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***Community Participation in the Management of
Large-Volume Materials***

**Managing Earth's Resources
Beverly, Massachusetts**

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ABSTRACT

Currently, local communities are minimally involved in the management of large-volume materials, such as ash produced from power plants, dredged sediment from waterways, and processed sewage. These materials are bringing health, economic, and environmental damage to the North Shore of Massachusetts. This project is an attempt to first assess the current level of community participation in the management of large-volume materials, and then to increase the amount of participation. Educated, community-driven decisions with regards to large-volume materials management will lead to better management of the resources, and hence reduce health and environmental damage, as well as provide positive economic opportunities (Chelsea Center, 2002).

SUMMARY

TARGET COMMUNITY

The target community that was involved with this project was the residents of the North Shore of Massachusetts who are affected in some way by what is done with locally present large-volume materials. Large-volume materials (LVM) found in this community include ash produced from power plants, dredged sediment from waterways, and processed sewage. The specific towns and cities in the North Shore that took part in this project were Beverly, Salem, and Peabody. There were also some other small towns surrounding the area that were involved, simply because of their close proximity.

PROBLEM STATEMENT

If large-volume materials that exist on the North Shore continue to be used and disposed of as they have been in the past, LVM will continue to cause health, environmental, and economic damage. One reason for current irresponsible management practices, is that LVM are being managed and disposed of with very little input by local communities. This has resulted in situations such as the one seen in the power plant in Salem, Massachusetts. For years, ash from the plant was dumped in nearby communities, and now there is evidence that some of the ash has seeped into Wenham Lake, the only water supply for many area residents. If actions like this continue, there is evidence that the water supply could become too polluted for consumption (Ipswich River Watershed Association, 2002, Summer).

GOAL

The goal of this project was to increase community participation in the managing of large-volume materials. The local residents are usually left out entirely when it comes to decisions about what to do with LVM in their community. This project aimed to increase the level of participation by the community so that there is an ongoing dialogue between the producers and disposers of the materials, and the local residents. This would ensure that the interests of community members are taken into consideration when decisions are made concerning what to do with LVM in the community.

OBJECTIVES AND OUTPUTS

By April 2003 we hoped to have: a clear understanding of the community's knowledge regarding LVM management; an inventory of current LVM usage; determined which management practices need changing; and a list of alternative methods for LVM management and usage.

A successful project would produce the following outputs:

- A list of who is currently recycling or blending LVM and how those materials are being used. This has been partially achieved. Further research is needed to complete this list.
- Questionnaires. This has been fully achieved.
- Responses from the questionnaire, compiled into a report which shows what the community currently knows about what happens to LVM in their community. This has been partially achieved. We need to disseminate the questionnaire to the community more fully.
- A list showing who is producing LVM in this community, and what they are doing with them. This has been fully achieved.
- A report analyzing the current management processes, which will be presented to the community for consideration. This report needs to be written. Then the report needs to be presented to focus groups, and their response to it taken into consideration.
- A list of alternative methods for managing materials. This has been partially achieved. Further research needs to be done.
- A list of organizations that will move forward with us to bring improvement to managing practices. This has been partially achieved. More contacts need to be made, and partnerships formed.
- Definitions of real and potential barriers to implementing alternative practices. This needs to be researched and compiled.
- A decision made by the community stating which alternatives are best. This would be done by focus groups and town meetings.
- Educational tools (e.g. videos, curriculum, etc) surrounding the issue of LVM management, specifically focusing on the alternatives decided upon by the community. This has been partially achieved. We still need to gather more educators, residents, and students using focus groups and other gatherings to develop these tools.

CONCLUSION/RECOMMENDATIONS

The goal for this project has remained unchanged. The project objectives and objectives have been adjusted to allow for delays and unexpected occurrences which have slowed down the project since its original conception. We probably could have completed the project if we had more money and better partnerships with other organizations in the community. The fact that I no longer work for MER has been a huge unexpected event that has made it much harder to achieve the project's objectives. For those doing a similar project in the future, it would be important to form strong relationships with other people and organizations in the community. Also, if one wanted more assurance of success, it would be important to have the money for the project in hand or guaranteed before starting.

