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# Juneau County Diversion Program

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## *A Benefit-Cost Analysis*

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Diversion Program

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## **Executive Summary**

The Juneau County Diversion Program is “designed to create a more community-oriented response to misdemeanor offenders” (Southworth 2011). It offers non-violent, generally young, first-time offenders an alternative to the traditional criminal justice system. Implemented in June 2010 with funding from a federal grant, the program strives to reduce the costs of processing minor misdemeanor offenses and recidivism by involving the community in the judicial process. Participants are matched with a mentor, attend “living-skills” workshops, complete a minimum of 20 hours of community service, and pay full restitution to complete the program. Upon completion, the offender’s criminal charges are dropped.

Our goal is to determine whether the diversion program provides positive net benefits for Juneau County. This can give the District Attorney and Program Coordinator valuable insights on the program’s fiscal and social aspects as they consider renewal or expansion of the program. Our analysis indicates that the diversion program generates positive net benefits for Juneau County. According to the Monte Carlo sensitivity analysis, the mean annual net present value of the program is approximately \$25,734. These net benefits suggest it is worthwhile to continue the program beyond expiration of the federal grant. We recommend additional data collection for future analysis.

## **Introduction**

Based in Mauston, Wisconsin, the Juneau County Diversion Program was implemented in June 2010. It offers certain offenders the option of rehabilitation through diversion, as opposed to having criminal charges brought against them in the traditional justice system.

Offenders who meet the following criteria are eligible to participate in the program: 1) have committed a non-violent crime, 2) have no significant previous record (i.e. no history of violent crimes), and 3) fall between the ages of 17 and 25 years (although exceptions are often made).

The most common offenses among program participants include disorderly conduct, misdemeanor theft, criminal damage to property, and possession of drugs or drug-related paraphernalia (Albers, September 23, 2011). Eligible participants are informed of the diversion program option during a pre-trial conference. Upon completion of the program, criminal charges are dismissed.

One of the defining characteristics of the program is mentoring. Other counties in the area, for example Monroe County, have comparable programs, but do not include the mentoring component. Through personal connections, community organizations, church groups, public service announcements, and local press releases, Sheryl Albers, the Diversion Program Coordinator, goes to great lengths to recruit mentors. Prospective mentors must provide a letter of reference, undergo a background check, and complete mentor training. An effort is also made to match mentors and participants based on common interests and the participant's career aspirations. Mentors meet or communicate regularly with their mentees, offer advice, and act as a reference for potential employers. The intent is for mentors to be positive role models and provide valuable advice for mentees. In addition to the mentoring component, participants attend living-skills workshops covering topics in ethics, driver's licensing, budgeting and credit,

and leadership; engage in a minimum of 20 hours community service; and complete at least two job applications per week (Albers, September 23, 2011). Additionally, Ms. Albers makes every attempt to assist program participants in securing employment. For example, during the living-skills workshop, professionals are brought in to assist with mock interviews and help develop resumes. The emphasis on mentoring and developing life-skills is intended to assist participants with developing key traits for success after the diversion program and preventing recidivism.

#### *Current Diversion Program Statistics*

Since its inception in 2010, the program has enrolled 48 participants, 31 of whom were under the age of 25. Of these participants, 52 percent are still in the program, while 18 percent completed the program and 29 percent did not. The program also enrolled and trained 32 mentors, 30 of whom are still with the program and have recommitted for the upcoming year. Participants performed approximately 980 hours of community service in 15 community organizations, and of the nine participants who completed the program, eight are currently employed. In comparison, of the 11 participants who did not complete the program for whom data are available, only one is employed.

While exceptions are made, the program targets 17 to 25 year old offenders. The average and median ages are 24 and 21, respectively. District Attorney (DA) Scott Southworth prosecuted 62.5 percent of diversion cases, and Assistant District Attorneys (ADAs) prosecuted the remaining 37.5 percent. On average, participants in the program are offered a diversion agreement of 11.3 months, and, as listed in Table 1, the most common offenses committed by participants are disorderly conduct, misdemeanor theft, and criminal damage to property.

**Table 1: Types of crimes committed by participants in the diversion program**

Type of Crime	Incidence
Disorderly Conduct	24
Misdemeanor Theft	23
Criminal Damage to Property	16
Possession of drug paraphernalia	6
Resisting or Obstructing an officer	6
Bail jumping-misdemeanor	5
Misdemeanor battery	5
Telephone harassment	4
Possession of THC	3
Receiving stolen property	2
Driving vehicle without consent	1
Lewd Behavior	1
Operating without a license	1

*Source: Data spreadsheet on program participants, Sheryl Albers*

It is noteworthy that in 2010, the number of felony cases tried by the DA's Office increased by 60 percent, while the number of misdemeanor cases decreased by 38 percent (Southworth 2011). If this is part of a general trend in Juneau County, then we should expect the pool of eligible participants to decrease further.

### *Literature Review*

Diversion programs, such as the one adopted by the Juneau County DA's Office, are designed to break the cycle of offending and incarceration (Roman and Visher 2009, 128). Studies that assess the long-term effectiveness of these programs use recidivism rates as a metric for effectiveness. Multiple factors affect recidivism, including stability of family life and employment, aging, exposure to antisocial peers, identity issues (Roman and Visher 2009, 128) and criminal history (Bonta 1998, 123-142). Where incarceration occurs, most research emphasizes the importance of including the family and the community in post-release treatments. Ideal post-release casework incorporates a family and social network in rehabilitation and involves the community through organizations and service providers. In fact, programs treating

individuals in communities, as opposed to institutions, are associated with greater net benefits (Roman and Visser 2009, 133).

Programs reducing recidivism rates tend to be based on “interventions that are based on social learning or behavioral principles, are structured rather than nondirective, seek to build human capital in offenders, and use more than one treatment modality to address the multiple problems that offenders may be experiencing” (Cullen and Jonson 2011, 305; Roman and Visser 2009, 134; Warren 2007). Within this framework, cognitive-behavioral programs (i.e., programs that assume offenders’ beliefs and ideas are learned and affect their behavioral choices, such as their choices to break the law) are associated with recidivism reductions of at least 15 percent (Cullen and Jonson 2011, 305).

Factors such as the length of previous incarceration or confinement are not clearly linked with recidivism (Song and Lieb 1993). Programs that do not reduce recidivism rates tend to be those emphasizing deterrence-oriented treatment or character-building interventions. Intermediate sanctions, which are stricter punishments than probation but not as severe as prison, also tend to be unsuccessful in reducing recidivism (Cullen and Jonson 2011, 306).

Research on mentoring programs shows mixed results. Some programs, like Big Brothers Big Sisters appear to have positive net benefits (Aos 2004), but are primarily aimed at at-risk youths, as opposed to youths who have already committed a misdemeanor. Mentoring programs are also shown to increase access to other support services and reduce delinquency and misbehavior in school, with parents and teachers of youths in such programs reporting behavior improvements (Keating, 2002). However, some of these benefits, particularly reduced recidivism, may only accrue in the short-term, as the recidivism rates for those in mentoring programs and those not converges by 36 months (Barnoski 2006).



Mentoring is only one aspect of the Juneau County Diversion Program. Diversion programs are generally designed to “divert, or channel out, youthful offenders from the juvenile justice system” (Bynum 1996, 430). Based on the idea that sending certain individuals through the justice system may have more negative consequences than positive ones, diversion programs offer participants the opportunity to avoid the social stigma and economic consequences (for example, in finding a job) that come with a criminal record. In addition to helping offenders, such programs also reduce pressure on courts and detention facilities (Shelden 1999). Diversion programs, such as the Adolescent Diversion Project in Michigan and the Thurston County FastTrack Diversion Program in Washington, have been shown to reduce recidivism by between 20 percent (Drake 2007) and 29 percent (Aos 2004) and also proved to be cost effective. At last count, 26 states in the country had implemented some form of diversion program, with a median annual budget of \$159,000 dollars per program. On average, the programs served 150 people per year (National Association of Pretrial Service Agencies 2009).

One aspect of diversion programs that merits particular discussion is the effect of criminal behavior on employability and wages. Research shows that offenders with a criminal record are less likely to be hired or even receive job callbacks, and of those who are employed, wages tend to be lower than before incarceration (Holzer 2007). However, there is not a clear causal relationship between having a record or history of incarceration and lower employability or wages. Other factors such as low self-esteem may affect both a person’s criminal propensity and employability (Western et al. 2001). Additionally, there is an endogeneity issue in determining whether crime leads to lower employability or lower employability leads to crime. Some research also suggests that greater unemployment rates for ex-offenders can be partially

explained by labor force nonparticipation (i.e., that many ex-offenders are not even looking for work) (Apel and Sweeten 2010).

