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DOES PARTICIPATION IN WASHINGTON'S WORK RELEASE FACILITIES REDUCE RECIDIVISM?

In 2007, the Washington State Legislature passed an adult offender reentry initiative with the goal of reducing recidivism.[1] As part of that effort, the Legislature directed the Washington State Institute for Public Policy (Institute) to evaluate the Department of Corrections' (DOC) work release program to determine its impacts on key outcomes, such as recidivism.

This report includes findings from our recidivism analysis. Recidivism is defined as any offense committed after release to the community that results in a Washington State conviction. We analyzed three types of recidivism: felony, violent felony, and total recidivism, which includes misdemeanors.

A future report will assess the impact of offender's participation in work release on employment.

Legislative Direction

The Institute was directed to:

- Evaluate DOCs' work release program on key outcomes.
- Identify the programs that show the greatest effectiveness on key outcomes and which services should be provided for effective reintegration.
- Examine work release practices inside and outside of Washington State.

This report is divided into three sections based upon these legislative directives.

Summary

Work release facilities enable certain offenders under the jurisdiction of the Washington State Department of Corrections (DOC) to serve up to six months of their prison sentence in a residential facility while employed in the community. Today, there are 15 work release facilities that house about 700 offenders statewide.

The Institute was directed by the 2007 Legislature to evaluate whether participation in Washington's work release facilities impacts recidivism. Our time period of study includes offenders who released from DOC between January 1998 to July 2003.

Findings from the study indicate participation in Washington's work release facilities:

- lowers total recidivism, by 2.8 percent
- has a marginal effect on felony recidivism; by 1.8 percent; and
- has no effect on violent felony recidivism.

Of the 15 facilities operating in 1998 to 2003, we found that participation in some contributes to greater reductions in recidivism than others.

We ran our economic model to determine if the marginal benefits of work release outweigh the cost. Based upon the felony recidivism findings, participation in work release generates $3.82 of benefits per dollar of cost. The benefits (about $2,300 per work release participant) stem from the future benefits to taxpayers and crime victims from the reduced recidivism.

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[1] ESSB 6157, Chapter 483, Laws of 2007.

Section I: Evaluation of DOC's Work Release Program

Our first legislative directive was to evaluate DOC's work release program on key outcomes. For this study, we analyzed the impact of work release on recidivism.

DOC's Work Release Program

Washington's work release program was created by the Legislature in 1967.[2] Work release facilities enable certain offenders under the jurisdiction of DOC to serve up to six months of their prison sentence in a residential facility while employed in the community.[3] Today, 15 work release facilities house about 700 offenders statewide.[4]

DOC eligibility criteria restrict who participates in work release. Current statewide policy[5] prohibits offenders convicted of First Degree Murder and offenders convicted of First Degree Rape[6] from participating in work release unless approved by DOC's screening committee.

In addition, each work release facility has its own local eligibility criteria. For example, some facilities house both male and female offenders, while others are gender specific. Some facilities serve as a therapeutic community for chemically dependent offenders, while others do not. In addition, some work release facilities may accept some sex offenders, only treated sex offenders, or no sex offenders. Appendix A contains more detailed information on facility characteristics.

DOC hires contractors to provide custodial staff for security.[7] In addition, contractors typically provide food service, maintenance, and clerical staff, depending upon each facility's contract. DOC staff include the work release supervisor, case management staff, and administrative support.

Offenders are responsible for finding a job within about ten days of arrival at the facility and are typically required to work 40 hours a week. Some work release facilities have established informal partnerships with local employers. Many work release facilities have a job specialist who helps offenders with interviewing techniques, resume writing, and job preparation. These specialists often come from the local Employment Security Department or are provided through the contracted staff. Offenders are responsible for their own transportation—typically public transportation—to and from work.

By law, wages earned by the offender can be deducted for the following reasons: vocational training expenses, room and board, financial support for dependents, legal financial obligations, payments to creditors, and personal savings to be used upon release.[8]

Evaluation Design

The best way to determine a program's effectiveness is to compare the outcomes of offenders who participate in work release with similar offenders who do not participate. In an ideal research setting, offenders would be randomly assigned to a work release or comparison group. We did not have that option for this evaluation; thus, we constructed an appropriate comparison group by minimizing differences between the groups and adjusting statistically when differences remained.

Evaluations that measure recidivism are "retrospective" by design, which means that we did not evaluate the effectiveness of work release as it operates today. The study groups selected were as recent as possible, while allowing sufficient time for a 36-month follow-up period. Our time period of study includes offenders who were released from prison

[2] RCW 72.65
[3] RCW 9.94A.728 (6)
[4] DOC considers Lincoln Park and Rap House one work release facility. In this report, these facilities are analyzed separately, because they serve two different populations. Thus, when counted separately, there are 16 work release facilities.
[5] DOC Policy Directive 300.500.
[6] Policy prohibits participation by offenders convicted of First Degree Rape who are within their first three years of confinement.
[7] The Tri-Cities Work Release is the only work release facility in Washington that is entirely state-operated.
[8] RCW 72.65.050

between January 1, 1998 and July 31, 2003 and we measured recidivism through September 2007.