THE PROBLEM

PROBLEM STATEMENT

If large-volume materials (LVM) that exist on the North Shore, such as ash produced from power plants, dredged sediment from waterways, and processed sewage, continue to be used and disposed of as they have been in the past, LVM will continue to cause health, environmental, and economic damage. One reason for current irresponsible management practices, is that LVM are being managed and disposed of with very minimal input by local communities. This has resulted in situations such as the one seen in the power plant in Salem, Massachusetts. For years, ash from the plant was dumped in nearby communities, and now there is evidence that some of the ash has seeped into Wenham Lake, the only water supply for many area residents. If actions like this continue, there is evidence that the water supply could become too polluted for consumption (Ipswich River Watershed Association, 2002, Summer).

Local communities are not involved in LVM management for several reasons. One reason is because the people who have been responsible for LVM management have managed it quietly and behind the scenes. In other words, the vast majority of citizens never see how large-volume materials are disposed of. An additional reason is that the harmful impact of current LVM management relative to other options is not known within local communities. Finally, local communities are not involved in the planning process because they are not aware of alternative methods to manage the resources.

Educated, community-driven decisions with regards to LVM management will lead to better management of the resources, and hence reduce health and environmental damage, as well as provide positive economic opportunities (Chelsea Center, 2002). In order to reduce the harmful results of bad LVM management, the local community must be involved in the planning and management of the materials. To accomplish this, the community must discover what is currently being done with large-volume materials, and determine which actions are positive and which are negative. In addition, alternative methods for managing the materials must be ascertained.

If this community decides it wants to change some of the current managing styles, then we can present to them as one option, recycling the materials. The materials can only be recycled if they are *uncontaminated*. So in the end, the community will hopefully be encouraged not only to recycle any uncontaminated materials that currently exist, but also to push for less contamination of LVM in general. Current levels of

contamination vary widely depending on the material and where it is located. Some are completely uncontaminated (such as sediment that is being dredged from two lakes in Iowa), while others are very contaminated (such as much of the ash from the Salem power plant).

TARGET COMMUNITY

The target community that was involved with this project was the residents of the North Shore of Massachusetts who are affected in some way by what is done with locally present LVM. The specific towns and cities in the North Shore that took part in this project were Beverly, Salem, and Peabody. There were also some other small towns surrounding the area that were involved, simply because of their close proximity. These include Marblehead, Manchester and Wenham.

The population of these cities and towns is about 160,000. They are about 90% White, 4% Asian, and 3% Black. Hispanics make up about 7% of the population. (Mass.Gov, 2003) These figures hide some of the diversity in the area. For example there are some very wealthy neighborhoods, as well as many homeless people in the area (Hogan, 2003).

All these towns and cities are affected by one or more of the LVM that are being focused on for this project; they either receive electricity from the power plant, use the sewage system in the area, and/or have waterways that have been or may need to be dredged. Some of the towns are tied even more closely to the LVM, as is seen in the aforementioned example of ash contaminating the local drinking water supply.

There are numerous large-volume materials and material-generators that exist in the area. The Salem Power Plant and the South Essex Sewage District are two major generators of ash and processed sewage respectively. There is also a lot of sediment in various waterways (rivers, lakes, harbors). In addition there is yard debris and construction and demolition debris.

ASSUMPTIONS

The North Shore of Massachusetts, and New Englanders in general are known for keeping to themselves and not getting involved with issues that do not affect them personally. But if something does affect them, then they are known for being very intent on fixing the issue. People on the North Shore have close ties to their town or city, and do not naturally reach out across town-lines. The issues that this project deal with affect

the entire community, any race, young and old, educated and uneducated. Therefore, it will be important to not only show the community how the issues affect them, but also to gain regional support for the project. Because of the behind the scenes nature of most LVM management, and because most New Englanders tend to keep to themselves, these communities may have been more susceptible than others to unhealthy LVM management.

Fundamentally, this project dealt with economic externalities. “An externality exists when the benefits or costs of an action are not fully incurred by the individual doing the activity (when private costs do not equal social costs).”¹ Currently, in dealing with LVM, the externalities are often negative. The benefits go to “those who can retain a [positive] economic connection” to the action, while the rest of the population deals with the adverse economic effects of the action (Mander & Goldsmith, 1996). The goal of this project was to create positive externalities with regards to LVM.

First of all, communities are often forced to pay for the clean-up and/or disposal of large-volume materials. Another negative externality is that property value drops for those living near places such as ash dump-sites. Through the increased awareness that the project will bring about, these same materials could actually become a source of income, as they are used to make product such as cement or high-quality soils. Re-using the material will also cut down on dump-sites, since there will be less material to dump. So instead of sucking money from a community, the materials may become a way of injecting money into the community.

