ASTSWMO
Beneficial Use Survey

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The Task Force wishes to thank all those who helped complete the survey. Without their cooperation, this report would not be possible. Even so, the Task Force takes full responsibility for the information and conclusions presented in this report.

Information from the survey has already helped the Task Force to better understand how individual States and Territories approach decision-making about the beneficial use of solid wastes. The Task Force and ASTSWMO will continue to use this information in developing additional tools to assist States and Territories.

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I. INTRODUCTION

In recent years, many States and Territories have received requests to approve the "beneficial" use of non-hazardous, industrial solid wastes - such as wood ash, foundry slag, and wastewater treatment sludges -- in lieu of disposal. The Association of State and Territorial Solid Waste Management Officials (ASTSWMO) believes the number of requests of this nature is increasing. Based on informal discussions, we also know that some States have formal programs to handle such requests, other States have processes to handle limited aspects of these requests, and other States currently have no capability to respond.

Given this wide range in programmatic experience, ASTSWMO's Solid Waste Subcommittee established a Beneficial Use Task Force (Task Force) to study how States are managing requests to use non-hazardous, industrial solid wastes rather than dispose of them in landfills. The Task Force's primary goal is to collect and share information that will assist States and Territories in developing or improving programs and processes to handle these requests.

The Task Force's scope includes large-volume, non-hazardous solid wastes or by-products from industrial, commercial, or manufacturing operations that would normally be disposed in landfills if not recycled or used in some fashion. Its scope does **not** include materials from the mixed municipal waste stream that are traditionally recycled, such as aluminum, glass, plastic, metal, paper, and yard and other vegetative materials. A list of waste types considered by the Task Force is included in Appendix B.

In late 1998 and early 1999, the Task Force prepared a Beneficial Use Survey which was mailed to all States and Territories on May 20, 1999. This survey was designed to gather information on beneficial use decision-making by States and Territories and on their current, approved uses of non-hazardous, industrial solid wastes. The survey consisted of 23 questions, many of which were further divided into sub-questions.

To assist people in completing the survey, the Task Force also prepared a list of frequently asked and expected questions, with corresponding answers, about terms or concepts that may have been confusing if not defined or explained (Appendix A). This list of questions and answers clarifies the thinking of the Task Force when the survey questions were initially created and may help others new to this program area.

The purpose of this report is to compile the information obtained from the survey and make it available to all State and Territorial Solid Waste Managers and other interested parties. For ease of discussion, the report presents results by general topics and categories, rather than in the order in which questions were asked in the survey. The Task Force hopes this information will be useful in developing or aiding the implementation of beneficial use programs. The Task Force also will use this

information to develop a list of additional needs, a work plan to address these needs, and educational materials for States and Territories.

At the time of this report, a total of 40 States and 2 Territories had completed the survey. A few States have many years of experience in this program area and have much to offer other States. On the other hand, States new to the program have also contributed some innovative program enhancements. All programs continue to evolve and improve with experience. The Task Force therefore cautions readers not to discount or directly assess the value or utility of any given method or tool based solely on the statistical results of the survey. That is, an excellent method or tool may only currently be used by a limited number of States, but that fact, in and of itself, should not necessarily deter another State from considering that option.

Section II of this report discusses results of the survey (Appendix C), grouped by categories of questions. Section III provides a brief overall summary and the Task Force's recommendations for follow-up activities, based on the survey results and other feedback obtained through discussions with States.

II. BENEFICIAL USE SURVEY RESULTS

A. Status of Beneficial Use Programs and Processes in Responding States and Territories

A total of 33 of the 40 reporting States, or 82.5 percent, indicated they had either formal or informal decision-making processes or programs relating to beneficial use of solid wastes. Neither of the two reporting Territories had formal or informal processes. Please note that from this point forward in the report, all statistical references will be based on the total of 33 States that reported having a formal or informal beneficial use program or process.[1]

The fact that so many States have some form of program or process indicates requests for beneficial use of solid wastes are common throughout the country. This does not mean there are always staff specifically dedicated to this issue or that there is a "beneficial use" listing in an agency/department directory.

The length of time that States have had experience with beneficial use programs or processes varies considerably, from less than 2 to more than 10 years. Eight States

[1] Illinois and South Dakota are not included in these summary tabulations, since they indicated that they did not have a formal or informal beneficial use process or program. However, they did provide responses regarding how they address beneficial use requests, and these responses are reported in the Compilation of Survey Results found in Appendix C.

have had programs or processes in existence for 2 years or less and seven have had them between 2 and 5 years. Fourteen States reported programs or processes in existence between 5 and 10 years and four States reported them in place for over 10 years.

Not surprisingly, the underlying authority for beneficial use programs and processes varies greatly between States. Of the responding States, fourteen indicated their activities were based on statutory authority, twenty had regulations for beneficial use, and seven used policy memoranda or guidance documents in their programs (some States had two or all three of these). Seven States also indicated that they used "agency discretion" in making beneficial use decisions (the Task Force understands this to mean that decisions are made on a case-by-case basis using available information but with no official policy or rules in place guiding these decisions).

About one-half of the States have an actual written definition of beneficial use or a similar term. Five States have statutes containing a definition of beneficial use, thirteen have a definition in regulations, and five have one in policies or guidelines that specifically define beneficial use (some States have a combination of statutory and regulatory language and/or policies or guidelines; see Questions 1c. and 2 in Appendix C). While definitions differ and in some cases apply only to a limited number of waste types, beneficial use typically constitutes use either in a manufacturing process to make a product or as a substitute for a raw material or product. Other components that are less prevalent in definitions but that are often used as evaluation review criteria include: 1) existence of valid markets; 2) prevention of speculative accumulation; and 3) protection of public health and the environment.[2]

The evolution of an individual State's beneficial use program or process is typically a result of the State's environmental agency structure and the nature of the agricultural and industrial sectors located within States. Nine States reported that beneficial use decisions are made by more than one program within their environmental or solid waste department. Twenty-one States reported that other agencies (especially agriculture and transportation) are often involved in issuing beneficial use approvals. In addition, many States that do not have formal beneficial use programs still have other programs that allow the use of specific wastes they regulate, such as sludge or contaminated soil. The survey did not question if States approved the use of wastes under mechanisms other than beneficial use determinations.

Approximately one-half of the States indicated that wastes approved for beneficial use, regardless whether through a specific beneficial use determination or another programmatic process, were also considered exempt from solid waste regulations.

[2] Appendix D of this report includes a listing of the States which forwarded copies of their definitions to ASTSWMO.

How this exemption is implemented, however, is highly variable among States. In some cases, beneficial uses are exempt upon determination that a material has been proposed for beneficial use or is destined to be used beneficially. In other cases, beneficial uses are not considered exempt until the time of actual use. Many States that provide exemptions for materials used beneficially nevertheless noted that the materials might still be regulated under certain conditions (e.g., evidence of toxicity, length of time after issuing permit).

The survey asked for feedback on some of the most common barriers to making beneficial use determinations. The largest barrier to the process is the lack of good information to use in evaluating the risk to human health and the environment. Often a beneficial use request involves diverting a waste from a relatively secure facility into a use or location where there is potential for release or exposure to one or more contaminants. The lack of information needed to evaluate the impact and facilitate a decision is the major barrier. Getting companies to provide adequate information and locating missing information is a huge drain on staff resources which becomes the next largest barrier. Providing for exchange of information between States could provide some relief for that problem. The list of other barriers includes but is not limited to: poor markets, public acceptance, limitations created by rule or statute that restrict beneficial use, competition from virgin materials, and cross-media issues.

B. Administrative Aspects of Beneficial Use Programs and Processes

Several questions in the survey focused on administrative aspects of State programs, such as number of requests, review time limits, staff hours for review, fees and administrative tools.

Number of Requests

Three-fourths of responding States receive less than 20 requests annually for beneficial use determinations, with the majority of States reporting less than ten requests. Only six States reported greater than 30 requests annually. States with existing programs also were asked for information on total requests that they had received since the inception of their program. Responses ranged from zero to an estimated 1,000; one State reported 565 actual requests.

The survey asked States to first indicate if they had received a beneficial use determination request for each of 22 different waste types, and then to indicate if they had completed approvals for the various waste types. There was also room in the survey to insert additional waste types. State responses to the survey added 48 more waste types to the table found in Appendix B.

Review Time Limits

Eleven States indicated that they have mandatory time limits for responding to a beneficial use request. These mandatory review time limits ranged from ten days to one year. Two States have provisions for automatic approval if the time limit is exceeded. Two States also indicated that fees are refunded in cases where the time limit is exceeded.

Staff Hours for Review

Significant variation exists among States in the average number of staff hours necessary to review beneficial use requests, for both routine and complex applications. This is probably due in part to variation in State approval processes and in the nature of waste streams prevalent in various regions. Estimates ranged from a low of a half hour for routine reviews to 1,440 hours for a complex, first-time review. Most States estimated that routine reviews could be accomplished in less than 10 hours.

Fees

The majority of State programs currently do not charge a fee. Only five States reported having fees associated with their programs. Three of these were a flat fee that ranged from $250 to $900. One State's fees are based on the duration of the beneficial use project and the need for risk assessment.

Administrative Tools

Several administrative tools are being used for approval of beneficial use projects. Many States grant approval in the form of permits or letters. Several States have rules or statutes stipulating that formal approval is unnecessary. Some States have developed lists of materials that are pre-approved for beneficial use. Approximately 61 percent of the responding States indicated that they use more than one of these administrative tools in their approval process.

In addition to these administrative tools, at least three States are currently allowing pilot projects. These pilot projects can be used as a research and development tool to assess the viability of a proposal prior to granting full approval.

C. Factors in Making Beneficial Use Determinations

States use numerous criteria to evaluate the nature of beneficial use proposals. We believe that all States place their mandate to protect human health and the environment foremost in the beneficial use evaluation process. Nearly all of the 33

States that have formal or informal beneficial use determination programs consider whether or not the proposal constitutes a use rather than disposal. Eighty-five percent of States consider whether or not the waste material constitutes an effective substitute for an analogous raw material.

Chemically binding waste in a material such as cement, concrete, or asphalt is a practice considered acceptable by 70 percent of the responding States. However, only 21 percent allow blending to meet target contaminant levels. Thirty percent of the responding States rule out requests for materials that require decontamination or treatment.

Nearly 61 percent of respondents look for a demonstrated market or need for the material in their evaluations. Approximately 36 percent of respondents consider diversion from a disposal facility to be an important criteria and 30 percent consider a proposal's consistency with an integrated waste management policy. Only 12 percent of States' criteria included a consideration of the proposal's ability to save resources or energy. Thirty percent of respondents indicated that they consider additional criteria (e.g., the material would be used in landfill construction or operation; and some States establish minimum BTU's for wastes used as alternative fuels).

A subtly different group of elements are considered by States when evaluating the waste materials proposed for beneficial use. A benefit assessment, based on suitable physical, chemical, or agronomic properties, is considered by 94 percent of States. Ninety-one percent of States may impose special conditions which limit a material's use. Approximately seventy percent of States may use institutional controls as one such special condition. Specific numeric thresholds, standards or guidelines are an element used by 79 percent of States.

Seventy percent of States use informal risk evaluations, but only 24 percent use formal human health risk assessments, and only 12 percent consider formal ecological risk assessments. Public notification may be required by 27 percent of States and 21 percent may require some form of financial assurance or bonding for beneficial use projects.

When asked to rank a list of twelve factors, 48 percent listed testing of a material's chemical/physical characteristics to be the most important element in the decision-making process. Twenty-four percent listed a benefit assessment as the most important element and 15 percent listed specific numeric thresholds, standards or guidelines as most important.

Testing Methods

The survey asked for information on testing methods used in making beneficial use determinations, specifically regarding tests related to chemical analysis and leaching characteristics of the materials being evaluated. The survey did not ask for information about tests that may be necessary to determine, or document, physical characteristics or engineering properties needed for some beneficial use approvals. Test methods provided as examples in the survey were: 1) total metals and organics analyses; 2) leachate procedures including EPA Methods 1311 (Toxicity Characteristic Leaching Procedure, or TCLP) and EPA Method 1312 (Synthetic Precipitation Leachate Procedure, or SPLP); and 3) neutral water leachate procedure (ASTM Method 3987).

Twenty-eight States require total metals testing, 24 require total organics analyses, 24 require the TCLP, 10 require the SPLP, and 3 require ASTM Method 3987. Use of the TCLP is probably related to mandatory hazardous waste determinations.

Many States also indicated that they could require additional testing and analytical methods on a site-specific basis, tailored to risk evaluation or other protocols in place for waste characterization. States typically test for constituents suspected of being present in the material, including but not necessarily limited to: pathogens, dioxins and furans, nitrates/nitrites, cyanides, sulfates, chlorides, total petroleum hydrocarbons, total kjeldahl nitrogen, organic nitrogen, polychlorinated biphenyls, benzene, toluene, ethylbenzene, xylene, and organochlorine pesticides and polychlorinated biphenyls. Some States also use methods to characterize application rates, as outlined by 40 Code of Federal Regulations Part 503.

The table below summarizes some of the more commonly used test methods and how the results are used:

METHOD	USED IN:
TCLP	Hazardous waste determination
Total Organics/Metals	General material characterization, risk evaluation, application rates from 40 CFR 503
SPLP	Simulating atmospheric exposure in evaluating risk
Nutrient value, pathogens, nitrogen content	Land application decisions involving sludges or agronomic use

Risk Assessment and Other Forms of Evaluation

Using risk assessments or an established risk level for human or ecological receptors can be an important part of beneficial use determinations. After compiling the survey

results, it became apparent that subtle differences in the risk terms used (e.g., “risk assessment”, “risk evaluation”) may have been missed or misinterpreted by some, causing comparisons for some of the tabulations between questions to conflict. We feel that useful information can be taken when viewed at the macro level, i.e., to see where some form of risk assessment and/or risk evaluation is employed. However, due to differences between the questions using risk terminology, the responses may not lend themselves to direct comparisons.

Twenty-three States use some level of risk assessment as part of their approval process. Eleven States indicated that risk-based evaluations were used consistently in beneficial use determinations, 10 responded that such evaluations were not used consistently, and 11 responded that such evaluations were not used at all. The risk evaluation process is just one method available to consider whether the proposed use is harmful to the environment or threatens public health, safety or welfare.

The most commonly-used risk level, reported by 10 States, was a $1x10^{-6}$ excess cancer risk; however, the survey did not distinguish whether this risk level was based on a single substance or on cumulative effects of all constituents. Two States responded that it used a $1x10^{-5}$ excess risk level, five reported that acceptable risk determinations were made on a case-by-case basis, and two States responded that no adverse risk was the acceptable level. No States use $1x10^{-4}$ excess cancer risk.

