Advancing Social Equity through the Sustainable Jersey Program: Analysis and Potential

Sustainable Jersey
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Sustainable Jersey
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Executive Summary

Sustainable Jersey is a network and movement of over 450 municipalities working collectively to build a more sustainable world, one community at a time. Collaborating with state agencies, non-profit organizations, business, and academia, Sustainable Jersey sets standards and provides resources and guidance on best practices for what communities could and should do to contribute to a sustainable future.

Social equity is integral to the holistic vision of a sustainable future guiding Sustainable Jersey's mission. New Jerseyans today face wide disparities in access to the conditions for health and well-being, disparities which are further reflected in environmental and human health outcomes. Creating more equitable and sustainable communities means changing the systems that have resulted in those disparities. Sustainable Jersey is meeting this challenge by strategically supporting the role of municipal governments in bringing about the needed change.

With support from the Surdna Foundation, Sustainable Jersey embarked in 2017 upon an internal equity initiative. This report documents the outcomes of its first three steps and the ongoing direction of the fourth:

1. co-development of a shared framework for understanding social equity;
2. screening the entire suite of Sustainable Jersey actions for potential equity impacts and recommending changes to address equity impacts;
3. assessing municipal certification and grant awards for patterns in relation to social equity;
4. integrating social equity across the Sustainable Jersey program, filling gaps and pursuing opportunities to remove barriers and promote social equity.

Equity Framework

The first step in launching the equity initiative was to work with the Sustainable Jersey Diversity and Equity Task Force to co-generate a framework for understanding and explicitly defining social equity, as summarized below.

> **Equity Goal**: to develop municipal capacity and mobilize municipal efforts to eliminate disparities based on race, poverty or other forms of social advantage or disadvantage.
>
> A holistic conception of equity involves *fairness* in each of three elements:

1. **Distribution**
   The first dimension of equity emphasizes the uneven disposition distribution of benefits (such as access to green spaces) and burdens (such as pollution) across social groups and neighborhoods. An equitable distribution does not add to the burdens of marginalized or vulnerable groups nor exclude them from benefits.
2. **Participation**
   Meaningful participation in decision-making by affected individuals and communities is guaranteed by procedural equity.

3. **Scale**
   Municipalities must ensure that their 'downstream' neighbors do not feel negative impacts from municipal action and should collaborate across boundaries to reduce regional disparities.

Equity Screen of Actions

Based on these equity framework elements, a screening tool was developed and applied in a systematic audit of all 139 actions in the Sustainable Jersey municipal program during 2019. Volunteers and staff members with expertise in each issue area reviewed and assigned each action to one of four categories based on the action's likely impact on social equity in each of the three dimensions.

Eleven actions were flagged as having potential inequitable impacts; recommendations were made on improving 52 additional actions. Overall, the qualitative findings of this screening exercise include the following:

- The equity impact of an action depends on how it is implemented. Many actions could be considered equitable or not depending on the qualitative details of implementation under different circumstances.
- Specific requirements to make actions more equitable, or to confirm that they are implemented equitably, may also make them more difficult and increase the documentation burden.
- Equitable participation (including leadership) and targeted outreach are needed to ensure equitable distribution of outcomes.
- Recruitment from underrepresented groups by using appropriate means of communication and by making meetings accessible enables equitable participation.

Quantitative Analysis of Certification and Grant Performance

For the purposes of this study, the research focused on inequity *between* municipalities in New Jersey, since municipalities of different sizes, levels of wealth, and social composition are likely to experience differing advantages and barriers to gaining benefits from participation in Sustainable Jersey. Could the certification program unintentionally favor one type of municipality over another?

To investigate this question, this study analysed performance in the Sustainable Jersey program with respect to census and other publicly available data characterizing each municipality. The general findings support the conclusion that distressed municipalities do not appear to face any systematic bias in achieving Sustainable Jersey certification or obtaining Sustainable Jersey grants. Nor is there any apparent racial bias in opportunities to participate in and benefit from the Sustainable Jersey program. Smaller municipalities, with presumed lesser capacity, experience more difficulties in advancing in the program.

The specific findings indicated:

- Certification levels are either statistically unrelated, or only weakly correlated, with a lower score on an index of municipal 'distress' (a composite of indicators such as poverty, unemployment, and high school graduation rates);
- Municipalities with larger populations have a statistically significant, but relatively small, advantage;
- Communities with different racial compositions participate at equal rates in Sustainable Jersey. The only anomaly is that communities with large populations of Asians participate at a higher rate.
- In total, *population and distress together explain less than 10% of the variation in certification level*.

The research demonstrates that factors other than municipal distress, racial composition or population contribute to success in achieving Sustainable Jersey certification. Such factors may include, for example, the presence of local champions or collaboration with external partners. Further research is required to identify other relevant factors and assess their respective impact on outcomes.

A review of success in obtaining grants offered through the Sustainable Jersey program resulted in similar findings as reported above: population is statistically significantly correlated, with a relatively small impact, with successful grant applications, while municipal distress is not. At the same time, the data suggest that *small* distressed municipalities are the least likely to pursue or benefit from Sustainable Jersey grant opportunities.

Next Steps

In the first decade of its existence Sustainable Jersey has provided equitable support, inspiration, guidance, and resources to New Jersey municipalities in their efforts to promote environmental, economic, and social sustainability. The challenge for the decade ahead is to understand how Sustainable Jersey can become a *driver* for advancing social equity as an integral element of sustainability? Would targeted outreach and support make the difference for smaller, distressed municipalities? Would providing more actions directly address their barriers and concerns inspire more participation in the program by underrepresented or marginalized social groups and by the municipalities in which they form a large part of the population?

The results of the equity screening process described in this report will inform ongoing improvements to Sustainable Jersey actions and the development of new actions to drive equity gains at the local level. In an important step, Sustainable Jersey has adopted a formal equity policy that will establish procedures and criteria for developing actions, awarding grants, and defining certification standards in line with the equity framework. As part of its sustainability mission, the policy articulates Sustainable Jersey's programmatic commitment to working with local partners to dismantle barriers to opportunity and to advance social equity within their communities and across the state of New Jersey.

Acknowledgements

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Introduction

Sustainable Jersey Mission and Equity Initiative

The mission of Sustainable Jersey is to build a more sustainable world one community at a time. Social equity is integral to that mission for two major reasons: because it is *fair* and because it is *effective*. It is only fair and just that all people enjoy the benefits of the environmental, social and economic health and well-being we aim to sustain. In order to be effective in achieving that mission, it is necessary to build and engage the capacity, talents and energy of all communities and all community members. Yet, New Jerseyans face vast disparities, not only in the conditions for health and well-being, but also in opportunities to lead and participate in efforts to meet community needs and pursue sustainability goals.

Sustainable Jersey recognizes that creating more inclusive, equitable and sustainable communities means changing the systems that have resulted in those disparities. Our challenge and mission as an organization is to identify and support the role of municipal governments in doing their part in bringing about that needed change.

With generous support from the Surdna Foundation, Sustainable Jersey embarked in 2017 upon an *equity initiative* to pursue this mission. The initiative has four steps:

1. Co-develop shared framework for understanding social equity.
2. Screen all Sustainable Jersey actions for their potential equity impact; sort actions into categories; collate recommendations for revisions and new actions to promote social equity.
3. Assess patterns in municipal certification and grant awards in relation to social equity factors.
4. Integrate social equity across the Sustainable Jersey program: fill gaps and pursue opportunities to remove barriers and promote social equity.

While work continues on the final step of the equity initiative, this report documents learning from the first three steps, completed by the end of the grant period, April 2019.

Sustainable Jersey in a Nutshell

Sustainable Jersey is a network and movement of over 450 municipalities[1] working collectively at the local level to achieve a sustainable future for New Jersey. Collaborating with state agencies, foundations and other non-profit organizations, business and academia, Sustainable Jersey sets standards and supplies resources and guidance on best practices for what communities could and should do to contribute to a sustainable future. When municipalities document accomplishment of these prescribed best practices to the satisfaction of expert reviewers, they accrue points towards progressive levels of sustainability certification. Prior to attaining certification, municipalities are eligible to participate in the program and apply

[1] 453 municipalities were registered as of January 2020. Since 2014, Sustainable Jersey has also run a

for grants once they voluntarily form 'green teams' that are recognized by resolution as bodies of local government and register in the program.

Since its inception in 2009, Sustainable Jersey has been committed to a holistic vision of sustainability, captured in the three-part motto: Planet-Prosperity-People. Sustainable Jersey's commitment to these principles is reflected in the *Sustainable State of the State Report*, which defines Sustainable Jersey's vision of sustainability in terms of 57 goals across 14 broad-based dimensions of sustainability. Through regular updates since 2015, the report tracks performance metrics – including measures of social disparity in health, education and access to healthy environments and resources.

Equity Framework

The municipal best practices, known as *actions,* that form the core of the Sustainable Jersey program are developed by one of nineteen issue-based task forces, comprised of volunteer experts drawn from local government, state agencies, universities and non-profit organizations. The long-standing Diversity and Equity Task Force (see Appendix I) has been a key partner in undertaking this equity initiative, ensuring that the work is collaborative, informed by multiple disciplines, professions and perspectives, and grounded in the practical realities faced in New Jersey cities and towns.

The first step in launching the new equity initiative was to co-generate a framework for understanding and explicitly defining what 'social equity' means to Sustainable Jersey as a goal and as an operational concept. After Sustainable Jersey staff presented the initial draft framework to the Task Force, it was subject to in-depth discussion and multiple rounds of revision by a smaller working group before being ratified.

Equity goal

In the long term, Sustainable Jersey strives to eliminate the root causes of social inequity and dismantle barriers to opportunity. In the shorter term, the direct goal of the Sustainable Jersey program is:

> to develop municipal capacity and mobilize municipal efforts to reduce or eliminate disparities that are based on race, poverty or other forms of social disadvantage or difference.

Fundamental disparities in opportunity, resources and decision-making power lead to further disparities in outcomes across every arena of sustainability, including environmental quality, health, public safety, housing, transportation, education, employment, income, and enjoyment of recreation and the arts. Many, if not most, of these inequitable outcomes are co-located and geographically concentrated in the same zip codes, a national pattern that is particularly stark in the highly segregated state of New Jersey (Whytlaw, 2019; UW Population Health Institute, 2019).

Dimensions of equity

Drawing from models found in the literature (McDermott et al., 2013; Schlosberg, 2013), the equity framework identifies the key dimensions that form a complete and robust definition of equity. Rather than specify a universal definition, the framework leaves room for users to refine the content of each dimension of equity to reflect community-defined values and constraints specific to the local context. Across variation in local values, social equity is fundamentally about *fairness* for all members of a community or society. A holistic conception of equity must explicitly involve fairness in each of three elements: distribution, participation and scale (see full framework in box below).

The first dimension, *distributional equity*, emphasizes the uneven disposition of benefits and burdens across social groups and neighborhoods. Writing and activism on environmental justice has brought attention to racial and ethnic disparities in the distribution of polluting facilities and other environmental hazards and the lack of environmental amenities such as green spaces where low-income people and people of color live (Jennings and Gaither, 2015; Cole and Foster, 2001; U.S. EPA, 1992).