In addition to this relatively direct economic benefit to the community, there is also a less direct economic benefit. This benefit stems from the fact that compared to current uses of LVM, alternative uses could significantly lessen the environmental impact on the earth. This will save money years down the road, since if current trends continue, the resources will be used up, as has already happened in some areas (Mander & Goldsmith, 1996, p.22). So the economic life of our environment could be extended as a result of the project.

¹ <http://www.faytech.cc.nc.us/~burnsc/eco251/ressol.htm>

PROJECT GOAL

GOAL STATEMENT

The goal of this project was to increase community participation in the managing of large-volume materials (LVM), such as ash produced from power plants, dredged sediment from waterways, and processed sewage.

In order to be sure that the project would move toward achieving this goal, I defined discernable, doable objectives. 1) We would evaluate the public's current knowledge regarding what happens to LVM. 2) We must discover what is currently being done with LVM. 3) We must determine which current managing practices are positive, and which need changing or refining. 4) We must find and present to the community alternative methods for managing LVM. This proposed process follows the general proven outline put forth by the Chelsea Center for Recycling (Chelsea Center, 2002).

Before moving toward these objectives, some preliminary research needed to be accomplished. This included finding out what markets exist for blended or recycled LVM. If markets existed, then it would be a viable business venture to proceed with the project. (If markets did not exist, the project would still be valuable as a means to increase public participation in the management of LVM. While the participation would not be toward the end of making money, it would still serve the greater purpose of improving the health of people and their earth.) From what we now know, certain markets do exist, such as blended soil for golf-course construction (see appendix) – but more research is needed surrounding the possibilities of these markets.

CURRENT COMMUNITY CONDITIONS

Currently, local residents are almost entirely left out of any decisions regarding what to do with large-volume materials. But some progress can be seen. The Chelsea Center has been working hard to involve local residents in decisions regarding recycling in their communities. But their work has not focused on large-volume materials. The Wenham Lake Watershed Association has been involved in a very visible fight to get the ash removed from the bottom of Wenham Lake, as well as working for cleaner air standards for the Salem Power Plant. But their work has not focused on the reuse of any of the ash – even the ash that may not be polluted. So as far as community participation in the management of LVM goes – there is virtually none.

DESIRED COMMUNITY CONDITIONS

This project aimed to increase the level of participation by the community so that there would be an ongoing dialogue between the producers and disposers of the materials, and the local residents. This would ensure that the interests of community members are taken into consideration when decisions are made concerning what to do with LVM in the community. Since levels of participation at the beginning of the project were so minimal, any increase at all would be positive and would meet the goal of the project. But ideally, by the end of the project we hoped to have formed strong relationships between the producers and disposers of the materials on the one hand, and local residents on the other. The residents could be represented by a group created solely for this purpose, or possibly by an already existing organization. This would be worked out in the final stages of the project. These relationships would be ongoing, so that any time there is an important decision to be made regarding the management of LVM, the community would be a vital advisor.

PROJECT OBJECTIVES

OBJECTIVES

By April 2003 we hoped to have:

- A clear understanding of the community's knowledge regarding LVM management.
- An inventory of current LVM usage.
- Determined which management practices need changing.
- A list of alternative methods for LVM management and usage.

Additionally, in the months following April we anticipated:

- The development of educational tools for teaching communities about LVM management.

In time, with the implementation of similar projects, we seek to reduce pollution and the sheer volume of materials, by reusing them.

OUTPUTS

A successful project would produce the following outputs:

- A list of who is currently recycling or blending LVM and how those materials are being used. This list would show us if markets exist for the reuse of large-volume materials. If the markets do exist, then this project may be economically, as well as environmentally important.
- Questionnaires. Questionnaires were chosen because they were thought to be the quickest and least expensive way of gathering quantitative information regarding the community's knowledge of LVM management.
- Responses from the questionnaire, compiled into a report which would show what the community currently knows about what happens to LVM in their community. This information would form the foundation for the rest of the project, i.e. once we know how much the community knows, then we will be able to move forward toward increasing their awareness. We need a baseline so that we can start somewhere, and move on from there.
- A list showing who is producing LVM in this community, and what they are doing with them. This output would also be part of the foundation for this project, since we need to know what is currently being done with the materials if we are to decide which management processes need changing and which do not.
- A report analyzing the current management processes, which will be presented to

the community for consideration. Through focus groups, the community would then decide which management practices need changing, and this information would also be compiled into a report. This report would include the number of people who think each LVM is being managed well and which are not, possible changes that are proposed, as well as any consensus that is reached. These reports are a way to quantify the decisions that are made during discussions and focus groups. Making the decisions is the objective.