Selecting the Work Release Group

There were 35,475 offenders released from a DOC facility from January 1, 1998, through July 31, 2003. Of these, 32 percent, or 11,413 offenders, participated in work release.[9] This group of offenders became our study group for the evaluation. The remaining 24,062 offenders did not participate in work release.

To understand how work release participants differ from the general prison population, we compared the two groups on key characteristics such as criminal history, offense seriousness, sentence length, and demographics.

Exhibit 1 shows that offenders who participate in work release tend to have more criminal history, but less serious and less violent offenses than the general prison population. Thus, offenders who participate in work release have shorter sentences and spend less time in prison than the general prison population. There are more African American and female offenders in the work release group, and they are also slightly older than the general prison population.

To determine which characteristics are predictive of participation in work release, we ran a logistic regression analysis using the characteristics shown in Exhibit 1. A statistic produced from the logistic regression, called the area under the receiver operating characteristic (AUC), helps determine how strongly these characteristics are associated with participation in work release (for a further explanation of the AUC, see the sidebar on this page). The AUCs in Exhibit 1 indicate that, individually, none of the characteristics is predictive of participation in work release.

Technical Note:
Measures of Association Strength

The AUC

A statistic called the *area under the receiver operating characteristic* (AUC) is the best measure for determining how accurately a characteristic predicts an event, such as participation in work release or recidivism.[†]

The AUC ranges from .500 to 1.000. This statistic is .500 when there is no association and 1.000 when there is perfect association. AUCs in the .500s indicate little to no predictive accuracy, .600s weak, .700s moderate, and above .800, strong predictive accuracy.

Standardized Estimate

A statistic called the *standardized estimate* is used to compare the relative strength between the dependent variable, such as participation in work release or recidivism, and certain characteristics. Negative numbers indicate a negative association and positive numbers indicate a positive association with the dependent variable. The larger the estimate is, the greater the association.

[†] V. Quinsey, G. Harris, M. Rice, & C. Cormier. (1998). *Violent offenders: Appraising and managing risk.* Washington D.C.: American Psychological Association; P. Jones. (1996). *Risk prediction in criminal justice*. In A. Harland (Ed.), Choosing correctional options that work. Thousand Oaks, CA: Sage, pp. 33–68.

We also conducted a logistic regression analysis which included all characteristics in the model to see if, collectively, these characteristics are associated with participation in work release. Results of the full model, however, indicate that the characteristics have a weak association with participation in work release.

In summary, based upon the characteristics in Exhibit 1, it is difficult to predict who participates in work release.

[9] This figure includes offenders who spent at least one full day in work release; it does not include offenders who transferred through a work release facility en route to another facility on the same day. This figure also excludes offenders who entered DOC for sanctioning purposes for a violation of community supervision.

Exhibit 1
Work Release Group Versus the General Prison Population: Key Characteristics

	Work Release Group	Offenders Released Between 1998 to 2003 (excluding work release Group)	Sig-nificance Level	AUC	Std. Estimate
Number of Releases	11,413	24,062			
Means					
Felony risk score[a]	74	71	0.00	0.547	0.082
Non-drug risk score[a]	52	52	0.38	0.511	0.006
Violent risk score[a]	32	34	0.00	0.521	-0.066
Prior adult felony adjudications	4.0	3.3	0.00	0.566	0.118
Minimum sentence years[b]	3.0	3.1	0.00	0.500	-0.023
Maximum sentence years[b]	3.2	3.2	0.09	0.500	-0.011
Mandatory sentence days	20	29	0.01	0.504	-0.019
Actual prison days	514	701	0.00	0.575	-0.161
SRA offender score[c]	4.4	3.8	0.00	0.551	0.103
SRA severity level[c]	4.6	5.0	0.00	0.536	-0.063
Age at release	34	33	0.00	0.560	0.090
Percentages					
Male	82%	89%	0.00	0.533	-0.104
Caucasian American	69%	73%	0.00	0.524	-0.058
African American	26%	20%	0.00	0.532	0.083
Logistic regression AUC	0.678				

[a] The risk scores shown are calculated based upon the scoring methods of DOC's static risk instrument. For more information, see: R. Barnoski & E. Drake (2007). *Washington's Offender Accountability Act: Department of Corrections' static risk instrument.* Olympia: Washington State Institute for Public Policy, Document No. 07-03-1201.
[b] 110 observations were omitted from the sample for this statistic because they were outliers—offenders sentenced to life in prison or death.
[c] The Sentencing Reform Act (SRA) of 1984 established a "sentencing grid," which is based upon the offender score and offense severity level. The offender score is calculated primarily on prior convictions (0 to 9 plus) and the severity level is reflective of the current offense of conviction and ranges from a low of 1 to a high of 16.

Selecting the Comparison Group

The next step of the evaluation was selecting an appropriate comparison group. To do this, we first reviewed historical DOC work release screening policies used during our study period—1998 through 2003—to determine who was eligible to participate.

