

SOCIAL RETURN ON INVESTMENT REPORT- KEY FINDINGS SUMMARY

HEADWATERS AT THE COMAL EDUCATION AND NATURE CENTER PROJECT

Comal County, Texas

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1.0 Executive Summary

This report contains a forecast of the economic, social, and environmental outcomes expected from the Phase II expansion of the Headwaters at the Comal Education Center in New Braunfels, Texas. New Braunfels is a city of over 90,000 residents in Comal County, slightly north of the San Antonio Metropolitan Area in Texas.

The 16-acre site is on land owned by New Braunfels Utilities (NBU) who utilized it as a maintenance yard since the 1940's until 2004 but has since transferred operation to a newly created non-profit to create a legacy conservation project known as Headwaters at the Comal (Headwaters). The Headwaters project has been in operation since 2017 but is seeking funding to perform a Phase II expansion that will significantly improve the facilities and offerings. The Social Return on Investment (SROI) analysis presented by this report was commissioned by Headwaters in order to make a more comprehensive and compelling case for the funding request. In the short term, the intent is to demonstrate the wide range of value and benefits to be created for the community. Longer term, Headwaters will also utilize the SROI results to expand their communications and reporting.

Ultimately, the long-term development of the site will encompass many phases covering a number of years. This specific report focuses on value created to date from Phase I relative to pre-Center conditions and predicts benefits to be created by the planned Phase II intended to commence in 2022. In large part, the phasing is for financing and planning purposes. For the purpose of this analysis and to determine baseline, the "project" is the center and pre-project conditions were the vacant maintenance facility and lot. Value created is based on a start year of the first year operating with a completed Phase II, defined as Year One. Future phases will be evaluated when appropriate and this report updated accordingly. The analysis builds on results and benefits created to date during phase I (2017-2022), and predicts the additional environmental, economic, and social benefits to be created by Phase II over a 25-year time horizon (2023-2048).

The site is a very valuable and unique location because it is a combination of historical, cultural, economic, and environmental attributes. For example, the site's name, Headwaters at the Comal, reflects its role as the source spring for the Comal River. The region is characterized by springs seeping from a very important aquifer. Evidence shows that this area was a focal point for people for at least 8000 years due to its value as a source of water. It still serves as a water source area in that NBU operates an active well field and pumping station for municipal water supply. However, there are other natural attributes in the area such as biodiversity and archaeological finds that make this an excellent location for education and interacting with the natural environment. This coupled with NBU's commitment to make this a place of experiential learning and interaction with nature, makes Headwaters ideal. As noted on their website "The Comal River is the heart and soul of New Braunfels, that is why we are rejuvenating 16 acres at the headwaters of the Comal River where people can learn, have fun, and experience history and nature. We are strengthening the relationship between the community and nature by showcasing the significance of the Comal Springs." The mission of the organization is to *"Strengthen the relationship between the community and nature by showcasing the significance of the Comal Springs. A premier education center inspiring hearts and minds on the importance of conservation to community."*

1.1 Social and Market Value Creation

The comprehensive benefits of this project – which include social, economic, and environmental outcomes – were tracked, measured, and reported on, utilizing the EcoMetrics methodology. EcoMetrics incorporates the guiding principles of Social Value International’s (SVI) SROI Methodology. The following major stakeholder groups will benefit from the Headwaters project:

- **The Environment**, due to improved soil formation, erosion control and water retention, water quality improvement (via natural treatment), support of pollinator populations, habitat creation and protection and the biologic control of invasive species.
- **Funder (includes NBU and donors)**, monetarily from enhanced reputation, improved marketing opportunities, and the market value of the carbon sequestered, the nitrogen intercepted, and the phosphorus intercepted
- **Community at large (includes adjacent residents and visitors to the Center)**, from enhanced marketing and outreach opportunities, enhanced reputation and well-being derived from tourism and volunteering, and sense of community pride. Other outcomes include storm flooding protection, air quality improvements, phosphorus and nitrogen retention, carbon sequestration, and cultural, historical and amenity value. In addition, the community benefits widely from enhanced physical and mental health as well as an increased property value.
- **Students visiting the site for educational purposes**, from the value of educational programs and opportunities at the site, and from the future value of educational opportunities such as field trips.
- **Researchers and Academia**, from improved earnings from research stipends for enhanced research opportunities in and around the project site.
- **Headwaters at the Comal Center**, increased visitors and activities at the center will generate visitor revenue and new sources of grants and donations.
- **Employees of the Center**, their employment (for both staff and interns), earnings from retail sales and additional training for interns that is expected to increase future job opportunities.

The Headwaters project was analyzed using the initial capital investments of approximately \$8,000,000 for Phase I, a planned \$8,000,000 for Phase II, as well as anticipated annual investment and assessing the benefits over a 25-year time horizon with a 5% discount rate.

The SROI analysis of the anticipated outcomes for each stakeholder group shows a positive social return associated with the Headwaters project. An investment of \$27,838,056, which includes two main capital investments totaling \$16,000,000 creates approximately \$58,614,502 of net social impact over 25 years, resulting in an indicative SROI ratio of 2.11:1 (Table 1). In other words, the SROI analysis presents evidence that substantiates that for every dollar invested in Headwaters by Funders, \$2.11 is returned to community stakeholders in social value. Additionally, \$7,304,419 in direct market value is returned to Funders largely from the value of enhanced reputation, license to operate, and brand positivity, a direct market return of \$0.26 for every dollar invested (Table 1). In sum, with an initial investment of \$27,838,056 in financial capital, the community and funding stakeholders see a return of \$65,918,921 over 25 years (Table 2) for a total return on investment of 2.37:1. Figures 1 and 2 reflect the same information graphically. The Tables and Figures reflect value created sorted both by Stakeholder type and by the four pillars of the Center’s mission and vision.

Table 1: Return on Investment by Center Pillars

Center Pillar	Investment	Market Value	Social Value
Create Community		\$5,398,435.00	\$33,638,103.00
Educate and Demonstrate		\$905,637.00	\$4,432,322.00
Partner in Research			\$2,196,984.00
Protect and Conserve		\$2,534.00	\$13,874,827.00
Total Investment (Phase I and II)	\$27,838,056.00		
Carryover from Phase I		\$997,813.00	\$6,646,649.00
Total Present Value		\$7,304,419.00	\$58,614,502.00
Market and Social Return on Investment (dollar returned per dollar invested)		0.26	2.11

Table 2: Social and Market Return on Investment Summary

Description	Value
Present Value of Total Social Value	\$58,614,502.00
PV of Total Investment	\$27,838,056.00
Social Return on Investment	2.11
PV of Total Market Value	\$7,304,419.00
Market Return on Investment	0.26
PV Social + Market Value	\$65,918,921.00