- A list of alternative methods for managing materials.
- A list of organizations that would move forward with us to bring improvement to managing practices.
- Definitions of real and potential barriers to implementing alternative practices.
- A decision made by the community stating which alternatives are best. This would be done using focus groups and town meetings.
- Educational tools (e.g. videos, curriculum, etc) surrounding the issue of large-volume materials management, specifically focusing on the alternatives decided upon by the community. The previous four outputs would essentially be compiled into these tools. We would gather educators, residents, and students using focus groups and other meetings to develop these tools. The result of this objective would be increased awareness of the issue, as well as the ability to educate others regarding LVM management.

BACKGROUND

There are numerous environmental groups in the area, but none of them have the same focus as the organization that I worked for. The nonprofit that I worked for, Managing Earth's Resources (MER), is concerned about long-term planning for the future, as it relates to the reuse of large-volume materials. MER is a small organization and is not well-known in the community yet, although it does have some important links to environmentalists and politicians. MER is well-connected to the scientific community across the country, especially those involved with the reuse of LVM.

I got involved with this project because I was looking for a project that would fit into the definition of a CED project. At the time, I was concentrating most on seeking out a project that focused on community participation. The director of MER started a conversation with me in a coffee shop relating to a book I was reading for CED. By the end of the conversation it was clear that she needed someone to work on a project about raising community awareness regarding LVM. The project was part of a larger strategy

to reduce pollution and the volume of materials, by reusing them. We seemed to have a perfect match, so I began at MER with this project as my main responsibility.

Other important stakeholders came from the communities involved in the project. In general, the residents of Beverly, Salem, and Peabody (the towns that the research was focused on) would have an increased awareness of what happens to their community's large-volume materials, as well as the opportunity to join in the planning and managing of these materials. The citizens of Salem, who were recently involved in a dispute over the dumping of dredged material in Salem Harbour, would likely be more willing to participate in the current project, due to their past involvement with MER. The people who were interviewed during the research would have even more knowledge, be able to make more informed decisions, and would have even greater opportunity to get involved in the managing of LVM.

Community leaders and politicians are another important group. This group could either be positively or negatively affected by the project, depending on how they respond to the research. Their support would be very helpful because of their influence with regards to funding, as well as developing or swaying public opinion. If the communities become excited about being involved with the planning and managing of LVM, then the leaders have two choices: they can support the project and MER's goals, which would lead to increased popularity, or they can oppose the project which would lead to decreased popularity. Since politicians' careers are founded upon the public's opinion of them, the project could affect their political aspirations. Some of the leaders that may be affected are: U.S. senators John Kerry and Edward Kennedy, Massachusetts senator Fred Berry, the Marblehead selectmen (who were involved in the Salem Harbour debate), State representatives, the mayors of Beverly, Salem, and Peabody, and Governor Romney.

Pacific Gas and Electric and South Essex Sewage District are utilities that have ties to this project. They all had major roles to play in the project, because the project was about large-volume materials that entities like them produce. They could be affected by the results of the research, i.e. the community may hold them more accountable in regards to their LVM management. If the utilities take up the cause of caring more about their LVM, then they could become partners in the research and development of better ways to manage the materials, which would also increase their reputation in the community. If they resist change for whatever reason (from ignorance to increased financial burden in the short run), then it may mean a more uphill battle in figuring out

how to better manage the materials. It will be vital to present the utilities with scientific facts and sound economic reasoning in any discussion with them, to try and pull them toward “our side.” For example, in the long run, it should be less expensive to recycle the materials and sell the recycled goods, than it is to dump them. Also, recycling the material is more environmentally sensitive, which is important to many people. It was important to involve the utilities in decision-making and planning processes in order to gain their support.

