The Creation of a Regional Voice: 
The Care and Feeding of the Northwest Biosolids Management Association

M. Lono-Batura*, D. Thompson**

*Northwest Biosolids Management Association, 201 S. Jackson St., KSC-NR-0512; Seattle, WA 98104
(E-mail: maile.lono@metrokc.gov)

**City of Tacoma-TAGRO, WA, 2201 Portland Ave., Tacoma, WA 98421
(E-mail: dthompson@cityoftacoma.org)

Abstract The biosolids producers in southwest Canada and the northwest United States have banded together to form a biosolids information network with the purpose of advancing the environmentally sound management of biosolids through education and information, regulations development and research and demonstration. This organization currently known as the Northwest Biosolids Management Association (NBMA) has grown from a gritty band of 14 sludge management visionaries to a fully incorporated non-profit association of over 200 members in both the private and public sectors. What spark ignited this conflagration of creativity? What calamity could possibly convince 200 relatively sober agencies to pony up a collective $200,000 American every year? What great cosmic bellows continues to force the airs of inspiration into the dry and desiccated souls of Biosolids managers across beautiful British Columbia and beyond? The answers lie in the modern day alchemy that is biosolids management. It is the inspiration gained from spinning gold out of something less aesthetically pleasing. It is the satisfaction in communicating to a mass audience the technical and counter intuitive science of residuals treatment. Creation and maintenance of a Biosolids information network is an essential tool in fostering the environmentally sound use of this extremely useful product.

Keywords Biosolids, recycling, network, regional, association, collaboration, credibility, research

The Northwest Biosolids Management Association (NBMA) is an organization made up of publicly owned treatment plants, consultants and other private entities dedicated to advancing environmentally sound biosolids management.

Members of the Northwest Biosolids Management Association (NBMA) support the beneficial use of biosolids and have joined forces to meet the challenge of finding safe, economical ways to manage biosolids. The organization's purpose is to share knowledge about biosolids management between member agencies and companies; local, state and federal regulators; and the general public.

We came together as an organization in May of 1987 to address a crisis in wastewater treatment. That crisis was the increasing public opposition to specific Biosolids (or sludge as we called it back then) land application projects and the looming increase in production brought on by the implementation of full secondary treatment as required by the U.S. Clean Water Act. The reality that lagoons were becoming mud flats, digesters were full and we were all dependent on a handful of unreliable and very nervous end users lead us to drastic action. We actually started talking to each other. You see, we wastewater operators are an independent lot by nature. We do not naturally consult and group think. It took a region wide system breakdown to force us to do more than share our meager successes.

In the late 1980’s the Northwest United States was the epicenter of the anti-sludge culture. We were home to such crusading legends as Linda Zander and the Victims of Sludge, Canada’s own Dr. Susan Cook, T.V. Star Linda Evans and the infamous CATS or Citizens Against Tulalip Sludge. In these dark days the woeful refrain of a land application project gone awry was heard from Grants...
Pass, Oregon to the interior of British Columbia. It got so bad that we could no longer pretend that all was well and our Biosolids recycling programs were a thundering success.

One rainy night in May of “87” seven down trodden Biosolids program managers gathered in Mukilteo, Washington and admitted defeat. The conversation that night was at once depressing and revealing. Land application was under siege in virtually every corner of Washington State. Public opposition was everywhere and it was based on fear not fact. Perhaps the most startling discovery was that we were all playing by a different set of rules. At that time local health districts regulated land application of biosolids. There are 34 health districts in Washington State. Consequently there were 34 different sets of rules. If this wasn’t bad enough there was no agreement between regulators, generators or academics on nomenclature or language. The result was a cacophony of alternately simplistic and scientific terms, many of which sounded gruesome, dangerous, or downright satanic. This lack of clarity regarding our product, our programs and our processes coupled with an unwieldy regulatory jumble was the perfect recipe for creating wild eyed activists. In the United States we don’t put loons on our currency but there are many that would contend that lunacy is the coin of the realm. The ray of hope that emerged from these discussions was that although our troubles were great, they were largely of our own making and there was something we could do about it.