Recognizing the factors discussed above, the Juneau County Diversion Program aims to reduce recidivism by involving the community in offender rehabilitation, ensuring stability of employment, and promoting social and behavioral learning through living-skills workshops.

## **Methodology**

The general approach in this benefit-cost analysis is to compare the costs of the diversion program to those of the traditional justice system. Many program benefits can be understood as avoided costs of the traditional system (e.g. reduced processing costs and avoided probation and jail costs). The analysis also takes into account benefits of the program, such as offenders' community service. The benefits and costs were predicted over a three-year period, which is the length of time suggested by the National Institute of Justice for assessing recidivism ("Measuring Recidivism," 2008). We separate out the benefits and costs for each year in a three-year period, discounting at the middle of each year.

Dividing the timeframe into year-long periods accounts for the fact that not everyone will recidivate immediately. We specify three periods as follows: Period 0 is when offenders enter into the diversion program and includes all participants. Recidivism during this period is based on numbers obtained from the current group of participants. Period 1 considers those who recidivate within one year of the initial offense. Periods 2 and 3 consider recidivism in the two subsequent years. All benefit-cost calculations are carried out for each time period with the appropriate discount rate.

Recognizing that not everyone who enrolls in the program will complete it, a program success rate was estimated, and diversion participants were divided into two groups, completers

and non-completers. It was assumed that completers and non-completers behave differently and only completers benefit from program participation. This assumption might lead to an underestimation of the diversion program's net benefits, as brief participation in the program may have longer-term positive effects on an offender's behavior. However, while aspects of the program (for example, mentoring) may eventually lower recidivism rates even for those who do not complete, non-completers do not gain all the benefits of the program, such as having no criminal record.

The division between completers and non-completers is empirically valid, as nine participants have completed the program, but 14 people have already dropped out or have had their participation in the program revoked. As mentioned above, only 18 percent have completed the program, while 29 percent have not. A failure rate of 30 percent would be misleading, however, because the majority of participants (52 percent) are still in the program. Moreover, as the program has only existed since June 2010, most participants have not been in the program long enough to complete the required duration of their agreements. Therefore, minimum and maximum failure rates for the program were estimated. The minimum is bounded by the 14 people who have already failed the program (29 percent), while the maximum is bounded by those who dropped out of the program and those whose participation in the program is currently incomplete because the length of their agreement is over 12 months (77 percent). A failure rate between these two extremes, 50 percent, was selected as a base case, and uncertainty about the failure rate is accounted for in the Monte Carlo analysis.

It is important to note how recidivism is defined. In this analysis, recidivism refers to the number of subsequent court appearances, not the number of people who recidivate. This is because we assume if an individual returns to court, they incur all court costs again (DA, ADA

and judge time, probation and jail time, etc.). This definition allows differentiation between those who only recidivate a few times over three years, and those who recidivate multiple times.

### *Predicting Future Behavior*

In order to determine how the costs and benefits of the diversion program differ from the traditional justice system, some assumptions about future program participant behavior had to be made. We had to determine whether and how often completers and non-completers would recidivate over the three-year period. For those who do recidivate, we had to predict how they would behave, with respect to paying fines and court costs, as well as serving probation or jail time if sentenced. As these data are not yet available for current diversion participants, an appropriate comparison group was created. The comparison group's behavioral patterns were used to help predict the behavior of diversion participants.

### *Creating a Comparison Group*

In order to project effects of the program and behavior of program participants, we worked with Ms. Albers to construct a dataset of all misdemeanor offenders in Juneau County in 2006 who would have been eligible for the diversion program had it existed at the time. This allows the use of data specific to Juneau County and thus holds constant particular characteristics of Juneau County. The year 2006 was selected because it allowed for an estimation of how many individuals had re-offended over at least three years. To account for the effect of time in the final calculations, the 2006 data were used to calculate specific values for each relevant variable in every time period. Appendix A discusses data collection for the comparison group, and highlights specific numbers obtained.

The comparison group consisted of 77 individuals. We assume that those who chose to enroll in the diversion program are not systematically different from those who did not. Thus, we

also assume that those in the comparison group are not systematically different from diversion non-completers. However, diversion completers may differ in terms of recidivism rates. Indeed, we assumed that recidivism would decrease by 25 percent for diversion completers, as a literature review of similar diversion programs estimated reductions in recidivism of between 20 and 27 percent. Once diversion completers recidivate, however, we assume they behave identically to members of the comparison group. It should be noted that at this point, the 25 percent reduction in recidivism is our best estimate of diversion program effectiveness. We note that the high employment rate for those who complete the program bolsters our confidence that 25 percent is a reasonable prediction. However, to make the overall benefit-cost analysis more reflective of this particular program, we suggest that program administrators collect recidivism data for the next three years and re-evaluate that figure.

Table 2 on the following page compares characteristics of the 2006 and current diversion groups.

**Table 2: Characteristics of Comparison and Diversion Groups**

	<b>2006 Group</b>	<b>Diversion Group</b>
Percent Male	63.6	76.6
Percent Female	36.4	23.4
Average Age	29 years	24 years
Most Common Crimes	Disorderly Conduct Possession of THC Criminal Damage to Property	Disorderly Conduct Misdemeanor Theft Criminal Damage to Property
Percentage Cases Tried by DA	21	63
Percentage Cases Tried by ADA	79	38
Percent Sentenced to Probation	14.3	N/A
Average Probation Sentence	1.09 years	N/A
Percent Sentenced to Jail	9.1	N/A
Average Jail Sentence	55 days	N/A
Number of Recidivism Cases After One Year	15	N/A

Source: Authors

The Wisconsin Circuit Court Access (CCAP) website provided data on the comparison group and participants in the diversion program. Data were collected on all current and previous

participants in the diversion program, and cross-referenced with records on CCAP. We used information from this database to compare the diversion group with the comparison group from 2006.

### *Standing*

A benefit-cost analysis requires judgments about “the question of whose willingness-to-pay should count in the aggregation of net benefits,” commonly called standing (Boardman et al. 2006, 36). In other words, analysts must decide which parties’ gains and losses should carry weight in the analysis. One such group in the Juneau County Diversion Program is the offenders. Based on a review of the literature, as further discussed in Appendix B, we have determined that by their conscious violation of the rights of others, offenders forfeit standing for the costs they are ordered to pay, notably fines, restitution, court fees, and legal fees for private defense. However, as the fines and fees they would have paid would have been revenues for the State, we consider these only as costs of the diversion program, and not as costs to the offenders.

Although we do not give diversion participants standing with regard to costs, we do account for the benefits they reap from the program in the form of a human capital investment. This may take the form of greater employability and earnings potential, both as a result of not having a criminal record and avoiding jail. As the program is funded by a federal grant, administered through Wisconsin’s Office of Justice Assistance, costs and benefits incurred by the federal and state government are also given standing. Therefore, overall, we conduct a social benefit-cost analysis that includes all governmental costs.

## **Costs of the Diversion Program**

The following description of costs for the Juneau County Diversion Program is supplemented by Appendix C, which outlines the calculations and sources used. Diversion program costs are measured in net present value in 2011 dollars. Unlike other diversion programs, such as Marquette County where participants pay \$150 to participate, Juneau County does not charge a participation fee (Albers, September 30, 2011). Thus, the program does not generate any revenue. It relies on a federal grant of \$240,000, allocated over three years (\$80,000/year) as the main revenue source (Albers, September 23, 2011). As the diversion program does not consume the entire grant, we have estimated a yearly program cost of \$67,320.

### *Administrative and Operational Costs*

Administration and operational costs of the diversion program consist of Sheryl Albers' salary and other operational costs. This year, Ms. Albers earned \$31,500. Currently, Ms. Albers is on state retirement, so the program does not pay her benefits, and she earns an hourly wage of only \$22.53. She works approximately 36 hours every week. Ideally, however, the program would prefer to have someone working 40 hours per week. We assume that anyone hired to replace Ms. Albers would work 40 hours per week, and receive benefits because Ms. Albers' unique circumstances do not reflect what the program would actually cost to administer.