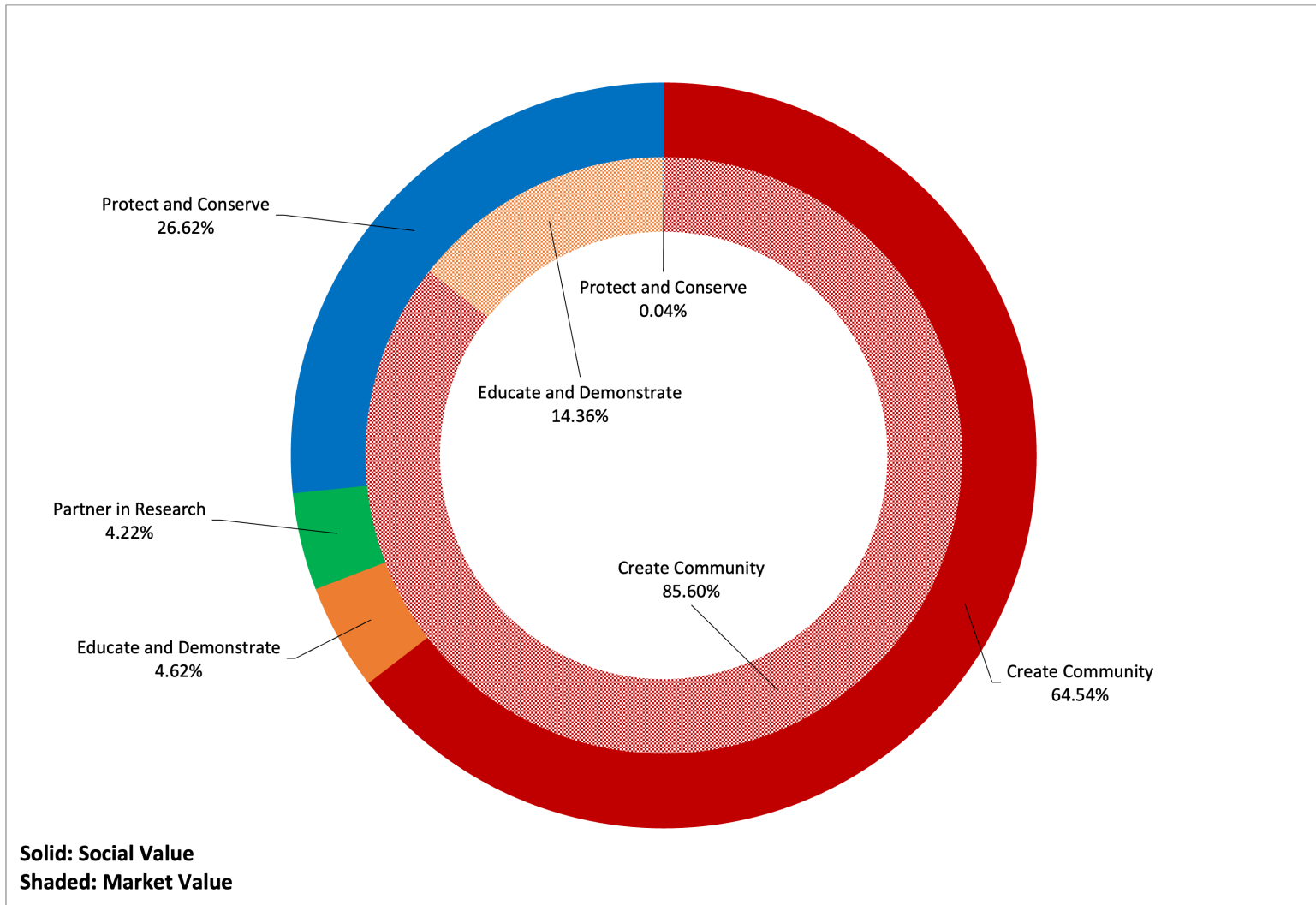


Figure 1: Social and Market Value Generated by Center Pillar

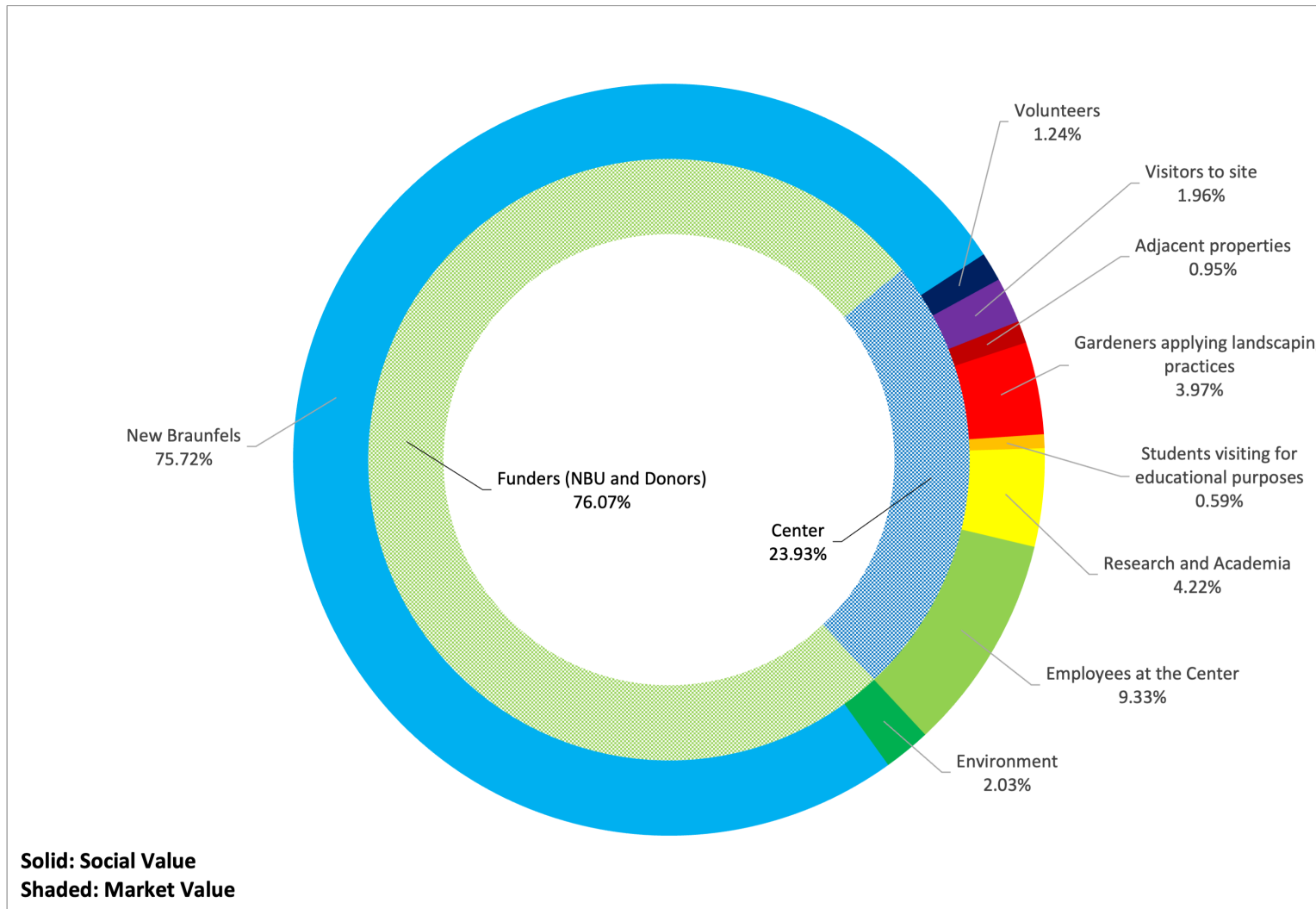


Figure 2: The Benefit of Action by Stakeholder

2.0 Social Return on Investment Background

2.1 Purpose of Social Return on Investment

SROI is a framework for measuring and accounting for the broad concept of social value, a measure of change that is relevant to people and organizations that experience it. This concept of value goes beyond what can be captured in pure, market-based financial terms, seeking to reduce inequality and environmental degradation and improve wellbeing by incorporating social, environmental, and economic costs and benefits into project valuation (SROI Network, 2012). For analytical purposes, SROI converts non-financial values into their financial equivalents, using both subjective and objective research to estimate those values. EcoMetrics LLC believes this is what makes SROI different from other forms of social-impact analysis, and therefore more valuable to funders and supporters.

The objective of this report is to use the SROI methodology for the following purposes:

- Identify and engage key stakeholders affected significantly by this project – Understand what each stakeholder wants changed (objectives), what they contribute (inputs), what activities they do (outputs) and what changes for them (outcomes, intended or unintended) as a result of their involvement;
- Measure and value the social impacts of this project – Understand the value created as a result of the changes experienced by each stakeholder group by using indicators to measure the outcomes and financial proxies to value the outcomes; and
- Create a forecast analysis to measure and evaluate the anticipated future impacts of site development – Articulate the key drivers of social value and identify what data are needed to best measure and evaluate the impacts of activities.

To fully measure and evaluate the impacts of the Headwaters project, this research incorporates scientific data on the objective social, environmental, and economic impacts of both the natural space as well as the impact of being an accessible education and recreation center into the SROI evaluation. These data are directly tied to the outcomes identified by the key stakeholders and used to quantify the social value of changes. The SROI methodology presents these social values in terms of financial equivalents, which allows stakeholders across the board to evaluate the cost/benefit favorability or unfavorability of proposed projects and project alternatives. **Such valuation of outcomes will allow Headwaters and its partners such as NBU and other donors to understand the internalized financial benefits and externalized societal benefits of making investments in the site's development.**

The audience for this SROI report is Headwaters and NBU management, although Headwaters will also use findings of this study to communicate the impact of the project to donors and other local and regional stakeholders who may be affected by the site's development. **The data derived through this research will be used as baseline data to assess and monitor the social impacts of the project.**

3.0 Project Background

3.1 Location

This study assesses the social value of the Headwaters at the Comal education center, located in New Braunfels, Texas between San Antonio and Austin (Figure 3).