Several tasks were of immediate concern. We needed a strong state presence in Biosolids regulation to provide leadership to the scattered and disparate local regulatory authorities. We needed to establish a credible body of biosolids technical information that was easily accessible by generators, regulators and the general public. Perhaps most importantly we needed consensus and a unified voice within the regulated community on key Biosolids issues.

The NBMA was organized around these initial critical problems. The organization addressed these daunting issues by committing itself to six goals:

1. Foster Intergovernmental cooperation  
2. Develop Biosolids land application sites that could be available to any agency  
3. Participate in the development of local, state and federal regulations affecting Biosolids  
4. Inform the public about Biosolids management issues  
5. Develop an equipment sharing network  
6. Provide continuing education for members.

Goals centering around communication and credibility quickly rose to the forefront. We recognized early on that credibility would be a critical element in accomplishing our goals. We also recognized that, as Biosolids generators, we had no credibility. Extraordinary efforts were made to establish and maintain a credible voice. Our first and perhaps most important step was to establish a unified voice on Biosolids issues. Prior to the formation of the NBMA conflicting information from Biosolids recycling experts was common. The academic community was split not on basic Biosolids facts but on nomenclature and local prevailing recycling methods. It was a classic blind men and the elephant scenario. Each expert had a hold of a different part of the elephant and the Biosolids stories they told were completely different and often apparently conflicting. Everyone’s credibility was damaged. As far as the public was concerned, no one knew anything for sure.

An important element in establishing a unified voice on Biosolids issues has been the coordination of Biosolids research activities at the major academic institutions in our area. Just getting the academic leaders to talk to each other resulted in a more consistent message. Coordinating research
and sharing the findings created a synergistic phenomena that exponentially increased the body of knowledge pertaining specifically to Biosolids recycling in the northwest and at the same time fostered a dialogue between the experts resulting in agreement on key Biosolids terms.

The NBMA funds research at local academic institutions on a variety of topics. In the past this has included the fate of heavy metals in various land application options, nutrient management, erosion control, the manufacture and use of various Class A products, wetland and mine restoration with Biosolids products, and growth response of a variety of crops. The expertise developed by the University of Washington, Oregon State University and Washington State University has allowed these institutions to play a very important role in our public and customer outreach efforts. Nearly half of the NBMA budget is allocated to contract research with northwest academic institutions. Our support of University research programs has helped them to become world renowned experts in the field of Biosolids recycling. In return, we have received information that has helped us refine our management programs and we have developed credible expertise in our own backyard.

In addition to partnering with the Universities, the NBMA serves as a clearinghouse for biosolids information. Disseminating information to Biosolids practitioners was an important element in creating a unified voice on Biosolids issues. The NBMA Technical Resource Center is composed of the Organic Residuals Reference Center housed at the University of Washington and the NBMA website (NWBIOSOLIDS.ORG). Building a well organized technical resource center has helped the NBMA provide timely information to our members and establish the NBMA as a source of technical information for regulators and the public.

A key to the success of the NBMA has been the structure of the organization. The mission of the NBMA can be broken down into specific goals. The accomplishment of these goals is delegated to committees made up of member volunteers. The challenges facing the Biosolids industry have changed over the last 20 years. The NBMA committees have changed in response.

For example, the NBMA had a committee responsible for securing communal land application sites in the late eighties and early nineties. The concept was that permitting land application sites was onerous and required expertise and time. Smaller agencies simply didn’t have the resources to locate and survey potential sites, create acceptable land application plans and go through an uncertain and constantly shifting regulatory maze. Many agencies could pool their resources and permit one very large site for everyone to use. What could possibly go wrong? As it turns out, nearly everything could go wrong. Large sites are difficult to find, sometimes crossing jurisdictional lines. Dealing with multiple landowners created challenges and perhaps most importantly large sites are lightning rods for public concern.

At its inception this committee had tremendous energy and much participation. A few sites were established but the advent of the 503 rule and the streamlining of state regulations opened up new opportunities. The major accomplishment of the committee was to highlight how unwieldy the regulatory structure was. The result was a major shift in regulatory philosophy at the state level and the emergence of a strong state Biosolids program committed to a science based biosolids rule. The opaque cloud of multi-jurisdictional regulations became penetrable by smaller less sophisticated agencies. It was actually possible to permit smaller sites at a reasonable cost. Interest in the regional site committee waned and the committee was disbanded.
The mission-oriented nature of the committees and the willingness of the NBMA to adapt to shifting challenges have served to keep the organization relevant for 20 years. The energy and enthusiasm of the volunteers staffing the committees has contributed greatly to the success of the organization. Small, focused committees have allowed volunteers to take ownership of projects and allowed them to see and feel that their efforts make a difference.