History matters when determining what is an equitable distribution today. Providing fair opportunity to all may require removing obstacles and compensating for past effects. Context also matters: pre-existing economic, social, and political inequalities create an "uneven playing field." The framework calls attention to the fact that for people who start out from different places, equal treatment is therefore not equitable.

Many definitions of equity only consider how the 'pieces of the pie' of social goods are divvied up. A strength of the equity framework is that it guides the user to go further and consider why and how and by whom the pie was divided up in the first place. This goes to the second dimension of *procedural equity*, which is defined as the representation and meaningful participation of affected individuals and communities in decision-making. In other words, it concerns how much power is in local hands. Before power can be shared, equitable participation presupposes *recognition*, or equal respect for all social and cultural groups and diverse voices (Fraser, 2009). As the literature on environmental justice emphasizes, efforts to achieve procedural equity require intentional effort and explicit mechanisms to ensure *inclusion* in policy and planning decisions of affected actors, particularly disadvantaged or vulnerable groups (Schlosberg, 2013; Foster et al., 2019; Leichenko et al., 2011).

The framework highlights *scale* as the third dimension of equity. It is necessary to establish the boundaries of the unit (area or population) under consideration in order to assess the equity of a condition or impact. This has important implications for a program such as Sustainable Jersey. While it is focused at the municipal scale as a unit of responsibility and action, at the same time it seeks to advance sustainability across the state of New Jersey and beyond. Minimally, this means ensuring that municipal actions do not have inequitable impacts on neighboring, or 'downstream,' communities. Since more social disparity exists *among* than within municipalities in New Jersey, the framework highlights the fact municipalities will need to collaborate to take positive action if regional disparities are to be reduced.

The very idea of sustainability points to the reality that there are no environmental or economic boundaries among communities. Due to flows of environmental services, materials and waste,

cities share the same watersheds, air-sheds and trash-shed and as surrounding suburbs and the towns in rural periphery. Due to a complex of historical factors operating in New Jersey, these uneven flows have resulted over time in inequitable distribution of environmental goods (e.g., trees in leafy suburbs) and bads (e.g., toxic waste, diesel exhaust, and trash) in certain urban neighborhoods and rural areas often inhabited predominantly by low-income people and communities of color (Whytlaw, et al., 2019). This challenges Sustainable Jersey to draw the attention of participating municipalities to consider the downstream effects of their actions and to collaborate with their neighbors on common problems and opportunities.

Sustainable Jersey Equity Framework

Equity goal:

To develop municipal capacity and mobilize municipal efforts to reduce or eliminate disparities based on race, poverty or other forms of social advantage or disadvantage.

A holistic conception of equity involves *fairness* in each of three elements:

1. **Distribution** concerns how the total 'pie' is divided up among different social groups. The 'pie' refers to benefits (access to good things) and *also* burdens (costs and exposure to risk).

- *An equitable distribution does not add to the burdens or risks of marginalized or vulnerable people, nor unfairly burden any social group.*
- *An equitable distribution of benefits meets the needs of marginalized or vulnerable people and, wherever feasible, also meets the interests of all social groups. Providing fair opportunity may require removing obstacles facing particular groups and compensating for past discrimination they have experienced.*

2. **Participation** concerns the role and influence in decision-making processes (i.e., power) exercised by different social groups.

- *Equitable participation means all social groups have a meaningful opportunity to participate in decision-making and influence its outcome.*
- *Equitable participation also means that all affected groups are afforded:*
  - recognition*, or equal respect for all social and cultural groups and diverse voices;*
  - inclusion*, which results from* intentional *efforts to enhance effective participation by diverse and, especially, marginalized or vulnerable groups.*

3. The **scale** under consideration matters to the meaning and practice of realizing social equity.

- *Equity considerations extend past municipal boundaries. Neighboring ("downstream") municipalities do not feel negative impacts of municipal action.*
- *Municipalities should also collaborate to take positive action to reduce regional disparities.*

The Equity Screen

Having established a shared definition of equity, the next step was to operationalize it as a screening tool for use in a systematic audit of all 139 actions currently in the Sustainable Jersey municipal program for potential equity impact.[2] The principal purpose of the screening exercise was to sort the entire suite of Sustainable Jersey actions into categories reflecting the priority of the need (if any) to revise them in order to meet the program's equity goals. In this context, the goals are twofold: first, protect social equity (do no harm) and then, wherever it is within the power of municipal government, improve social equity.

Methods: Applying the Equity Screen

A working group of four Task Force members translated the equity framework into a series of questions embedded in a Google Form with accompanying instructions designed to guide reviewers (screeners) through assessing the equity impact of each action (see Appendix II for the form and guidelines).

For each of the three dimensions of equity defined in the framework, the equity screen directs the reviewer first to determine if the action is "Not Applicable," that is, if it has no foreseeable impact on that dimension of equity. Otherwise, the reviewer scores the likely impact of the action on a scale of four: inequitable, slightly inequitable, slightly equitable, or equitable (i.e., significantly improves social equity). The reviewer is then requested to record any ideas on "how this action could do a better job" with respect to each dimension of equity. The last question provides space for ideas for *new* actions that might fill gaps in the existing set and capture any missed opportunities to advance social equity at the municipal scale.

The equity screen was pilot-tested by several reviewers and vetted by the Task Force, Sustainable Jersey staff and the Certification Standards Committee before being finalized. A training webinar (Appendix III) was developed and used to orient a total of six reviewers. After the first round of reviews, the results were exported as a spreadsheet and series of summary charts. The spreadsheet was then circulated to staff, who re-reviewed and added their comments under actions in the topical areas they cover.

By analysing the impacts of a given action in terms of three distinct components (distribution, procedure and scale), the equity screen approach achieves thorough, systematic and, hence, comparable results. Although each reviewer brings an element of subjectivity to the screening process, multiple perspectives also add value. In this application of the method, a second round of reviews in which the staff cross-checked initial results provided a corrective balance to differences of interpretations. (In only three cases, in which the initial reviewer appeared to have misunderstood the action, did staff change a score.) It must also be kept in mind that the purpose of this exercise was to sort the actions into categories based on their perceived need for revision. Thus, if any one reviewer had a concern about a given action in relation to equity, regardless of any conflicting opinions, it was flagged for further scrutiny by the staff and task

[2] Existing 'equity toolkits' consulted included: Nelson, J. 2015. *Racial Equity Toolkit: An Opportunity to Operationalize Equity.* Government Alliance on Racial Equity; Sustainable CT Equity Toolkit, Sustainable CT. (Available on sustainablect.org).

force with relevant expertise. Finally, since major action revisions must ultimately be approved the Certification Standards Committee, the outcomes of the screening exercise should be understood as recommendations for further attention, rather than final determinations.

Equity Action Screen: Qualitative Results

Categorization and review of actions by potential equity impact
Appendix IV shows the listing of actions assigned to the top two priority categories based on their need for revision to correct for possible inequitable impacts, namely:

Priority for Revision – Inequitable impact likely, based on:
1) Distribution of Benefits and Costs (3 actions)
2) Participation – Opportunities to make decisions (8 actions)
3) [Neighboring Municipalities – Impact and Collaboration (0 actions listed)]

Potential for improvement – Slightly inequitable impact, based on:
1) Distribution of Benefits and Costs (30 actions)
2) Participation – Opportunities to make decisions (13 actions)
3) Neighboring Municipalities – Impact and Collaboration (9 actions)

A few examples illustrate some of the concerns raised by reviewers about the equity impact of particular actions, as well as some of the judgement calls involved.

- **Pay-As-You-Throw**

This action was sorted into the category: *Priority for Revision – Inequitable impact likely, based on Distribution of Benefits and Costs*.

  - Screener 1: Low-income residents are disproportionately burdened by fees for municipal services (which pose little disincentive to high income residents who can easily afford them). PAYT programs could be designed to ameliorate this effect, e.g., by providing (a) exemptions or subsidies for low-income households, or (b) basic service for free, with charges only for trash exceeding that baseline weight.
  - Screener 2: Low income residents have opportunity to save money with this action. Whether it is pay as you throw or imbedded in the services, taxes need to be paid for. Reducing waste benefits all.

- **Environmental Commissions**

This action was sorted into the category *Priority for Revision – Inequitable impact likely, based on Participation.*

  - The Environmental Commission should be required to identify the location of any Environmental Justice neighborhoods within the municipality and to include representatives of … the low-income, racial and/or ethnic communities that live in those areas (e.g., neighborhood associations, faith groups or other non-profit entities active in those neighborhoods). If necessary, accommodations to the meeting schedule should be made for time, transportation, and/or language constraints of these groups.

In addition to the sorting process, one of the most valuable outcomes of the exercise have been the reveiwers' recommendations and ideas for improving specific actions so that they not only avoid harming social equity, but rather, go beyond maintaining the inequitable status quo to advance social equity proactively. For example, the advice given in response to the *Establish a Creative Team* action would apply to numerous actions that involve the formation of a team to drive and guide implementation.

- **Establish a Creative Team**
  - [Impact] depends on implementation. Without deliberate intentional steps, participation will be skewed. Given the inherent challenges of gaining diverse participation, I think this likely, but of course not inevitable. If there isn't diverse participation then it is likely that the output of the Team will at best fail to engage and at worst exclude certain groups.

    The composition of the ideal team may not necessarily be proportional to community demographics (as the action guidance recommends). In fact, it would often need to be skewed towards the otherwise underrepresented groups. The action should explain that what is needed is *affirmative action* to include representatives of minority and disadvantaged or overlooked groups. In particular, Creative Teams will be missing out if they don't include representatives of youth and any important local ethnolinguistic or cultural groups. If representatives of such groups don't volunteer to join the Team, then they need to find creative ways of engaging them in other ways to learn what they would want from the arts in town, as well as to get feedback on how [the action] is working. The [revised] action should probably stop short of mandating inclusion of underrepresented groups, but should emphasize it more... Guidance should also specifically address strategies for gaining more diverse involvement, such as translation and services for the hearing or vision impaired, transportation and access for seniors and others with impaired mobility, provision of childcare and scheduling at varied meeting times and locales. Establish multiple channels for receiving input beyond public meetings, including social media, oral histories, and focus groups. Work with neighborhood associations, faith groups or other non-profit entities active in affected neighborhoods. The more inclusive the process, the richer and more representative the result.

No actions were judged to have more than "slightly" negative impacts on neighboring municipalities, but reviewers identified several ways that actions could be improved by encouraging regional collaboration. Reviewers also identified dilemmas associated with scale – where do we draw the boundaries of concern?

- **Bicycle Pedestrian Plan**
  - Coordination with neighboring municipalities and regional entities (MPOs, County) would be especially valuable for this action!
- **Environmental Justice in Planning & Zoning**
  - It was hard to select the "right" answer for the question of scale. Once one municipality/community cries NIMBY, the polluting facility will inevitably be

> placed elsewhere (quite possibly in a municipality with less political power/voice). That said, if the neighboring municipalities have their own EJ recommendations in place, then having this adopted by a neighbor shouldn't be a problem... Sustainable Jersey can't be in the position to say "all you communities with no landfills or waste facilities need to start letting those polluting industries into your borders." That would be bonkers! So where do we go from here?