Some method of evaluating or quantifying the benefit derived from the proposed use is generally made by a majority of States, based on suitable physical, chemical, or agronomic properties of the waste or by-product. States also use a variety of mechanisms to assess “toxics along for the ride”, i.e., undesirable constituents in materials that do not have a specific chemical or physical purpose in the beneficial use being evaluated. Fourteen States look at “toxics along for the ride” on a case-by-case basis. Thirteen States have specific standards used to limit some constituents, while six limit toxics in beneficial use approvals based on other toxicity benchmarks. Five States use cleanup rules or a risk evaluation process to look at undesirable constituents. Eight States provided “other” comments, including three that use some type of assessment but that do not have a formal process.

Site- and Use-Specific Restrictions

Ninety-one percent of the States indicated that they may place site-specific or use-specific restrictions on approvals for beneficial use. These restrictions include:

- specific numeric thresholds, standards or guidelines (79 percent);
- site location and set-back distance restrictions to water supplies, surface waters, or wetlands (79 percent); however, only 30 percent indicated that property or deed restrictions may be required;
- restrictions based on depths to groundwater (70 percent)

- institutional controls at the location where the material is used (70 percent);
- regular reporting of waste quantities used (48 percent);
- periodic follow-up testing or monitoring of products (45 percent);
- regular monitoring reports (36 percent);
- post-use soil or groundwater monitoring (24 and 21 percent, respectively).

Sham Recycling

States also are concerned about “sham recycling”, i.e., whether the beneficial use process could be misused by applicants to garner approvals for activities that do not legitimately constitute beneficial use. States use a variety of requirements to avoid this problem:

- limits on waste stockpile volumes or storage times (82 percent);
- evaluation of the role or purpose of the material in the proposed application (approximately 61 percent);
- documentation of end markets and/or comparison with use of an analogous raw material (50 percent);
- performance criteria or technical specifications (approximately 45 percent);
- mandatory turnover of a certain volume of BUD material stockpiled into an approved process (approximately 30 percent)
- provision by applicant of market information (30 percent).

D. Compliance and Enforcement

Twenty States indicated they have an enforcement process that is used to maintain compliance with beneficial use determination conditions. Some indicated they would implement enforcement in response to problems identified in inspections (e.g., of land application sites) or reviews of annual compliance reports. States without a formal enforcement process indicated they would investigate beneficial use operations for potential enforcement actions on a complaint basis, or if it was determined that material approved for a beneficial use determination was being mismanaged. One State indicated it had the authority to conduct remediation based on conditions created or caused by beneficial use activities.

Reasons for a State to take enforcement actions to assure compliance, up to and including revocation of a previously-approved use, commonly include:

- non-compliance with terms and conditions of approval;
- improper storage;
- failure to provide test data;
- falsification of records;

- discovery of environmental impacts;
- acceptance of materials from non-approved suppliers;
- unauthorized/changed use;
- occurrence of sham recycling;
- change in waste analysis;
- lack of markets;
- public nuisance.

III. Summary and Recommendations For Task Force Follow-Up

This survey was designed to gather information about the status and nature of State and Territorial programs for making determinations about proposals for beneficial use of non-hazardous, industrial solid wastes. A total of 42 States and Territories responded to the survey. Of these, 33 have a formal or informal program or process for dealing with requests for beneficial use; the responses of these 33 States are the basis for all statistical comparisons in this report. States reported that they have considered beneficial use requests for at least 70 different waste types.

There are many reasons for States and Territories to address the issue of beneficial use of non-hazardous, industrial solid wastes. These typically include large volumes of these wastes, limited landfill capacity, and their ability in many cases to constitute an effective substitute for analogous raw materials. At the same time, though, the risks associated with specific beneficial uses must be carefully considered in order to protect human health and the environment.

The size and sophistication of existing activities regarding beneficial use ranges from States with comprehensive, highly developed, and experienced programs to States with small and/or inexperienced programs, often limited to specific waste types, to States and Territories with no programs or processes in place at all. Even so, States and Territories have made impressive advances in developing processes and decision-making about beneficial use in the last five years. One indication of this progress is that statutes on beneficial use exist in 14 States and regulations are in place in 20 States.

The level of effort required and resources dedicated to making decisions about beneficial use requests is related to the number of projects proposed, the complexity of the requests, the structure of the State's environmental protection agency or agencies, and the nature of wastes generated in the State. The amount of staff time required to evaluate a request varies dramatically between States for "first time" evaluations and repeat requests on the same waste type, due in part to the factors above. Most States receive less than ten requests per year and do not charge fees for processing applications or requests. Many States use permits or approval letters to authorize or document an approved beneficial use. Others have developed lists of pre-approved material for beneficial use, which reduces administrative burdens. Also, some States

allow pilot projects as a means of gathering information to make a final decision at a later time about specific beneficial uses.

States rely heavily on testing information supplied with requests to make decisions. Most States require commonly used tests (e.g., for total metals, organics, leachate) and also target other contaminants and limiting parameters likely to be contained in a material proposed for beneficial use. States also look carefully at a given request to first determine if it involves a legitimate use rather than an alternate method of disposal, and then whether the request represents a substitution for an analogous raw material. In many cases, binding or encapsulation of a waste in a new product to avoid or minimize release of contaminants is a preferred use. Site- or use-specific restrictions are employed if necessary to assure that the proposed use protects health and the environment.

Enforcement actions to correct non-compliance with approved beneficial use conditions have been necessary in a limited number of cases, but in general enforcement does not appear to have been a major issue for beneficial use programs. Most States do not have a formal or standardized inspection process but rely instead on investigations and follow-ups based on complaints.

Recommendations for Task Force Follow-Up

One purpose of this survey was to identify what information or work products would be most helpful to States wishing to start or enhance a beneficial use program. The survey has helped identify the States that have developed effective programs that can be used as examples or provide tools for improvement where others have been struggling. States that do not have an existing program identified the following items as the greatest needs to help them establish a program: 1) access to lists of materials approved for beneficial use by other States; 2) the background information or criteria used to make specific determinations; and 3) State program staff contacts.

One of ASTSWMO's objectives is to facilitate the exchange of information among peers in State and Territorial waste management programs. Based on the results of this survey, a roundtable discussion on preliminary results of this survey at the 1999 ASTSWMO Solid Waste Conference, and other feedback, the Task Force makes the following recommendations:

1) <u>Increase Communication Among States and Territories</u>

The Task Force recommends that ASTSWMO and other appropriate entities facilitate communication and information exchange between States and Territories regarding beneficial use of non-hazardous, industrial solid wastes. Good communication

between States and Territories in a geographic area, especially those with common borders, is very important to long-term, successful implementation of beneficial use programs. This communication could take the form, for example, of scheduled regional conference calls or meetings to exchange information and develop working relationships.

2) Make Existing Information More Readily Available

Certain States have accumulated a wealth of information and experience with beneficial use determination programs and processes, as evidenced by individual State responses in Appendices B and C. However, finding this information is a formidable burden for staff in other States and Territories that are attempting to initiate new programs or to enhance existing but less experienced programs and processes. The Task Force believes steps should be taken to share existing technical and regulatory information. The Task Force specifically recommends that existing State Web sites, with links made directly through the ASTSWMO Web page, be used to post existing information about beneficial use programs and processes. This would be an important step towards making information more readily available and should result in saving time and resources for program implementation.

TABLE 1

List of Relevant Web Sites

Does your State/Territory have information regarding beneficial use available on the Internet? ____ Yes; ____ No; If Yes, please give the address for the Web site:

[Note: Only those States which provided a Web Site Address are included in this Table.]

STATE	YES	NO	WEB SITE ADDRESS
CA	X		www.ciwmb.ca.gov Provides general information on recycling, markets, waste exchange which could apply to industrial waste
MA	X		www.state.ma.us/dep
MN	X		For Land Application Only: http://www.pca.state.mn.us/water/landapp.html
MO	X		www.dnr.state.mo.us/deq/swmo/homeswmp.htm
NE	X		www.deq.state.ne.us
NH	X		http://www.des.state.nh.us/hw-rtrn.htm
NY	X		www.dec.state.ny.us/website/dsbm/sld waste/index.htm
OH	X		www.epa.state.oh.us/dsiwm/igwmp/iwp_out.html (Integrated Alternative Waste Management Program)
PA	X		www.dep.state.pa.us (List of general permits)
TX	X		www.tnrcc.state.tx.us/waste/ihw/weval
WI	X		http://www.dnr.state.wi.us

Appendix A

Questions and Answers Provided with the Survey

Questions and Answers Provided with the Survey

The Questions and Answers document was included as an attachment to the Beneficial Use Survey. It was designed to provide answers to some typical questions which the ASTSWMO Beneficial Use Task Force members believed might be asked by individuals completing the Survey Form. Definitions were developed by Task Force members for purposes of this survey.

Q1. What wastes are targeted by this survey?

A. This survey is intended to gather information on the beneficial use of non-hazardous, industrial solid wastes. These waste types would normally be large-volume wastes or by-products from industrial, commercial or manufacturing operations which would normally be disposed in landfills if not recycled or used in some fashion. This survey does not address waste materials which are typically recycled such as aluminum, glass, plastic, metal and paper or mulch and compost produced from vegetative wastes. Examples of waste types intended to be addressed by this survey are listed in Survey Question #23.

Q2. What is the meaning of "Beneficial Use" (BU) of a waste?

A. Beneficial Use implies that there must be some benefit to diverting what was previously considered waste from a landfill or other disposal facility for use in another location or application. In general, for a waste to be used beneficially it must have chemical or physical properties similar to the raw material it is replacing or, when incorporated into another product, its use must have some enhancing qualities to the final product which would distinguish that use from disposal. Also, beneficial use of a waste must not be expected to result in adverse affects to human health or the environment. While there may be considerable confusion over when use of a waste is truly beneficial, the beneficial use of a waste would typically have one or more of the following characteristics: (1) used in a manufacturing process to make a product; (2) used as a substitute for a raw material or with other materials in a construction project; or (3) used as a substitute for a commercial product.

Q3. What is the meaning of "Beneficial Use Determinations" (BUDs)?

A. Beneficial Use Determinations refer to the decisions made by the reviewing agency to approve or deny beneficial uses proposed by an applicant. The BUD will normally be based upon the information and demonstrations provided by the applicant as well as the policy criteria used by the reviewing agency to evaluate

the proposed beneficial use. Some typical policy criteria used by the reviewing agency when making BUDs are shown in Survey Question #9.

Q4. What is meaning of "toxics along for the ride"?

A. Typically, a high percentage of the volume of waste constituents will contribute to or are a necessary part of the proposed beneficial use. The phrase "toxics along for the ride" refers to contaminants in a waste, other than the main constituents, which may be in sufficiently high concentrations to pose a potential threat to human health or the environment if the waste is not properly managed.

Q5. What is the meaning of "sham recycling"?

A. American Heritage Dictionary says a sham is "something false or empty that is purported to be genuine; a spurious imitation." Thus, sham recycling is when someone uses the concept of "recycling" as a decorative cover to sell or convince others that a waste material has a legitimate application and true value when in fact it does not. In these cases, the "recycled waste" has little or no market or value and sometimes its use may result in adverse environmental impacts.

Q6. What should I do if I do not know how to answer a Survey Question?

A. The Task Force realizes there will be significant differences in interpretation and program structures between different States and Territories which may lead to difficulties in completing the Survey. The Task Force requests that you try not to leave any questions blank. Rather, you are encouraged to call or e-mail your Regional Task Force member for clarification, or make your best attempt to guess or estimate an answer that would reflect the activities of your program.

Q7. What is the meaning of the word "request" when used in the survey such as in Survey Question #23?

A. Beneficial use requests can be made formally, in writing, or informally, as a verbal request. For the purposes of this survey, a beneficial use request can be verbal or written if its result is to require the reviewing agency to evaluate the request and make a beneficial use determination. General inquiries about possible beneficial uses of waste materials would not normally be counted as requests unless the reviewing agency was obligated to conduct further evaluations of the proposed beneficial use.

Q8. How can you approve waste being diverted from a landfill and still protect the environment?

A. In the past, the safest and easiest way to handle a non-hazardous industrial waste was assumed to be disposal of this material in a secure landfill. Beneficial Use Determinations are often challenging because the use of a waste may pose a greater risk to human health or the environment than the risk that would be expected from disposal. Good policy judgments and technical evaluations are necessary to make these decisions. ASTSWMO wants to help equip programs with the best available information. The two over-riding principles for making these determinations are: (1) that beneficial use decisions should always maintain what your State or Territory chooses as an acceptable level of risk; and (2) that the approved waste uses are protective of human health and the environment.

Appendix B

List of Wastes Evaluated for Beneficial Use

List of Wastes Evaluated for Beneficial Use

Please complete the following table. [Add any more waste types your State/Territory includes in Beneficial Use Determinations (BUDs)]

WASTE TYPE	BENEFICIAL USE REQUEST?			BENEFICIAL USE APPROVED?		
	YES	NO	OTHER	YES	NO	OTHER
Construction and Demolition Debris	DE, FL, IL, IA, KS, MA, MI, MN, MS, MO, NV, NH[1], NJ, NY, OH, PA, RI[2], SD	AL, AZ, CT, GA, KY[3], ME, NE, NC, TN, TX, WI	AK*: No - inert waste CA[4]	DE, FL, IL, KS, KY, MA, MI[5], MS, MO, NH[1], NY, OH, PA, RI, SD	IA, NV, NJ	CA[4] MN: Pilot project
Roofing Shingles	DE, FL, GA, IL, IA, KS, ME, MA, MI, MN, MO, NE, NJ, NY, NC, OH	AL, AZ, CT, KY[3], MS, PA, RI, SD, TN, TX, WI	AK: No - inert waste NH: By rule	DE, FL, GA, IA, KS, KY, ME, MA, MN, MO, NE, NJ, NY, NC, OH	IL, MI	NH: By rule
Waste-to-Energy (WTE) Ash	AL, CT, DE[6], FL, KY, ME, MA, MI, MN, MS, NH[7], NJ, NY, NC, OK, PA, TN	AZ, GA, IL, IA, KS, MO, NE, OH, RI, SD, TX, WI	AK: No - MSW	AL, DE, FL, KY, ME, MA, MS, NH[8], NJ, NY, PA, TN	MI, NH[9], NC, OK	CT: Applicant never completed MN: Demonstration

* Note: For all waste types listed in the tables, Alaska (AK) responded in terms of: Could we approve BU Request? Have we done so? - as indicated in the response to Question 1b., Alaska's BUD process was very new and had not yet been used at the time of the survey.