Enthusiastic volunteers are wonderful assets to any organization but it is often difficult to get follow through on projects from people that have significant commitments elsewhere. We have found it necessary to have full time paid staff to guide projects to completion. NBMA staff are responsible for the overall execution of programs and for the marketing strategy of the organization. In addition staff coordinate events, answer technical information request, and produce written communication materials. The presence of paid staff insures follow-up on all projects, and relieves volunteers of a workload that might interfere with their regular duties with their respective organizations. Staff are also available to handle technical information requests from regulators, members, and the general public on a daily basis. This provides timely access to information, better customer service, and improves our credibility.

The philosophy of the NBMA is to be inclusive rather than exclusive. We began as a collection of relatively large generators with immediate needs. It was obvious from the beginning that the smaller agencies needed help. It was equally obvious that any hard won successes secured by the larger entities could be wiped out by negative press from a poorly run Biosolids project at the smallest of agencies. It was in our enlightened self interest that we welcomed any agency into the fold. The NBMA has never turned down an application for membership. We have had concerns about the track record of some of our applicants but we believe that the mission of environmental and health protection is prevalent throughout the entire industry and our job is to provide the necessary tools for all entities to accomplish this mission to the best of their ability. What we have is a synergy when agencies of diverse circumstances work together. The large and experienced provide leadership and expertise and the small and rural provide a connection to the agricultural/forest communities where our products are often recycled.

The NBMA has fostered a collaborative relationship with regulators. We have extended open invitations to regulators to attend our meetings and events and have provided scholarships to regulators so that they may attend our conferences. The NBMA has collaborated with local regulators to conduct workshops on technical issues, contracted to write Washington’s Best Management Guidelines and provided (some would say endless) comments on rule and permitting issues. These efforts have resulted in an on-going dialogue between the regulators and the regulated. The common sense nature and streamlined character of our state Biosolids regulatory program is a direct result of this dialogue.

The NBMA has made an effort to partner with the users of Biosolids as well. The NBMA provides technical information to farmers, composters, and forest products, and mining companies. We have worked with farmers to put together displays at county fairs, organized public meetings and rural open houses and provided people and resources for school and 4H projects.

NBMA has worked extensively with cooperative extension agents through out the Oregon and Washington. Cooperative extension is probably the most credible Government agency in the U.S. agricultural community. The widespread success of agricultural land application of biosolids in the Northwest U.S can be directly attributed to the activities of the cooperative extension service.
As you might guess, funding research, creating outreach materials, and coordinating meetings, conferences and workshops does not come cheap. The NBMA has an annual budget of around $200,000 US that is reviewed and approved by the Board of Directors. Most of this money comes in the form of production share contributions. In keeping with the inclusive philosophy of the organization the NBMA only charges $75 per year per agency for public wastewater treatment agencies and $225-$1125 (based on number of employees) for private commercial entities. We ask for a substantial contribution based on Biosolids production from our public agencies. Tacoma for example pays an additional $25,000 per year in contributions. In addition agencies will sometimes provide money for special research or demonstration projects of particular interest. Most of the NBMA annual budget is made up of these production share contributions from the larger agencies. Some agencies prefer to treat their production share contribution as dues and others prefer to earmark their contributions to particular projects such as the technical resource library. The flexibility in the funding mechanism is designed to allow the organization to be as inclusive as possible by having very low base dues ($75). At the same time it provides a mechanism to raise a significant amount of money. In short, members are given the opportunity to pay into the organization whatever they think it is worth and can, in fact, direct their money to the parts of the organization they think can benefit their program the most. On the surface, this would appear to be a recipe for budget chaos but in practice it provides a fairly stable revenue source for the organization. The stable funding base is due to the strong commitment members have to the organization and the fact that the demonstrated value of the NBMA is an easy sell to utility administrators.