Based on these DOC screening criteria, the following offenders were excluded from participation in work release:

- Those convicted of First Degree Murder, First Degree Rape, First Degree Assault, First Degree Assault of a Child, First Degree Kidnapping, Homicide by Abuse, Second Degree Murder, First Degree Manslaughter.[10]

[10] Unless approved by DOC's Headquarter's Community Screening Committee.

- Those with an out-of-state release plan; those wanted by law enforcement for another felony; and offenders who were released to the custody of federal authorities, such as the Immigration and Customs Enforcement.
- Offenders with violations or infractions that were violent, such as assault or sex offenses.

In addition to the exclusion criteria above, offenders also had to meet the following inclusion criteria to participate in work release:

- Must have had six months or less until their early release date.
- Must have had the lowest custody classification level—Minimum Custody Level 1.

The comparison group selected for this study included offenders who did not participate in work release, but met all of the aforementioned eligibility criteria according to DOC statewide policy. Offenders in the comparison group were released from prison during the same time period as the work release group—January 1, 1998, through July 31, 2003. A total of 3,913 offenders were included in our comparison group.[11]

Offenders who refuse to participate in work release, by DOC policy, have their custody level overridden to a higher level. Due to this criterion, offenders in both the work release and the comparison groups have volunteered to participate in the program, therefore reducing the possibility of self-selection bias threatening the validity of the study design.

We compared the work release group with the comparison group to estimate how different the two groups are on key characteristics such as criminal history, offense seriousness, sentence length, and demographics. **Exhibit 2** shows that there are some statistically significant differences between characteristics of the work release and comparison groups. Offenders who participated in work release had more criminal history but less violent offenses than the comparison group. Offenders who participated in work release had longer sentences and spend more time in prison than the comparison group. There were fewer Caucasians and more African Americans in the work release group, and they were also slightly older than the comparison group. These differences may reflect the local screening policies of work release facilities. Unfortunately, however, some of these local criteria are unobserved to the researchers.

To further test the differences between the study groups, we ran logistic regression analyses to determine if we can predict who participates in work release based upon the characteristics in Exhibit 2. Shown in the exhibit are the individual AUCs—the strength of association between the characteristic and participation in work release. The AUCs indicate that, individually, none of the variables have an association with participation in work release.

We also conducted a logistic regression analysis, which included all of the characteristics in the model to see if, collectively, they are associated with participation in work release. Results of the full model indicate that the characteristics have a weak association with participation in work release (AUC=.668).

If any statistical bias remains in our multi-variate analysis, it would be in the direction of showing work release to be more effective at reducing recidivism.

[11] Appendix B details the selection process for the study groups. It also shows how many offenders would have been eligible for work release under DOC's current screening policy.

Exhibit 2
Work Release Group versus Comparison Group: Key Characteristics

	Work Release Group	Comparison Group	Sig-nificance Level	AUC	Std. Estimate
Number of Releases	11,413	3,913			
Means					
Felony risk score[a]	74	74	0.91	0.501	-0.001
Non-drug risk score[a]	52	54	0.00	0.530	-0.056
Violent risk score[a]	32	34	0.00	0.543	-0.089
Prior adult felony adjudications	4.0	3.8	0.00	0.514	0.036
Minimum sentence years[b]	3.0	2.5	0.00	0.500	0.169
Maximum sentence years[b]	3.2	2.7	0.00	0.500	0.144
Mandatory sentence days	20	12	0.08	0.500	0.025
Actual prison days	514	498	0.16	0.486	0.015
SRA offender score[c]	4.4	4.0	0.00	0.529	0.066
SRA severity level[c]	4.6	4.3	0.00	0.518	0.056
Age at release	34	33	0.00	0.533	0.062
Percentages					
Male	82%	82%	0.31	0.504	0.010
Caucasian American	69%	72%	0.00	0.517	-0.040
African American	26%	22%	0.00	0.520	0.052
Logistic regression AUC	0.668				

[a] The risk scores shown are calculated based upon the scoring methods of DOC's static risk instrument. For more information see: R. Barnoski & E. Drake (2007). *Washington's Offender Accountability Act: Department of Corrections' static risk instrument.* Olympia: Washington State Institute for Public Policy, Document No. 07-03-1201.

[b] 110 observations were omitted from the sample for this statistic because they were outliers—offenders sentenced to life in prison or death.

[c] The Sentencing Reform Act (SRA) of 1984 established a "sentencing grid," which is based upon the offender score and offense severity level. The offender score is calculated primarily on prior convictions (0 to 9 plus) and the severity level is reflective of the current offense of conviction and ranges from a low of 1 to a high of 16.

Defining Recidivism

Recidivism is defined as any offense committed after release to the community that results in a Washington State conviction. Three types of recidivism are reported:

- Violent felony convictions;
- Felony convictions, including violent felonies;
- Total recidivism, including misdemeanors, felonies, and violent felony convictions.

At-Risk Date and Follow-up Period for Recidivism

Offenders who participate in work release are partially confined, meaning they are free in the community during working hours but are confined in a facility at night.[12] Since offenders are not fully at-risk to reoffend, two complexities are created in conducting recidivism analysis for the work release group.

