misapprehensions on the part of growers, but the mistaken beliefs persist, and some growers continue to allow illegal camps on their property. While the recalcitrance of the growers is subject to a variety of interpretations, the Department of Health subscribes to the view that the current farmworker housing situation is mostly a reflection of the growers' experiences with the regulatory authorities. According to the growers, most of those experiences have been bad--the imposition of inflexible rules of unknown purposes, and the imposition of fines for failures to comply. How well these impressions square with the facts is less important than how much

they color the growers' views. And to make matters worse, there have been too few positive experiences to compensate for the negative ones. Prior to the summer of 1995, the regulatory agencies offered very little in the way of technical assistance, and conducted no outreach or education programs to encourage growers to provide licensed farmworker housing. Over the past two years, however, both DOH and L&I have devoted considerable time to outreach, education, and technical assistance efforts, and as a result, many growers now understand the rationales and accept the need for basic public health protections.

Community Housing

Advocates for farmworkers argue that community housing is preferable to on-farm housing, and regulatory authorities agree. The development of more community housing to support migrants would alleviate the pressure on growers to provide on-farm housing, and would improve the living conditions for the workers. But community housing is more practical and more widely available for local residents than for migrants. And migrant farmworkers already live in community housing for part of the year. They become migrants only when they travel away from home to find temporary work. If all agricultural communities supported farmworkers with year-round employment, and if each community had enough workers to bring in the crops, then there would be no need for migrant labor and no need for migrant farmworker housing.

The Department of Health views the limited capacity for community housing to meet the needs of migrant farmworkers as another good reason for taking its approach to farmworker housing. Duplicating the permanent housing of temporary workers as they move from job to job would be extremely expensive and inefficient housing policy. Providing for a safe and sanitary living environment, on the other hand, is a time-tested application of public health principles, and clearly in the public interest.

The Farmworker Housing Shortage

Estimating the number of migrant farmworkers and the corresponding number of beds needed to accommodate them calls for a high tolerance for imprecision. The National Advisory Council on Migrant Health reviewed the national farmworker population estimates of the U.S. Bureau of the Census, the U.S. Department of Labor, the Migrant Health Program, and the U.S. Department of Agriculture, and found a range of results from 159,000 to five million. Several factors contribute to this discrepancy--different counting methods, different criteria, the mobility of the population in question, and the ever-changing composition of the population. In spite of these difficulties, however, policy makers need to know some sense of the scale of the problem, and so the Department of Health cautiously offers the following estimates of the farmworker population in Washington.

The Department's December 1995 preliminary report to the legislature estimates the total number of migrant farmworkers in the state at 92,700. This estimate uses demand-for-labor formulas to determine the total number of *seasonal* farmworkers in the state, and then applies the statewide proportion of migrants in the seasonal work force (on the basis of Employment Security Department data) to determine the total number of migrants in the state. In this final report to the legislature, the Department revises its estimate of the number of migrant farmworkers downward to 62,300. The following table summarizes the demand for migrant farmworkers in Washington by region and by selected crops.

Region	Migrants	Crop	Migrants
Southeast	8,600	Apples	27,000
South Central	16,500	Cherries	16,000
North Central	23,100	Asparagus	3,500
Columbia Basin	5,300	Berries	4,900
Western	8,800	Vegetables	3,900
		Other	7,000
State Total	62,300	Total	62,300

Note: These figures are derived from Employment Security Department and U.S. Bureau of the Census data. The regions are defined by ESD reporting areas as follows: Southeast--Benton, Franklin, Walla Walla; South Central--Klickitat, Yakima; North Central--Chelan, Douglas, Kittitas, Okanogan; Columbia Basin--Adams, Grant; Western--all counties west of the Cascades.

The revised statewide estimate of migrant farmworkers relies less on demand-for-labor formulas, and more on region-by-region and crop-by-crop analysis of the actual Washington employment figures gathered by the Employment Security Department. The revised estimate also reflects the use of U.S. Bureau of the Census figures on employment, farm size, and production. Based on these same Census figures, the Department of Health estimates that approximately 1,000 farms in the state have the need for migrant farmworker housing. The following table shows the estimated distribution of these farms by crop.

Crop	Number of Farms
Apples	410
Cherries	290
Asparagus	50
Berries	70
Vegetables	50
Other	130
Total	1,000

Note: These figures are derived from Employment Security Department and U.S. Bureau of the Census data.

According to these Department of Health estimates, approximately 62,300 migrant farmworkers need housing at approximately 1,000 Washington farms over the course of a year. In 1996 the Department will issue licenses for on-farm housing at 170 farms for 8,900 workers. Skagit County, which administers the farmworker housing program by delegation from the Department, licensed 12 farms for approximately 700 workers. These figures add up to a statewide total of licensed on-farm housing of 182 farms with 9,600 workers. An additional 27 farms are in the Department of Health's active files; these are previously licensed farms that were not licensed in 1996 because of crop failures or other reasons, but that are likely to be licensed again in the future.

The community housing available to some farmworkers reduces the estimate of workers who need on-farm housing, but the availability of such housing varies widely by region, and even by crop. The Department can report with some confidence, for example, that more community housing is available in Benton and Yakima and the counties west of the Cascades, and that more asparagus workers find community housing than do workers in other crops. The regional differences are attributable to community size and the housing stock in the vicinity of the farm work. The availability of community housing for asparagus workers is attributable to the length of the asparagus work--three consecutive months--and to the efforts of asparagus growers to assist their workers in arranging for rentals.

Specific housing estimates by region or crop are not available, and an overall estimate of workers accommodated by community housing is difficult to make. On the basis of anecdotal information, combined with estimates made by the Department of Community, Trade and Economic Development (DCTED), the Department of Health estimates that approximately 15,000 community beds are available to migrant farmworkers statewide. This estimate includes housing authority units as well as private sector housing, and together with the licensed on-farm housing, leaves a shortage of 37,700 beds for migrant farmworkers statewide.

The Department's 1995 preliminary report to the legislature uses a ratio of .65 dependents per worker to estimate the number of dependents who are traveling with the workers, and who also need housing. This ratio comes from a 1993 DCTED study, and in the Department of Health's recent experience, it is no longer accurate. Department field staff report that over the past three to four years there are fewer and fewer dependents traveling with the workers, a trend that may be attributable to changes in federal immigration and state child labor laws. Some patterns are evident--there are, for example, more families in the asparagus harvest, and more single men in the cherry harvest--but there are also wide variations within crops and regions. In light of this knowledge, and in the absence of more reliable data, the Department makes no projection of the number of dependents who are traveling with the migrant farmworkers, but notes that the failure to quantify this population does not make the dependents and their housing needs any less real.

To compensate for the housing shortage, the migrant farmworkers and their dependents stay in unlicensed on-farm camps, in off-farm camps, or in crowded community rentals. Information about these "choices" is spotty and anecdotal, but the Department of Health is aware of some of the conditions. The off-farm camping conditions, in the Department's knowledge, are dismal and potentially hazardous. Shelter consists of cars or campers, cardboard boxes, and tarps; safe drinking water is rarely available, and bathing, handwashing, and toilet facilities are virtually nonexistent. Conditions in unlicensed on-farm housing vary considerably. The worst is no better than the

off-farm camps, but the Department's experience in the summer of 1996 suggests that some unlicensed on-farm housing comes close to meeting the standards for a license.

"Sewage bubbling up to the surface from overtaxed septic systems is a common result of this overcrowding."

The conditions in some of the crowded community rentals pose public health risks as serious as those in the worst camps. The Department knows, for example, of the following situations: people living in the crawl space of a trailer and using insulation for bedding; 14 individuals staying in an unheated, unfinished garage; 29 individuals sharing one single-wide mobile home; and mattresses lined up wall-to-wall to accommodate 24 individuals in another trailer. Sewage bubbling up to the surface from overtaxed septic systems is a common result of this overcrowding. Such conditions obviously increase the risk of disease outbreaks, but in these cases and others like them, no better alternatives are currently available.

Welfare and Immigration Reform

Federal efforts to change welfare and immigration policy may eventually affect the demand for migrant farmworkers and for farmworker housing. Former welfare recipients may increase the proportion of local workers in the seasonal work force, and changes in immigration rules may alter the composition of the migrant work force. No reliable projections of these potential changes are currently available, and at this time the Department can do little more than note that the possibility for change exists.

Initiatives: A Promising Start

The Department of Health's pilot project allowing for the use of tents as shelter during the cherry harvest is increasing the number of on-farm beds available to migrant farmworkers, and the economic incentives passed in the 1996 legislative session are helping growers to improve the condition of their on-farm housing. An additional \$2 million appropriation from the federally-funded State Legalization Impact Assistance Grant (SLIAG) is stimulating farmworker housing developments in several counties. Taken together these recent initiatives represent a promising beginning. The Department of Health's epidemiological review of the farmworker housing standards provides the analytical basis for redefining the standards in the future. And a new building code for temporary worker housing may make the development of on-farm housing less expensive.

The Department of Health Provisional License Pilot Project

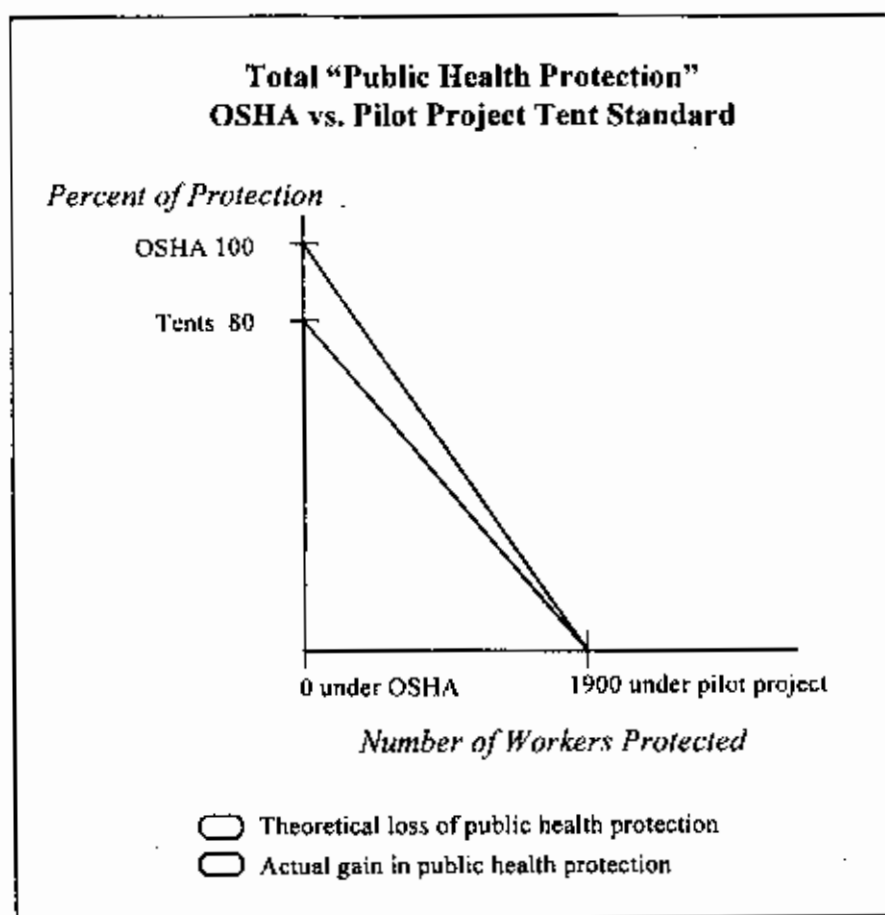
In the summer of 1995 the Department of Health, in collaboration with L&I, began a pilot project offering cherry growers the opportunity to become provisionally licensed while meeting the shelter requirements in the housing standards with worker-supplied tents. Five growers in the Wenatchee area participated in the project, and provided provisionally licensed on-farm housing for 500 workers. The pilot project expanded in the summer of 1996 to include 14 growers in the Wenatchee area and another 18 in the southeastern part of the state. These growers provided on-farm housing for 1,900 workers.

The Department of Health bases this pilot project on the following considerations: 1) that the cherry harvest is extremely short and labor intensive; 2) that many cherry growers are unwilling or unable to provide housing that meets the OSHA/WISHA shelter standards, but are willing and able to provide the basic public health protections afforded by the other housing standards; 3) that the harvest time of year (June or July) is warm enough to enable tents to afford the necessary protection from the elements; and 4) that the alternative available to many workers is much worse than on-farm camping in a provisionally licensed camp. To receive a provisional license growers must meet all of the site and infrastructure requirements in the regulations, and in addition must develop and implement a facility management plan that assures that the camp is safe and secure, and that maintains the camp within its approved capacity. Tents must be commercially available, have attached floors, and may only be used by the number of persons the tents are designed to accommodate.

After two summers of this pilot project, the Departments of Health and Labor and Industries are convinced that the tent camps represent a significant improvement in housing conditions for the cherry harvest. In the years prior

to the pilot project, no cherry growers offered licensed on-farm housing, and the workers either stayed in illegal, substandard on-farm camps, or else camped wherever they could find a place. The pilot project offers safe housing to 1,900 workers, and potentially to many more. Workers interviewed by Department of Health field staff acknowledge that conditions are improving, and the growers agree.

The following graph compares the public health protection afforded to cherry workers under the OSHA standard and under the pilot project tent standard. "Public health protection" in this depiction is the product of the number of workers covered by the standards and the protections provided by the standards.



The OSHA standard is higher, and represents 100 percent of the housing standards, while the tent standard is lower at approximately 80 percent (by Department of Health estimate) of the OSHA standard. With the OSHA standard in force, no growers provide housing, and the public health protection is zero. With the tent standard, growers provide housing for 1,900 workers, and the public health protection is represented by the shaded area below the tent line on the graph. The unshaded area between the OSHA line

and the tent line represents the loss in public health protection for the 1,900 workers *if they had been previously protected to the OSHA standard*. But since no cherry workers have been protected to the OSHA standard, this loss in public health protection is theoretical rather than real.

In spite of the agencies' views that the pilot project is improving farmworker housing conditions in the cherry harvest, Columbia Legal Services continues to oppose the project. Columbia's main concerns focus on schedules to require cherry growers to come into eventual compliance with the OSHA/WISHA standard, and on the provisions concerning electricity and food storage and preparation. The Departments of Health and Labor and Industries are working with Columbia to resolve their differences.

"The Department is working with the growers and the workers to find affordable solutions that provide the necessary protections..."

From the Department of Health's perspective, the purpose of this pilot project is to determine whether a standard different from the OSHA standard can afford more public health protection. The Department regards the project as a field test of alternative standards, and is using the experience gained through the project to formulate an overall strategy regarding the standards. The Department is working with the growers and the workers to find affordable solutions that provide the necessary protections, and that conform with common worker practices. Some of the knowledge acquired in this project will apply to other crops (the appropriate ratios of workers to showers, toilets, and handwashing sinks, for example), and some will apply only to the cherry harvest (the use of tents). In any case, the Department believes that the common sense application of scientific knowledge is the best approach to improving the farmworker housing conditions in the state.

Who Speaks for the Workers?

Over the past two summers, Department field staff have talked extensively with workers living in provisionally licensed camps, and have found that most workers appreciate the improvements in their housing conditions. Radio KDNA interviewed farmworkers in pilot project camps on Stemilt Hill near Wenatchee in the summer of 1996, and found widespread support for the project. The Department's responsibility extends to all the workers in licensed housing, and the Department believes that the pilot project promotes the greater good for the population at risk. Some workers who object to the project have representation. The workers who support the project must rely on the Department to speak for them.

Economic Incentives

In its 1996 regular session, the legislature passed Substitute House Bill 2778, which provides tax exemptions for farmworker housing. Growers do not have to pay the state portion of the sales taxes on labor, services, or materials used to build or improve farmworker housing. No comprehensive information about the effect of this legislation is available, but the Department of Health has learned of several cases where growers have used the tax break to make improvements:

- A Brewster grower spent \$60,000 to remodel 20 single-wide trailers; improvements include new wiring, new paneling, and new showers
- An Oroville grower spent \$30,000 to add two new bunkhouses for 18 workers, and to rebuild a shower/toilet facility
- A small business in Brewster reported sales of \$40,000 for refrigerators, ranges, hot water tanks, and furniture to several growers in Okanogan and Douglas counties
- A Roosevelt grower spent \$24,000 on a new bunkhouse
- A Lynden grower spent \$125,000 on kitchen and restroom facilities

Growers' associations also report that their members are taking advantage of the tax incentive to improve their housing. A brief Department of Health survey of growers found total expenditures of more than \$1 million in housing improvements. As more and more growers learn of the opportunity, the number of growers making improvements is likely to increase.

Additional Funding for Farmworker Housing

In 1996 the legislature appropriated \$2 million from the federally-funded State Legalization Impact Assistance Grant (SLIAG) for new investments in migrant and seasonal farmworker housing. This resource is administered by the Department of Community, Trade and Economic Development in consultation with the Departments of Health, Labor and Industries, and Social and Health Services along with grower and farmworker representatives. In the seven months of its existence, the SLIAG team has invested a total of \$959,000 to provide new housing opportunities for more than 370 farmworkers in Yakima, Benton, Skagit, and Adams counties. These SLIAG-supported projects include large-family rental housing for migrant and seasonal workers, and homeownership opportunities for local farmworkers and their families. Each dollar invested has resulted in a matching investment of \$4.65 from other public and private sources.

The SLIAG funding is also supporting an interdepartmental effort to provide emergency housing for displaced workers. During the summer of 1996, the Department of Health for the first time used emergency housing vouchers to find adequate accommodations for farmworkers who were displaced when the Department of Labor and Industries shut down an illegal, substandard camp. Several workers were placed in a local motel, and others were placed in a licensed camp where the harvest was already complete and space in the camp was available.

According to DCTED, the SLIAG program is generating unprecedented interest in farmworker housing throughout the state--established nonprofits and nonprofit/grower partnerships are for the first time expressing interest, and some are applying for funding. Both applications and requests for investments are more than triple the levels requested in previous years through the Housing Trust Fund. The SLIAG team expects that requests for additional assistance will far exceed the available supply of funding, and that by the end of the year the program will have invested the remainder of the funds. Based on the current investments, DCTED projects that the full \$2 million will generate more than \$9 million in other public and private financing, and will create more than 750 new housing opportunities for farmworkers and their families.

An Analytical Basis for the Housing Standards

The state's ability to amend the WISHA labor camp standards is limited by the OSHA requirement that state standards be as effective as OSHA's. The federal standards under OSHA, and the state equivalents under WISHA, are only effective at protecting workers to the extent that growers provide housing that meets those standards. The level of protection afforded by the standards themselves is certainly adequate, but many Washington growers believe that the standards are unreasonable, and their refusal to provide housing leaves many workers unprotected. As a result, the state's application of the WISHA labor camp standards provides inadequate protection to the state's migrant farmworker population.