In several instances, reviewers proposed that rather than layer even more requirements onto existing actions – thereby decreasing the number of towns that would be likely to undertake them, it might be more effective to create entirely new actions with an explicit focus on equity. Reviewers suggested several new equity focused actions, including:

- Electric vehicle car-sharing
- Public access plans
- Anti-gentrification policies and best practices
- Municipal practices: hiring, contracting
- Equity self-assessment and community profile.

General findings and recommendations

Reviewers noted in several cases that the impact of a Sustainable Jersey action on social equity would depend on how it is *implemented* by a particular municipality under local circumstances, making it difficult to score the action's likely impact in a generalized way. Reviewers made suggestions on how additional specific instructions or required steps could improve the likelihood that residents from underserved, vulnerable and marginalized social groups or neighborhoods would benefit.

One of key ways to achieve a fair distribution of benefits and costs is through inclusive participation and targeted outreach. Diverse groups of residents with special needs or concerns can most effectively get them met if they have a seat at the table, including a leadership role on the team doing the implementing.

Participation goes beyond consultation to embrace decision-making power. However, the difficulties in attracting and enabling any level of participation by marginalized and disadvantaged groups are real. Informing members of underrepresented groups and making them feel comfortable coming forward requires targeted, tailored outreach strategies, such as those mentioned above in the *Establish a Creative Team* example.

Reviewers questioned if and when actions should *mandate* demonstration of affirmative efforts (a) to recruit diverse leadership or membership in action teams and/or (b) to conduct outreach and education specifically targeted to reach underserved neighborhoods and community members.

Additional action requirements may improve the likelihood that a given action will improve social equity, but they require more effort and come at the expense of a heavier burden of documentation (e.g., collecting and reporting data disaggregated by age, gender, race).

The disincentives imposed by heavier action requirements for the purpose of equity gains can be counteracted in a few different ways: add additional points for the action, add an optional 'equity tier' for additional points, or create a separate new action that directly targets opportunities to the people that might be left out of the benefits from the original action.

Actions that benefit the environment to some degree benefit everyone, even if unequally. If we make the action an even "heavier lift," we are likely to decrease the number of municipalities that are willing to undertake it and everyone thereby loses out on the environmental benefits.

When the concern is that actions may be more beneficial to certain members of the community than others (e.g., due to greater access or discretionary time on the part of better-off residents), a balancing act is in order. Some actions may have inequitable consequences under some circumstances not because of anything that the municipality does, but because they are imposed on a society with a history of profound discrimination and dispossession. The key issue for Sustainable Jersey and its constituents is to understand and enact the *role of municipal government* in righting the wrongs of the past or at least counteracting their legacy.

However, actions that result in disadvantaged or vulnerable groups becoming significantly worse off without compensation are not acceptable to Sustainable Jersey.

Directing opportunities for participation and benefits to reach the broadest possible base within the municipality requires in the first place knowing who lives and works there. This is the idea behind the new action proposed by the Diversity and Equity Task Force: the *municipal equity self-assessment and community profile.* This foundational action would inform outreach and participation efforts of many other actions. The proposed action would involve (a) a complete demographic profile, ideally in a GIS (Geographic Information System) with a resolution at the neighborhood (census block) scale, and (b) more specialized profiles of neighborhoods and social groups that have been underserved and underrepresented in local government, that bear historical legacies of discrimination, including disproportionate environmental burdens, and/or that may be particularly vulnerable to environmental or economic shocks. The action would also involve a participatory process to identify the chief equity-related issues in the municipality, with a particular focus on the issues and concerns of these groups, including their preferred modes of communication.

Equity Action Screen: Quantitative Summary of Results

The following charts present a quantitative summary of results of the action screening process. These results must be interpreted with a number of provisos in mind. First, the purpose of this exercise is not to evaluate the equity impact of Sustainable Jersey actions, but rather to sort them into categories for further attention. As a result, there was modest but deliberate bias in favor of finding actions to be relatively more likely to produce inequitable impacts. In order not to miss any opportunities for improvement and to allow for differing values, if any one reviewer had a concern about a given action in relation to equity, the category selected reflected the more negative assessment. Thus, while the numbers in the charts have indicative value, they do not represent objective evaluations of the Sustainable Jersey action set. Moreover, the actions are not static: any actions screened as 'inequitable' will be further investigated by issue-area experts, then revised, then subject to approval by the Certification Standards Committee.

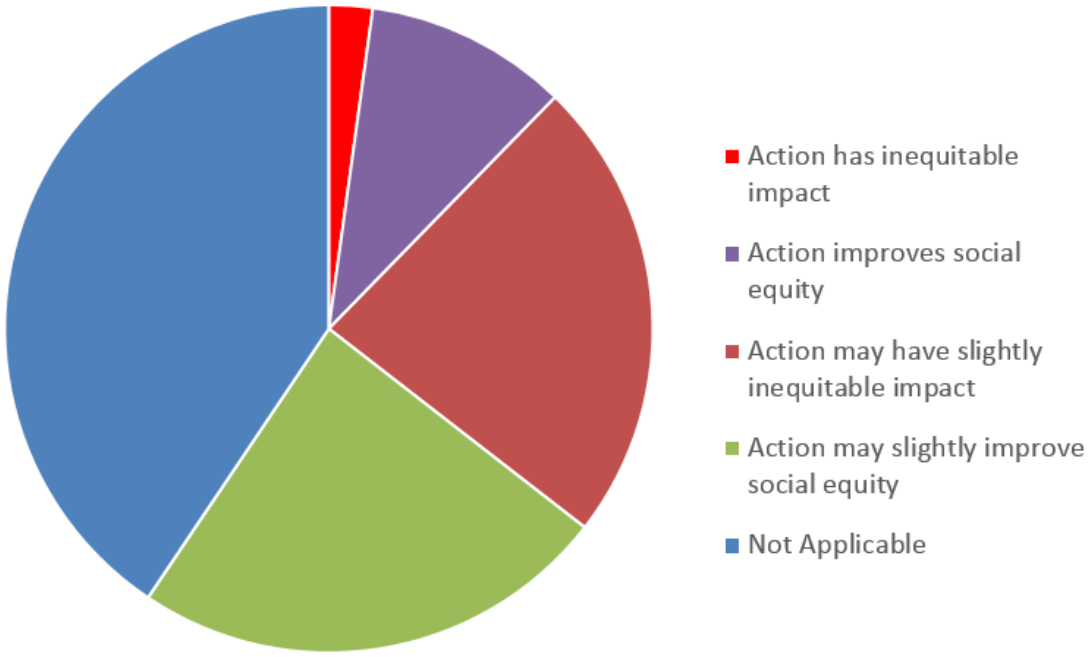


Figure 1. Equity Impact of Sustainable Jersey Actions: Distribution

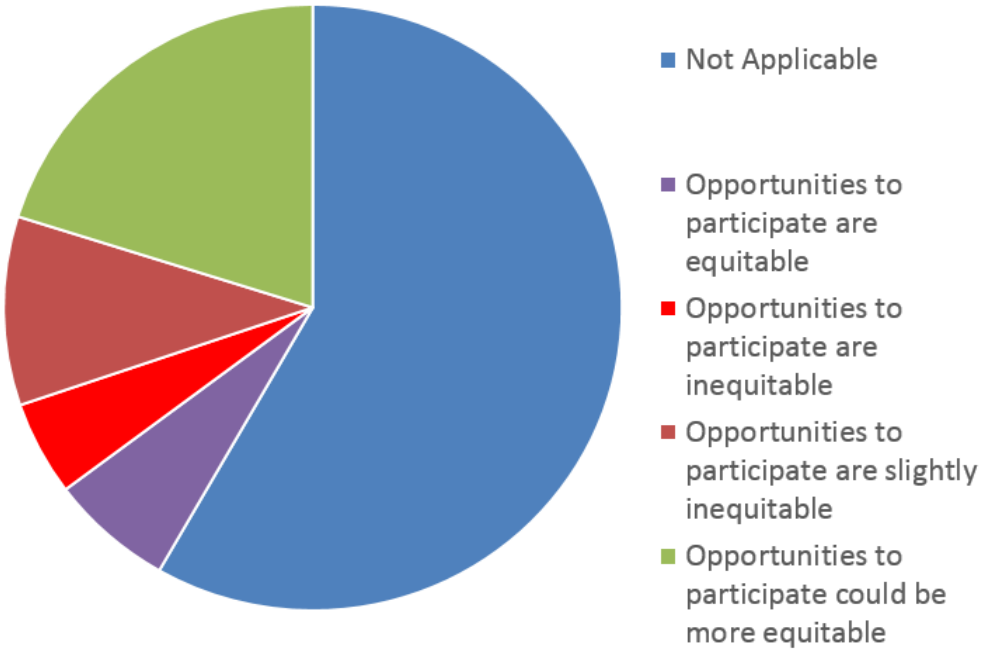


Figure 2. Equity Impact of Sustainable Jersey Actions: Participation

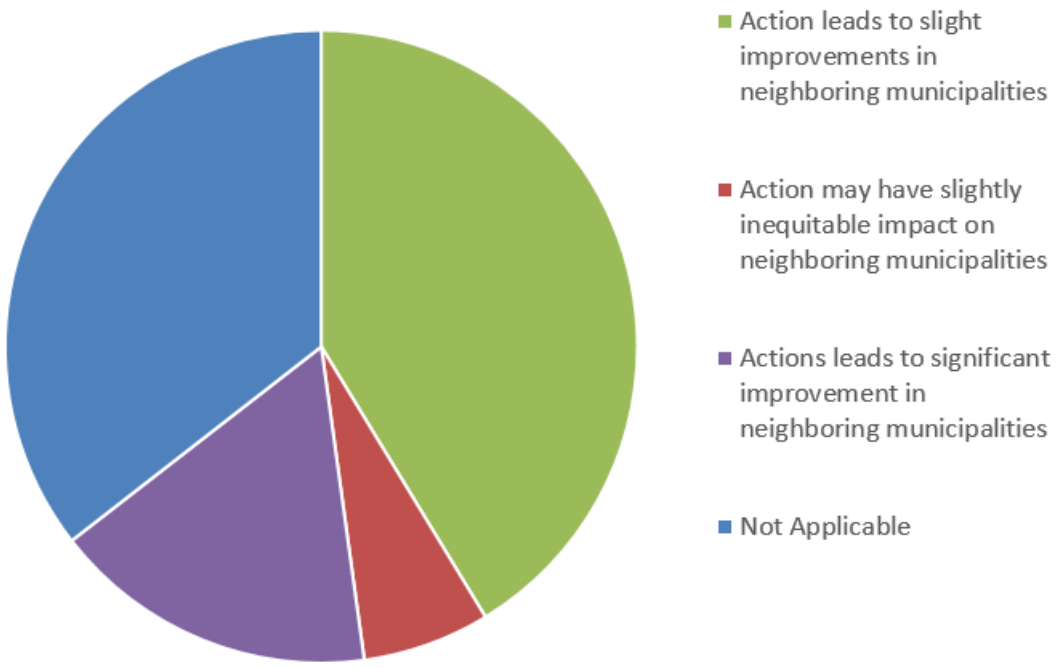


Figure 3. Equity Impact of Actions on Neighboring Municipalities

Based on these results, a few actions (3) are suspected of producing an inequitable distribution of benefits and 30 could use improvement in this area. The analysis found a slightly greater proportion of actions (8) with perceived inequitable opportunities to participate in shaping their implementation and more (13) with room for improvement. While no actions are thought to have negative downstream effects on neighboring municipalities, there are many that are currently missing opportunities to collaborate regionally. Equity concerns are not applicable to a plurality of actions. A minority of actions as currently written are seen to have a high and unambiguous likelihood of improving social equity. However, there is plenty of scope for improvement of actions that may be missing opportunities to do more to enhance social equity.