First, we needed to determine if the at-risk date should be the date offenders started work release or the date they were released from DOC confinement into the community. We

[12] RCW 9.94A.731 defines partial confinement as confined in a facility for at least eight hours per day.

examined whether work release participants committed offenses while on work release. **Exhibit 3** shows that 2.6 percent, or 296 offenders, committed a felony offense while on work release. Thus, the decision was made to use the work release start date as the recidivism at-risk date.[13] The at-risk date for the comparison group is the date of release from prison.

Exhibit 3
Percent Actual Recidivism While On Work Release

Type of Recidivism	Total Number	Number Recidivated	Percentage Recidivism
Total	11,413	368	3.2%
Felony	11,413	296	2.6%
Violent Felony	11,413	19	0.2%

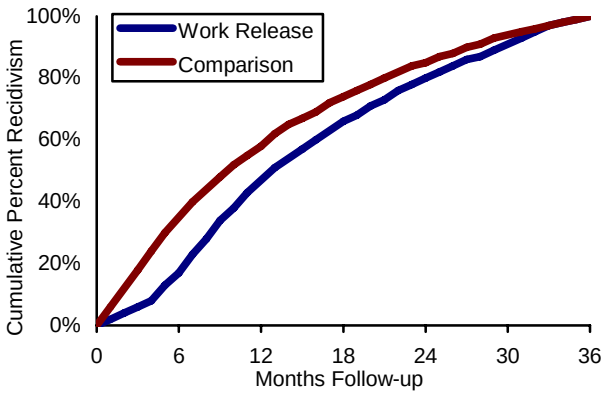
Second, since the at-risk date is the date offenders started work release, our study group was still partially confined during the follow-up period. Thus, we needed to determine an appropriate follow-up period for the work release group. In order to address this issue, we analyzed the timing of those people who recidivated.

Exhibit 4 shows there was a suppressed recidivism rate for work release offenders within the first 6 months of their at-risk date. It should be noted that offenders can serve up to 6 months on work release; however actual length of stay in work release is an average of 104 days.

To account for this suppression, we extended the recidivism follow-up period for each individual offender in the work release group by the number of days they spent in work release. For example, if an offender spent 3 months on work release, that offender's recidivism follow-up was extended to 39 months.

[13] Ninety-three percent of the offenders who committed a felony while on work release were classified by DOC's risk assessment tool as high-risk (drug, property, or violent) offenders.

Exhibit 4
Timing of New Felony Conviction for People Who Recidivated by Month



Recidivism Rates[14]

We used multivariate regression analysis to adjust for observed differences that exist between the study groups (see Exhibit 2). This enables us to calculate adjusted recidivism rates, which give a clearer picture of whether work release affects recidivism.[15]

Exhibit 5 displays multivariate-adjusted recidivism rates for felony, violent felony, and total recidivism at the 36-month follow-up (The results of the logistic regression analyses for each type of recidivism are shown in Appendix C).

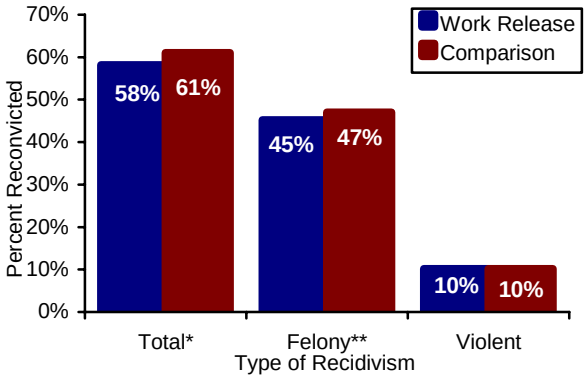
- **Total recidivism**—for offenders who participated in work release, we found that 58 percent had a new conviction for any offense. Without work release, we calculated that 61 percent were reconvicted for any new offense within three years—a statistically significant difference.

[14] It may also be of interest to note that 22 percent of the work release group released from prison rather than work release, meaning that these offenders were unsuccessful in work release.

[15] Specifically, we used logistic regression and included the independent variables listed in Exhibit 2. The recidivism rate for the comparison group was adjusted using the odds ratio from the logistic regression. For example, using the actual recidivism rate of the work release group (45 percent) and the effect size (-0.0736), we do the following calculation to get a recidivism rate of 47 percent for the comparison group: (.45/(1-.45))/ exp(-0.0736)/(1+(.45/(1-.45))/exp(-0.0736)).

- **Felony recidivism**—for offenders who participated in work release, we found that 45 percent had a new felony conviction. Without work release, 47 percent of offenders were convicted for a new felony within three years. Statistically, this is a marginally significant difference (p=.1187).
- **Violent felony recidivism**—there was no difference between the two groups.