"...the Department of Health is reconsidering the rules from two different angles--common sense and science."

In response to this predicament, the Department of Health is reconsidering the rules from two different angles--common sense and science. One example of this approach is the cherry harvest pilot project where field experience informs the development of reasonable rules that provide adequate protections and that take into account the practices of the workers. The establishment of an analytical basis for the housing standards, a task assigned to the Office of Epidemiology at the Department of Health, is another example of the Department's common sense and science approach.

The Office of Epidemiology convened a work group to review the standards, and a copy of their report is attached as Appendix A. The report's introduction suggests that, "...while scientific documentation may make a strong case for the importance of a specific provision, the work group recommends that policy makers not under value the contribution that experience may play in this area. Public health experience related to temporary living conditions grows out of many years of field experience in diverse situations, such as refugee camps, military operations, and temporary worker housing. While much of this knowledge has not been formally tested using scientific methodology, the work group feels that both experience and common sense have much to offer in determining health and safety issues related to temporary worker housing."

The Office of Epidemiology work group reviewed each provision in the Board of Health regulations to determine which provisions have a scientific basis, and which are based on experience or common sense. The following excerpts from the work group's report illustrate their approach to the evaluation of the labor camp standards. The provision being analyzed in this example calls for "...an adequate, convenient water supply from an approved source..."

Response: The importance of potable water for health has been adequately documented. Lack of adequate potable water leads to dehydration which has been associated with illnesses such as kidney stones, and in the extreme, death. In addition to concerns related to dehydration, unregulated or improperly regulated drinking water can be an important source of exposure to disease-causing agents or toxins.

In the absence of a readily available source of drinking water, consumers have been known to seek and use whatever sources are most easily obtained. Sources available may not be approved in the sense that the water quality is subject to contamination by microbiological or chemical agents, and as such, pose a risk to the health of the consumers.

The drinking water regulations constitute the basic foundations for public health protection for water supplies, including water quality requirements, system construction, system operation, and system maintenance. The availability of an adequate, convenient water supply from an approved source is important for health.

The Office of Epidemiology work group report, together with knowledge acquired through field experience in the pilot project, provide the state with a practical and analytical foundation for the development of standards that taken

as a whole could be more effective than the current standards. Whether or not new standards can succeed in Washington depends on their acceptance by three critical parties. The federal government has to acknowledge that any new standards are as effective as OSHA. The growers have to accept the standards as reasonable and affordable. And the farmworker advocates have to accept the standards as protective of the workers. If these tests cannot be met through common sense and science, the Department of Health believes, they cannot be met at all.

New State Building Code for Temporary Worker Housing

The legislature directed the State Building Code Council to develop temporary worker housing code that conforms to the WISHA and State Board of Health regulations, and that facilitates designs allowing for maximum affordability while providing decent, safe, and sanitary housing. The Building Code Council formed a Technical Advisory Group (TAG) with representatives from the agricultural industry, farmworkers, and the Department of Health, among others. The TAG met throughout 1996, and developed a temporary worker housing code for presentation by the Building Code Council to the legislature. The disposition of the Council's recommendations is the legislature's decision to make.

Only the Beginning

The Department of Health's credibility among growers is high, and a climate conducive to progress is taking shape. If the state can sustain this momentum long enough, eventually market forces will take over and help complete the job--when enough growers provide safe and sanitary housing, the remaining growers will need to provide similar housing in order to stay competitive. But many growers continue to rail against the government, and resist regulation as an unnecessary intrusion on their lives. Columbia Legal Services opposes the ongoing use of any shelter that fails to meet the current federal standards, and in their opposition to the pilot project create the impression that they are more interested in saving the standards than in protecting the workers. And the relationship between the growers and Columbia remains one of hostility and mistrust.

The Department of Health intends to continue working with both the growers and the advocates, as well as with other state agencies, federal partners, and the legislature to sustain the momentum to improve farmworker housing. The progress so far is only a modest beginning, but this beginning may be the last best hope. If this effort fizzles and fails, the next opportunity may not arise for a long, long time.

Policy Options

The state's range of policy options is limited by federal law, but within the federal regulatory framework, the state has some discretion in the administration of the farmworker housing program. The important policy questions facing the state are:

- Who should administer the temporary worker housing program--the Department of Health, Labor and Industries, or both? Or should the state give the program to the federal authorities?
- Who should administer the new building code for temporary worker housing?
- What is the optimum role for local government in the administration of temporary worker housing?
- How should the temporary worker housing program be funded, and to what extent?
- If the state retains the administration of the program, should it revise the standards?

An evaluation of the options and the Department of Health's recommendations to the legislature follow.

The Administration of Temporary Worker Housing

The state has four basic options for the administration of temporary worker housing--maintain the status quo, place the responsibility solely with either the Department of Health or Labor and Industries, or give the program to the U.S. Department of Labor. The status quo option is the one best understood at this time. The feasibility of the other options is still in question, and any determination to change the status quo should await thorough discussions with the many parties affected by the change. The Department of Health nevertheless presents all of the options for the legislature's consideration in order to inform the legislature of the range of possibilities.

Option One: Maintain the Status Quo. Currently the Department of Health administers the temporary worker housing program, licenses on-farm housing, conducts inspections and other compliance activities, and provides education and technical assistance to growers who want to maintain on-farm housing for their temporary workers. The Department of Labor and Industries, under WISHA authority, conducts inspections of on-farm housing in conjunction with other routine agricultural inspections, and enforces the housing regulations at those sites it has inspected, and at sites referred to it by the

Department of Health. The Board of Health adopts rules for the temporary worker housing program administered by the Department of Health. Local governments issue building permits and approve water sources and septic systems; at the option of the local government, local health departments can assume the State Department of Health role in the administration of the temporary worker housing program.

To some observers the status quo is a confusing situation of overlapping authorities with too many agencies involved in the regulation of farmworker housing. On the other hand, each of the agencies is operating within the scope of its overall mission, and, at least among the agency staff working in this area, the respective agency roles are becoming well understood. And despite the inherent inefficiencies associated with a number of agencies involved in a single issue, the status quo does not necessarily preclude opportunities for improvements. In the past two years, for example, the Departments of Health and Labor and Industries have increased their levels of technical assistance and enforcement, and these efforts appear to be improving farmworker housing conditions. In particular, L&I's enforcement efforts in the summer of 1996 seemed to motivate many growers to seek a provisional license from the Department of Health.

Under the status quo, the success of the farmworker housing program depends on interagency cooperation, especially between the Departments of Health and Labor and Industries. These agencies are large organizations with their own chains-of-command and institutional cultures. Under current leadership, the two agencies are coordinating their policies and efforts as efficiently as possible, a task inherently more difficult than intra-agency coordination. Under different leadership, the agencies might not maintain the same degree of cooperation. In addition, the current responsibilities to some degree cast the agencies in "good cop-bad cop" roles with respect to the regulated community—the Department of Health (good cop) provides technical assistance and works with growers to get them licensed, and Labor and Industries (bad cop) enforces the regulations and potentially levies fines against those who are out of compliance. The fact that L&I also provides technical assistance is often overshadowed by the growers' concerns about enforcement.

In the current regulatory environment, two sets of rules cover farmworker housing—the Board of Health rules (administered by DOH), and the labor camp rules in WISHA (administered by L&I). The housing standards are nearly identical in the two sets of rules, but the Board of Health rules require growers who provide housing to have a license, and the standards apply to all the housing residents. The WISHA rules have no requirement for a license, and the standards apply only to the *workers* living in the housing, not to non-

working dependents or others who may also be living in the housing. The WISHA rules—and the equivalent federal rules under OSHA—are limited to situations where there is an employer-employee relationship, and family members or others traveling with migrant farmworkers do not have such a relationship with the provider of the housing. This difference in the application of the standards illustrates to some extent the different perspectives and responsibilities of the agencies—Labor and Industries regulates *occupational* health and safety, while the Department of Health regulates *public* health and safety.

Option Two: Place Sole Responsibility with the Department of Health. Under this option, Labor and Industries assigns the labor camp portion of the state plan with OSHA to the Department of Health. OSHA either maintains the respective parts of the state plan with the two state agencies, or Labor and Industries in effect subcontracts with the Department of Health through a memorandum of understanding or some other device. Labor and Industries continues to enforce agricultural standards, but no longer enforces housing regulations. When a routine agricultural inspection finds violations of the housing standards, L&I refers the case to the Department of Health.

According to federal requirements, the state agency administering OSHA-equivalent regulations under a state plan must have enforcement powers equivalent to OSHA's. This means that the Department of Health would need the same enforcement powers that L&I has under WISHA, and that the Department would enforce the housing regulations at both licensed and unlicensed sites.

By placing sole responsibility for temporary worker housing in the Department of Health, this option reduces interagency coordination problems to a large extent. Labor and Industries' involvement is limited to managing a subcontracting arrangement. This option eliminates the Board of Health role because the Department of Health administers WISHA labor camp rules, and Board of Health rules are no longer necessary. Local governments continue to approve water sources and septic systems, but the willingness of OSHA to allow local governments to administer the temporary worker housing rules is unknown. Placing the sole responsibility for temporary worker housing in the Department of Health emphasizes the public health aspects of the program.

Option Three: Place Sole Responsibility with the Department of Labor and Industries. This option effectively removes the Department of Health and the Board of Health from the temporary worker housing business. Labor and Industries administers the program as part of WISHA, and maintains its state plan with OSHA. This option reduces interagency coordination problems even more than Option Two by eliminating the Department of Health role.

Under this option Labor and Industries maintains the state plan with OSHA, and administers all of the WISHA regulations. Assigning sole responsibility for temporary worker housing to Labor and Industries places the program in the occupational health and safety realm. In the context of all the WISHA regulations, the temporary worker housing rules are likely to remain relatively low in L&I's enforcement priorities.

Option Four: Give Temporary Worker Housing to the Federal Authorities. Every year the state has the option to give the temporary worker housing program to the U.S. Department of Labor. This option, however, is apparently available only if the state also gives up the field sanitation portion of the occupational safety and health regulations along with the labor camp regulations. The implications of this option warrant careful consideration by the state, and Labor and Industries is the obvious agency to conduct the proper evaluation.

The Department of Health can offer only guarded observations beyond identifying that the option is available. Choosing this option would apparently place more regulatory authority with a federal agency, but the level of effort that the Department of Labor may devote to this area is unknown. Growers may resent the presence of yet another regulator of their business. But Columbia Legal Services and other farmworker advocates might welcome the prospect of more aggressive enforcement, even if the Department of Labor has limited resources for the administration of the program.

Recommendation: The state should maintain the status quo with regard to the administration of the temporary worker housing program. Each of the other options appears to improve on some aspect of the status quo, but the implications of these options are not all identified, much less fully understood. The Departments of Health and Labor and Industries should prepare assessments of the options, including evaluations by stakeholders and affected agencies, and develop proposals, as appropriate, for the legislature's consideration.

The Administration of Temporary Worker Housing Building Code

Building departments in local governments administer the state building code, and would appear to be the logical entities to administer the new code for temporary worker housing. But local building officials have deep reservations about the viability and advisability of the temporary worker housing code, and prefer that it be administered by someone else. The Washington Association of Building Officials characterizes the temporary worker housing code as a significant reduction to the minimum building code, and finds the new code to be in conflict with the mission of the state building code. The State Building Code Council also prefers to have no administrative responsibilities with respect to the temporary worker housing code.

The Department of Health, as the agency responsible for licensing farmworker housing, is perhaps the most likely alternative. The Department has some of the necessary expertise in its Plan Review section, and can develop whatever additional expertise the responsibility requires. One advantage to this alternative is that the Department of Health would apply the code in a consistent manner across the state, where the approach of local officials might vary from jurisdiction to jurisdiction. The potential problems with this alternative are that demand may outstrip the Department's capacity to deliver the necessary service, and that growers may find the arrangement inconvenient.

The administration of the temporary worker housing code by any agency other than the State Building Code Council and local building officials, comes with the possibility of a perverse outcome. Unless the temporary worker housing code is exempt from the state building code, local building officials could insist that the state code applies to all structures, and that builders of temporary worker housing need a building permit. They could then refuse to issue permits for temporary worker housing on the basis that the state building code has no provision for such housing. The explicit authority to issue building permits for temporary worker housing is therefore essential to whichever agency is responsible for administering the program. In addition, the administrative agency needs enforcement authority for the code, and the temporary worker housing code proposed by the State Building Code Council includes no enforcement language.

Recommendation: Assuming that the legislature adopts the temporary worker housing building code proposed by the State Building Code Council, the legislature should place the code in the Department of Health, exempt the code from the state building code, authorize the Department to issue building permits for temporary worker housing, add provisions for enforcement, and provide the Department with the resources necessary to administer the program.

The Role of Local Government

Growers have complained that they are discouraged from providing farmworker housing by the overlapping authorities and by the difficulty of acquiring the necessary license and permits. In response to this complaint, legislators have asked whether local government might offer "one-stop shopping" as a way of providing some relief to the growers. The legislature directed the Department of Health to analyze this issue and to recommend the optimum role for local government in the administration of farmworker housing.

After extensive discussions with growers and with local officials, the Department of Health concludes that local government is already providing the appropriate service in a timely fashion. Growers report that the real barrier to their providing on-farm housing is not so much the difficulty of the permit application process as it is the cost associated with meeting the current standards. Local health departments normally approve water sources and septic system designs within a month, and local building officials usually issue building permits in the same timeframe. When water rights are in question the process takes longer. Obtaining a license from the Department of Health to operate farmworker housing takes about two weeks from start to finish.

State and local officials agree with growers that one idea worth pursuing is the development of informational materials to assist growers in understanding their obligations as well as their options. Both state and local offices could provide such materials to any growers who inquire about the procedures and requirements. The Department of Health is beginning to develop a comprehensive package of farmworker housing information, but is awaiting the disposition of the proposed temporary worker housing code before completing the package. Once the information is finalized, the Department will distribute the materials to local officials and to growers and grower associations.

The prospect of shifting more administrative responsibility to local government as a means of achieving greater efficiency is not particularly promising. Each locality would need the budget and staff to conduct compliance activities, as well as both the resources and authority to run an enforcement program. The only county currently operating its own temporary worker housing program is Skagit. The Skagit County Health Department charges fees of \$250, and reports that these fees cover about half of their program costs.

As the lead state agency for temporary worker housing, the Department of Health is in a good position to provide a consistent application of the regulations across the state. In addition, the Department may be in the best position to effect meaningful change in the housing standards. On the strength of the pilot project and the epidemiological review, the Department can propose new standards that meet the federal requirement that the state's standards be as effective as OSHA's. Placing the administrative responsibility for temporary worker housing with local government may compromise the state's ability to amend the standards, and may lead to less rather than more flexibility in the rules.

Recommendation: The legislature should leave the primary responsibility for the administration of temporary worker housing with the Department of

Health, and continue to allow local governments to operate their own programs at their discretion.

Funding for the Administration of Temporary Worker Housing

In several statutes passed prior to 1995, the legislature recognized the housing shortage and the grim living conditions facing migrant farmworkers, and adopted policies intended to protect the workers. But the policies relied on growers to provide the housing, and offered no incentive to do so. Nor did the agencies have the resources to devote to the promotion and development of farmworker housing.

Since 1995 both the Department of Health and the Department of Labor and Industries have shifted agency resources into their temporary worker housing programs, and the legislature has increased the Department of Health's temporary worker housing budget. The agencies have undertaken a pilot project and an epidemiological review of the standards, and have increased their technical assistance, outreach, and enforcement efforts. The legislature has adopted tax incentives and provided additional funding for the development of farmworker housing, and has directed the State Building Code Council to write new code for temporary worker housing.

The recent progress in the area of farmworker housing is clearly attributable to the new level of effort supported by new resources. The maintenance of this progress depends on the maintenance of the support. Furthermore, additional outreach and technical assistance are necessary to maximize the potential benefits of the tax incentives and the new temporary worker housing building code. And as more growers provide on-farm housing, the demand for technical assistance and compliance resources will increase.

The Department of Health budget for temporary worker housing is currently funded by a legislative appropriation and by fees charged to growers for a license. The maximum fee is set in statute at \$75. The Department charges growers with six or fewer units \$50, and growers with more than six units \$75. A cost accounting analysis of the Department's costs for issuing licenses, including surveys, but not including technical assistance or complaint investigations, finds that costs exceed the revenue from fees. Given the current licensees, the fees would have to go up to \$275 for smaller operations, and to \$412 for larger operations for the Department to recover its costs. These projected fees take into account a limited self-survey program initiated by the Department in 1995 for growers with good compliance records. The Department conducts surveys of these growers' housing only once every three years rather than annually. Support for compliance activities, technical assistance, and outreach comes from non-fee sources.

Applying the conventional fee-setting analysis to farmworker housing makes sense from the limited standpoint of determining the fee necessary to cover an agency's costs. From a broader perspective, however, the public policy questions are who benefits from the program, and who should pay for it. The growers clearly receive a benefit from providing housing and from having a license. But the workers also benefit, as does the public. As a matter of equity, the distribution of costs should mirror the distribution of benefits to the extent possible, and should also reflect the ability to pay.

The workers have demonstrated that they are willing to forego public health protections, so their willingness to pay is low, and because of their poverty, their ability to pay is low as well. The growers complain about the current fees so their willingness to pay higher fees is no doubt low. The growers' ability to pay is harder to determine, and they incur significant costs in providing the housing, so they are already contributing to the overall costs. The public's interest in farmworker housing seems to remain dormant until workers are displaced from growers' property and end up camping in parking lots and other public places. A strong licensing program would preclude such displacements.

Recommendation: The legislature should provide adequate resources (funding and positions) for technical assistance, outreach, compliance and enforcement activities, and the administration of temporary worker housing. The legislature should authorize the Department of Health to set licensing fees. To the extent that the legislature wants to minimize fees charged to growers, it should provide the Department the resources necessary to conduct the licensing program.

New Standards for Farmworker Housing

There are two compelling reasons for the state to consider writing new rules for temporary worker housing. First, the existence of two sets of rules--Board of Health and WISHA--leads to confusion. And second, the state can increase grower participation in the temporary worker housing program by amending the current standards to be more reasonable and affordable. Greater grower participation means greater protection for the migrant farmworker population.

In 1995 the legislature passed Engrossed Substitute Senate Bill 5503, subsequently codified in Title 70 RCW, directing the State Board of Health to develop labor camp rules that do not exceed the standards developed under WISHA. The Board of Health adopted revised rules that became effective on January 1, 1996, but despite the Board's efforts to meet its legislative mandate, the Board of Health rules may still exceed the WISHA rules, as interpreted by Labor and Industries.

