Alternative Workweeks: Productivity vs. Employee Benefit

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Public agency managers face increasingly limited public funds with demands for increased accountability and greater pressures for transparency of choices for employee work schedules. As a result, alternative work schedules (AWS) have become increasingly popular over the past several decades. AWS, in the area of public works, is a heated topic with the issue of productivity being a core question. It is widely thought that an AWS increases productivity due to higher employee satisfaction and morale but limited research found by LA Consulting concludes that AWS generally function to the benefit of the employee with little to no documented improvement in productivity.

Background

Research done in Utah by Wadsworth, Facer & Arbon (2010) shows that the traditional five-day eight-hour work week has been the standard in the United States for many years. The shift to a five-day workweek began when Ford Motor Company first adopted the schedule in 1927 as attitudes toward working hours began to change and society began to focus on higher levels of personal gratification.

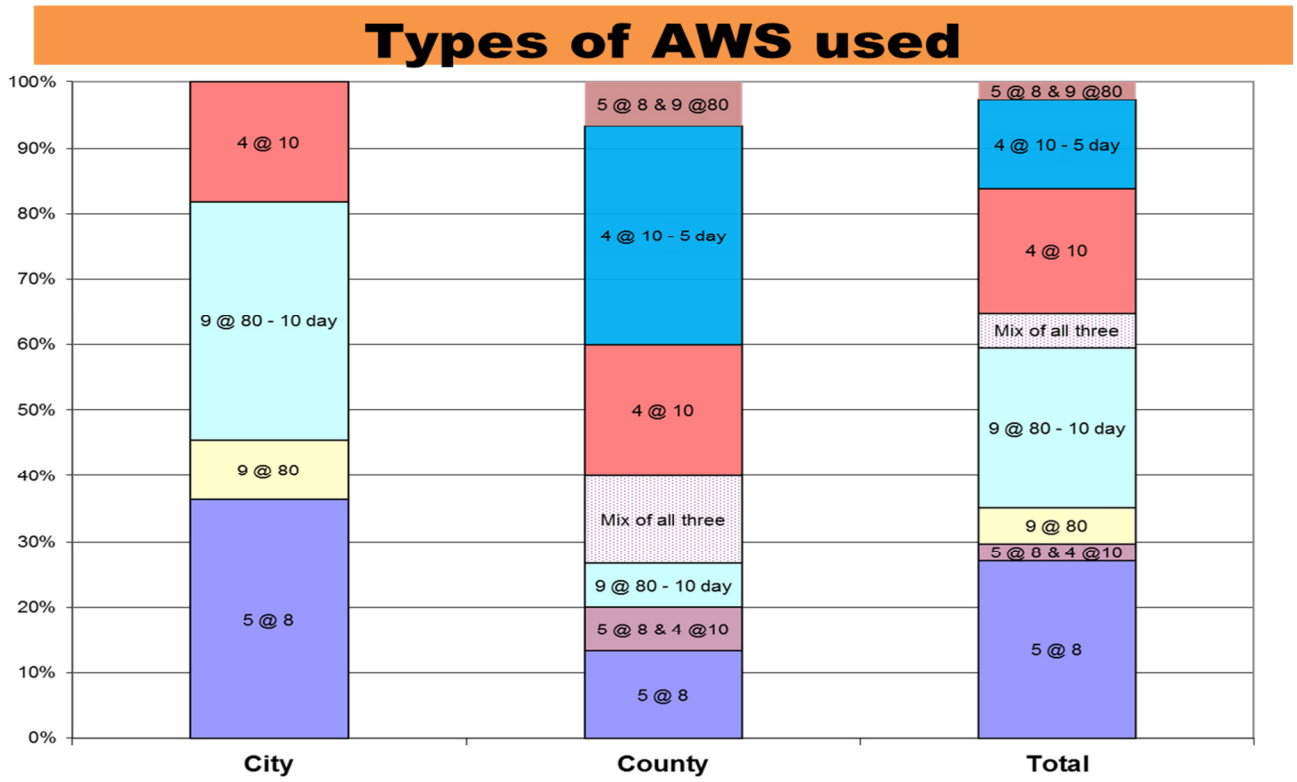
AWS have taken many forms including a variety of extended daily work hours with compressed work weeks to telecommuting. Each presents unique productivity challenges. In public works, the most popular AWS are the compressed work week schedules. They include 4/10 (working ten-hour shifts for four days with three days off each week) and the 9/80 (working nine days over a two-week period). These AWS have different variations to obtain department coverage for 5 days like split crews to cover 5 days.

