Bill as Introduced

HB 1313 – AS INTRODUCED

2001 SESSION

01-2189
08/09

HOUSE BILL ***1313***

AN ACT relative to spreading sludge on excavation sites for reclamation.

SPONSORS: Rep. Melcher, Hills 11; Rep. Babson, Carr 5; Rep. B. Williams, Graf 8; Rep. O'Connell, Hills 13

COMMITTEE: Environment and Agriculture

ANALYSIS

This bill provides specific conditions for the use of sludge at reclamation sites and in soil manufacturing.

Explanation: Matter added to current law appears in ***bold italics.***
Matter removed from current law appears [~~in brackets and struckthrough.~~]
Matter which is either (a) all new or (b) repealed and reenacted appears in regular type.

HB 1313 – AS INTRODUCED

01-2189
08/09

STATE OF NEW HAMPSHIRE

In the Year of Our Lord Two Thousand One

AN ACT relative to spreading sludge on excavation sites for reclamation.

Be it Enacted by the Senate and House of Representatives in General Court convened:

1 Findings. The general court finds that both the safety of our drinking water and the sensible recycling of biosolids require more restriction of their application in some circumstances and less in others. Therefore, the rules for biosolids application need to be more specific, according to the type of site and use.

2 New Paragraphs; Definitions. Amend RSA 485-A:2 by inserting after paragraph XXIII the following new paragraphs:

XXIV. "Reclamation" means the restoration of a site by grading, backfilling, compacting, and landscaping to an appropriate natural contour, the spreading of natural or artificial topsoil, or strippings, if any, and the planting of seedlings or grasses suitable to prevent soil erosion.

XXV. "Soil manufacturing" means the planting of a grass crop on artificial topsoil, made of biosolids, short paper fiber, and sand for the purpose of periodically skimming soil from the top for the purpose of sale or use elsewhere.

3 New Sections; Use of Biosolids. Amend RSA 485-A by inserting after section 5-d the following new sections:

485-A:5-e Biosolids Reclamation of Excavation Sites. In addition to the standards for reclamation in RSA 155-E:5, biosolids and short paper fiber may be spread on an excavation site permitted for reclamation purposes, without monitoring wells, provided:

I. That reclamation spreading process is limited to one per year;

II. It is at rates sufficient only to establish a vegetative cover;

III. It is at fall seeding with a booster application during the following spring;

IV. There is a minimum of a 4 foot vertical barrier to seasonal high water;

V. It is incorporated within 48 hours; and

VI. That any biosolids material stockpiled for longer than 30 days shall be placed on a low-permeable pad and protected from weather and surface runoff and that it be totally removed and the site or sites be cleaned up and reseeded according to best management practices.

485-A:5-f Exception. Sites which are later used for agricultural cropping may receive additional spreading at agronomic rates and times in accordance with rules adopted by the department.

485-A:5-g Biosolids Used in Soil Manufacturing. Biosolids and short paper fiber may be spread on a site above an aquifer permitted for soil manufacturing provided:

I. That a system of monitoring wells be installed and checked according to rules of the department;

II. That only one application is made per year in the spring immediately before seeding;

III. There is a minimum of a 4 foot vertical barrier to seasonal high water;

IV. It is incorporated within 48 hours; and

V. That any biosolids material be isolated and shaped, and sites be annually rotated cleaned and reseeded according to best management practices, to minimize any potential for negative environmental impact.

4 Effective Date. This act shall take effect 60 days after its passage.

Amendments

Rep. Melcher, Hills 11
January 18, 2002
2002-2230h
08/09

Amendment to HB 1313

Amend the bill by replacing sections 2 and 3 with the following:

2 New Paragraph; Definitions. Amend RSA 485-A:2 by inserting after paragraph XXIII the following new paragraph:

XXIV. "Soil manufacturing" means the production of artificial topsoil, made of a mixture of biosolids, and/or short paper fiber, and sand for the purpose of sale or use elsewhere. The term shall also apply to a mixture of biosolids, and/or short paper fiber, and sand, often planted with vegetative cover crop, and later excavated for sale or use elsewhere.

3 New Sections; Use of Biosolids. Amend RSA 485-A by inserting after section 5-d the following new sections:

485-A:5-e Biosolids Reclamation of Excavation Sites. In addition to the standards for reclamation in RSA 155-E:5, biosolids and short paper fiber may be spread on an excavation site permitted for reclamation purposes, without monitoring wells, provided:

I. That the reclamation spreading process is limited to one time except as provided in RSA 485-A:5-f;

II. It is at agronomic rates sufficient only to establish a vegetative cover;

III. It is at spring or summer seeding with a booster application during the following spring;

IV. There is a minimum of a 4 foot vertical barrier to seasonal high water;

V. Biosolids are incorporated within 48 hours; and

VI. That any biosolids material stockpiled for longer than 30 days shall be placed on a low-permeable pad and protected from weather and surface runoff and that it be totally removed and the site or sites be cleaned up and reseeded according to best management practices.

485-A:5-f Exception. Sites which are later used for agricultural cropping may receive additional spreading at agronomic rates and times in accordance with RSA 485-A:4, XVI(b), RSA 485-A:6, X-a, and rules adopted by the department.

485-A:5-g Biosolids Used in Soil Manufacturing. Biosolids and short paper fiber may be spread on a site above an aquifer permitted for soil manufacturing provided:

I. That a system of monitoring wells be installed and checked according to RSA 485-A:4, XVI(b), RSA 485-A:6, X-a, and rules adopted by the department;

II. That only one application is made per year in the spring immediately before seeding;

III. There is a minimum of a 4 foot vertical barrier to seasonal high water;

IV. Biosolids are incorporated within 48 hours; and

V. That any biosolids material be isolated and shaped, and sites be annually rotated, cleaned, and reseeded according to best management practices, to minimize any potential for negative environmental impact.

Amend the bill by inserting after section 3 the following and renumbering the original section 4 to read as 5:

4 New Paragraph; Definitions. Amend RSA 155-E(1) by inserting after paragraph VI the following new paragraph:

VII. "Reclamation" means the restoration of a site by grading, backfilling, compacting, and landscaping to an appropriate natural contour, the spreading of natural or artificial topsoil, or strippings, if any, and the planting of seedlings or grasses suitable to prevent soil erosion.

Rep. Melcher, Hills. 11
February 12, 2002
2002-2586h
08/09

Amendment to HB 1313

Amend the bill by replacing sections 2 and 3 with the following:

2 New Paragraph; Definitions. Amend RSA 485-A:2 by inserting after paragraph XXIII the following new paragraph:

XXIV. "Soil manufacturing" means the production of artificial topsoil, made of a mixture of biosolids, and/or short paper fiber, and sand for the purpose of sale or use elsewhere. The term shall also apply to a mixture of biosolids, and/or short paper fiber, and sand, often planted with vegetative cover crop, and later excavated for sale or use elsewhere.

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I. That the reclamation spreading process is limited to one time except as provided in RSA 485-A:5-f;

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II. That only one application is made per year in the spring immediately before seeding;

III. There is a minimum of a 4 foot vertical barrier to seasonal high water;

IV. Biosolids are incorporated within 48 hours; and

V. That any biosolids material be isolated and shaped, and sites be annually rotated,

cleaned, and reseeded according to best management practices, to minimize any potential for negative environmental impact.

485-A:5-h Biosolids Reclamation Database. The department shall initiate and maintain a database of all sites on which biosolids have been spread. The database shall be able to be searched by property owner's name and the address of the property. Information contained in the database shall be public information.

2002-2586h

AMENDED ANALYSIS

This bill provides specific conditions for the use of sludge at reclamation sites and in soil manufacturing, and establishes a database of sites on which biosolids have been spread.

Rep. Melcher, Hills. 11
February 12, 2002
2002-2586h
08/09

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2002-2586h

AMENDED ANALYSIS

This bill provides specific conditions for the use of sludge at reclamation sites and in soil manufacturing, and establishes a database of sites on which biosolids have been spread.

Committee Minutes

E&A Committee Minutes, Jan.15, 2002
Opened Executive Session at 9:25
HB1143 ITL 15-0
Chm recommends to Speaker that he name an E&A study committee to recommend legislation on this subject by November:
Liebl, Owen, Hall, Brewster, Cobb.
HB 1170 ITL 5-10
VV on Melcher amendment to repeal the repeal NO
OTP 13-3
HB 1197 ITL 15-0
Exec session closed 10:10

Opened Hearing at 10:I5 HB 1305 repealing repeal of pollution prevention
Rep. O'Connell yielded to
Sharon Yergeau DES in favor written testimony.
Rep. Scanlon Republican leadership in favor
Shelagh Connelly Mesouce Mgmt. Inc in favor
Needs more than 2 positions.
Ned Beecher NEBRA in favor written testimony
Bill to Environmental Policy subcom.

HB 1313 rel to biosolids reclamation of gravel excavations.
Rep. Melcher explained bill, history, science
Dick Flanders DES Support written te4stimony
Carolyn Snider Sierra Club opposed
Ned Beecher NEBRA supports written testimony
Doug Bogen Clean Water Action opposed written testimony
Shelagh Connelly Resource Mgmt. supports written testimony
Gerhard Bedding NH Pure Water Action opposed written testimony
Charles Hansen Resource Mgmt supports written testimony
promotes conservation
Jan Pendlebury opposed
Chris Reuggeberg Cit for Future □H opposed written testimony
Bill assigned to Environmental Policy subcom

HB 1382 rel. to using only topsoil from site to reclaim excavation
Rep. Hall wants amendment to remove possibility of using biosolids.
Mary Pinkham-Langer DRA opposed written testimony
tax problems if change the bill
Chris Gallagher NGH Aggregate Mfg. Assocv. opposed weakens law
Law OK as is.. Topsoil provision unworkable
Marjory Swope NH Assn Conservatn Commissns opposed
weakens law Topsoil piles disappear
Shelagh Connelly Resource Mgmt. opposede
Biosolids ref belongs in B 1313

Bill to Environmental Policy Subcom.

HB 1102 rel. certification of hazardous waste coordinators

Rep Allen yields to

Ken Marshner DES supports written testimony and suggested amendment

wants to change from study committee to a program plan

Bill to Hazardous Waste Subcom.

Exec - 665
1119
1126
1374

01-15-02

Exec Session 9:25

AB 1143 ITL 15-0

Chm recommends & Speaker that he name an Ed & Comm to study + recommend legislation Re Libel Actions Rob Brewster Cobb.

1170 HB 1170 ITL 5-10

Steve Mickelson amendment 2002-2156h No. No.

OTP 13-3

~~HB 1170 OTP~~ repeal specific AB 1855 & obsolete provisions.

Jeanne 10:15 2 Sharon Jorgensen DES in favor written testimony

HB 1197 ITL 15-0

3 Rep. Scanlan Majority Office in favor
1 Rep. O'Connell yields to DES
4 Shelagh Connelly Resource Mgt Assn in favor.
Needs more than 2 partners.
5 Neil Beecher NEBRA in favor written testimony
Bill to Environment Policy Committee

AB 1319

Neil Mickelson explained bill.

Motion Reading 1102 and 1382 and 1194 1 PM and every 1/2 hour.

Recess Meeting till 2 P.M.

