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**The Economic Benefits of  
Bottle Bill Funding of the  
Local Conservation Corps**

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March 2014

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**About the Report Sponsors:**

CALCC was formed in 1993 to enable California's Local Conservation Corps to collaborate and to provide a forum to advance the conservation corps movement in California and nationally. The 14 certified Local Conservation Corps that are members of CALCC are individual, local organizations. The mission of each Local Conservation Corps is to develop young women and men, primarily ages 18-25, through a program of conservation work, education and community service.

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**The Economic Benefits of Bottle Bill Funding of the Local Conservation Corps**  
(Key Findings)

- Investment in the Local Corps generates \$52.7 million in increased economic activity and over 900 jobs
- One quarter of all Corps members finish their high school diploma while in the Corps and most graduates begin college
- Expected lifetime earnings increase by over \$260 million for each \$20 million investment
- Increased educational attainment will also lead to \$14.1 million in increased revenue and decreased spending on government programs

## 1. Background

### *History*

The California Local Conservation Corps have been providing education and job training to at risk young people through projects that provide valuable community service for over 30 years. Local Conservation Corps have a complimentary mission to the statewide Corps. While the statewide Corps generally works in more remote areas, the Local Corps work in urban areas, near Corps members homes. This provides a critical opportunity to at risk young people with family responsibilities, especially young single parents. Additionally, Local Corps are certified by the statewide Corps based on a number of key factors, outlined in California Public Resources Code, Section 14507.5:

- Selects young men and women for participation on the basis of motivation for hard work, personal development, and public service, without regard to background;
- The program is based upon a highly disciplined work experience, with an educational component, and designed to develop character and civic consciousness
- Pays not less than minimum wage and assists in job placement;
- Engages in recycling, litter abatement and other conservation projects; and
- Must maintain an average enrollment of at least 50 18-25 year old members and have been continuously operating for at least 12 months.

The first Local Corps in the nation was founded in Marin County in 1982, with a conservation focus on improving the area's trail system. The following year, Mayor Dianne Feinstein and Honorable Justice J. Anthony Kline founded the San Francisco Conservation Corps, creating the first urban municipal youth corps in the nation. Later that year they were joined by CivicCorps in the East Bay. 11 more Local Corps have subsequently been founded covering all of California's major municipal areas, from Sacramento in the north to San Diego in the south.

### *Community Projects*

Corps members work on a wide variety of projects. They include conservation, education and public safety. Corps members have dedicated millions of hours to public space conservation and beautification, including litter removal, restoration, trail maintenance and weed removal. Corps members have proved a vital force in California's high recycling rates, diverting thousands of tons of recyclables annually from landfills.

Additionally, Corps members educate K-12 students in subjects like conservation, recycling and organic farming. Corps members also complete projects in fire fuel reduction, graffiti removal and other public safety concerns.

### *Education & Job Training*

One of the key requirements the Local Corps All corps members are required to participate in a structured academic program. This proves to be a tremendously valuable aspect of the program. Most Corps members (about 85%) enter the program without a high school degree. Each local Corps works with or operates a charter school. Members without a degree take courses at the schools after their work day. Successful members complete their high school degree and many enroll in college or vocational education programs while members of the Corps. Nearly half of Corps members leave the Corps with their high school degree and eighty percent of them have begun college.

In addition to the members that complete formal education, all Corps members receive valuable on-the-job training. They gain basic work skills that dramatically improve employability moving forward. In addition, many Corps members earn valuable certifications, such as standard and high level drivers licenses, fork lift operation and other key skills.

### *Funding the Corps*

The Local Corps have traditionally been funded through a variety of sources. This has included a mix of state and Federal grants, contracts with service recipients, direct fundraising and the Bottle Bill. Unfortunately, as government budgets have tightened in recent years, state and federal grants have decreased or been eliminated, making the Local Corps more dependent on Bottle Bill funding to remain solvent.

Additionally, due to the costs of operating recycling centers, schools and other operations, the Local Corps have high overhead requirements, which require adequate volume to operate efficiently. This means any cuts to the Corps, or changes in their focus, will ultimately entail a significant loss of utility for participants and society.