AWS do result in several positive outcomes including increased employee satisfaction and improved staff morale. These outcomes lead to the assumption that this improves productivity. LA Consulting's literature review focused on the application of AWS in public works which revealed pertinent finding for and against AWS.

Types of AWS Utilized

LA Consulting's research, completed in 2012, studied the variety of AWS used in both cities (22) and counties (14) across California. Eight variations were used for both cities and counties as shown in Figure 1 on the next page:

Figure 1



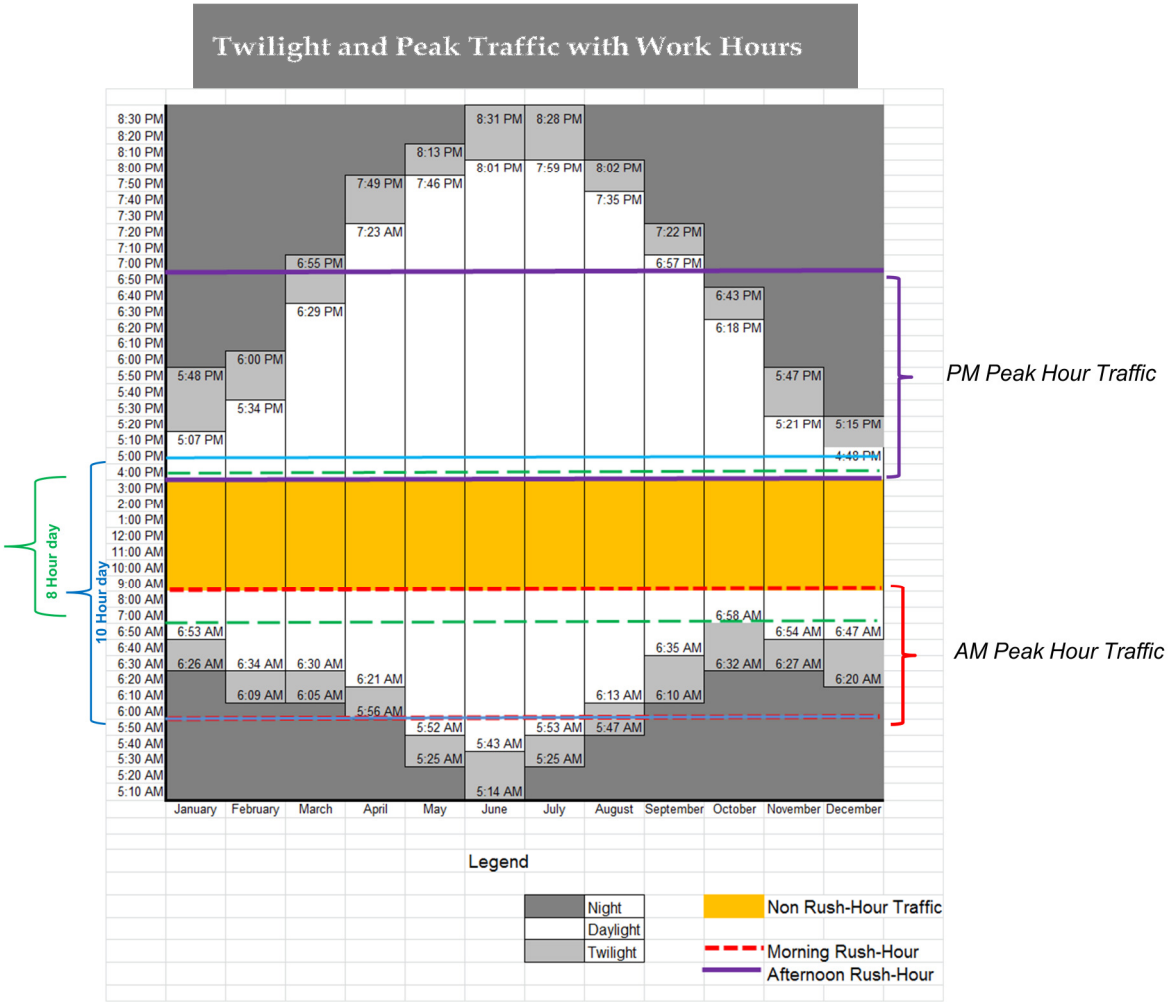
The majority of counties (eight) were on a 4/10 schedule with five of those having a split shift, five day coverage with only two counties working a 5/8 schedule, one was on a 9/80, and four were a combination. Four counties were on a modified approach where they shift from 4/10 or 9/80 to a 5/8 work schedule based on the time of the year. All four counties conduct major chip, asphalt or seal operations during the summer months.