It should also be noted that Ms. Albers' salary does not reflect the true extent of her personal commitment to the program, the value of her individual connections, and her extensive understanding and knowledge of the diversion program. For instance, Ms. Albers organizes the living-skills workshop component and actively recruits professionals to provide valuable career insight and assist with mock interviews and resume-building. Because of restrictions within the federal grant, Ms. Albers uses her personal income to provide snacks during the workshops. In

addition, the program incurs implementation and supply costs. By combining the salary and benefits of a full-time employee, plus the costs of food, program implementation, and supplies, we reach our total administrative and operational costs of \$67,320.

#### *Forgone Revenue from Fines*

In the traditional justice system, most offenders are assessed fines relative to their offenses. Participants in the diversion program are only required to pay any restitution ordered. Therefore, the diversion program incurs additional costs to the county and state in the form of revenues that would have otherwise been collected from program participants. An additional consideration for this cost is that not all fines will be paid in full, as reflected in the comparison group data. Because a certain amount of assessed fines will likely remain outstanding, this analysis assumes that only the percentage of assessed fines that offenders would actually pay is foregone revenue the diversion program costs the county or state.

#### *Criminal Justice System Costs*

The costs of processing a misdemeanor offender through the criminal justice system are high. For every misdemeanor case, actors, including prosecutors, public defenders, judges, and probation officers, play a role in ensuring respect of each offender's due process rights and the fulfillment of his or her debt to society. Although the diversion program decreases the amount of court time dedicated to each case and participants completing the program will not require a probation officer, criminal justice system costs will still be incurred. Moreover, participants failing to complete the diversion program will incur costs of joining the diversion program and nearly all costs associated with the traditional criminal justice system. Therefore, our analysis includes the costs incurred for participants whose participation is revoked.



Accordingly, one of the primary categories of costs is time dedicated to each diversion program participant by prosecutors, public defenders, judges, and other court employees. For all actors, we obtained hourly wage rates and the amount of time each would spend on processing a diversion program case.

Significant variability exists in determining the costs of individual actors within the criminal justice system. For example, public defender representation depends on the number of offenders requesting public defender assistance. Costs are also affected by the numbers of cases handled by a state public defender or delegated to a private attorney hired through the State Public Defender's office. Additionally, while the DA and ADA review diversion and traditional cases, their case loads are not equally divided. The DA, whose hourly wage is nearly double that of the ADA, spends more time recruiting and selecting individuals to participate in the diversion program, while the ADA typically processes traditional misdemeanor cases and diversion program drop-outs. Regarding probation officer costs, we surmise from our 2006 comparison group data that not all offenders require a probation officer. However, as recidivism increases over subsequent years, the resulting demand for probation officers, and the increase in jail costs, are taken into account.

#### *Program Volunteers and Mentors*

Monetizing volunteer hours is a challenge. It is not always clear whether volunteer hours should be counted as a cost or a benefit to the volunteers. Assigning a dollar value to an hour of volunteer time also presents difficulties. The volunteer time of diversion program mentors consists of interactions with mentees via personal meetings, phone calls, and emails. Volunteers appear committed to participation, with current program data indicating that 32 of 33 program mentors agree to return for a second year. This high rate of retention suggests that

mentors gain some utility by volunteering in the program, and we have therefore decided not to count mentoring as a cost to the program.

We also take account of the costs incurred by speakers who volunteer their time for the life-skills workshops. As a cost to the program, these volunteer hours must be monetized. The nonprofit website IndependentSector.org calculates the average value of a volunteer hour at \$17.79 in Wisconsin for the year 2008. The value is based on the average hourly earnings of all production and nonsupervisory workers on private nonfarm payrolls (as determined by the Bureau of Labor Statistics) and then increased by 12 percent to account for fringe benefits (“Value of Volunteer Time” 2011). This rate is arguably more suitable than the minimum wage, as many of the speakers are prosperous and successful in their careers. If anything, this shadow price of volunteering for program workshops likely underestimates their opportunity cost of participating. Eleanor Brown, the Author of “Assessing the Value of Volunteer Activity” remarks:

To the extent that volunteers are motivated by ancillary rewards stemming from volunteering, such as socializing or gaining work experience, there occurs what economists term *joint production*. Again, the value to volunteers of the experiences produced jointly with recipient-oriented services needs to be counted in measures of the value of volunteering (Brown 1999, 5).

We will not attempt to assess a joint production benefit to the speakers or mentors, most of whom are retired or otherwise employed. They are therefore unlikely to realize career benefits by volunteering. It is conceivable that the mentors feel some social obligation to Ms. Albers, as she recruits many of them through her church and social circle. While such a feeling of obligation might spur a person to make a donation or some other relatively “painless” contribution, it is unlikely that this sense of duty or embarrassment would be enough to keep a mentor involved in the program for a full year. The opportunity cost of speaker time is varied in

the Monte Carlo analysis, in order to account for this uncertainty.

### **Benefits of the Diversion Program**

Similar to diversion program costs, diversion program benefits are also measured in net present value in 2011 dollars. Benefits of the Juneau County Diversion Program can be separated into four primary categories: criminal justice system savings, jail savings, community service, and enhanced employability and earnings for diversion program participants. We have not counted a potential fifth category, restitution, as a benefit because the restitution repayment rate was found to be 100 percent for both traditional and diversion program members.

#### *Criminal Justice System Savings*

As mentioned in the discussion of criminal justice system costs, processing a misdemeanor offender is expensive. Therefore, a major category of benefits is potential cost-savings due to the reduced amount of time all relevant actors spend in court for a diversion case because diversion cases involve fewer court appearances, which can be seen in Appendix D. Prosecutors (DAs and ADAs) generally spend less time in court with diversion cases than traditional misdemeanor cases, whereas public defenders generally spend more time on diversion cases than traditional misdemeanor cases. However, if a diversion program participant drops out, ADAs, in particular, will spend more time on the case than if the participant had initially gone through the traditional system. In terms of time spent in court (which incurs costs for time of judges, court reporters, bailiffs, and court clerks), cases for diversion completers will require approximately half as much time as traditional misdemeanor cases, while cases for individuals revoked from the program will require about an hour more than a misdemeanor case processed solely through the traditional system.

Each participant completing the diversion program also saves probation officer time because the monitoring of an offender by a probation officer is instead done by a mentor.

Moreover, a diversion program participant, ideally, should require less monitoring because of the relationship built with his or her mentor or through skills gained in workshops.

### *Jail Savings*

Another significant cost-savings category of the diversion program is a reduction in the number of individuals sent to jail. Although the number of misdemeanor offenders that would receive a jail sentence is low, the costs of jailing an offender are so high that keeping a small number of offenders out of jail could result in significant cost-savings. These savings depend on the length of time offenders are kept out of jail, meaning if offenders remain out of jail for longer periods of time, Juneau County could see substantial decreases in jail costs.

### *Community Service*

One of the conditions of completing the diversion program is performing 20 hours of community service at various organizations in Juneau County. We counted this service among the benefits of the diversion program, assuming that every participant who completes the program will complete 20 hours of service. Because we assume that costs incurred by offenders do not have standing, we need not be concerned with including the cost of their leisure time. Community service is simply a non-monetary way for offenders to perform their duty to society. We can, however, treat their volunteer hours as a benefit to the community. As most of the volunteer work they perform is low-skill, we use the minimum hourly wage of \$7.25 to monetize their contribution to Juneau County.

### *Enhanced Employability and Earnings*

The most significant category of benefits in our analysis is higher employment and earnings for diversion program participants who complete the program. So far, we find that eight out of nine participants who completed the program are employed, but no individuals revoked from the program are currently employed, indicating a 90 percent employment rate for program completers compared to zero percent for non-completers.

There appear to be endogeneity issues in that individuals more likely to complete the diversion program may inherently have a greater likelihood of finding employment. Still, participants are likely to gain significant benefits from completion of the diversion program. These benefits include references from mentors, Ms. Albers' assistance in locating employment opportunities, and convincing employers to provide participants a chance to redeem themselves, thereby diminishing the stigma offenders might otherwise face in seeking employment. Details regarding our calculations of employability are included in Appendices B and C.

### **Benefit-Cost Analysis**

The following table describes the net benefits of the Juneau County Diversion Program, considering the assumptions and the values described in Appendix C. Benefits and costs are calculated in comparison to the traditional justice system. Please note that this is a singular benefit-cost calculation, which does not account for uncertainties. The numbers used in the Monte Carlo analysis better reflect net benefits given uncertainty.