### *The Bottle Bill*

Early in the Local Corps' history, the Bottle Bill was passed, including funding for a number of projects that support recycling, including the Local Corps. Bottle Bill funding has increased over the years, as additional Local Corps have been formed and is indexed to cost of living. Today it directs \$20 million annually to the Local Corps to fund recycling efforts.

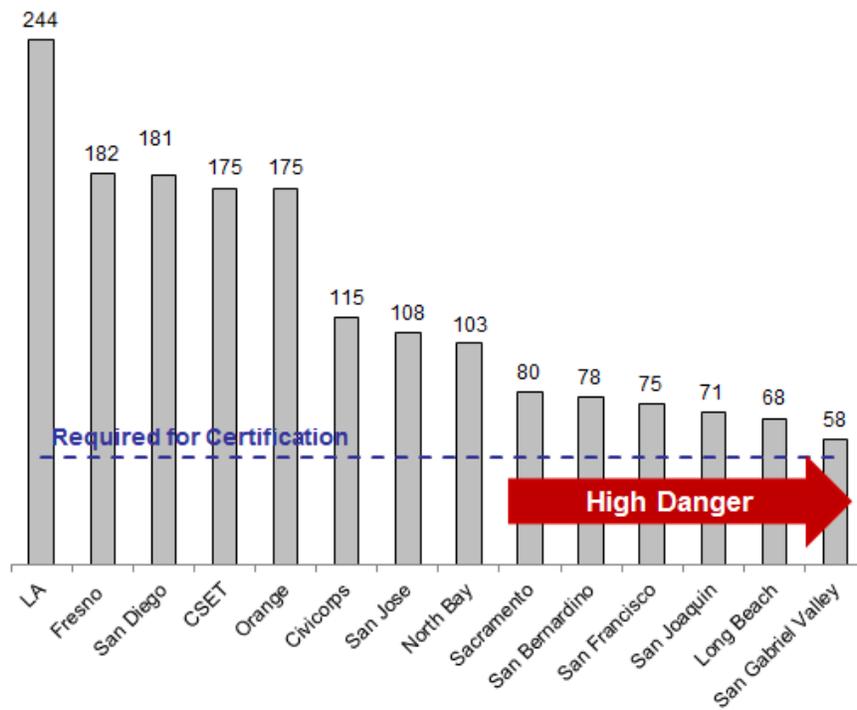
The program has proved successful. In part due to the Local Corps' efforts, California has the highest recycling rate in the nation, with 82% of CRV eligible products being recycled. In addition, the Local Corps have been able to leverage Bottle Bill funding into an additional \$5 million of funding annually, adding to the value of this funding.

### *Policy Situation*

Despite the program's success, this continues to be a significant policy issue because CalRecycle is running a deficit with CRV funding. Both it and the Brown Administration have proposed cutting or shifting Bottle Bill funding away from the Local Corps. CalRecycle proposed cutting all funding to Local Corps in 2015.

The Governor's Budget proposes cutting \$15 million of the \$20 million from the Bottle Bill. While the Governor has proposed alternate funding, these are special funds that may not be used for bottles & cans based recycling. This is a significant issue because the Local Corps have invested substantially in capital equipment needed for recycling, that would become obsolete under a forced shift in focus. Additionally, a number of Local Corps are already operating near the margin and may be forced to shut down without this funding.