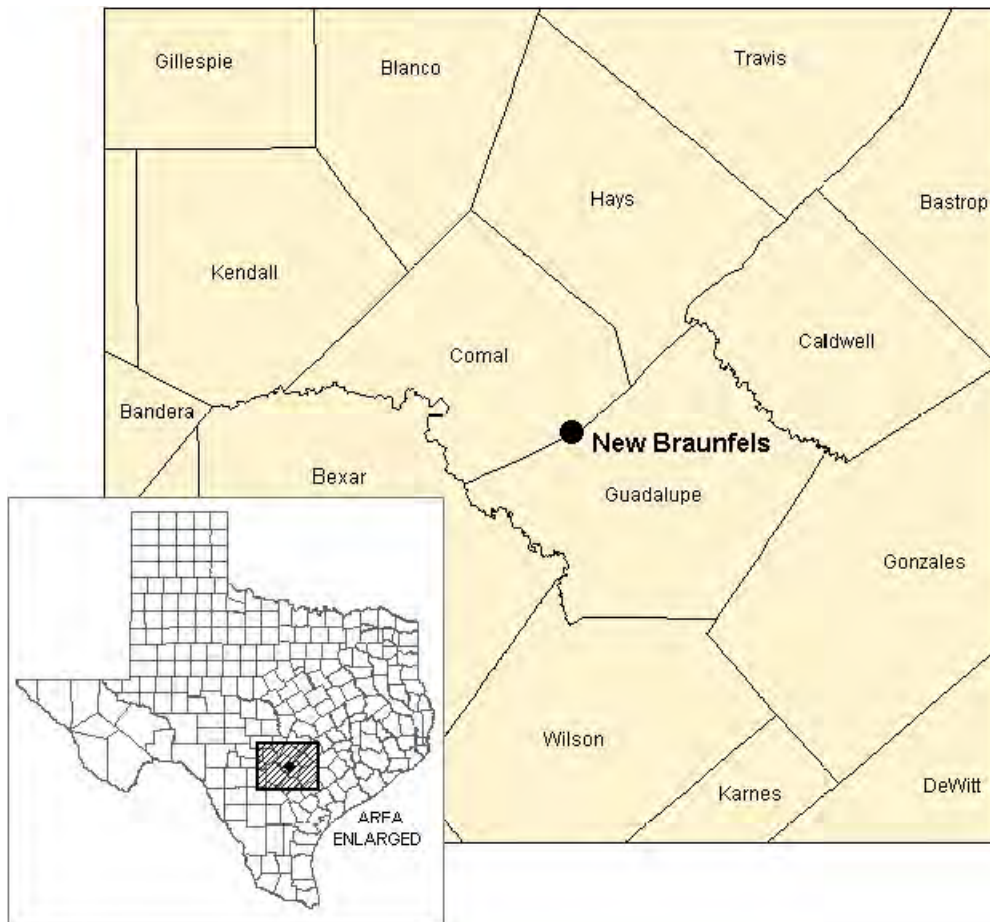


Figure 3: Project Location

3.2 Project Description

Situated at the headwaters of the Comal River, during the NBU time, the site was dominated by impervious cover in the form of concrete, gravel parking lots, and buildings. It was used by NBU for many years for the purpose of managing their utilities on site and throughout the area. The property includes two wells, a ground water storage tank, a booster pump station, a building platform, and ten buildings; two of which are historic. Other unique elements on site include, a previously existing house foundation slab, and a grove of trees; all of which are situated on a small pervious area, which make up approximately 37% of the total site area. Adjacent to the site are the springs, which is home to many endangered species. The property is also located southeast of a retirement community and residential area

above the escarpment, southwest of prime farmland, and northeast of the Heidelberg Lodges. It is approximately two miles from downtown New Braunfels. (Refer to Figure I-1) (Klingemann Report, Lake/Flato et al, 2017).

A multi-phased master plan was created for the site to transition from the NBU maintenance yard to a multifaceted facility that includes natural open space, education-focused buildings, and other supporting features. The intent was to have the site demonstrate many environmental and cultural aspects of this natural feature, the Comal Springs. As part of the site development, a significant archaeological site was uncovered that represents settlement in the area around the springs dating back 8000 years. This has expanded the cultural aspect of the center's mission by adding to the local cultural and historical value of the site.

The first phase of work, which commenced in 2016, was focused on spring restoration and protection, including removing part of a concrete cap that had been put on the spring. While this may seem counterproductive in terms of protecting the spring, removing the cap helps increase habitat for the endangered species in the area by providing access. The showcase of phase I is the 4-acre restoration of a native grasses area along the river and spring, which will also help protect the spring and offset any risk introduced by partially removing the cap. This work has resulted in flood mitigation, enhanced habitat, water quality protection, and erosion control. Equally important, the site is open to the public and has already provided visitors and school groups with educational and recreational value, even as renovations continue to configure it for larger-scale operation. For example, Phase II will enhance site structures to serve as demonstration, interpretative, and education features. Additional renovations will make the site more conducive to rental for group events and meetings, as well as support features such as parking and restroom facilities. Work will also continue on the long-term transition from a site dominated by impervious surfaces to one of predominantly pervious surfaces.

The project overall hopes to build on two main areas:

- Environmental and nature based – such as source water protection, stormwater runoff mitigation, habitat and biodiversity improvement and protection, and water quality impact protection. Because the site sits in the 100-year floodplain and is surrounded by urban and suburban development, flooding and poor-quality runoff is of real concern for source water protection. Biodiversity management is also critically important because the site has both threatened and endangered species which must be accommodated and protected, but also has harmful invasive species which must be controlled. Invasive species actually cause problems for the desired biodiversity and habitats. Because of these elements, combined with water quality and quantity protection, there is significant interest in this site from government agencies. The restoration work will restore ecosystems that become self-sustaining and self-correcting. This is more effective than static and isolated replacement which requires frequent and long-term maintenance. Finally, the restoration of the nature-based elements will in turn provide education and experiential opportunities.
- Socio-cultural – such as raising awareness of the springs to local history and culture, the importance to the local economy, and provide for experiential learning of sustainable attributes such that visitors can take what they learned to practice at home and at work. It was already known how important these spring areas are to Texas, especially the Comal Springs and River, but the archaeological discoveries made during Phase I site work accentuated the cultural and historical value of the site, which needs to be protected and preserved. These discoveries also serve as an important research and educational opportunity.

3.3 Project Partners

Headwaters at the Comal was founded in 2017 as a non-profit to create a legacy conservation and educational project at a former New Braunfels Utilities (NBU) maintenance yard. This yard was associated with a municipal water supply well field and pump station adjacent to the Comal Springs which feed the Comal River. NBU continues to remain operationally and financially engaged with the site and support the Headwaters staff. NBU has a variety of interests in this project, including direct stewardship and protection of a key water supply source in their system, as well as supporting their sustainability and stewardship legacy and goals. Because of these reasons, NBU is the most active partner supporting the Center.

Headwaters also benefits from a wide array of supporting partners that have been instrumental in getting the work to where it is now in 2022, and to position it to move forward with future phases. Partners include local residents who are donors, civic groups, local educators, technical and subject matter experts in a variety of topics. Headwaters has rapidly become a focal point for demonstrating many ideas and concepts that can help the community as a whole. In addition to providing financial support, these partners also play a key role in developing this study.

Headwaters essentially wants to serve as a place for visitors to come and experience the impact of the Comal Springs on the region and see first-hand the importance of environmental attributes in protecting key source water areas. The hope is that visitors and students can take what they learn here and apply it in their lives. This will result in even greater sustainability for the region than could be done by the 16-acre site alone. This can generate quantifiable social, environmental, and economic benefits to communities surrounding the project.

Coincident with the social value of the site and project, Headwaters has attracted many scientists and government agency partners because of its environmental significance. The site is a key source of water and the site's goal of protecting the spring itself, local wildlife, and biodiversity makes it a key location for environmental stewardship. The historical significance of the site has also attracted subject matter experts in archaeology and social sciences.

3.4 Ecological Overview

The site is interesting in that it naturally consists of riparian areas along the river but upland area for the remainder of the site. A long history as the NBU yard makes it commercial industrial rather than natural, and over the years the area has been ecologically degraded in terms of runoff impact, soil stability, and biodiversity. It is the importance of the springs as a water source that makes the area so important, and the goal of the Center is in part to return conditions back to the more natural and protective state. This also makes the site unique, even though there are other, less critical but important springs in the general area.

The Comal Springs/River system is the largest spring system in Texas and is in one of the fastest growing counties in the state of Texas. The general area of New Braunfels and the immediate region is of national importance because of the Edwards Aquifer, which is one of the most important aquifers in Texas and ranks nationally as a source of drinking water for very large and populated areas. The geology of the area makes it uniquely sensitive in that the aquifer outcrops in the area and therefore recharge is important. Secondly, the geology is characterized by karst limestone features, which means that degradation of surface waters can easily infiltrate deeper levels and contaminate subsurface supplies. Springs are hydro-geologically important as they represent surficial discharges of subsurface aquifers. The presence and

history of the NBU water supply installation at this location is evidence of the importance. In other words, the Comal Springs represent a visible and tangible link between surface water and groundwater.

Also highlighting the significance of the site is its rich archeological history. The proximity to water access has been utilized long before NBU and is evident by the wealth of archeological artifacts that have been discovered, identified, and preserved as part of the initial site investigations.

The general natural biodiversity in the area is quite rich and has been studied by various experts in the field. The diversity in the naturally occurring soils has also contributed to diverse grass species identified onsite. However, the overall health of the ecoregion has been identified as “poor to moderate”, as a result of prior site development. A number of threatened and endangered, as well as invasive, species have been highlighted to be of concern. This includes various plants, beetles, turtles, and other aquatic ecosystem species.

Figure 4 is an aerial photograph of the site in 2019. The NBU water supply operation is clearly visible in the upper left quadrant, as is the smaller, circular spring cap. The heavily developed nature of the site is evident as paved areas and buildings.



Figure 4: Site Aerial Photograph from 2019

3.5 An Important Focal Point for Water

Fed by one of the largest systems of springs in the southwestern U.S., the Comal River is located entirely within the city limits of New Braunfels, Texas. The Comal Springs, in turn, are supplied by the Edwards Aquifer, a very important regional aquifer which underlies and serves multiple counties in south central Texas. Archeological research suggests that the area surrounding the Comal Springs has been utilized by humans for at least 8,000 years. Beginning in the 19th century, European settlers used the water from the springs to power various types of mills and for hydroelectric power. By the end of the 19th century, the area now known as Landa Park had become a popular area for recreation, and it remains so today.

In the early 20th century, the city of New Braunfels purchased three springs at the headwaters of the Comal River to supplement its existing water supply. Over the next few decades, the springs were capped, and various buildings were constructed on the property to facilitate the property's use by New Braunfels' Water Works, and later New Braunfels Utilities (NBU).