According to the Labor and Industries interpretation of the WISHA rules, food storage and preparation facilities are not required in temporary worker housing, but these facilities are required by the Board of Health rules. In fairness to the Board of Health, the L&I interpretation of WISHA requirements was not known to the Board at the time the Board adopted its revised rules. Columbia Legal Services has challenged Labor and Industries' interpretation, and the parties are working to resolve the dispute. In the meantime, the Department of Health is considering the issue as part of its pilot project. Based on the epidemiological review of the standards, the Department is convinced that the rules should make some provision for food storage and preparation. At this point, however, any provision for food storage and preparation would exceed WISHA, and the Department defers to L&I's interpretation of the WISHA standards.

The Department of Health cannot operate the pilot project indefinitely, and at some point the knowledge gleaned from the project should be incorporated into the routine regulatory program. The Department has already learned enough from the project to recommend rule changes in several important areas. The current rules specify certain ratios of workers to showers, toilets, and handwashing facilities, and the Department believes that these ratios can be relaxed to some extent without jeopardizing the protections afforded to the workers. The Department is also convinced that tents can provide adequate shelter for the cherry harvest.

Some prospective changes remain unresolved--food storage and preparation provisions, and specifications for tents, for example. The Department believes that another year for the project is sufficient time to determine its final recommendations for amendments to the current rules. According to federal regulations, OSHA reviews the state's standards after the state adopts its own rules. This sequence carries the unfortunate possibility that the state will spend its resources writing new rules only to have OSHA eventually find that the state rules are not as effective as OSHA's, and therefore must be changed in at least some respects. One way to minimize the likelihood of this outcome is for the state to invite OSHA's participation in the rule development process.

Recommendation: The legislature should pass legislation that results in the development of one set of new rules that provide essential public health protections, that incorporate the findings of the pilot project and the epidemiological review, and that are as effective as the OSHA rules. This action should await a decision about the administration of the temporary worker housing program so that the legislature knows who should develop the new rules--the Board of Health, the Department of Health, Labor and Industries, or some combination. The legislature should also provide the agencies with the resources necessary to develop the rules.

**Appendix A: Public Health Basis for WAC 246-358,
Temporary Worker Housing, Working Document**



**PUBLIC HEALTH BASIS FOR WAC 246-358, TEMPORARY
WORKER HOUSING, WORKING DOCUMENT**

April 1996

Washington State Department of Health
Division of Environmental Health Programs and
Division of Epidemiology and Health Statistics

Prepared by

Richard Ellis
John Grendon
Tim Hardin
John Kobayashi
Jim Hudson
Juliet VanEenwyk
Bill White

Preliminary Review by

Tom Barton, International Rescue Committee
Gregg Grunenfelder, Thurston County Public Health and Social Services Department
Marvin G. Johansen, State of Michigan Department of Public Health
Joy Keniston-Longrie, King County Department of Natural Resources
Ginny Hamilton, Washington State Department of Labor and Industries
Patricia Harrison, University of California, Davis
James M. Meyers, University of California, Berkeley
Mary Miller, Washington State Department of Labor and Industries
Pedro Serrano, Washington State Department of Labor and Industries
Paul Stehr-Green, Washington State Department of Health
Charles Treser, University of Washington

For more information, contact

Juliet VanEenwyk
Office of Epidemiology
1102 Quince St. SE, P.O. Box 47812
Olympia, WA 98504-7812
(306) 705-6051

Context

In order for the Department of Health to understand which portions of the temporary worker housing regulations are related to health and safety, the Office of Epidemiology convened a work group to determine which provisions of the Washington Administrative Code (WAC) 246-358 have a scientific basis, which seem to be developed from experience, which seem to rely on common sense, and which do not seem to be supported by science, experience or common sense. In order to make this determination, each provision in the WAC was examined separately. While this approach may be useful in determining the importance for health and safety of most of the provisions, there are several limitations.

First, the approach of examining each provision individually runs the danger of having the detail obscure the larger picture. Housing comes as a gestalt and while any one element may not be crucial, substandard housing across a number of elements combined with poor nutrition, poor access to preventive medical services, heavy physical labor involving exposure to potentially dangerous chemicals, lack of education regarding health practices, the sharing of living facilities by unrelated individuals, and the number of individuals served by the structure may change the picture. For example, while crowding in and of itself may not be too problematic, crowding combined with poor ventilation and altered host susceptibility, such as might occur with inadequate nutrition, can result in rapid spread of any number of communicable diseases.

Second, perception of housing adequacy may be related to health and this factor is not taken into account in the present analysis. One study on perception of housing adequacy found that dissatisfaction with housing was associated with poorer health (Fuller *et al.*, 1993), presumably mediated through a relationship between housing dissatisfaction and stress. Other studies have found that perception of crowding rather than the actual number of people per room is related to mental health. Although research on this topic is limited, it may speak to the need to involve workers in discussions of what they perceive to be the most important elements of housing so that satisfaction is maximized.

Third, when assessing the importance of housing and health for a specific group of people, it may be informative to look at causes of morbidity and mortality among that group. For example, in Washington state, farm workers constitute a large portion of workers occupying temporary housing. Between 1988 and 1991, proportionate mortality ratios for homicide and motor vehicle accidents were high among Washington's farm workers. Earlier data (1976-1989) indicate high proportionate mortality ratios for tuberculosis, pneumonia and several non-infectious diseases of the respiratory system, as well as motor vehicle accidents and homicide. Thus, housing conditions which may foster these causes of death may be particularly important for temporary housing provisions in Washington.

Fourth, the work group would like to note that while adequate housing is important for health and safety, it does not guarantee good health and safety, but rather sets the infrastructure to reduce risk of injury and communicable disease. Health and safety

education is important so that facilities are used in a manner consistent with healthy practices.

Finally, while scientific documentation may make a strong case for the importance of a specific provision, the work group recommends that policy makers not under value the contribution that experience may play in this area. Public health experience related to temporary living conditions grows out of many years of field experience in diverse situations, such as refugee camps, military operations, and temporary worker housing. While much of this knowledge has not been formally tested using scientific methodology, the work group feels that both experience and common sense have much to offer in determining health and safety issues related to temporary worker housing.

The remainder of this document discusses the specific provisions in WAC 246-358. The title of each section of the WAC is in bold and the text of the WAC is underlined. Although there are many interrelated or repeated provisions, we have cross-referenced only in instances where text would be repeated (i.e., our response to both provisions is identical) or where we thought additional explanation was necessary. There are many instances where part of another response is relevant, but we did not cross-reference, since the explanation seemed clear without the cross-reference. For example, many provisions are to prevent rodents and insects from entering or breeding in the housing. A discussion of health and safety factors associated with rodents and insects occurs in subsection 246-358-155, but we do not refer the reader to that section every time we discuss rodents and insects.

We have provided references only where we have cited specific documents or studies. We do not provide references in cases where we believe information relating housing conditions to health and safety is well-established and available from a variety of sources either in the literature or in some cases, through expert testimony based on experience.

WAC 246-358 defines temporary worker as "a person employed intermittently and not residing year-round at the same site. Temporary worker housing is defined as "a place, area or piece of land where sleeping places or housing sites are provided by an employer for his or her employees or by another person, including a temporary-worker housing operator, who is providing such accommodations for employees for temporary seasonal occupancy, and includes "labor camps" under RCW 70.54.110.

WAC 246-358-045 Location and maintenance.

(1) An operator shall locate housing:

(a) To prevent a health or safety hazard:

Response: Housing which is not located to prevent health and safety hazards would, by definition, pose health and safety hazards to occupants.

(b) On well-drained sites to prevent standing water from becoming a nuisance:

Response: Standing water on a building site (under or near a building) could:

- compromise on-site sewage disposal and drinking and/or surface water quality depending on the location of such systems in relation to the standing water;
- serve as breeding sites for mosquitoes capable of carrying human pathogens;
- serve as a water source that attracts rodents and other mammals which could carry human pathogens; and
- create conditions for mold (fungal) growth in structures which could lead to human illness.

Sections 055 and 065 discuss the importance of clean water and proper sewage disposal, respectively. Section 155 discusses vectorborne human pathogens and Section 165 discusses the importance of rodent and insect control. Exposure to molds can produce allergic responses including asthma, rhinitis, hypersensitivity pneumonitis, and other respiratory effects. Direct dermal contact with molds can elicit skin rashes. Children appear to be more sensitive than adults to mold exposures. Molds produce mycotoxins which may be related to additional health effects from exposure to molds in indoor air including immunosuppressant effects. (Samson *et al.*, 1994)

(c) 500 feet or more from a livestock operation unless the department or contracted health officer determines that no health risk exists:

Response: Conditions at livestock operations (dairy farms, corrals, feedlots, slaughterhouses) including animals, feces, animal feed and water may attract rodents and insects (flies, mosquitoes) capable of carrying human pathogens. Additionally, odor is a nuisance problem associated with livestock operations in close proximity to housing, especially if prevailing winds are toward the housing. Distancing housing from livestock operations will reduce the likelihood of odors, rodents and flies reaching the housing units and residents. However, the 500 feet distance may or may not be outside the range of rodents and insects depending on the species and in the case of insects, weather conditions.

(d) More than 200 feet from swamps, pools, sink holes, or other surface collections of water unless provisions are taken to prevent the breeding of mosquitoes:

Response: Mosquitoes can carry human disease-causing organisms and transmit them via biting to humans. These bodies of water may also attract rodents and other animals capable of carrying human disease-causing organisms. It is unlikely that 200 feet is outside the range of most mosquitoes or small animals. While most residential zoning codes do not include a set-back distance of 200 feet from surface water, differences in the nature of permanent versus temporary housing may be relevant in considering safety issues, especially for children, associated with housing near water. Residents in permanent housing likely have greater ability to construct safe play areas away from the water (e.g., fenced in yards) helping to ensure that young children are not unsupervised when by the

water. Without safe play areas and appropriate supervision, bodies of water pose a potential danger for children who do not know how to swim. However, it is not likely that this provision is based on this concern, because 200 feet is probably not sufficient to prevent young children from walking to the body of water.

(e) On sites sufficient in size to prevent overcrowding of necessary structures:

Response: This seems to refer to population density (crowding of structures) and not crowding within structures (see 246-358-075.5). Studies on the relation of population density to health are inconclusive, but do not suggest a strong relationship between health and population density. However, overcrowding of structures can be problematic if their positioning inhibits access by emergency vehicles, or if there is insufficient space for septic system drainage fields and/or insufficient space for proper separation between drainage fields and water sources. Fire hazard may also be increased by the crowding of structures.

(2) An operator shall ensure that the housing site is maintained at all times in a sanitary condition free from garbage and other refuse:

Response: In the Centers for Disease Control and Prevention (CDC) Vectorborne Disease Control Training Manual, sanitation is described as "the control of insects and rodents of public health importance." One of the goals of maintaining "a sanitary condition free from garbage" is to discourage the presence of insects and rodents at the housing site. Garbage and other refuse can provide food, water, shelter, and a breeding environment for insects and rodents. Insects and rodents have been shown to carry infectious diseases which can be transmitted to humans. (See Section 246-358-155.) Increased human contact with insects and rodents at the housing site means an increased likelihood of exposure to an infectious disease, a physical injury from a rodent bite, and the nuisance factor resulting from insect bites. Rodents may also chew the plastic insulation on electric wiring which has been documented as a cause of fires.

We have concerns about the operator being required to maintain sanitary conditions at all times. Conditions which will attract insects and rodents could be the result of negligence by the operator or the residents in the housing unit. The flow of garbage is:

- 1) storage in adequate, leak-proof smaller container in the housing unit;
- 2) movement to a larger container outside when the smaller, inside container is full;
- 3) removal of the contents of the larger outside container on regular basis; and
- 4) appropriate disposal at a licensed disposal site.

Generally, tenants or residents are responsible for the first two steps listed above. For the operator to oversee these steps would require some type of routine inspection. However, given that the housing is temporary and the workers cannot reasonably be expected to provide the smaller and larger bins themselves, the operator should be required to provide adequate bins for the garbage storage. Generally, the landlord or operator would be responsible for step 3 or steps 3 and 4, if the operator did not contract step 3 to a licensed

garbage collector. Based on experience, if proper facilities are not available, garbage will be allowed to accumulate until it is eventually burned.

While maintenance of sanitary conditions is essential for good health, assignment of responsibility for maintaining these conditions is a policy, not a scientific, decision. Proper storage of garbage both inside and outside of the housing unit would be a good health education topic.

WAC 246-358-055 Water supply. An operator shall

(1) Provide an adequate, convenient water supply from an approved source as described in chapter 246-290 WAC (Drinking Water Regulations):

(a) For housing existing prior to August 1, 1984, maintain and operate the water system in accordance with chapter 246-290 WAC:

(b) For housing constructed after August 1, 1984, design, construct, maintain, and operate the water system in accordance with chapter 246-290 WAC:

Response: The importance of potable water for health has been adequately documented. Lack of adequate potable water leads to dehydration which has been associated with illnesses such as kidney stones, and in the extreme, death. In addition to concerns related to dehydration, unregulated or improperly regulated drinking water can be an important source of exposure to disease-causing agents or toxins. The regulations are a governmental approach to maintaining separation between humans and waterborne disease-causing agents by assessment and, if needed, control of water quality. The regulations are not always based on scientific studies that have definable levels of certainty. Rather, they may be based on experience over many years (decades, if not centuries). Once scientific cause-effect relationships are discovered, scientific standards may be set to mitigate a potential disease risk (e.g., chlorine doses to effect bacteria kill), but standards may also be based on logic and reason. We suspect many standards come from the latter approach.

In the absence of a readily available source of drinking water, consumers have been known to seek and use whatever sources are most easily obtained. Sources available may not be approved in the sense that the water quality is subject to contamination by microbiological or chemical agents, and as such, pose a risk to the health of the consumers. Approved sources are those which have been determined to pose a minimal threat to health and are considered to reduce health risks to consumers, or have been sufficiently characterized to allow development of treatment methods which can render the water safe to drink.

The drinking water regulations constitute the basic foundations for public health protection for water supplies, including water quality requirements, system construction, system operation, and system maintenance. The availability of an adequate, convenient water supply from an approved source is important for health.

Although WAC 246-290 refers specifically to drinking water supplies, an adequate, convenient water supply is also important for hand washing and other aspects of personal hygiene, such as showering and clothes washing, all of which have been demonstrated to reduce transmission of infectious and/or toxic agents.

(2) Provide a water system:

(a) Capable of delivering 35 gallons per person per day to the housing site at a peak rate of two and 1/2 times the average hourly demand; and

Response: The provision of 35 gallons of water per person per day may be sufficient, although somewhat marginal. We were unable to find scientific evidence for specifying the number of gallon per day. Most likely, the specification of gallons per day has been developed through experience. For comparison, the Uniform Plumbing Code and/or the American Waterworks Association recommend 50 gallons per person per day for semi-permanent construction camps, 50 gallons per person per day for cottages with seasonal occupancy, 35 gallons per person per day for tourist camps with central bath and toilet facilities and 60 gallons per person per day for multiple family dwellings.

If 35 gallons are to be delivered per person per day, average hourly demand is 1.46 gallons per person per hour (35 gallons/24 hours). Two and 1/2 times this rate gives a peak rate of 3.65 gallons per person per hour (1.46 gallons/hour x 2.5) which must be capable of being delivered at the appropriate pressure. (See subsection b below.) We question whether this would be sufficient to meet peak demand.

(b) With distribution lines capable of supplying water at normal operating pressures to all fixtures for simultaneous operation:

Response: "Normal operating pressure" needs to be defined in terms of a minimum pressure. Pressure fluctuations may put the water system at risk of contamination from back siphonage. WAC 246-290 requires a consistent residual pressure of at least 20 pounds per square inch (psi) be maintained in all portions of a public water system to prevent potential contamination from back siphonage. Additionally, consistent water pressure is convenient for showering and hand washing. A lack of consistent water pressure may dissuade or prevent residents from these activities.

(3) If water is not supplied solely by a community water system submit a water sample to a department-certified laboratory for bacteriological quality testing each year prior to opening housing in accordance with WAC 246-290-300:

Response: Microbiological quality of drinking water, based on the use of an indicator organism (coliforms), is important to ensure protection from waterborne pathogens. Documentation is available to show the relative safety associated with drinking water that has been tested and found to be negative for coliforms. Although this indicator bacterium

is not 100% correlated with pathogen presence, it is the best available organism to test to ensure water that is relatively pathogen-free. The absence of coliforms has been widely accepted as an indicator of water that is bacteriologically safe to consume. Bacteriological testing is the only method of determining that water is free of coliforms.

NOTE: Chemical water quality is not discussed. By definition, temporary housing is housing which is not occupied year round and therefore, there may be relatively short exposure periods for workers in temporary living situations. Short term exposure to relatively low levels of organic and inorganic compounds would not pose an immediate health threat. The health importance of exposure to these elements and compounds derives from cumulative chronic exposure. Nonetheless, since people living in the housing may be exposed to organic and inorganic compounds in other living or work situations, it may be prudent to at least examine the water quality where we feel the sources of water are relatively vulnerable to contaminating influences, such as pesticides. For example, if the water sources are located in areas of known pesticide applications, we should look at whether the source is vulnerable to contamination to determine if testing may be warranted. For the inorganics, problems have been observed in fairly well-defined areas for elements or compounds such as arsenic or nitrate. If infants can be expected to be in residence at a housing site, we suggest that nitrates be examined so that the occupants can be informed of the risks. The same is true of arsenic in areas where we suspect it may be found.

(4) Delay the use of housing until bacteriological quality meets the requirements in WAC 246-290-310:

If the water quality does not meet the bacteriological requirements of the WAC, it is not safe to drink. However, alternatives, such as boiling the water before drinking or having the operator supply bottled water, may be preferable from a health viewpoint than delaying the use of the housing altogether. Whether health and safety are improved by delaying use of housing depends on what alternatives are available. However, non-potable tap water needs to be clearly labeled as such. (See subsection 8 below.)

5) Provide cold, potable, running water under pressure in, or within 100 feet of, each dwelling unit:

Response: The importance of the availability of potable water to health is well documented. We are not clear about the basis for "cold" or "running," although the absence of running water may introduce complications depending on how one obtains water from a non-running source (e.g., dipping into a water supply may lead to contamination of water). The majority of studies in developing countries looking at the relationship between disease and distance to water have shown decreases in infectious disease with decreased distance to water sources (Ersey *et al.*, 1991). However, some of the basis for this reduction was related to hygienic practices, such as hand washing, and so may not pertain to potable water, per se. Additionally, the basis for the 100 feet is unclear. The requirements seem to arise both from scientific evidence about the

relationship of availability of potable water to health and from what would be a societal norm for such housing situations.