Footnotes:

1 NH: Yes - 50/50 mix with soil as alternate daily cover (ADC); Yes - Clean Crushed Concrete

2 RI: Handled under Regulation, not BUD Policy.

3 KY: Written authorization from State not required (401 KAR 47:150), but regulated community requests for written authorization led to an informal application procedure; Attachment provided by State listed in Appendix D.

4 CA: For all waste types listed in the survey, case-by-case review, depending on use and constituents in the waste.

5 MI: Bricks, concrete

6 DE: From other State

7 NH: Yes - Road Fill; Yes - R&D Project Ashphalt

8 NH: As R&D Project

9 NH: As Road Fill

WASTE TYPE	BENEFICIAL USE REQUEST?			BENEFICIAL USE APPROVED?		
	YES	NO	OTHER	YES	NO	OTHER
Power Plants: **- Coal Fly Ash**	AL, CT, DE, FL, GA, IL, IA, KS, ME, MI, MN, MS, MO, NE, NH[1], NJ, NY, NC, OH, OK, PA, TN, TX, WI, WY	AZ, KY[2], RI, SD	AK: No - inert waste MA: Exempt	AL, DE, GA, IL, IA, KS, KY, ME, MI[3], MN, MS, MO, NE, NJ, NH[4], NY, NC, OH, PA, TN, TX, VA, WI, WY	NH[5]	CT: Ongoing FL: Under review OK: Y/N
- Coal Bottom Ash	AL, CT, DE, FL, GA, IL, IA, KS, MI, MN, MS, MO, NE, NH[6], NJ, NY, NC, OH, OK, PA, TN, TX, WI, WY	AZ, KY[2], ME, RI, SD	AK: No - inert waste MA: Exempt	AL, DE, GA, IL, IA, KS, KY, MI[3], MN, MS, MO, NE, NH, NJ, NY, NC, OH, PA, TN, TX, VA, WI, WY		CT: Ongoing FL: Under review OK: Y/N
Wood Ash	AL, AK, FL, GA, ME, MA, MI, MN, MS, NY, NC, OK, PA, TN, WI	AZ, CT, IL, IA, KS, KY[2], MO, NE, NJ, OH, RI, SD, TX	NH: By rule	AL, FL, GA, KY, ME, MA, MI[3], MN, MS, NY, NC, OK, PA, TN, WI	AK	NH: By rule
Phosphogypsum from fertilizer manufacturing	AK, FL, MS, MO	AL, AZ, CT, DE, GA, IL, IA, KS, ME, MA, MI, MN, NE, NH, NJ, NY, NC, OH, PA, RI, SD, TN, TX, WI	KY: N/A	MO	AK, MS	FL: Under review

Footnotes:

1 NH: Flow Fill, Concrete, Compost Bulking Agent, General Fill

2 KY: Written authorization from State not required (401 KAR 47:150), but regulated community requests for written authorization led to an informal application procedure; Attachment provided by State listed in Appendix D.

3 MI: Statutory Exemption

4 NH: Flow Fill, Concrete, Compost Bulking Agent

5 NH: General Fill

6 NH: Sand Blasting Grit

WASTE TYPE	BENEFICIAL USE REQUEST?			BENEFICIAL USE APPROVED?		
	YES	NO	OTHER	YES	NO	OTHER
Street Sweepings	AK, FL, IA, ME, MA, MI, MN, NJ, OH, RI[1]	AZ, DE, GA, IL, KS, KY[2], MS, MO, NE, NH, NY, NC, PA, SD, TN, TX, WI	AL: Not regulated CT: BMPs in place	IA, ME, MA, MN[3], NJ, RI	AK, KY, MI	FL: Under review OH: Not yet
Stormwater Sediments	AK, FL, IA, MA, MI, MN, NJ	AZ, DE, GA, IL, KS, KY[2], ME, MS, MO, NE, NH, NY, NC, OH, PA, RI, SD, TN, TX, WI	AL: Not regulated CT: BMPs in place	IA, MA, MN[3], NJ	AK, KY, MI	FL: Under review
Pulp and Paper Mill Wastes (all by-products)	AL, AK, DE, FL, GA, ME, MA, MI, MN, MS, NH[4], NJ, NY, OH, PA, TN, WI	AZ, IL, IA, KS, KY[2], MO, NE, NC, RI, SD, TX	CT: Inquiries	AL, GA, IA, ME, MA, MI, MN, MS, NH[5], NJ, NY, OH, PA, TN, WI	AK, FL, KY	DE: No decision
Sand Blasting Media	AL, AK, DE, FL, GA, IL, IA, KS, MA, MN, MS, MO, NJ, NY, OH, OK, WI	AZ, CT, KY[2], MI, NE, NH, NC, PA, RI, SD, TX		AL, DE, FL, GA, IL, IA, KS, KY, MN, MS, MO, NJ, NY, OH, WI	AK, MA	OK: Y/N
Chicken Litter	AL, DE, FL, GA, KS, MN, MS, MO	AZ, CT, IL, IA, ME, MA, MI, NE, NJ, NY, NC, OH, PA, RI, SD, TX, WI	AK: No - animal waste KY: Not regulated as a solid waste NH: By rule	AL, GA, IA, KS, MN, MS, MO	FL	DE: Trial approval KY: N/A NH: By rule
Waste Tires	AL, AK, DE, FL, GA, IL, IA, KS, ME, MA, MI, MN, MS[6], MO, NE, NH, NY, NC, OH, OK, PA, SD, TN, WI, WY	KY[2], NJ, RI, TX	AZ[7] CT: Inquiries	AL, DE, FL, GA, IL, IA, KS, KY, ME, MA, MI, MN, MS[8], MO, NE, NH, NY, NC, OH, OK, PA, UT, VA, WI, WY	AK, MS[8], TN	AZ[7], SD[9]

Footnotes:

1 RI: Handled under Regulations, not BUD Policy.

2 KY: Written authorization from State not required (401 KAR 47:150), but regulated community requests for written authorization led to an informal application procedure; Attachment provided by State listed in Appendix D.

3 MN: We don't track these reuses.

4 NH: Fertilizer, Compost and Manufactured Topsoil

5 NH: Through the Water Division of NHDES

6 MS: Waste Tires/Tire Bales

7 AZ: Waste Tires must be used in certain beneficial manners, but specific approvals are not needed.

8 MS: Yes for Tires; No for Bales

9 SD: Yes and No, depends on use.

WASTE TYPE	BENEFICIAL USE REQUEST?			BENEFICIAL USE APPROVED?		
	YES	NO	OTHER	YES	NO	OTHER
Metal Shredder Residue	DE, FL, MA, MN[1], MS, NH[2]	AL, AZ, CT, GA, IL, IA, KS, KY[3], ME, MI, MO, NE, NJ, NY, NC, OH, PA, RI, SD, TN, TX, WI	AK: No - inert waste	FL, MA	DE, KY, MN, MS	NH: Under review
Foundry Slag	AL, AK, DE, IL, KS, ME, MI, MN, MS, MO, NJ, NY, OH, OK, PA, RI[4], TN, TX, WI	AZ, CT, FL, GA, IA, KY[3], MA, NE, NH, NC, SD		AL, IL, KS, KY, ME, MI[5], MS, MO, NJ, NY, OH, PA, RI, TN, TX, WI	AK	MN: Approval pending OK: Y/N
Lead Slag	AK	AL, AZ, CT, FL, GA, IL, IA, KS, ME, MA, MI, MS, MO, NE, NH, NJ, NY, NC, OH, PA, RI, SD, TN, TX, WI	KY: N/A		AK	
Steel Slag	AK, IL, MI, MN, MS, NE, NJ, NY, NC, OH, PA, TX, WI	AL, AZ, CT, FL, GA, IA, KS, KY[3], ME, MA, MO, NH, RI, SD		IL, KY, MI[5], MS, NE, NJ, NY, NC, OH, PA, TX, WI	AK	MN: Pending approval

Footnotes:

1 MN: Same as Auto Shredder Fluff

2 NH: ADC

3 KY: Written authorization from State not required (401 KAR 47:150), but regulated community requests for written authorization led to an informal application procedure; Attachment provided by State listed in Appendix D.

4 RI: BUD

5 MI: Statutory Exemption

WASTE TYPE	BENEFICIAL USE REQUEST?			BENEFICIAL USE APPROVED?		
	YES	NO	OTHER	YES	NO	OTHER
Contaminated Soil	AL, DE[1], FL, GA, IL, IA, KS, ME, MA, MI, MN, MS, MO, NJ, NY, OH, OK, PA, RI[2], TN, WI, WY	AK, AZ, KY[3], NE, NC, SD, TX	CT[4] NH: By rule (fill)	DE, GA, IA, KS, KY[5], ME, MA, MI, MN, MS, MO, NJ, NY, OH, PA, RI, TN, WI, WY	AL, FL, IL	NH: By rule OK: Y/N
Cement Kiln Dust	AL, AK, IL, KS, ME, MI, MS, MO, NH[6], NY, OK, TN, WY	AZ, CT, FL, GA, IA, KY[3], MA, NE, NJ, NC, OH, PA, RI, SD, TX		AL, KS, KY, ME, MI, MS, MO, NH, NY, OK, TN, WY	AK, IL	
Dredge Material	AL, AK, DE, FL, IA, ME, MI, MN, MS, MO, NJ[7], NY, OH, PA, RI[2], WI	AZ, GA, IL, KS, KY[3], MA, NE, NH, NC, SD, TX	CT[4]	AL, IA, KY, ME, MI, MN, MS, MO, NJ, NY, PA, RI	AK, DE, FL	OH: Not yet WI: ?
Drinking Water Treatment Lime	AL, AK, CT[8], FL, IL, IA, KS, KY, MA, MI, MN, MS, MO, NJ, NY, NC, OH, PA, RI[9], SD, WI	AZ, DE, GA, ME, NE, NH, TX		AL, FL, IA, KS, KY, MA, MI[10], MN, MS, MO, NJ, NY, OH, PA, RI, SD, WI	AK, IL, NC[11]	CT: Ongoing

Footnotes:

1 DE: Petro

2 RI: Handled under Regulations.

3 KY: Written authorization from State not required (401 KAR 47:150), but regulated community requests for written authorization led to an informal application procedure; Attachment provided by State listed in Appendix D.

4 CT: Regulations in place. Remediation Standard Regulations have provisions which apply to the use of polluted soil and which also have been applied to upland placement of dredge material.

5 KY: Landfill daily cover

6 NH: ADC

7 NJ: Not as BUDs, but similar process.

8 CT: Fe and Al-based

9 RI: BUD

10 MI: Statutory Exemption

11 NC: Landfilled

WASTE TYPE	BENEFICIAL USE REQUEST?			BENEFICIAL USE APPROVED?		
	YES	NO	OTHER	YES	NO	OTHER
Auto Shredder Fluff	AL, DE, FL, GA, IA, MA, MI, MN, MS, NH[1], NJ, NY, NC, OH, RI[2], TN, WI	CT, IL, KS, KY[3], ME, MO, NE, PA, SD, TX	AK: No - inert waste AZ[4]	FL, IA, MA, MI, NJ, NY, RI, WI	AL, DE, GA, KY, MN, MS, NC[5], OH, TN	NH: Under review

Footnotes:

1 NH: ADC

2 RI: Landfill Cover

3 KY: Written authorization from State not required (401 KAR 47:150), but regulated community requests for written authorization led to an informal application procedure; Attachment provided by State listed in Appendix D.

4 AZ: For Auto Shredder Fluff, there are specific approvals needed to store, treat, process and dispose of this material, but these approvals are not limited to beneficial use.

5 NC: Landfilled

ADDITIONAL WASTE TYPES FROM THE SURVEY[1]	BENEFICIAL USE REQUEST?			BENEFICIAL USE APPROVED?		
	YES	NO	OTHER	YES	NO	OTHER
Industrial Organic Sludge (CT)			CT: Compost product			CT: Ongoing
Glass Aggregrate (CT)	CT			CT		
Glass (NH, NY)	NH[2], NY			NH[3], NY		
Glass Grit Screenings (MN)	MN			MN		
Sewage Sludge Ash (CT)	CT					CT: Ongoing
Iron Rich Sludge (DE)	DE			DE		
Non-processed cucumber waste (DE)	DE			DE		
Wallboard/drywall (DE)	DE			DE		
Municipal WWTP Grit (DE)	DE			DE		
Foundry Sand (GA, IA, MN, NH, NY, NC, OH, PA, TN)	GA, IA, MN, NY, NC, OH, PA, TN	NH		GA, IA, MN, NY, OH, PA	NC	
Concrete truck wash & rejected loads (MN)	MN			MN		
Mineral Wood (MN)	MN					MN: Pending approval
Thin Stillage - Ethanol Production (MN)	MN			MN		
Antibiotic Milk (MN)	MN			MN		

Footnotes:

1 The State(s) which added waste types to those listed in the Beneficial Use Survey are noted in parentheses ( ) next to the waste type(s).
2 NH: Pilot Glass/asphalt
3 NH: Pilot study

ADDITIONAL WASTE TYPES FROM THE SURVEY	BENEFICIAL USE REQUEST?			BENEFICIAL USE APPROVED?		
	YES	NO	OTHER	YES	NO	OTHER
Porcelain/China Scrap (MS)	MS					MS: Pending
Crockery Wastes (MS)	MS				MS	
Shredded Newsprint (MS)	MS			MS		
Flue Gas Desulfurization Sludge (from Power Plants) (MS)	MS					MS: Pending
Farm Irrigation Piping (MS)	MS				MS	
Food Residuals/Grease Trap (MS)	MS				MS	
Food Processing Waste (MN)	MN			MN		
Food Waste (OH)	OH				OH	
Phosphotising Wash (MN)	MN			MN		
Diatomaceous Earth (MN, NH)	MN, NH			MN, NH		
Granite Fines (MN)	MN					MN: Approval pending
Alfalfa Ash (MN)	MN					MN: Approval pending
Paint Polymer from Auto Process (MO)	MO			MO		
Biosolids (land application) (MO)	MO			MO		
Iron Shot Blasting Media (MO)	MO			MO		
Blast Furnace Slag (NH, NY)	NY	NH		NY		
Filter Sand (NH, NY)	NY	NH		NY		

ADDITIONAL WASTE TYPES FROM THE SURVEY	BENEFICIAL USE REQUEST?			BENEFICIAL USE APPROVED?		
	YES	NO	OTHER	YES	NO	OTHER
Asphalt shingles (NH, NY)	NH, NY			NY		NH: Under review
Water Well Cuttings (MS)	MS			MS		
Water Treatment Sludge (NH, NY)	NY	NH		NY		
Wastewater Treatment Sludge (NH, NY)	NH[1], NY			NH[2], NY		
Coal Tar (NY)	NY				NY	
Yard Waste (NY)	NY			NY		
Processed Silica (NC)	NC[3]			NC[4]		
Ceramic Tile (NC, OH)	NC, OH			NC[5], OH	NC[5]	
Concrete Siding (NC)	NC			NC		
Unexpanded Pearlite (NC)	NC			NC		
Rock Wool Mfg. Residue (NC)		NC				
Manufactured Stone (OH)	OH			OH		
Antifreeze (PA)	PA			PA		
Waste Oil (PA)	PA			PA		
Metallic Grinding Swarf (PA)	PA			PA		
Wood Waste (not Ash) (SD)	SD			SD		
Cattle - Paunch Manure (SD)	SD			SD		

Footnotes:

1 NH: Fertilizer, Compost and Manufactured Topsoil

2 NH: Through the Water Division of the NH Dept. of Environmental Services

3 NC: Structural Fill

4 NC: pH adjusted to 6.5 - 8.5

5 NC: Yes for 2/3; No for 1/3

Appendix C

Compilation of Survey Results

Compilation of ASTSWMO Beneficial Use Survey Results

1a. Does your State/Territory have a formal or informal beneficial use decision making process or program?