Quantitative Analysis of Programmatic Data

The previous section primarily focused on how Sustainable Jersey actions affect inequity within municipal boundaries. However, as we have seen, inequity in New Jersey is much greater *between* municipalities than it is within them. In terms of the numbers affected, poverty remains concentrated in urban centers. Yet, at the same poverty is also deepening in small, more rural municipalities, particularly in the southern part of the state. New Jersey's municipalities also vary greatly in social composition. While immigrants and people of color are gravitating to cities, many small towns remain nearly racially homogeneous (29% have a population that is more than 95% white).

Municipalities of different sizes, levels of wealth, and social composition are likely to experience differing advantages or barriers to gaining benefits from participation in a voluntary and demanding program such as Sustainable Jersey. Could the program unintentionally be favoring one type of municipality over another? Does one type of municipality benefit more than others? This section mines the rich set of programmatic data maintained by Sustainable Jersey for evidence of any systemic bias in the levels of success different municipalities experience in progressing in certification and in obtaining grants.

Municipal Participation and Performance in Certification

In order of accomplishment and difficulty, the levels of participation in the Sustainable Jersey program include: *not registered* (i.e., not participating), *not certified* (i.e., registered but not certified), *Bronze*-certified, and *Silver*-certified. Formation of a Green Team and a municipal resolution of intent to participate are the only requirements for registration. Bronze-certified municipalities have completed selected priority actions, along with others that add up to at least 150 points; 350 points and more priority actions are required to attain Silver certification. (There is not yet a complete Gold level of certification.) As of April 1, 2019 there were 245 registered, 149 bronze and 55 Silver municipalities out of 565 in the state. For this analysis, the current status of municipalities in the program was derived from the Sustainable Jersey website.

The Municipal Revitalization Index (MRI), as defined by the New Jersey Department of Community Affairs,[3] provided a single, summative measure of disadvantage. Also known as the "municipal distress score," the MRI ranks New Jersey's municipalities according to multiple, weighted indicators of local conditions, including poverty, unemployment, household income, public assistance, high school graduation and population change. The score ranges from 0 to 100, with City of Camden representing the highest level of distress, a score of 100. While indices have the disadvantage of conflating the underlying factors, the MRI is useful as a single variable that is well-known and consequential (it is used by state government as a factor in distributing certain need-based funds).

[3] New Jersey Department of Community Affairs. *Measuring Distress in New Jersey: The 2017 Municipal Revitalization Index.*

Figure 4 shows the average distress score (MRI) for all municipalities categorized by the rising levels of achievement in the program. Although the mean values are not far apart (differing by 5 out of 100 points), a clear pattern is evident. Lower municipal distress (i.e., higher MRI) is associated with greater success in the certification program. Yet, applying a statistical test for the comparison of mean values (ANOVA) reveals that there is no statistically significant difference among the four certification categories (see Test 1a. in summary table of statistical results found in Appendix I V). Note that this does not mean that there *is* no relationship, just that it cannot be established within a 95% confidence level ($p>0.05$). In fact, when the categories are collapsed to two, certified vs. non-certified, the relationship with municipal distress becomes significant (Test 1b). Moreover, when we apply a different statistical test (bivariate logistic regression, Test 1c), we find that higher certification levels are significantly, though weakly, associated with a lower distress score.

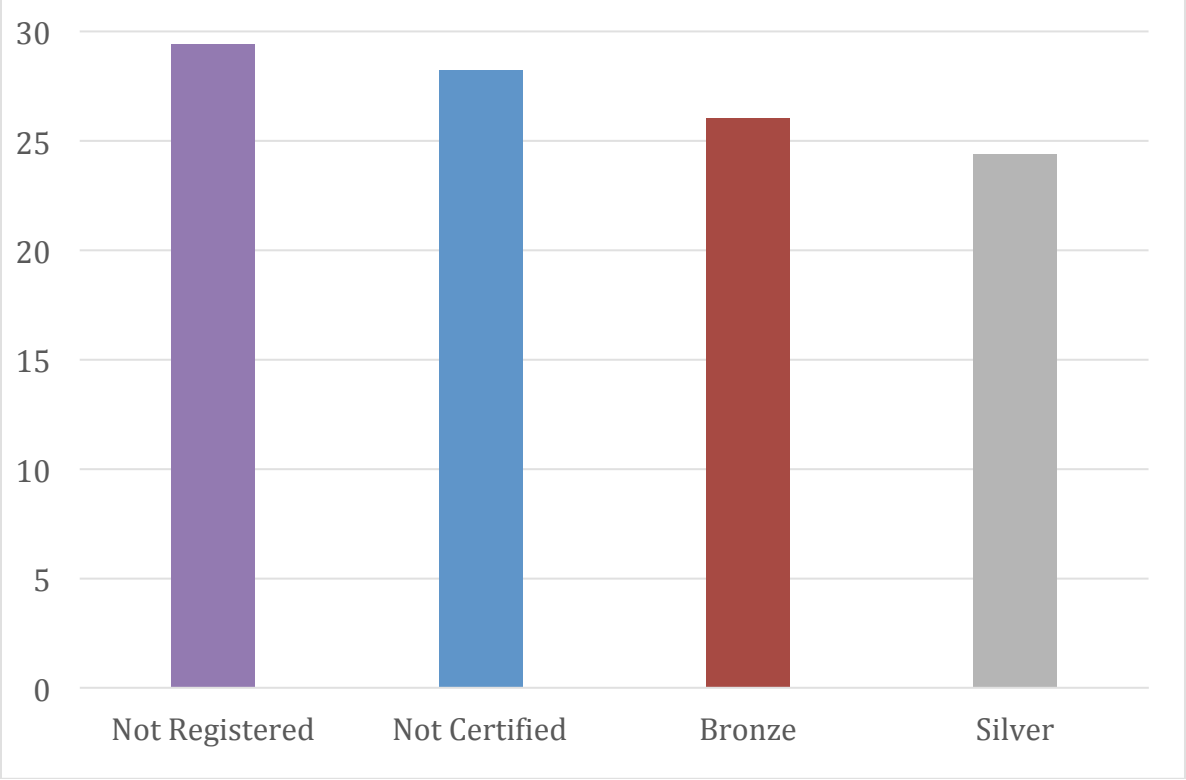


Figure 4. Average Distress Score (2017) by Certification Level (2018)

A plot of the total number of points earned by every municipality (Figure 5) provides another way of illustrating the lack of an obvious, strong pattern in the relationship between municipal distress and performance in the program. Note the presence of outliers, as well as the clustering of values at all levels of distress along the bronze (150) and, to a lesser extent silver (350), threshold point levels.