There are also some groups that will be closely tied to the project through their consulting and partnering relationship with MER. The Wenham Lake Watershed Association should have been more involved in the project, because there is an intense debate occurring right now over what to do with ash on the bottom of the lake that needs to be dredged. The lake supplies drinking water for Beverly and Salem. The Chelsea Recycling Center had potential to be very helpful to the project. The Center is currently involved with numerous types of recycling. If MER could have developed a partnership with the Recycling Center, there was the possibility of joining resources to improve the situation for all involved. The Chelsea Recycling Center needed to be approached in a non-threatening way, and shown that MER did not want to compete with it. MER’s non-profit status would have been an important part of this approach.

RESULTS

This project has produced the following outputs:

- A list of who is currently recycling or blending large-volume materials and how those materials are being used. This database would show if markets exist for the reuse of LVM. If the markets do exist, then this project would be economically, as well as environmentally important.
 - This has been partially achieved (see appendix). It is clear that some markets do exist, but further research is needed to complete this list.
- Questionnaires.
 - This has been fully achieved (see appendix).
- Responses from the questionnaire, compiled into a report which shows what the community currently knows about what happens to LVM in their community. This information would form the foundation for the rest of the project, i.e. once we know how much the community knows, then we would be able to move forward toward increasing their awareness. We need a baseline so that we can start somewhere, and move on from there.
 - This has been partially achieved (see appendix). The responses we received showed a lack of awareness about LVM, but we need to disseminate the questionnaire more fully to the community.
- A list showing who is producing large-volume materials in this community, and what they are doing with them. This objective would also be part of the foundation for this project, since we need to know what is currently being done with the materials if we are to decide which management processes need changing and which do not.
 - This has been fully achieved (see appendix).
- A report analyzing the current management processes, which would be presented to the community for consideration. Through focus groups, the community would then decide which management practices need changing, and this information would also be compiled into a report. This report would include the number of people who think each LVM is being managed well and which are not, possible changes that are proposed, as well as any consensus that is reached. These reports are a way to quantify the decisions that are made during discussions and focus groups. Making the decisions is the objective.

- This still needs to be done.
- A list of alternative methods for managing materials.
 - This has been partially achieved (see appendix). Further research needs to be done.
- A list of organizations that would move forward with us to bring improvement to managing practices.
 - This has been mostly achieved. A few more contacts need to be made, and partnerships formed, but most major organizations have been identified, i.e. the producers of LVM in the community, Chelsea Recycling Center, and Wenham Lake Watershed Association.
- Definitions of real and potential barriers to implementing alternative practices.
 - This needs to be researched and compiled.
- A decision made by the community stating which alternatives are best. This would be done using focus groups and town meetings. The purpose of these meetings would be to gather qualitative information. The interviews and lists give important quantitative information, but in order for the decisions regarding these issues to be informed, the research must be able to probe deeper. A focus group allows for flexibility, speedy results, and depth – at a relatively low cost (Palakurthi & Karush, 2001, Fall). It also includes local residents in the decision-making process.
 - This still needs to be accomplished.
- Educational tools (e.g. videos, curriculum, etc) surrounding the issue of large-volume materials management, specifically focusing on the alternatives decided upon by the community. The previous four outputs would essentially be compiled into these tools.
 - This has been partially achieved. We made contact with some educators and schools, but we still need to gather more educators, residents, and students using focus groups and other gatherings to develop these tools. The result of this objective would be increased awareness of the issue, as well as the ability to educate others regarding LVM management.

CONCLUSION/RECOMMENDATIONS

CONCLUSION

The goal for this project has remained unchanged, although some objectives and outputs were adjusted throughout the project. Since the goal was to increase participation, any increase would have been good. I did not want to quantify the goal for this reason. Of course, more participation is better. If the project achieved its objectives, there would definitely be a significant increase in community participation surrounding what is done with large-volume materials (LVM).

The project's hopeful accomplishments by April 2003 have been adjusted to allow for delays and unexpected occurrences which have slowed down the project since its original conception. We probably could have completed the project if we had more money and better partnerships with other organizations in the community. Since I started at MER, we consistently tried to raise money. We traveled to Washington D.C. to meet with aides for various Senators and Representatives, we wrote over fifteen proposals to foundations, and we approached a number of individuals for money. All of these activities came up fruitless. The executive director had been supporting MER by working weekends. When she decided to stop working weekends in order to take better care of herself, and in order to devote herself more wholly to MER, our money eventually ran out.