Dirk Flanders DES Support written testimony
David Scanlan Property Rights in favor
Carolyn Eaton NH Sierra Club opposed
because it comes environmentally sensitive la
Ned Barbar NHEBRA supports – written testimony
~~Chris Wagner~~
Doug Bogen Clean Water Action opposed. written testim
Shelagh Connolly Resource Mgmt. in favor written testim
Garland Beckley NH Pwr Water Coalition opposed written te
Charles Romano Resource Mgmt Trust in favor written testim
good conversation
Jay Lindelberg opposed written testimony
Chris Ruggerio Citizens for Water NH written testim

Bill assigned to Environmental Policy Subcommittee

HB 1382

Rep Hall Sponsor in support w/ AA
wants to remove possibility of liquidation
Mary Pinkham-Lynch DRA oppose written testimony
groundwater pits expanded.
variation in non-reclaimed pits higher than reclam
Possible to avoid activity by
Chris Gallagher NH Aggregate Mfg Assoc oppose
Law DES as is.
Opposed to a law which requires reclamation
if operations unreasonable
wastes away
when pass OK

typical can easily be sold humanely

Majority Except N.A. Bar of Associations have opposed

would weaken law

Leopold Orbis Shampoo Wind + Water

Shelagh Donnelly Resource Mgmt. Law opposes

Disabilities ~~Act~~ don't belong in this bill

Act in 1818

Bill to Environmental Policy Institute

Senate committee shown + Bill in Feb. during break

AB 1102

Rep Alben yields to Ken Meeking

Ken Mynchenberg DES supports w written testimony

Steve Austin (letter)

Wants to change plan strictly down to a district.

Need for certified coordinators

Bill goes to Assembly Natural Environment

Environment and Agriculture Committee

MINUTES

Oct 1, 2002

Meeting called to order by Chairman Musler at 10:08

Rep Swindlehurst rose and made a graceful speech in praise of Rep Cobb, who is not returning. Rep Cobb returned thanks

There followed votes on interim study bills:

HB654 Subcom (Chm Liebl) **Not** Recommended. Full committee agreed

HB675 Subcom (Chm Liebl) Recommended. Full committee agreed

HB1214 Subcom(Chm Cobb) **Recommended.** Full committee agreed

HB1313 Subcom(Chm Melcher) **Not** Recommended. Full comittee did not agree; and voted **Recommended** for future legislation.

HB1374 Subcom(Chm Williams) Not **Recommended**. Full committee agreed

HB1399 Subcom(Chm Philbrick) **Not** Recommended. Full Committee agreed. Committee agreed.

The ad hoc committee on Recycling submitted their interim report tentatively in favor of an advanced disposal fee system. They intend to complete their work by December.

Rep O'Connell reported on the Buffalo meeting of the NE Regional Agriculture Committee of CSG. He drew attention to the federal agriculture bill, especially the part dealing with the NE dairy compact and its crucial importance to NH. He advocated for a strong committee position of support for agriculture and recommended regular funding to match fed money.

Meeting adjourned 11:10

Resp'y

Rod Musler, Clerk

Report of the Recycling Subcommittee

Members

Reps. Burton W. Williams (Chair), Peter H. Allen, Betty B. Hall, Irene M. Messier, Timothy D. O'Connell, Donald R. Philbrick, Leighton C. Pratt, Martha S. Solow

Representative George T. Musler, Chairman of the House Environment and Agriculture Committee, established this Recycling Subcommittee to look at ways of improving recycling in the state. The Subcommittee has held a number of meetings since its inception and provides this report as a summation of its findings to date.

In general, it appears that the greatest amount of attention and assistance needs to be directed toward the public sector. Municipal waste programs have become the receptacle of a broad variety of wastes produced by our modern, consumer-oriented society. Handling each type of waste appropriately, from both an economic and environmental point of view, has become a daunting task. Often it is simpler and sometimes cheaper for municipalities just to throw everything in the general refuse hopper then to separately handle and recycle the various waste materials.

The commercial sector, on the other hand, seems better equipped and positioned to recycle its wastes. Often a given business will have a limited number of wastes to deal with and an easier time successfully controlling the collection and marketing of waste materials. Numerous organizations are also available to assist businesses in adopting environmentally friendly practices, while also reducing overall disposal costs. In addition, businesses have already been required by federal and state laws to separately recycle or otherwise dispose of certain common products containing hazardous substances, such as cathode ray tubes (TVs and computer monitors) and florescent light bulbs. In contrast, municipal waste programs have been exempted from these requirements and are now struggling with whether to recycle those products at an added cost, or to just toss them in with the rest of the refuse.

The Subcommittee believes that the state needs to take a leading role in providing a clear path that municipalities can follow to successfully and cost effectively recycle and dispose of their waste. This includes ensuring that financial

resources are available for municipalities to use in taking the necessary next steps to improve their recycling operations. Ideally, a comprehensive approach should be developed to address the system as a whole.

The Subcommittee is interested in further studying the concept of using advanced disposal fees (ADFs) to fund municipal recycling efforts and perhaps overall disposal programs. The thought behind ADFs is to pay for the recycling or disposal of products up-front, at the time they are introduced into the consumer marketplace, instead of at the end of their useful life when no one is interested in picking up the tab, and municipalities (taxpayers) happen to be the last ones at the table. ADF revenues could be used to provide grants to municipalities to help pick up the tab.

ADFs may be especially appropriate when used with household products that contain hazardous substances. Keeping these products from being landfilled or incinerated is a preferred management practice that avoids potential contamination of the air or groundwater. However, many of these products can be costly to collect and recycle, making it tempting for municipalities to just dispose of these products with their general refuse, which many do. Those that separately collect and recycle these products may charge residents a fee for their disposal to pay for the added cost. Unfortunately, charging a separate fee encourages homeowners to either stockpile these products at home, or worse, illegally dump them. An advanced disposal fee alleviates the driving force behind these undesirable behaviors by providing an up-front source of revenues to pay for end of life expenses.

The Subcommittee is not ready to advocate for any one course of action right now. It hopes, though, that it remains in existence to continue its work for a short time longer, up until the new Legislature is sworn in in December. Hopefully, a more firm recommendation can be made by then and, if needed, appropriate legislation can be filed.

Respectfully submitted,

Rep. Burton W. Williams, Chair
For the subcommittee

Speakers

HB 1313

GALLAGHER, CALLAHAN & GARTRELL

SUSAN H. PASCHELL
LEGISLATIVE SPECIALIST

The Government Group

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SIGN UP SHEET

To Register Opinion If Not Speaking

Bill # HB 1313 Date January 15, 2002

Committee Environment + Agriculture

** Please Print All Information **

Name	Address	Phone	Representing	(check one) Pro	Con
Rob Johnson	295 Sheep Davis Rd.	224-4934	NH Farm Bureau Fed.	✓	
Teresa Rosenbergen	49 Main St.	226-1000	Natural Res Doc	✓	
Betsy Tanaway	225 Tyler Rd, Webster	746-3818	Audubon NH		✓
Carl Paulsen	54 Portsmouth Concord	228-6472	NH Rivers Council		✓

HOUSE COMMITTEE ON ENVIRONMENT AND AGRICULTURE

PUBLIC HEARING ON HB 1313

BILL TITLE: relative to spreading sludge on excavation sites for reclamation.

DATE: January 15, 2002

LOB ROOM: 303 **Time Public Hearing Called to Order:** 10:45 a.m.

Time Adjourned: 12:20 p.m.

(please circle if present)

Committee Members: Reps. Musler, Babson, Messier, L. Pratt, Philbrick, Dunlap, Cobb, Brewster, O'Connell, Dunne, Swindlehurst, B. Williams, Liebl, Owen, B. Hall, Melcher, Phinizy, Robb, Solow and Allen.

Bill Sponsors: Rep. Melcher, Hills 11; Rep. Babson, Carr 5; Rep. B. Williams, Graf 8; Rep. O'Connell, Hills 13

TESTIMONY

* Use asterisk if written testimony and/or amendments are submitted.

Rep. Harold Melcher - Prime sponsor. Supports the bill. Explained the bill, history, and science.

*** Dick Flanders, NH Department of Environmental Services (DES)** - Supports the bill. Written testimony.

Caroline Snyder, Sierra Club - Opposes the bill.

*** Ned Beecher, NEBRA** - Supports the bill. Written testimony.

*** Doug Bogen, Clean Water Action** - Opposes the bill. Written testimony.

*** Shelagh Connelly, Resource Management, Inc.** - Supports the bill as amended. Written testimony.

*** Gerhard Bedding, NH Pure Water Coalition** - Opposes the bill. Written testimony.

*** Charley Hanson, Resource Management, Inc.** - Supports the bill. Written testimony. Promotes conservation.

*** Jan Pendlebury** - Opposes the bill. Written testimony.

*** Chris Rueggeberg, Citizens for a Future, N.H.** - Opposes the bill. Written testimony.

Rep. David Scanlan - Supports the bill.

Respectfully submitted,

Rep. Harold P. Melcher
Clerk

HOUSE COMMITTEE ON ENVIRONMENT AND AGRICULTURE

PUBLIC HEARING ON HB 1313

BILL TITLE: relative to spreading sludge on excavation sites for reclamation.

DATE: January 15, 2002

LOB ROOM: 303 **Time Public Hearing Called to Order:** 10:45 ~~10:30~~ a.m.

Time Adjourned: 12:20

(please circle if present)

Committee Members: Reps. ~~Musler~~, Babson, Messier, L. Pratt, Philbrick, Dunlap, Cobb, ~~Brewster~~, ~~O'Connell~~, Dunne, ~~Swindlehurst~~, ~~B. Williams~~, ~~Liebl~~, ~~Owen~~, ~~B. Hall~~, ~~Melcher~~, ~~Phinizy~~, Robb, ~~Solow~~ and ~~Allen~~.

Bill Sponsors: Rep. Melcher, Hills 11; Rep. Babson, Carr 5; Rep. B. Williams, Graf 8; Rep. O'Connell, Hills 13

TESTIMONY

* Use asterisk if written testimony and/or amendments are submitted.

Sub-Committee Actions

HOUSE COMMITTEE ON ENVIRONMENT AND AGRICULTURE

SUBCOMMITTEE WORK SESSION ON HB 1313

BILL TITLE: relative to spreading sludge on excavation sites for reclamation.

DATE: 1/23/02

Subcommittee Members: Reps. Cobb, Robb, Williams, Phinizy, Allen, & Pratt

Comments and Recommendations:

Amendments:

Sponsor: Rep. Melcher	OLS Document #:	2002	2230h
Sponsor: Rep.	OLS Document #:		
Sponsor: Rep.	OLS Document #:		

Motions: OTP, OTP/A, ITL, Interim Study (Please circle one.)

Moved by Rep. Williams

Seconded by Rep. Cobb

Vote: 3-2

Motions: OTP, OTP/A, ITL, Interim Study (Please circle one.)

Moved by Rep. Williams

Seconded by Rep. Cobb

Vote: 3-2

Respectfully submitted,

Rep. John S. Cobb
Subcommittee Chairman/Clerk

HOUSE COMMITTEE ON ENVIRONMENT AND AGRICULTURE

SUBCOMMITTEE WORK SESSION ON HB 1313

BILL TITLE: relative to spreading sludge on excavation sites for reclamation.

DATE: 1-23-02 @ 10:00

Subcommittee Members: Reps. Cobb, Rdd, Williams, Phinizy, Allen, Pratt

also Rep Hall, Melcher & Brenster.

Comments and Recommendations:

Rep Hall felt that her amendments did not satisfy her intent and expressed a desire for Interim Study

Amendments:

Sponsor: Rep. MELCHER — OLS Document #: 2002-2230k

Sponsor: Rep. — OLS Document #:

Sponsor: Rep. — OLS Document #:

Motions: (OTP), OTP/A, ITL, Interim Study (Please circle one.)