STATE	YES	NO
AL	X[1]	
AK	X	
AZ	X[2]	
CA	X[3]	
CT	X	
DE	X[1]	
FL	X	
GA	X	
HI		X
IL		X
IA	X	
KS	X[1]	
KY	X	
LA	X	
ME	X	
MA	X	
MI	X	
MN	X	
MS	X[1]	
MO	X	
NE	X	
NV	X	
NH	X	

[1] Informal

[2] Sewage Sludge, only - review of a registration form (land application of biosolids).

[3] For non-hazardous petroleum contaminated soil and ash.

1a. Does your State/Territory have a formal or informal beneficial use decision making process or program?

STATE	YES	NO
NJ	X	
NY	X	
NC	X	
OH	X	
OK	X	
PA	X	
RI	X	
SC		X
SD		X
TN	X[4]	
TX	X	
UT		X
VT		X[5]
VA	X	
WA		X
WI	X	
WY	X	
Guam		X
Northern Mariana Islands		X

[4] Informal

[5] Currently being developed, at time the survey was conducted.

1b. How many years has your program or similar process been in place?

STATE	# OF YEARS	COMMENTS
AL	3	
AK	less than 1 year	
AZ	3	
CA	1 - 2	
CT	3	15 years in Land Applications; 4 years for polluted soils
DE	11	
FL	3	
GA	10	
HI	N/A	
IL	N/A	
IA	10	
KS	10	
KY	8	
LA	6	
ME	1	Current rule
MA	9	
MI	15+	
MN	About 8	
MS	10	
MO	2	
NE	5	
NV	1	
NH	8	Since 1991 Solid Waste Rule changes
NJ	4	
NY	10	
NC	5.5	
OH	2	
OK	6	
PA	10	

1b. How many years has your program or similar process been in place?

STATE	# OF YEARS	COMMENTS
RI	1.5	
SC	N/A	
SD	N/A	
TN	10	
TX	13	
UT	N/A	
VT	0	
VA	6	
WA	N/A	
WI	19[1]	
WY	1	
Guam	N/A	
Northern Mariana Islands	N/A	

[1] Believe a statutorily-required program started in 1985.

1c. Please indicate whether or not your State/Territory has a mandate or provision for beneficial use (or a similar term) of non-hazardous solid waste in a:

STATE	STATUTE	REGULATION	POLICY/ GUIDELINES	AGENCY DISCRETION	N/A	OTHER
AL					X	
AK		X[1]				
AZ	X[2]	X[3]				
CA		X				Requirement (statutory) to reduce disposal of waste by 25% and 50% through source reduction, recycling and composting.
CT	X					
DE		X[4]		X		
FL	X					
GA		X				
HI				X		
IL					X	
IA		X[5]		X[5]		

[1] 18 AAC60.005(c)(16); Attachment provided by State listed in Appendix D.

[2] New law passed in May 1999, general to materials reused/reprocessed on-site; Attachment provided by State listed in Appendix D. Also, Waste Tires are required to be used beneficially.

[3] Sewage Sludge

[4] DE Reg Gov Solid Waste general provision, not a mandate.

[5] Regulation for Coal Ash and Foundry Sand; Agency Discretion for other materials.

1c. Please indicate whether or not your State/Territory has a mandate or provision for beneficial use (or a similar term) of non-hazardous solid waste in a:

STATE	STATUTE	REGULATION	POLICY/ GUIDELINES	AGENCY DISCRETION	N/A	OTHER
KS					X	
KY	X					For “reuse of solid waste” as a preferred management practice.
LA		X				
ME	X	X				
MA		X				
MI	X	X				
MN				X		
MS				X		
MO		X	X			
NE					X	
NV					X	
NH	X	X	X			
NJ		X				
NY	X	X				
NC	X	X				
OH					X	
OK			X			New proposed rules, current rule on “reuse”.
PA	X	X				
RI			X			

1c. Please indicate whether or not your State/Territory has a mandate or provision for beneficial use (or a similar term) of non-hazardous solid waste in a:

STATE	STATUTE	REGULATION	POLICY/ GUIDELINES	AGENCY DISCRETION	N/A	OTHER
SC					X	
SD				X		
TN		X	X			
TX	X					
UT	X[1]					
VT				X		
VA		X				
WA	X					
WI	X	X	X			
WY		X	X			
Guam					X	
Northern Mariana Islands					X	

[1] For Tires only

2. Does your State/Territory have a written definition of beneficial use or a similar term? (If No, go to #4.)

STATE	YES	NO
AL		X
AK		X
AZ		X
CA	X[1]	
CT	X	
DE		X
FL	X[2]	
GA	X	
HI		X
IL		X
IA		X
KS		X
KY		X
LA	X	
ME	X	
MA		X
MI	X	
MN		X

[1] Contained in non-hazardous petroleum contaminated soil and ash regulations.

[2] The closest definition we have is the term “industrial byproduct” in 403.7045(1)(f).

2. Does your State/Territory have a written definition of beneficial use or a similar term? (If No, go to #4.)

STATE	YES	NO
MS		X
MO		X
NE		X
NV		X
NH	X	
NJ	X	
NY	X	
NC	X[1]	
OH		X[2]
OK	X	
PA	X	
RI	X	
SC		X
SD		X
TN	X	
TX		X

[1] GS 130A-309.05(c)

[2] Except for Scrap Tires - definition appears in statute

2. Does your State/Territory have a written definition of beneficial use or a similar term? (If No, go to #4.)

STATE	YES	NO
UT	X[1]	
VT		X
VA	X	
WA		X
WI	X	
WY	X	
Guam		X
Northern Mariana Islands		X

[1] For Tires only

3. Where is your definition of beneficial use (or similar term) located? Check all that apply.

STATE	STATUTE	REGULATION	POLICY/GUIDELINES
CA		X	
CT			X
FL	X[1]		
GA		X	
LA		X	
ME		X	
MI	X		
NH		X[2]	
NJ		X	X
NY			X
NC	X[3]	X[4]	
OK		X[5]	X

[1] Industrial byproduct 403.7045(1)(f) Florida Statutes

[2] Env-Wm 102.44

[3] GS 130A - 309.05(c)

[4] 15A NCAC 13B.1700 Rules

[5] Proposed rule

3. Where is your definition of beneficial use (or similar term) located? Check all that apply.

STATE	STATUTE	REGULATION	POLICY/GUIDELINES
PA	X	X	
RI			X
TN		X	
UT	X		
VA		X	
WI		X	
WY		X	

4. What are the major barriers to implementing Beneficial Use Determinations (BUDs) in your State/Territory? Check all that apply.

STATE	Public Acceptance	Lack of Awareness	Statutory or Rule Limitations that Restrict BU	Staff Resources	Insufficient Info to Determine Human or Ecological Impacts of Use Rather Than Disposal	Lack of Authority to Implement	Others
AL	X	X		X	X		
AK							We have not used our BUD process yet - less than one month old (as of 8/4/99).
AZ	----	----	----	----	----	----	----
CA	X				X		
CT					X		- Acceptance by manufacturers to use materials in the processes (product & environmental liability, regulation) - Lack of available markets
DE	X			X	X	X	
FL	X			X	X	X	
GA				X	X		
HI				X			
IL						X	
IA		X			X		
KS				X	X		

4. What are the major barriers to implementing Beneficial Use Determinations (BUDs) in your State/Territory? Check all that apply.

STATE	Public Acceptance	Lack of Awareness	Statutory or Rule Limitations that Restrict BU	Staff Resources	Insufficient Info to Determine Human or Ecological Impacts of Use Rather Than Disposal	Lack of Authority to Implement	Others
KY		X		X	X		
LA	X				X		
ME	X	X					
MA					X		
MI					X		
MN		X			X		Lack of a program and permit requirement to assist staff in the decision-making process.
MS			X	X	X	X	
MO		X	X		X		- Markets for end product - Difficulty of coordinating within the agency (water issues, air issues, hazardous waste issues, etc.)
NE			X				
NV				X		X	

4. What are the major barriers to implementing Beneficial Use Determinations (BUDs) in your State/Territory? Check all that apply.

STATE	Public Acceptance	Lack of Awareness	Statutory or Rule Limitations that Restrict BU	Staff Resources	Insufficient Info to Determine Human or Ecological Impacts of Use Rather Than Disposal	Lack of Authority to Implement	Others
NH	X[1]	X					Lack of national EPA Criteria for specific applications (e.g., coal fly ash products such as low strength concrete and flowable fill).
NJ							Just the amount of clean material available for safe use.
NY				X			Lack of national "how clean is clean" standards/criteria.
NC			X		X		Very restrictive criteria to qualify waste(s) as recovered material(s).
OH			[2]	X[3]	X[4]		

[1] Biosolids

[2] Statute doesn't restrict, but statute doesn't set up our program to make BUDs easy.

[3] Mostly lack of training.

[4] Most/all of our risk standards are based on clean-up to levels and not on contaminate-to levels.

4. What are the major barriers to implementing Beneficial Use Determinations (BUDs) in your State/Territory? Check all that apply.

STATE	Public Acceptance	Lack of Awareness	Statutory or Rule Limitations that Restrict BU	Staff Resources	Insufficient Info to Determine Human or Ecological Impacts of Use Rather Than Disposal	Lack of Authority to Implement	Others
OK		X			X		
PA	X			X	X		
RI	X	X		X	X		
SC		X		X	X		
SD				X	X		Limited success with participants adhering to beneficial use “plans”. Becomes disposal rather than beneficial use.
TN				X	X		
TX	X	X					
UT							Have not had demand.
VT							None
VA				X	X		
WA							Rule development currently in process. Expected completion by Fall 2000.
WI				X	X		
WY				X			

4. What are the major barriers to implementing Beneficial Use Determinations (BUDs) in your State/Territory? Check all that apply.

STATE	Public Acceptance	Lack of Awareness	Statutory or Rule Limitations that Restrict BU	Staff Resources	Insufficient Info to Determine Human or Ecological Impacts of Use Rather Than Disposal	Lack of Authority to Implement	Others
Guam		X		X	X		
Northern Mariana Islands	X	X		X	X		

5a. In a twelve month period, estimate the number of written requests / applications your State/Territory receives for a beneficial use notice or approval for non-hazardous, solid wastes which would normally have been disposed of if not used?

STATE	1 - 10	11 - 20	21 -30	31 or more	None
AL		X			
AK					X
AZ			X		
CA	X[1]				
CT	X				
DE		X			
FL	X				
GA	X				
HI	X				
IL	X				
IA	X				
KS		X			
KY		X			
LA		X			
ME		X			
MA		X			
MI				X	
MN				X	
MS		X			
MO		X			
NE	X				
NV	X				
NH	X				
NJ				X	
NY				X	
NC	X				
OH		X			

[1] Verify that meet regulatory requirements.

5a. In a twelve month period, estimate the number of written requests / applications your State/Territory receives for a beneficial use notice or approval for non-hazardous, solid wastes which would normally have been disposed of if not used?

STATE	1 - 10	11 - 20	21 - 30	31 or more	None
OK	X				
PA			X		
RI	X				
SC					X
SD	X				
TN	X				
TX				X	
UT	X				
VT	X				
VA	X				
WA					X
WI				X	
WY			X		
Guam					X
Northern Mariana Islands					X

5b. If possible, for the history of the program, give the total number of written requests your State/Territory has received: _____ (circle one: actual or estimate)

STATE	ACTUAL	ESTIMATE	DID NOT INDICATE ACTUAL OR ESTIMATE
AL	----	----	[1]
AK	0		
AZ	----	----	----
CA	----	----	----
CT	5		
DE			100
FL		15	
GA		20	
HI			< 10
IL		350	
IA		30	
KS		100	
KY			160
LA	----	----	----
ME	----	----	----
MA	200		
MI		>150	
MN		30[2]	
MS		70+	
MO	43		
NE		5	
NV			1
NH	?	?	?
NJ		150	

[1] Unknown. Many verbal responses given; 11-20 (reference to 5a.) since we started responding in writing. Attachment provided by State listed in Appendix D.

[2] Most are verbal.

5b. If possible, for the history of the program, give the total number of written requests your State/Territory has received: _____ (circle one: actual or estimate)

STATE	ACTUAL	ESTIMATE	DID NOT INDICATE ACTUAL OR ESTIMATE
NY	556		
NC	70[1]		
OH		30	
OK		20	
PA		225	
RI		9[2]	
SD	----	----	Unknown — too much staff turnover
TN		100	
TX		1000	
UT	----	----	----
VT		20	
VA	22		
WI		>100	
WY	?	?	?

[1] Coal Ash: 53 Other: 17

[2] This estimate does not include requests for the reuse of materials as alternate landfill cover.

6. If your State/Territory does not have a BUD process, what information would be most useful to begin developing such a process (or revising an existing one)?

STATE	Models of Existing Programs	Suggested Ways to Overcome Major Barriers	List of Approved Materials and Uses by State	List of Staff Contacts	List of Criteria or Other Standards Used for Decision Making	Other
AL			X			
AK			X	X	X	
AZ	X		X			
CA	X	X	X	X	X	
DE	X		X		X	
GA	X		X		X	
HI	X		X	X	X	
IL	X	X	X	X	X	
IA	X		X	X	X	
KS	X		X		X	
KY			X			
MN	X	X	X		X	“Lessons Learned” - what did not work.
MS	X	X	X	X	X	
MO	X	X	X	X	X	Testing requirements
NE					X	
NV	X		X		X	
OK			X		X	

6. If your State/Territory does not have a BUD process, what information would be most useful to begin developing such a process (or revising an existing one)?