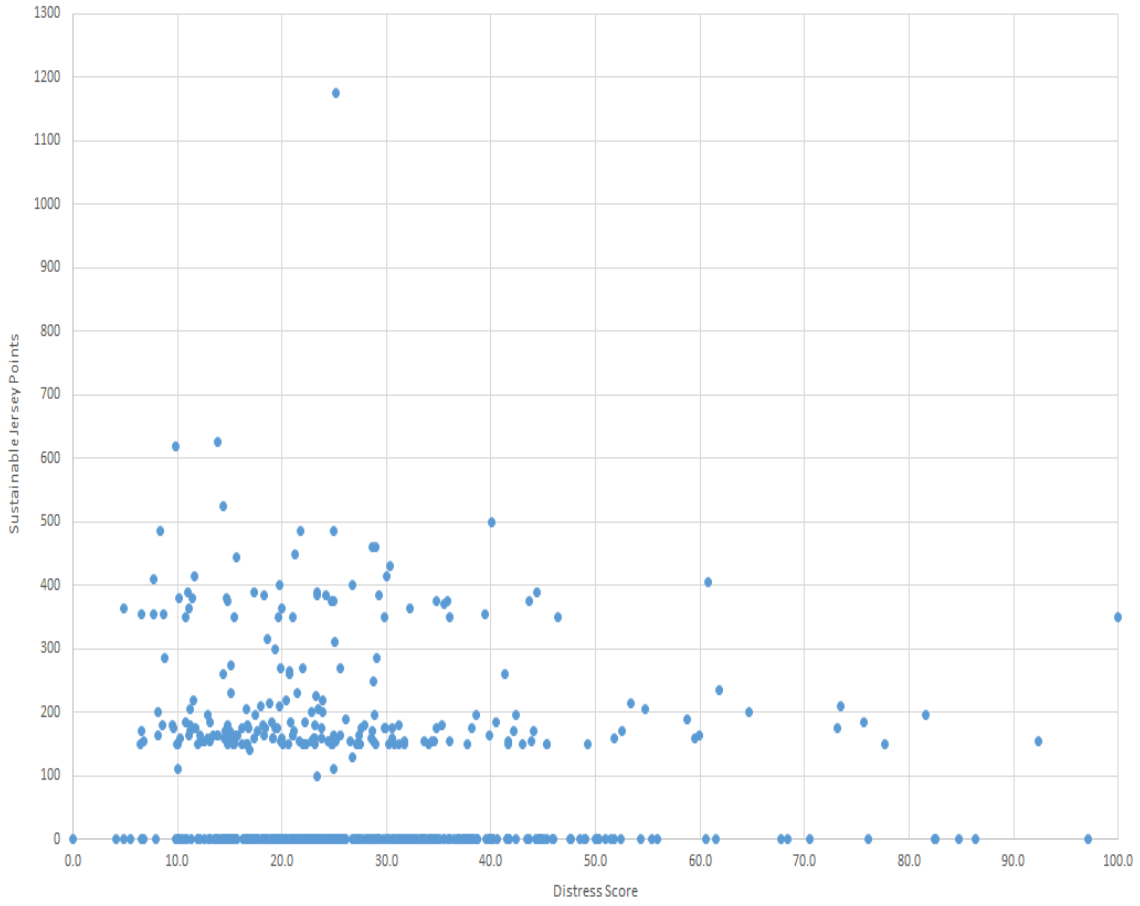


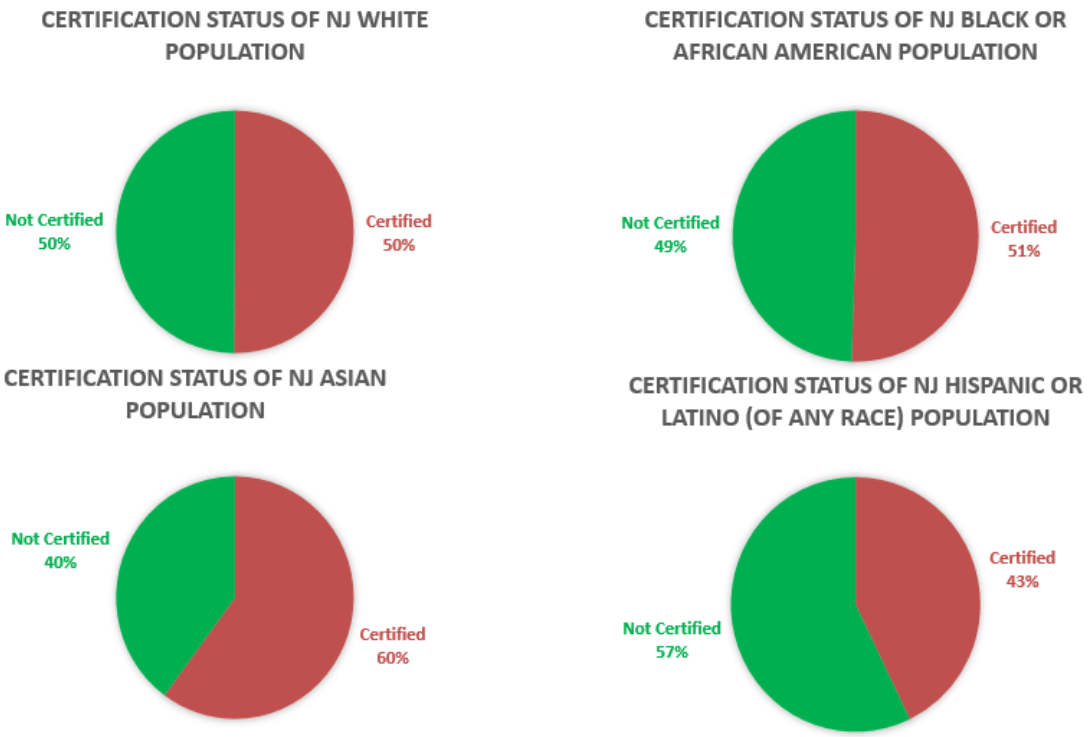
Figure 5. Total Sustainable Jersey Points by Distress Score

When the composite factors in the MRI are decomposed, the relationships tested are no stronger. The average poverty rate appears to decline with increased performance up to Bronze certification, but the differences are not statistically significant (test 15). The average of the 'mean household income' rises with each level of involvement in the program, though the differences are only statistically significant for the not registered and registered but not certified municipalities.

As elsewhere in the U.S., Black and Latinos in New Jersey are more likely to live in poverty and in distressed municipalities. The role of municipal government in the history of racial discrimination in this country (Rothstein, 2017) makes it critically important to investigate any potential racial bias in the Sustainable Jersey program. In addition to race, a legacy of discrimination is associated with the census category "Hispanic," a cluster of Spanish-speaking

ethnicities that includes people who identify themselves on the census as belonging to various races.

One way to disentangle the multivariate relationships involved is to compare the average percentage composition by one race at a time for municipalities at each level of certification (Test 6a-11b). Whether four levels are distinguished or only two, there are no significant differences for any race or ethnicity except Asian. A higher percentage of Asian residents is positively associated with higher levels of certification. Another way to examine the complex relationships involved is to compare the percentages of all people of one race or ethnicity who live in municipalities of particular certification levels. As shown in Figure 6, Blacks and Whites are each equally likely to live in a certified (vs. non-certified) municipality. Hispanics are slightly less likely, and Asians distinctly more likely, to live in a certified municipality.



	NJ White Population	NJ Black Population	NJ Asian Population	NJ Hispanic Population
Certified	3,002,549 (50%)	575,503 (51%)	286,137 (60%)	475,875 (43%)
Not Certified	2,986,402 (50%)	563,456 (49%)	190,064 (40%)	634,681 (57%)

Figure 6. Certification Status of different racial groups in N.J. (U.S. Census, 2010)

The fact that important municipal characteristics such as race, income and municipal distress, are correlated with each other makes it difficult to determine which characteristics are

independently associated with advantages in achieving certification. One of the most significant conflating factors is municipal population. In New Jersey, while the larger cities are the most distressed, with the highest concentration of non-white and low-income residents, they also have larger budgets, more professional staff and access to more federal and other sources of aid than do small municipalities. Some of the most prosperous municipalities are very small, and consequently have low capacity to participate in a voluntary program such as Sustainable Jersey. In particular, a small municipality, with only part-time staff and municipal officials, will have difficulty in complying with the documentation burden that increases with each level of certification. Population is thus a proxy for municipal capacity.

The data validate these observations. As shown in Figure 7, larger municipal population is associated with higher certification level (Test 3a). However, further analysis shows that the difference in average populations is significant only for the not-registered and Silver categories (Test 3b). This means that while smaller towns are less likely to register, larger cities have an advantage in reaching Silver, and population is not a factor in getting certified at the entry (Bronze) level.

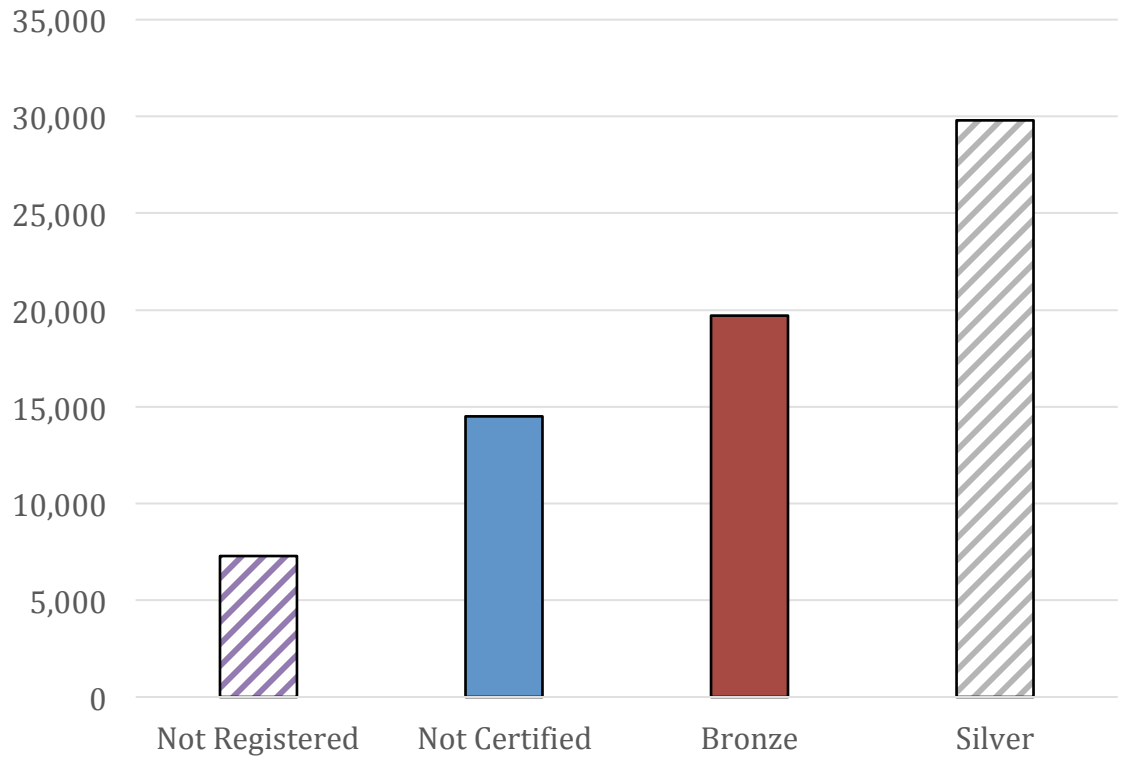


Figure 7. Average Municipal Population (2015) by Certification Level

When both factors are combined, we find that *even when holding population constant*, less distressed municipalities are significantly more likely to be registered and are also more likely to be certified (Test 4 and 5). However, while the relationships are significant, they are weak: population and distress together explain less than 10% of the variation in certification level (r^2, Test 5).

Therefore, the quantitative analysis of programmatic data demonstrates that factors other than municipal distress, racial composition or population must explain success in attaining Sustainable Jersey certification. In other words, distressed municipalities do not appear to face any systematic bias in achieving Sustainable Jersey certification.

This result points to the limitations of quantitative analysis in this context. It can eliminate or support certain types of hypotheses, but it cannot account for the particular constellation of interacting factors and causal mechanisms at play. In order to investigate the interplay with alternative predictors of program performance, such as the presence of local champions or advocacy groups, qualitative approaches, such as focus groups, interviews and in-depth case studies, would be required.

Municipal Participation and Performance in Obtaining Grants

Grants of money and technical assistance are one form of tangible benefit municipalities receive from participating in the Sustainable Jersey program. This section examines how the distribution of grant assistance among municipalities differ with respect to factors in social equity.

From its inception through 2018, Sustainable Jersey has awarded 3.9 million dollars in grants to municipalities, ranging in size from numerous $2,000 capacity-building grants to fewer, more competitive grants for projects up to $30,000. Sustainable Jersey staff provide outreach and support municipalities in the preparation of grant applications, but decisions on grant awards are made independently by volunteer expert juries. While the strength of the application is always the primary criterion in making grant awards, juries are encouraged to apply affirmative action considerations in weighing their decisions, specifically in terms of geographical distribution and municipal distress score.

This analysis was based on the Sustainable Jersey database for grants awarded since 2014. Municipal benefit from the grants program was assessed in terms of three variables: (1) total numbers of grants received by municipality, (2) total dollars received by municipality, and (3) rate of success in grant applications.

A few facts about participation in the grants program provide some perspective in interpreting the data. Since 2014, only 46% of registered municipalities have ever applied for a Sustainable Jersey grant of any type and only 39% have ever obtained one. At the same time, other municipalities have won multiple grant awards, including ten who have received four or five. Clearly, self-selection plays a factor. Municipalities with low-capacity green teams due to small size, distress factors or both are presumably less likely to apply for grants in the first place. Figure 8 illustrates the distribution of the number of all grants awarded per municipality since 2014 plotted against distress score. The lack of a pattern visually apparent in this diagram is borne out by statistical tests. No statistically significant correlation was found between municipal distress score and any of the three variables reflecting municipal benefit from the grants program (Test 17).