Moved by Rep. WILLIAMS

Seconded by Rep. COBB

Vote: 3 YES 2 NO

Motions: OTP, OTP/A, ITL, Interim Study (Please circle one.)

Moved by Rep.

Seconded by Rep.

Vote:

Respectfully submitted,

Rep.
Subcommittee Chairman/Clerk

John S. Cobb

Rep Phinizy had concerns with 2 areas not in bill, (1) certifying site & facilities and (2) other was sellers responsibility on containment. He, Rep Phinizy and Melcher will get to gether to resolve a portion (2) certifying sites -

Peter Schuller

Sub-Committee Minutes

Mailed to all EtA members Wed. 6-19-02

Minutes of Subcommittee on HB1313 June 18, 02

Meeting called to order by Rep Hal Melcher at 10AM

Present: Members Melcher, Hall, Ouellette, and Cobb. Absent: Messier, and Dunne. Others present: Babson, Owen, Solow, Allen, and Dunlap

A..Tom Buob of Coop Extension, in charge of reviewing nutrient management plans for agriculture:

1)He described the history of the "Best Management Practices: Biosolids" based of research by George Estes at Tadmore Farm in Lebanon, a 5 year study of sludge nitrates could be used as fertilizer. Results:
- good yield response
- no nitrate movement to monitoring wells
- no change in plant uptake of metals

Mrs. Snyder noted that soil was agricultural, not excessively drained.

2) Commented on warm season grasses:
- not as productive as cold season
- good for conservation, not crops
- slow to establish
- need feeding with rate matched to crop.

3) Nitrogen management difficult. Agricultural issues are his specialty, not excavation reclamation. nor forestry.
- More study is needed and funds for same.
- No indication of harm to herds from biosolids applications.;

B. Discussion of harms and benefits from HB1313
See the attached list

C. Martha Carlson told of her school project in Tamworth: encouraging wild cranberries on local pit.

Meeting adjourned at 1130 until next Tuesday.

~~Martha Carlson~~

Hal Melcher, chair.

Attachment to Minutes of June 18, 2002 Subcomm. HB1313

Potential Harms from HB1313

Groundwater pollution by possible leaching of excess toxic elements.
Wildlife damage from same, if not incorporated
Surface water pollution from runoff, if not prevented
Odors if not stabilized
Possible irborne pollution if not incorporated
Cost of cleanup if contamination.

Benefits

Environmental Health

Revegetation

A. Need

800 sites

only 5 permits: cost of wells B.

B. Effectiveness

Slower N release than chemical

So safer for groundwater

Top layer protects from airborne pollution

good tilth

Better crop quicker than unfertilized

C. . Conserves topsoil from elsewhere

Disposal problem avoided by recycling

A. Safer than incineration

river/ocean dumping

landfilling: [potential leaks]

Aesthetics

Beauty of landscape: tourist attraction

Economy.

Cost saving

A. Cheaper than topsoil or chemical fertilizer

B. Cheaper than transporting out of state or far instate

C. Preserves scarce landfill space.

To Members of the Committee:
From Hal

Because these working sessions are limited in time, and are an occasion for our own discussion, visitors are not encouraged to speak. If you have a resource person who can help us, please let me know in advance. I will hereafter ask for a vote of committee on permission for a member of the public to speak.

Attendees HB 1313 6-11-02

Name	Who Represent	
Shelagh Connelly	Resource Mgmt, Inc	536 8900
Joel Anderson	HCR	
Beth Kelley	Bouley Assoc. - AFTPA	225-7397
Chris Ruggeberg	Citizens for a Future NH	783-9372
Caroline Snyder	Sierra Club	284-6998
Dick Flanders	NHDES	271-3571
Adam Schmidt	Branco PA - NH Realtors	225-7170
Gary Abbott	AGC of NH	225-2701
Paul Worsovicz	Callaghan Wallwork + Gottwell Aggregate Manufacturers Association	worsovicz@gcglaw.com 228-1181 Ext. 221

mailed to all E+A Committee members 6/27/02

Minutes of Subcommittee on HB1313 June 25, 02

Meeting called to order by Rep Hal Melcher at 10AM

Present: Members Melcher, Hall, Ouellette, Messier, Pratt and Cobb. Absent: Dunne. Others present: Babson, Phinizy, Allen, and Dunlap

I. In an attempt to focus debate on specific issues, Chairman asked members to write down whether **at this time** **(1)** they would favor further legislation of the bilII as it was amended **(two subcom members)**

(2) they would not favor further legislation, regardless of any modification,

(one subcom non-member)

(3) they would suggest specific amendments

(three members, one non-member)

- **a. Add funds to educate communities in biosolids disposal alternatives**
- **b. Differentiate between aquifer and non-aquifer sites**
- **c. Remove soil manufacturing**
- **d. Clarify "one-time application" vs "spring booster"**
- **e. Shorten unprotected stockpiling time**
- **f. Clarify definition of agronomic rates**

One member preferrred not to have an opinion without further information.

II. A discussion of the **OIG Report** followed with questions by Rep Hall and answers by Dick Flanders, eliciting that

(1) The report did not make recommendations
(2) It delegated regulation to states if they would not be less restrictive than EPA rule.
(3) The delegation application was costly, time-consuming and irrelevant for NH, since we are much more restrictive already
(4) That about $150,000 federal EPA dollars supported our sludge effort (McDowell, partly, and two DES positions)

III. Dick Flanders answered questions of Rep Ouellette about local towns' understanding of biosolids options, waste water facilities, and costs of recycling vs other means of disposdal.

IV. A discussion of agronomic rates revealed that the definition and understanding of that term need more work. There was confusion about the

meaning of "crops" and amounts, even after Tom Buob's presentation of June 18.

V. Finally Carolyn Snyder proclaimed that short paper fiber was the more dangerous item in biomix because there were no nutrients in it, but many chemicals that had never been tested. Dick Flanders instructed us in the role of SPF as organic bulker, as carbon source to reduce leaching, and pointed out that SPF, too, must pass the standards for toxins before being used for reclamation.

VI. Next meeting: either Aug 2 or 7, preferably 7: a tour of reclamation sites by both warm season grasses and biomix with Ted Kelsey and Charley Hansen, leaving LOB at 9AM. Save the dates. All to be contacted more definitely after July 8.

s/Hal Melcher

State of New Hampshire

HOUSE OF REPRESENTATIVES

CONCORD

MEMORANDUM

DATE: **July 24, 2002**

TO: **Members of Interim Study Subcommittee re HB 1313, relative to spreading sludge on excavation sites for reclamation:**

Rep. Peter H. Allen	Rep. Irene M. Messier
Rep. David L. Babson	Rep. Robert O. Ouellette
Rep. John S. Cobb	Rep. Leighton C. Pratt
Rep. Patricia C. Dunlap	Rep. James G. Phinizy
Rep. Betty D. Hall	Rep. Martha S. Solow

FROM: **Rep. Harold P. Melcher, Chairman**
732 Abbot Hill Road
Wilton NH 03086-5914
(603) 654-2804

SUBJECT: **Excavation Site Trip**

On Wednesday, August 7, at 9:00 a.m., the tour, guided by Dick Fraser, Ted Kelsey and Charley Hanson, will leave the Legislative Office Building. The trip will return by 3:00 p.m., I am assured, but each of us should bring a picnic lunch. We will visit both warm season grass sites and bio-mix sites. Since this information tears tangentially on HB 1313, it would be well to have your questions ready and to take notes.

This trip is an investigative function for committee members only. Members of the public may visit the same sites on their own, but not as members of the committee.

HPM:co

For Cindy

E+A

To Reps. Allen, Babson, Cobb, Dunlap, Hall, Messier, Ouellette, Pratt, Phinizy, and Solow
From Hal Melcher.
Re: Excavation site trip

July 24

On August 7 at 9 AM, the tour, guided by Dick Fraser, Ted Kelsey, and Charley Hanson, will leave LOB. The trip will return by 3 PM, I am assured, but each of us should bring a picnic lunch. We will visit both warm season grass sites and biomix sites. Since this information bears tangentially on HB1313, it would be well to have your questions ready and to take notes.

This trip is an investigative function for committee members only. Members of the public may visit the same sites on their own, but not as members of the committee

s/.....

INTERIM STUDY
SUBCOMMITTEE WORK SESSION

COMMITTEE: **ENVIRONMENT AND AGRICULTURE**

BILL NUMBER: **HB 1313**

BILL TITLE: relative to spreading sludge on excavation sites for reclamation.

DATE: August 14, 2002

ATTENDANCE: See attached

Comments and Recommendations:

- Meeting called to order at 10:10 a.m.
- No quorum

- Discussion of advisability of letting DES deal with issue in rules
- Discussion of Tom Ballesteros' report on testing
- Discussion of amending bill to include warm season grasses

- Next meeting: Tuesday, Oct. 1, 2002 at 9:00 a.m. in LOB Room 303
- Meeting adjourned at 11:05 a.m.

Rep. Harold P. Melcher

Chairman/Clerk

Original: Committee Bill File

HB1313

Attendance Aug. 12

Rep David L. Babson Jr.
Rep Lucy Moon Pratt
Rep John R Swindlehurst
Rep Betty Hall
" Dick Ives
Rep. Bob Nelson
Rep. Martha Carlson

Testimony

NEW HAMPSHIRE RIVERS COUNCIL

January 15, 2002

Representative George T. Musler, Chair
House Environment and Agriculture Committee
303 Legislative Office Building
Concord, NH 03301

Re: House Bill 1313, An Act Relative To Spreading Sludge On Excavation Sites For Reclamation

Dear Representative Musler and members of the Committee:

The New Hampshire Rivers Council urges you to oppose HB 1313 as currently written. This bill recognizes, reasonably enough, that neither is all sludge created equal nor are all circumstances of land application the same. But the bill then uses this finding to propose a series of weak and unsupported measures for addressing the application of biosolids on excavation sites.

The Rivers Council currently opposes landspreading of sludge on reclamation sites because of the lack of certainty that it can be done without damaging groundwater and other resources. We believe that our water resources are far too valuable to subject them to management techniques of questionable safety. Where potential water supplies are concerned, we should act with extreme caution.

A carefully controlled study of biosolids applications on gravel pit reclamation sites, conducted by UNH researcher William McDowell in 1999 and 2000, showed clear impacts to groundwater from this activity. After the biosolids application, nitrate levels spiked far above the EPA regulatory limits for safe drinking water (while control wells above the application remained stable).

Furthermore, some research has shown that high carbon-to-nitrogen (C:N) levels in biosolids can reduce the impacts to groundwater, yet in this study the biosolids used had relatively high C:N levels. The theory behind the benefit of high C:N levels is that the relative abundance of carbon in the mix helps boost plant uptake of the nitrogen in the biosolids. These findings led the researchers to conclude: "Results suggest that this level of nitrogen application, even with C:N adjustment, has negative impacts on groundwater quality." In other words, even the generally accepted "best management practice" of adjusting C:N ratios in biosolids before application may not work in all cases.

54 PORTSMOUTH STREET • CONCORD, N.H. 03301
603-228-NHRC (6472) • FAX 603-228-0423

This study also found a few other compounds from the biosolids in monitoring wells (for example, bis(2ethylexyl) phthalate, or DEHP, a potential endocrine disruptor in animals and people). Similarly, the detection levels in the water analysis for other contaminants (most notably lead) were far above the regulatory limits, meaning that there was no way to determine whether the sludge applications would have been safe with respect to these contaminants.