4.0 Stakeholder Engagement Methodology

A stakeholder engagement element was conducted as part of the EcoMetrics analysis of the project. This element involved identifying the relevant and applicable stakeholder types and groups, selecting individuals representing one or more of these groups, conducting interviews, and analyzing responses to inform the identification, quantification, and valuation of the expected co-benefits. Subgroups were identified through the process of classifying materially different outcomes from gathered qualitative data and representative stakeholders. The stakeholder engagement phase of the analysis consisted of a combination of in-person interviews via group sessions, one-on-one onsite interviews, telephone interviews, and emailed survey questionnaires

Collectively, groupings included:

- Archaeological consultant
- Architect and design
- Campaign Committee
- City of New Braunfels staff
- Comal County Historical Commission
- Educators and volunteers including New Braunfels Independent School District
- Headwaters at the Comal Board of Directors
- Center full time staff
- Center part time staff
- Center Technical Committee
- New Braunfels Utilities Conservation and Customer Corporate Group

In addition, we also consulted the stakeholder engagement work done before by others. Although not done under the auspices of EcoMetrics, this work appeared to be comprehensive and provide stakeholder feedback and insight very consistent with what we would ask. Hence, information on expected impact and benefits of the center noted in this earlier study were used to inform the EcoMetrics outcomes list. During the 2011-12 study, two stakeholder meetings were held and included representation from stakeholder groups such as:

- NB Parks & Recreation;
- New Braunfels Conservation Society
- Comal Water Recreational District #4;
- New Braunfels Chamber;
- Eden Hill (senior citizen community adjacent to the site);
- Heidelberg Lodges;
- New Braunfels property owners
- Economic Development Foundation
- Comal County Historical Commission;
- Parks & Recreation Foundation.

5.0 Theory of Change

A theory of change describes and summarizes the objectives, inputs, outputs, and outcomes of programs and activities on different stakeholder groups (Social Ventures Australia, 2011). It is additionally a pathway linking the activities of these programs and activities to short-term, medium-term, and long-term outcomes experienced by these stakeholder groups (Ireland, 2013). The theory of change described here delineates how varying stakeholder groups experience and perceive material change resulting from the inputs of the Headwaters project. The logic flow for the Theory of Change is illustrated in Table 6.

Collected data was carefully analyzed to determine the changes experienced by stakeholder groups and their interrelations. As previously described, the input costs for labor, time, land, and money are accounted for within the inputs provided by Funders. This input culminates in the central input of the project: a multi-use educational center with a focus on local environmental, historical, and cultural features focused on the Comal Springs. As such, the theory of change for each stakeholder group other than Funders is derived from the relationship between the operation of the Center and the respective outcome for each stakeholder group.

The results of the qualitative portion of this research revealed that there were differences in the ways that groups of people potentially impacted by the project were able to engage with the project. The development of the theory of change highlights these differences and identifies those outcomes unique to each stakeholder group. Based on observation, past experience, and initial data gathering, relevant stakeholder groups were identified as acknowledged in this report.

6.0 Analysis of outcomes

6.1 Stakeholders Outcome Identification and Justification

One of the most important aspects of stakeholder engage, and the reason for the Theory of Change, is to identify the expected impacts (outcomes) of the proposed project. Many of these impacts are positive, and represent benefits to a variety of stakeholders. Before EcoMetrics can quantify and value a benefit, it needs to know what the benefits are. Whereas some of these could be determined via technical expertise and some degree of speculation, to conform to the SVI principles, these benefits need to be sourced from

and validated by relevant stakeholders. The stakeholder engagement process identified a series of benefits which were carried through the EcoMetrics analysis and are described below.

6.2 Outcomes Identified by Stakeholders

Environment

- Multiple impacts were noted related to improved soil formation and stability, erosion control and stormwater retention, water quality protection and improvement (via natural treatment), habitat creation such as support of pollinator populations, and the biologic control of invasive species.

It was clear from stakeholder interviews that the environment will benefit from the Headwaters project in a number of ways. The transition from a predominantly paved industrial-type yard to one with more natural features would lead to improvement of the environmental condition. The main points raised included the impact to water quantity and quality as the banks along the spring are restored to native grasses. Species habitat was also noted as important.

When NBU vacated the site, there was interest from business/apartment developers to convert the site to residential use, but it was ultimately determined it would be converted into a type of nature preserve. One key important action conducted in Phase I was to partially uncap the main spring discharge point and convert some of the asphalt cover to a natural landscape. The project will continue to integrate the waters and the habitat in their natural state and developed areas where residents can engage and learn about the ecology of the region.

Situated on the banks of the Comal Springs and Blieders Creek, the Headwaters site represents the outermost habitat for species living in the Comal Springs ecosystem and is a potential refuge for native and migratory species. Headwaters is also the first line of defense for the sensitive Comal Springs species and habitats, acting as a natural buffer against some of the polluted stormwater drained by Blieders Creek from its extensive watershed miles away.

When the site was all asphalt, nuisance stormwater and poor water quality due to contaminant runoff was a major issue as indicated in the Lake/Flato study in 2011-12 and discussion with the Center Director. The design of the project, using existing structures and lowering disturbance of the area, improve the water quality in the region. The amount of silt and sedimentation that flowed into the waterways has already been significantly reduced as the area's native habitat is being restored. The heavy rains no longer sweep silt and sediment from asphalt into the watershed, but rather the unique diversity of native grasses and plants naturally treat the water, trapping sediments and pollutants, while supporting biodiversity.

As proof of the ecological changes to the site, the builders noticed that during construction, new birds came to nest in newly restored areas.

Funder (includes NBU and donors)

- Funders and donors will benefit from improved reputation and "License to Operate".
 - This is especially important for NBU, which is the local water, wastewater and electric utility and depends on positive engagement with ratepayers to justify operations and costs. The tremendous, sustained growth in the region requires significant investment of resources to secure additional water supplies and develop necessary infrastructure, resulting in large part to NBU's capital program growing dramatically from \$75M to an excess of \$700M. To eliminate and/or delay additional costly water purchases and

expanded infrastructure, as well as to preserve local springs and other scarce water resources, a significant shift must be made in how regional water is managed. NBU is meeting this challenge by adopting a One Water, or integrated water management, approach that requires a redoubling of water conservation efforts and implementation of innovative solutions that will stretch the community's existing water supply. In addition to adjusting internal water planning and projects to achieve aligned goals, NBU is partnering with regional agencies that also play an important role in the community's water management to advance a joint water management strategy plan. The Headwaters plays an important role in the success of these efforts. The site and buildings will showcase innovative conservation and water management concepts, some of which cannot be found anywhere else in the region. Additionally, the Headwaters will serve as a community demonstration, education, and research conduit for water resource innovation strategies for the region. Furthermore, NBU still operates water wells and a pump and distribution facility at the site and has a material interest in the continued protection of the water supply associated with the spring and local aquifer.

Although not anticipated to be significant at present, those with ownership interest in the site can generate revenue via transacting the carbon sequestered, and the nitrogen and phosphorus intercepted using credits trading market mechanisms that may be developed in Texas in the future.

Community at large (includes adjacent residents, volunteers, the general New Braunfels community, and visitors to the Center)

- From enhanced marketing and outreach opportunities, enhanced reputation and well-being derived from visiting the Center, and a general sense of community pride. Other outcomes include area-wide storm flooding protection, air quality improvements, nutrient retention, and cultural and amenity value. These enhanced marketing and outreach opportunities are not to promote the center but instead to promote the general region as a result of the presence of the center. In other words, because of the presence of the center, local tourism efforts have more to show as a draw to the area.

Overall, the stakeholders in this broad group were very positive about the impacts of the project. They recognize the importance of the Comal Springs to the local water supply, its role in defining the character and value of the region, and the unique opportunity it presents. None of the stakeholders noted any negative impact. The main point of caution noted was that they did not want it to become an overly commercialized tourist attraction, instead they prefer it be seen more as a place to experience and learn. The second note of desired improvement is for it to have more "curb appeal" and awareness. In general, this stakeholder group felt that the site needs to be more well-known. But the consensus was that this proposed use is the best path forward considering the other options that could have been realized once NBU vacated the site.

A key point raised was that most of the land in Texas is privately owned and having public access to such as site is a rare opportunity for direct contact with nature and history. NBU's willingness to open the site to public use was perceived as very positive.

This area of Texas is very dependent on the regional aquifer for water supply, and its management and protection are paramount. Coincident with the water supply aspect, the springs in this region are of exceptional quality and importance. For example, the Comal Spring system is one of the largest in the United States. New Braunfels is one of the fastest growing cities in the nation, placing significant strain on resources. Specifically, residents already have a very high water use per capita and future growth will further constrain existing supplies. The Headwaters project inspires those who migrate to the area to

become aware of the environmental balance needed to support the population in the area, and in turn will motivate new residents to adopt a mentality of environmental stewardship and sustainability. This is based on the concept of applied learning, and the assumption that if people learn the value of something, and learn how they can do it, they will transfer the concept to other aspects of their lives. The proxy used for this category is the idea of gardeners replicating practices at home, and residents in general being more water use efficient.

Those who visit the project contribute to the local economy- by eating locally and spending money in nearby shops. This domino effect means more jobs, inspired youth, and the possibility to attract national attention with the project.

Visitors appreciate the opportunity to come and bring their families to something new and interesting. It was characterized as a “jewel of the city.” Tourism in the area and around the local river system is already a beneficial amenity and economic engine for the community, but the unique community value of the site was under-utilized and somewhat neglected before this project. Because the site is small relative to other attractions in the area, the increased tourists specifically stemming from the Center is relatively small. To avoid overclaiming, per person tourism-related value creation was based on visitors to the site.