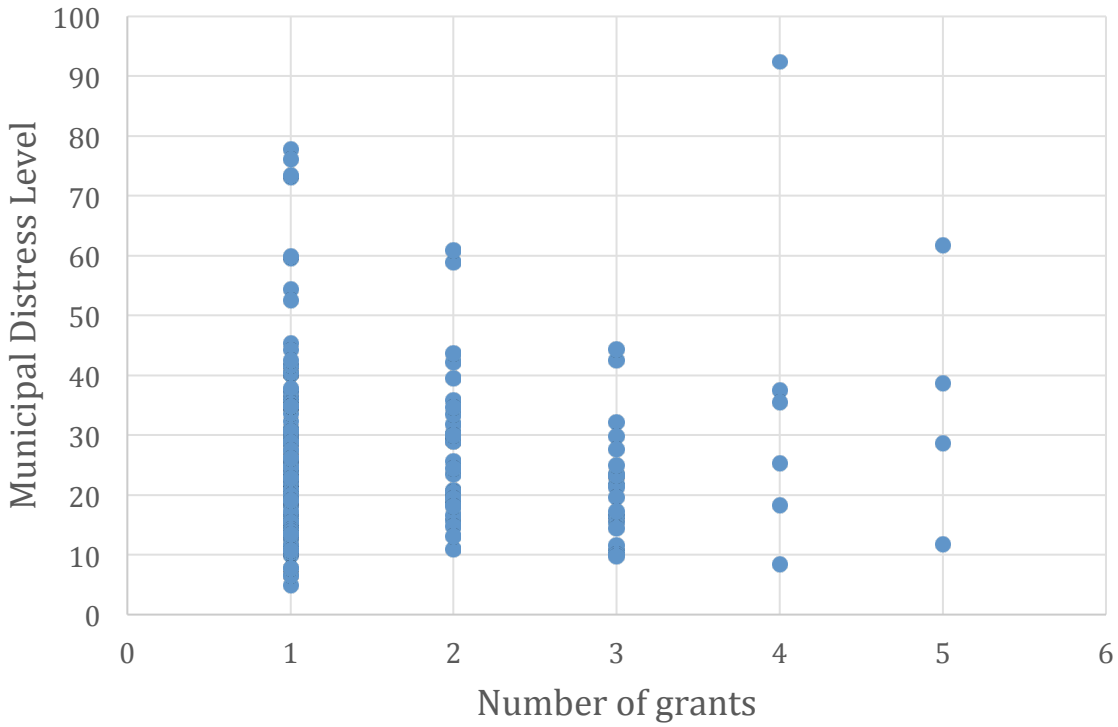


Figure 8. Number of Grants Received (2018) by Distress Score

As we have observed above for certification level, any correlation that might exist between higher distress scores and lower grant success may be obscured by the tendency for more distressed municipalities to have larger populations, which are associated greater municipal capacity. In fact, population is found to be significantly correlated with all three measures of grant performance. However, population explains only 4.3% of the variation (Test 16) even for the strongest of these relationships, namely, with total grant amount.

These findings provide support for the premise that affirmative action on the part of the Sustainable Jersey grant selection committees has been effective in counterbalancing any barriers to successful grant applications that may be faced by distressed municipalities as a class. The greater concern should then be that so many municipalities fail in the first place to apply for Sustainable Jersey grants, including even the easy-to-win $2,000 grants specifically designed to help build municipal capacity. Although further research would be needed to confirm this hypothesis, the data suggest that small, distressed municipalities are the least likely to pursue or benefit from Sustainable Jersey grant opportunities.

Conclusions and Next Steps

The general findings of the quantitative analysis support the conclusion that distressed municipalities do not appear to face any systematic bias in achieving Sustainable Jersey certification or obtaining Sustainable Jersey grants. Nor is there any apparent racial bias in opportunities to participate in and benefit from the Sustainable Jersey program. Smaller municipalities, with presumed lesser capacity, experience more difficulties in advancing in the program.

Further research is necessary to discover the nature of the success factors and obstacles that account for the variation in municipal performance in certification and competition for grants. Since population was found to be a significant (if weak) success factor in both areas, attention focused on the challenges and needs of smaller distressed municipalities could expand the reach of the program.

In the first decade of its existence Sustainable Jersey has provided equitable support inspiration, guidance and resources to New Jersey municipalities in their efforts to promote environmental, economic and social sustainability. This is at least in part due to the explicit focus on equity in Sustainable Jersey's mission, and various forms of formal and informal affirmative action integrated into program operations. In the next decade the challenge then becomes: can Sustainable Jersey go a step further and become a driver for advancing social equity as an integral element of sustainability? This challenge raises further questions to consider.

Would becoming more relevant and effective in addressing equity issues drive more participation in program? Might a shift in this direction help and inspire unregistered municipalities to join the program? Would it motivate registered but uncertified municipalities to take action and become certified? Would it assist the municipalities stuck for years at 150 points (the minimum for 'bronze') to move forward and take on new actions? Would effectively targeted outreach and extra affirmative support make the difference for smaller distressed communities in South Jersey, as well as larger distressed cities (e.g., Newark) that have recently dropped out of certification?

The results of the equity action screen indicate that there is a great deal of potential for revising existing actions as well as creating new actions to more proactively advance social equity. Some of these steps have already been taken by Sustainable Jersey as of the time of this writing, and some will unfold over the next several years.

Thus far, the results of the equity action screening process and the quantitative programmatic analysis have been presented at meetings of staff (4/1/19), the Diversity and Equity Task Force (3/7/19, 4/9/19) and the Certification Standards Committee (4/26/19). Those fruitful discussions have informed this report and have continued at subsequent meetings. The findings of this research have also been presented and discussed at Sustainable Jersey's annual June *Sustainability Summit*, attended by over 600 members of Green Teams, partner agencies, non-profits, exhibitors and presenters.

As preparation for the work ahead, the Diversity and Equity Task Force has prioritized for attention the list of actions identified as likely to have an inequitable impact and assigning

responsibility for revisions. The lists of actions as categorized by the equity screening process will be distributed for revision to each of the relevant subject matter task forces. Each task force will review and prioritize among the actions in their area that have been flagged for equity concerns. In order to optimize scarce resources, in deciding which existing actions to revise, task forces will also consider their popularity and effective impact on sustainability.

Discussions with Sustainable Jersey staff and the Diversity and Equity Task Force came to the conclusion that the development of new actions to fill gaps may yield greater dividends than revising existing actions. Work has already begun on the proposed *Equity self-assessment and community profile* action. Completing this foundational action will give municipalities the key to targeting more effective inclusion of marginalized and underrepresented members of their community in the process of implementing (and benefitting from) many other actions.

The concurrent launch of a major new Sustainable Jersey initiative, a Robert Wood Johnson funded project entitled *Leveraging the Sustainable Jersey Certification to Build a Culture of Health*, promises to provide numerous synergies with the equity initiative. Advancing health equity is a fundamental objective of this project, which is backed by grant resources and a new Health Task Force with broad-based expertise in the field. Early discussions have generated a list of potential new actions with major potential equity impact, including several in a new arena for Sustainable Jersey, safe and affordable housing: addressing code enforcement, addressing lead paint and lead service lines.

In order for the learning from the equity screening exercise to have a significant and transformative impact that maximizes the potential of Sustainable Jersey to promote social equity, it must be institutionalized in the program. The Certification Standards Committee has recently approved a policy that adopts the equity screen as a standard for the approval of all future actions. The equity policy will provide guidance to task force members and staff in the development future actions.

The findings of this equity analysis, the recommendations it makes, and the questions it raises, have also provided rich material for the wide-ranging collective ‘re-think’ of the entire program which Sustainable Jersey has undertaken in recognition of the ten-year anniversary of its founding. This moment provides a juncture for Sustainable Jersey to enact an explicit commitment to advancing social equity as a core value and fundamental dimension of sustainability.

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Appendix I – Diversity and Equity Task Force (2018)

Nathaly	Agosto-Filion	City of Newark
Diane	Bates	The College of New Jersey
Staci	Berger	Housing & Community Development Network of NJ
Irene	Boland Nielson	US EPA – Region 2
Laureen	Boles	New Jersey Environmental Justice Alliance
Kelly	Boyd	New Jersey OEM
Caroline	Ehrlich	Woodbridge, Sustainable Jersey Board
Dan	Fatton	Work Environment Council
Charnett	Frederic	Irvington
Olivia	Glenn	New Jersey Conservation Foundation - Camden Program
Molly	Greenberg	Ironbound Community Corp., NJEAJ
Jennifer	Godoski	NJ Natural Resources
Fletcher	Harper	Greenfaith
Renee	Koubiadis	National Association of Social Workers (NASW)
Toni	Lewis, MPH, HO	New Jersey Health Initiatives
Melanie	McDermott	Sustainability Institute at TCNJ
Cynthia	Mellon	Newark Environmental Commission
Riche	Outlaw	New Jersey DEP
Crystal	Owensby	New Jersey Dept of Health
Nicky	Sheats	New Jersey Environmental Justice Alliance, Central New Jersey
Randy	Solomon	Sustainability Institute at TCNJ
Jay	Watson	D&R Greenway, former Asst. Commissioner, NJ DEP

Appendix II. SJ Equity Action Screen (Google Form) and Guide

SJ Equity Action Screen

This form takes you through the process of screening Sustainable Jersey actions for their potential impacts on social equity. The purpose is (a) to sort them into 'buckets' based on the need to revise them (or not) in order to have a (more) positive impact on equity, and (b) to capture your ideas on *how* they might be revised to do so. (Please see guidance document for definitions and more information.)

1. **Name of Sustainable Jersey Action reviewed**

2. **Distribution: Are the benefits and burdens of implementing this action likely to be equitably distributed? If it will have little direct or differential impact on individuals, select 5 (not applicable). Otherwise, rate likely impact on a score of 1 (inequitable) to 4 (equitable).**

Mark only one oval.

Action has inequitable impact Action may have slightly inequitable impact

Action may slightly improve social equity

Action improves social equity

Not Applicable

3. How could this action do a better job of distributing costs and benefits in a way that improves social equity?

4. Participation: Do all social groups have a meaningful opportunity to participate in decisions involved in the implementation of this action? If there are no decisions involved and the action cannot reasonably involve a participatory element, select 5 (not applicable). Otherwise, rate likely impact on a score of 1 (inequitable opportunities to participate) to 4 (equitable opportunities to participate).

Mark only one oval.

Opportunities to participate are inequitable
Opportunities to participate are slightly inequitable
Opportunities to participate could be more equitable

Opportunities to participate are equitable Not Applicable

5. How could this action do a better job of involving participation by all social groups in the community?

6. **Scale: Are neighboring ("downstream") municipalities likely to feel negative impacts from this action?** Where possible, does the action improve conditions for neighboring municipalities? If it has no foreseeable impact on neighboring municipalities, select 5 (not applicable). Otherwise, rate the impact on neighboring municipalities on a score of 1 (inequitable) to 4 (equitable).

Mark only one oval.

Action has negative impact on neighboring municipalities
Action may have slightly inequitable impact on neighboring municipalities
Action leads to slight improvements in neighboring municipalities Actions leads to significant improvement in neighboring municipalities
Not Applicable

7. How could this action have less negative and/or more positive impacts on neighboring municipalities? How could it promote municipal collaboration to reduce regional disparities?

8. **Help us innovate! Please record any ideas for *new* actions for advancing social equity that might supplement the action you are reviewing.**

Guide to Equity Screen of SJ Actions

This guide provides more detailed explanation, context and definitions for using the SJ Action Equity Screen Google form. The form takes you through the process of screening Sustainable Jersey actions for their potential impacts on social equity. The purpose is (a) to sort them into 'buckets' based on the need to revise them (or not) in order to have a more positive impact on equity and (b) to capture your ideas on *how* they might be revised to do so.