While this research does not constitute an outright condemnation of sludge spreading on gravel pits for reclamation – the site where significant nitrogen impacts occurred is a topsoil manufacturing site with a 10 year history of biosolids application - it certainly raises questions about the practice. Given the importance of safe public water supplies and the increased and contentious competition for those supplies (such as in the case of the USA Springs water bottling proposal in Nottingham) New Hampshire should be taking a risk averse approach to managing biosolids. Where landspreading involves reclamation sites, the risk clearly exists.

The new policies proposed under HB 1313 would condone these risky practices by explicitly allowing biosolids applications on reclamation sites. Under broad circumstances this bill would allow this practice with absolutely no monitoring for contamination (Paragraph 3). **This lack of monitoring amounts to a substantial weakening of current sludge regulations which require groundwater monitoring for all applications of biosolids on reclamation sites.** With at least some evidence in New Hampshire that similar practices contaminate groundwater, this policy is at best unwise.

In addition, this waiver of groundwater monitoring is of particular concern because these sites may apparently be used for stockpiling, with little more than an impermeable pad to protect against leaching and contamination. The bill is inconsistent regarding stockpiling under paragraph 3 because it first requires incorporation within 48 hours (section V) and then spells out (under section VI) conditions under which stockpiling may occur. Stockpiling intensifies the risks many fold. Allowing stockpiling without groundwater monitoring in these sensitive areas is, in our view, dangerous.

Portions of this bill contain policies that are an improvement over the current laws. For example, limits on spreading to one application per year, seeding requirements and soil incorporation requirements are not addressed under the rules, and therefore unregulated. Unfortunately, in the larger context of the bill, these amount to little improvement. In fact, it appears that these requirements may well be weaker than the existing regulations for landspreading of sludge on non-reclamation sites, depending on the extent to which these requirements supplant the existing sludge rules. Given the high sensitivity of these lands, this outcome would indeed be unwise.

The Rivers Council is also concerned about the effect of the definitions contained in this bill (Paragraph 2). The definition for "reclamation" is new and, by requiring "natural or artificial topsoil or strippings" would seem to narrow the range of reclamation options. Since native topsoil is generally stripped and sold (in part because the state no longer requires topsoils to be retained onsite for reclamation purposes), the implication of this definition is that operators would have to use "manufactured" soil, or, in essence, biosolids. While reclamation would ideally include natural native soils, there may be circumstances under which other reclamation options, such as sand and warm season grasses, may be preferred. Clearly this issue needs much

more consideration.

The Rivers Council continues to believe that the science supports a cautious approach to landspreading of sludge. In recognition of the widespread concern over this issue, it seems counterproductive to approve legislation that would significantly weaken the current regulatory environment, particularly where it concerns the possible contamination of drinking water supplies. We hope you will forestall any such proposals until there is clear evidence that our finite and precious water supplies are protected.

Sincerely,

Carl Paulsen
Policy Director

Flanders, Dick

From: Bill McDowell [Bill.McDowell@unh.edu]
Sent: Sunday, January 13, 2002 10:17 PM
To: Flanders, Dick
Subject: RE: Proposed legislation

Hi Dick. Thanks for the update. First, I think DES should definitely consider site reclamation and soil manufacturing as two distinct operations
with different rules.

I have read over your proposed changes and they sound good to me. I think
it is particularly important to switch to a spring/summer application, and
to applying only once per site to establish vegetative cover.

I hope that your changes make it through the legislature.

We plan to have the final DES report ready in March. The very dry fall slowed down report preparation - we sampled later in the fall (until mid December) than we had planned, hoping to get water in all our wells, but we
never did. Bill

William H. McDowell
Professor of Water Resources Management
Chair, Department of Natural Resources
(http://www.unh.edu/natural-resources/index.html)
Director, New Hampshire Water Resources Research Center
(http://www.wrrc.unh.edu/)
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FAX (603) 862-4976
e-mail: bill.mcdowell@unh.edu

Home page: http://www.unh.edu/natural-resources/fac-wmcdowell.html

-----Original Message-----
From: Flanders, Dick [mailto:rflanders@des.state.nh.us]
Sent: Friday, January 04, 2002 1:48 PM
To: Bill McDowell (E-mail)
Subject: FW: Proposed legislation

-----Original Message-----
From: Flanders, Dick
Sent: Friday, January 04, 2002 1:43 PM
To: 'Bill.McDowell@unh.edu'
Cc: Stewart, Harry
Subject: FW: Proposed legislation

Bill:
Greetings! I trust your New Year celebration went well!
I got a phone call from Rep. Betty Hall today wondering whether I had received your final report on the Hooksett GW monitoring. She said she

talked with you last October and that you had told her that it should be ready by the end of the year. I responded that we extended your contract to March 15, 2002 and that the final progress report was not due until then.
There are two bills relating to gravel pits to be heard on January 15th. HB 1313 is sponsored by Rep. Hal Melcher and discussed below. Betty's bill is HB1382 "revising requirements for restoring excavation sites". Her bill does not speak to biosolids use. Nevertheless, Betty asked that I contact you on the status of your report. Ideally she would like to have it for the hearings on the 15th. Where are you and Tamara on this?

Also, in our Draft letter of testimony on HB 1313 (see attached and not for public distribution)we suggest some changes in the bill. We would appreciate your review of this letter. Frankly, we are not at this point sure that we want to support this bill by Rep. Melcher because it would duplicate what we are proposing to do by rule changes to Env-Ws 800. Nevertheless, Hal has been a strong advocate of our programs and his bill does establish, as legislative policy, a distinction between reclamation with reduced GW monitoring versus soil reclamation operations such as you are investigating at the Martin's Ferry site in Hooksett. This has some merit, and is (hopefully) supported by your research.
Thanks for your review in advance!
Sincerely,
Dick

HON HAROLD MELCHER
732 ABBOT HILL RD
WILTON NH 03086-5914

NEW HAMPSHIRE SIERRA CLUB

3 Bicentennial Square
Concord, NH 03301

phone (603) 224- 8222
fax (603) 224-4719

January 10, 2002

To: Chairman Musler and members of the Environment and Agriculture Committee

Re: **House Bill 1313**

The Sierra Club is the oldest and largest environmental advocacy group in the US with over 700,000 members.

A year ago the Sierra Club appointed a Sludge Task Force to address the controversial practice of land application. This Task Force developed the enclosed Guidance for Land Application of Sewage Sludges. The document went through eight drafts and a number of major revisions. It is based primarily on recent peer reviewed published technical articles. It also incorporates many suggestions by waste management experts, soil scientists, sludge researchers, environmental experts, and industry representatives.

Statements in the Guidance document that are particularly relevant to House Bill 1313 have been highlighted.

Caroline Snyder
Member
Sierra Club Sludge Task Force

New Hampshire Sierra Club
Environmental Science Committee

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FOUNDED 1892

Sierra Club Conservation Policies

Solid Waste Policy

Sierra Club Guidance on the Land Application of Sewage Sludges

Background on the Problem

Although the Sierra Club supports the use of pathogen- and pollutant-free treated human waste as fertilizer, such a practice is only possible by separating the industrial waste stream from human waste. Sewage treatment plants are not designed to separate wastes and to produce fertilizer. They were designed to remove pollutants from the waste water. Many of these pollutants concentrate in the resultant sludges. As a result the exact composition of any sludge is unknown. Urban sludges are a highly complex, unpredictable biologically active mixture of organic material and human pathogens that can contain thousands of industrial waste products, including dozens of carcinogens, hormone disrupting chemicals, toxic metals, dioxins, radionuclides and other persistent bioaccumulative poisons. The Federal Clean Water Act defines sewage sludge as a pollutant.

After ocean dumping was banned in 1989, the US faced a formidable problem: what to do with the estimated 10 to 15 million dry metric tons of sewage sludge produced annually. In 1993, the US EPA issued its land application rule, 40 CFR, Part 503: Standards for the Use and Disposal of Sewage Sludge. To make sludge spreading more acceptable, it was

called "recycling" and sludge that met the US land application standards was called "biosolids". By identifying sludge as a fertilizer-rather than as a pollutant it became exempt from several laws governing waste disposal. Current federal regulations have standards for only nine pollutants. These land application regulations are the least protective of any in the industrialized world. For example, the cumulative metal loading allowed under these rules result in contaminant levels approximately an order of magnitude higher than those allowed under land application rules in most European countries.

Guidance

There is growing agreement among scientists and environmentalists that the current US sewage sludges management programs need serious improvements. In 1997 the Cornell Waste Management Institute concluded that current regulations governing land application do not protect human health, agricultural productivity, and the environment.

On July 13, 2000, the US House Science Committee held a hearing on the 1999 National Research Council report entitled "Strengthening Science at the US EPA". The 503 sludge rule was singled out as an example of regulation that is being driven by politics, rather than by sound science. In 2000 the CDC/NIOSH identified Class B sewage sludge as a potential hazard to workers who handle this material, and the same year the EPA Office of Inspector General also concluded that due to lack of data and lack of oversight the EPA cannot assure the public that current land application practices are protective of human health and the environment.

The Sierra Club opposes the land application of municipal sewage sludges as a fertilizer and/or soil amendment because the current policies and regulations governing this practice are not

adequately protective of human health and the environment. The Sierra Club recognizes, however, that more than half of the sewage sludges generated in the US are being disposed through land application. Because this practice cannot be banned overnight, the Sierra Club has developed Guidelines for Community Activists, as well as Recommendations for Research and for the National Program.

Guidelines for Community Activists

An increasing number of local governments are enacting ordinances to control land application in their communities in order to protect the health and welfare of their citizens. These communities need science-based guidelines for ordinances that are more protective than the federal and state regulations. A 2001 paper on local ordinances published in Natural Resource Journal (vol. 41) provides a useful review of approaches taken by municipalities to address an array of local concerns.

These Sierra Club guidelines are not exhaustive. Nor should they be interpreted as an endorsement of land application. They are offered to activists so they can inform farmers, property owners, citizens, and local governments who want to reduce some of the hazards of land application.

1. Several deaths and many adverse environmental and health incidents have been linked to land application, especially to composting operations and to Class B sewage sludge that is stockpiled and/or spread on hayfields, pastures, and other no-till sites. To reduce pathogen exposure and exposure to sludge odors and to airborne sludge contaminants and to reduce groundwater and surface water contamination, sludges should not be top dressed but immediately incorporated

into the soil; sludges should not be stockpiled on site. Some communities may want to ban the stockpiling and land application of Class B sewage sludges altogether.

2. To prevent dairy cattle from ingesting sludge contaminants (including dioxins), sludges should not be placed on grazing pastures.

3. To prevent ground water contamination, sludge should not be placed on karst, or on excessively drained soil and/or on sites with shallow and varying water tables.

4. To protect soils and crops, nutrient and pH management plans should be required for all agricultural applications. Soil pH that is either too high or too low can mobilize toxic metals. Permanent pH management is necessary at sludged sites, especially in regions with acid soil and acid precipitation.

5. To reduce exposure to airborne contaminants extensive buffer zones should be established. Some communities require a 5 mile radius for open composting facilities and a ½ mile setback for Class B sludge.

6. To keep children, pets, and wildlife away from newly sludged sites, these sites should be securely fenced and posted for 12 months after the last Class B application. Signs should use all languages spoken in the area.

7. Do not use any sewage sludge products on home vegetable gardens. Keep children away from sludge products.

8. To protect your community's natural resources for future generations, refuse

sludge from highly industrialized urban centers, from treatment plants that receive superfund or toxic waste site leachates, and from plants that accept nuclear waste.