**Table 3: Overall costs and benefits of the diversion program**

<b>Costs/Benefits categories</b>	<b>Amount</b>
Program costs	-\$67,320
Offender fines and fees foregone	-\$9,505
Costs of defense paid by the State	-\$5,946
Court processing costs	-\$315
Saved DA and ADA time	\$301
Saved probation officer costs	\$1,367
Saved jail costs	\$9,316
Community service benefits	\$3,334
Avoidance of wage reduction	\$96,941
<b>Total Net Benefits:</b>	<b>\$28,173</b>

Sources: See Appendix C

As shown in Table 3, most costs of diversion are program costs, which include the salary and benefits for a full-time employee in Ms. Albers' position as well as costs for supplies and workshops. As drop-outs from the diversion program incur increased processing costs even larger than those of the traditional justice system, there are minimal savings in DA, ADA and probation officer time. In fact, there is a marginal increase in court costs. Although there are significant jail savings, these are not nearly enough to cover program costs. There are two primary reasons for this. First, diversion participants commit misdemeanors, which rarely result in jail time. For the few who serve jail time, the 2006 data show that sentences are not very long, even when offenders recidivate. Secondly, not all participants complete the program, so with only 48 participants, jail savings are not large enough to cover program costs.

Nonetheless, as demonstrated in Table 3, the program has positive net benefits largely because of wage-related benefits successful participants gain from having all criminal charges dropped upon program completion (i.e., not having a record). This effect is compounded by the wage effect of not being incarcerated. Thus, while the mentoring aspect of the program might

help reduce recidivism, it is the wage savings and increased employability created by the reduction in recidivism that ultimately lead to the greatest benefits. Note that we do not include victim costs of crime, which are assumed to be small for these misdemeanors, especially with restitution. However, to the extent that restitution does not cover victim costs fully, or recidivism involves more serious crimes, our approach underestimates the benefits of avoided crime.

### **Monte Carlo Sensitivity Analysis**

This evaluation uses a Monte Carlo analysis to account for uncertainty in the benefit-cost calculations of the Juneau County Diversion Program. One of the largest areas of uncertainty is the program effect, if any, on recidivism rates across all three time periods. In order to account for this uncertainty in the analysis, a recidivism-reduction factor was used to reflect potential reductions in the recidivism rate over time. The value of this factor was set to vary between 0.50 and 1.00, with a value of 1.00 meaning that completing the diversion program had no effect on the recidivism rate for a particular time period, and a value of 0.50 meaning that completing diversion would reduce the recidivism rate by 50 percent. This factor allows a demonstration of the diversion program's potential advantage over the traditional justice system, as a lower recidivism rate for program completers and adds to cost-savings. The resulting recidivism rate for diversion completers varies between trials in the Monte Carlo analysis, but once that value is determined for a particular trial, it is assumed constant throughout the entire time period of the trial.

A second source of uncertainty in the net benefit calculation is the rate at which participants complete diversion. Existing literature on diversion programs identifies a wide range of failure rates for participants. To reflect this uncertainty, the analysis incorporates a

random variable ranging between 25 to 75 percent for the rate at which participants complete the program. The randomly drawn completion rate is then multiplied by 48, the total number of program participants to date, in order to generate the number of program completions. It is assumed that the random number of completions initially generated remains fixed over the three-year period of any given trial in this analysis. This may actually underestimate net benefits because it does not allow for improvements in the completion rate that may occur over time.

Two other areas of note are the unemployment rate for individuals with a record of incarceration and the hourly shadow price of workshop speaker time. Variation is included in the unemployment rate of individuals with a record of incarceration because a clear indication of this effect was not found in available literature. Though Geller, et al. did find a 6 percentage point effect of incarceration on unemployment, most other figures depended largely on the crime committed and preferences specific to individual employers. To account for variation in the literature, the effect of incarceration on unemployment was allowed to vary within a range of zero to 12 percentage points. Secondly, the shadow price of workshop speaker hourly time was allowed to vary between \$0 and \$20, to reflect uncertainty in the literature as to the opportunity cost of volunteer time. A shadow price of \$0 reflects the possibility that the utility gained by speakers from volunteering at the living-skills workshops offsets the opportunity cost of their time. In this case, similar to diversion program mentors, there would be no additional cost of speaker time in the overall program costs. However, a shadow price of \$20 per hour reflects the fact that these speakers tend to be successful professionals and business owners whose time is valuable (IndependentSector.org). This means there would be an implicit opportunity cost for these individuals volunteering as speakers at the living-skills workshops.

In the Monte Carlo, net benefits were calculated as cost-savings and incorporated the



above variations and uncertainties. In the initial time period ( $T_0$ ), the percentage of diversion program completers varied. The evaluation assumes that those who do not complete the program incur the costs of the traditional justice system, with probation and jail sentences similar to the 2006 comparison group. This means, for example, that 14.3 percent would be sentenced to one year of probation, while 9.1 percent would be sentenced to 56 days in jail.

For time periods beyond  $T_0$  ( $T_1$  through  $T_3$ ), net benefits were calculated assuming some recidivism would occur both among the randomly generated number of individuals completing the program, and among participants who failed to complete the program. For individuals who failed to complete the program, the analysis assumes that recidivism rates over the period  $T_1$  through  $T_3$  will be the same as for individuals processed through the traditional justice system without the option of diversion. The recidivism rates for individuals who did not complete diversion were assumed equal to the rates for the 2006 comparison group over the years 2007 to 2009, which appear in Appendix C. These rates were also incorporated into the net benefit calculations for the diversion completers, but were changed by the random value assumed by the recidivism reduction factor. Regardless of whether recidivators participated in the program, the percentages sentenced to probation and jail, as well as average probation and jail sentences, were assumed the same as found in the 2006 comparison group for the respective year.

The overall net benefits were calculated in the Monte Carlo by subtracting the net benefits of the group of the traditional justice system from the benefits of the program, that is, the sum of the benefits to diversion completers and non-completers. As can be seen in Appendix E, replicating this process over 1,000 trials resulted in a mean net present value for diversion program net benefits of \$25,734. The median net present value for diversion program net benefits is \$18,263, with a standard deviation of roughly \$54,000. The minimum net present

value of diversion program net benefits was -\$71,000 and the maximum was \$177,000. The probability of positive net benefits is approximately 65 percent.

The sensitivity analysis shows an 80 percent correlation between the program completion rate and the outcome. This indicates that raising the completion rate, perhaps with more or better mentors, should help the program realize greater positive net benefits. Screening possible participants also adds value by helping to filter out those unlikely to complete the program. The administrators negotiate a balance between offering a valuable opportunity to people who wish to improve their lives, and refusing to spend limited resources on offenders who have little chance of completing the diversion program.

## **Recommendations**

This analysis finds that even when incorporating uncertainty in recidivism, program completion, unemployment, and the value of workshop speaker time, the Juneau County Diversion Program reaps positive net social benefits averaging \$25,734. This finding appears to be driven largely by the diversion completion rate. The cost-savings, in terms of time spent in court and avoided probation and jail time, contribute to the program's overall net benefits. An important component appears to be the benefit of increased employability for individuals completing the program, relative to being processed through the traditional justice system.

Though this analysis did yield positive net benefits for the program, there are figures used in the cost calculations that may be of future interest, particularly if the program continues beyond the scope of the federal grant currently funding it. In calculating program costs, we use \$67,320 as the salary and benefits that would be paid to someone hired for an ADA position including coordination of the diversion program. Currently, the program spends approximately

\$31,500 on Ms. Albers' salary. The salary and benefits of a full-time program coordinator position was used in this analysis to determine whether the program might yield positive net benefits if Ms. Albers would decide not to continue coordinating the diversion program beyond the end of the federal grant in December 2012. However, if Ms. Albers continues to coordinate the program beyond 2012, the difference between these two salary figures would not only result in additional net benefits, but would be surplus funds that could be put toward other uses in the program.

An additional cost to note is the amount of time spent by DA Southworth on diversion cases. Though court proceedings generally require less time from all parties involved in the court system except for public defenders, the DA's higher salary relative to the salaries of the Juneau County ADAs increases diversion program costs. The DA prosecutes a greater percentage of diversion cases than traditional misdemeanor cases. As this program is still relatively new, greater involvement on the part of the DA would be expected, but if the diversion program continues for a longer period of time, greater involvement of ADAs in the program could be a future cost consideration.