The Headwaters site gives people hands-on learning opportunities, such as the planned “Living Building” and the nature walk through the restored area, to demonstrate changing perspectives on natural beauty and sustainable gardening, as a new way of living. The Center will also offer a number of sessions, classes, exhibits, and workshops to learn about these concepts. Stakeholders believe the place can inspire others to create change and pass their learnings along everywhere they go. This scalability and replicability were noted as a very important aspect. Whereas the site itself is relatively small, its ability to impact others to apply sustainable principles is the true long-term value.

Volunteering opportunities are a highlight, as well as other community education opportunities. People from everywhere and every age, even community members are curious. Volunteers are motivated by future generations and working locally and for their community. This initiative offers a more comprehensive understanding of the entire water system.

Students visiting the site for educational purposes

- From the value of educational programs and opportunities at the site, and from the future value of educational opportunities.

A nearly unanimous opinion of all stakeholders was that this site will provide a rare and excellent opportunity for experiential learning for school-aged children. Opportunities to provide hands-on exposure to environmental and natural aspects are rare, and local educators and schools are always looking for opportunities. A benefit universally noted by stakeholders was the ability to use this site for both passive and active learning on many topics. Those who spoke from the educational perspective noted that there is growing pride in the participation in projects like this, especially in what it means for increased opportunities for local children. Students can learn firsthand what biologists, environmental scientists, historians, and archeologists do, discovering new career paths.

Field trips are less frequent in school systems because of low funding, especially for transportation, and education is becoming more focused on testing rather than experiences. The Center can offer discounted admission rates and other options to offset the school’s cost of transport. In addition, the Center’s location is proximal to the community and reduces transportation costs and complexities. The project

envisions Saturday programs and school field trips, driven by volunteer-led curricula, utilizing the knowledge of subject matter experts.

The project provides cultural continuity for the community, enabling people to better understand their past and how it relates to the present. It makes visitors more sensitive to the past artifacts by linking people of the past and present.

Headwaters surveyed participants of the Summer Camp Program. Respondents were asked to rate one statement as Excellent to Poor, and five statements as strongly agree, agree, neutral, disagree, and strongly disagree. The inquiries were:

- How would you rate your child/student's experience at Headwaters?
- The program my child/students participated in was educational.
- The program my child/students participated in was entertaining.
- This program positively changed my child's/students' attitude toward science, the environment, and/or conservation.
- This program helped prepare my child/students for future science classes.

For the excellent to poor question on rating the experience, all were excellent or very good, with the majority as excellent. For the remaining questions rated strongly agree to strongly disagree, most were either strongly agree or agree, with only a few neutral, and the majority as strongly agree. There were no "negative" ratings for any question which is indicative of a very positive experience by site users for educational purposes.

Researchers and Academia

- From earnings from research stipends for enhanced research opportunities in and around the project site.

Culturally, the Headwaters site is home to several historical and archeological features that help tell the story of New Braunfels and the broader region. Archeological findings provided a unique hands-on setting to directly study the scientific, cultural, and historical aspects of the region.

In addition to an archeological focus, biodiversity cataloging such as the i-naturalist online program for logging observations can offer research communities many data points for their studies. Other noted benefits include opportunity to study endangered species that inhabit the area. As noted for the Community at large stakeholder group, given the fact that so much of Texas is under private land ownership, having this kind of site accessible to the public will provide an excellent opportunity for learning.

Headwaters at the Comal Center

- Increased visitors and activities at the center will generate revenue via entry fees, rental fees, and other fees for service offerings. The more aware the public becomes of the site and its value, the more it will create new sources of grants and donations.

An increase of visitors and use of the center will enhance retail sales and earnings, providing additional financial income to support the Center. Interviews with those employed by the Center noted that New Braunfels' reputation as a unique "crown jewel" in Texas will only be enhanced by the Headwaters at the Comal facility and its proposed activities, attracting visitors, business and earnings to the Center, its employees and surrounding amenities. Long term, the project is expected to result in an increase in local tourism, which will likely further result in benefit to the Center and local businesses.

Those Employed by the Center

- Their employment (for both staff and interns), earnings from retail sales and additional training for interns that is expected to increase future job opportunities.

Those employed by the Headwaters at the Comal center will benefit directly from their employment and/or internship via salary, stipends, or other employment benefits. It is expected that those who work as interns at the Headwaters at the Comal Center will benefit from an increased likelihood of being hired for future job opportunities due to the training and experience they will receive at the Center. The cross-section of value the Headwaters provide as a unique ecological resource for the watershed, an educational tool, a recreational site, and location of historical significance to the region will provide unique training opportunities for the staff and interns of the Center, enhancing future career opportunities at the Center or elsewhere. An increase of visitors and use of the center will enhance retail sales and earnings, providing additional financial income to support the center and its staff and interns.

As this project is only now beginning with Phase II, more detailed information on who specifically will benefit in this stakeholder category will become clearer over time.

7.0 SROI Mapping

7.1 Introduction to SROI Mapping

The SROI approach is one that starts with input information and feedback from stakeholders and ends with a compilation of quantified and valued outcomes. The process is illustrated and documented in an SROI Map. For this report, we have summarized the SROI Map into a flow diagram. Figure 5 is a conceptual flow diagram illustrating the SROI Mapping process.

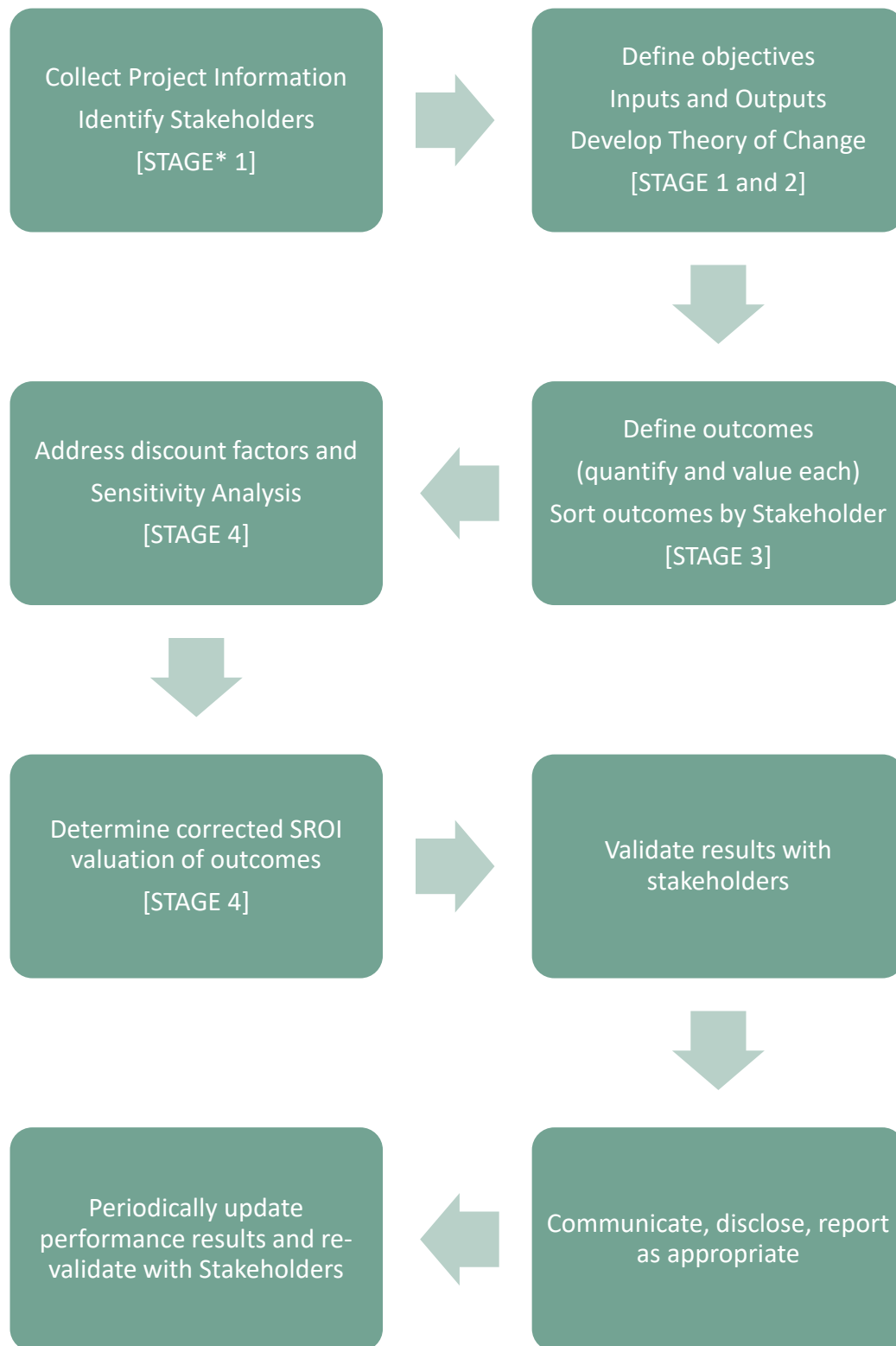


Figure 5: Conceptual SROI Mapping Flow Diagram

***STAGE numbers refer to SVI SROI Mapping**

7.2 Inputs and Outputs – SROI Map Stages 1 and 2

There are two basic types of inputs for the Headwaters project. There is direct financial input from donors and funders either as capital sums or as ongoing operational financial support. For example, NBU currently supports the salaries of Center staff. There are also in-kind inputs such as volunteer hours.