9. Insist on low application rates that take into account previous sludge applications and soil contaminants from other sources, as well as nutrients.

10. Often the pathogen density of sludge is unknown. Request pathogen testing for both fecal coliform and salmonella just before application.

11. Record sludge applications on property deeds.

12. Request indemnification against potential liabilities from sludge spreading.

13. Require monitoring for additional contaminants including toxic organic chemicals.

14. Require a performance bond.

15. Establish a local enforcement and monitoring program.

16. Require and establish a method to deal with complaints.

Recommendations for Research and the National Program

1. The deficiencies of the current land application policy cannot be addressed by merely "fine tuning" the existing rules or by issuing guidance documents or adopting voluntary sludge management systems. Long-term, a policy that deliberately allows the addition of persistent pollutants to the nation's farm and forest soil is indefensible. The Sierra

Club urges the EPA and industry to investigate safer long-term disposal options, technologies that separate wastes at the source, and meaningful incentives for toxic use reduction. Treatments such as incineration that create new pollutants and toxic ash are not acceptable.

2. The Sierra Club urges EPA to shift research priorities. Currently the promoters of land application are also its regulators. This is a serious conflict of interest. Tax dollars are being spent for crisis management and on aggressive PR campaigns to "change public perception", rather than on making land application safer. Research by the promoters tends to be biased and focuses on beneficial use rather than on how land application adversely effects the environment and human health and how to reduce those risks. Research funds should not be administered by those who have a financial stake in the outcome. Research needs include unbiased, independent investigation of alleged incidents of health and agricultural impacts from land application. Individuals who believe they have been impacted, as well as independent technical experts, must be involved in the determination of the research objectives.

3. Data are needed on the long term effects of sludge on soils; on identifying and regulating the many pollutants of concern that currently are not regulated or monitored; on why land application adversely affects human health and live stock; and on how land application affects wildlife, nonagricultural plant communities, aquatic organisms, forest ecosystems,and wildlife habitats. In fact, beyond the Oak Ridge National Laboratory literature review, EPA has not

addressed the ecological impacts of sludge spreading. Data are needed on the identity, prevalence, fate, transformation, transport, and survival of disease causing pathogens and airborne sludge contaminants. Data are needed on chemical mixtures and their toxicologic interactions in sludges, and how they affect human health and the environment.

4. Improved methods need to be developed and used to identify, monitor, and eliminate pathogens from sludges. Required management practices need to be improved to prevent exposure of people and animals. Class B sewage sludges contain significant levels of pathogens, some of which can survive in soil for months, even years. There is evidence that sludge odors and airborne contaminants are associated with illness. Current treatment and management practices are not adequate to prevent off-site odors. No valid epidemiologic study has been conducted by EPA to assess whether current land- application practices impact human health and live stock. These are some of the reasons why the Sierra Club supports a ban on the land application of Class B sewage sludges.

5. To protect soil and groundwater from persistent sludge contaminants and from over application of phosphorus, application rates must be based on many other factors than the nitrogen needs of a given crop or the cumulative loading of the handful of regulated trace elements.

6. Current allowable levels of metals in sludge and sludged soil need to be radically lowered. Pollutant tracking and site restrictions are necessary for all sludge types, including so-called Class A

EQ sludge.

7. Any land application policy must be based on valid scientific principles and include enforceable and enforced regulations.

8. If land application is to remain a disposal option, industry and government must abandon the current risk-based approach (which allows the accumulation of persistent pollutants in soil, until the land has been permanently degraded). Instead, land application must be based on the ecological principle of sustainability and non-degradation. In 1996, a National Research Council panel affirmed that a non-degradation policy for land application is based "on a valid scientific principle." Healthy farm and forest soils are a precious and limited resource. Preserving and protecting this resource should be a high priority. Any land application policy must be based on sustainability with a goal that no persistent toxic chemicals be added deliberately to soil beyond background levels.

The European Union, aware of the need to protect soils in perpetuity, has based its land application policies on the principle of non-degradation and sustainability with much more protective regulations. And the European community has plans for even stricter regulations in the future. In fact, Switzerland will ban land application of sludge by the year 2005. In contrast, the US EPA appears to be headed in the opposite direction. Instead of tightening the regulations that would improve sludge quality and sludge management, the EPA Office of Water has proposed a 300 ppt standard for dioxin in sludge that is land applied, no longer requires post-storage pathogen testing, no longer requires certification that pathogen reduction and vector attraction reduction requirements for

Class B sludge have been met, significantly weakened the Class B pathogen sampling requirements, and allows radionuclides, including plutonium and radium, in sludges that are used for growing food and feed crops. In addition, the metal products industry and AMSA are successfully resisting EPA's proposed tighter pretreatment standards for metals. Meanwhile the amount of toxic material being discharged into sewage treatment plants has increased every year since 1996. And there is increasing evidence that new unregulated toxics, such as brominated ethers, are concentrating in sludge.

Reference documents are available upon request. Please contact Doris Cellarius.

Executive Summary

Saving Soil

Biosolids Recycling in New England

September 2001

Ned Beecher and Jennifer Ostermiller
NEBRA
Tamworth, NH

Andrew Brydges, Kristen Kruger, and Sarah Woodhouse
EFI
Boston, MA

A report of the
New England Biosolids and Residuals Association

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FULL REPORT AVAILABLE FOR FREE DOWNLOAD AT
www.nebiosolids.org or for a fee from the NEBRA office.

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- Ogunquit: Biosolids Growing Great Hay!
- Massachusetts Water Resources Authority: National Demand for Fertilizer Pellets
- Lewiston-Auburn Water Pollution Control: Being a Good Neighbor
- Merrimack Biosolids: Nourishing Greener Parks and Fairways

Chapter I – Executive Summary

Over the past several years, public interest in the recycling of biosolids has grown in New England and in several other regions of the United States. In particular, concerns have been raised about the potential impacts of biosolids recycling on public health and the environment. This has led to a demand for accurate information and data regarding current biosolids recycling practices and the quality of biosolids products. In an effort to meet this demand, the New England Biosolids and Residuals Association (NEBRA) has created this report, *Saving Soil: Biosolids Recycling in New England.*

This report provides background information about biosolids recycling, applicable regulations, and state-by-state summaries of recent developments in biosolids management in the region. Included are definitions of common terms, explanatory charts, tables, and graphs, and five specific case studies of representative New England biosolids recycling operations.

Saving Soil provides the best current estimates of how biosolids are managed in each of the New England states, including the percentages of biosolids landfilled, incinerated, and recycled through heat drying, composting, or land application.

There are about 600 publicly owned wastewater treatment facilities throughout New England that managed approximately 425,000 dry tons of sewage sludge in 2000. Just over one-fifth of the regional sewage sludge total was recycled as biosolids and soil amendment products. Of the more than 93,000 dry tons of biosolids recycled in 2000, 18.5% were treated to Class B standards for bulk use on agricultural land and 81.5% were treated to Class A standards for general landscape and gardening use through composting or heat drying.

If they had been thrown away, the New England biosolids recycled in 2000 would have required an estimated 350,000 cubic yards of landfill space (i.e. 6 landfills, each the size of a football field and 33 feet deep). In addition, New England biosolids recycled in 2000 provided an estimated 3.7 million pounds of nitrogen (assuming a conservative average biosolids content of 2% nitrogen). NEBRA estimates that an equivalent amount of chemical fertilizer nitrogen would have cost $1.3 million.

Individual biosolids recycling rates and systems vary within New England. In recent years, Maine has had the highest recycling rate in the region, with more than 90% of its sewage sludge treated for beneficial use in agricultural and general landscaping applications. Vermont recycles about 75% of its sewage sludge, primarily through composting. New Hampshire's rate of recycling has declined from 50% in 1996 to 30% in 2000, due primarily to public scrutiny and stricter state and local biosolids land application regulations. Massachusetts recycles about 20% of the sewage sludge produced in the state, almost all of it as Class A material, including a large proportion of Boston's Massachusetts Water Resources Authority (MWRA) heat dried "Bay State Fertilizer." Connecticut and Rhode Island each have recycling rates below 10%.

Much of the *Saving Soil* report focuses on the quality of New England's recycled biosolids, including chemical and trace metals data. Analysis of seven years of data for 37 New England biosolids products shows that average concentrations of the ten metals for which testing is typically required are remarkably consistent across the region.

NEBRA found that state averages of trace metals in biosolids from recent testing data are uniformly well within the federal Exceptional Quality ("EQ:" Part 503, Table 3) standards and individual states' strictest standards. Further analysis of the trace metals data shows a downward trend in trace metals levels over

recent years as improved industrial pretreatment, pollution prevention, and other programs continue to reduce the concentration of trace metals in wastewater. The data also shows that, from 1994 to 2000, the average concentrations of the trace metals of greatest concern to the public (mercury, cadmium, arsenic, and lead) are also very low.

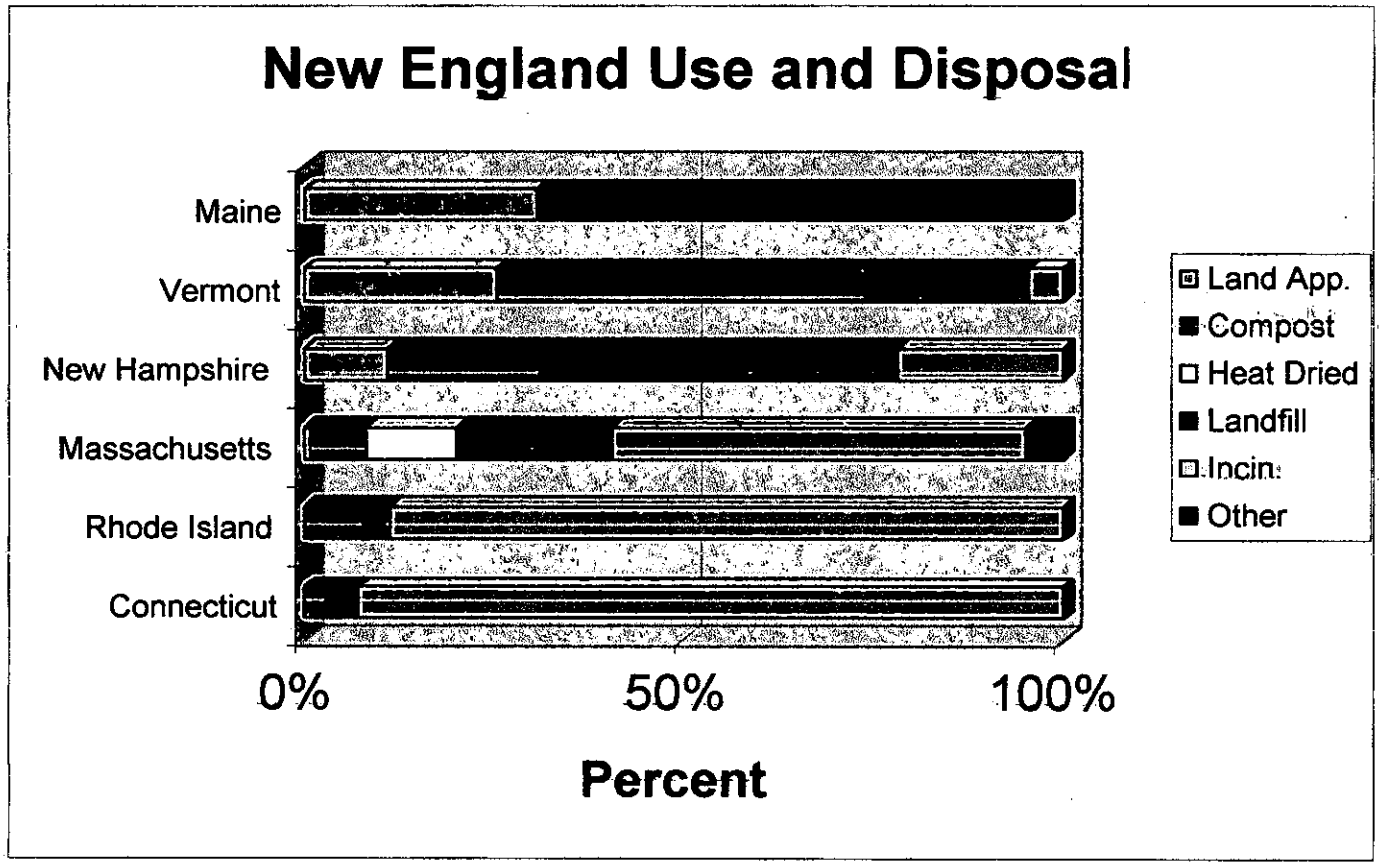
Saving Soil notes that some decline in biosolids recycling rates has occurred in most New England states in the past few years, despite significant improvements and investments in biosolids recycling programs. The future of biosolids recycling in New England will depend on further public acceptance, continuing growth in demand for biosolids products, and other factors.