Some additional data collection could greatly assist a future benefit-cost analysis. Better data on program completion and recidivism occurring over a longer period of time, would be more indicative of program effects than current data measured only over the span of one year. Additional data collection, notably on employment, for diversion participants during and after the program, would help to refine potential effects of the program on employability, which will likely continue to be a significant source of benefits. Comparing data on individuals participating in the program to those who decline to participate may also be useful in future determination of whether there are systematic differences between the two groups. These data

could help to refine selection processes, or to some extent program components, affecting individual decisions to decline participation.

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## **Appendix A: Collecting Data for the 2006 Reference Group**

To assess the net benefits of the Juneau County Diversion Program relative to the traditional justice system, this analysis used a reference group. As this program is county-based, a significant complication arose because data are generally collected on relevant variables, such as recidivism, numbers of offenders sentenced to probation or jail, and jail costs, at the state level. Furthermore, state crime data, particularly for recidivism rates, tends to not be sensitive to distinctions between criminal misdemeanors and felonies.

The initial format for data collection was originally proposed by Ms. Albers, with input from District Attorney Southworth. In order to establish a reference group specific to Juneau County, data were collected on 719 criminal misdemeanor cases processed through the court system in 2006. The year 2006 was chosen in order to allow a sufficient amount of time to pass for determining the recidivism rate of individuals convicted of misdemeanors that year.

All data for the comparison group was collected using the Wisconsin Circuit Court Access website, otherwise referred to as CCAP, which stands for Consolidated Court Automation Programs. Initial data collection for the original 719 cases took place in two stages. First, data were collected by case number on individual identification (name and date of birth), prosecuting and defense attorneys, misdemeanor counts, and sentence. The second step involved entering each offender's name and date of birth in CCAP, which generated a list of all convictions for the individual. Using the list of crimes for an individual offender, data were collected if that offender was convicted of a criminal misdemeanor or felony from the time of his or her 2006 conviction to the present day.

After the data on the original 719 cases were collected, the data were sent to Ms. Albers and DA Southworth for review, to determine which offenders would have been eligible for the



diversion program, had it existed in 2006. Eligibility was determined for the 2006 cases in the same way it would be determined presently. That is, offenders are program eligible if they committed a non-violent misdemeanor, have no record of violent crimes, and generally fall between the ages of 17 to 25. Of the 719 cases tried in Juneau County in 2006, 79 cases were deemed eligible, with 10 of these cases having fulfilled deferred prosecution agreements as part of their 2006 plea agreement.

A final round of data collection for these 79 diversion-eligible cases took place in order to assemble data on participants into separate categories. Information gathered as part of the initial data collection phase was separated into categories, such as fines, court costs, restitution, probation, jail time, recidivism and recidivism offense type. This process occurred for only 77 of the 79 participants originally deemed diversion-eligible. Two cases were not concluded because of outstanding bench warrants. Because the two offenders involved failed to make an initial court appearance, there was insufficient data, particularly in their plea hearing sentences, to collect and use in this analysis.

Data on recidivism were also collected for the period following initial 2006 offenses through the year 2009, with recidivism defined as a court case subsequent to the initial 2006 offense in this three-year time period. Because a major focus of this analysis is the cost incurred in processing individuals through the justice system, defining recidivism as court cases more accurately reflects the additional costs incurred by future court cases. These subsequent court cases require additional time from attorneys and court officials, and can result in more probation and jail sentences.

The resulting data available on the 77 diversion-eligible individuals and recidivism in the years 2006 to 2009 provided the basis of a number of calculations featured in this analysis and can be viewed in the tables below:

**Table 4: Comparison Group Statistics, 2006 Offenses**

Number of Cases	77
Average Fine/Forfeiture	\$320.05
Average Costs	\$108.52
Average Restitution	\$720.22
Repayment Percentage for Fines/Forfeitures	85.3
Repayment Percentage for Court Costs	84.1
Percent Sentenced to Probation	14.3
Average Probation Sentence	1.09 years
Percent Sentenced to Jail	9.1
Average Jail Sentence	55.9 days

**Table 5: Comparison Group Statistics, 2006 Recidivism**

Number of Cases	7
Average Fine/Forfeiture	\$450.30
Average Court Costs	\$245.00
Repayment Percentage for Fines/Forfeitures	55.9
Repayment Percentage for Court Costs	100
Percent Sentenced to Probation	28.6
Average Probation Sentence	2.5 years
Percent Sentenced to Jail	28.6
Average Jail Sentence	75 days

**Table 6: Comparison Group Statistics, 2007 Recidivism**

Number of Cases	15
Average Fine/Forfeiture	\$406.00
Average Court Costs	\$137.21
Repayment Percentage for Fines/Forfeitures	89.9
Repayment Percentage for Court Costs	68.4
Percent Sentenced to Probation	53.3
Average Probation Sentence	1.5 years
Percent Sentenced to Jail	13.3
Average Jail Sentence	30.5 days

**Table 7: Comparison Group Statistics, 2008 Recidivism**

Number of Cases	12
Average Fine/Forfeiture	\$506.29
Average Court Costs	\$258.40
Repayment Percentage for Fines/Forfeitures	71.2
Repayment Percentage for Court Costs	82.1
Percent Sentenced to Probation	41.7
Average Probation Sentence	1.8 years
Percent Sentenced to Jail	25.0
Average Jail Sentence	50 days

**Table 8: Comparison Group Statistics, 2009 Recidivism**

Number of Cases	10
Average Fine/Forfeiture	\$747.39
Average Court Costs	\$98.00
Repayment Percentage for Fines/Forfeitures	47.6
Repayment Percentage for Court Costs	100
Percent Sentenced to Probation	30.0
Average Probation Sentence	1.67 years
Percent Sentenced to Jail	50.0
Average Jail Sentence	65.75 days

## Appendix B: Should Offenders Have Standing?

Whittington and McRae note that offenders have infringed upon the property and safety rights of their fellow citizens. As a result of that choice, “as a society we prohibit an individual convicted of a felony from voting while incarcerated; if the vote is a criterion for citizenship, political ‘standing’ is presumably withheld from convicted burglars” (Whittington, 1986, 668). By the same reasoning, this analysis denies offenders economic standing for their penalties. The analysis does, however, give them standing in its consideration of their employment gains from the program. Such gains are a tenet of many diversion programs, and yield significant positive benefits in this program.

Zerbe addresses the direct financial gains to criminals from committing an offense, such as theft. Such gains undoubtedly bring the criminal some satisfaction (“utility”), just as losing these funds would be unpleasant. But Zerbe argues that “the thief has no right to illicit gains,” and so his or her changes in utility are irrelevant (Zerbe, 1991, 96-102). Amartya Sen vividly illustrates the supremacy of rights over utility: “There might have been good utilitarian reasons for forcing men to fight wild animals in the Colosseum with the utility gain of the thousands of spectators outweighing the utility loss of the few forced men” (Sen, 1982, 3-39). In more ordinary terms, we need not consider the criminals’ displeasure at being made to repay their illegal gains, for they have no right to the utility they got by criminal means. Thus, benefit-cost analysis should not treat restitution as a cost to the criminal.

We extend Zerbe’s reasoning to the other financial burdens resulting from offenses. These payments are the criminals’ debts to society at large. They are costs incurred *by society* when some citizens choose to infringe upon other people’s rights to property and safety. Just as the criminals had to pay restitution to their victims, they must also compensate the government for expenses (e.g., urine analysis tests, court fees) resulting from their own misbehavior.

Furthermore, we do not include the offenders' burden of punitive fines. As Brennan and Buchanan note, "the legislated punishment is not to be construed simply as the "price" of an alternative course of action [i.e. a crime]; it also symbolizes the fact that a 'wrong' has been committed" (Brennan, 1990, 201-218). For these reasons, costs to criminals are not included in this analysis.

On the other hand, the diversion program may yield substantial benefits for participants. These may take the form of psychic gains such as higher self-esteem and the avoidance of negative labeling. Monetizing such effects presents considerable challenges, as the literature is largely silent about the preferences and feelings of misdemeanor offenders. This analysis therefore omits these gains.

Researchers have, however, addressed the effect of imprisonment and stigma on offenders' employment prospects and earning potential. To the extent that it avoids these costs by giving offenders a clean record free of jail time, the program does them a substantial service. One recent study of young offenders incarcerated for two to four months found that "wages of ex-inmates are about \$.70 lower per hour. Judged against a base-line of \$9.10 hourly among the non-incarcerated sample (conditional on nonzero wages), this amounts to an 8 percent wage penalty" (Apel and Sweeten, 2010, 467). The authors note that this penalty is half the 16 percent decrease due to incarceration found by Bruce Western in 2002 (Apel and Sweeten, 2010, 467).