STATE	Models of Existing Programs	Suggested Ways to Overcome Major Barriers	List of Approved Materials and Uses by State	List of Staff Contacts	List of Criteria or Other Standards Used for Decision Making	Other
RI	X	X	X	X	X	Listing of significant environmental and engineering problems in reusing particular materials.
SC	X		X	X	X	
SD			X		X	
TN			X		X	
TX	X	X	X		X	
UT			X			
VT	X	X		X	X	
VA			X		X	
WA	X	X	X	X	X	
WY	X		X	X	X	
Guam	X	X	X			
Northern Mariana Islands	X	X	X	X	X	BUD Training

7a. Does your State/Territory have time limits that beneficial use applications must be reviewed within?

STATE	30 Days	60 Days	90 Days	120 Days	Other	None
AL						X
AK						X
AZ					15 Days[1]	
CA						X
CT						X
DE						X
FL						X
GA						X
IL						X
IA						X
KS						X
KY						X
LA					110 Days	
ME					180 Days	
MA			X			
MI					180 Days	
MN						X
MS						X
MO						X

[1] Land application of sewage sludge only

7a. Does your State/Territory have time limits that beneficial use applications must be reviewed within?

STATE	30 Days	60 Days	90 Days	120 Days	Other	None
NE						X
NV						X
NH		X[1]		X[1]		
NJ			X			
NY						X
NC						X
OH						X[2]
OK						X
PA					160 Days for general permits 60 Days for determinations of applicability 30 Days for registrations	
RI					6 months - 1 year	
SD						X
TN						X
TX			X			
VA						X
WI					10 Days	
WY						X

[1] There is an initial time limit of 60 days for the agency to issue a “completeness determination” as to whether an application has enough information to issue a decision and either approve or reject the proposal. There is no limit (outside of court appeals) on the number of times that an agency can reject an application they feel is incomplete. However, once a completeness determination is given in the affirmative, the agency must issue a final decision within 120 days.

[2] We have a 45-day goal.

7b. If you have a time limit, does the request become automatically approved when the limit is exceeded?

STATE	YES	NO	OTHER - SPECIFY OUTCOMES
AK			No automatic approvals
AZ		X	
LA		X	
ME		X	Time limits can be extended under certain circumstances. If the timeline is not met by the agency, fees are refunded to the applicant.
MA		X	Refund of fee
MI		X	
NH			As noted in the response to 7a., a completeness determination is done first under a 60 day limit. There is not a limit on how many times an agency can keep rejecting an application as incomplete. There is the 120 day limit, however, once the agency has determined the application is complete for review.
NJ		X	
PA		X	Applicants may have their application fee returned.
RI		X	
TX		X	
WI	X		Under our Wis. Adm. Rule NR538 (Beneficial Use of Industrial By-Products) which is largely self-implementing, there are several uses (>5,000yds^3) that if we do not respond in 10 business days, concurrence is considered to be granted.

8. Estimate the range of staff hours it takes to review a beneficial use request / application:_____ to_____ hours for an average written request; _____ to _____ hours for first time / unique or more complex request.

STATE	Range in Hours for an Average Written Request	Range in Hours for a First Time/ Unique or More Complex Request	Comments
AL	2 - 4	6 - 10	
AK	2 - 8	8 - 20	Estimate; no data
AZ	1 - 2	5 - 10	
CA	----	----	Unknown - time varies in verification that meets regulatory requirements.
CT	----	----	Highly dependent on complexity of proposed use.
DE	7.5 - 14	40 - 80	Assumes information submitted is complete and accurate.
FL	16 - 24	40 - 60	Could be more depending on the number of staff involved in the process.
GA	4 - 8	8 - 24	
IL	4 - 8	8 - 40	
IA	1 - 3	5 - 10	
KS	1 - 2	4 - 8	
KY	----	----	
LA	5 - 10	20 - 25	
ME	8 - 12	100 - 500	
MA	15 - 30	30 - 75+	
MI	2 - 4	4 - 20	
MN	----	12 - 20	Does not include writing the permit. Until our program is developed, there will not be an “average permit”.
MS	0.5 - 4	1.0 - 12.0	

8. Estimate the range of staff hours it takes to review a beneficial use request / application:_____ to_____ hours for an average written request; _____ to _____ hours for first time / unique or more complex request.

STATE	Range in Hours for an Average Written Request	Range in Hours for a First Time/ Unique or More Complex Request	Comments
MO	5 - 20	20 - 60	
NE	1 - 4	5 - 10	
NV	----	10 - 20	
NH	4 - 120	160 - 320	Review time given includes a “completeness determination” through which the agency concurs that enough information is included in the application to either approve or reject the proposal.
NJ	3 - 8	10 - 40	
NY	7.5 - 37.5	30 - 75	
NC	24 - 36	5 - 10 work days	
OH	----	20 - 25	Not tracked
OK	1 - 2	5 - 10	
PA	40 - 50	50 - 60	
RI	21 - 35	35 - 70	
SD	8 - 12	15 - 30	
TN	1 - 4	20 - 100	
TX	1 - 2	3 - 1440	
VA	1 - 3	3 - 10	
WI	.5 - 2	5 - 15	
WY	1 - 2	8 - 10	

9. Which of the following criteria does your State/Territory use when considering beneficial use requests and making decisions? Check all that apply (i.e., if the request is not consistent with the criteria, it would be grounds for rejection). It must:

a. constitute a use rather than a disposal
b. be consistent with an integrated waste management policy or hierarchy
c. be effective substitute for an analogous raw material
d. not require decontamination or treatment
e. have demonstrated market or need for the material
f. divert waste from a landfill or other disposal facility
g. save resources or energy
h. (may allow) blending allowed to meet target contaminant levels
i. use in a product or activity where contaminants are chemically bound (i.e., cement, concrete, asphalt)
others (please specify)

STATE	A	B	C	D	E	F	G	H	I	Other
AL	X								X	Not harmful to environmental quality.
AK						X		X		Must not create harmful leachates or cause a threat to public heath, safety or welfare or to the environment.
AZ	X		X		X					
CA	X		X	X		X			X	
CT	X	X	X		X	X	X	X	X	Can be efficiently and effectively managed to minimize long-term human and ecological risks.
DE	X[1]		X		X	X	X		X	Usage of waste in landfill construction or operation (i.e., ADC, roadbeds).
FL	X		X		X			X	X	Demonstration by applicant that the use will not pose an unacceptable risk to human health or the environment.
GA	X		X		X	X			X	
IL	X		X		X					
IA	X		X	X					X	

[1] Debate on-going reference use vs. disposal

9. Which of the following criteria does your State/Territory use when considering beneficial use requests and making decisions? Check all that apply (i.e., if the request is not consistent with the criteria, it would be grounds for rejection). It must:

a. constitute a use rather than a disposal
b. be consistent with an integrated waste management policy or hierarchy
c. be effective substitute for an analogous raw material
d. not require decontamination or treatment
e. have demonstrated market or need for the material
f. divert waste from a landfill or other disposal facility
g. save resources or energy
h. (may allow) blending allowed to meet target contaminant levels
i. use in a product or activity where contaminants are chemically bound (i.e., cement, concrete, asphalt)
others (please specify)

STATE	A	B	C	D	E	F	G	H	I	Other
KS	X		X			X			X	
KY			X	X	X	X				
LA	X	X	X	X	X	X				
ME	X		X		X					
MA	X	X	X					X		
MI	X	X	X						X	
MN	X	X	X		X				X[1]	
MS	X		X	X	X				X	
MO	X		X							Not pose a threat to public health or the environment.
NE	X		X						X	
NV	X				X					
NH	X	X	X		X			X		

[1] But not limited to

9. Which of the following criteria does your State/Territory use when considering beneficial use requests and making decisions? Check all that apply (i.e., if the request is not consistent with the criteria, it would be grounds for rejection). It must:

a. constitute a use rather than a disposal
b. be consistent with an integrated waste management policy or hierarchy
c. be effective substitute for an analogous raw material
d. not require decontamination or treatment
e. have demonstrated market or need for the material
f. divert waste from a landfill or other disposal facility
g. save resources or energy
h. (may allow) blending allowed to meet target contaminant levels
i. use in a product or activity where contaminants are chemically bound (i.e., cement, concrete, asphalt)
others (please specify)

STATE	A	B	C	D	E	F	G	H	I	Other
NJ	X		X	X	X			[1]	X	
NY	X	X	X	X	X				X	Alternative fuels must have a minimum BTU of 4,000 BTU/lb; must not adversely affect human health, safety or the environment; engineering soundness of the end product/application.
NC	X			X		X			X	
OH									X	Safe to put on/in ground without engineering controls or monitoring based on material characteristics, siting, use.
OK	X		X		X				X	Not pose unacceptable risk to human health and/or the environment.
PA	X	X	X		X			X		
RI	X	X	X		X	X	X	X	X	Proposed recycling of the waste will not degrade the environment.
SD	X		X							
TN	X		X		X				X	

[1] Sometimes/rarely

9. Which of the following criteria does your State/Territory use when considering beneficial use requests and making decisions? Check all that apply (i.e., if the request is not consistent with the criteria, it would be grounds for rejection). It must:

a. constitute a use rather than a disposal
b. be consistent with an integrated waste management policy or hierarchy
c. be effective substitute for an analogous raw material
d. not require decontamination or treatment
e. have demonstrated market or need for the material
f. divert waste from a landfill or other disposal facility
g. save resources or energy
h. (may allow) blending allowed to meet target contaminant levels
i. use in a product or activity where contaminants are chemically bound (i.e., cement, concrete, asphalt)
others (please specify)

STATE	A	B	C	D	E	F	G	H	I	Other
TX	X		X		X				X	
VA	X		X						X	
WI	X	X	X	X		X			X	
WY	X		X	X		X	X		X	

10a. Which of the following administrative tools does your State/Territory use when making beneficial use decisions? Check all that apply.

STATE	List(s) of exempted materials or preapproved use for wastes	Rule or statute directs that no formal approvals are needed	Letters simply acknowledging beneficial use of a material but not an approval	Special consideration when material used as a substitute for another raw material	Letters granting approval	Permits	Others
AL			X		X		
AK					X		
AZ		X[1]					Letters acknowledging the registration.
CA	X						
CT						X[2]	
DE					X		
FL		X			X	X	
GA			X				
IL							We previously provided solid waste determinations. We currently respond to letters and provide some guidance, but not necessarily an approval or denial.
IA	X	X			X		
KS					X		

[1] We simply review a registration form.

[2] Specifically General Permits; Attachment provided by State listed in Appendix D.

10a. Which of the following administrative tools does your State/Territory use when making beneficial use decisions? Check all that apply.

STATE	List(s) of exempted materials or preapproved use for wastes	Rule or statute directs that no formal approvals are needed	Letters simply acknowledging beneficial use of a material but not an approval	Special consideration when material used as a substitute for another raw material	Letters granting approval	Permits	Others
KY		X	X				
LA					X	X	
ME	X					X	
MA						X	Generic approval by policy.
MI	X	X	X	X	X		
MN					X	X	
MS			X		X	X	
MO	X	X			X		Can allow pilot project for B.U.(9)(B). Specific rules on coal combustion byproducts 9(F)(G)(H) (fly ash, bottom ash, boiler slag).
NE	X				X		
NV			X		X		
NH	X[1]						Must receive Certified-Waste Derived Product (CWDP) designation.
NJ	X	X	X		X		

[1] By-Rule, As-Approved Lists

10a. Which of the following administrative tools does your State/Territory use when making beneficial use decisions? Check all that apply.

STATE	List(s) of exempted materials or preapproved use for wastes	Rule or statute directs that no formal approvals are needed	Letters simply acknowledging beneficial use of a material but not an approval	Special consideration when material used as a substitute for another raw material	Letters granting approval	Permits	Others
NY	X				X	X[1]	
NC			X				
OH	X						Exemption from permit/license
OK			X	X	X		
PA						X	No permits required for certain uses of coal ash — as specified in regulations.
RI	X				X		Our Policy allows us to grant letters of approval and is based on general authorities of our Solid Waste and Recycling statutes.
SD					X	X	
TN		X			X		
TX			X				
VA	X				X		
WI	X	X			X	X	Permits are called conditional grants of exemption.
WY	X				X		

[1] Cold-mix asphalt

10b. If a material meets your State/Territory requirements or is preapproved to be considered for beneficial use, is it exempt from solid waste regulation?

STATE	YES	NO	If Yes, what is the specific point at which the material ceases to be a solid waste?
AL		X	
AK	X		Some materials such as asphalt pavement chips are never regulated if used in certain ways. Materials exempt under Section 18AAC60.005(c)(16) are only exempt after getting an approval letter.
AZ	X		Sewage sludge ceases to be a solid waste after it is land applied in accordance with the rule.
CA	X		The State Water Resources Control Board continues to regulate for purpose of water quality.
CT		X	
DE		X[1]	
FL	X		There is a sense in which the answer to this question is both Yes and No.[2]
GA	X		Not stated in the rule. However, in general, once the material has been determined to be destined to be recovered, it is no longer a solid waste and as such not regulated.
IL	----	----	We have no BUD regulations. If the material does not meet the definition of a waste, then it may be used and would not be subject to the solid waste regulations.
IA		X	A waste material is a waste until it is reused or proposed to be reused. Storage time would be limited. If it is exceeded, the material would be considered a waste.
KS	X		When actually used.
KY		X	
LA		X	
ME		X	
MA	X		When used or stored, processed according to approval

Footnotes:

1 DE: The activity of recycling is exempt but the solid waste is not under DRGSW.

2 FL: There is a sense in which the answer to this question is both “yes” and “no”. Florida has no official process where solid wastes are defined as “exempt from regulation”. But there are cases where the effect is the same. For example, if a material is approved for use as a fertilizer or encapsulated into another product such as Portland cement, concrete or asphalt, then we have not tracked these materials further as a solid waste. So they have essentially become exempt from regulation when they become incorporated into these other products. We would probably regulate the handling, i.e., storage or stockpiling, of these solid wastes prior to incorporation into the products.

Also, if we agree that a solid waste meets the requirements to be called an industrial byproduct, Section 403.7045(1)(f), Florida Statutes, then it, in effect, becomes unregulated material. The point at which that material would cease to be a solid waste would depend on the actual operations of the facility. The material would be unregulated as long as the three criteria in our industrial byproducts language were followed. However, if we determined the material was not being managed in accordance with our industrial byproducts language, we would say this exemption does not apply and take enforcement action if necessary.

10b. If a material meets your State/Territory requirements or is preapproved to be considered for beneficial use, is it exempt from solid waste regulation?