Exhibit 5
36-Month Adjusted Recidivism Rates for Work Release and Comparison Groups



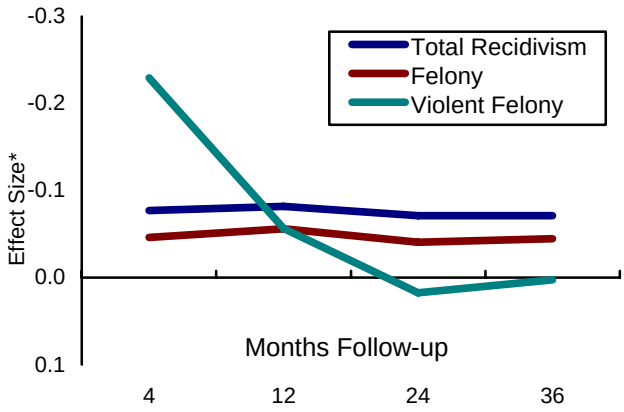
* Statistically significant difference at the p<.05 level.
** Marginally significant at p=.1187.

We also conducted multivariate-adjusted recidivism rates measured at intervals from 4- to 36-months follow-up to see how participation in work release impacted recidivism over time. Significant differences were found between the work release and comparison groups for total recidivism at every follow-up, but were found only at the 12-month follow-up for felony recidivism. For violent felony recidivism, a significant difference was found only at the 4-month follow-up period.

Another way of portraying the effect of participation in work release on recidivism is to look at the "effect size." Effect sizes measure the degree to which a program has been shown to change an outcome for program participants relative to the comparison group. **Exhibit 6** shows that work release appears to decrease non-violent recidivism. These effects, for felony and total recidivism, are similar to other adult corrections' programs we have reviewed.[16] Further, these effects are very stable over time.

After a 24-month follow-up, there was no effect on violent felony recidivism. Exhibit 6 also shows that, while there were large effects of work release participation on violent felony recidivism at the 4-month follow-up period, those differences decreased by 12-months and there was no difference by the 36-month follow-up period.

Exhibit 6
Size of Recidivism Reductions for Each Follow-up Period by Type of Recidivism



* A negative number indicates work release lowers recidivism relative to the comparison group.

In summary, work release lowers recidivism rates for total reconvictions, has a marginal effect on felonies, and has no effect on violent felonies.

[16] S. Aos, M. Miller, & E. Drake (2006). *Evidence-based public policy options to reduce future prison construction, criminal justice costs, and crime rates.* Olympia: Washington State Institute for Public Policy, Document No. 06-10-1201.

Benefit-Cost Analysis

In addition to estimating whether work release reduces recidivism, it is important to estimate whether the benefits of participation in work release outweigh the costs. We do this with the economic model used in our other benefit-cost analyses of corrections programs.[17]

The first step in conducting a benefit-cost analysis is to determine the cost of the program versus the cost of not participating in the program. This is calculated by multiplying the total length of stay by the cost per person, per day. **Exhibit 7** shows that the average total cost for an offender to participate in Washington's work release is $43,071 compared with $42,456 to not participate.[18]

Exhibit 7
Work Release versus Non-Participation: Costs Comparison

	Work Release	Comparison
Average Length of Stay in Days		
Prison days—before start of work release[a]	514	641
Prison days—after start of work release, but before DOC release date	38	0
Days on work release	104	0
Total length of stay	656	641
Cost		
Average prison cost in a minimum facility/per person, per day[b]	$ 66	$ 66
Total prison cost	$ 36,538	$ 42,456
Average work release cost/per person, per day[b]	$ 63	—
Total work release cost	$ 6,533	—
Total cost per person	$ 43,071	$ 42,456

[a] We estimated the number of days in prison for the comparison group had they received the same average minimum term as the work release group. Thus, 641 days is the product of 903 days (average minimum days for work release group) multiplied by 71 percent (the percentage of the minimum term that the comparison group served). The length of stay for the work release group is the actual number of days served in prison before the start of work release.

[b] Estimate from DOC, November 2007, in 2007 dollars.

[17] See Aos, et al., 2006.

[18] If the number of days spent in prison after the start of work release were zero, the total cost for work release group would be $40,558.

The second step in conducting a benefit-cost analysis is to determine the monetary benefits of participation in the program. Crime reductions result in an economic benefit to both taxpayers and to crime victims. It is important to note that the benefits in this section are based upon our findings of the impact of participation in work release on felony recidivism: it had a marginal effect.

To estimate the benefits of participation in the program, we first estimated how the effect size is related to future crimes avoided and how much taxpayers and crime victims save when crime is reduced.

Section (1) of **Exhibit 8** shows the effect size for participants relative to the comparison group.[19] The effect size translates into a 1.4 percent reduction in crime, shown in section (2). The economic benefits of participating in work release are shown in section (3) of the exhibit.

The final step in conducting a benefit-cost analysis is to compare the benefits to the costs in order to determine the bottom-line estimate. We find that participation in work release generates $3.82 of benefits per dollar of cost.