An examination of white-collar offenders in California in the mid-1980s found an earnings decrease of approximately 40 percent due to incarceration (Lott, 1992, 602). As the demographics and crimes of the Juneau County offenders are closer to those of Apel, Sweeten and Western, this analysis assumes a 15 percent wage penalty due to incarceration.

In addition, the unemployment rate for offenders is far higher than the prevailing Juneau County level of approximately 9.2 percent (WI Department of Workforce Development). By keeping their record clean, the diversion program allows program completers to face the employment rate of the general population rather than an unemployment rate potentially worsened by a criminal record. In fact, 11 of the 12 program completers were gainfully employed in 2011, implying an unemployment rate just over eight percent, whereas none of the offenders who dropped out of the program were employed. Clearly, the employment effect cannot be attributed completely to the program. It may be that the kind of offender able to finish the program is one who would have little trouble getting a job even without it. Still, the comparison is striking. The sensitivity analysis accounts for this variance.

## **Appendix C: Measuring Benefits and Costs**

This appendix discusses various program benefit and cost calculations and the relevant assumptions behind them. Most benefits of the diversion program can be understood as saved costs when compared to the traditional justice system, so in this analysis, we calculated benefits and costs for the traditional justice system and diversion system separately. The net benefits are the differences between the two.

Our general approach in calculating net benefits was separating benefits and costs for the traditional system and the diversion program and further delineating calculations specific to diversion participants by those who finished the program and those who did not. The largest source of saved costs is for program completers, who are assumed to have reduced recidivism rates (25 percent lower recidivism) as a result of completing the program. We calculated net present benefits over a time period of three years, and discounted at a social discount rate of 3.5 percent, applied at mid-year.

This general approach engenders two assumptions. First, the 2006 group is not systematically different from current or future diversion participants. Second, those who do not complete the diversion program do not gain any benefits from the time they spent in the program, whether from lowered recidivism rates or improved employability. Program non-completers are broadly treated the same as the 2006 group, except where noted otherwise.

### *Calculating Recidivism Rates:*

Before talking specifically about the benefits and costs calculated, it is worth discussing how we projected recidivism rates over the time periods in question. Following up with the members of the 2006 group, we used CCAP to determine who recidivated, when, and with what legal repercussions. We then used these data to predict recidivism rates over the 3 year period, assuming a 25 percent reduction in recidivism for program completers. We defined recidivism in

terms of repeat court appearances, as opposed to just number of people who recidivated, because we assumed that every time an offender recidivated, they incur all court-related costs again. It would be incorrect to assign equal weight to someone who recidivated once over the period and someone who recidivated multiple times, and hence ran up costs, multiple times.

The following table describes the recidivism rates gleaned from the 2006 data (traditional justice system) and the corresponding, 25 percent lower, recidivism rates for diversion completers:

**Table 9: Average Recidivism Rates for Traditional Justice System Offenders and Diversion Non-Completers and Lower Recidivism Rates for Diversion Completers**

	<b>Recidivism Rate: Traditional Justice System and Diversion Non-Completers (percent)</b>	<b>Recidivism Rate: Diversion Completers [Assuming 25% Lower Recidivism Rate] (percent)</b>
<b>Period 0 Recidivators</b>	10* (29 for non-completers)	8* (4% for completers)
<b>Period 1 Recidivators</b>	34	25
<b>Period 2 Recidivators</b>	23	18
<b>Period 3 Recidivators</b>	20	15

\*: periods for which we altered recidivism rate calculations. Source: Authors, 2006 dataset

There are two cases in which we adapted these calculations. The first is for recidivisms in period 0 for completers. In this period, if offenders recidivate, they are not allowed to complete the program, so they would be in the non-completers group, not the completers group. To calculate a relevant value for this period, therefore, we use the data we have already observed for the diversion program, where one person out of an anticipated 24 completers recidivated. Correspondingly, we use the existing data to determine a higher recidivism rate for non-completers in this period, as seven out of 24 anticipated non-completers recidivated during this period.



## *Cost-Benefit Categories*

We identified nine cost and benefit categories as follows:

### 1. **Program Costs**

These are the total costs of administering the program. The program is currently funded by an \$80,000 per year grant. However, we find that the costs of administering the program are lower than that. Relevant costs measured in this category are:

#### a. *Salary Costs*

Currently Ms. Albers is working part-time, and because she has already retired, draws retirement benefits from the State. DA Southworth indicated, however, that the program would ideally be run by a full-time employee. Over the last year, Ms. Albers only earned about \$32,000 from working for the diversion program. However, for the purposes of this analysis, we considered how much it would cost to hire a full-time person in Ms. Albers' position. We are looking for the more general net benefits of the program and thus, chose not to account for Ms. Albers' unique circumstances. Based on information given to us by administrators at the Juneau County DA's office, we estimated a total salary of \$65,620, which includes benefits (Chipman, December 19, 2011). It should be noted that this salary estimate provides an estimation of the opportunity costs of Ms. Albers' time.

#### b. *Program Costs*

The program also has ongoing costs for miscellaneous items such as supplies. Ms. Albers estimated these costs amount to \$1,400 per year (Albers, November 30, 2011). It should be noted that there are also expenses of about \$2,500 for computers and projectors when the program was first created. However, we consider these sunk costs and do not include them in our estimation of program costs, as they are assumed to be one-time costs.

c. *Life-skills workshop costs*

Ms. Albers estimates that she spends approximately \$300 per year of her personal income on food for the workshops, as grant funds are not useable for this purpose (Albers, November 8, 2011).

d. *Volunteer time*

As a part of the life-skills workshops, Ms. Albers invites community members to speak with diversion participants. Guest speakers prepare presentations or participate in panel discussions, and spend approximately two hours with diversion participants at each workshop. There is debate in the literature about how to value these volunteer hours, so we accommodate this uncertainty in the Monte Carlo, valuing their time at between \$0 and \$20 per hour. (See Benefits section for a discussion of how to value volunteer time)

2. **Offender Fines and Fees**

When offenders go through the traditional justice system, they are required to pay fines, court costs, and restitution. As discussed in the Costs section, as we do not give offenders standing for costs in this analysis, we do not consider these fines and fees as a cost to offenders, but rather, benefits to the State. However, when participants complete the diversion program, they do not need to pay fines and court costs (although they do pay restitution), resulting in a net negative benefit to the State.

To calculate these foregone benefits, we used the 2006 data to predict average offender fines and court fees for each period under consideration. We also calculated average repayment rates for each of these periods, as not all offenders repay the complete amount assessed. It should be noted that in collecting the data for repayment of court fees, there were two periods, Period 0 for those who recidivate and Period 3, where the 2006 dataset reported no court fees.

Instead of assuming a repayment rate of 100 percent for those periods, however, we applied the repayment rate from the previous period. In the 2006 data, the relevant fines, fees and repayment rates were as follows for the three time periods considered:

**Table 10: Average Offender Fines, Court Costs, and Corresponding Repayment Rates**

	<b>Average Offender Fines (per court appearance)</b>	<b>Average Court Fees (per court appearance)</b>
<b>Period 0</b>	\$320 Repayment Rate: 85%	\$108.50 Repayment Rate: 84%
<b>Period 0 Recidivators</b>	\$450 Repayment Rate: 56%	\$245 Repayment Rate: 84%*
<b>Period 1 Recidivators</b>	\$406 Repayment Rate: 90%	\$137 Repayment Rate: 68%
<b>Period 2 Recidivators</b>	\$506 Repayment Rate: 71%	\$258 Repayment Rate: 82%
<b>Period 3 Recidivators</b>	\$747 Repayment Rate: 48%	\$98 Repayment Rate: 82%*

\*: periods in which repayment is calculated based on the previous period's values  
Source: Authors, 2006 dataset

It is also important to note that we do not consider restitution payments as a net benefit of the program. We determined that there is a 100 percent restitution repayment rate in both the traditional justice system and the diversion program. As a result, participation in the diversion program does not produce any restitution benefits in excess of those for the traditional program.