Figure 1.1  
Enrollment by Local Corps

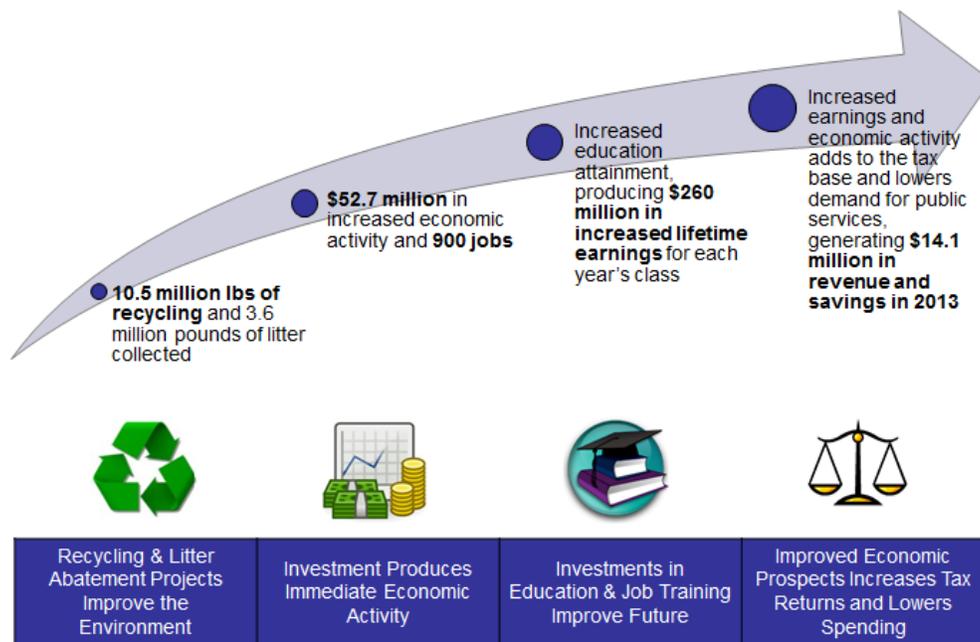


Source: Internal Data

## 2. Benefits Overview

The Local Corps produce a range of benefits, beginning with the recycling and litter abatement the funding directly pays for. From there, there are substantial economic benefits that are created from the work done by Corps members, totaling \$52.7 million in output and over 900 jobs. While enrolled in the Corps, each member receives education and job training that leads to \$260 million in increased lifetime earnings for each year's class. Finally, as more productive members of society, public finances are improved due to higher tax contributions and decreased demand for public services, generating over \$14 million in 2013 in revenue and savings.

Figure 2.1  
Overview of Benefits

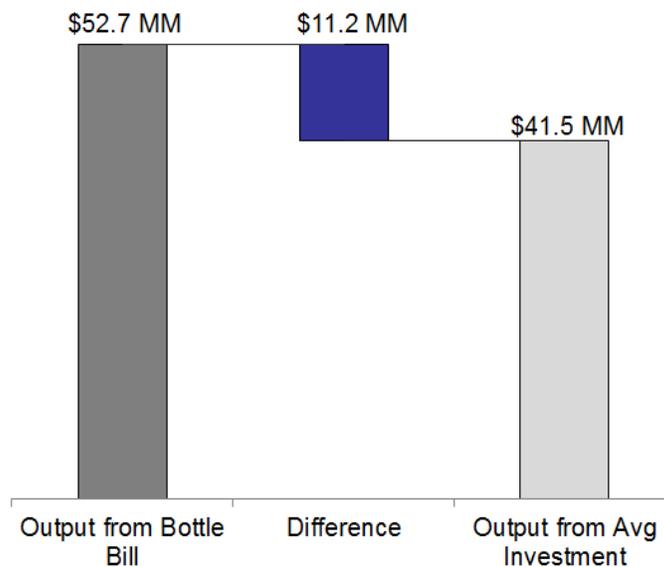


### *Economic Benefits*

A \$20 million investment in the Local Conservation Corps would produce \$52.7 million in economic activity. While any investment produces economic activity, this significantly more economic activity than an average \$20 million investment primarily because the Local Corps are

able to leverage additional funds. Additionally, the Bureau of Economic Analysis has found that the *waste management and remediation services* industry tends to generate more economic output than the average industry from the same amount of investment. These impacts are calculated using BEA RIMS II multipliers, with the employment impact adjusted for the actual direct employment generated by this funding within the Local Corps.