(6) Provide one or more drinking fountains for each 100 occupants or fraction thereof if water under pressure is available:

Response: We do not know the basis for this requirement. Most single-family and multi-unit dwellings do not include drinking fountains. They are more common in dormitory settings, where access to kitchen and bathroom facilities may be limited. Under those circumstances, access to drinking fountains may be more than a convenience, if their presence allows people to drink adequate amounts of water to keep from becoming dehydrated (although this may be a more important issue during working hours away from the residence) or discourages use of common or inadequately cleaned drinking cups or storage of water in containers with potential for contamination. (See subsection 7 below.) We found no basis for the provision of one drinking fountain for every 100 occupants or fraction thereof. It is not clear what the health implications would be if 120 occupants were served by one fountain.

(7) Prohibit the use of containers from which water is dipped or poured, and common drinking cups:

Response: There have been outbreaks of waterborne disease related to portable outdoor water supplies, and Hepatitis B has been shown to be transmitted through common usage of items, such as cups. There is a consistent premise in the literature that use of a common cup and containers from which water can be dipped or poured are possible sources of exposure to infectious agents, because of the possibility of introducing contaminants into the water by hand or mouth. The main concern is to interrupt the opportunities for water contamination, which can logically be seen as a consequence of using common cups or containers from which water can be dipped. If containers are protectively sealed (like water containers used on work sites with spigots) and the water is not accessible by hand, then pouring water is likely to be safe. Pouring from open containers, however, is viewed as a risky practice.

(8) When water is unsafe for drinking purposes and accessible to occupants, post a sign by the source reading "DO NOT DRINK, DO NOT USE FOR WASHING, DO NOT USE FOR PREPARING FOOD." in English or marked with easily-understood pictures or symbols:

Response: See response to subsection 1. Drinking of water that is not safe for drinking is likely to cause acute illness. Since water which is unsafe for drinking often looks like water that is safe, marking the water as unsafe is the only way to assure that people know that the water is not safe. It is important to have the signs in a language that is understood by the population living in the housing. Therefore, we recommend that signs be in English and Spanish or other appropriate language. Since we do not know the literacy level of residents, we recommend that an easily recognizable icon be mandatory.

WAC 246-358-065 Sewage disposal. An operator shall:

(1) Connect sewer lines and floor drains from buildings to public sewers if public sewers are available;

(2) If public sewers are not available provide on-site sewage disposal systems designed, constructed, and maintained as required in chapter 246-272 WAC, chapter 173-240 WAC, and local ordinances;

(3) Ensure connection and drainage of sewage and waste water from all housing to a sewage disposal system approved by the jurisdictional agency.

Response to subsections 1-3: Improper sewage disposal has been connected with a variety of diseases including typhoid, paratyphoid, dysentery, poliomyelitis, cholera, hepatitis, and a variety of parasitic infections. The basis for the requirement for adequate sewage disposal is replete with studies and experience demonstrating adverse health outcomes associated with inadequate sewage disposal. Keeping sewage from contacting water, food, insects or people has a demonstrable benefit in terms of health protection. It is beyond the scope of this paper to review the basis for the specific sewage rules.

246-358-075: Construction and Maintenance. An operator shall:

1) Ensure construction provides protection against the elements and complies with applicable state and local ordinances, codes, regulations, and this chapter;

Response: Protection against the elements is a primary function of housing and allows people to continue with daily living functions important to health (e.g., cooking and sleeping) during inclement weather. In extreme conditions, lack of protection from the elements can result in direct adverse health events, such as frostbite.

While health and safety issues are related to the setting of many local and state ordinances, codes and regulations (e.g., fire hazards with improper electrical wiring, water contamination hazards with improper plumbing, potential of infectious disease spread with improper ventilation), it is beyond the scope of this document to review local and state building ordinances, codes and regulations to determine which are important to the health and safety of the occupants.

(2) Identify each dwelling unit and space for worker-supplied housing by posting a number at each site;

Based on experience, housing addresses in temporary living situations have been shown to be important in finding individuals who may have been exposed to infectious disease

or require some type of medical treatment. They are also important for locating of houses by emergency vehicles and identification when citing rules violations.

3) Maintain buildings and shelters in good repair and sanitary condition:

Buildings which are not maintained in good repair run the risk of becoming structurally unsound, allowing entrance by rodents or other small animals, and/or exposing occupants to the elements. Structurally unsound buildings pose a danger of unintentional injury to residents. Protection from the elements is discussed in subsection 1, above. Entry of rodents into buildings and health effects related to rodents are discussed in Sections 246-358-165 and 246-358-155, respectively.

Unsanitary conditions are linked to the spread of disease. For example, exposure to human and animal fecal material is associated with histoplasmosis, gastrointestinal disease, hepatitis and hantavirus. The presence of garbage in buildings may attract rodents and insects. (See Section 246-358-045.2.) While there are clear health and safety issues associated with maintaining sanitary conditions, based on experience, maintaining sanitary conditions requires activities on the part of both the operator and the residents.

4) Comply with chapter 51-20 WAC by providing two means of escape from sleeping rooms, foodhandling facilities, and rooms where fifty or more people congregate:

Response: Death and injury from fire occur when people trapped in burning buildings are burned, suffer smoke inhalation, or are trampled when many people are trying to escape. Provision of two means of escape (as opposed to one means of escape) increases the likelihood that people can exit a burning building, avoiding serious injury or death. It also allows two entrances for fire fighters to rescue people who have not yet escaped.

5) Provide at least seventy square feet of floor space for one occupant and fifty square feet for each additional occupant in each dwelling unit:

Response: Many infectious diseases with person-to-person transmission, as well as non-infectious conditions, such as homicide and psychological conditions, are known to be more prevalent when people live in crowded conditions. However, the vast majority of the studies documenting these associations do not control for other important variables which are associated with crowding, including poverty, malnutrition, sanitation, and smoking. One recent review of the epidemiology of acute respiratory infections noted that "Because respiratory infections are contagious diseases, general conditions of crowding favor their propagation....[However,] given the extreme level of confounding between malnutrition and crowding as risk factors for acute respiratory infection, it will require some considerable effort and care to tease out the separate effects of these factors" (Graham, 1990, p.160-161). Another author notes "One of the more widely held and cherished notions in medicine is that the spread of infectious disease is facilitated by crowding. This assumption underlies many of the research endeavors seeking to establish a relationship between housing and health, and has been accepted as a truism by policy

makers. There is little question that under certain circumstances crowding may be linked to an increased incidence of communicable diseases, but in other circumstances no such relationship has been discovered" (Fuller *et al.*, 1993, p.1418). A study by the same author found a relationship between perceived lack of privacy and subjective crowding and health outcomes, but found no relationship between objective measures of crowding and health.

The literature on psychological factors related to overcrowding is equally ambiguous. One study concluded that crowding decreased individuals' ability to cope with minor, daily stressors resulting in increased psychological distress symptoms (Lepore *et al.*, 1991). Other researchers have noted a relationship between crowding and mental health, but found that the relationship between the subjective experience of crowding and mental health is stronger than the relationship between persons per room and mental health (Gove and Hughes, 1984). This study also noted a relationship between crowding and both family discord and dissatisfaction with housing. The author cites two other studies which reported similar relationships. People from different cultures experience subjective crowding at different levels, and the experience of subjective crowding is also related to privacy needs which differ among cultures. One method of reducing subjective experience of crowding related to lack of privacy is to compartmentalize sleeping areas so that a large number of people are not sleeping and dressing in an open area.

Information on overcrowding from a safety perspective was not found in the scientific literature. However, overcrowding can make egress difficult in the event of a fire.

The literature on crowding generally defines crowding as persons per room and does not specify floor space. Studies in the U.S. and Canada generally have a smaller range of persons per room than do studies in the developing countries. For example, one study (Lepore *et al.*, 1991) looked at crowding in both the U.S. and India. In the U.S., residential density averaged 1 person per room with a range of 0.5 to 2. In India, investigators found an average of 3.5 person per room with a range of 0.5 to 11.

Even though the relationship between objective crowding and both mental and physical health is ambiguous, adequate living space for residents of temporary housing is important for a number of reasons.

- Under some circumstances spread of infectious disease is facilitated by people living in crowded conditions. Therefore, even though these circumstances have not been clearly delineated, it is prudent to avoid situations which may contribute to the spread of infectious disease. This may be particularly relevant for farm workers in Washington where the proportion of deaths due to tuberculosis and pneumonia are high compared to these causes of death in other workers.
- Interpersonal discord seems to be related to living in crowded conditions. Given the high proportion of deaths due to homicide among farm workers in Washington, it seems prudent to avoid conditions which may increase interpersonal discord.

- Both experience and common sense dictate that egress in the event of a fire is hindered in overcrowded conditions.

Unfortunately, we could not locate research or experiential guidance on what amount of space is sufficient space. The American Public Health Association (APHA)-CDC guidelines (Mood, 1986) require more space per person (150 square feet of floor space for the first occupant and 100 square feet of floor space for each additional occupant) than is required here, but the basis for these guidelines is unclear.

(6) Provide at least 7 foot ceilings and 50 square feet of floor space for each occupant in rooms used for sleeping purposes:

Response: See subsection 5 for a discussion of floor space. Relevant information about the relation of specific ceiling heights to health was not found. While ceiling heights may be a factor in the spread of airborne communicable disease in that lower ceiling heights reduce the cubic feet of air available per person, the issue is really proper ventilation, not ceiling height. (See subsection 9 for a discussion of the importance of proper ventilation.) There may be psychological factors associated with ceiling height. Several studies investigating this issue were recently identified and have been requested for review.

(7) Provide smooth and tightly constructed wood, asphalt, or concrete floors in good repair:

Response: The alternative to these types of floors seems to be earthen or rough floors, which may be more difficult to maintain in a sanitary condition. The floors need to be in good repair to prevent rodent entry and falls and to facilitate cleaning. It is not clear whether this provision is intended to prohibit the use of tile or sheet vinyl composition floor coverings. If so, the basis for a this prohibition is not clear.

(8) When wood floors are used, ensure floors are at least 12 inches above the ground at all points:

Response: This stipulation is most likely to prevent rodent access and to provide an air space for ventilation so that the wood stays dry. Keeping the wood dry prevents it from rotting and thus, is important for maintaining structural integrity. It may also prevent growth of mold. We do not know the basis for the precise specification of 12 inches. If the area between the ground and the floor is not properly screened, the area allows a living space for small animals.

(9) Provide a window area equal to 1/10 of the total floor area in each habitable room which opens 1/2 or more directly to the outside for ventilation:

Response: Fresh breathable air is a necessity for human life and health. Ventilation issues range from discomfort to disease transmission. The standards from the American

Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE) call for no less than 15 cubic feet per minute (CFM) of fresh outside air per person in dormitory style housing. This air is provided to dilute the by-products of human metabolism, such as CO₂, exhaled moisture, and biological aerosols. This dilution air is also provided to compensate for the use of cooking appliances which generate products of combustion like CO, NO₂, and SO₂, which when allowed to build up in a non-ventilated area will result in direct deleterious human health effects. Further justification is found in dilution of personal hygiene products, such as pressurized deodorant sprays and antifungal sprays, which may become toxic in non-ventilated areas and/or cause adverse reactions in sensitive individuals sharing the same living space.

It is important to dilute contagious human pathogens to a level that does not pose a disease risk to those in close proximity to someone who is ill. Several well documented cases exist with regard to overcrowding and under-ventilation resulting in the transmission of disease. While the spread of diseases like pneumonia and tuberculosis has been documented, there is also the likelihood that the common cold and flu may be spread at higher rates in overcrowded and under-ventilated situations. (While this may seem to contradict the information in subsection 5, the response to subsection 5 notes that under certain circumstances, spread of infectious disease is facilitated by people living in crowded conditions. Lack of adequate ventilation combined with the presence of disease carriers is undoubtedly one of those circumstances.)

Whether windows equal to one-tenth the floor area, which open half way, will also allow proper air movement to assure that the room is properly ventilated depends on a number of factors, such as size, number, and placement of windows, and wind direction. (From this perspective, opportunities for cross-ventilation should be taken.) The stipulation that the window open directly to the outside is to ensure that the air coming into the room is not contaminated by products affecting indoor air quality in adjacent rooms. Additionally, intake windows must not be by an exhaust vent from something else.

(10) Provide effective 16-mesh screens on all exterior openings, and screen doors equipped with self-closing devices:

Response: Screens reduce the likelihood of insects and animals, such as bats, rodents and snakes, which may carry disease or toxins, from entering the house. Flies can transmit enteric bacterial disease by physically transmitting bacteria from human feces to food items completing the fecal-oral route of transmission. Mosquitoes may also carry disease. Scratching of bites from insects may also result in skin infection when living conditions are not sanitary. (See Section 246-358-155.) Bats are known to carry rabies in Washington. Rodents carrying hantavirus have been identified in Washington and rattle snakes live in eastern Washington and the Cascade mountains. Sixteen mesh screens on exterior openings will prevent flies and most species of mosquitoes from entering housing units. They will also discourage entry by animals.

(11) Provide electrical service to include at least one electrical ceiling-type light fixture and at least one separate floor-type or wall-type convenience outlet in each habitable room.

Response: This section refers to provision of electric light, as well as provision of electricity through a wall outlet.

Electric lighting: Most of the scientific literature on lighting relates to possible adverse health outcomes associated with over-illumination and/or fluorescent lighting, including damage to the eyes and skin and concerns about malignancies, such as malignant melanoma. However, concerns about fluorescent lighting seem to be limited to people who spend "much of their time" under such lighting, such as indoor workers (Abramov, 1985). Therefore, these concerns would probably not apply to housing for temporary workers and their dependents. Another aspect of light and health is the relationship of natural light to seasonal affective disorder. While seasonal affective disorder may be alleviated by exposure to specific spectra of artificial lighting, the type of lighting necessary is not considered residential lighting and so is not relevant to this discussion. One recent reviewer concluded that "the health and biologic effects of environmental lighting are not well understood and will likely remain so indefinitely" (Levin, 1995).

There are, however, common sense health and safety reasons for the provision of electric lighting in all rooms. The danger of injury from falls and encounters with insects and animals is reduced in areas with adequate lighting. The potential for unintentional injury related to using equipment, such as stoves, knives, scissors, etc., is diminished with adequate lighting. Sanitation may be improved in foodhandling, bathing, toilet and laundry facilities with lights. People may be reluctant to use facilities without lighting and may seek less sanitary alternatives. Finally, the failure to provide adequate lighting may result in people using relatively less safe means of lighting, such as kerosene lamps or candles, resulting in increased risk of fire.

Provision of outlets for electricity: Most of the scientific literature concerned with the provision of electricity concentrates on possible adverse health effects of electricity production, such as air pollution from oil-powered generators and exposure to ionizing radiation from nuclear power plants. Recently, much of the scientific literature has concentrated on potential adverse health effects of exposure to electromagnetic fields. We were unable to find studies which documented improvements in health associated with provision of electricity, per se. There may be some comfort and convenience issues associated with the provision of electric outlets. Interestingly, the APHA-CDC recommended minimum housing standards (Mood, 1986) require provision of electricity only if there is usable electric service readily available from power lines which are not more than 300 feet away from the dwelling. If electric outlets are provided, based on experience, it may be important to assure there are a sufficient number of outlets to minimize use of potentially less safe alternatives. We do not know whether 1 per habitable room is sufficient. Michigan law requires 2 outlets per room. Other codes are based on the size of the room.

(12) Provide a minimum of 30 footcandles of light measured 30 inches from the floor in dwelling units:

Response: According to a recent reviewer, "research on task performance and accuracy ... led to new lighting standards (as published by the IES [Illuminating Engineers Society]), which raised recommended task illumination levels by 250-500% in the late 1950s and early 1960" (Levin, 1995, p.80). The same author notes that standards in industrialized Western European countries are 30-70% of the U.S. IES recommended levels. Additionally, data from the Illuminating Engineers Research Institute (IERI) show that "performance tasks are only marginally (3-7%) impaired at illumination levels only 10% of those recommended by IERI" (Levin, 1995, p.80).

A preliminary review of office lighting (ANSI/IESNA, 1993) and industrial standards (ANSI/IES, 1979) indicates that 30 footcandles may be enough light to perform most residential tasks, by most residents. For example, 20, 30 or 50 footcandles are recommended for reading newsprint and magazines in offices, depending on the age of the people and the importance of speed and accuracy. For people over age 55 years, where speed and accuracy are important, 30 footcandles are recommended. If speed and accuracy are critical, 50 footcandles are recommended. However, for people ages 40 to 55 years, 30 footcandles are recommended for tasks where speed and accuracy are either important or critical. The same intensities are recommended for writing with a number 2 pencil or a ball-point pen. Most daily living tasks can probably be accomplished at lighting intensities sufficient to read a newspaper or write with a ball-point pen. There may be some tasks, however, which require stronger lighting intensities. The 1993 ANSI/IESNA office lighting standards recommend 50, 75 or 100 footcandles for reading a telephone book, depending on the person's age and the importance of speed and accuracy. The 1979 ANSI standards for industrial settings recommend 70 footcandles for the first aid room.

The APHA-CDC (Mood, 1986) recommended minimum housing standards do not recommend lighting intensities except for public halls and stairways in multiple unit dwellings, where at least ten footcandles of light are recommended.

(13) Ensure wiring and fixtures are installed in accordance with department of labor and industries regulations, RCW 19.28.070 and local ordinances, and maintained in a safe condition:

Response: Reexamination of the RCW regulating the installation of wiring and fixtures is beyond the scope of this assignment. However, improperly installed and/or poorly maintained wiring and fixtures increase risk of fire and electric shock.

(14) Ensure heating, cooking, water heating, and other electrical equipment is installed in accordance with state and local ordinances, codes, and regulations governing such installation:

Response: See subsection 13.

(15) Provide adequate heating equipment if camp is used during cold weather:

Response: Although there are regulatory guidelines which address the issue of adequacy of heating equipment (for example, the federal Employee Housing Act), from a scientific perspective, there are health and safety factors related to fumes from improperly vented heating equipment and to potential for fire related to some types of heating equipment, such as some types of portable heaters.

The temperature to which the equipment can heat also reflects the adequacy of the heating equipment. Cold temperatures, per se, do not seem to be a risk factor for disease. Most of the scientific literature on home heating temperature concerns hypothermia and the elderly. An indoor air temperature of 70 degrees Fahrenheit seems sufficient to prevent hypothermia in the elderly (variously defined as over 65 or over 75 years old). Hypothermia may be triggered by "mildly cool temperatures of 60 to 65 degrees Fahrenheit, particularly in those 75 years of age and older" (Macey, 1989). It is likely that people less than 65 years old with no chronic illnesses and adequate clothing are not at risk for adverse health outcomes at lower temperatures. One article suggests that health factors seem to be unimportant in any decision to lower the temperature of [college] campus buildings to as low as 60 degrees Fahrenheit (College Health, 1974). The same author cites a study on manual performance as finding the lowest incidence of minor accidents among workers when the temperature in which they were working was between 65 and 68 degrees Fahrenheit.