- The first step is to read through the entire action, found on the SJ website.
- Then, open a new Google form and label it with the complete name of the action.
- The screener is asked to rate the action on each of three different elements of social equity: distribution, participation and scale. For each of the three elements, instead of rating the action, the screener has the option of classifying the action as **'Not Applicable'**. This means that the action has no foreseeable significant impact on any dimension of social equity. In other words, (a) the action is unlikely to affect different social groups differently in such a way that one group might be left out of receiving benefits, bear more cost, or take on more risk, *or* (b) the action is not missing an opportunity to become a vehicle for *improving* equity.

  The screener would then move on to the next element of equity. In many cases, when an action is really irrelevant to social equity it would get a 'not applicable' for all three elements. However, this will not always be true, so the form should be filled out in full. For example, some actions might be ranked for distribution as "inequitable impact" based on how fairly the benefits and burdens are distributed, but might be marked "N.A." for participation if there is no feasible or relevant opportunity for public participation (beyond what is already mandated by law).

- In a separate entry under each element, the screener is invited to enter written comment on *how* the action could be revised to better advance that aspect of social equity.

- The last question provides a place where the screener is invited to write down ideas for *new* actions that would fill in gaps in how existing Sustainable Jersey advance social equity. Sometimes, rather than layer on an equity element to the action being reviewed, it might seem better to create a new action that is focused on equity.

- Your written input will be extremely valuable to strengthening the SJ program! Taking the time to record your ideas and suggestions on gaps and improvements will be deeply appreciated.

Appendix III. Results of Equity Action Screen

Categories of Sustainable Jersey actions based on priority for revision to improve social equity impact

Priority for revision - Inequitable impact likely, based on:

1) Distribution of Benefits and Costs

- Pay-As-You-Throw
- Public Electric Vehicle Charging Infrastructure
- Buy Fresh Buy Local Programs

2) Participation – Opportunities to make decisions

- Brownfields Inventory and Prioritization
- Brownfields Marketing
- Environmental Commission
- Environmental Commission Site Plan Review
- Municipal Commitments to Support Arts & Creative Culture
- Utilizing Your Creative Assets
- Wildfire Safety Council
- Community-Led Solar Initiatives
- [Health in All Policies – *review based on version of action now superseded*]

3) [Neighboring Municipalities – Impact and Collaboration (0 actions listed)]

Potential for improvement – Slightly inequitable impact, based on:

4) Distribution of Benefits and Costs

- Backyard Composting
- Enhanced Licensing Compliance
- Recycling and Waste Reduction Education and Compliance
- Recycling Depot
- Smart Workplaces
- Water Conservation Ordinance
- Easement Inventory and Outreach
- Create Green Team
- Historic Preservation Element
- Municipal Commitments to Support the Arts
- Wildfire Safety Council
- Utilizing Your Creative Assets
- Coastal Vulnerabilities Assessment
- Household Hazardous Waste
- Wind Ordinance

- Creative Placemaking Plan
- Establish a Creative Team
- Farmland Preservation Plans
- Tree-planting Programs
- Community Gardens
- Farmers Markets
- Building Healthy Communities
- Climate Action Plan
- Green Challenges
- Hold a Green Fair
- Community Wildfire Protection Plans
- Open Space Plans
- Brownfields Marketing
- Reusable Bag Education Program
- Make Your Town Solar Friendly

5) Participation – Opportunities to make decisions

- Coastal Vulnerability Assessment
- Wind Ordinance
- Creative Placemaking Plan
- Farmland Preservation Plans
- Establish a Creative Team
- Tree Planting Programs
- Community Gardens
- Farmers Markets
- Building Healthy Communities
- Creative Assets Inventory
- Green Building Education
- Natural Resources Inventory
- Lead Education and Outreach Program

6) Neighboring Municipalities – Impact and Collaboration

- Smoke-Free and Tobacco-Free Public Places
- Environmental Justice in Planning and Zoning
- Making Farmers Markets Accessible
- Wind Ordinance
- Brownfields Marketing
- Buy Local Campaign
- Public Electric Vehicle Charging Infrastructure
- Farmers Markets
- Make Your Town Electric Vehicle Friendly

Appendix IV – Statistical Results

Test #	Variable 1	Variable 2	Dependent Variable	Test Done	Significance Level	R^2 Range
1a	MRI		CF 4	ANOVA	0.093	
1b	MRI		CF 2	ANOVA	0.018	
1c	MRI		CF 2	Binary Logistic Regression	0.019	0.01 – 0.014
2	MRI	Population	Not Reg vs Reg	Binary Logistic Regression	0.023, 0.00	0.079 – 0.124
3a	Population		CF 4	ANOVA	0.00	
3b	Population		CF 4	TUKEY Test	Not Reg v Not Cert – 0.024 Not Reg v Bronze and Silver – 0.00 Silver v Bronze – 0.024	
4	Population		CF 2	ANOVA	0.00	
5	Population	MRI	CF 2	Binary Logistic Regression	0.00, 0.00	0.063 – 0.086
6a	Race White %		CF 2	ANOVA	0.074	
6b	Race White %		CF 4	ANOVA	0.062	
7a	Race White % Alone		CF 2	ANOVA	0.196	
7b	Race White % Alone		CF 4	ANOVA	0.232	
8a	Race Hispanic %		CF 2	ANOVA	0.508	

8b	Race Hispanic %		CF 4	ANOVA	0.896	
9a	Race Black %		CL 2	ANOVA	0.249	
9b	Race Black %		CL 4	ANOVA	0.156	
10a	Race Asian %		CL 4	ANOVA	0.008	
10b	Race Asian %		CL 4	TUKEY Test	Not Reg v. Bronze – 0.01 Not Reg v. Silver – 0.032	
11a	Race Asian %		CL 2	ANOVA	0.001	
11b	Race Asian %		CL 2	Binary Logistic Regression	0.002	0.018 – 0.024
12a	Median HH Income		CL 4	ANOVA	0.012	
12b	Median HH Income		CL 4	TUKEY test	Not Cert v. Silver – 0.05	
13a	Median HH Income		CL 2	ANOVA	0.001	
13b	Median HH Income		CL 2	Binary Logistic Regression	0.002	0.018 – 0.024
15	Poverty Rate		CL 4	ANOVA	0.808	
16	Grants	Population		Bivariate Correlation	Significant at 0.05	.044
17	Grants	MRI		Bivariate Correlation	Not Significant	

The Following are the output tables from the SPSS 25 analysis:

ANOVA

Distress Score

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1391.949	3	463.983	2.148	.093
Within Groups	121173.721	561	215.996		
Total	122565.669	564			

Test 1a. MRI ANOVA Significance of 0.093 – Not Significant 0=NR,1=NC,2=B,3=S

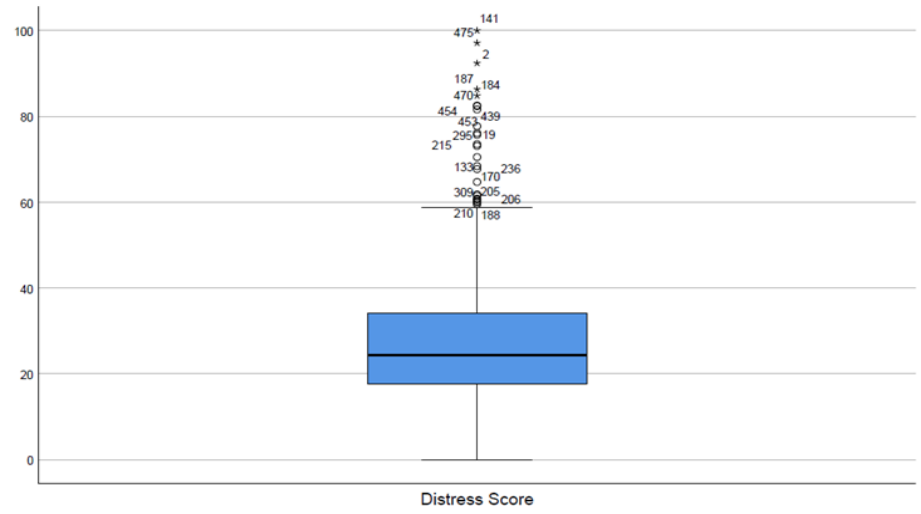
ANOVA

Distress Score

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1219.824	1	1219.824	5.660	.018
Within Groups	121345.845	563	215.534		
Total	122565.669	564			

Test 1b. MRI ANOVA Significant 1=Silver, Bronze

MRI Box Plot Distribution



Test 1c. MRI Binary Logistic Regression 0=Silver, Bronze

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Distress Score	-.015	.006	5.510	1	.019	.985
	Constant	-.162	.192	.711	1	.399	.851

Also, Test 1c. MRI Binary Regression R-square

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	733.179[a]	.010	.014

Test 2. MRI Binary Logistic Regression Controlling for Population Not Registered vs Registered

Variables entered on step 1: Distress Score, Population

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Distress Score	.017	.008	5.183	1	.023	1.017
	Population	.000	.000	23.398	1	.000	1.000
	Constant	-1.164	.258	20.343	1	.000	.312

Also, Test 2. MRI Binary Logistic Regression Controlling for Population 1= Registered 0= Not Registered

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	521.963[a]	.079	.124

Test 3a. Population ANOVA with 0=NR,1=NC,2=B,3=S CL(4)

ANOVA

Population

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.123E+10	3	7078024465	12.690	.000
Within Groups	3.129E+11	561	557763365.4		
Total	3.341E+11	564			

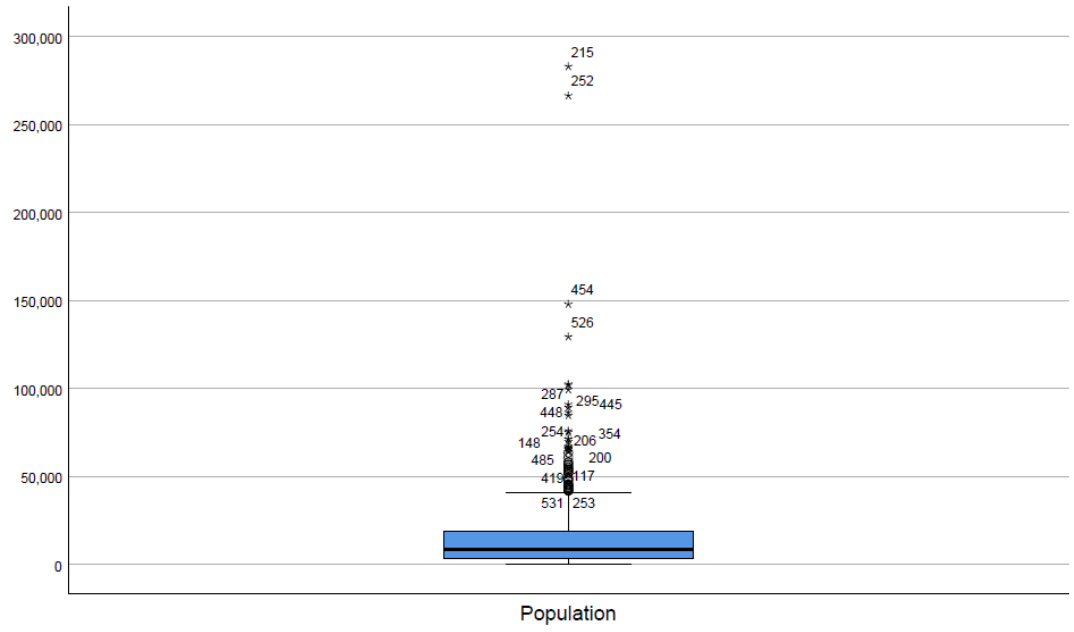
Test 3b. Population ANOVA with TUKEY Test