There are basically two organizations whose similar missions could have been a great resource for MER, had we been able to partner more effectively with them. However, forming relationships with these organizations was hampered by unhappy interactions in the past between the organizations and MER. The strained relationships were the result of miscommunication, egos, and perceived turf battles. I believe that I was beginning to form positive relationships with these groups by listening and communicating, but then we ran out of money, and I ceased to work for MER.

The fact that I no longer work for MER has been a huge unexpected event that has made it much harder, if not impossible to achieve the project's objectives. This is true mainly because I have done all the work to date as a MER employee. Therefore, MER has the proprietary rights to a lot of what I have done. Technically, MER still exists (it has not lost its 501(c)3 status). So I do not have the freedom to take my work elsewhere. Due to personal issues that my executive director was dealing with, I have not been in touch with her for many months, and I do not think I will be in touch with her in the future. However, I do not want to risk her coming back into the area and seeing

that the project that I was working on for her has now been taken over by one of these other organizations – especially since she did not have a very positive working relationship with either organization. I would risk legal action as well as the personal risk to our friendship.

RECOMMENDATIONS

For those doing a similar project in the future, it would be important to have the money for the project in hand or guaranteed before starting. If we had more money from the start, MER could have devoted a lot more time to actually implementing the project – including interviews and seeking partners in the community. In addition to the time that would have been freed up, MER would have had money to print out and disseminate more questionnaires as well as convene focus groups.

If one wanted more assurance of success, it would also be vital to form strong relationships with other people and organizations in the community. First of all, these relationships are necessary if one wants to define a project as community economic development. “Authentic participation,” as defined in Annex 1 of the Fall 2002 CED 793 syllabus, is the phrase that best sums up the meaning of “community” in “community economic development.” Authentic participation is participation that affects the decision-making element of a project (Aricanli, 2002, Fall). This means that the community is intimately involved with the decision-making surrounding the planning and implementation of the project.

At first glance it may have seemed contradictory for me to write a project proposal, i.e. a plan to implement a proposal, before I had talked with the community. But the fact is that one has to start somewhere. As a part of the community that my project was happening in, I became interested in the project after hearing about some of the issues surrounding large-volume materials. Then, as a community member, I wrote up a proposal. This proposal was my best effort at addressing the issues surrounding LVM management in my community. But it was just a proposal. I wanted and expected the community to be involved with any changes to the planning and implementation of the project. In fact, if it came down to it, and the rest of the community really was not interested in the project, I was prepared to let it go. However, the community did voice an interest in the matters taken up by the project.

First of all, it is the community that wants something to be done about large-volume materials. We know this from the interviews to date, that have shown that people would like input into what happens to LVM, as long as they are aware of how the

materials are affecting them (i.e. if it is in “their own back yard”). One of the biggest ways that it is in their own yard is that communities have to pay for clean-up when materials are mismanaged (e.g. the ash in Wenham Lake). Also, these materials can cause environmental degradation, not to mention the aesthetic displeasure of looking at and smelling a land-fill. When people understand these issues, they want to be involved.

Secondly, the community would be involved because they would be helping to choose which materials need better management, and which type of reuse of the product is right for their community. They would match the material with the needs of their community (e.g. does the community need housing, soccer fields, better soils, etc).

Thirdly, the community would be involved in deciding which educational tools would best suit their community, and in the creation and implementation of the tools.

Finally, it would be authentic community involvement because once the community was educated about LVM management, they would form pressure groups to get changes set in place. MER would not play a primary role in this aspect, but would accomplish this through partnerships with local environmental groups who already have the infrastructure in place to form these types of groups. The groups would put pressure on either the generators of the materials and/or politicians, depending on which group responds.

Forming relationships with other community members, also aids in the economic component of a project. An economic component is also vital to a project, if it is to qualify as CED. First of all, communities are often forced to pay for the clean-up and/or disposal of large-volume materials. Through the increased awareness that the project would bring about, these same materials could actually become a source of income, as they are used to make cement or high-quality soils. So instead of sucking money from a community, the materials may become a way of injecting money into the community.

In addition to this relatively direct economic benefit to the community, there is also a less direct economic benefit. This benefit stems from the fact that compared to current uses of LVM, alternative uses could significantly lessen the environmental impact on the earth. This would save money years down the road, since if current trends continue, the resources will be used up. So the economic life of our environment could be extended as a result of the project.

In order for the project to meet the criteria of “development,” it must last beyond my tenure as the project coordinator; it must grab the attention of the community at large, and be taken on by them after I leave. Again, relationships were key to this aspect of the