7.3 Outputs and Outcomes – SROI Map Stage 2 (Continued)

Once we know the outputs, we can determine what changes as informed by research, direct observation, and stakeholder input. These are the outcomes. Outcomes of the Headwaters project were determined by first analyzing collected information from the qualitative phase of research. Collected stakeholder input information was quantitatively analyzed to determine frequencies, differences, and similarities of outcomes identified by participants across stakeholder categories. Only outcomes identified by stakeholder groups during the qualitative research phase were included. Once outcomes were identified by stakeholder group, third-party (secondary source) literatures were consulted to validate research findings within broader third-party literature and other relevant studies.

As noted above, this project is in the transition stage from Phase I to Phase II. This analysis is focused on anticipated benefits of Phase II building on how Phase I has been evolving. There are anticipated features that are not yet in place, and therefore some outcomes are extrapolated from current information. For example, income from Retail Sales personnel or saving realized by gardeners applying learned landscaping practices are anticipated when Phase II is underway. Other outcomes are building on features of Phase I and are better known, for example soil stabilization and educational value. All outcome types and values are supported by stakeholder input and researched information. In table 8, we combine what was learned from stakeholder engagement with the other work to develop a list of outcomes.

Table 3: SROI Mapping Stage 2 Cont. – Identifying Outcomes by Stakeholder

Stakeholders	Outcome
Environment	Soil Formation
	Soil Stabilization
	Pollinator Populations support
	Water Quality- Natural Treatment
	Refuge Habitat creation
	Biological Control- Invasive Species
Funders (NBU and Donors)	Enhanced Reputation
	Market value of Carbon Credits
	Market value of Nitrogen Credits
	Market Value of Phosphorus Credits
Community at Large	Enhanced Marketing and Outreach Opportunities
	Sense of Accomplishment by Volunteering

	Sense of Community Pride
	Storm Flooding Protection
	Air Quality
	Phosphorus Retention- Social Value
	Nitrogen Retention- Social Value
	Cultural Value (including archaeology)
	Amenity Value
	Carbon sequestration- Social Value
	General Recreation
	Valuing the Water Resource
	Archaeological Asset Protection
	Master Naturalist Program
	Mental Health
	Physical Health
	Real estate value added
Gardeners Applying Landscaping Practices	Gardener Water Savings
	Gardener Fertilizer Savings
	Gardener Carbon- Social Value
Students Visiting for Educational Purposes	Educational Value Towards Future Opportunities
	Field Trip Educational Value
Researchers and Academia	Earnings from Research Stipends
	Value of Citizen Science
Center	Visitor Fees Revenue
	Grants and Donations Income
Employees at the Center	Earnings- Staff
	Earnings- Interns
	Earnings- Retail Sales
	Enhanced Earning Potential for Interns

7.4 Quantifying and Valuing Outcomes – SROI Map Stage 3

For attaching values to outcomes, our goal was to use as much as we could ascertain from the stakeholder engagement. However, the nature of this project and the stakeholders meant that whereas outcomes and benefits were noted, the expertise or data was not available to stakeholders for them to give a quantity.

Therefore, our second approach was to find the most up to date peer-reviewed materials to use for the calculation of financial proxies across outcomes. Where possible, we looked for the most regionally specific calculations beginning from the local area to the broader community, to the local region, to the state and regional level, and finally, where there was no regionally specific information, to the U.S. national level. Peer-reviewed figures from federal and state agencies were prioritized, depending on dates they were produced. Where these criteria could not be met for peer-reviewed proxies, recent international reports were used to make calculations, particularly for some of the more intangible values of well-being and sense of pride and accomplishment. Many of these values were drawn from data sources that have met the standard of social value as established by SVI and priority was given to projects that have been assured by this organization. The values were then adjusted by EcoMetrics LLC to reflect the circumstances of the Headwaters project and the social conditions of New Braunfels and Texas.

Quantities for the Environment stakeholder were based primarily on the nature of the four acres of restored open space by examining the various attributes of these native grasses and plants. Secondly, environmental benefits are created from removing part of the Spring concrete cap and other protective measures of the surface water. We derived quantities of visitors to the site, both tourists and education visitors, from qualitative research, input from site staff, and projections based on Phase I data collected by Center staff.

Quantities of outcomes for all other stakeholder groups were derived from third-party literature and stakeholder input as defined elsewhere in this report. Duration of outcomes for valuation purposes was set as a 25-year outlook as requested the Center Director. Hence, the total value is provided for each outcome which is based on the quantity of the outcome times the value per unit quantity and projected out for 25 years as Net Present Value with 5% discount rate.

The EcoMetrics methodology incorporated these various inputs to determine the value of outcomes which were shared with and validated by relevant stakeholders.

7.5 Correcting for Discount Factors

7.5.1 SVI-driven Corrections

In order to ensure consistency with the SROI process, it is necessary to correct the initial values of the outcomes to be more reflective of the changes that are actually due to the project or activity. In other words, we are determining the “net value impact.”

It is then necessary to establish the amount of impact each outcome has had. Impact is defined in the SROI as an estimate of how much of the outcome would not have happened without the project and the proportion of the outcome that can be isolated as being added by the activities being analyzed. A number of filters are utilized in the analysis to render additional validity and stability to the conversion of non-market social values into their financial equivalents. SROI uses four filters applied to each outcome to establish the impact of the activities:

- Deadweight – What would have happened anyway?
- Displacement – Were other outcomes displaced to create the outcome?
- Attribution – Who else contributed to the outcome?
- Drop-off – How much does the outcome drop-off each year?

Establishing impact is important as it reduces the risk of over-claiming and may also help identify any important stakeholders that may not have been included in the analysis.

The Headwaters project is unique in that the site was essentially unused immediately prior to the beginning of this work. As noted above, the site was a maintenance yard for NBU, but those operations were moved to a different location. Once vacant, discussion began to determine a viable use for the site. This fact of starting from a “blank slate” relative to what Headwaters wishes to accomplish means that some correction factors are by and large, not applicable or not significant.

7.5.2 Testing Outcomes for Materiality

In accordance with SVI’s Principle 4 Guidance- Only Include what is Material, we used the following test:

Outcomes are included if they are relevant and are relevant if the activity contributes to the outcome and:

- stakeholders perceive an outcome as important to them;
- peers are already managing the outcome and have demonstrated its value;
- the organization has a policy to include the outcome;
- there are existing social norms that demand it; or
- there are financial consequences to the organization for not including this outcome in the analysis.

Causality between the outcomes and the project was determined based on stakeholder engagement and relevant third-party literature. All outcomes are directly linked to the project, as no other factors or inputs were determined to have caused any of the outcomes identified by stakeholder groups and third-party literature. In short, the first event in the chain of events is the development of Headwaters project to which all identified outcomes are directly linked. Some of these events may have begun in Phase I, but some outcomes will not trigger until Phase II. Outcomes noted by stakeholders, indirectly implied by stakeholders, or naturally extrapolated for Phase II based on predictions consistent with stakeholder input and third-party literature review and verified by review of other information are noted as material.

Relevance was determined by the materiality of the outcome, that is, if it was a material outcome articulated by a member of a stakeholder group during the qualitative phase of the research. For the Environment stakeholder, the only group that cannot speak for itself, relevance was determined by third-party literature as well as suggestions by EcoMetrics LLC, applicable stakeholders, government agencies, or Center staff.

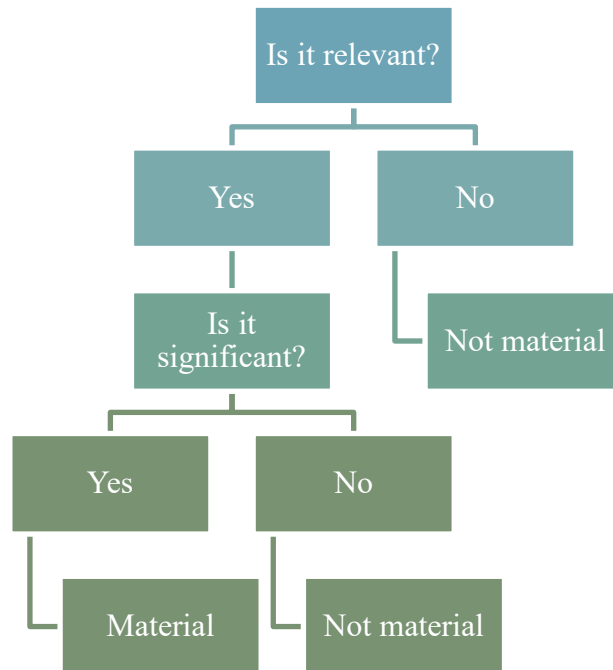


Figure 6: Determining Materiality Through Relevance and Significance

7.5.3 Unintended or Negative Outcomes

EcoMetrics methodologies were designed to capture unintended consequences or negative outcomes stemming from the project and what would happen without the project. The stakeholder engagement process explored the following questions to account for unintended or negative outcomes:

- Do outcomes change over time? As the site comes online and matures, does it impact who uses it differently?
- What possibilities are there for reduced or increased usage of the Center, once fully implemented, over time and for whom?
- What kinds of uses might change over time?
- Do certain outcomes impact groups differently?
- Do you think development of the site might have any unintended negative impacts or outcomes over time?