Multiple Comparisons

Dependent Variable: Population

Tukey HSD

(I) CLNumericCodes	(J) CLNumericCodes	Mean Difference (I-J)	Std. Error	Sig.	95% ... Lower Bound
Not Registered	Not Certified	-7586.674*	2674.100	.024	-14477.16
	Bronze	-12013.294*	2938.714	.000	-19585.62
	Silver	-22624.238*	3877.346	.000	-32615.18
Not Certified	Not Registered	7586.674*	2674.100	.024	696.19
	Bronze	-4426.620	2449.802	.271	-10739.14
	Silver	-15037.564*	3521.264	.000	-24110.97
Bronze	Not Registered	12013.294*	2938.714	.000	4440.97
	Not Certified	4426.620	2449.802	.271	-1885.90
	Silver	-10610.943*	3726.195	.024	-20212.41
Silver	Not Registered	22624.238*	3877.346	.000	12633.30
	Not Certified	15037.564*	3521.264	.000	5964.15
	Bronze	10610.943*	3726.195	.024	1009.48



Test 4. Population ANOVA 1=Silver, Bronze 0= Not Registered, Not Certified

ANOVA

Population

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.222E+10	1	1.222E+10	21.374	.000
Within Groups	3.219E+11	563	571789955.1		
Total	3.341E+11	564			

Test 5. Population and MRI regression with 1=Silver, Bronze (Page 25,26)

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Distress Score	-.025	.007	12.986	1	.000	.975
	Population	.000	.000	23.539	1	.000	1.000
	Constant	-.285	.200	2.029	1	.154	.752

Also, Test 5. Population and MRI regression with 1=Silver, Bronze R-squared

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	702.325[a]	.063	.086

Test 6a. Race White ANOVA -- Not Significant CL(2)

ANOVA

White %

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.086	1	.086	3.213	.074
Within Groups	14.949	557	.027		
Total	15.035	558			

Test 6b. Race White ANOVA – Not Significant CL(4)

ANOVA

White %

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.197	3	.066	2.462	.062
Within Groups	14.838	555	.027		
Total	15.035	558			

Test 7a. Race White % Alone CL (2) ANOVA – Not Significant

ANOVA

White alone, not Hispanic or Latino %

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.062	1	.062	1.676	.196
Within Groups	20.661	557	.037		
Total	20.723	558			

Test 7b. Race White Alone % ANOVA – Not Significant CL(4)

ANOVA

White alone, not Hispanic or Latino %

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.160	3	.053	1.435	.232
Within Groups	20.564	555	.037		
Total	20.723	558			

Test 8a. Race Hispanic % CL(2) ANOVA – Not Significant

ANOVA

Hispanic or Latino (of any race) %

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.005	1	.005	.439	.508
Within Groups	5.790	557	.010		
Total	5.795	558			

Test 8b. Race Hispanic % CL(4) ANOVA – Not Significant

ANOVA

Hispanic or Latino (of any race) %

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.006	3	.002	.200	.896
Within Groups	5.789	555	.010		
Total	5.795	558			

Test 9a. Race Black % CL (2) ANOVA – Not Significant

ANOVA

Black or African American %

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.021	1	.021	1.331	.249
Within Groups	8.801	557	.016		
Total	8.822	558			

Test 9b Race Black % CL (4) ANOVA – Not Significant

Test 10a. Race Asian % CL (4) ANOVA – Significant

Test 10b. Race Asian % TUKEY

Multiple Comparisons

Dependent Variable: Asian %

Tukey HSD

(I) 0=NR	(J) 0=NR	Mean Difference (I-J)	Std. Error	Sig.	95% ... Lower Bound
Not Registered	Not Certified	-.007100894	.0057624696	.607	-.021949806
	Bronze	-.019836561*	.0063509513	.010	-.036201891
	Silver	-.023026820*	.0084118621	.032	-.044702769
Not Certified	Not Registered	.0071008940	.0057624696	.607	-.007748018
	Bronze	-.012735667	.0053467366	.082	-.026513305
	Silver	-.015925926	.0076819551	.163	-.035721028
Bronze	Not Registered	.019836561*	.0063509513	.010	.0034712314
	Not Certified	.0127356672	.0053467366	.082	-.001041971
	Silver	-.003190259	.0081327093	.980	-.024146878
Silver	Not Registered	.023026820*	.0084118621	.032	.0013508708
	Not Certified	.0159259259	.0076819551	.163	-.003869176
	Bronze	.0031902588	.0081327093	.980	-.017766361

Test 11a. Race Asian % 1=Silver, Bronze ANOVA

Test 11b. Race Asian % 1=Silver, Bronze Regression

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Asian %	5.325	1.730	9.478	1	.002	205.505
	Constant	-.801	.114	49.643	1	.000	.449

Test 11b. Race Asian % Regression R- Squared

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	719.168[a]	.018	.024

Test 12a. Median Household Income ANOVA CL 4

ANOVA

Median household income (dollars)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	9380926228	3	3126975409	3.711	.012
Within Groups	4.710E+11	559	842554592.2		
Total	4.804E+11	562			

Test 12b. Median Household Income TUKEY test

Multiple Comparisons

Dependent Variable: Median household income (dollars)

Tukey HSD

(I) 0=NR	(J) 0=NR	Mean Difference (I-J)	Std. Error	Sig.	95% ... Lower Bound
Not Registered	Not Certified	-448.3383	3290.8704	.999	-8928.172
	Bronze	-7266.9126	3611.8636	.185	-16573.874
	Silver	-11616.0826	4765.5015	.071	-23895.709
Not Certified	Not Registered	448.3383	3290.8704	.999	-8031.495
	Bronze	-6818.5744	3015.5807	.109	-14589.048
	Silver	-11167.7443*	4331.0706	.050	-22327.940
Bronze	Not Registered	7266.9126	3611.8636	.185	-2040.048
	Not Certified	6818.5744	3015.5807	.109	-951.900
	Silver	-4349.1700	4579.7274	.778	-16150.099
Silver	Not Registered	11616.0826	4765.5015	.071	-663.544
	Not Certified	11167.7443*	4331.0706	.050	7.548
	Bronze	4349.1700	4579.7274	.778	-7451.759

Test 13a. Median Household Income ANOVA 1=Silver, Bronze

ANOVA

Median household income (dollars)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8605431530	1	8605431530	10.233	.001
Within Groups	4.718E+11	561	840933176.0		
Total	4.804E+11	562			

Test 13b. Median Household Income Binary Logistic Regression

Variables in the Equation

		B	S.E.	Wald	df	Sig.
Step 1[a]	Median household income (dollars)	.000	.000	9.857	1	.002
	Constant	-1.357	.270	25.338	1	.000

Test 13b. Median Household Income Binary Logistic Regression R-squared

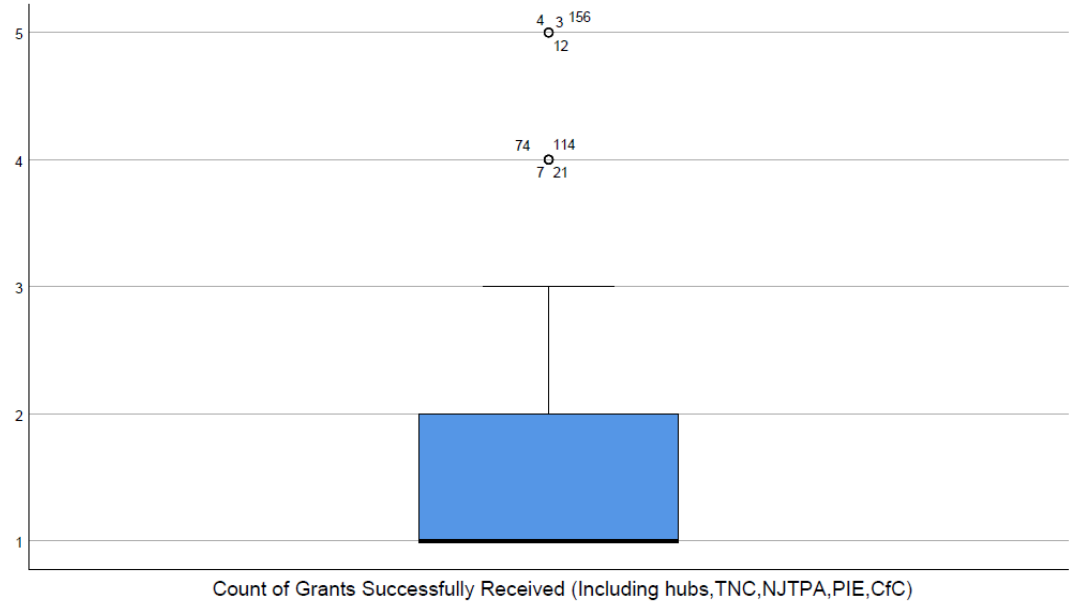
ANOVA

Poverty Rate

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	39.937	3	13.312	.324	.808
Within Groups	23030.871	561	41.053		
Total	23070.807	564			

Test 14. Poverty Rate ANOVA – Not Significant

Grants Received Box Plot Distribution



Test 15. Grants Population Bivariate Correlation with Population

Correlations

		Population	Count of Grants Successfully Received (Including hubs, TNC,NJTPA, PIE,CfC)	Success rate (Times received/Times applied)
Population	Pearson Correlation	1	.046	-.087
	Sig. (2-tailed)		.549	.252
	N	176	176	176
Count of Grants Successfully Received (Including hubs,TNC, NJTPA,PIE,CfC)	Pearson Correlation	.046	1	-.001
	Sig. (2-tailed)	.549		.992
	N	176	176	176
Success rate (Times received/Times applied)	Pearson Correlation	-.087	-.001	1
	Sig. (2-tailed)	.252	.992	
	N	176	176	176
Total Amount Received	Pearson Correlation	.209**	.367**	.263**
	Sig. (2-tailed)	.005	.000	.000
	N	176	176	176

Test 16a. Grants MRI Bivariate Correlation with MRI (All Grants)

Correlations

		Count of Grants Successfully Received (only statewide)	Total Amount Received	Distress Score
Count of Grants Successfully Received (only statewide)	Pearson Correlation	1	.545**	-.062
	Sig. (2-tailed)		.000	.413
	N	177	176	176
Total Amount Received	Pearson Correlation	.545**	1	.029
	Sig. (2-tailed)	.000		.703
	N	176	176	176
Distress Score	Pearson Correlation	-.062	.029	1
	Sig. (2-tailed)	.413	.703	
	N	176	176	176

Test 16b. Grants MRI Bivariate Correlation with MRI (Only Statewide Grants)