### 3. State Defense Costs

Offenders going through the traditional justice system or the diversion program have the right to ask state-sponsored legal representation. This could be a cost in both the traditional system and the diversion program. However, in talking with the State Public Defenders' Office, we discover three things:

- a. Not everyone uses state-sponsored representation. Ms. Albers estimates that, on average, only 50 percent of offenders are represented by public defenders. The rest appear *pro se*, or pay for their own defense.

b. Public defenders cannot take on all the cases assigned to them. Due to overwhelming casework, public defenders take on cases they can accept, and pass the rest on to private defenders paid to act as public defenders by the State. Since the State does not have to pay benefits for these defenders, their hourly cost is actually cheaper than public defender costs (\$40 per hour as opposed to \$55 per hour). The Public Defender's Office also indicated that they take on 62 percent of cases that come to them, and pass along the remaining 38 percent to private defenders paid by the State. We account for these distinctions in our calculation of defense costs. It should be mentioned that we made two assumptions here. First, there is no systematic difference in cases taken on by the public defender's office and forwarded to private defenders. This was confirmed by the Public Defender's Office, as they mentioned that they take cases on a first-come-first-served basis, as opposed to the case type. Secondly, we assumed that private defenders spend the same amount of time on misdemeanor cases as public defenders. If the assumption that there is no systematic difference between the cases is correct, this second assumption should also hold.

c. Public defenders spend more time on diversion participants (an average of 5.28 hours) than on traditional misdemeanors (an average of four hours), although we assumed the distribution of public and private defenders remains constant. Moreover, if someone is dropped from the diversion program, this incurs significant extra work for the public defender, who then spends an average of 13 hours with diversion drop-outs. As a result, the diversion program leads to negative net benefits, but these are tempered by the fact that only 50 percent of diversion participants use a public defender. It should be noted that time quantities provided are rough estimates based on small sample sizes, and therefore, the State Public Defender's office cautions against drawing any broad conclusions from this information.

#### 4. **Court Processing Costs**

Sending an offender through the court system requires the time of court employees, including judges, court clerks, court reporters and bailiffs. Based on our conversation with Ms. Albers, we determined that a traditional misdemeanor case would take about 1.25 hours, but diversion completers only take 0.5 hours of the court's time. However, if someone fails to complete the diversion program, they end up taking 2.25 hours of the court's time. We applied values to the hourly costs for judges, court clerks, court reporters and bailiffs, and determined that as a result of increased court time for diversion non-completers, there are negative net benefits in terms of court costs. These are minimal, however, at approximately \$300.

#### 5. **DA and ADA Costs**

In determining the costs of DA and ADA time with respect to the traditional justice system and diversion program, we noticed that:

a. In comparing the 2006 data with the data from the diversion group, the DA handled a larger number of the misdemeanors in the diversion program than in the traditional system. In the traditional system, the DA only takes on 21 percent of misdemeanor cases, with the rest handled by an ADA, while in the diversion program, he takes on 63 percent of cases. This is noteworthy, because the DA costs considerably more than the ADA (\$52.38/hour for the DA versus \$26.99/hour for the ADA).

b. In the traditional system, a literature review revealed that the average misdemeanor case requires 2.17 hours of prosecutor time (Onsager, 44). A successful diversion program completer, however, only takes 0.75 hours of the prosecutor's time. As with the case of court processing and defense costs, however, Ms. Albers revealed that non-completers cost more

in terms of DA and ADA time than if they had just gone through the traditional justice system (3.25 hours). Here we assume that there are no systematic differences between the cases the DA and ADA take on, and that they spend the same amount of time on a case.

c. Ms. Albers also mentioned that those who fail the diversion program have their cases taken on by the ADA, regardless of whether they were initially tried by the DA. Here we assume that the ADA takes on all failed diversion cases.

In calculating the costs of DA and ADA time in the traditional system and diversion program, therefore, we control for the relative costs of the DA and ADA, the relative percentages of cases they each take on, contingent on whether the case is a diversion, a diversion drop-out, or a traditional case.

## 6. **Probation Officer Costs**

For calculating savings in probation officer time, it is imperative to note that most misdemeanor cases, even in the traditional justice system, do not result in probation. The 2006 data shows that only 14.3 percent of those who committed misdemeanors were sentenced to probation. However, once offenders recidivate, these numbers change, and the amount of probation they are sentenced to also increases. The following table shows the percent of offenders eligible for probation, and the average number of years of probation they were sentenced to. The Department of Corrections informed us that a year's worth of probation for a misdemeanor offense translates to 12.9 hours/year. We assumed all assigned probation is completed, and that additional probation for repeat offenses would simply add on.

**Table 11: Percentage of Offenders Sentenced to Probation and Length of Probation**

	<b>Percent Sentenced to Probation</b>	<b>Years of Probation Required</b>
<b>Period 0</b>	14.3	1.09
<b>Period 0 Recidivators</b>	28.6	2.5
<b>Period 1 Recidivators</b>	53.3	1.5
<b>Period 2 Recidivators</b>	41.7	1.8
<b>Period 3 Recidivators</b>	30	1.67

Source: Authors, 2006 dataset

In calculating saved probation officer costs, therefore, we assumed that probation requirement patterns for diversion recidivators (completers and non-completers) are the same as for the 2006 group.

#### **7. Jail Costs**

Keeping offenders in jail is a costly affair. In Juneau County, daily costs for an inmate are approximately \$79.29. Keeping an inmate in jail for a year, therefore, costs close to \$30,000. However, as with the case of probation officer savings, it is important to note that only a small fraction (about nine percent in the initial period for the 2006 group) of offenders would have gone to jail as a result of committing a misdemeanor. Moreover, of those who are sentenced to jail, sentences tend to be short, and generally considerably less than a year. The following table shows that rate at which offenders were sentenced to jail in the periods considered, and the average jail sentence. Here, we assume that everyone serves exactly the time sentenced. This would lead us to overestimate benefits slightly, as many offenders are released before serving the complete length of their sentence.

**Table 12: Percentage of Offenders Sentenced to Probation and Length of Probation**

	<b>Percent Sentenced to Jail</b>	<b>Days of Jail Sentence</b>
<b>Period 0</b>	9.1	56
<b>Period 0 Recidivators</b>	28.6	75
<b>Period 1 Recidivators</b>	13.3	30.5
<b>Period 2 Recidivators</b>	25	50
<b>Period 3 Recidivators</b>	50	65.75

Source: Authors, 2006 dataset

## **8. Community Service Benefits**

Most diversion program participants are required to perform community service in order to successfully complete the program. On average, participants complete 20 hours of service each. We count the value of this service as a benefit to society, pricing it at the opportunity cost of diversion participants' time. We use the minimum hourly wage in Juneau County (\$7.25) as an estimate for this opportunity cost. Here, we are making an important assumption—that only those who complete the diversion program complete any community service. On the one hand this assumption underestimates benefits, and many of the non-completers still perform some community service while in the program. But on the other hand, it overestimates benefits, as offenders in the traditional justice system are often sentenced to community service as well. Thus we further assume that non-completers and offenders in the traditional system perform the same number of hours of community service, which cancel each other out in net benefits estimate. Thus the excess benefits from community service come from diversion completers.

## **9. Avoidance of Wage Reduction**

As discussed in the literature in the Benefits section, offenders may experience reduced earnings relative to the general population. We employed a number of assumptions to calculate this effect.



a. Earnings reductions come from three sources: employability, a criminal record, and prior incarceration. A criminal record reduces employability (interpreted as an increased unemployment rate). We set this reduction at 6 percentage points (based on findings of Geller et. al 2006). A criminal record also reduces earnings for those who are employed, with the effect decaying with time after the offense. Reductions in earnings for those with a record were calculated as 4 percent in the year of the charges, 3 percent the following year, and no effect thereafter (based on estimations by Grogger 1995). Those with an incarceration record experience a steady 15 percent decrease in wages (not cumulative) over the three-year period (see Appendix B). It should be noted that we allow change in employability to vary in the Monte Carlo.

b. Recidivism rates were assumed to be the same regardless of the date of last offense. Thus, for a given period, the total number of recidivators includes recidivators from previous periods as well. Here we also assumed that each individual can have up to one recidivism per period, but can recidivate in multiple periods. If it turns out that most of the recidivism is driven by the same people reoffending repeatedly, we would be overestimating benefits with this assumption.