UPDATED CHARTS

Updated October, 2001*

New England Biosolids: Use and Disposal Methods (2000 data)								
		Beneficial Use			Disposal			
Location	**Units**	**Land App.**	**Compost**	**Heat Dried**	**Landfill**	**Incin.**	**Other**	**Total**
Maine	dry tons	10,431	15,651		7,769		126	33,977
NEW 2000 DATA*	% of Total	30.7	46.1	0.0	22.9	0.0	0.4	100
Vermont	dry tons	2,086	3,957		1,766	384		8,193
	% of Total	25.5	48.3	0.0	21.6	4.7	0.0	100
New Hampshire	dry tons	1,980	3,600		8,460	3,960		18,000
	% of Total	11.0	20.0	0.0	47.0	22.0	0.0	100
Massachusetts	dry tons	2,690	18,830	32,280	53,800	145,260	13,450	266,310
	% of Total	1.0	7.1	12.1	20.2	54.5	5.1	100
Rhode Island	dry tons		2,174		1,053	24,795		28,022
	% of Total	0.0	7.8	0.0	3.8	88.5	0.0	100
Connecticut	dry tons		2,385		3,180	73,935		79,500
	% of Total	0.0	3.0	0.0	4.0	93.0	0.0	100
New England	dry tons	17,187	46,597	32,280	76,028	248,334	13,576	434,002
	% of Total	4.0	10.7	7.4	17.5	57.2	3.1	100

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*NOTE: More complete data for 2000 was submitted by the Maine Department of Environmental Protection just after initial publication of *Saving Soil*. This new data, included above, shows a recent significant decline in Maine's rate of biosolids recycling to less than 80%, part of the very recent downward trend identified in the report. This newest data appears only here; it is not included in the *Saving Soil* report.

Chart 3.3: Trace Metal Concentrations in New England Biosolids (parts per million or mg/kg)

Metal	Federal EQ Standards	Maine (1999 Data)	Massachusetts (2000 Data)	New Hampshire (2000 Data)	Vermont (1999 Data)
Arsenic	41	6	9	2	9
Cadmium	39	3	2	3	3
Chromium	no standard	17	32	20	31
Copper	1500	310	388	433	490
Mercury	17	1	2	2	2
Molybdenum	no standard	13	7	11	9
Nickel	420	19	26	18	22
Lead	300	50	91	49	72
Selenium	36	2	4	2	6
Zinc	2800	419	498	663	649

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State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES
6 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095
(603) 271-3503 FAX (603) 271-2982

January 15, 2002

The Honorable George T. Musler, Chair
Environment and Agriculture Committee
Legislative Office Building, Room 303
Concord, New Hampshire 03301

Re: HB 1313, relative to spreading sludge on excavation sites for reclamation

Dear Chairman Musler:

Thank you for the opportunity to testify on HB 1313 relative to spreading sludge on excavation sites for reclamation. The Department of Environmental Services (DES) supports the general intent of HB 1313 to establish in statute the differences between "reclamation" and "soil manufacturing". We offer the following comments on certain aspects of the bill for your consideration. In Attachment 1, we offer suggested amendments that incorporate those comments.

State-funded research is currently being performed by Dr. William McDowell of the University of New Hampshire (UNH) on biosolids and short paper fiber (SPF) land application at sites with highly permeable soils, a common characteristic of reclamation sites. Based on Dr. McDowell's progress report dated March 2001, *Monitoring Demonstration at Top-Soil Manufacturing Site in New Hampshire, William H. McDowell & Tamara J. Chestnut, UNH, March 5, 2001*[1], and subsequent conversations with him, he has already concluded that overuse and stockpiling for extended periods are the leading causes of water quality problems at soil manufacturing sites. Soil manufacturing is a repetitive process by which soil is produced and removed for sale or use elsewhere. In contrast, reclamation is typically a one-time process to restore land impacted by activities such as gravel excavation. Because Dr. McDowell's work has clearly demonstrated that the long term environmental risks created by soil manufacturing operations are significantly higher than for reclamation, it makes sense that the regulation of these different operations should be considered differently, as proposed in HB 1313.

Section 2 of HB 1313 proposes definitions for "reclamation" and "soil manufacturing" that clearly establish the differences between these two activities. Our proposed amendment makes these definitions more technically accurate. We also recommend that the "reclamation" definition be placed in RSA 155-E because other aspects of reclamation are already discussed in this chapter without definition.

Section 3 of HB 1313 provides more specific criteria for how reclamation and soil manufacturing may occur and how the activities should be monitored for environmental impacts. Our suggested amendment includes some changes to clarify the language in this section.

[1] Dr. Mc Dowell's final report is due in March 2002.

While we welcome the Legislature's efforts to provide this level of detail in statute, please note this can also be provided through proposed rulemaking by DES. In this regard, DES has been developing and will shortly propose revisions to Env-Ws 800, Sludge Management Rules that will include provisions to address stockpiling and groundwater monitoring that consider the results of the UNH research and are virtually identical to, but with more detail than, the provisions of Section 3 of HB 1313. A description of the expected proposed rule changes for reclamation sites and soil manufacturing facilities is provided in Attachment 2 for your consideration.

Thank you for your consideration and if you have any questions, please contact me at 271-3503 or Richard Flanders at 271-3571.

Very truly yours,

George Dana Bisbee
Assistant Commissioner

cc: Representative Harold Melcher
Representative David Babson
Representative Burton Williams
Representative Timothy O'Connell

ATTACHMENT 1
PROPOSED AMDENDMENTS TO HB 1313

I. Replace section 2 of the bill with the following:

2 New Paragraph: Definitions. Amend RSA ~~485-A:2~~ ***155-E:1*** by inserting after paragraph ~~XXIII~~ ***VI*** the following new paragraph:

~~XXIV~~ ***VII***. "Reclamation" means the restoration of a site by grading, backfilling, compacting, and landscaping to an appropriate natural contour, the spreading of natural or artificial topsoil, or strippings, if any, and the planting of seedlings or grasses suitable to prevent soil erosion.

Rationale: Reclamation as defined in HB 1313 is more appropriately applied to RSA 155-E Local Regulation Excavations. Currently there is no definition of reclamation in that law while there is a section RSA 155-E:5 Minimum and Express Reclamation Standards. Within DES rules for biosolids, Env-Ws 802.3 defines reclamation as "the addition of organic matter and nutrients [from biosolids, short paper fiber, or a mixture] to improve and/or promote establishment of vegetation on soils which have been severely disturbed or which are in a poor vegetative state." [proposed language changes]

II. Replace section 3 of the bill with the following:

2 Definition. Amend RSA 485-A:2 by inserting after paragraph XXIII the following new paragraph:

~~XXV~~ ***XXIV***. "Soil manufacturing" means the ~~planting of a grass cover crop on~~ ***production of*** artificial topsoil, made of ***a mixture of*** biosolids~~,~~ ***and/or*** short paper fiber, and sand ~~for the purpose of periodically skimming soil from the top~~ for the purpose of sale or use elsewhere. ***The term shall also apply to mixtures of biosolids and/or short paper fiber, and sand originally placed as artificial topsoil, often planted with a vegetative cover crop, and later excavated for sale or use elsewhere.***

Rationale: The manufacture of soil mixtures as typically practiced involves the physical mixing of various organic and inorganic materials to produce a product used in landscaping, lawns, etc. HB 1313 seeks to impose additional restrictions on those soil manufacturing operations that pose an increased threat to aquifers. DES supports this approach. The amendment language eliminates a potential loophole by including facilities that merely mix materials for sale/use offsite while redefining and including those that are artificial topsoil stripping operations. Proposed DES rules under Env-Ws 800 would classify all "soil manufacturing" operations as "facilities" requiring groundwater monitoring.

III. Amend items I, II and III in original section 3 to read as follows:

I. That ***the*** reclamation spreading process is limited to ~~one per year~~ ***one time except as set forth in 485-A:5-f***;

II. It is at ***agronomic*** rates sufficient only to establish a vegetative cover;

III. It is at ~~fall~~ ***spring or summer*** seeding with a booster application during the following spring;

Rationale:

I. Reclamation as defined means site restoration. This is done once, not once a year.

II. Agronomic rates are those sufficient to supply plant nutrient needs for one growing season.

III. Prof. McDowell of UNH has stated that spring or summer (and not fall) is the most beneficial time for plant growth and uptake of nutrients, thus minimizing the potential impact on ground water.

IV. Renumber original sections 3 and 4 to 4 and 5.

ATTACHMENT 2
EXPECTED RULE CHANGES FOR ENV-WS 800
SLUDGE MANAGEMENT RULES
RELATIVE TO SOIL MANUFACTURING AND RECLAMATION SITES

- Amend the definition of "reclamation" to "...the addition of organic matter and nutrients ***from biosolids, short paper fiber, or a mixture*** to improve and/or promote establishment of vegetation on soils which have been severely disturbed or which are in a poor vegetative state."

- Add a definition for "soil manufacturing" as follows: " ...the production of artificial topsoil, made of a mixture of biosolids and/or short paper fiber, and sand originally placed as artificial topsoil, often planted with a vegetative cover crop, and later excavated for sale or use elsewhere."

- Add a definition for "biosolids" as follows: "any sludge derived from a sewage wastewater treatment facility that meets the standards for beneficial reuse specified by the department."

- Add a definition for "short paper fiber" (SPF) as follows: "any sludge derived from a pulp or papermill wastewater treatment facility that meets the standards for beneficial reuse specified by the department."

- Move stockpiling requirements to a stand-alone section in the rules and reflect recommendations from the Sludge Management Advisory Committee, the latest research by Prof. McDowell of UNH, and proposed legislation (HB 1313) by Rep. Hal Melcher on reclamation and soil manufacturing.

- Require additional restrictions on stockpiling of biosolids and SPF for reclamation sites and soil manufacturing facilities including:
  "Stockpiling of class B biosolids, or short paper fiber with a carbon to nitrogen ratio of less than 25:1, shall not be permitted on excessively drained soils for longer than 30 days unless one of the following is met:
  (1) Placed on a minimum of 8 inch sawdust pad (or other approved carbonaceous material) which must be completely removed and utilized on site within one year; or
  (2) Placed on a low permeability pad with provision for leachate collection and proper disposal off site or on site with approval by DES; or
  (3) Placed in a Natural Resource Conservation Service approved manure storage facility or bunker silo."