Exhibit 8
Work Release Program Benefit-Cost Analysis[a]

(1)	**Effect Size**	
	Unadjusted effect size	-0.040
	Adjusted effect size	-0.020
(2)	**Effect on Crime Outcomes**	
	Percentage change in crime outcomes	-1.4%
(3)	**Benefits**	
	Crime victim costs avoided	$1,161
	Taxpayer costs avoided	$1,140
	Total crime-related costs avoided	$2,301
(4)	**Costs**	
	Total work release cost per program participant	$ 603
(5)	**Benefit-Cost**	
	Benefit-Cost Ratio	$ 3.82
	Total benefits minus costs per participant	$1,698
	Internal Rate of Return on Investment	33%

[a] For methods on adjusted effect size and benefit-cost analysis: S. Aos, et al., 2006.

[19] The adjusted effect size is also displayed. It reflects assumptions we make concerning research design quality and whether the program operated in the "real world." See Aos, et al., 2006.

Section II: Identification of Facilities With the Greatest Effectiveness on Recidivism

Our second directive was to identify programs that show the greatest effectiveness on key outcomes. In this study, we identified the work release facilities with the greatest reductions in participant recidivism.

For this part of the analysis, ideally we would select a comparison group for each individual facility in order to determine whether participation in that particular facility had a significant impact on recidivism. This approach could not be done because there were not enough offenders in the comparison group to select a comparison group for each individual facility. Thus, we compared each facility with the entire comparison group using a logistic regression.[20] A logistic regression analysis was run for felony recidivism at the 36-month follow-up to determine how individual work release facilities impact felony recidivism relative to the comparison group.

Exhibit 9 summarizes the results of the analysis. The number of offenders who participated in each work release facility is displayed in column (1).[21]

A negative parameter estimate, shown in column (2), indicates a decrease in felony recidivism relative to the comparison group. A positive estimate indicates an increase in recidivism. It is also important to note the significance level of the individual facilities. From January 1998 through July 2003, participants in Rap House, Brownstone, Bishop Lewis, and Progress House had significantly reduced felony recidivism rates; participants in Peninsula had a significantly increased felony recidivism rate.

Column (3) shows the actual recidivism rates for each of the work release facilities.

Multivariate regression analysis was used to adjust for observed differences between the study groups. This enables us to adjust the recidivism rate of the comparison group based upon the control variables for each work release group, which are shown in column (4).[22] If statistical significance was not obtained, there was no difference in recidivism rates between the work release and comparison groups; thus, there was no need to adjust the comparison group rate.

It is difficult, quantitatively, to determine why participation in these four facilities contributes to a reduction in recidivism. Discussions with DOC indicate that facilities with negative parameter estimates are urban facilities compared with those with positive estimates, which tend to be rural facilities. Individual facility findings may become clearer after the employment analysis is conducted.

[20] When using logistic regression, one variable of mutually exclusive independent variables, must be omitted to serve as the "reference category." For this analysis, the comparison group serves as the reference category.

[21] The total number of offenders in column (1) is more than the total number of offenders in the work release group (11,413) because offenders participated in multiple work release facilities.

[22] Control variables included in the logistic regression analysis are shown in Technical Appendix C.

Exhibit 9
Logistic Regression for 36-Month Adjusted Felony Recidivism
By Work Release Facility

Facility	Number Participating (1)	Parameter Estimate (2)	Actual Facility Recidivism (3)	Adjusted Comparison Recidivism (4)
Statistically Significant (p<=.05)				
Rap House	235	-0.446	33%	43%
Brownstone	1,044	-0.289	43%	50%
Bishop Lewis	1,159	-0.178	49%	53%
Progress House	1,540	-0.126	49%	52%
Peninsula	694	0.174	45%	41%
Not Statistically Significant				
Ahtanum View	766	-0.110	43%	43%
Bellingham	411	0.042	45%	45%
Clark County	503	0.075	33%	33%
Eleanor Chase House	411	0.109	35%	35%
Helen B. Ratcliff	601	-0.168	34%	34%
Lincoln Park	466	-0.175	45%	45%
Longview	811	0.153	46%	46%
Madison Inn	502	-0.075	52%	52%
Olympia	466	0.183	49%	49%
Pioneer	5	0.781	40%	40%
Reynolds	1,594	-0.096	49%	49%
Tri-Cities	383	0.064	46%	46%
Logistic regression AUC		0.837		
Number observations		15,309		

Section III: Examination of Work Release Practices

Our final directive was to examine work release practices inside and outside of Washington State. In order to do this, we conducted a systematic review of all the literature that examines the impact of participation in work release on recidivism.[23] In this section, we report the findings of studies that have utilized a rigorous methodology.

Exhibit 10 shows the adjusted effect size for each study.[24] The effect size measures the degree to which a program has been shown to change an outcome for program participants relative to the comparison group. A negative effect size indicates a decrease in recidivism and a positive effect size indicates an increase in recidivism.

Three of the four studies have found that participation in work release reduces recidivism.[25] One study, which utilized the strongest level of research design, random assignment, found no difference between the work release and the comparison groups.