From a comfort viewpoint, a recent review article on physical factors in the indoor environment states that temperatures between 68 and 78 degrees Fahrenheit are expected to satisfy 80-95% of building occupants, although the author questions the upper boundary and provides evidence that people find air quality less acceptable as temperatures increase above 68 degrees Fahrenheit (Levin, 1995). A study of office workers in San Francisco cited in the same article found that 72.5 degrees Fahrenheit was the temperature at which fewest people were dissatisfied. Radiant temperature from surrounding surfaces, air movement and humidity interact with room temperature in affecting comfort level.

Based on experience, in the absence of adequate heating equipment, tenants find alternate methods of heating which often pose health and safety risks.

(16) Ensure that operator-supplied trailers and recreational vehicles manufactured after July 1968 display a Washington state department of labor and industries insignia as required in chapters 296-150A and 296-150B WAC:

Response: These WACs refer to regulations for factory-built structures and mobile homes. It is beyond the scope of this assignment to review whether these WACs are based on health and safety concerns.

(17) Follow the compliance schedule established with the department or contracted health officer when existing housing fails to meet the requirements in this chapter.

Response: It is reasonable that a compliance schedule needs to be followed to assure that structures which are not in compliance come into compliance. However, it is beyond the scope of this paper to review the compliance schedule to determine whether it is reasonable to assure health and safety. While many of the provisions in WAC 246-358 are related to health and safety, non-compliance with some of the provisions poses more immediate or greater health and safety risks than does non-compliance with other provisions. We have not investigated how different provisions are scheduled for compliance.

WAC 246-358-090 Laundry facilities. An operator shall provide laundry facilities including:

(1) Hot and cold running water under pressure for laundry adequate to meet the needs of occupants as determined by the department or contracted health officer;

(2) One laundry tray or tub, or one mechanical washing machine, for each 30 occupants, or fraction thereof, specified on the operating license;

(3) At least one slop sink in each building used for laundry;

(4) Facilities for drying clothes;

Response to subsections 1-4: To reduce the opportunity for disease transmission, it is important to wash clothes that may have become contaminated with either chemicals or disease-causing organisms. There is documentation supporting the transmission of chemical contamination (e.g., lead) through clothing. Disease-causing organisms, such as infectious causes of diarrhea or hepatitis, have been documented to be transmitted through clothing and bedding. Laundering with hot water is effective in preventing disease transmission by these means. See Section 246-358-095.1a below, for further elaboration of the importance of hot water. While a slop sink (utility sink) is a convenience, it does not seem to be essential to health and safety as long as residents understand and use acceptable alternatives to disposing of waste water which is likely to clog normal sinks. Many residences do not contain slop sinks.

(5) Sloped, coved floors of nonslip impervious materials with floor drains;

Response: Sloped, coved floors and floor drains are to prevent water from accumulating in these areas and to ensure that laundry waste water is properly disposed of. Accumulation of water would allow for breeding of certain insects, and may attract rodents or other small mammals. Even without water accumulation, the floors in laundry

facilities are likely to become wet, and possibly wet and soapy. Nonslip floor materials are important for reducing the likelihood of falls in the facilities. Impervious materials are important in areas that are likely to become wet to ensure the structural integrity of the flooring and allow for surfaces which could harbor bacteria, fungi, or molds using residual organic matter from human uses, to be readily cleaned, thus allowing greater protection from these organisms. These requirement may ensure more use of these facilities so that alternate, less sanitary, methods would not be as attractive.

(6) At least 1 electrical ceiling or wall-type convenience fixture;

Response: See Section 246-358-075.11.

(7) 30 footcandles of light measured 30 inches from the floor;

Response: See Section 246-358-075.12. In industrial settings, 30 footcandles are recommended for washing (ANSI/IES, 1979). However, higher intensities are recommended for other tasks (ironing, weighing, listing, marking, etc.), which may or may not be relevant to residential settings.

WAC 246-358-095 Bathing and handwashing facilities. (1) An operator shall:

(a) Provide hot and cold running water under pressure for bathing and handwashing adequate to meet the needs of occupants as determined by the department or contracted health officer;

Response: Hot water is more effective in cleansing than cold water. The kinetics of soap's reaction with dirt (minerals, calcium, oils, etc.) is enhanced with hotter water and is, thus, made more effective for body/hand cleansing and clothes washing. (However, there is a documented risk of scalds and burns with water above 55 degrees Celsius.) Additionally, based on experience, when only cold water is provided people are less likely to wash their hands and bathe. See Section 246-358-055.2b for a discussion of the importance of having the water under pressure. (In some areas, both growers and farm workers have expressed the desire for a "rinse off" space outside of the living unit to hose off and remove clothing before entering the dwelling to shower. They are aware of the need to remove pesticides and dirt from their bodies and clothing before entering the dwelling to avoid contamination of the eating and sleeping areas.)

(b) Provide at least 1 electrical ceiling or wall-type convenience fixture.

Response: See Section 246-358-075.11.

(c) Provide 30 footcandles of light measured 30 inches from the floor.

Response: See Section 246-358-075.12. The ANSI/IES 1979 standard for locker rooms and showers in industrial settings is 10 footcandles. We have not looked into the reason for what appears to be a large discrepancy.

(2) An operator providing centralized bathing or handwashing facilities shall meet the requirements of subsection (1) of this section, and:

(a) Provide the number of handwashing sinks and shower heads as follows:

Handwashing sinks: 1 per each 6 persons or fraction thereof.

Shower heads: 1 per each 10 persons or fraction thereof.

The number of persons shall be calculated by subtracting the number of occupants sheltered in dwelling units that contain individual facilities from the maximum occupancies approved for both operator-supplied and worker-supplied housing.

Response: These are Occupational Safety and Health Administration's (OSHA) requirements ("Minimum Requirements for Sanitation in Temporary Labor Camps"). While they may come from studies in the workplace where factors such as productivity, convenience, reasonableness, etc. are taken into account, we did not locate those studies and so we do not know the basis for these requirements. Even if there are studies relating number of sinks and showers in the workplace to health and safety, it is not clear how they would translate to residential settings. Health may be at issue if the availability of these facilities is so limited that people forego or seek alternative means for washing and showering, rather than waiting. Thus, while there are health implications regarding the availability and accessibility of these facilities, we are not aware of the basis for these specific requirements. We are aware that others codes or laws have different specifications. For example, the federal Employee Housing Act requires 1 sink per 10 occupants.

(b) Provide a means to maintain a temperature of 70°F during cold weather.

Response: See Section 246-358-075.15. Based on the discussion in that subsection, maintenance of a temperature of 70°F may not be supportable, although that discussion does not specifically address temperatures in bathing facilities.

(c) Ensure bathing and handwashing facilities are maintained in a clean and sanitary condition

Response: The importance of maintaining clean sanitary conditions is discussed in Section 246-358-045.2. In addition to those considerations, an additional issue may be safety related to water on the floor in bathing and handwashing facilities. Even with nonslip surfaces, water on the floor may increase the potential for falls. Unsanitary conditions may also discourage use of the facilities. While the maintenance of clean and sanitary conditions is a health and safety issue, the assignment of responsibility for maintaining clean and sanitary conditions is policy decision.

(d) Provide one slop sink per building used for handwashing and bathing.

Response: While a slop sink (utility sink) is a convenience, it does not seem to be essential to health and safety as long as residents understand and use acceptable alternatives to disposing of waste water which is likely to clog normal sinks. Many residences do not contain slop sinks.

(e) Provide shower rooms with:

(i) Sloped, coved floors of nonslip impervious materials;

(ii) Floor drains; and

(iii) Smooth, water impervious walls and partitions to the height of splash.

Response: See Section 246-358-090.5.

(f) Provide cleanable, nonabsorbent waste containers.

Nonabsorbent waste containers are important in areas which are likely to become wet so that they remain intact and can be easily cleaned to prevent harboring of mold and bacteria. See discussion in Section 246-358-045.2.

(3) An operator providing bathing or handwashing facilities in dwelling units shall meet the requirements in subsection (1) of this section, and request occupants to maintain bathing, handwashing, and toilet facilities in a clean and sanitary condition.

Response: See subsections 1 and 2c. The latter part of this provision recognizes that maintaining these facilities in a clean and sanitary condition is the joint responsibility of the operator and the tenant.

WAC 246-358-100 Toilet facilities. (1) The operator shall:

(a) Locate each toilet in a toilet room which is accessible without passing through a sleeping room:

Response: A "toilet room" indicates that each toilet is separated from other toilets and habitable areas. This is probably important for societal and cultural reasons. People may not use the toilets if they do not have privacy. Rather, they will look for alternate places for elimination and that may lead to the possibility of disease spread from human waste. We are not aware of the basis for the provision that the toilets be accessible without passing through a sleeping room. This may be to prevent disturbing others at sleep, to minimize accidents that could occur in the dark of the sleeping room (e.g., tripping over others or things), to maintain the privacy of those sleeping, or to ensure that the toilet is available at all times.

(b) Provide a window not less than 6 square feet in area opening directly to the outside, or other satisfactory ventilation.

Response: See discussion of ventilation under Section 246-358-075.9. In addition to the issues discussed in Section 246-358-075.9, proper ventilation in the toilet area is important so that people do not use less sanitary alternatives. As discussed in Section 246-358-075.9, adequate ventilation depends on a variety of factors, not just the size of the window. "Proper ventilation" is a vague term. A specific air flow rate needs to be indicated.

(c) Provide water flush toilets unless privies or other methods are specifically approved by the department or contracted health officer according to requirements in chapter 246-272 WAC:

Response: Provision of toilets is basic to reducing disease carried by human fecal matter. (See Section 246-358-065.) However, based on experience, there seems to be conflicting views of the desirability of prioritizing flush toilets compared to privies. The disposal system for flush toilets which are not connected to city sewage systems would need to be approved. While it is beyond the scope of this report to assess the health and safety issues related to WAC 246-272, this WAC regulates on-site sewage systems which is necessary to assure proper sewage disposal and integrity of the water supply (see Sections 246-358-055 and 246-358-065).

(d) Locate pit privies, when approved, at least 100 feet from any dwelling unit, space, or foodhandling facility:

Response: The separation from the point of the contamination potential to the inhabited area is at issue. We did not find the basis for the 100 foot distance. If properly maintained and located down wind from the prevailing winds, odor would not be problem at distances less than 100 feet, based on experience. Based on experience, it is unlikely that 100 feet separation is far enough to mitigate disease transmission from flying or crawling insects. Therefore, the privy needs to be properly constructed and maintained with screened ventilation. Given these constraints (down wind, properly maintained, screened ventilation), experience leads us to conclude that distances of less than 100 feet may be preferable to encourage use of the privy, especially during the night.

(e) When vault privies or chemical toilets are approved:

- (i) Locate at least 50 feet from any dwelling unit, space, or foodhandling facility:
- (ii) Maintain a service contract for sewage pumping with a licensed waste disposal company; and
- (iii) Comply with local ordinances:

Response: Based on experience, certain waste receiving devices can be located nearer to the user groups if they are maintained and operated in an appropriate manner. The possibility of contamination from human wastes increases if these devices are not

pumped appropriately. The health and safety issues related to the local ordinances are not known, but based on experience, some local ordinances may not reflect best current knowledge.

(f) If urinals are provided, cover the floor with a material impervious to moisture for a radius of not less than 15 inches from the outer edge of the urinal, and from the urinal to the wall:

Response: The 15 inch criteria most likely developed from a combination of experience and logic. The reason for the impervious materials is most likely to preclude problems with urine accumulation on floors which cannot be readily cleaned. This is seen mostly as an aesthetic consideration, since human urine is not considered an important risk factor for disease transmission in Washington. While human urine can play a role in the transmission of typhoid and paratyphoid fevers, this is not a large concern in Washington. Although it is not impossible that a carrier of typhoid or paratyphoid from an endemic region outside of the United States might be housed in temporary housing in Washington, spread of disease related to urinals is viewed as remote. Hand washing after elimination and before preparing food and/or eating, and maintaining the integrity of the water and sewage systems are viewed as more important to infectious disease control.

(g) Provide an adequate water flush in urinals if water under pressure is available.

Response: This is most likely for aesthetic purposes. See the discussion of the role of human urine in disease transmission in subsection 1f above.

(h) Connect sinks and bathing facilities through properly trapped floor drains to an approved disposal system.

Response: Wastes disposed through these facilities should be removed from the area to prevent flooding, or accumulation of water which could promote growth of mold or bacteria or provide breeding areas for insects. This provision also has aesthetic importance, and facilities are more likely to be used if waste water is properly drained. Proper traps are to prevent odors, insects and small animals from entering the facilities. Use of an approved disposal system is important to prevent potential contamination of soil, ground water and/or surface water by wastes from these facilities.

(i) Provide an adequate supply of toilet paper in each toilet room, privy, and chemical toilet compartment.

Response: The basis for this provision is most likely that the use of toilet paper is normative in this culture. It is reasonable to expect that the potential for disease transmission through the fecal-oral route will be decreased by the use of toilet paper combined with proper hand washing. (In this regard, supply of water and soap is important also.) Additionally, based on experience, when toilet paper is not available, people will use a wide variety of alternatives, such as newspaper, magazine paper,

plastics, leaves, sticks and rocks. If thrown into a toilet, these items may compromise the integrity of the sewage disposal system. (See Section 246-358-065) If not thrown into the toilet, these items, which will contain fecal material, may become health hazards in their own right. Thus, based on experience, it appears that provision of toilet paper (as well as hand washing facilities) may be important in decreasing potential for disease spread through the fecal-oral route. While responsibility for provision of toilet paper is primarily a policy issue, given that residents of temporary housing are, by definition, relatively mobile, it may make sense for the landlord to provide toilet paper (and soap) under these circumstances, even though the tenant is usually responsible for provision of toilet paper in dwelling units occupied by families or small numbers of unrelated persons. Provision of toilet paper in central toilet facilities seems standard in this culture.

(j) Provide at least 1 electrical ceiling or wall-type convenience fixture.

Response: See Section 246-358-075.11.

(2) An operator providing centralized toilet facilities shall meet the requirements of subsection (1) of this section, and:

(a) Provide 1 toilet per 15 persons of each sex with a minimum of 2 toilets for any facility shared by men and women;

Response: Provision of toilets is essential so that people do not use less sanitary options. While people may use less sanitary options if waiting times to use toilets are too long, we found no evidence for one toilet per 15 people as an optimum ratio. Other codes specify different ratios. For example, the federal Employee Housing Act specifies one toilet per 10 people. A discussion of latrines in refugee situations suggests that one latrine per 10 to 15 people is suitable. (Simmonds *et al.*, 1983) To comply with subsection 2c below, at least two toilets would be necessary for a facility shared by men and women. (See subsection 2c below.)

(b) Locate toilets within 200 feet of the door or each sleeping unit.

Response: We are not aware of studies showing this distance to be critical with respect to health and safety. Based on experience, 200 feet may be too far away, and people may seek alternatives, especially at night.

(c) Separate toilet rooms for men and for women with solid walls or partitions extending from the floor to the roof or ceiling.

We found no scientific evidence relating to health and safety for the provision of separate facilities for men and women. There did not seem to be a consensus on the importance of this provision based on experience. However, to the extent that this provision recognizes a cultural standard for separate facilities for men and women, compliance with this norm

will encourage use of these facilities as opposed to less sanitary alternatives, which could lead to spread of disease by the fecal-oral route.

(d) Clearly mark each room for "men" and for "women" by signs printed in English and in the native language of the persons occupying the camp, or marked with easily-understood pictures or symbols.

Response: This provision seems to be based in common sense. If the facilities are to be separate, there must be some means of distinguishing the men's from the women's facilities. Easily-understood picture or symbols are preferable to obviate concerns with literacy.

(e) Provide natural or artificial light 24 hours per day equal to 20 footcandles of light measured 30 inches from the floor.

Response: The requirement for light 24 hours per day is important for both health and safety. This seems to be based on common sense. For safety, light is important to lessen the possibility of injury due to falls and lessen the possibility of bites from insects or small animals. From a health viewpoint, lighting is important to assure that the facility is properly used and cleaned, both of which are important in decreasing potential for disease transmission from fecal exposures. Provision of lighting may also increase the probability that the facility will be used on a 24-hour basis and that less protected waste disposal alternatives will be less attractive. Finally, the failure to provide adequate lighting may result in people using relatively less safe means of lighting, such as kerosene lamps or candles, resulting in increased risk of fire. For a discussion of lighting intensity, see Section 246-358-075.12. The ASNI/IESNA (1993) standard for rest rooms in an office setting is 10, 15 or 20 footcandles depending on the age of the people using the facility and how important one judges speed and accuracy to be in this setting.

(f) Provide a means to maintain a temperature of 70°F during cold weather.

Response: Adequate temperature is important to comfort. However, we found no scientific or experiential information indicating that 70°F is the appropriate temperature. See Section 246-358-075.15.

(g) Ensure that the toilet facilities are cleaned at least daily.

Response: The importance of maintaining clean sanitary conditions is discussed in Section 246-358-045.2. This is especially important in toilet facilities to decrease the potential for disease spread through fecal exposure and for aesthetic purposes so that people do not seek less sanitary alternatives. For shared facilities, the requirement to clean once per day may be reasonable (i.e., has some element of common sense), but we did not find documentation regarding the frequency of cleaning which is necessary to ensure sanitary conditions.

(3) An operator providing toilet facilities in dwelling units shall meet the requirements in subsection (1) of this section.

(a) Provide a handwashing sink in each dwelling unit that contains a toilet.

Response: The provision of the handwashing sinks with the toilets may increase the use of hand washing after use of toilets. There is good scientific documentation concerning the importance of hand washing to prevent disease transmission by fecal-oral routes of exposure. Additionally, studies have shown that if handwashing facilities are close by, persons are more likely to use them. (In fact, conveniently located hand washing facilities are so important in reducing spread of communicable disease, such as hepatitis, that we wonder why sinks are not required in close proximity to centralized toilet facilities covered in subsection 2 above.)

(b) Request occupants to maintain toilet facilities in a clean and sanitary condition.

Response: See subsection 2g above. While assignment of the responsibility for maintaining toilet facilities in a clean and sanitary manner is a policy question, it seems reasonable that occupants assume at least some of that responsibility when toilets are in dwelling units.

WAC 246-358-125 Cooking and foodhandling facilities. An operator shall provide enclosed cooking and foodhandling facilities for all occupants.

(1) An operator furnishing cooking facilities in each dwelling unit shall provide:

(a) An operable cook stove or hot plate with a minimum of 1 cooking surface for every 2 adult occupants or 4 cooking surfaces for every 2 families;

(b) A sink with running water under pressure;

(c) Food storage areas and easily-cleanable food preparation counters situated off the floor;

(d) Mechanical refrigeration capable of maintaining temperature of 45 degrees Fahrenheit or below, with space for storing perishable food items for all occupants;

Response: The primary ways to prevent foodborne disease include:

- Frequent hand washing by food handlers to prevent transmission of infectious diseases which may be present in the food handlers or in the uncooked foods they touch,
- Adequate cooking and refrigeration of food, and
- Proper dish washing to prevent cross-contamination.