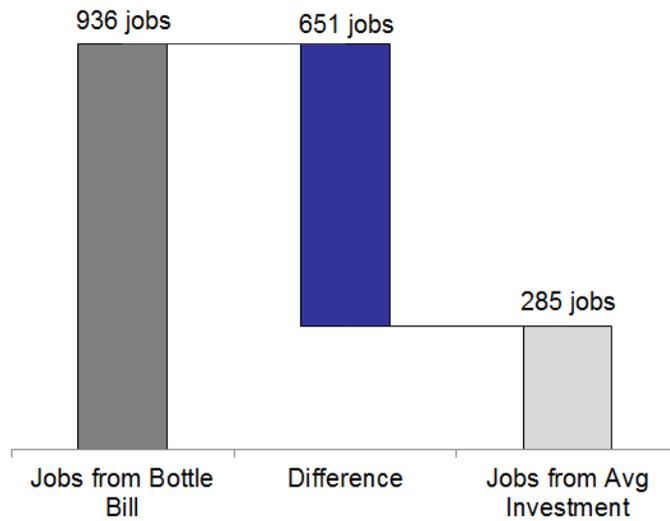
Figure 2.2  
Economic Output Generated



*ACC Calculations using BEA RIMS II Multipliers (California, 2010)*

While the Corps produce more output than average, they are particular adept at job creation. \$20 million in funding to the Local Corps produce over 900 jobs. This is over three times as many jobs as an average \$20 million investment because of the additional leveraged funds and the program's focus on employing and educating at risk young adults seeking education and workplace skill development.

Figure 2.3  
Jobs Generated



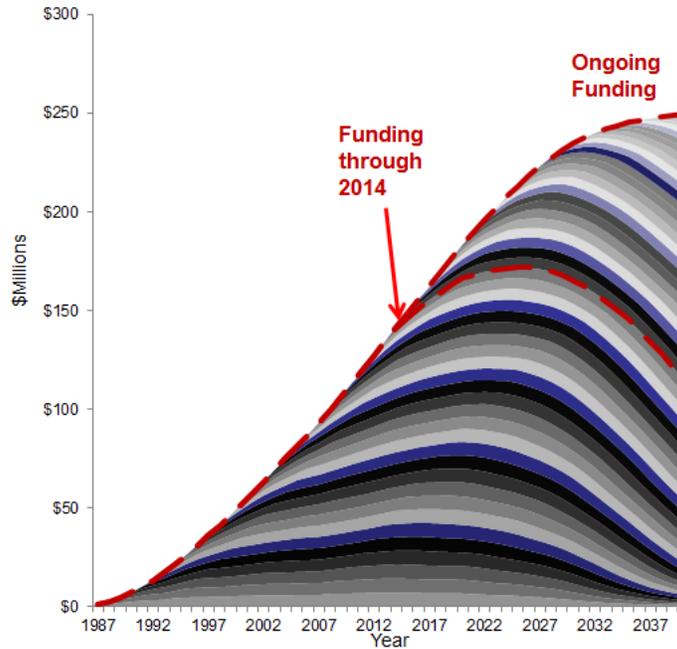
*ACC Calculations using BEA RIMS II Multipliers (California, 2010)*

### *Education Attainment Benefits*

The Corps have a major focus on educating its members. Each member is enrolled in a structured educational program. Most enter the Corps without a high school degree, leaving their economic prospects with great room for growth. Additionally, the education produced by the Corps' programs decrease the chance of incarceration and receipt of government assistance.

We estimate that increased education and job training received by corps members increases their average annual lifetime earnings by \$4.5 million per year per \$20 million invested. These benefits continue to accrue over the life of each corps member, meaning a single year's \$20 million investment will produce over \$260 million in cumulative increased earnings over the life of its Corps members. To date, corps members have earned over \$1.5 billion in increased earnings. This is separate from the direct economic and social benefits derived from the operations of the program.