The Institute has stated in previous reports that more research needs to be conducted on work release before it can be determined if participation in work release reduces recidivism because the findings are mixed and there have been too few recent evaluations. [26]

Exhibit 10
Rigorous Studies Evaluating the Impact of Participation of Work Release on Recidivism

	Jeffrey & Woolpert	LeClair & Guarino-Ghezzi	Turner & Petersilia	Waldo & Chiricos
Study Information				
Year published	1974	1991	1996	1977
Research design level[a]	3	3	3	5
Program Information				
State	California	Massachusetts	Washington	Florida
Number in work release	109	212	112	188
Number in comparison	92	211	106	93
Adjusted effect size	-0.172	-0.049	-0.049	0.021

Citations:
1) Jeffrey, R., & Woolpert, S. (1974). Work furlough as an alternative to incarceration. The Journal of' Criminology, 65(3), 405-415.
2) LeClair, D. P., & Guarino-Ghezzi, S. (1991). Does incapacitation guarantee public safety? Lessons from the Massachusetts furlough and prerelease programs. Justice Quarterly, 8(1), 9-36.
3) Turner, S. M., & Petersilia, J. (1996). Work release in Washington: Effects on recidivism and corrections costs. Prison Journal, 76(2), 138-164.
4) Waldo, G. P., & Chiricos, T. G. (1977). Work release and recidivism: An empirical evaluation of a social policy. Evaluation Quarterly, 1(1), 87-108.

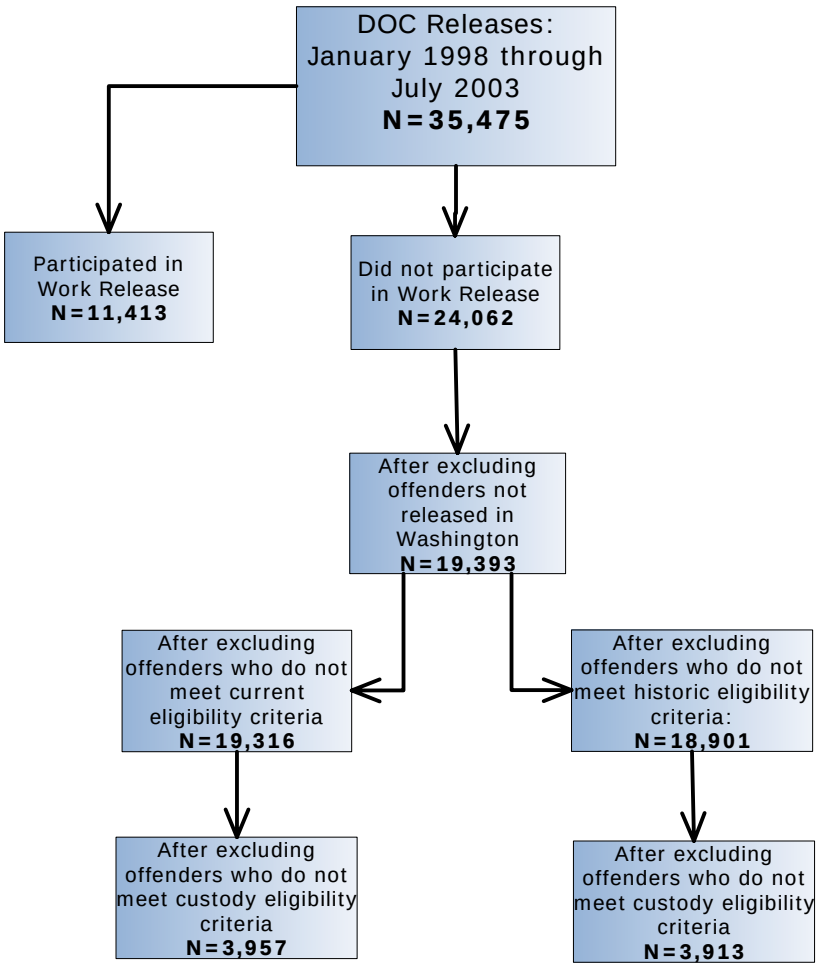
[a] Studies are rated based upon the Maryland scale of rigor—1 is the lowest quality and 5 is the highest quality, random assignment. In our analysis of the literature, we only report findings of studies rated a 3 or higher.

[23] For more details on our methodology of systematic reviews, see: Aos et al. 2006.
[24] The adjusted effect size reflects assumptions we make concerning research design quality and whether the program operated in the "real world". See Aos et al. 2006.
[25] The study conducted by Jeffery & Woolpert was a jail work release program. The remaining studies were prison work release.
[26] Aos et al. 2006.