These preventive measures have been the standard of public health practice for many years. A study by Irwin, K, *et al.*, "Results of Routine Restaurant Inspections Can Predict Outbreaks of Foodborne Illness: The Seattle-King County Experience,"

(American Journal of Public Health, May 1989, p.586-590) found increases in foodborne diseases when these measures were violated in restaurants.

With regard to provision 1a, we did not find the basis for the optimal number of cooking surfaces per person.

Under provision 1b, hot water is preferable, since it is a better solvent than cold water and increases comfort that may be important in ensuring adequate hand and dish washing. Provision of hot water also decreases the potential for scalds and burns from heating hand and dish water on a stove. (Subsection 2c below stipulates hot and cold running water. It is not clear why this provision is not included in 1b, since 1a-d generally parallel 2b-e.)

Easily cleanable food preparation counters (1c) are important to minimize transmission of foodborne infectious agents which may be present in uncooked foods. Storage areas off the floor reduces potential contamination of food from mop water and floor cleaning chemicals, and may decrease access by rodents and insects. While the former concern seems to be based on common sense, we are not certain of the basis for the latter concern, since rodents and insects are able to access food stored in cabinets off the floor. Food preparation counters off the floor may make it easier to keep dirt and possible contaminants out of the food, and are probably viewed as an important convenience by most people in this culture. Depending on their height, the food preparation counters may have orthopedic value and may decrease potential for injury while cutting, but we did not investigate the ergonomic aspects of counter height.

While there is some debate about the ideal temperature for refrigeration, maintaining refrigeration temperatures at 45 degrees Fahrenheit or below (1d) is generally considered safe, since pathogens of concern either do not grow, or grow very slowly, at those temperatures. Above 45 degrees Fahrenheit, many common pathogens, such as salmonella and staphylococcus aureus, begin to multiply, resulting in both increased potential for disease related to foodborne pathogens and increased food spoilage and waste.

(e) Fire resistant, nonabsorbent, nonasbestos, and easily-cleanable wall coverings adjacent to cooking areas:

Response: These are intended to reduce the risk of fires in cooking areas, ensure the surface areas are cleanable to reduce the risk of cross contamination, and decrease exposure to asbestos which is known to cause lung disease.

(f) Nonabsorbent and easily-cleanable floors:

Response: Nonabsorbent floors are easier to clean than absorbent floors. Clean floors are important to decrease infestation by rodents and insects. In cooking areas, clean floors are also important to decrease the potential for injury due to falls and slips.

(g) At least 1 electrical ceiling or wall-type convenience fixture.

Response: See Section 246-358-075.11.

(h) 30 footcandles of light measured 30 inches from the floor.

Response: See Section 246-358-075.12. It is not clear how to translate standards for industrial foodhandling to residential settings. However, information on lighting requirements in small restaurants or cafeterias may be relevant. We are in the process of obtaining that information.

(2) An operator furnishing common foodhandling facilities shall provide:

(a) A room or building, adequate in size, separate from any sleeping quarters and without direct openings to living or sleeping quarters:

Response: Separation of the kitchen from the sleeping areas may have some health value in minimizing the potential for inadvertent contamination of food by contagious individuals who may be in the sleeping area. If the kitchen were in the sleeping area, noise from kitchen activities could interfere with sleep, and fatigue has been documented to be related to increases in unintentional injury. While this seems to be based in common sense for larger facilities, small residential units, such as studio apartments often contain cooking facilities which are not separated from the sleeping area.

We do not know the rationale for not having direct openings from the kitchen to the living or sleeping areas. This may be an attempt to reduce the number of people who have no need to be in cooking areas, such as children or people who have not washed their hands or have infectious disease. While the strategy of limiting the number of people in contact with food preparation most likely reduces the potential for inadvertent contamination of the food, as well as unintentional injury (e.g., burns in children), we have no evidence that this is an effective way to achieve that goal.

(b) An operable cook stove or hot plate with a minimum of 1 cooking surface for every 2 adult occupants or 4 cooking surfaces for every 2 families:

Response: See the general discussion under subsection 1 above and the comment for subsection 1a.

(c) Sinks with hot and cold running water under pressure:

Response: See the general discussion under subsection 1 above and the comment for subsection 1b.

(d) Food storage areas and easily-cleanable food preparation counters situated off the floor:

Response: See the general discussion under subsection 1 above and the comment for subsection 1c.

(e) Mechanical refrigeration capable of maintaining a temperature of 45 degrees Fahrenheit or below with space for storing perishable food items for all occupants:

Response: See the general discussion under subsection 1 above and the comment for subsection 1d.

(f) Fire-resistant, nonabsorbent, nonasbestos, and easily-cleanable wall coverings adjacent to cooking areas:

Response: See subsection 1e above.

(g) Nonabsorbent, easily-cleanable floors:

Response: See subsection 1f above.

(h) No direct openings to living or sleeping areas from the common foodhandling facility:

Response: See subsection 2a above.

(i) At least 1 ceiling or wall light fixture where electric service is available: and

Response: See Section 246-358-075.11.

(j) 30 footcandles of light measured 30 inches from the floor.

Response: See Sections 246-358-075.12 and 246-358-125.1h.

(3) An operator furnishing a dining hall shall:

(a) Comply with chapter 246-215 WAC. Food service:

Response: WAC 246-215 sets standards for central food handling and it is beyond the scope of this document to review that WAC. However, as noted in subsection 1 above, violations of measures required in central foodhandling facilities (restaurants) have been associated with increases in foodborne disease.

(b) Provide a room or building, adequate in size, separate from any sleeping quarters and without direct openings to living or sleeping quarters:

Response: See subsection 2a above.

(c) Provide fire-resistant, nonabsorbent, nonasbestos, and easily-cleanable wall coverings adjacent to cooking areas:

Response: See subsection 1e above.

(d) Provide at least 1 ceiling or wall light fixture where electric service is available: and

Response: See Section 246-358-075.11.

(e) Provide 30 footcandles of light measured 30 inches from the floor.

Response: See Sections 246-358-075.12 and 246-358-125.1h.

WAC 246-358-135 Beds and bedding and personal storage. An operator shall:

(1) Provide beds or bunks furnished with clean mattresses in good condition for the maximum occupancy approved by the department or contracted health officer for operator-supplied housing:

(2) Ensure bedding, if provided by the operator, is clean and maintained in a sanitary condition

Response to subsections 1 and 2: Sleep is a necessity for life and people in this culture are accustomed to a bed in which to do it. Clean bedding helps to prevent infection by parasites, such as scabies and lice, and exposure to harmful chemicals. Provision of beds for the maximum occupancy is to prevent overcrowding in beds which could result in spread of infectious diseases, as well as sleep deprivation.

(3) Provide a minimum of 12 inches between each bed or bunk and the floor:

Response: Based on experience, bedding off the floor has some advantages. However, the basis for the precise specification of 12 inches is unknown. Although some types of rats can climb, 18 inches seems to be considered a minimum height for deterring most rats and other vermin. Roof rats, which are common in rural Washington, tend to climb easily, but usually live in the upper timbers or attics. Keeping the beds off the floor protects bedding in the event of flooding, such as internal sewage backup, which may or may not be a possibility depending on the housing arrangement. Bedding off the floor also makes floor cleaning more convenient, decreases potential for contact with floor dirt which may contain contaminants, provides storage space for personal belongings, may increase warmth, and may prevent rodent harborage when the facility is not in use.

(4) When single beds are used separate beds laterally and end to end by at least 36 inches:

Response: The basis for spacing between beds is to 1) provide emergency escape lanes in case of fire, 2) decrease potential for spread of infectious disease, and 3) facilitate

maintenance of the bed. However, we found no evidence documenting that 36 inches is the minimal spacing necessary to reduce health and safety concerns.

5) When bunk beds are used:

(a) Separate beds laterally and end to end by at least 48 inches:

Response: See subsection 4 above. Presumably, due to the need to climb in and out, greater separation is required.

(b) Maintain a minimum space of 27 inches between the upper and lower bunks:

Response: We do not know the basis for 27" as the minimum necessary separation. It may be to allow people to sit upright in bed.

(c) Prohibit triple bunks:

Response: The basis for this prohibition may be the potential for the bed tipping, the hardship of entering the top bunk and/or the increased potential of serious injury from falls from a relatively greater height than a double bunk. However, we do not know if stable triple bunks are available and whether there are studies or experience documenting increased injury with their use. Prohibiting triple bunks could also be to prevent conflict between requirements for minimum ceiling heights and vertical separation needs. Seven-foot ceilings are most likely not adequate for triple bunks.

(6) Provide storage facilities for clothing and personal articles in each room used for sleeping.

Response: Based on experience, without proper storage for clothing, clothing is often found in piles on the floor, providing harborage for insects and rodents.

WAC 246-358-140 Use of tents. An operator may use tents that do not violate WISHA requirements.

While it is beyond the scope of this assignment to review the WISHA requirements, there is little in the scientific literature which addresses the potential for adverse health effects of living in tents. We found one study conducted during Desert Storm looking at health complaints of those living in air conditioned buildings compared to those living in tents. Complaints of sore throat and cough were associated with sleeping in the air conditioned buildings and chronic rhinorrhea was associated with exposure to blowing sand while living in tents. (Richards *et al.*, 1993) Based on experience and common sense, tents are preferable to no shelter.

WAC 246-358-145 Health and safety. An operator shall:

(1) Comply with chapters 15.58 and 17.21 RCW, chapter 16-228 WAC, and pesticide label instructions when using pesticides in and around the housing:

Response: While it is beyond the scope of this assignment to review additional WACs and RCWs, improper use of pesticides may have adverse health effects.

(2) Prohibit, in the housing area, the use, storage, and mixing of flammable, volatile, or toxic substances other than those intended for household use:

Response: By definition toxic substances are those which have adverse health effects and flammable substances are those which pose a danger of fire, with subsequent injury and death. Volatile substances may be toxic and may pose a danger of explosion and fire, with subsequent injury or death. Therefore, there are health reasons to prohibit the use, storage and mixing of these substances in housing areas.

(3) Provide readily accessible first-aid equipment meeting the requirements of Part A-1 of chapter 296-24 WAC:

(4) Ensure that a person trained to administer first aid is readily accessible at all times:

Response to subsections 3 and 4: The availability of first aid equipment and the ability to use such equipment most likely can decrease adverse health effects in cases of injury. The assignment of responsibility for provision of equipment and its proper use in residential setting is a policy question.

(5) Comply with chapter 51-20 WAC by providing smoke detection devices:

Response: Smoke detection devices have been shown to reduce injury and death in residential fires.

(6) Store or remove unused refrigerator units to prevent access by children:

Response: Suffocation of children in unused older model refrigerators has been documented. Newer model refrigerators with magnetic closures may continue to be problematic for very young children, who could get into the refrigerator (e.g., in the course of playing with older children) and be unable to get out. Alternatively, removal of refrigerator doors would prevent suffocation of children in unused refrigerators. Other than suffocation, we do not know of injury associated with play in unused refrigerators, although this would be a possibility depending on the stability of the unused refrigerator and the nature of play.

(7) Fill abandoned privy pits with earth, and lock or otherwise secure unused privy buildings.

Response: Abandoned privy pits need to be filled so they do not become a site where insect breeding could occur. This is especially true for flies which could carry pathogens from the disposal pit to humans. It is also important to fill pits to prevent people, especially children, from falling into the pits. There are documented cases where people have fallen into unfilled, abandoned privy pits. Locking privy buildings is to prevent their further use without a proper pit.

WAC 246-358-155 Refuse disposal. An operator shall:

(1) Establish and maintain a refuse disposal system:

Response: This provides for routine removal of garbage and refuse from outside the housing site to prevent conditions which would attract insects and rodents. (See Sections 246-358-045.2 and subsection 2 below.)

(2) Protect against rodent harborage, insect breeding, and other health hazards while storing, collecting, transporting, and disposing of refuse:

Response: It is important to control rodents and insects which may carry disease.

Examples of diseases carried by arthropods which are transmitted to humans are:

Viral encephalitis - carried by mosquitoes and transmitted to humans via bites
Enteric bacterial disease - physically transmitted by flies from human feces to food completing fecal-oral route of transmission

Examples of diseases carried by rodents which are transmitted to humans:

Rat bite fever - bacteria transmitted by the bite of a rat
Leptospirosis - bacteria transmitted by direct or indirect human contact with urine of rodents and other animals
Salmonellosis - bacteria transmitted via food contaminated by rat and mouse feces.
Murine typhus fever - rickettsia transmitted to human via rat fleas
Trichinosis - rodents involved in the rodent-swine-human cycle
Rickettsial pox - transmitted from the house mouse to humans by the bite of the house mouse mite.
Lymphocytic choriomeningitis - viral disease transmitted to humans by contact with saliva, nasal secretions, urine and feces of mice.
Hantavirus pulmonary syndrome(HPS) - newly described viral strain shed in urine, feces and saliva of wild rodents and transmitted to humans via the inhalation of dust and aerosols (Zietz *et al.*, 1995)

In addition to the threat of infectious disease exposure from arthropods and rodents, other issues include the nuisance factor (mosquito, flea bites), the economic loss from food consumption and contamination by rodents, and the threat of fires caused by rats gnawing

of electrical wire insulation. CDC Vectorborne Disease Control Training Manual states that 5-25% of fires of unknown origin on farms are caused by rats.

Other health hazards from improper storage, collection, transportation and disposal of garbage include exposures to toxic materials or dangerous (broken glass, metal) items which could result in physical injury.

The manner the garbage is collected, transported and disposed of depends on the collector (operator, trash collection company). Collection and transport could result in spilling garbage which would then attract insects and rodents or increase exposure to toxic or dangerous materials. If the garbage were collected in front of housing units, transported and disposed of improperly behind housing units the same problems could occur.

(3) Store refuse in fly-tight, rodent-tight, impervious, and cleanable or single-use containers:

Response: Between collection dates garbage should be stored in containers which adequately contain the garbage, do not allow access to insects or rodents, do not leak fluids (which would in turn attract insects and rodents); and which can be easily cleaned as to not attract insects and rodents.

(4) Keep refuse containers clean:

Response: See subsection 3 above.

(5) Provide a container on a wooden, metal, or concrete stand within 100 feet of each dwelling unit and space:

Response: The stand for the container provides a cleanable surface for spilled garbage. While we do not know the basis for the provision that the container be within 100 feet of the dwelling, if the container is too far away, residents may be more likely to let garbage accumulate in the housing areas.

(6) Empty refuse containers at least twice each week, and when full:

Response: Emptying the container when full will prevent conditions which will attract insects and rodents. CDC recommends twice-weekly garbage collection especially during the fly season (summer), unless the containers are fly-proof. From a health perspective, the important factor is not allowing rodents and insects access to the garbage, not frequency of garbage pick-up, as long as the containers are rodent and insect-tight. Typical residential garbage collection is once per week.

(7) Comply with local sanitation codes for removing refuse from housing areas and disposing of refuse:

Response: Any refuse which would provide shelter, nesting materials for rodents, or collection of rainwater (mosquito breeding grounds) should be removed from the housing areas and appropriately disposed. Examples include wood scraps, mattresses, irrigation pipes, appliances, vehicles, and paper. It is beyond the scope of this document to investigate the reasoning behind the local sanitation codes.

(8) Ensure the housing area is free of refuse when housing is closed for the season to prevent a nuisance.

Response: This provision is to prevent infestation of housing by rodents, which could pose a health hazard to the person opening the housing at the beginning of the next season.

246-358-165 Rodent And Insect Control. An operator shall take measures necessary to control rodents and insects in and around the housing.

Response: The importance of insect and rodent control is discussed in Section 246-358-155.

Rodent control consists of three basic steps:

1) Do not provide an environment (food, water, shelter) which will attract rodents.

Rodents need food, water, shelter and nesting materials. A food source could be pet food left outside, accessible garbage, improperly stored foodstuffs inside the housing unit, livestock feed, poorly cleaned food preparation areas, etc. A water source could be any container that collects water or a leaky pipe. Shelter can consist of almost any place out of the weather (outbuildings, appliances, walls), and nesting materials can be found inside and outside of housing units (woodpiles, yard waste, vehicles, mattresses, clothing, drawers, closets, heating vents, paper) While the operator can control some of this step, some responsibility seems to rest with the residents.

2) Do not provide rodent access to the inside of buildings.

Some mice can enter a building through a 1/4 inch opening. Openings are commonly found in wall cracks, where pipes enter walls or floors, drains, heating systems, doors, etc. Openings can be filled with materials which will prevent rodent access. This appears to be the responsibility of the operator. This step requires substantial time, effort and expense for success.

3) If a current rodent infestation exists in the housing, trapping and/or the appropriate use of rodenticides are needed to eliminate them. This step must be carried out in combination with steps 1 and 2 for successful control. Again, substantial time, effort and expense may be required.

WAC 246-358-175 Disease prevention and control. An operator shall:

(1) Make reasonable efforts to know if disease is present among occupants:

(2) Report immediately to the local health officer:

(a) The name and address of any occupant suspected of having an infectious or communicable disease:

(b) Any case of suspected food poisoning; and

(c) Any unusual prevalence of any illness in which fever, diarrhea, sore throat, vomiting, jaundice, productive cough, or weight loss is a prominent symptom among occupants;

Item 2a should be modified as follows: The name and address of any occupant suspected of having a reportable infectious disease as determined in Chapter 246-100-076 WAC. A list of these reportable diseases can be obtained from local health departments.

Response to subsections 1, 2a (as modified), 2b, and 2c: General regulations exist (Chapter 246-100 WAC) requiring reporting of specified communicable diseases to prevent epidemics and further spread once epidemics occur. These regulations apply to schools and day care centers, as well as to health care providers, hospitals, clinics and local health departments. The regulations also allow any member of the general public to report cases or suspected cases. These provisions are an extension of this public health principle to another group at risk of infectious disease outbreaks, people in temporary worker housing. While the goal of this reporting is to prevent spread of disease, based on experience, there are a number of reasons why identification and reporting of illness may be difficult with residents of temporary housing, in general, and temporary farm worker housing, in particular. Residents may be reluctant to report any illness because they do not want to lose work and wages. Additionally, if people do not have health insurance, they may be reluctant to report disease which may require medical attention.

(3) Prohibit any individual with a communicable disease from preparing, cooking, serving, or handling food, foodstuffs, or materials in dining halls.

Response: Spread of communicable disease by infected food handlers has been well documented. Prohibition of individuals with communicable disease from involvement in food handling is a good strategy to limit the spread of these diseases.

(4) Establish rules and inform occupants of their responsibilities related to maintaining housing consistent with the requirements in this chapter.