STATE	YES	NO	If Yes, what is the specific point at which the material ceases to be a solid waste?
MI	X		At the point it is used. The storage, processing, incorporation into a finished product, transportation are all regulated.
MN		X	
MS		X	
MO	X		If the material is considered a "recovered material", it is not regulated as a solid waste. For others such as fly ash, which has been shown to meet requirements, it's still a regulated waste. It's just being beneficially used. Also, anything which causes a nuisance, health, or environmental problem is regulated.
NE		X	
NV		X[1]	
NH		X[2]	
NJ	X		Yes, in some specific cases - probably when it is designated for the intended beneficial purpose.
NY	X		Unless otherwise determined for the particular solid waste under review, that point occurs when it is used in a manufacturing process to make a product, or used as an effective substitute for a commercial product, or used as a fuel for energy recovery.
NC	X		If a waste contains no contaminant which leaches at a level exceeding NC ground water 2L max. contamination levels (using a TCLP protocol at very low detection limits required).

[1] Would be exempt from regulation at the point of use (final).

[2] Some "universal" environmental criteria still apply.

10b. If a material meets your State/Territory requirements or is preapproved to be considered for beneficial use, is it exempt from solid waste regulation?

STATE	YES	NO	If Yes, what is the specific point at which the material ceases to be a solid waste?
OH	----	----	If used in manufacture of a product, it is not "disposal" and is not regulated (it is still a solid waste, though, until the product is made). If use constitutes disposal (fill material, land application), an exemption is issued. This is a very important distinction in our program. We do not judge "benefit" - we regulate disposal. If disposal without liner, ground water monitoring, etc. is okay, then issue exemption (basically, show "no harm" rather than benefit).
OK	X		Conditionally exempted at time of approval through incorporation into beneficial reuse. (Generally, time period to reuse material should not exceed 3 months.)
PA		X	However, we have the regulatory authority to de-waste a waste through a condition of the general permit.
RI	X		When all performance criteria and approval conditions regarding the treatment and reuse of the waste have been satisfactorily met.
SD		X	
TN	X		When it is reused as a material or product.
TX		X	
VA	X		When it is beneficially used.
WI	X		It is exempt from licensing under 289.31, Stats., and the regulatory requirements in Chs. NR 500 to 536. This occurs after the initial certification has been submitted and reviewed.
WY		X	

11a. What elements below do you consider in your routine process for making a BUD? Check all that apply.

a. **benefit assessment (based on suitable physical, chemical or agronomic properties)**
b. **institutional controls where materials are used**
c. **financial assurance or bonding for beneficial use projects**
d. **informal risk evaluation**
e. **formal human health risk assessment**
f. **formal ecological risk assessment**
g. **testing chemical / physical characteristics of materials**
h. **specific numeric thresholds, standards or guidelines**
i **special conditions that limit use**
j. **public notification**
k. **other elements (please specify)**

STATE	ELEMENTS										
	A	B	C	D	E	F	G	H	I	J	Other
AL	X	X		X			X		X		Best Management Practices Plan
AK	X[1]	X[1]	X[1]	X[1]	X[1]	X[1]	X[1]	X[1]	X[1]	X[1]	
AZ	X						X	X	X	X	
CA	X	X					X	X			
CT	X	X	X[2]	X	X	X	X	X	X	X	Available markets for use
DE	X	X		X[3]			X		X		
FL	X	X		X	X		X	X	X	X	
GA	X			X			X		X		
IL	X						X		X		
IA	X			X			X	X	X		It depends on what materials are being considered and for what use.
KS	X			X			X				

[1] We may not require any of these in some cases - process is very new.

[2] For processing facilities

[3] Very informal - qualitative, not quantitative

11a. What elements below do you consider in your routine process for making a BUD? Check all that apply.

a. **benefit assessment (based on suitable physical, chemical or agronomic properties)**
b. **institutional controls where materials are used**
c. **financial assurance or bonding for beneficial use projects**
d. **informal risk evaluation**
e. **formal human health risk assessment**
f. **formal ecological risk assessment**
g. **testing chemical / physical characteristics of materials**
h. **specific numeric thresholds, standards or guidelines**
i **special conditions that limit use**
j. **public notification**
k. **other elements (please specify)**

STATE	ELEMENTS										
	A	B	C	D	E	F	G	H	I	J	Other
KY	X			X			X	X	X		
LA	X		X	X			X	X	X	X	
ME	X[1]	X[1]	X[1]		X[1]		X[1]	X[1]	X[1]	X[1]	
MA	X[2]	X[2]		X[2]	X[2]	X[2]	X[2]	X[2]	X[2]	X[2]	
MI	X	X		X			X	X	X		
MN	X	X		X			X	X	X		In the future, marketing plan depending if the use is in a “product”.
MS	X						X	X	X		
MO	X	X		X			X	X	X		Comparison to water quality standards, though no formal risk assessment is done.
NE	X	X		X			X	X	X		
NV	X						X	X	X		
NH	X	X			X		X	X	X		

[1] May apply, depending on proposal specifics

[2] Not all elements in all approvals

11a. What elements below do you consider in your routine process for making a BUD? Check all that apply.

a. **benefit assessment (based on suitable physical, chemical or agronomic properties)**
b. **institutional controls where materials are used**
c. **financial assurance or bonding for beneficial use projects**
d. **informal risk evaluation**
e. **formal human health risk assessment**
f. **formal ecological risk assessment**
g. **testing chemical / physical characteristics of materials**
h. **specific numeric thresholds, standards or guidelines**
i **special conditions that limit use**
j. **public notification**
k. **other elements (please specify)**

STATE	ELEMENTS										
	A	B	C	D	E	F	G	H	I	J	Other
NJ	X	X[1]					X	X	X		
NY	X	X	X[2]	X			X	X	X		Contracts to purchase proposed products; previous BUDs granted; available technical and scientific publications; existing markets.
NC	X						X	X			
OH	X	X					X		X		
OK	X	X		X			X		X		
PA	X	X	X	X	X	X	X	X	X	X	
RI	X	X		X			X	X	X		
SD	X			X			X	X			
TN		X	X	X	X		X	X	X		
TX	X			X			X	X	X		
VA	X	X		X			X		X		
WI		X					X	X	X	X	
WY	X	X		X			X	X	X		

[1] Rarely

[2] Only if RD&D permit is issued

11b. From the list above, which 3 items are the most important? (you may use the letters): most important (#1): _____; 2nd most important:_____; 3rd most important: _____

STATE	Most Important	2nd Most Important	3rd Most Important	Comments
AL	g	a	b	
AK	f	d	g	
AZ	g	h	a	
CA	h	a	b	
CT	e	f	b	
DE	g	i	a	Currently the most important
FL	h	g	b	
GA	g	d	i	
IL	a	b	c	
IA	g	d	h	
KS	a	d	g	
KY	g	a	d	
LA	g	h	d	
ME	----	----	----	
MA	a	g	i	
MI	h	g	a	
MN	g	d	a	
MS	a	h	i	
MO	g	b	h	
NE	h	a	b	

11b. From the list above, which 3 items are the most important? (you may use the letters): most important (#1): _____; 2nd most important:_____; 3rd most important: _____

STATE	Most Important	2nd Most Important	3rd Most Important	Comments
NV	a	g	h	
NH	h	a	g	
NJ	a	g	h	
NY	a	g	d or h	
NC	g	h	a	
OH	g	a	i	
OK	g	d	a	
PA	g	a	i	
RI	a	h	g	
SD	a	g	h	
TN	g	e	i	
TX	a	d	g	
VA	g	j	i	
WI	g	h	i	
WY	g	a	d	

12. Please check any general restrictions or conditions your State/Territory places on beneficial use decisions. Check all that apply.

STATE	RESTRICTIONS OR CONDITIONS ON BENEFICIAL USE DECISIONS									
	Site location	**Set back distances from water supplies, surface waters or wetlands**	**Depth to ground water**	**Property or deed restrictions**	**Post use soil sampling**	**Post use ground water sampling**	**Periodic follow-up testing or monitoring of products**	**Quarterly or annual monitoring reports**	**Reporting of quantities of wastes utilized at the end of the year or quarter**	**Others**
AL[1]	X	X	X		X	X	X			
AK										None - unless we determine the BUD request was not accurate
AZ	X	X	X						X	For biosolids: pH of soil, slope, application rate
CA	X	X	X			X	X	X	X	
CT	X	X	X	X[2]			X	X	X	- Quantities of material handled - Sampling and testing before beneficial use

[1] Added “or advisories” after “general restrictions or conditions”

[2] For soils in particular

12. Please check any general restrictions or conditions your State/Territory places on beneficial use decisions. Check all that apply.

STATE	RESTRICTIONS OR CONDITIONS ON BENEFICIAL USE DECISIONS									
	Site location	Set back distances from water supplies, surface waters or wetlands	Depth to ground water	Property or deed restrictions	Post use soil sampling	Post use ground water sampling	Periodic follow-up testing or monitoring of products	Quarterly or annual monitoring reports	Reporting of quantities of wastes utilized at the end of the year or quarter	Others
DE	X	X							X[1]	
FL	X	X	X	X			X			
GA	X	X					X			
IL	X	X	X							
IA	X	X	X				X			
KS	X									
KY	X		X							
LA	X	X	X	X	X		X	X	X	
ME	[2]	[2]	[2]	[2]	[2]	[2]	[2]	X	X	
MA	X	X	X	X			X	X	X	
MI	X	X	X	X			X	X	X	

[1] For ash only

[2] Any of these could be placed as conditions; they are not general conditions, however.

STATE	RESTRICTIONS OR CONDITIONS ON BENEFICIAL USE DECISIONS									
	Site location	**Set back distances from water supplies, surface waters or wetlands**	**Depth to ground water**	**Property or deed restrictions**	**Post use soil sampling**	**Post use ground water sampling**	**Periodic follow-up testing or monitoring of products**	**Quarterly or annual monitoring reports**	**Reporting of quantities of wastes utilized at the end of the year or quarter**	**Others**
MN	X[3]	X[3]	X[3]		X[3]	X[3]	X[3]	X[3]		

12. Please check any general restrictions or conditions your State/Territory places on beneficial use decisions. Check all that apply.

STATE	RESTRICTIONS OR CONDITIONS ON BENEFICIAL USE DECISIONS									
	Site location	**Set back distances from water supplies, surface waters or wetlands**	**Depth to ground water**	**Property or deed restrictions**	**Post use soil sampling**	**Post use ground water sampling**	**Periodic follow-up testing or monitoring of products**	**Quarterly or annual monitoring reports**	**Reporting of quantities of wastes utilized at the end of the year or quarter**	**Others**
MS	X[3]	X	X		X[1]		X	X	X	
MO	X								X	Quantity limits in some cases 9 (F)(G)(H) fly ash

[2] All of these conditions are use and waste specific, and may not be necessary in certain situations.

[3] Some but not all

STATE	RESTRICTIONS OR CONDITIONS ON BENEFICIAL USE DECISIONS									
	Site location	**Set back distances from water supplies, surface waters or wetlands**	**Depth to ground water**	**Property or deed restrictions**	**Post use soil sampling**	**Post use ground water sampling**	**Periodic follow-up testing or monitoring of products**	**Quarterly or annual monitoring reports**	**Reporting of quantities of wastes utilized at the end of the year or quarter**	**Others**
NE										If they demonstrate that the material presents no threat, these restrictions are not an issue.
NV	----	----	----	----	----	----	----	----	----	----

12. Please check any general restrictions or conditions your State/Territory places on beneficial use decisions. Check all that apply.

STATE	RESTRICTIONS OR CONDITIONS ON BENEFICIAL USE DECISIONS									
	Site location	**Set back distances from water supplies, surface waters or wetlands**	**Depth to ground water**	**Property or deed restrictions**	**Post use soil sampling**	**Post use ground water sampling**	**Periodic follow-up testing or monitoring of products**	**Quarterly or annual monitoring reports**	**Reporting of quantities of wastes utilized at the end of the year or quarter**	**Others**
NH	X	X								Follow-up monitoring of certified waste; Other facility-specific requirements of the facility which produces the certified waste.
NJ	X	X	X	X		X		X		
NY	X	X	X		X		X	X	X	Application rates; weather conditions; contaminant levels; destinations; transporters; facility operations (i.e., material storage, dust & runoff control).
NC		X	X	X					X	

12. Please check any general restrictions or conditions your State/Territory places on beneficial use decisions. Check all that apply.

STATE	RESTRICTIONS OR CONDITIONS ON BENEFICIAL USE DECISIONS									
	Site location	**Set back distances from water supplies, surface waters or wetlands**	**Depth to ground water**	**Property or deed restrictions**	**Post use soil sampling**	**Post use ground water sampling**	**Periodic follow-up testing or monitoring of products**	**Quarterly or annual monitoring reports**	**Reporting of quantities of wastes utilized at the end of the year or quarter**	**Others**
OH	X	X	X	X						Good environmental management practices (control run-off, no nuisance).
OK	X		X	X						
PA	X	X	X				X	X	X	
RI	X	X	X		X	X	X	X	X	
SD	X	X	X							
TN		X	X	X	X[1]	X[1]				
TX	----	----	----	----	----	----	----	----	----	----
VA		X	X							
WI	X	X	X				X		X	
WY	X	X	X						X	

[1] Certain cases

13. What analytical tests do you require for making BUDs? Check all that apply.

STATE	ANALYTICAL TESTS					
	Total metals analysis	Total organic analysis	TCLP (EPA Method 1311)	SPLP (EPA Method 1312)	Neutral Water (ASTM 39876)	Others
AL			X			Nutrient value for land application at agronomic rate.
AK						None - unless we have reservations about the material, then we could withhold approval until the applicant does the tests we want.
AZ						Test for metals and pathogen reduction
CA	[1]	[1]	[1]	[1]	[1]	
CT	X	X	X	X		Dioxins & furans, conventional pollutants (i.e., nitrates, mitrite, total organics), cyanide, sulfate, chloride
DE	X[2]	X[2]	X[3]			
FL	X	X	X	X		
GA	X	X	X			
IL						Any or all of these may be required but our determination is site-specific.

[1] Potentially all of these could be used prior to the waste being determined as non-hazardous. Also used by the State Water Resources Control Board for purposes of water quality.

[2] Occasionally - case-by-case

[3] Always

13. What analytical tests do you require for making BUDs? Check all that apply.

STATE	ANALYTICAL TESTS					
	Total metals analysis	Total organic analysis	TCLP (EPA Method 1311)	SPLP (EPA Method 1312)	Neutral Water (ASTM 39876)	Others
IA	X		X			More specific tests like TPH
KS	X	X	X			503 land application rates
KY	X	X	X			
LA	X	X	X			Total Kjeldahl Nitrogen, Organic Nitrogen, Pathogen tests for sludges
ME	X[1]	X[1]	X[1]	X[1]		
MA	X	X	X		X	As appropriate for material
MI	X	X		X		
MN	X	X				Staff will also consider the process and the waste when determining the list of analytes.
MS	X		X	X		
MO	X		X	X	X	
NE	X	X	X		X	
NV	X	X				
NH	X	X	X			PCBs, Dioxin (TCDD), BTEX, TPH, pesticides (8081), and finally, case-by-case analytical needs.