- For reclamation sites, allow biosolids and SPF use under certain conditions without groundwater monitoring provided:
  "(1) That the reclamation spreading process is limited to one time except as set forth in RSA 485-A:5-f;
  (2) The application rate does not exceed agronomic rates;
  (3) Application is done only during spring or summer just before seeding;
  (4) Stockpiling is limited to 30 days; and
  (5) Biosolids and short paper fiber is incorporated within 48 hours of application."

- For soil manufacturing facilities, groundwater monitoring will always be required.

- For reclamation sites and soil manufacturing facilities, the proposed rules specify that the minimum depth to groundwater shall be four (4) feet "to the seasonal high water table".

PAGE-BY- PAGE SUMMARY OF PROPOSED CHANGES IN SLUDGE RULES

Page #	Proposed Change	Specific Language

2 Add legislative (SB 307) definition for "biosolids":
Env-Ws 802.06 ***"Biosolids" means "biosolids" as defined by RSA 485-A:2, XXII, namely "any sludge derived from a sewage wastewater treatment facility that meets the standards for beneficial reuse specified by the department."***

3 Amend definition of "facility":
Env-Ws 802.13*4* "Facility" means a location or system for storing sludge for longer than 8 months or for the processing, treatment, or disposal of sludge, ~~other than land application~~ ***biosolids, or short paper fiber***. Facilities include, but are not limited to~~,~~ *:* lagoons~~,~~ *;* sludge treatment facilities~~,~~ *;* sludge monofills~~,~~ *;* sludge, ***short paper fiber, or biosolids*** transfer stations~~,~~ ***; composting;*** and ~~sites~~ ***locations*** where sludge, ***biosolids, or short paper fiber*** is treated or mixed with other sludge, ***biosolids, or short paper fiber*** or other material for shipment off site ***including soil manufacturing operations.***

5 Amend definition of "reclamation":
Env-Ws 802.3*1*2 "Reclamation" means the addition of organic matter and nutrients ***from biosolids, short paper fiber, or a mixture*** to improve and/or promote establishment of vegetation on soils which have been severely disturbed or which are in a poor vegetative state.

5 Add legislative (SB 307) definition for "short paper fiber":
Env-Ws 802.3*3* ***"Short paper fiber" means "short paper fiber" as defined by RSA 485-A:2, XXIII, namely "any sludge derived from a pulp or papermill wastewater treatment facility that meets the standards for beneficial reuse specified by the department."***

5 Add definition of "soil manufacturing":
Env-Ws 802.37 "Soil manufacturing" means the production of artificial topsoil, made of a mixture of biosolids and/or short paper fiber, and sand for the purpose of sale or use elsewhere. The term shall also apply to mixtures of biosolids and/or short paper fiber, and sand originally placed as artificial topsoil, often planted with a vegetative cover crop, and later excavated for sale or use elsewhere.

8 Allow a site permit (not a facility permit) for reclamation activities:
"....a site permit shall be required for:
(1) All ~~sludge~~ ***biosolids or short paper fiber*** land application sites, ***including reclamation sites***;
(2) All ~~sludge~~ ***biosolids or short paper fiber*** mixing sites where the resultant ~~sludge~~ ***mixture*** is to be used on site; and
(3) All ~~sludge~~ ***biosolids or short paper fiber*** stockpile ***or field storage*** sites where ~~sludge~~ ***biosolids or short paper fiber*** will be stockpiled for 8 months or less and where the stockpile ***or field storage*** location is not on a site permitted by (1) or (2) above."

9 Clarify facility permit requirement for soil manufacturing operations:
"...a facility permit shall be required for:
(1) The processing, treatment, or disposal~~, other than land application~~, of sludge, ***biosolids or short paper fiber;***
(2) All ~~sludge~~ ***soil*** mixing sites where the resultant sludge, ***biosolids or short paper fiber*** is to be used off-site ***including soil manufacturing operations***;
(3) All ~~sludge~~ stockpile sites where sludge, ***biosolids or short paper fiber*** will be stockpiled for greater than 8 months;
(4) The construction, operation , and closure of sludge lagoons, ***in-vessel or aerated static pile composting facilities,*** and monofills; and
(5) The construction, operation, and closure of sludge ***or biosolids*** transfer stations."

26 Specify that seasonal high groundwater be applied as the minimum depth for reclamation sites:

Table 806-1 Buffer Distances (in feet) for Land Application

Surface Water[a]	~~125~~[a]
Designated river under RSA 483:	***250***
Other surface water	***125***
Non-tidal Drainage Ditch	33
Community Wells[b]	400
Other Wells	300
Surface Drinking Water Source	500
Property Lines	100[c]
Public Roads other than Federal Interstate Highways	25[d]
Federal Interstate Highways	10[d]
On-site Occupied Dwelling	100
Off-site Occupied Dwelling:	
If used for top dressing	500[de]
If incorporated within 48 hours	200[de]
Bedrock / Restrictive Layer	2
Groundwater Depth:	
Land Application	2[f]
Reclamation	4[eg]

27 "(7) ***The letter "g" shall indicate that this shall be the distance to the seasonal high water table."***

48 Limitations specified for soil manufacturing operations under facility standards:

"(e) In addition to the requirements in (c) above, and as set forth in RSA 485-A:5-g, all soil manufacturing operations shall be limited to:

(1) One annual application during the spring immediately before seeding;

(2) The application rate as determined by agronomic needs for that growing season; and

(3) Incorporation within 48 hours following application."

49 Specify that seasonal high groundwater be applied as the minimum depth for soil manufacturing and other facilities:

"Table 808-~~1~~*1* Buffer Distances (in feet) For ~~Processing, Stockpiling or Storage~~ Facilities

Nearest ***Off-site*** Well	500[a]
Surface Water	250[b]
Surface Drinking Water Source	500
Nearest Occupied Dwelling	500[bc]
Property Line	500[bc]
Groundwater Depth	4[d]
Bedrock / Restrictive Layer	4
Non-tidal Drainage Ditch	***100***

(4) The letter "d" shall indicate that the distance is to the seasonal high water table."

51 Groundwater monitoring not required for reclamation sites if 5 conditions are met:

"(d) ***Groundwater monitoring shall not be required for reclamation sites where biosolids or short paper fiber is used as set forth in RSA 485-A:5-e provided:***

(1) That the reclamation spreading process is limited to one time except as set forth in RSA 485-A:5-f;

(2) The application rate does not exceed agronomic rates;

(3) Application is done only during spring or summer just before seeding;

(4) Stockpiling is limited to 30 days; and

(5) Biosolids and short paper fiber is incorporated within 48 hours of application."

56 Add new part 812 Requirements for Stockpiling and Field Storage to consolidate all stockpiling requirements for Class B and SPF in one location in the rules. Stockpiling on excessively well drained soils for > 30 days requires either pads or use of manure storage facilities:

"Env-Ws 812.02 Requirements for Class B Biosolids and Short Paper Fiber Stockpiling and Field Storage.

(a) No person shall field store or stockpile class B biosolids and short paper fiber within the buffer areas specified in Table 812-1, subject to (b) below:

Table 812-1 Buffer Distances (in feet) for Stockpiling or *Field* Storage

Surface Drinking Water Source	500
Nearest Occupied Dwelling	500[a]
Nearest *Off-site* Well:	500[b]
Property Line	100[c]
Bedrock / Restrictive Layer	4
Groundwater Depth[d]:	
For land application sites:	
With excessively well-drained soils	*4*
Other soils (not poorly or very poorly drained)	*2*
For facilities	*4*
Surface Water	250[e]
Non-tidal Drainage Ditch	100

57 (b) The following shall apply to Table *812-1*:

(1) The letter "a" shall indicate that the distance to the nearest occupied dwelling *at the time of application (with the exception of the permittees' dwelling)* shall be as far as practical beyond 500 feet, but ~~can~~ may be reduced below 500 feet with the occupant's prior written consent.

(2) The letter "b" shall indicate that the distance to the nearest *off-site* well shall be as far as practical, but in no case closer than 500 feet.

(3) The letter "c" shall indicate that the distance to property lines may be reduced through written agreement with affected party(ies).

(4) The letter "~~id~~" shall indicate that the distance is to the seasonal high water table.

(5) Unless otherwise required *or exempted* by RSA 483, New Hampshire rivers management and protection program, the letter "e" shall indicate that the distance to surface water may be reduced to 125 feet if the slope of the land to the surface water is less than 5% and a vegetated buffer strip of at least 25 feet is maintained between the stockpile and the surface water.

(c) Any person stockpiling *class B biosolids, or short paper fiber with a carbon to nitrogen ratio of less than 25:1,* for longer than 7 days shall cover the stockpile with an odor control material, such as lime, wood ash which has been approved for such use pursuant to Env-Wm 3400, or cement kiln dust, to minimize odors.

(d) ~~Stockpiles~~ *Stockpiling and field storage* of ~~sludge~~ *class B biosolids for greater than 48 hours* shall ~~be maintained~~ *require careful siting* to minimize ~~surface water run-on and run-off~~ the amount of water running on, off, or through the stockpile *or field storage structure. As a minimum, all stockpiles and field storage structures located on slopes greater than 3% shall be surrounded by an earthen or non-biosolids based berm.*

(e) Stockpiling *and field storage* of ~~sludge~~ *class B biosolids or short paper fiber* shall not be permitted on any poorly or very poorly drained soils.

(f) Stockpiling of class B biosolids, or short paper fiber with a carbon to nitrogen ratio of less than 25:1, shall not be permitted on excessively drained soils for longer than 30 days unless one of the following is met:

(1) Placed on a minimum of 8 inch sawdust pad (or other approved carbonaceous material) which must be completely removed and utilized on site within one year; or

(2) Placed on a low permeability pad with provision for leachate collection and proper disposal off site or on site with approval by DES; or

(4) Placed in a Natural Resource Conservation Service approved manure storage facility or bunker silo.

58 Rotation of stockpiles required; stockpiling on reclamation sites with 3 conditions:

(g) Any person providing for stockpiling under (f)(1) above, shall rotate stockpile sites from year to year to minimize nitrate saturation in soil that may occur with multiple repeat storage events in one location.

(h) As set forth in RSA 485-A:5-e, any person providing for stockpiling on reclamation sites for longer than 30 days shall:

(1) Be protected from weather and surface runoff;

(2) Be placed on a low permeability pad installed with suitable thickness to prevent movement of leachate for at least 8 months, and with provision for leachate collection and proper disposal off site; and

(3) Be totally removed and the site(s) cleaned up and reseeded according to best management practices.

(i) Any person providing field storage for longer than 48 hours shall provide control measures to minimize odors.

(j) Field storage and ~~S~~stockpiling ~~of sludge~~ shall not be permitted for greater than 48 hours on the 100-year flood plain as defined and delineated by the flood insurance rate maps published by the US Department of Housing and Urban Development or the Federal Emergency Management Agency.

(k) One soil test pit or auger boring shall be taken, at a depth of at least 4 feet, for each area proposed for stockpiling *or field storage*.