The rather ambitious goals of our organization have required a significant amount of money. Our research and demonstration budget alone exceeds $100,000 annually. We have found that having at least one full time staff person is critical in ensuring our goals are met and in making sure that regulators and the public get good service. We believe that there is a critical level of service below which we begin to lose our credibility.

The organization has prided itself in presenting a budget that runs lean while still delivering that critical level of service. Because of this lean budget, the NBMA has felt the impact of what would be minor blips in a cushioned budget. With the cost to fund the organization and critical programs increasing and some temporary cutbacks in major contributions, the organization has seen a budget deficit. The Board refused to draw from the emergency reserve account to fund the deficit as they had the past few years and asked a small committee to form new dues options. In 2007, the NBMA implemented its first dues increase since it’s incorporation in 1993. Annual base dues were increased by 50% to address the budget deficit (i.e. $50 to $75 for wastewater agencies). In addition to the base dues increase, members were asked to provide their percentage of the regional biosolids production. While the production share has always been a standard piece of the annual dues, it had been voluntary. So far, the majority of our members have sent full dues payments with a few exceptions.

Maintaining relevancy over 20 years has certainly given the organization a match to contend with. Many of the biosolids programs in the region are running smoothly, there is less public outrage to biosolids recycling projects due in large part to the credible resources and information that are available. Local, state and national Biosolids regulations are reasonable and revisions are met with critical review and comment. All seems to be running smoothly, so why worry – why get actively involved? Complacency became the new crisis of the NBMA. While the organization maintains a strong and committed membership base, many will be retiring soon and there will be a significant void in organizational knowledge and people power. How do you communicate the severity of this
crisis when the majority of your membership scopes calm seas ahead? Our focus has become communicating the necessity of staying tuned to the biosolids dial for updates and continuing to fund this worthy cause. We’re essentially communicating the message that was very clear at the inception of the organization – what would this region be like without biosolids recycling? How can you be a part of keeping this vision alive?

To help communicate this need and set a clear course for the organization, we embarked on a strategic planning process that allowed us to take an in-depth look at where our organization has come from, where we want to go and what it will take to get us there. Exercises included analyzing our strengths and weaknesses and potential opportunities and threats. We also brainstormed who our stakeholders are internally (currently involved) and externally (could be involved or that we just need to be aware of). The planning process also allowed the association to reassess our long-term goals and mission and to create a vision, strategies and values that align with these. The product of this two-year process was the NBMA’s 2005-2008 Strategic Plan that is utilized as a road map for the organization and will be reviewed and updated next year.

While all the pieces of this plan create the whole, our organizational values truly reflect the building blocks we feel are necessary for us to achieve our mission as a regional biosolids management association.

**Leading By Example** - We provide a model for collaboration among regulators, universities, public and private agencies and the community. Our members serve as models of best practices in the field of biosolids management.

**Continuing Support for Research** - Research is the key to understanding biosolids recycling. It is the basis for developing safe, practical beneficial reuse options and regulations.

**Practicing Environmental Stewardship** – NBMA members perform a vital public health service by treating wastewater and recycling treated resources back into soils and waters. We advocate biosolids management options that preserve and enhance the environment, while ensuring that our biosolids products provide real environmental value.

**Staying Aware & Responsive** – Recognizing that perception is reality, NBMA members consult and listen to the public and stakeholders. We respond to concerns with openness, understanding and information.

**Meeting the Challenge** – Our members provide an inclusive network of support for biosolids recycling. We challenge ourselves to fulfill our mission with excellence and integrity.

Ultimately it is the active participation of our members that we rely on to continue to support relevant biosolids programs and research and to literally be the eyes and ears of the organization. Our members are on the front lines every day and the strength and value of the information we present is dependent upon the input of our collective membership.

From its inception, the NBMA has focused on fostering communication between biosolids generators, regulators, researchers, private companies and the public and has succeeded in providing a regional voice for biosolids managers for the last 20 years. Because the organization has experienced a plethora of events, rule changes, partnerships and emerging issues over the years, it
has become necessary to be flexible to change and to welcome the growth that can come from it. We plan for tomorrow but always try to remember to live for today – enjoying the journey.