Figure 2.4  
Increased Earnings Produced by Bottle Bill to Date



### *Revenue Benefits*

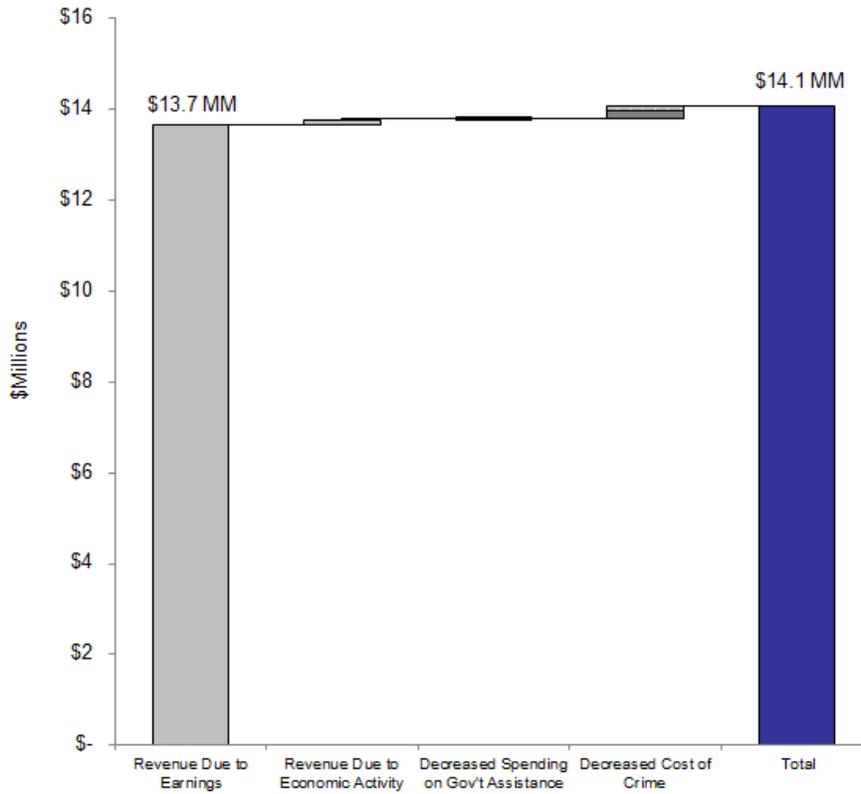
In addition to the various societal benefits from increased recycling and litter abatement; higher education and earnings; lower crime rates and less demand for public services, the Local Corps is nearly revenue neutral. As higher educational achievement has been shown to increase earnings, these increased earnings translate into increased tax revenue for state and local governments. In addition, decreasing the need for government assistance and likelihood of criminal activity saves the state money from funding these services.

The \$20 million provided to the Local Corps by the Bottle Bill increases lifetime earnings and avoids public costs in government assistance and corrections, producing revenue and averted spending of over \$14 million per year.<sup>1</sup> Over 2/3 of the annual \$20 million investment is directly repaid to the State of California and local governments through increased taxes due to higher wages and increased economic activity as well as decreased expenditures on government

<sup>1</sup> We assume an effective tax rate of 9.2%, based on the research from the Institute on Taxation & Economic Policy (ITEP)

programs, meaning the various benefits we describe effectively cost the state less than \$6 million to produce.

Figure 2.6  
2013 Revenue Impacts

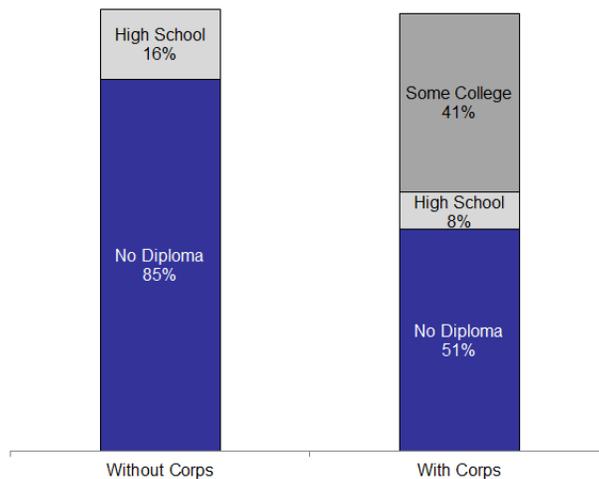


### 3. Data, Literature & Methodology

#### *Earnings & Educational Attainment*

The Local Corps internal data indicate that most Corps members (85%) enter the Corps without a high school diploma. The program is targeted at high risk young people that are most in need of enhancing their education and job skills. Because of these educational programs over 1/3 of Corps members finish high school each year. Additionally, over eighty percent of graduates then enroll in college or technical education.