Response: This seems to be a common sense step in having occupants understand and implement their responsibilities related to maintaining housing in a manner consistent with the requirements. However, people willingness to obey rules and implement responsibilities depends on many factors (e.g., sense of ownership or investment in the process; an understanding of the logic behind the rules; fear of consequences if rules are broken, etc.) Therefore, simply establishing and informing of rules independently of input by the occupant may not succeed in achieving the desired result.

(5) Post information regarding temporary-worker health and sanitation when provided by the department or contracted health officer.

Response: This may or may not be useful depending on residents' proficiency and literacy in the language of the posted information.

References

- Abramov, I. Health effects of interior lighting: discussion. *Annals of the New York Academy of Science*. 365-370, 1985.
- ANSI/IES. American National Standard Practice for Industrial Lighting. RP-7-1979.
- ANSI/IESNA. American National Standard Practice for Office Lighting. RP-1-1993.
- College Health. Editorial. Indoor temperature and human health. 22:167-168, 1974.
- Esrey, SA, Potash, JB, Roberts, L, and Shiff, C. Effects of improved water supply and sanitation on ascariasis, diarrhoea, dracunculiasis, hookworm infection, schistosomiasis, and trachoma. *Bulletin of the World Health Organization*. 69:609-621, 1991.
- Fuller, TD, Edwards, JN, Sermisri, S., and Vorakitphokatorn, S. Housing, stress, and physical well-being: evidence from Thailand. *Social Science and Medicine*. 36:1417-1428, 1993.
- Gove, WR and Hughes, M. *Overcrowding in the Household*. Academic Press, New York, 1984.
- Graham, NMH. The Epidemiology of acute respiratory infections in children and adults: a global perspective. *Epidemiologic Reviews*. 12:149-178, 1990.
- Lepore, SJ, Evans, GW, and Palsane, MN. Social hassles and psychological health in the context of chronic crowding. *Journal of Health and Social Behavior*. 32:357-367, 1991.
- Levin, H. Physical factors in the indoor environment. *Occupational Medicine*, 10: 59-94, 1995.
- Macey, SM. Hypothermia and energy conservation: a tradeoff for elderly persons. *International Journal of Aging and Human Development*. 29:151-161, 1989.
- Mood, EW. *Housing and Health: APHA-CDC Recommended Minimum Housing Standards*. St. Mary's Press, Hollywood, MD, 1986.
- Richards, AL, Hyams, KC, Watts, DM, Rozmajzl, PJ, Woody, JN, and Merrell, BR. Respiratory disease among military personnel in Saudi Arabia during Operation Desert Shield. *American Journal of Public Health*. 83:1326-1329, 1993.
- Samson RA, Flannigan B, Flannigan ME, Verhoeff AP, Adan OCG, Hoekstra AS, Eds. *Air Quality Monographs Volume 2, Health Implications of Fungi in Indoor Environments*. Elsevier, The Netherlands, 1994.

Appendix B: Report by Columbia Legal Services

Secretary Miyahara invited farmworker advocates and grower associations to provide the Department of Health with their own reports on the regulation of temporary worker housing. Secretary Miyahara suggested to these groups that the Department would use their work as background information for the Department's report, and would append their reports to the Department's. Columbia Legal Services is the only group that submitted a report.



COLUMBIA LEGAL SERVICES
CENTRAL WASHINGTON REGIONAL OFFICE
200 PALOUSE, SUITE 201
WENATCHEE, WASHINGTON 98801

ADA SHEN-JAFFE
DIRECTOR

TELEPHONE/TDD
1-800-572-9615
(509) 662-9681
FAX 662-9684

CC: TWY
TEAM
RTN

May 20, 1996

Bruce A. Miyahara
Department of Health
P.O. Box 47890
Olympia, WA 98504

MAY 22 1996
DEPT. OF HEALTH
OFFICE OF THE SECRETARY

Re: Temporary worker housing report

Dear Secretary Miyahara:

The following is a report submitted to your office on behalf of farm worker clients. These clients have requested our assistance in the development of housing and the enforcement of labor camp regulations. The report is submitted in response to your letter of request dated February 2, 1996.

The report is structured to answer the following four topics outlined in your letter: recommendations for (1) an adequate supply and continuous improvement of temporary worker housing; (2) optimum roles for state and local administration of temporary worker housing; (3) incentives for the development of temporary worker housing; and, (4) appropriate compliance strategies.

Prior to answering the above questions, this report will outline why safe, sanitary housing is necessary, and offer a criticism of the Department's 1995 Preliminary Report. Farm workers need safe and sanitary housing because they suffer job-related illnesses disproportionate to the general population. The criticism is that the Department has failed to incorporate the experience of Oregon state, where cherry workers are provided permanent housing in camps that fully meet the standards for safe and sanitary housing, into its policy decisions.

Farm workers need safe and sanitary housing to avoid increasing health problems.

Farm workers as a whole have a history of health problems that exist at much higher rates than the general population. Two factors that lead to this increase are: (1) work in agriculture is the second-most dangerous occupation in the United States,

Bruce A. Miyahara
May 20, 1996
Page 2

including exposure to pesticides; and, (2) extremely limited access to medical services.¹ Because farm workers are less healthy than the general population, housing standards designed to provide a safe and sanitary living situation are absolutely necessary to avoid further aggravating the health of farm workers.

A few examples of the increased health problems faced by farm workers is necessary. Washington workers' compensation data shows that farm workers have 12.5 times the average rate of influenza.² An analysis of OSHA data shows that the farm workers' risk of parasitic infection was 20 times the norm; their risk of gastroenteritis and infectious diarrhea was 11 times the norm; and they were 300 more times likely to develop infectious hepatitis.³

Farm workers who have these type of health problems, must not be exposed to increased risk factors in their housing. Farm workers who live in over-crowded labor camps, with no access to potable water, no sanitary food preparation and storage facilities, and a lack of clean bathrooms and showers, will certainly lead to an increase in health problems. This does not benefit anyone. Employers lose with increased sick time, social and health services will continue to be over-burdened, and farm workers and their families will lose valuable wages.

Labor camp standards created to protect farm workers must take into account the population they are meant to serve. The standards are not designed to protect the average weekend camper, who can pack up and go home at the first sign of inclement weather or the common cold. The standards are for farm laborers and their families, who perform the arduous, and often hazardous, work that agriculture requires. Migrant farm workers cannot choose to go home, nor do they have the same ability to access health care. For these reasons, labor camp standards must provide decent, habitable housing so that the health problems of farm workers will not be exacerbated.

¹ General Accounting Office, Hired Farmworkers: Health and Well-Being at Risk, at pp. 5 and 20, (1992).

² Department of Labor and Industries, Farm Worker Health & Safety in Washington State: A Look at Workers' Compensation Data, at 11 (1991).

³ Ortiz, J.S., Composite Summary and Analysis of Hearing Held by Department of Labor on Field Sanitation for Migrant Farm Workers (1985).

A Tale of Two States - Why does Washington ignore the Oregon experience?

In Oregon state, cherry workers live in permanent, on-orchard housing provided by the employer. In Washington state, cherry workers live in orchards in pup-tents, and under tarps or cardboard boxes that the workers must purchase or construct themselves. Oregon has a history of strict enforcement of labor camp rules. Washington has a history of non-enforcement. The Department's 1995 Preliminary Report concludes that Oregon's policy of strict enforcement, "has led to more and better on-farm, grower-supplied housing." Oregon cherry growers have provided safe, sanitary housing without government assistance, and under the same short harvest constraints as Washington cherry growers.

Several conclusions can be drawn from the above information. Cherry growers can comply with the current labor camp rules and continue to earn a profit. Government-funded housing programs, while beneficial, are not required to solve the problem. Enforcement of labor camp standards increases both the amount and quality of housing. If standards are enforced, employers have two choices: (1) build and provide habitable housing, or (2) pay wages that will attract local workers or that will enable outside workers to pay for habitable temporary housing. Failure to enforce labor camp standards inevitably leads to squalid, Third-world living conditions because employers have no economic incentive to provide decent housing or pay wages that enable workers to pay for decent housing.

Even though Oregon has provided a strategy with a proven track record, Washington state opted for uncharted waters. In response to the dangerous conditions that were documented in cherry orchards in 1994, the Department crafted the Provisional Licensing Program (PLP). The PLP exempts cherry growers from many labor camp regulations including, requirements for rain-proof shelters with adequate square footage and ceiling heights, adequate food storage and preparation facilities, and an adequate supply of lighting and electricity.

According to the Department's Preliminary Report, the exemptions were created after growers stated the regulations were "too expensive," and that they would only participate in the PLP if the workers supplied their own tents. The Department of Labor and Industries also agreed that the exempted regulations would not be enforced. These exemptions were granted without any commitment from cherry growers to comply with the full set of regulations by a date certain as required by provisional licenses under WAC 246-358-030(5)(a).

Appendix C: Comments

Secretary Miyahara invited interested parties to comment on the Department's report. The Department received the following comments from the Washington Growers League, Sea Mar Community Health Centers, and Columbia Legal Services.

No one has argued that cherry growers should comply with the full set of regulations overnight. Our clients believe that allowing three years for full compliance is sufficient. The Department initially stated five years was necessary, but has not given any firm deadline for compliance. Combined with a permanent exemption from shelter regulations, the current PLP leaves farm workers wondering why housing is provided to them in Oregon, but they are required to supply their own in Washington.

Cherry growers can afford to comply with the labor camp shelter requirements. Oregon has proved that cherry growers can afford permanent structures. Even if Washington cherry growers are reluctant to invest in permanent structures, rain-proof tents with proper height and square-footage dimensions are available as low-cost alternatives to permanent structures.⁴ Given the affordable options available, the Department's policy decision to permanently exempt cherry growers from providing affordable shelters that meet the regulations, has no reasonable basis. Our clients are not arguing that tents should be prohibited. They are arguing that within a three year time-frame, appropriate tents with pads and kitchen facilities can and should be provided.

The permanent shelter exemption is further flawed in that it shifts the burden of providing housing from a cherry industry valued over \$75 million annually, to farm worker families whose average yearly income is \$7,500. Even if small, family-owned cherry orchards could not afford to house their workers, the industry may form cooperatives to provide decent housing. The Department should investigate existing and potential models for providing habitable housing before concluding that it is not feasible to do so. The Department's policy decision has the effect of rewarding chronic noncompliance with basic health standards, and ignores the experience of Oregon cherry growers who have provided habitable housing for temporary workers.

1. Supply and improvement of temporary worker housing.

A. Increase supply by requiring new orchards to provide housing. The shortage of housing for farm laborers is well documented in the Department's 1995 Preliminary Report. The current shortage of 128,500 beds, combined with the continued

⁴ See, attached, literature from Rainier Industries.

expansion of highly labor-intensive orchards in Grant County,⁵ has created a crisis situation. The efforts currently in place to meet the present and future shortages will make a relatively small difference.⁶ In order to place a cap on the current bed short-fall, all new orchards must be required to provide housing.

There is currently no law that requires agricultural employers to supply housing. However, with the Department's documentation of sprawling tent camps of 200-300 workers along the Columbia River in Grant County, the surrounding communities can no longer absorb the influx of workers. Our clients in Mattawa inform us that mobile home trailers with two bedrooms and one bath are routinely partitioned in half and rented to two separate families employed in agriculture, each paying \$400 a month in rent.⁷

This explosion of new orchards without an attending consideration for the housing needs of the workforce is irresponsible. The agricultural industry cannot continue to argue that, like McDonald's, they should not be required to provide housing. When McDonald's needs workers they place an advertisement in the local paper and hire people living in the community. In agriculture, workers are recruited and hired from California and Mexico. And, even if these workers could afford rental housing, a sufficient supply does not exist to meet the demand.

Therefore, it is increasingly clear that the most effective

⁵ See, attached, Wenatchee World article, April 14, 1996, showing an increase in total fruit acreage in Grant County of 42% over the last 8 years (19,000 acres in 1986 to 27,000 acres in 1994). Experts estimate that new orchard plantings since 1986 have increased the total fruit acreage to 40,000 acres.

⁶ There is one non-profit developer of farmworker housing in the state, called the Office of Rural and Farmworker Housing. This group develops farmworker housing using money from the Housing Trust Fund to leverage Farm Home Administration dollars. It has developed 611 housing units to date.

This year, the Legislature allowed \$2 million from the State Legalization Impact Assistance Grant (SLIAG) fund to be appropriated as an additional source for developing housing for agricultural workers. While this money will fund some needed development projects, it is only a one-time source.

⁷ See also, attached letter from David E. Mauk, dated February 24, 1996, detailing the occupancy of a single-wide mobile home by 29 people, as well as farm workers sleeping in the crawl space on foam pads.

construct farm worker housing.⁹

Since both state and federal governments have appropriated little money to fund low-income housing,¹⁰ alternative funding is needed. One such source would be a self-imposed tax on each box of fruit sold. Washington state leads the nation in apple, pear, and cherry production with total fruit sales amounting to almost \$2 billion annually.¹¹ The cherry crop alone was valued at \$88.7 million in 1994.¹² Even the smallest of taxes would generate a significant amount of capital. The industry already has self-imposed taxes to fund its various marketing organizations, as well as other funding needs. The money generated from such a tax could be pooled to leverage other funds to be loaned at low-interest rates to employers who want to develop or upgrade housing.

Without such efforts, the amount of funding will continue to be limited. Eventually, the industry itself will have to take strides to find solutions from within the industry.

4. Appropriate compliance strategies.

The major compliance strategy outlined above is to begin to enforce the regulations. This will require a change in priorities from the Department of Labor and Industries, as well as a commitment from the Legislature to fund enforcement positions.

If the Legislature were reluctant to fund new inspectors, a major access problem could be alleviated if L&I accepted complaints regarding housing problems through use of a bilingual "800" telephone number. As the current system works, workers are required to file a formal written complaint in order to trigger an investigation. Many farm workers cannot read and write, thus making the system inoperable. If this barrier were removed, the system would be accessible to those who most need its protections.

⁹ The exemption should be expanded to include non-profit corporations that are formed to develop farm worker housing.

¹⁰ What little money is appropriated for the development of farm worker housing should be used to fund community-based housing.

¹¹ See, Wenatchee World article cited in footnote #5.

¹² See, Washington Agricultural Statistics 1994-95, p. 77.

Bruce A. Miyahara
May 20, 1996
Page 6

way to curtail the ever-increasing shortage of housing is to require, by law, all new orchards to include adequate housing facilities for the anticipated work force.

B. Temporary worker housing will not improve as long as the regulatory burden continues to shift to the farm worker. The current trend in the regulation of temporary worker housing is to shift the regulations on to those who can least afford to comply - the farm workers. The PLP, while well-intended, has the practical effect of requiring workers whose earnings are below the poverty level to pay for their own shelter, refrigeration, food preparation, and electricity not only at their permanent residence but at their temporary workplace. As long as migrant farm workers are the primary providers of these items, the temporary labor camps will continue to deteriorate and promote hazardous living conditions.

The 1995 Washington Legislature passed a bill regarding farm worker housing that removed the prohibition on tent housing for farm workers. The bill did not change the other basic safety and health provisions in the state Board of Health rules nor the WISHA rules enforced by the Department of Labor and Industries. The Department of Health then devised the PLP for the many tent camps that are operated during the cherry harvest. The Department wanted to bring camps into its licensing program and ensure basic health to farm workers at the same time.

The PLP allows employers to house workers in tents under conditions substantially less protective of health and safety than that afforded by either the WISHA or Board of Health regulations. For example, PLP camps are allowed to house workers in small backpacking tents, purchased by the workers themselves. There are no requirements for rain-proof shelter, food storage, food preparation or refrigeration (other than a requirement that a camp have on hand one refrigerator for storing medicines). There is no requirement for electricity.

A governmental agency charged with protecting public health should require, at a minimum, weather-proof shelters, cooking facilities free from fire dangers, clean surfaces upon which to prepare foods, and refrigerators necessary to keep food from spoiling. Would the Department allow the conditions in PLP camps to exist in a summer youth camp occupied for two weeks?

PLP camps are required to supply potable water, adequate showers and bathing facilities, and to control the numbers of workers residing in the camps so that the basic structures are not over-taxed. In 1995, the Department succeeded in controlling the number of residents in PLP camps, and access to potable water

was greatly improved.

Clients of legal services resided in two PLP camps and in one unlicensed camp in 1995. Our clients informed us that workers who could not purchase their own tents were turned away from the camps. Since our clients cannot afford expensive tents, they bought flimsy, poorly-constructed tents which leaked when it rained. Workers stored their food on the ground, on top of self-constructed tables made of logs and plywood, or purchased cheap styrofoam coolers. Because only one or two electrical outlets were available, extension cords criss-crossed the camps. The net effect of the program was that responsibility for housing in the employer's labor camp was transferred to workers who could ill-afford to purchase quality equipment.

This current trend must be reversed. The regulations were written for the benefit and protection of farm workers, not as a burden that requires farm workers to expend scarce resources in a futile attempt to comply. If the responsibility for providing safe and habitable housing is not returned to those who can most afford to comply, the housing stock will continue to deteriorate.

2. Role for state and local administration of temporary worker housing.

The Department of Health has done a good job of educating operators of the labor camp requirements. The Department has conducted a number of trainings in different locations throughout the State in order to better inform camp operators of the regulations. It is in everyone's interest that persons responsible for complying with the regulations are adequately informed of their responsibilities.

Along with education, the Department needs to enforce the regulations. The Department of Health's authority under the regulations is limited. It has no authority to issue fines for violation of its regulations. Although it has authority to close down camps, it has never done so.⁸ It has only 1 to 1.5 FTEs assigned to inspection and licensure of the camps. Its budget for the program is \$350,000 for the 1995-97 biennium.

⁸ The Department has been reluctant to close camps and displace large numbers of people with no place to live. There is a proposal to use a portion of the SLIAG housing development funds to assist farm workers and their families locate housing should their labor camp be closed due to substandard conditions. Legislation should be drafted to require any camp operator, whose camp is closed resulting in the use of SLIAG funds to house workers, be required to fully reimburse the fund.

Bruce A. Miyahara
May 20, 1996
Page 8

Approximately 7,500 of the state's 175,000 farmworkers are housed in about 200 licensed camps.

There are many camps that operate without a license. In 1994 and 1995 our staff visited approximately 30 unlicensed tent camps. The total number of unlicensed camps is unknown. In 1994, housing workers in tents was prohibited under state Board of Health rules. In both 1994 and 1995, we found the following general conditions in the tent camps: workers live in cheap "pup" tents that leak in the rain under blue tarps and in cardboard structures, they cook over gas stoves or open fires, and drink contaminated water in some cases. The camps are often overcrowded, and workers have little access to showers, adequate garbage disposal or electricity. When the wind comes up, dust covers workers' food and clothing. There is no way to keep belongings safe and dry except by locking them in the car.