The city research revealed that eight were on a 5/8 work schedule, four were on a 4/10, and ten were on a 9/80 with eight of these cities using split-shift coverage. Those on a 9/80 schedule appear to warrant their schedule based on trip reductions, air quality and employee benefits. Economic rationale was not given as justification.

Best Use of AWS

If a public works department implements an AWS, the 4/10 at a 6:00 am to 4:30 pm schedule shows considerably more time (6%) in both twilight and peak hours (47.7%) than other schedules, which would most likely affect both work efficiencies and public impact. Figure 2 on the next page shows twilight and peak traffic with work hours for Southern California. Twilight and peak traffic work hours will vary in the U.S. based on location within the time zone.

Figure 2



As shown by extending work hours more work time is done during twilight and peak traffic.

Research Results

Although current research (Lingard, Brown, Bradley, Bailey & Townsend , 2007; Wadsworth et al., 2010) conducted in the United States and abroad suggests that productivity is maybe improved by implementing a 4/10, that research is based on qualitative data which is centered on employee and human resource interviews and opinion surveys. This has left a gap in the research available to prove the link between AWS and economically improved productive outputs. Further, the findings suggest that a significant amount of the data on employee satisfaction, efficiency, and service levels were compiled with limited or incomplete productivity measurements. Except in specific situations, this has led to mixed research results between employee health and performance and productivity and cost savings.

In 2010, Utah experienced controversy on schedules and productivity which led to an evaluation and audit on actual statewide ASW implementation. In 2008, Utah implemented a state-wide 4/10 AWS only to have it reversed back to the traditional 5/8 schedule because they could not document actual productivity improvement. Even though the vast majority of employees preferred the 4/10 schedule and thought they were more productive, the lack of quantitative data in support of increased productivity and costs savings were not met.

In select cases, productivity and cost efficiencies can be realized. In particular, large construction projects that require extensive job set up and tear down can benefit from AWS. Longer days on such projects can result in reduced delays in the work effort resulting in enhanced productivity as recorded by a study in Illinois (1993). In addition, large rehabilitation projects such as roadway surface asphalt overlays can benefit from seasonal use of AWS to maximize work in daylight hours during the summer month as illustrated in studies done in Missouri (1981) and Washington (2008).