[1] May be required depending on type of waste and reuse proposal

13. What analytical tests do you require for making BUDs? Check all that apply.

STATE	ANALYTICAL TESTS					
	Total metals analysis	Total organic analysis	TCLP (EPA Method 1311)	SPLP (EPA Method 1312)	Neutral Water (ASTM 39876)	Others
NJ	X	X	X[1]	X[2]		
NY	X	X	X	X		PCBs, Dioxins, BTEX, TPH, pH, pesticides (method 8081), varies on a case-by-case basis
NC	X	X	X			
OH	X	X	X			
OK	X	X	X			
PA	X	X	X	X		Other analyses which may be needed on a case-by-case basis
RI	X	X	X			PCBs, cyanide, pesticides and TPH
SD	X[3]	X[3]	X[3]			
TN	X	X	X			
TX			X			
VA	X	X	X			BTEX, TOX, TPH
WI	X		X			ASTM D3987 Water Leach Test
WY	X	X		X		

[1] Assumed

[2] Rarely, but more frequently recently

[3] Potentially, would depend on the scenario

14a. What is the acceptable risk level for human and ecological receptors that comes closest to your State/Territory rules or policy applied to BUDs? Check all that apply.

a. no adverse risk accepted
b. case-by-case acceptable risk determination
c. 1 in 10,000 excess cancer risk (1X10-4)
d. 1 in 100,000 excess cancer risk (1X10-5)
e. 1 in 1,000,000 excess cancer risk (1X10-6)
f. other human health risk level or range:_____
g. ecological effects levels (circle those that apply: i.e., No-Effects Levels, Low-Effects, Moderate-Effects Levels, LD50; other:_____)
h. risk level is not used as an element of the decision or approval process, however, we use the following:_____

STATE	ACCEPTABLE RISK LEVEL FOR HUMAN AND ECOLOGICAL RECEPTORS								
	A	B	C	D	E	F	G	H	Other
AL								X[1]	
AK				X					
AZ								Pollutant concentrations (of course, these are based on risk assumptions).	
CA[2]									
CT		X[3]			X[4]	0.5×10^{-6} for single substance; Hazard Index < 1 non-carcinogens	Hazard Quotient < 1		

[1] Referenced Attachment provided by State listed in Appendix D.

[2] This is determined by the Department of Toxic Substances Control that oversees hazardous waste.

[3] If bioaccumulative substance present, then require human health and ecological risk assessment.

[4] Cumulative (more than one substance).

14a. What is the acceptable risk level for human and ecological receptors that comes closest to your State/Territory rules or policy applied to BUDs? Check all that apply.

a. no adverse risk accepted
b. case-by-case acceptable risk determination
c. 1 in 10,000 excess cancer risk (1X10-4)
d. 1 in 100,000 excess cancer risk (1X10-5)
e. 1 in 1,000,000 excess cancer risk (1X10-6)
f. other human health risk level or range:_____
g. ecological effects levels (circle those that apply: i.e., No-Effects Levels, Low-Effects, Moderate-Effects Levels, LD50; other:_____)
h. risk level is not used as an element of the decision or approval process, however, we use the following:_____

STATE	ACCEPTABLE RISK LEVEL FOR HUMAN AND ECOLOGICAL RECEPTORS								
	A	B	C	D	E	F	G	H	Other
DE								Qualitative risk used currently, in the process of developing standard or defaulting to some existing remediation standards (1×10^{-6}).	
FL					X	Hazard Index Quotient ≤ 1.0 for non-carcinogens	Low Effects		
GA	X								
IL		X							
IA								X (no elaboration)	
KS								503 standards	
KY					X				

14a. What is the acceptable risk level for human and ecological receptors that comes closest to your State/Territory rules or policy applied to BUDs? Check all that apply.

a. no adverse risk accepted
b. case-by-case acceptable risk determination
c. 1 in 10,000 excess cancer risk (1X10-4)
d. 1 in 100,000 excess cancer risk (1X10-5)
e. 1 in 1,000,000 excess cancer risk (1X10-6)
f. other human health risk level or range:_____
g. ecological effects levels (circle those that apply: i.e., No-Effects Levels, Low-Effects, Moderate-Effects Levels, LD50; other:_____)
h. risk level is not used as an element of the decision or approval process, however, we use the following:_____

STATE	ACCEPTABLE RISK LEVEL FOR HUMAN AND ECOLOGICAL RECEPTORS								
	A	B	C	D	E	F	G	H	Other
LA		X							
ME						ICLR 5 x 10^{-6}/ health index of 1/2			
MA		X							
MI					X				
MN				X					No increased risk through reuse, or if risk-based numbers are used, they were based on 1 in 100,000.
MS								X (no elaboration)	
MO								Sometimes compare to water quality standards	
NE								MCL limits	
NV								X (no elaboration)	

14a. What is the acceptable risk level for human and ecological receptors that comes closest to your State/Territory rules or policy applied to BUDs? Check all that apply.

a. no adverse risk accepted
b. case-by-case acceptable risk determination
c. 1 in 10,000 excess cancer risk (1X10-4)
d. 1 in 100,000 excess cancer risk (1X10-5)
e. 1 in 1,000,000 excess cancer risk (1X10-6)
f. other human health risk level or range:_____
g. ecological effects levels (circle those that apply: i.e., No-Effects Levels, Low-Effects, Moderate-Effects Levels, LD50; other:_____)
h. risk level is not used as an element of the decision or approval process, however, we use the following:_____

STATE	ACCEPTABLE RISK LEVEL FOR HUMAN AND ECOLOGICAL RECEPTORS								
	A	B	C	D	E	F	G	H	Other
NH					X				Applicant prepared risk assessment.
NJ					X				
NY									Formal risk assessment is not performed; a multi-path exposure assessment is conducted considering ground and surface water protection, human health exposure (HEAST) and tertrestrial exposure.
NC					X				
OH									Best professional judgement.
OK	----	----	----	----	----	----	----	----	----
PA		X			X		case-by-case		

14a. What is the acceptable risk level for human and ecological receptors that comes closest to your State/Territory rules or policy applied to BUDs? Check all that apply.

a. no adverse risk accepted
b. case-by-case acceptable risk determination
c. 1 in 10,000 excess cancer risk (1X10-4)
d. 1 in 100,000 excess cancer risk (1X10-5)
e. 1 in 1,000,000 excess cancer risk (1X10-6)
f. other human health risk level or range:_____
g. ecological effects levels (circle those that apply: i.e., No-Effects Levels, Low-Effects, Moderate-Effects Levels, LD50; other:_____)
h. risk level is not used as an element of the decision or approval process, however, we use the following:_____

STATE	ACCEPTABLE RISK LEVEL FOR HUMAN AND ECOLOGICAL RECEPTORS								
	A	B	C	D	E	F	G	H	Other
RI					X				
SD		X							
TN					X				
TX	----	----	----	----	----	----	----	----	----
VA								case-by-case	
WI									Our standards were developed from risk analysis.
WY	X						No-Effects		No formal risk assessment process.

14b. Is risk-based evaluation used consistently for all BUDs? ____ Yes; ____ No; ____ Not used

STATE	YES	NO	NOT USED
AL			X
AK		X	
AZ			X
CA[1]			
CT	X		
DE		X	
FL	X		
GA			X
IL		X	
IA			X
KS		X	
KY	X		
LA	X		
ME	X		
MA		X	
MI	X		
MN		X	
MS			X

[1] Determined by the Department of Toxic Substances Control

14b. Is risk-based evaluation used consistently for all BUDs? ____ Yes; ____ No; ____ Not used

STATE	YES	NO	NOT USED
MO			X
NE	X		
NV			X
NH	X		
NJ	X		
NY			X
NC		X[1]	
OH			X
OK	X		
PA		X	
RI	X		
SD		X	
TN		X	
TX		X	
VA			X
WI		X	
WY			X

[1] Not used on DOT projects.

15. How does your State/Territory address "toxics along for the ride" in a BUD material? (indicate methods used to deal with the undesirable constituents present, also, see Q&A in Attachment I for explanation)

STATE	METHODS USED TO ADDRESS "TOXICS ALONG FOR THE RIDE"				
	Linking beneficial use decisions to toxicity benchmarks	**Specific standards that limit concentrations**	**Case by case evaluation of risk (risk for each contaminant / cumulative for all contaminants)**	**Cleanup rules or a risk evaluation process are adequate to address this concern**	**Other**
AL					X[1]
AK			X	X	
AZ		X			
CA[2]					
CT	X		X		Evaluation of processes generating waste and substances introduced.
DE					No standard procedure.
FL				X	
GA					Do not use.
IL					There are no regulations addressing this issue. Any risk evaluation would be on a case-by-case basis.

[1] Referenced Attachment provided by State listed in Appendix D.

[2] Determined by the Department of Toxic Substances Control

15. How does your State/Territory address "toxics along for the ride" in a BUD material? (indicate methods used to deal with the undesirable constituents present, also, see Q&A in Attachment I for explanation)

STATE	METHODS USED TO ADDRESS "TOXICS ALONG FOR THE RIDE"				
	Linking beneficial use decisions to toxicity benchmarks	Specific standards that limit concentrations	Case by case evaluation of risk (risk for each contaminant / cumulative for all contaminants)	Cleanup rules or a risk evaluation process are adequate to address this concern	Other
IA		X			
KS				X	
KY			X		
LA			X		
ME	X		X		
MA			X		
MI		X			
MN		X			This is where an accurate waste characterization is extremely important.
MS	X		X		
MO		X	X	X	Standards only set for Coal Combustion Byproducts Beneficial Use Projects.
NE		X			

15. How does your State/Territory address "toxics along for the ride" in a BUD material? (indicate methods used to deal with the undesirable constituents present, also, see Q&A in Attachment I for explanation)

STATE	METHODS USED TO ADDRESS "TOXICS ALONG FOR THE RIDE"				
	Linking beneficial use decisions to toxicity benchmarks	Specific standards that limit concentrations	Case by case evaluation of risk (risk for each contaminant / cumulative for all contaminants)	Cleanup rules or a risk evaluation process are adequate to address this concern	Other
NV		X[1]			
NH		X	X		
NJ		X		X	
NY					The toxic constituent is compared to the raw material for which substitution is targeted.
NC		X			
OH		X			
OK	X		X		
PA	X	X	X		

[1] For example, 503 standards for soil amendments.

15. How does your State/Territory address "toxics along for the ride" in a BUD material? (indicate methods used to deal with the undesirable constituents present, also, see Q&A (Appendix A in report) for explanation)

STATE	METHODS USED TO ADDRESS "TOXICS ALONG FOR THE RIDE"				
	Linking beneficial use decisions to toxicity benchmarks	Specific standards that limit concentrations	Case by case evaluation of risk (risk for each contaminant / cumulative for all contaminants)	Cleanup rules or a risk evaluation process are adequate to address this concern	Other
RI			X		We have not had this come up with BUDs to date, however, we realize that it is a difficult issue to properly evaluate and that it could become an issue for us in the future.
SD			X		
TN			X		
TX			X		
VA					Limit exposure.
WI		X			
WY	X				

16. How does your State/Territory address the potential for "sham recycling" as opposed to legitimate beneficial use?

a. stockpile time or volume limitations
b. minimally identify or fully document end markets
c. mandatory turnover of a certain volume of BUD material into a process
d. performance criteria or technical specifications
e. comparison against an analogous raw material
f. evaluation of the role or purpose of the BUD material in a given application
g. provide market information
others (explain):_____

STATE	A	B	C	D	E	F	G	Other
AL								No - problematic.
AK	X							
AZ	X[1]							Crops must be grown where biosolids have been land applied.
CA	X				X	X		
CT	X	X		X	X	X	X	
DE		X						Case-by-case may have certain storage limitation conditions, but not used routinely.
FL	X		X			X		
GA	X		X					
IL								Any of these could be used on a case-by-case basis.
IA	X	X						
KS	X					X		
KY	X	X				X		

[1] Biosolids can only be applied at the agronomic rate.

16. How does your State/Territory address the potential for "sham recycling" as opposed to legitimate beneficial use?

a. stockpile time or volume limitations
b. minimally identify or fully document end markets
c. mandatory turnover of a certain volume of BUD material into a process
d. performance criteria or technical specifications
e. comparison against an analogous raw material
f. evaluation of the role or purpose of the BUD material in a given application
g. provide market information
others (explain):_____

STATE	A	B	C	D	E	F	G	Other
LA	X	X		X		X		
ME	X	X	X	X	X	X	X	
MA	X		X				X	
MI	X				X	X		
MN	X						X[1]	
MS					X			
MO						X		
NE				X	X	X		
NV	X	X		X	X	X	X	
NH	X	X	X	X	X	X	X	Waste or facility-specific permit requirements can be included in the "Certified - Waste Derived Product (CWDP)" (i.e., BUD) certificate. In addition, the facility-specific requirements can utilize both a "Standard" Permit format or a "Permit-by-Notification" format.

[1] In future

16. How does your State/Territory address the potential for "sham recycling" as opposed to legitimate beneficial use?

a. stockpile time or volume limitations
b. minimally identify or fully document end markets
c. mandatory turnover of a certain volume of BUD material into a process
d. performance criteria or technical specifications
e. comparison against an analogous raw material
f. evaluation of the role or purpose of the BUD material in a given application
g. provide market information
others (explain):_____

STATE	A	B	C	D	E	F	G	Other
NJ					X	X		
NY	X	X	X	X	X	X	X	
NC	X		X					
OH	X			X	X			
OK	X	X	X	X	X	X	X	
PA	X	X		X		X	X	
RI	X	X		X	X			Reuse may not be an alternate form of disposal and the approval is issued for 1 year, but is renewable.
SD						X		
TN	X							
TX	X	X	X	X	X	X	X	
VA	X	X	X	X	X	X		Don't allow speculative accumulation.
WI	X	X		X		X		
WY	X	X		X	X	X		

17. Does your State/Territory have an enforcement process which is used to maintain compliance with BUD? _____Yes; ____ No; Explain.