For the Headwaters site, the main negative consequences if the project were not to occur would be some other use for the land that would be less desirable. For example, several stakeholders noted that they prefer it would not be developed as residential or commercial. Leaving it as a vacant unused site for the long term would also be a negative outcome.

Conversely, there was essentially unanimous consent among all stakeholders that the planned use was positive and desired. All felt this was an excellent use of the site, and one that would capitalize on the environmental, natural, cultural, and historical value of the area. The only negative concerns regarding the planned development of the site were that stakeholders wanted to make sure that it was well-communicated that the resource exists for public use.

From an environmental perspective, again, there was essentially unanimous consent that the planned use of the site would maximize the potential environmental value of the area, most notably contribute to source water protection of the Comal Springs as a supply source.

This Headwaters project is somewhat unique in that there are essentially no perceived downsides of planned use, especially in the eyes of the stakeholders.

8.0 Summary of Social Value Created

We can now take the corrected, or net value, created for each outcome. These corrected net outcome values are presented in Sections 8 and 9 sorted by stakeholder and Center pillars, and by market and non-market category. To calculate the net present value (NPV) of the project, the costs and benefits incurred or generated over a 25-year time period need to be forecasted and summed. For these costs and benefits to be comparable, it was necessary to employ a discount rate in calculating the NPV of identified outcomes.

8.1 Stakeholder Value

The SROI analysis of the anticipated outcomes for each stakeholder group shows a positive social return associated with the Headwaters project (Table 4). An investment of \$27,838,056, which include two main capital investments totaling \$16,000,000 creates approximately \$58,614,502 of net social impact over 25 years, resulting in an indicative SROI ratio of 2.11:1. In other words, the SROI analysis presents evidence that substantiates that for every dollar invested in Headwaters by Funders, \$2.11 is returned to community stakeholders in social value.

Of the over 65 million dollars of social value, the largest components are source water protection and sense of community pride. This is not surprising as the site is critically important to protecting the Comal Springs that represent a very important regional water source. Because of the importance of the site to the community in terms of cultural, historical, and community aspects, it is expected that the value of community pride would be notable. Other large value outcomes include water savings by those who apply techniques learned at the site, and physical health value especially for recurring users such as Center members.

Educational value seems low compared to other outcomes but that is a function of the how the financial proxies are applied. In reality, students are also part of the community and would share in some of the other value created for “community at large.” Other more indirect educational value provided by the unique scientific, cultural, and historical nature of the site is reflected in the research and academia related outcomes, and archaeological asset value outcomes.

As noted by the various stakeholders, especially the environmental government agencies, the water supply and quality and biodiversity aspects of the site are critically important, and this is reflected in the outcomes associated with water supply, quality, and habitat. The balance of species is important, especially with some threatened and endangered species present, and controlling invasive species is necessary, as reflected by the relatively high value of the biological control outcome. Other environmental outcomes are of much lower value mainly because of the small acreage of restored open space. As more restoration occurs in future phases, these values will increase accordingly.

Table 4: Social Return on Investment by Stakeholder Group.

Stakeholder	Outcome	Social Value Creation	Social Value Creation per Stakeholder Group
Environment	Soil Formation	\$181.00	\$1,056,295.00
	Soil Stabilization	\$17,897.00	
	Pollinator Populations Support	\$3,645.00	
	Water quality- Natural Treatment	\$7,124.00	
	Refuge Habitat Creation	\$1,060.00	
	Biological Control- Invasive Species	\$1,026,388.00	
Community at Large	Enhanced Marketing and Outreach Opportunities	\$211,409.00	\$41,626,151.00
	Sense of Accomplishment by Volunteering	\$639,153.00	
	Sense of Community Pride	\$13,584,550.00	
	Storm Flooding Protection	\$16,065.00	
	Air Quality	\$6,943.00	
	Phosphorus Retention- Social Value	\$4,938.00	
	Nitrogen Retention- Social Value	\$2,570.00	
	Cultural Value (including archaeology)	\$2,656.00	
	Amenity Value	\$1,424,869.00	
	Carbon sequestration- Social Value	\$3,079.00	
	General Recreation	\$1,021,860.00	
	Valuing the Water Resource	\$12,784,937.00	
	Archaeological Asset Protection	\$7,921,257.00	
	Master Naturalist Program	\$8,490.00	
	Mental Health	\$47,169.00	
	Physical Health	\$3,467,456.00	
	Real Estate Value Added	\$478,750.00	
Gardeners Applying Landscaping Practices	Gardener Water Savings	\$1,847,499.00	\$2,067,342.00
	Gardener Fertilizer Savings	\$169,807.00	
	Gardener Carbon- Social Value	\$50,036.00	
	Educational Value Towards Future Opportunities	\$102,054.00	\$308,539.00

Students Visiting for Educational Purposes	Field Trip Educational Value	\$206,485.00	
Researchers and Academia	Earnings from Research Stipends	\$2,173,528.00	\$2,196,984.00
	Value of Citizen Science	\$23,456.00	
Employees at the Center	Earnings- Staff	\$3,290,866.00	\$4,862,542.00
	Earnings- Interns	\$1,077,176.00	
	Earnings- Retail Sales	\$470,931.00	
	Enhanced Earning Potential for Interns	\$23,569.00	
		Carryover from Phase I	\$6,496,649.00
		Total Present Value	\$58,614,502.00
		Total Investment (Ph. I and II)	\$27,838,056.00
		Social Return on Investment (dollar returned per dollar invested)	2.11

8.2 Market Value Creation

Additionally, \$7,304,419 in direct market value is returned to Funders largely from the value of enhanced reputation, license to operate, and brand positivity, a direct market return of \$0.26 for every dollar invested (Table 5). The overwhelming portion of this market value is enhanced reputation and brand value created by the funders investing in the project. Of the funders, at this point it is expected that this will benefit primarily NBU. The next highest component of market value is the revenue coming into the Center by way of research funding, visitor and site user fees, and grants and donations.

Also accounted for as market returns are the valuations of carbon sequestered and the values of nitrogen and phosphorous offsets created by introducing the restored natural area by the spring. However, due to the small acreage, these values are relatively minor. Note that Texas does not yet have a regulatory agency-supported water quality credit trading market. As such, any purchases of water quality credits would not be eligible for compliance offset and be voluntary with prices set by the specific transaction. There are national and international carbon markets, and carbon offsets can be banked as assets.

Table 5: Market Return on Investment by Stakeholder Group.

Stakeholder	Outcome	Market Value Creation	Social Value Creation per Stakeholder Group
Funders (NBU and Donors)	Enhanced Reputation	\$4,794,677.00	\$4,797,211.00
	Market Value of Carbon Credits	\$2,183.00	
	Market Value of Nitrogen Credits	\$256.00	

	Market Value of Phosphorus Credits	\$95.00	
Center	Visitor Fees Revenue	\$603,758.00	\$1,509,395.00
	Grants and Donations Income	\$905,637.00	
	Carryover from Phase I		\$997,813.00
	Total Present Value		\$7,304,419.00
	Total Investment (Ph. I and II)		\$27,838,056.00
	Market Return on Investment (dollar returned per dollar invested)		0.26

In sum, with an initial investment of \$27,838,056 in financial capital, the community and funding stakeholders see a return of \$65,918,921 over 25 years for a total return on investment of 2.37:1.

9.0 Alignment with the Center’s Pillars

The Headwaters at the Comal Center and organization has structured its mission and vision around 4 key pillars:

- Create Community
- Educate and Demonstrate
- Partner in Research
- Protect and Conserve

These pillars reflect the categories around which the Center will design its programs, projects, and activities. As part of the analysis, EcoMetrics LLC sorted all the outcomes by pillar (Table 6). The intent was to reflect the market and social value created in each of the pillars, to give an indication of how the project, especially Phase II, will support the intended mission and vision.

The Create Community and Protect and Conserve pillars represent the majority of the value created, representing approximately 90% of all value created. Of the four pillars, having the emphasis on these two pillars makes sense in that protecting the resource and environment, as well as providing a versatile and necessary attribute for the community are important aspects of the Center. However, as noted above with the education outcomes and the stakeholders, the lower values for the research and education pillars are more a function of how the outcomes are valued, than any diminished importance. For example, we contend that the create community pillar, by virtue of what the site does, indirectly supports educational aspects. Another example is the citizen science outcome which provides education opportunities for K-12 students as well as adults. Secondly, for both Educate and Demonstrate and Partner in Research, value of outcomes will notably increase as Phase II is completed and the site expands in terms of use and variety of offerings.