Figure 3.1  
Corps Member Educational Attainment

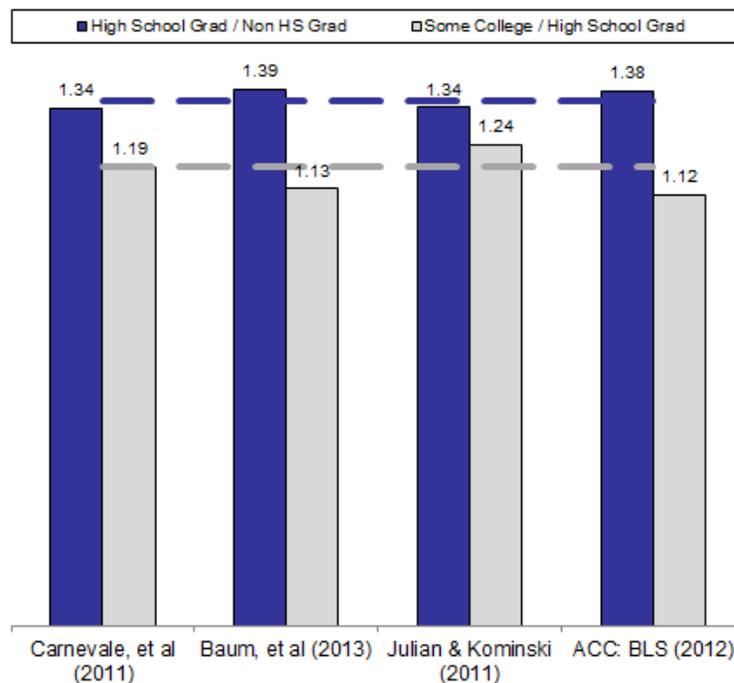


Source: Internal Data

The literature shows that increase in educational attainment increases average lifetime earnings substantially. Baum, et al (2013) found that a HS diploma increases lifetime earnings by 39% and some college by 13%. Carnavale, et al (2011) found similar results. Their research found that a high school diploma increases lifetime earnings by \$330,000 and some college by \$240,000. Julian & Kominski (2011) also found similar results, showing that a high school

diploma increases lifetime earnings by nearly \$200,000 over 9-12 and some college by over \$300,000. These are similar to the estimates we employ, using Bureau of Labor Statistics data of a 38% lifetime earnings increase from high school graduation and a 12% increase from some college.

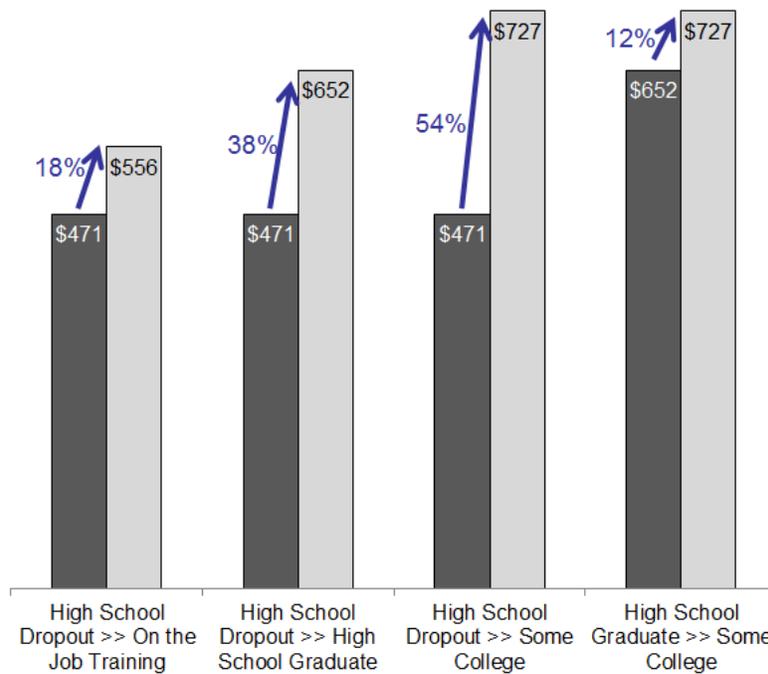
Figure 3.2  
Relative Lifetime Earnings by Educational Attainment



Notably, the literature also shows that people of color derive even more benefits from higher education attainment, suggesting our estimates may understate the true benefits of the program. Carnevale, et al (2011) wrote, “For African Americans and Latinos, there are large gaps between earnings when compared to Whites, especially at the lowest levels of educational attainment ... the gaps are smallest at the some college/no degree, Associate’s, Master’s, and Doctoral degree levels.” Baum, et al (2013) and Julian (2011) find that minorities gain slightly less from a HS diploma than whites but significantly more from some college and higher.