STATE	YES	NO	EXPLANATION
AL		X	We would investigate a situation on a complaint basis.
AK	X		If waste is disposed illegally, we can make the land owner remove it.
AZ	X		Inspections of land application sites and compliance reviews of annual reports are conducted.
CA	X		If inspect and find not BU, can issue cease and desist, cleanup orders and/or enforce in court.
CT	X		General enforcement discretionary authority; denial of general permit — require individual permit.
DE		X	Currently enforceability being tested.
FL		X	We have no formal process at this time. However, we would take enforcement action if it was determined that a material approved in a BUD was being mismanaged.
GA	X		Respond to complaints; no routine inspections, etc.
IL		X	There is no formal BUD program. Complaints would be investigated but routine inspections would not occur.
IA		X	No formal enforcement process. Violations are handled on a complaint basis or if observed while enforcing other regulations.
KS		X	
KY	X		Must comply with environmental performance standards which include prohibitions against surface or ground water contamination, floodplain restrictions, disease vectors, air quality, public nuisance, etc. However, inspections usually conducted only in response to citizen complaints.
LA	X		
ME	X		The Department uses its general enforcement authority, used to achieve/maintain compliance with all environmental laws in Maine.
MA		X	We do not have a formal process to follow-up on previous approvals. We rely on periodic sampling and reporting.

17. Does your State/Territory have an enforcement process which is used to maintain compliance with BUD? ____ Yes; ____ No; Explain.

STATE	YES	NO	EXPLANATION
MI	X		
MN		X	Minnesota does not have rules or statutes, however, they may be developed in the future.
MS	X		Not a specific process, but have necessary authority to require remediation of conditions created or caused by a beneficial use project involving solid wastes.
MO	X		If pollution, a public nuisance or a health hazard occur, the Department may revoke the exemption and take appropriate enforcement action.
NE	X		Nebraska Title 132 Integrated Solid Waste Management Regulations allow the enforcement based on illegal disposal of wastes.
NV		X	
NH	X		The Certified - Waste Derived Product (CWDP) designation can be revoked if it was found that the facts were in error or other facility-specific requirements were violated.
NJ	X		Under development.
NY	X		The Department may revoke any determination made under this subdivision if it finds that one or more of the matters serving as the basis for the Department's determination was incorrect or is no longer valid, or the Department finds that there has been a violation of any condition that the Department attached to such determinations.
NC	X		Reclassification as a qualified recovered material is required if the process/components change.
OH		X	Use standard open dumping, nuisance, water pollution enforcement.
OK		X	
PA	X		Site or facility inspections may be conducted.
RI	X		We will enforce compliance with a BUD just as we enforce compliance with all other licenses, permits and registrations that are issued by our Waste Facility Management Program (Program includes Solid Waste, Medical Waste and Hazardous Waste Programs).

17. Does your State/Territory have an enforcement process which is used to maintain compliance with BUD?

____ Yes; ____ No; Explain.

STATE	YES	NO	EXPLANATION
SD	X		Only becomes necessary if a BU process tends more toward solid waste disposal. We would then use our enforcement authority related to solid waste disposal.
TN		X	
TX	X		If material destined for BUD is not so used, it may be subject to enforcement action.
VA		X	Violations of regulations are enforced, but no specific process for BUDs.
WI	----	----	It is based on compliance with our Adm. Rule NR538 and other specific conditional grant(s) of exemption for beneficial use. Non-compliance would potentially be taken through our environmental enforcement process.
WY	X		We have the ability to conduct inspections to verify compliance with conditions of the BUD authorization (permit exemption) letter.

18a. How many BUDs has your State/Territory revoked during the life of your program?
18b. What is the most common reason for revocation?

STATE	# of BUDS Revoked	Most Common Reason for Revocation
AL	?	The “reuse” constitutes disposal.
AK	None	
AZ	None	
CA	None	
CT	None (unknown for land applications)	
DE	1	Environmental Impact discovered - due to violation of approval.
FL	None	
GA	None	
IL	None	
IA	None	
KS	10	Sham recycling to avert disposal.
KY	1 (~ 12 denied)	Failure to follow guidelines of BUD acknowledgment letter.
LA	----	
ME	None	
MA	None	
MI	1	Change in chemical analyses.
MN	at least 1	Incomplete waste characterization.

18a. How many BUDs has your State/Territory revoked during the life of your program?
18b. What is the most common reason for revocation?

STATE	# of BUDS Revoked	Most Common Reason for Revocation
MS	3 (est.)	Chemical/physical characteristics of the wastes, disposal rather than use, use constituted regulated activity, no available markets for waste/product.
MO	None	Public nuisance.
NE	None	
NV	None	
NH	None	
NJ	1	Applicant did not comply with the approval's conditions.
NY	6	Improper storage; new process--requested test data not provided; air permit revoked; accepting materials from unapproved facilities; falsifying records; materials not tested before use; unauthorized use of material.
NC	1	Denial (word "revocation" crossed out): Waste exceeds 2L Leachability LImits.
OH	None	
OK	None	
PA	1	Improper storage and use of waste.
RI	None	
SD	Unknown (too much staff turnover)	Failure to comply with a BU plan and abuse of the process leaning toward solid waste disposal.

18a. How many BUDs has your State/Territory revoked during the life of your program?
18b. What is the most common reason for revocation?

STATE	# of BUDS Revoked	Most Common Reason for Revocation
TN	a few	End use did not comply with use restrictions.
TX	None	
VA	1	Improper approval.
WI	None	Not familiar with any specific revocation of a beneficial use determination in the solid waste program.
WY	?	Threat to human health and environment.

19a. Do you charge a fee for reviewing a beneficial use request / application? ____Yes; ____ No
19b. If Yes, what is the fee? $_____ flat fee; _____prorated fee based on volume - range $_____ to $_____; _____ other fee criteria?:_____

STATE	YES	NO	IF Yes, the Fee is:		
			Flat Fee	Prorated fee based on volume, range $ to $	Other Fee Criteria
AL		X			
AK	X				$110/hour for services necessary to act on the BUD and/or for inspections.
AZ		X			
CA		X			
CT		X[1]			
DE		X			
FL		X			
GA		X			
IL		X			
IA		X			
KS		X			
KY		X			
LA	X		$500		

[1] No specific authority to assess fee, except for registration fee for general permit.

19a. Do you charge a fee for reviewing a beneficial use request / application? ____Yes; ____ No
19b. If Yes, what is the fee? $_____ flat fee; _____prorated fee based on volume - range $_____ to $_____; _____ other fee criteria?:_____

STATE	YES	NO	IF Yes, the Fee is:		
			Flat Fee	Prorated fee based on volume, range $ to $	Other Fee Criteria
ME	X				Depends upon whether the beneficial use is ongoing or one time only, and whether or not a risk assessment is required. Range: $900 - 1900
MA	X		$900		
MI		X			
MN		X			
MS		X			
MO		X			
NE		X			
NV		X			
NH		X			
NJ	X		$250		Plus additional charges based on TSM.
NY		X			
NC		X			
OH		X			
OK		X			

19a. Do you charge a fee for reviewing a beneficial use request / application? ____Yes; ____ No
19b. If Yes, what is the fee? $_____ flat fee; _____prorated fee based on volume - range $_____ to $_____; _____ other fee criteria?:_____

STATE	YES	NO	IF Yes, the Fee is:		
			Flat Fee	Prorated fee based on volume, range $ to $	Other Fee Criteria
PA					$2,000 for general permit application $ 500 for determination of applicability $ 250 for registration
RI		X			
SD		X			
TN		X			
TX		X			
VA		X			
WI		X			There may be certain case-specific requests that a fee would be required.
WY		X			

20a. Are there other State/Territorial agencies involved in BUD approvals? Check all that apply.

STATE	AGRICULTURE	HEALTH	COMMERCE	NATURAL RESOURCE	DOT	OTHER
AL	X[1]					Dept. of Public Health, Environmental Services Section; Natural Resources Conservation Service; Auburn University Dept. of Agronomy and Soils (the latter two re: technical assistance in developing a Land Application Plan).
AK				X[2]		
AZ	----	----	----	----	----	----
CA	X					[3]
CT	X[4]	X[5]		X[6]	X[7]	

[1] AL Dept. of Agriculture and Industries

[2] If disposal is on State land (1/3 of the State is State land).

[3] The Department of Toxic Substances Control determines not hazardous waste. State Water Resources Control Board determines if acceptable for purposes of water quality. CA Integrated Waste Management Board/Local Enforcement Agencies enforce regulations regarding other aspects.

[4] For land - agricultural applications

[5] Health risk evaluation

[6] Fisheries, wildlife

[7] If DOT-related application

20a. Are there other State/Territorial agencies involved in BUD approvals? Check all that apply.

STATE	AGRICULTURE	HEALTH	COMMERCE	NATURAL RESOURCE	DOT	OTHER
DE	X[1]				X[1]	
FL	X	X			X	
GA	X					
IL	----	----	----	----	----	----
IA	X					
KS	----	----	----	----	----	----
KY	----	----	----	----	----	----
LA	X			X	X	
ME		X[2]			X[2]	
MA	----	----	----	----	----	----
MI	----	----	----	----	----	----
MN	X[3]				X[3]	
MS	X				X	
MO	X			X		
NE					X	
NV	N/A	N/A	N/A	N/A	N/A	N/A

[1] Ag, DOT involved as source of information. No formal involvement in process.

[2] May be involved in a review/consultative capacity.

[3] Give input but do not approve.

20a. Are there other State/Territorial agencies involved in BUD approvals? Check all that apply.

STATE	AGRICULTURE	HEALTH	COMMERCE	NATURAL RESOURCE	DOT	OTHER
NH	X	X			X	
NJ	----	----	----	----	----	----
NY	X	X			X	
NC					X	Division of Water Quality
OH	----	----	----	----	----	----
OK	X[1]				X[1]	
PA	X				X	
RI	N/A	N/A	N/A	N/A	N/A	None of these agencies
SD	X					
TN	N/A	N/A	N/A	N/A	N/A	None of these agencies
TX	N/A	N/A	N/A	N/A	N/A	None of these agencies
VA	X				X	
WI	X[2]	X[2]			X[2]	
WY	----	----	----	----	----	----

[1] Sometimes

[2] These are possibilities.

20b. Are individual BUD approval / permits issued by different program areas within your agency? ____ Yes; ____ No; If Yes, how does your agency maintain consistency in BUD decisions?

STATE	YES	NO	IF YES, HOW IS CONSISTENCY MAINTAINED
AL	----	----	Requests are coordinated intra-agency. Attachment provided by State noted in Appendix D.
AK		X	
AZ		X	
CA	X		The CA Integrated Waste Management Board, through regulation.
CT	X[1]		
DE		X[2]	
FL		X[3]	
GA		X	
IL		X	
IA		X	
KS	X		Communication.
KY		X	
LA		X	
ME		X	
MA		X	
MI		X	

[1] Specifically for municipal sewage treatment sludge

[2] Land application of sludges is coordinated with Water Resources Division.

[3] Currently all BUD approvals are processed by the Solid Waste Program.

20b. Are individual BUD approval / permits issued by different program areas within your agency? ____ Yes; ____ No; If Yes, how does your agency maintain consistency in BUD decisions?

STATE	YES	NO	IF YES, HOW IS CONSISTENCY MAINTAINED
MN	X		Minnesota is currently developing a program to maintain consistency.
MS		X	
MO	X		All permit exemptions from the Solid Waste Management Program obtain concurrence from the appropriate programs. The Solid Waste Management Program is the only program that approves beneficial reuse of a non-hazardous solid waste, except land application biosolids and certain composting activities addressed in the regulations.
NE		X	
NV		X	
NH	X		Biosolids (sludge), not involving a waste management (RSA 149) facility, are regulated under the Water Division.
NJ	X		We apply the same criteria.
NY		X	
NC		X	
OH	X		Where waste material or use overlap divisions, one division will take the lead with the other division in a supporting role.
OK		X	
PA		X	Central Office issues all Statewide general permits.
RI		X	
SD		X	
TN		X	
TX		X	
VA		X	Track approvals in database; one source for approval.
WI	X		Mostly issued by the solid waste program. Some landspreading (beneficial use) approvals are issued by the wastewater program if material comes from a WWTP.
WY		X	

21. Does your State/Territory have information regarding beneficial use available on the Internet? _____ Yes; _____ No; If Yes, please give the address for the Web site.

See Table 1 for the responses to this question.

22. For follow-up purposes, please identify the person who is the main contact for beneficial use in your State/Territory.

Responses to this question not included in this summary.

23. List of Wastes Evaluated for Beneficial Use - Please complete the following table. (Add more waste types your State/Territory includes in BUDs.)

See Appendix B for responses to this question.

Appendix D

Reference List
Resources
List of State Abbreviations

Reference List

State Definitions of Beneficial Use

Copies of State Definitions were enclosed with the Beneficial Use Survey responses from the following States:

Alaska

California

Connecticut

Florida

Louisiana

New Hampshire

New Jersey

New York

North Carolina

Ohio

Oklahoma

Tennessee

Virginia

Wisconsin

Wyoming

Reference List (continued)

STATE	REFERENCE MATERIAL PROVIDED FOR SURVEY QUESTIONS
AL	Re: Question 20a: Sample letter to company which reference the various divisions and agencies involved in a beneficial use approval.
AZ	Re: Question 1c: Senate Bill 1281 (passed in May 1999) - contains Statutory provision for beneficial use
CT	Re: Question 10a: General Permit for Beneficial Use Flowchart (November 18, 1998)
KY	Re: Question 23, Specific Waste Types: 401 KAR 47:150. Special Types of Permits; Application for the Beneficial Reuse of a Solid Waste

Resources

STATE	SUPPLEMENTARY MATERIAL PROVIDED BY STATES
CT	Draft Guidance for Solid Waste Beneficial Use Proposals (October 16, 1998)
NE	Alternative Use of Coal Combustion By-Products and Other Similar Materials (October 10, 1995; revised July 18, 1997)
NC	GS 130A-309.05. Regulated Wastes; Certain Exclusions
WI	Guidance for the Beneficial Use of Industrial Byproducts (April 1998)

List of State Abbreviations

AL	Alabama	MT	Montana
AK	Alaska	NE	Nebraska
AZ	Arizona	NV	Nevada
AR	Arkansas	NH	New Hampshire
CA	California	NJ	New Jersey
CO	Colorado	NM	New Mexico
CT	Connecticut	NY	New York
DE	Delaware	NC	North Carolina
FL	Florida	ND	North Dakota
GA	Georgia	OH	Ohio
HI	Hawaii	OK	Oklahoma
ID	Idaho	OR	Oregon
IL	Illinois	PA	Pennsylvania
IN	Indiana	RI	Rhode Island
IA	Iowa	SC	South Carolina
KS	Kansas	SD	South Dakota
KY	Kentucky	TN	Tennessee
LA	Louisiana	TX	Texas
ME	Maine	UT	Utah
MD	Maryland	VT	Vermont
MA	Massachusetts	VA	Virginia
MI	Michigan	WA	Washington
MN	Minnesota	WV	West Virginia
MS	Mississippi	WI	Wisconsin
MO	Missouri	WY	Wyoming