Appendix A
Characteristics of Work Release Facilities

Work Release	City	County Catchment Area	Year Operation Began	Current Capacity	Special Characteristics of the Population Served
Ahtanum View	Yakima	Yakima, Grant, Douglas, Chelan, Klickitat, Kittitas	1972	60	Coed
Bellingham	Bellingham	Snohomish, Skagit, Whatcom, Island	1975	25	Coed
Bishop Lewis	Seattle	King, Snohomish	1970	61	Males
Brownstone	Spokane	Adams, Asotin, Ferry, Garfield, Lincoln, Okanogan, Pend Oreille, Spokane, Stevens, Whitman	1988	72	Males
Clark County	Vancouver	Clark, Skamania		27	Coed
Eleanor Chase House	Spokane	Adams, Asotin, Ferry, Garfield, Lincoln, Okanogan, Pend Oreille, Spokane, Stevens, Whitman	1993	23	Females
Helen B. Ratcliff	Seattle	King, Snohomish		22	Females
Lincoln Park	Tacoma	Pierce	early 80's	30	Mentally ill offenders
Longview	Longview	Cowlitz, Whakiakum, Lewis, Grays Harbor, Pacific, Clark overflow	1993	54	Coed
Madison Inn	Seattle	King, Snohomish	early 80's	25	Males Therapeutic community for chemically dependent
Olympia	Olympia	Thurston, Lewis, Mason, Grays Harbor, Pacific		25	Coed
Peninsula	Port Orchard	Kitsap, Jefferson, Clallam		60	Coed
Pioneer	Seattle	King, Snohomish		N/A	Coed
Progress House	Tacoma	Pierce	1978	75	Coed
Rap House	Tacoma	Pierce	early 80's	20	Coed Developmentally and physically disabled
Reynolds	Seattle	King, Snohomish, Island		100	Coed
Tri-Cities	Kennewick	Benton, Franklin, Walla Walla, Columbia, Garfield	1972	30	Coed

Appendix B
Study Group Selection Process from the Release Cohort
And DOC Eligibility Criteria



Appendix C

Exhibit C1
Logistic Regression Results for 36-Month Follow-up: Felony Recidivism

Variable	Standardized Estimate	Odds Ratio	Sig. Level
Work release	-0.018	0.93	0.12
Felony risk score	0.124	1.01	0.00
Non-drug risk score	-0.148	0.99	0.00
Violent risk score	0.113	1.02	0.00
Age at release	-0.207	0.96	0.00
Prior adult felony adjudications	0.997	1.71	0.00
Male	0.070	1.39	0.00
Caucasian	-0.021	0.92	0.07
Actual prison days	-0.108	1.00	0.00
SRA severity level	0.065	1.04	0.00
SRA offender score	-0.215	0.90	0.00
Minimum sentence years	0.209	1.00	0.00
Maximum sentence years	-0.177	0.86	0.00
Mandatory sentence days	-0.016	1.00	0.37
Logistic regression AUC	0.845		
Number observations	15,309		

Exhibit C2
Logistic Regression Results for 36-Month Follow-up: Violent Felony Recidivism

Variable	Standardized Estimate	Odds Ratio	Sig. Level
Work release	0.001	1.00	0.95
Felony risk score	-0.540	0.95	0.00
Non-drug risk score	-0.035	1.00	0.31
Violent risk score	0.733	1.13	0.00
Age at release	-0.270	0.95	0.00
Prior adult felony adjudications	0.476	1.29	0.00
Male	0.076	1.43	0.00
Caucasian	-0.020	0.93	0.23
Actual prison days	-0.016	1.00	0.63
SRA severity level	0.026	1.02	0.33
SRA offender score	-0.049	0.98	0.07
Minimum sentence years	0.009	1.00	0.89
Maximum sentence years	0.030	1.03	0.61
Mandatory sentence days	-0.023	1.00	0.44
Logistic regression AUC	0.843		
Number observations	15,309		

Exhibit C3
Logistic Regression Results for 36-Month Follow-up: Total Recidivism

Variable	Standardized Estimate	Odds Ratio	Sig. Level
Work release	-0.028	0.89	0.01
Felony risk score	0.356	1.03	0.00
Non-drug risk score	-0.049	1.00	0.05
Violent risk score	0.192	1.03	0.00
Age at release	-0.072	0.99	0.00
Prior adult felony adjudications	0.614	1.39	0.00
Male	0.014	1.07	0.25
Caucasian	-0.058	0.80	0.00
Actual prison days	-0.136	1.00	0.00
SRA severity level	0.043	1.03	0.01
SRA offender score	-0.169	0.92	0.00
Minimum sentence years	0.192	1.00	0.00
Maximum sentence years	-0.182	0.86	0.00
Mandatory sentence days	0.002	1.00	0.90
Logistic regression AUC	0.838		
Number observations	15,309		

Exhibit C4
Control Variables for Facility Logistic Regression Results in Exhibit 9

Variable	Standardized Estimate	Odds Ratio	Sig. Level
Felony risk score	0.126	1.01	0.00
Non-drug risk score	-0.146	0.99	0.00
Violent risk score	0.112	1.02	0.00
Age at release	-0.203	0.96	0.00
Prior adult felony adjudications	1.000	1.71	0.00
Male	0.074	1.42	0.00
Caucasian	-0.033	0.88	0.01
Actual prison days	-0.107	1.00	0.00
SRA severity level	0.071	1.04	0.00
SRA offender score	-0.213	0.91	0.00
Minimum sentence years	0.218	1.00	0.00
Maximum sentence years	-0.186	0.85	0.00
Mandatory sentence days	-0.019	1.00	0.31
Logistic regression AUC	0.837		
Number observations	15,309		

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