Based on this literature review, we estimate that increased educational attainment will increase average monthly lifetime earnings by between 12% and 54%, as shown in Figure 3.3. High school dropouts, where most Corps members initially start, have the greatest potential for increased earnings.

Figure 3.3  
Increased Earnings Due to Educational Attainment



*ACC Estimates, based on literature discussed above*

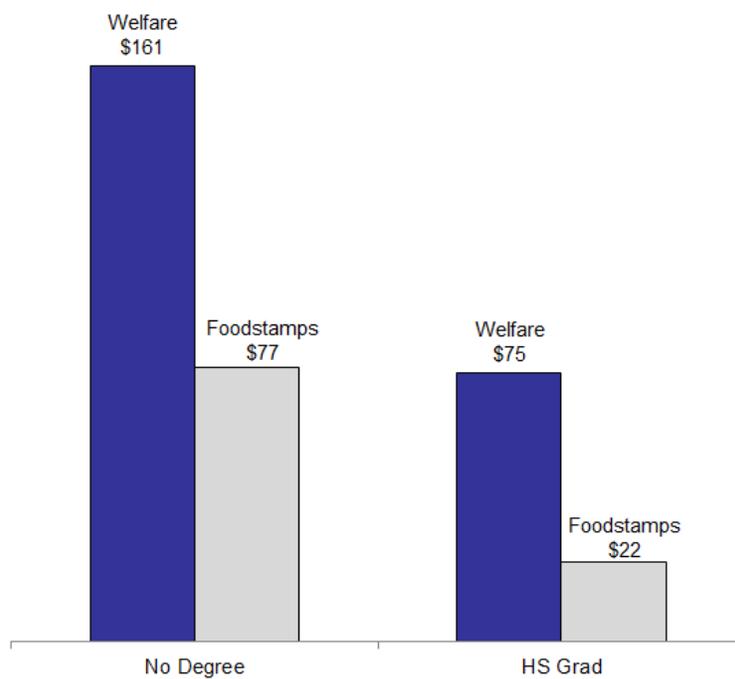
### *State Spending & Educational Attainment*

The academic literature shows that high school dropouts are substantially more likely to collect government support, such as welfare and food stamps. For example, Joun, et al (2009) write that “Educational attainment ... was related to welfare receipt, which supports findings from earlier research on the association of welfare receipt with dropping out of school.” Similarly, Ziliak (2013) finds, “There is evidence that SNAP participation significantly declines with age and with education attainment.” Atasoy, et al (2010) adds that “In particular, minority

status, single motherhood, and low educational attainment increase the probability of participating in the FSP among low-income households.”

Census<sup>2</sup>, USDA<sup>3</sup> and CDSS<sup>4</sup> data show that Americans with a high school degree on average collect less than half as much in welfare and less than 1/3 as much in food stamps as those without a high school degree, as shown in Figure 3.4.

Figure 3.4  
Public Support and Educational Attainment



*ACC Calculations, using Census, USDA and CDSS data*

This academic literature shows that high school dropouts are more likely to collect commit crimes and be incarcerated, costing state and local governments substantially in enforcement

<sup>2</sup> United States Census (2007-2011) ACS 5-year sample. Retrieved from: <https://usa.ipums.org/usa/sda/>

<sup>3</sup> United States Department of Agriculture (2014) Supplemental Nutrition Assistance Program: Average Monthly Benefit Per Person. Retrieved from: [http://www.fns.usda.gov/pd/18SNAPavg\\$PP.htm](http://www.fns.usda.gov/pd/18SNAPavg$PP.htm)

<sup>4</sup> California Department of Social Services (2013) Food Stamp Program Participation and Benefit Issuance Report. Retrieved from: <http://www.cdss.ca.gov/research/res/pdf/DFA256/2013/DFA256Oct13.pdf> and California Department of Social Services (2002) Food Stamps Characteristics Study. Retrieved from: <http://www.dss.cahwnet.gov/cdssweb/entres/q51804/publications/pdf/foodstamp02.pdf>

and corrections spending. Lochner (2011) found that education shows benefits in lower crime and a number of other factors, “Education has been shown to reduce crime, improve health, lower mortality, and increase political participation.” Machin, et al (2010) showed similar results, “Crime is significantly related to education, especially in the case of property crimes. The magnitudes of the estimated effects are sizable ...” Lochner and Moretti (2004) estimated that High school completion lowers annual social costs of crime by \$3,000 per male graduate. Harlow (2003) observed, “About 41% of inmates in the Nation’s State and Federal prisons and local jails in 1997 and 31% of probationers had not completed high school or its equivalent. In comparison, 18% of the general population age 18 or older had not finished the 12th grade.”