The Department of Labor and Industries does have authority to issue fines for labor camps that are operated in violation of the regulations. Even though unlicensed cherry camps have operated for decades, L&I has only cited one operator. That operator appealed his fine and ended up paying \$300, even though he admitted running his camp for more than 15 years. Fines with sufficient deterrent effect should be upheld, and legislation should be drafted to allow the money to be invested in labor camp improvements.

As outlined above, the State of Oregon has strictly enforced the same housing regulations. Because the regulations were enforced, cherry growers in The Dalles who operated a large substandard camp for years finally decided to close it down and build smaller camps that complied with the regulations. In Washington, the regulations must be enforced in a such a manner that camp operators find it more cost-effective to comply with the regulations than to continually pay minimal fines for substandard camps. At present, there is little or no incentive to comply, and unless the regulations are enforced, no development will ever take place.

3. Incentives for the development of temporary worker housing.

As discussed above, the primary incentive for the development of housing must be effective enforcement of the regulations. The State has already provided a number of incentives that should stimulate development. For example, the building code is being re-written to allow farm labor housing to be exempt from a number of the more expensive codes. Also, a tax exemption has been provided on the purchase of materials used to

Bruce A. Miyahara
May 20, 1996
Page 10

Another problem that frequently occurs, even when a written complaint is filed, is the inspector will be told that the housing is "year-round" and not a "temporary" labor camp. The inspector then drops the investigation, even though hazardous violations exist. Instead of dropping the matter, inspectors should be required to make a referral to the local building official. If it is the position of the camp operator that the housing is truly exempt from DOH or L&I regulations, the operator should comply with applicable standards for permanent housing.

With respect to the PLP, there must be a specific time frame during which unlicensed camps agree to take steps to come into compliance. Our clients have consistently argued that a three year time-frame is appropriate. In the first year the camp operator must provide: leak-proof shelters, adequate and clean showers and bathrooms, clean drinking water, and some type of cooking and food storage facilities which incorporate stoves, sinks, and refrigerators. In the later years, standards including concrete pads or floors for tent housing, adequate room to stand up inside the shelter, electricity, windows, cots or beds, and the remaining standards substantially equivalent to WISHA, should be incorporated.

As the PLP currently stands, no time-frame has been set for full compliance. Nor are there any plans to require camp operators to be responsible for supplying adequate shelter, even though viable options exist. The regulations continue to be shifted to the persons who can least afford them - the farm worker.

Thank you for this opportunity to provide input to the Final Report. If there is any additional information that can be provided, please do not hesitate to contact our office.

Sincerely,


Joachim Morrison
Attorney

Enclosures

WASHINGTON GROWERS LEAGUE

406 West Chestnut - P.O. Box 1662 - Yakima, WA 98907 - Phone (509) 575-8315 - Fax (509) 452-4834

December 23, 1996

Geoff Hughes
Department of Health
Olympia, WA 98504-7852

Mr. Hughes:

Thank you for the comprehensive overview of the farmworker housing situation in Washington state contained in the report "Common Sense and Science: New Directions in the Regulation of Temporary Worker Housing". The Washington Growers League is supportive of action to rescue the farm worker housing regulatory system from its current state of "gridlock".

Specifically, we favor the public health approach to temporary worker housing regulation. This approach has the most credibility with the regulated population: agricultural employers. Credibility is earned because it meets the tests incorporated in the title of the report, common sense and science.

The scope of adverse working conditions was overstated in the report's section "Poverty and Prejudice". While low annual incomes are common among farm workers, hourly wages and working conditions are often competitive with other industries. Widespread and comprehensive dire circumstances are not necessary to justify additional DOH action and flexibility to address housing problems. Notwithstanding the thin interpretation of questionable statistics in the report regarding workers compensation claims rates, health care access, working conditions, etc., it is in everyone's interest to see that safe and sanitary housing exists for the people who work on Washington state farms. The department should be careful not to generalize too much when discussing farm workers. Housing for agricultural employees is often in inadequate supply and in poor or unacceptable condition. This alone is reason to take action.

At this point in time, we see an advantage to consolidated authority over temporary worker housing regulation. In particular, it is in the interest of farm workers and their employers who supply housing to have the agency that writes the rules also enforce them. We also are intrigued by the option of putting the new Temporary Worker Housing Building Code in DOH. This proposal deserves further consideration.

Geoff Hughes
December 23, 1996
Page 2

It is true that the employer's risk environment can be "bought down" by heavier investment in employee housing. Unfortunately, the economic feasibility of investment in housing is limited by income opportunity from farm operations. Many crops do not have the revenue base on typically sized farms to justify investment necessary to meet WISHA standards. Fortunately, there is in our view, the possibility of variance from the WISHA standards while still providing safe and sanitary housing. We feel that in some specific circumstances, such as cherry harvest, regulatory programs that provide flexibility from the WISHA standards are justified and result in improved conditions for agricultural workers. We also share your conclusion that community housing will play a part in an overall housing solution.

The Washington Growers League applauds the department's efforts to find solutions to persistent problems with the quality and availability of temporary worker housing in our state. It is important for the viability of our rural communities, for the health of the Washington state agricultural industry and for the well over 100,000 farm workers who depend on it for their livelihood.

Sincerely,



Michael Gempler
Executive Director



SEA MAR
COMMUNITY HEALTH CENTERS

Proudly Serving the Community since 1978

ROGELIO RIOJAS, CHIEF EXECUTIVE OFFICER

King County

MEDICAL & DENTAL CENTER
COUNSELING & REFERRAL
8720 14TH AVENUE SOUTH
SEATTLE, WA 98106-4896
PHONE (206) 762-3732
FAX (206) 762-5647

CERTIFIED HOME HEALTH
AGENCY & CHORE SERVICES
8015 14TH AVENUE SOUTH
SEATTLE, WA 98106-4898
PHONE (206) 764-8717
FAX (206) 764-0494

CARE CENTER & CHILD
DEVELOPMENT CENTER
1040 S HENDERSON
SEATTLE, WA 98105
PHONE (206) 763-5210
FAX (206) 763-5273

Pierce County

RECOVERY CENTER
1415 CENTER STREET
TACOMA, WA 98409
PHONE (206) 627-2250
FAX (206) 627-2173

MEDICAL CENTER
1112 S GUSHMAN AVE
TACOMA, WA 98405
PHONE (206) 593-2144
FAX (206) 272-4125

Snohomish County

MEDICAL CENTER
16440 SMDKEY POINT
BLVD SUITE 210
APLINGTON, WA 98223
PHONE (360) 653-2142
FAX (360) 653-2299

COUNSELING & REFERRAL
SUBSTANCE ABUSE
1721 HEWITT AVENUE
SUITE 810
EVERETT, WA 98201
PHONE (206) 259-4379
FAX (206) 259-3047

Skagit County

MEDICAL & DENTAL CENTER
1400 LA VENTURE
MOUNT VERNON, WA 98273
PHONE (360) 428-4075
FAX (360) 419-5813

DENTAL CENTER
119 EAST FAIRHAVEN
BURLINGTON, WA 98223
PHONE (360) 755-9151
FAX (360) 755-9206

COUNSELING & REFERRAL
HOMELESS
2529 E COLLEGE WAY
SUITE 100
MT. VERNON, WA 98273
PHONE (360) 336-6612
FAX (360) 336-6639

Whatcom County

MEDICAL & DENTAL CENTER
800 E CHESTNUT ST
SUITE 2-A
BELLINGHAM, WA 98225
PHONE (360) 671-3225
FAX (360) 671-0000

MEDICAL CENTER
512 W GROVER
LYNDEN, WA 98264
PHONE (360) 354-8766
FAX (360) 354-7667

COUNSELING & REFERRAL
SUBSTANCE ABUSE
2209 ELA ST SUITE A
BELLINGHAM, WA 98225
PHONE (360) 734-6459
FAX (360) 734-5798

December 23, 1996

Mr. Geoff Hughes
Washington State Department of Health
P.O. Box 47820
Olympia, Washington 98504-7820

Dear Mr. Hughes:

I am writing in response to your letter dated December 13, 1996, soliciting comment regarding the temporary worker housing document to be presented to the Legislature.

As you may know, Sea Mar Community Health Centers has a network of clinics throughout five Western Washington counties which provide services to low income, Hispanics, migrant and seasonal farm workers and the homeless. Being a provider of services to the population that will be directly affected by the proposed temporary housing solution, I am compelled to state our strong opposition to the proposal.

The proposed project for temporary housing for farm workers via the use of tents or some similar structure is completely unacceptable. It raises many concerns, not the least of which is the affect and impact it would have on the numerous children of migrant workers. The lack of adequate living facilities has a tremendous impact on the physical and mental health of individuals, the affects of which are much harder on children. The use of tents as temporary housing would provide nothing more than a slight barrier from outside elements and would do nothing in the way of providing adequate lighting, plumbing, cooking facilities, potable water, etc. It is a well documented fact that farm workers suffer job-related illnesses at a rate far above the norm for the general population. As an already high risk population, it is essential that farm workers have housing standards that meet health and safety standards in order not to further compromise their well being.

By sanctioning the use of tents or similar structures as an acceptable means of temporary housing under a provisional license, we would be opening an approved method for allowing substandard housing accommodations to exist. Farm workers must be provided with safe and sanitary conditions in order to avoid the increasing

DEC 30 1996
COMMUNITY HEALTH CENTERS

number of health related problems associated with agricultural work. Tents simply do not provide any form of standard living. Furthermore, I am afraid that use of tents, even for the cherry harvest, as an acceptable form of temporary housing will inevitably lead to the increased use of them and simultaneously decrease chances of ever having farm worker housing built which meets acceptable standards of living. How can tents possibly provide for bathroom and shower facilities, food preparation and storage areas, running water, and proper lighting just to name a few?

Furthermore, it is difficult to believe that there will be any significant regulation of these "camp sites". Washington State has historically been lax in enforcing labor camp rules. The addition of tents as housing have the same substandard issues to deal with as on-farm housing and will only compound the already existing problems that have traditionally been ignored and overlooked.

It is difficult to comprehend how the proposed policy allow growers to house workers in tents that meet no health and safety standards, have to purchased by the workers themselves, and have no requirements for weather proofing, food storage or preparation, no electricity, etc. It is even more astounding that a governmental agency whose primary purpose is protecting public health would not require it mandatory that shelters be weather-proof, have food preparation and storage facilities, have accessible potable water, etc. It makes one wonder if the Department would allow these same conditions to exist for any other short-term or temporary program housing people, such as a residential treatment center, or a summer or church camp - - - I am fairly certain that the answer would be resounding NO!

It appears to me that, once again, migrant farm workers (most of whom are Hispanic) are being singled out or exempted from standards that the rest of nation's population must adhere to. Unfortunately, as with the Child Labor Laws, it is the young children who end up suffering the greatest loss as a result of this sort of legislation. If the use of tents as temporary housing is such a noteworthy and cost effective idea, given certain circumstances, then why are they not being considered in the urban and more populated areas as a means of providing shelter to the thousands of homeless individuals throughout the state?

I firmly believe that the current trends in farm worker housing, or lack there of, must be stopped. We must get back to basics and the true intent of the regulations and standards, which is to protect the farm worker, not act as a hindrance to them. If we fail to put the responsibility for providing safe and healthy housing that meets or exceeds minimum standards, then the issue of farm worker housing will surely continue to decline. Unfortunately, our current system leaves little if any incentive for growers to comply with housing standards and unless stricter enforcement of regulations occurs, there is little hope for making significant strides in developing acceptable housing. To now accept tents as any means of acceptable housing,

would only set us further back in the struggle for decent living accommodations for one of our nation's most high risk populations.

Thank you for allowing interested parties the opportunity to comment on the Department of Health report before it goes to the Legislature. If you have any questions or would like to speak with me directly, please do not hesitate to contact me at (206) 763-5210.

Sincerely,

A handwritten signature in black ink, appearing to read 'Rogelio Riojas', written in a cursive style.

Rogelio Riojas
Chief Executive Officer



COLUMBIA LEGAL SERVICES

CENTRAL SUPPORT OFFICE

SUITE 300

101 YESLER WAY

SEATTLE, WASHINGTON 98104

ADA SHEN-JAFFE
DIRECTOR

1-800-542-0794
(206) 484-5933

December 20, 1996

Geoff Hughes
Policy Analyst
Washington State Department of Health
Airdustrial Center
Clean Water Lane, Bldg. 2
Tumwater, WA 98501

Re: Department of Health Report on Temporary Worker Housing

Dear Mr Hughes:

Thank you for the opportunity to comment on Department of Health's report to the Legislature on temporary worker housing. Our Olympia office is submitting separate comments on several of the regulatory issues raised in the report. This letter addresses the report's characterizations of Columbia Legal Services representation of residents of farm labor camps.

- 1. Columbia provides legal representation to workers seeking healthy and safe housing.**

The report repeatedly states that Columbia Legal Services has taken positions on temporary worker housing issues. This creates the impression that Columbia is acting as an interested party. As you know, Columbia is a law firm. It speaks on behalf of farm worker clients who reside in temporary worker housing. Columbia does not take positions on its own behalf. It has, however, been called upon to comment on client needs and concerns, for example, by the Agricultural Interests/Legal Aid Relations Task Force chaired by Representative Clements.

Page i of the Executive Summary and page 6 of the report state that farm worker representatives, including legal services, appear to view the need for decent, affordable housing from a "social policy" or "housing policy" perspective. Columbia's report to the Department on the regulation of temporary worker housing, attached as Appendix B to the DOH report, shows that Columbia's representation addresses the health and safety of farm worker housing. This representation focuses on the need to prevent disease and injury that may result from lack of sanitary food storage and preparation facilities, hazardous cooking over open fires, dangerous electrical wiring, and lack of safe drinking water. The Department acknowledges (on page 3) that inadequate

housing is an important risk factor for disease.

2. **Our clients have proposed incentives to develop economical, safe and sanitary housing that would not duplicate permanent housing.**

The report implies that farm workers' proposals for community-based housing would not be economically feasible because they would duplicate the permanent housing of migrant workers. (See pages i and 11.) This is incorrect. Columbia's clients have put forth a proposal to encourage the development of temporary housing, such as well-constructed tents, for short-term workers. Under this proposal, cherry growers and packers would receive tax credits for contributions to a non-profit consortium that would construct and operate temporary housing in the communities of the contributing businesses. This proposal has been shared with Secretary Miyahara, Speaker Ballard, Representative Clements, Representative Lisk, Senator Newhouse, and representatives of the agriculture industry, including the Washington Growers League.

3. **Columbia has worked with growers and others to find cooperative solutions to our clients' housing problems.**

The report's depiction of the relationship between growers, Columbia, and Columbia's farm worker clients ignores important cooperative efforts to develop and improve farm worker housing. (See pages 9-10, 22.) These cooperative efforts include:

- * The establishment of a not-for-profit corporation controlled by grower and worker representatives to obtain land, raise money and purchase housing facilities as the result of the settlement of our clients' housing claims in Alvarado v. Blue Bird, Inc.;
- * Mutual efforts by growers' organizations and Columbia's clients to support the 1996 legislative appropriation of \$2 million from State Legalization Impact Assistance Grant (SLIAG) funds for farm worker housing, including a joint letter of support signed by the executive directors of Washington Growers League and Columbia Legal Services;
- * Support from growers' organizations and Columbia's clients for the 1996 enactment of Substitute House Bill 2778, which provides sales and use tax exemptions for materials and labor to construct or improve farm worker housing; and
- * Advisory committee and task force participation of grower and Columbia representatives to share information on the economical development of safe and sanitary housing and to leverage the use of public funding to maximize the development

of affordable housing.

While the report portrays growers as concerned about lawsuits brought by Columbia's clients "for some minor violation of some arcane rule," it fails to mention that lawsuits against growers for substandard housing are rare, and it fails to report the outcome of the only two such lawsuits that legal services clients have brought in recent years. One of those suits is Alvarado v. Blue Bird, Inc., which was filed to achieve an enforceable settlement agreement to develop safe and sanitary housing on behalf of the residents of the Blue Bird camp. The other case is Rodriguez v. Carlson, where a federal court recently found an employer to be liable for "serious" and "persistent" violations of health and safety standards, including lack of sanitation, failure to provide safe foodhandling facilities, and inadequate shelter, and for willful failure to procure a license. For a year prior to filing suit, the Rodriguez clients repeatedly tried to resolve this dispute without litigation. Protracted efforts to initiate negotiations toward a settlement, including the kind of settlement reached in Alvarado, were rejected. Columbia's clients brought litigation as a last resort. And, under the Columbia's current mediation policy, such litigation will only be pursued after appropriate alternative dispute resolution opportunities have been explored with the client.

It is our hope that state agencies will join farm worker representatives and growers organizations in recognizing that, while there are differences in perspective on these issues, there are significant opportunities to work together to achieve common goals.

4. Our clients support a properly administered provisional licensing program for the cherry harvest.

Over the course of two years, Columbia's clients who reside in farm labor camps during the cherry harvest have provided input to the Department of Health to try to ensure that the Department's provisional licensing program will meet their basic health needs. Our clients have consistently recognized that the Department may implement a program of gradual compliance with minimum health and safety standards, and that camp facilities may include the use of tents and other portable structures to meet the short-term housing needs of workers. They have, however, voiced their concerns that the Department has implemented its program in such a way that it does not meet their needs for safe and sanitary foodhandling facilities, decent shelter, lighting, and other basic human needs. Thus, the report's statements that Columbia "opposes" the Department's pilot project are taken out of context and therefore unfair. (See pages 7, 18, 22.)

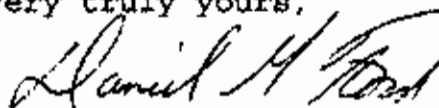
Geoff Hughes
December 20, 1996
Page 4

Our clients believe a properly administered provisional licensing program should contain compliance schedules for clearly articulated standards that are supported by the Department's epidemiological study (Appendix A to the DOH report). To date, this has not been done. If the Department expects cherry growers to improve the conditions in their camps, it must give the growers reasonable notice of the requirements for initial licensing and annual renewal. Similarly, if the Department expects workers to defer their needs for basic housing, it must tell workers when they can expect that their needs will be met.

The Department's epidemiological study sets forth the public health basis for: 1) cooking and food handling facilities, including sinks for frequent hand washing, refrigeration, and cooking facilities that reduce the risk of fires (pp. 25-26); 2) shelter with adequate living space (to reduce the risk of communicable disease), proper ventilation, and sanitary bedding (pp. 10-13, 29); and 3) safe and adequate lighting (pp.14-15). Our clients believe that science and common sense, as well as the law governing the provisional licensing program, require that the Department's pilot project incorporate standards to meet such basic needs.

I hope that this serves to clarify our clients' goals and our representation for the Department and the Legislature. If you have any questions concerning this letter, please do not hesitate to call.

Very truly yours,



Daniel G. Ford
Statewide Coordinator