Impact

While the lack of quantitative performance measures hinders a transparent evaluation, the benefits of the AWS option positively impacts employees in a meaningful way. Employees enjoy more days off, can achieve a more balanced work/family life, can reduce transportation costs and seek additional employment or pursue a hobby or passion. Studies by Combs (2012) and Wadsworth & Facer (2008) show that more than 70% of employees favor 4/10 schedules. Surveyed employees listed better family balance, more daylight for leisure, time for second jobs, reduced commute time, lower cost for travel and child care as 4/10 benefits. These findings are supported in studies done in Utah and Texas. Employers, from an operations standpoint, can staff a large job easier, increase daily coverage and benefit from reduced job set up and travel to and from the site on multi-day jobs. All of these positives can translate to a positive work environment.

Qualitative recorded employee drawbacks to an AWS included longer workdays, family interaction issues, lack of daily daylight for certain tasks and family schedule conflicts. While Utah and Texas have qualitative data, employers across the board experience difficulties in scheduling key people for meetings. Other difficulties include a lack of supervisor coverage, a decrease in face time between management and employees, a decrease in productivity, reduced employee morale for some staff, and friction between those employees with and without the option of an AWS.

Evaluation

Though employees favor a 4/10 schedule, the productivity improvement data is minimal. Existing data does not indicate productivity improvement for a year-round schedule over a 5/8 schedule.

Suggested factors that limit 4/10 schedule productivity on a year-round basis include:

- Extended work day schedules result in more afternoon work-hours during the least productive time of the day as noted in studies done by Barnes (2012) and Swart & McCathy (2007). In addition, research done by Tippin & Stroh in 1993 recorded that longer work-hours may negatively impact older employee's ability to endure physical aspects of the job. Further, noise ordinances may inhibit work start before 7am or after 5pm in many communities.

- Reduced daylight working hours during a 10-hour day reduces productivity. The use of a 4/10 schedule results in more total work time during twilight or darkness that reduces productivity and increase the need for additional safety measures. Reduced visibility may often impact using equipment, properly observing assigned work and coordinating with other employees, resulting in lower productivity. Hazards of reduced visibility may often result in additional crews visible to on-coming traffic. Further, in 2012, a 4/10 schedule study in California by L.A. Consulting shows increased working in twilight (6% increase for a 4/10 versus 0% for a 5/8) and increased work in peak traffic times by 50% again as seen in the twilight and peak traffic with work hours graph above. In Washington, 82% of public works agencies use a 4/10 schedule on a seasonal basis during the summer.

- While most maintenance work is classified as small response efforts that cannot take advantage of increased setup times that larger projects may experience, large construction jobs, on the other hand, do showed some improved productivity measures for 4/10 schedules. Improved productivity for maintenance was limited to the longer daylight hours of summer in a Missouri study conducted by Martin (1981). Consequently, the 4/10 schedules were implemented on a cyclical timetable during the longer daylight hours of summer days. During the shorter daylight hours of winter, the agency reverted back to a 5/8 schedule.

- Public works maintenance jobs typically work in a crew environment and have limited flexibility to adapt to different or varied schedules of crew members. As a result of these limitations, staff schedules must be related to the lowest common dominator. Limitations of older crew member(s) capacity to do physical work on extended work schedules could reflect on an entire team's production and/or safety.

Conclusion

Qualitative research supports the implementation of an AWS while quantitative research does not. There does not appear that a correlation between employee satisfaction to actual work improvement in the amount of work done, quality provided or service delivered exist. To reduce

the question of costs and benefits linked to productivity in public works, public works maintenance operations will need to compile and evaluate both quantitative performance and productivity data on a concurrent basis.

While studies suggest that the use of a 4/10 schedule is preferred by most affected employees, public works agencies need to confirm the needs of the department would be met before implementing AWS. Outcomes need to be weighted and prioritized by employers for both employees and employers. AWS, in most cases, can be a negotiable beneficial and help in attracting and retaining top employees, improving the work environment which, in turn, improves employee morale. Thus, use of AWS should be viewed primarily as a negotiation tool with employees as an employee benefit to attract and retain top talent.