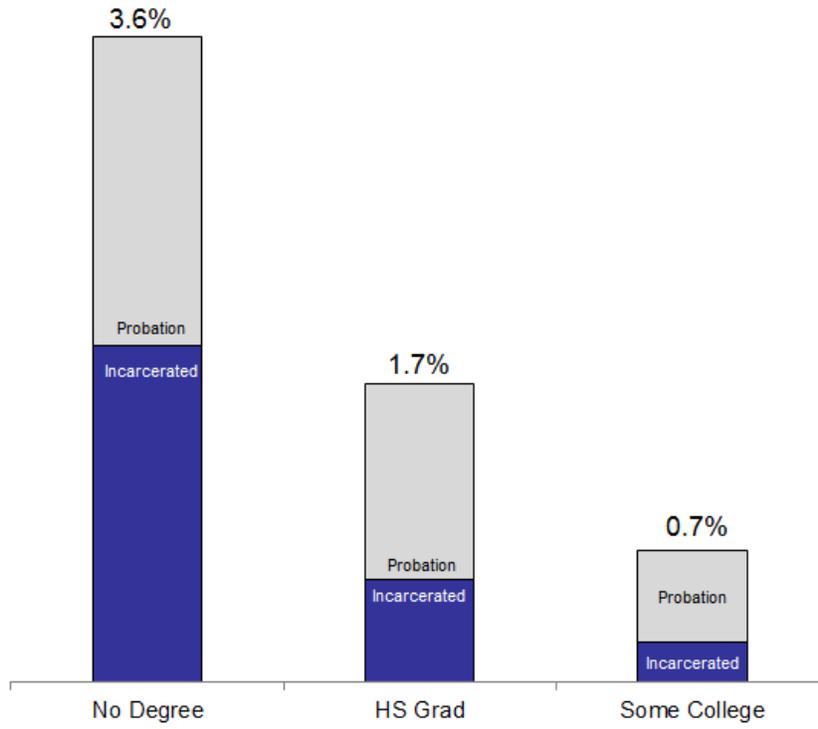
In line with this research, we use BLS, BJS and Census<sup>5</sup> data to estimate that Americans without a high school diploma are twice as likely to be incarcerated than those with a diploma and 5 times more likely than those with some college, as shown in Figure 3.5. We estimate savings based on these rates, using LAO data showing \$47,102 spending per inmate.<sup>6</sup>

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<sup>5</sup> Harlow, C.W. (2003). Education And Correctional Populations. Bureau of Justice Statistics. Retrieved from: <http://www.bjs.gov/index.cfm?ty=pbdetail&iid=814>

<sup>6</sup> Legislative Analyst’s Office (2008-2009), How much does it cost to incarcerate an inmate? Retrieved from: [http://www.lao.ca.gov/PolicyAreas/CJ/6\\_cj\\_inmatecost](http://www.lao.ca.gov/PolicyAreas/CJ/6_cj_inmatecost)

Figure 3.5  
Incarceration Rate and Educational Attainment



*ACC Calculations, using BLS, BJS and Census data*

#### **4. Conclusion**

Because the Local Corps' benefits go well beyond recycling and litter abatement, it has proved to be a tremendously efficient public investment. Bottle Bill funding to the Local Conservation Corps generates numerous benefits. As designed, it leads to 10.5 million pounds of recycling and 3.6 million pounds of litter abatement per year. In addition, it generates over \$52 million in economic activity and 900 jobs annually.

More importantly, the educational achievement the Corps generates leads to enormous lifetime gains for the member and society. Each \$20 million annual investment generates over \$260 million in increased lifetime earnings. To date, the corps has increased former members' earnings by nearly \$1.5 billion. In addition, taxes and decreased spending on public programs repay over two-thirds of the cost of the Bottle Bill funding.

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