Table 6: Stakeholder Market and Social Return on Investment by Center Pillar

Center Pillar	Outcomes	Market Value Creation	Social Value Creation	Market and Social Value Creation per Center Pillar
Create Community	Enhanced Reputation	\$4,794,677.00		\$39,036,538.00
	Sense of Community Pride		\$13,584,550.00	
	Cultural Value (including archaeology)		\$2,657.00	
	Amenity Value		\$1,424,868.00	
	Enhanced Marketing and Outreach Opportunities		\$211,409.00	
	Sense of Accomplishment by Volunteering		\$639,153.00	
	Physical Health		\$3,467,456.00	
	Mental Health		\$47,169.00	
	Earnings- Staff		\$3,290,866.00	
	Earnings- Interns		\$1,077,176.00	
	Earnings- Retail Sales		\$470,931.00	
	Visitor Fees Revenue	\$603,758.00		
	Archaeological Asset Protection		\$7,921,257.00	
	General Recreation Consumer Surplus		\$1,021,860.00	
	Real Estate Value Added		\$478,750.00	
Educate and Demonstrate	Gardener Water Savings		\$1,847,499.00	\$3,313,577.00
	Gardener Fertilizer Savings		\$169,807.00	
	Gardener Carbon Reduction-Social Value		\$50,036.00	
	Grants and Donations Income	\$905,637.00		
	Enhanced Earning Potential for Interns		\$23,569.00	

	Field Trip Value		\$206,485.00	
	Master Naturalist Program		\$8,490.00	
	Educational Value Towards Future Opportunities		\$102,054.00	
Partner in Research	Earnings from Research Stipends		\$2,173,528.00	\$2,196,984.00
	Value of Citizen Science		\$23,456.00	
Protect and Conserve	Soil Formation		\$181.00	\$13,877,361.00
	Soil Stabilization		\$17,897.00	
	Pollinator Populations Support		\$3,645.00	
	Water Quality- Natural Treatment		\$7,124.00	
	Biological Control- Invasive Species		\$1,026,388.00	
	Market Value of Carbon Credits	\$2,183.00		
	Market Value of Nitrogen Credits	\$256.00		
	Market Value of Phosphorus Credits	\$95.00		
	Storm Flooding Protection		\$16,065.00	
	Air Quality		\$6,943.21	
	Phosphorus Retention- Social Value		\$4,937.98	
	Nitrogen Retention- Social Value		\$2,569.59	

	Carbon sequestration- Social Value		\$3,079.16	
	Habitat Creation		\$1,059.89	
	Valuing the Water Source		\$12,784,936.66	
	Carryover from Phase I	\$997,813.00	\$6,496,649.00	
	Total Present Value	\$7,304,419.00	\$58,614,502.00	\$65,918,921.00
	Total Investment (Ph. I &II)			\$27,838,056.00
	Market and Social Return on Investment (dollar returned per dollar invested)	0.26	2.11	2.37

10.0 Conclusions and Recommendations

This study evaluates the integrated market and social returns of the Headwaters at the Comal Education Center project in New Braunfels, Texas. Integrated return is defined as the comprehensive economic, social, and environmental benefits of a project and presents a holistic depiction of the interrelatedness of factors contributing to an organization’s capacity to create value over time. Integrated reporting focuses on the nature and quality of an organization’s relationship with its key stakeholders including how and to what extent the organization recognizes and responds to its key stakeholders’ needs and interests. In this analysis, integrated social value was quantified using the EcoMetrics model, which was built on the guiding principles of SVI’s SROI Methodology. Stakeholder relationships are of primary importance to this approach. The SVI approach concerns an in-depth, evidence-based understanding of change for a full range of community stakeholders with recognition of both positive and negative changes as well as intended and unintended outcomes. Value in this context refers to the relative importance placed by a stakeholder group on one potential outcome over another. Assigning these valuations using SVI principles requires the use of financial proxies, as many of the identified outcomes are difficult to quantify using conventional accounting practices.

It is also important to note that because of the environmental component of this project, and it not being a typical SROI project, as well as the fact that this was an analysis of Phase II which is yet to occur, we had to modify the stakeholder process by using proxies for some anticipated stakeholders, as well as the environment itself. We do expect, however, that in subsequent evaluative reviews, we will reach out to these more specific stakeholders and also increase the number of stakeholders engaged.

Finally, we may find in subsequent reviews that we need to add or alter indicators. For example, we used a set fee for any type of visitor, but we anticipate that over time, with other site use types becoming available, pricing structure may change and that will impact use revenues. As this evolves, we will make adjustments in subsequent reviews. In summary, at this predictive stage there are some predictions that would be too speculative if we were to be too granular, and thereby compromising the “Do Not Overclaim” principle. A wealth of information was provided that significantly supported establishing the

baseline information and understanding anticipated outcomes. EcoMetrics LLC relied heavily on the various studies and planning conducted prior to the beginning of the site changes, and during Phase I. We recognize that Phase I was just a start in the transformation of this former NBU maintenance yard into a world-class showcase educational site and center. We also know that Phase II is but another step of a multiphase, long-term vision for the site, and that as each phase comes to fruition, more outcomes will be identified, and existing outcomes will see increase in value created.

- ***Integrate added value of One Water concept demonstration, education programming and community engagement.*** As noted in the report, over the next several years, NBU will be promoting increased conservation measures and incorporating innovative water management strategies as part of a One Water initiative. Headwaters will serve as a critical demonstration and education site for this work, amplifying the efforts of NBU and government partners tremendously. As site development continues and as Headwaters deepens community engagement on One Water, the EcoMetrics study should be updated to further identify, quantify, and value outcomes. This study already has identified several water-related benefits that could support NBU's overall goals, and further quantitative analysis can further strengthen knowledge of value created by the site.

It was clear from the research and site observations, and particularly the stakeholder engagement, that the Headwaters project and site is a very important addition to the local area, region, and the state of Texas as a whole. The site offers a unique opportunity to address source water protection of a very significant supply, and simultaneously provide a place to experience and learn about that water resource. This aspect, combined with the biodiversity and habitat importance, as well as the cultural and historical attributes allows for an unprecedented opportunity for everyone. The fact that most of the land in Texas is privately owned and public access to places is limited, the alignment of such as a valuable site combined with the ability to provide public access provides for an excellent situation.

10.1 Recommendations

Headwaters is well on its way to realizing its mission and vision. Phase I, albeit limited, has already seen productive results, and Phase II will build on that success. In regard to the EcoMetrics SROI analysis, the following recommendations are proposed:

- ***Continued stakeholder engagement.*** This SROI analysis has demonstrated the value of formally engaging with local and regional community members who have been to date and are potentially going to be further impacted by development and operation of the project to understand from their perspective what will change and how they value that change. To establish the long-term impact of the project on these local and regional stakeholders, Headwaters should continue to stay in contact with stakeholders as the project progresses and repeat the stakeholder engagement in the future. Specifically:
 - Identify and engage stakeholders from groups identified as possible beneficiaries but who did not yet exist at the time of this predictive
 - Enlarge the sampling size of stakeholder for as many of the stakeholder groups as possible. Consider “on the spot” interviews, exit surveys, or other follow up options for future users of the site

- Add a feedback portion to the Center’s website to allow for feedback regarding valuation of benefits aspects
- *Communicate the impact.* The SROI analysis reveals several impacts that the development of the project can have on a variety of stakeholders. Many of these impacts may be readily apparent to local stakeholders, such as the physical alteration of the landscape, while other impacts, such as the management of habitat, may be less apparent. It is important for Headwaters to communicate the ongoing results of the project to impacted stakeholders and potential investors to demonstrate the outcomes achieved by the project. Headwaters already has a very informative website and provides annual reports to the public. These provide an excellent avenue to be able to communicate the increased detail and content provided by the EcoMetrics analysis.
- *Measure the outcomes of the Headwaters project.* Use the methodology and lessons learned from this analysis to monitor the outcomes of the project, using the theory of change as the framework from which to identify expected and unexpected outcomes. Headwaters should continue to engage with stakeholders at regular intervals to understand the social value creation process over time and continue to build off the goodwill developed to date. Specifically:
 - Collect information on relevant and key assumptions for valuation, for example such as actual number of visitors, actual research opportunities realized, and donor funding levels
- *Integrate implications of the One Water Strategy.* As noted in the report, NBU is integrating a One Water Strategy and they see Headwaters as a centerpiece of their effort. As this concept evolves, the EcoMetrics study should be updated to further identify, quantify, and value outcomes related to the site and the One Water Strategy. This study already has identified several water-related benefits that could support NBU’s overall goals, and further quantitative analysis can further strengthen knowledge of value created by the site.
- As part of accomplishing these reviews, the outcomes, proxies, and specific quantification and valuation indicators should be updated. At this point, it is too soon to speculate exactly which will change and how. Specifically:
 - For the parameters noted as sensitive or having resulted in notable limitations during the predictive analysis, continue to conduct research to reduce the uncertainty and variability in the proxies.

Appendix I – Works Cited

Prehistoric background. Headwaters at the Comal. (2020, June 8). Retrieved from <https://headwatersatthecomal.com/the-headwaters/historical-information/prehistoric/>

Historical information. Headwaters at the Comal. (2020, June 8). Retrieved from <https://headwatersatthecomal.com/the-headwaters/historical-information/>

Comal Springs and Landa Park. (n.d.). Retrieved from <https://www.edwardsaquifer.net/comal.html>

International Integrated Reporting Council. (2013). *Capitals: Background paper for < IR >* (p. 12).

International Integrated Reporting Council.

Social Ventures Australia. (2011). *Managing to Outcomes: A Guide to Developing an Outcomes Focus*

(p. 28). Social Ventures Australia. <https://www.socialventures.com.au/assets/>

SROI Network. (2012). *A Guide to Social Return on Investment.* Cabinet Office.