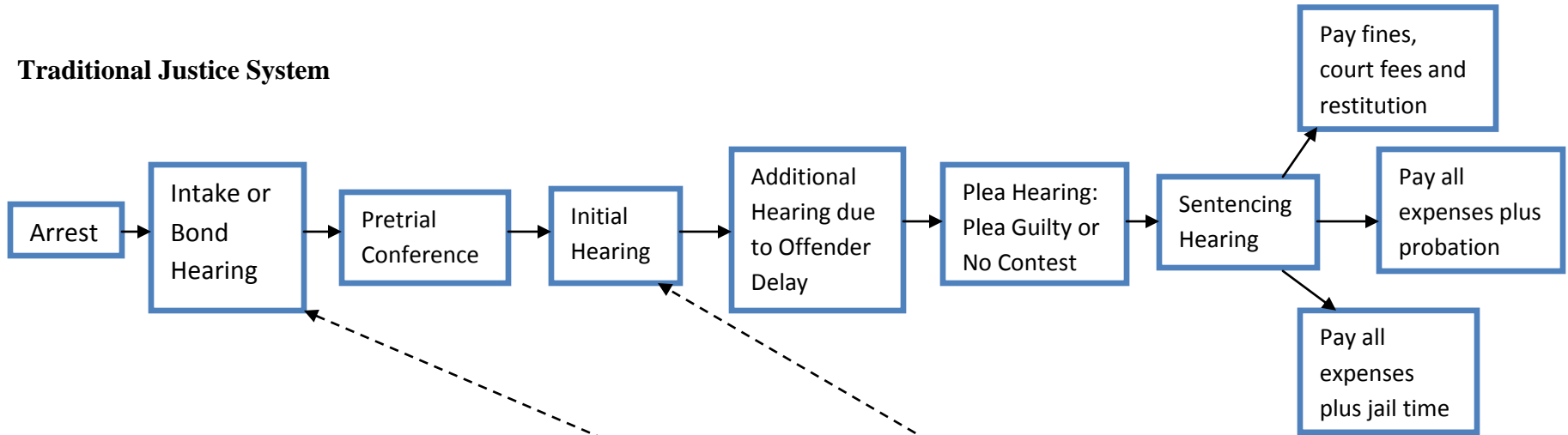
c. Diversion non-completers and everyone in the traditional system were assumed to have a criminal record at Period 0, while only those diversion completers who recidivated during Period 0 were assumed to have a criminal record. Any criminal history prior to enrollment in diversion was generally ignored.

d. Maximum potential wages were calculated at yearly gross earnings from a full-time, full-year minimum wage job (\$15,000). While this is lower than the \$23,000 median wage for Juneau County, we feel the lower amount reflects the generally reduced earnings prospects of

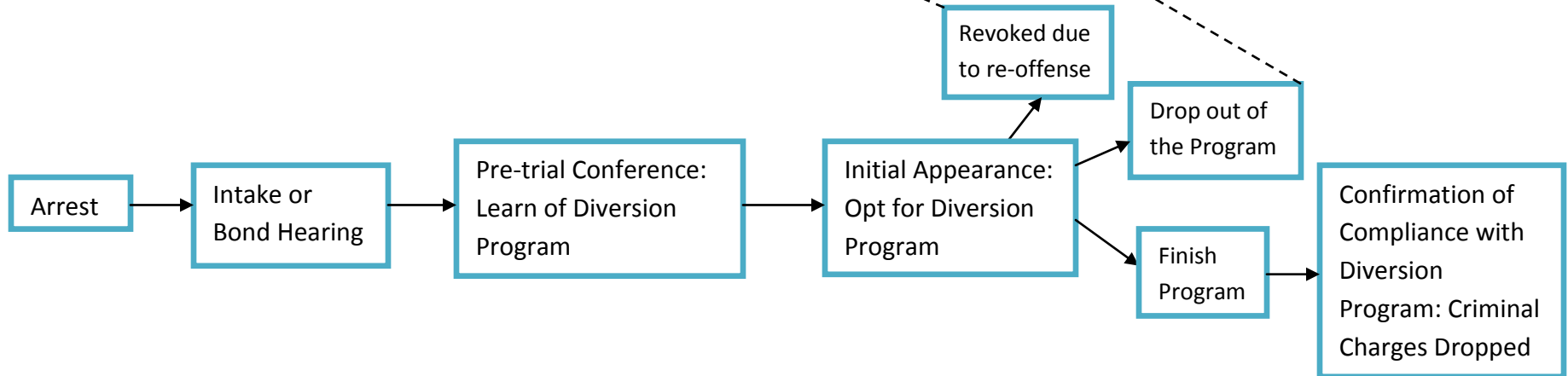
likely offenders. However, the county-wide unemployment rate was used, rather than a more demographically tailored figure, as no such figure was available. We calculate net benefits for this employability and wage effect, by accounting for lost income over the specified periods with the appropriate discount rate.

**Appendix D: Flowcharts of Court Proceedings**

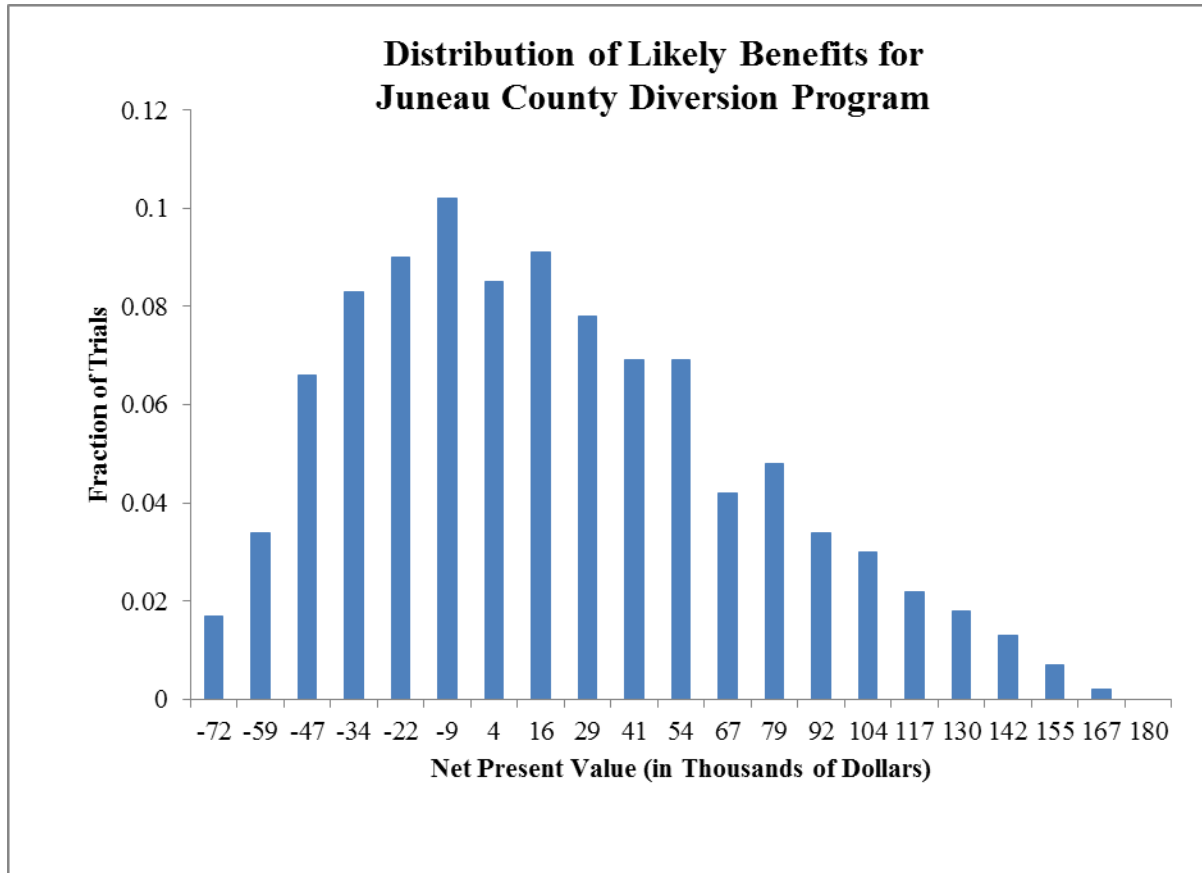
**Traditional Justice System**



**Juneau County Diversion Program**



**Appendix E: Monte Carlo Histogram**



Summary Statistics

<b>Median NPV</b>	\$18,263
<b>Mean NPV</b>	\$25,734
<b>Standard Deviation</b>	\$54,000
<b>Minimum NPV</b>	-\$71,322
<b>Maximum NPV</b>	\$177,880
<b>Probability of Positive Net Benefits</b>	.645