(l) An analysis of the soil test pits or auger borings required in *(k)* above shall be performed and shall include a description of the soil profile characteristics, depth to seasonal high water table, and depth to bedrock or other restrictive layer. "

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III. Amend items I, II and III in original section 3 to read as follows:

I. That ***the*** reclamation spreading process is limited to ~~one per year~~ ***one time except as set forth in 485-A:5-f***;

II. It is at ***agronomic*** rates sufficient only to establish a vegetative cover;

III. It is at ~~fall~~ ***spring or summer*** seeding with a booster application during the following spring;

Rationale:

I. Reclamation as defined means site restoration. This is done once, not once a year.

II. Agronomic rates are those sufficient to supply plant nutrient needs for one growing season.

III. Prof. McDowell of UNH has stated that spring or summer (and not fall) is the most beneficial time for plant growth and uptake of nutrients, thus minimizing the potential impact on ground water.

IV. Renumber original sections 3 and 4 to 4 and 5.

January 15, 2002

To: Members of the House Environment and Agriculture Committee
From: Jan Pendlebury MS Environmental Administration
BS Medical Technology (ASCP), CLS

Re: House Bill 1313, An Act Relative to Spreading Sludge on Excavation Sites for Reclamation

Thank you for this opportunity to state my opinion on HB 1313. My name is Jan Pendlebury. Today I am testifying as a health care professional and, at one time, instructor of medical microbiology, parasitology and mycology.

I urge all members of this committee to vote inexpedient to legislate on House Bill 1313, and reject any efforts to remove ground water testing where sludges have been applied over aquifers.

By the very nature of the geo-morphological events that shaped our terrain thousands of years ago, it is no accident that sand and gravel pits exist where they do, over stratified drift aquifers. The chemical composition of the sandy soils that comprise the pits repel absorption, allow quick drainage, and offer little filtering ability. Texture is the critical factor determining the pore spaces in soil, and its capacity to hold water. Sand contains the coarsest grains in a soil, making it the driest and lightest of soils. This allows water to percolate downward under the influence of gravity, and drain rapidly. Because silica, the primary mineral of sandy soil, does not dissolve readily during eluviation [downward transport], it does not provide the binding sites and chemical charge necessary to attract foreign materials to adhere to it.

The molecular size of viral agents, pathogens and toxics is so small that they are transported with ease. Cysts, like the spores [anthrax] we've heard so much about recently, are the dormant stage of a parasite, able to remain viable for many, many years in the absence of a host.

Recent reports by the World Watch Institute and the United Nations have stated that 1.12 billion people lack access to safe drinking water, more than one sixth of the world population. Eighty percent of all human disease can be linked to water, whether its origins stem from water borne disease or toxic contamination. Residents of the western United States have a far greater appreciation for the value of water than many of us residing in the east. However, recent drought conditions locally have provided the necessary wake up call to not only conserve water but also to protect all sources that provide us with safe water. The title of a January 6th editorial in the *Boston Globe* read, "The next world war will be over water." In a December 19th *Union Leader* article Governor Shaheen noted that water has been described as "the oil of the 21st century."

Any policy that would jeopardize water quality must be ruled out. Especially a policy that will eliminate ground water testing where sludges, known harbingers of toxics, viral agents, parasites and microorganisms, are applied. A policy such as this defies common sense. But much more significantly, sound scientific practice.

N.H. Pure Water Coalition

8 Green Acres Rd., Keene, NH 03431
Telephone & Fax 603-355-2202
Executive Director: Gerhard Bedding

Partial List of Professionals endorsing the NH Pure Water Coalition:
Albert Schatz. Ph.D. (the discoverer of streptomycin -- recognized as one of the medical giants of the 20th century); A. Konopka, M.D., Gail Rockwell Minton, Ph.D., Gerald Karnow, M.D.; Caroline Snyder, Ph.D.; Philip Incao. M.D., Paul W. Scharff, M.D.; L.J.Aventuro, M.D.; Kent Hesse, M.D.; Phyllis Mullenix, Ph.D.; Daisy Goodman, R.N.; Thomas Cowan, M.D.; Pamela Herring, N.D.; Leon Hecht, N.D.; Kelly Sutton, M.D.; Gary L. Walsemann, D.C.; David Ridge, D.C.; John R. Lee, M.D.; David Kennedy, D.D.S.; Elaine Brown, D.M.D., Paul Connett, Ph.D.

To the Members of the Environment & Agriculture Committee

January 14, 2002

Re HB 1313

The NH Pure Water Coalition opposes this bill because it endangers one of New Hampshire's most precious resources -- its drinking water.

Placing sludge on sand and gravel pits should not be acceptable to any one who respects and values the drinking water supplies underneath these sites.

Sincerely,

Gerhard Bedding

Gerhard Bedding, Director

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nebra
New England Biosolids & Residuals Association
Cooperatively promoting the environmentally sound recycling of biosolids and other residuals

The House Environment and Agriculture Committee
Honorable George Musler, Chair
Legislative Office Building, Room 303
Concord, New Hampshire 03301

January 15, 2002

Re: HOUSE BILL 1313

Dear Chairman Musler and Members of the Committee:

Thank you for this opportunity to provide input regarding House Bill 1313. This input is provided on behalf of the New England Biosolids and Residuals Association (NEBRA), a not-for-profit membership organization advancing the recycling of biosolids and other organic wastes throughout the region.

Over the past several years, there has been considerable scrutiny of the use biosolids and short paper fiber for reclamation of gravel pits and other disturbed lands. The extensive groundwater monitoring project at a Hooksett topsoil manufacturing site (and other sites) was the most involved analysis to date. That research, performed by Dr. Bill McDowell at UNH and supported through a public-private cooperative effort of the Legislature, DES, the McCabe Environmental Fund, and NEBRA, suggested that certain management practices might lead to reduced risks of negative impacts to groundwater from these reclamation activities.

This bill, HB 1313, aptly applies the findings of the UNH/McDowell research. NEBRA supports these improvements in management practices, although we feel that, in an ideal world, they would be better placed within regulations rather than law. However, given current circumstances, NEBRA supports this bill.

HB 1313 would help further establish two types of large-scale biosolids and short paper fiber land application--simple reclamation and soil manufacturing.

The bill simplifies the process for the use of these materials in one-time reclamation of spent gravel pits. For instance, HB 1313 removes the requirement for groundwater monitoring at these one-time reclamation sites. This makes sense, given the fact that extensive groundwater monitoring in the UNH/McDowell study and previous studies have not shown excessive impacts on groundwater from such basic reclamation activities. Significant impacts, when found, were apparently associated with long-term stockpiling and other activities that left stores of nitrogen in the soil. At the same time, HB 1313 strengthens required management practices for these one-time reclamation activities by specifying

application and seeding times, limited time to incorporation, and a conservative 4-foot buffer to seasonal high groundwater. These create yet another margin of safety.

It is important to remember that one-time reclamation activities are beneficial in restoring New Hampshire's landscapes to productive uses and aesthetically-pleasing appearances. The use of biosolids and short paper fiber--inexpensive recycled materials--encourages more of this beneficial activity.

It is also important to remember that HB 1313 does not remove the regulatory requirements of Env-Ws 800, including the requirement for site permits for any site where Class B biosolids and/or short paper fiber are utilized.

Regarding "soil manufacturing," HB 1313 maintains the groundwater monitoring requirement and strengthens several management practices for this kind of activity. Again, based on research findings, the greatest concern for the protection of groundwater seems to be from the build-up in the soil and subsoil of excessive stores of nitrogenous material, especially at stockpiling sites. HB 1313 reduces the likelihood of impacts to groundwater by limiting applications to one per year and requiring incorporation within 48 hours; a 4-foot separation to seasonal high water; and attention to the management of stockpiling areas, including rotation, clean-up, and seeding of stockpile sites.

As with reclamation activities, HB 1313 adds additional requirements for soil manufacturing that go above and beyond the requirements of the currently conservative and protective Env-Ws 800 regulations.

In summary, HB 1313 proposes to add reasonable, research-based management requirements that fine-tune current regulations, helping further ensure the maximum benefits and minimum risks from the use of biosolids and short paper fiber in the reclamation and soil manufacturing activities.

Thank you for your consideration of these comments.

Yours truly,

Ned Beecher
Executive Director

P.S. NEBRA can provide further background information regarding reclamation activities using biosolids and short paper fiber, including copies of the UNH/McDowell research report. An overview of reclamation, including photographs, can be viewed at http://www.nebiosolids.org/pulppaper.html.

CITIZENS FOR A FUTURE NEW HAMPSHIRE

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January 15, 2002

To: Members of the House Environment and Agriculture Committee
From: Chris Rueggeberg
Re: House Bill 1313, An Act Relative To Spreading Sludge On Excavation Sites For Reclamation

Please vote inexpedient to legislate on House Bill 1313. HB 1313 encourages sludge spreading over aquifers. It does not make the practice more restrictive. It does not protect aquifers that are sources of current and future drinking water from contamination. There are environmentally friendly alternatives to sludging gravel pits.

Water Is A Finite Resource

Three Senate bills have been introduced this session that recognize drinking water is a finite resource. The governor, the Department of Environmental Services, and a bipartisan group of senators and representatives are all encouraging regional cooperation in water resources management and water conservation.

House Bill 1313 takes just the opposite policy approach. It ignores the recent droughts and periodic water shortages occurring in drinking water supplies in New Hampshire's southern tier and seacoast regions. As the gap continues to widen between the available water supply and demand, sludge regulations need to be stricter, not weaker.

House Bill 1313 ignores the numerous scientific questions that remain unanswered about the long-term environmental and public health effects of spreading sludge over aquifers:

- Additional research now underway in New Hampshire will contribute significantly to the **limited data on impacts of land application here**. *DES New Hampshire Nonpoint Source Management Plan. Section 2-11-2*

- Sandy soils are not an effective retardant to the movement of sludge pathogens. *Guide to Field Storage of Biosolids (2000). EPA USDA (draft).*

- At no time should Class B sludge be used where there is a potential for virus migration to underground aquifers. *UNH Professor Aaron Margolin. October 7, 1996.*

- Paper mill wastes are probably a poor choice for (gravel pit) application because they tend not to be well stabilized and contain a variety of inorganic and soluble organic constituents. *UNH soil scientist Robert Harter. Position Paper on Gravel Pit Reclamation. March 20, 1998.*

Weak Regulations

"Biosolids" contain nutrients laced with low levels of PCBs, dioxin, furans, chlorinated pesticides, carcinogenic PAHs, toxic metals such as arsenic, mercury, lead, and cadmium, bacteria, viruses, industrial solvents, and petroleum products. The use of any product with this many contaminants needs to be strictly limited. Instead, HB 1313 creates gaps in the regulatory process.

The definition of "reclamation" in section 2 prohibits the environmentally friendly use of warm season grasses to reclaim gravel pits. Warm season grasses survive droughts and can be planted in sand without using topsoil or sludge. The definition of reclamation in the sludge management rules- Env-Ws 802.31- permits using warm season grasses.

Section 3 allows sludge to be spread on excavation sites for reclamation purposes without requiring monitoring wells if the spreading is only done once per year. "Excavation site" is not defined. Sand and gravel deposits are by their geologic nature potential groundwater aquifers. This language in effect encourages spreading sludge over aquifers for the following reasons:

(1) Groundwater monitoring wells are currently required by sludge management rules in Env-Ws 809. Their purpose is to detect groundwater contamination. Requiring monitoring wells acts as a deterrent to more sludge spreading at reclamation sites.

(2) Annual sludge spreading is in fact an intensive use. The current practice is to wait one year between applications. Inconsistent language actually permits sludge spreading more than once a year. Spring "booster" applications are permitted. If a "site" is later used for agricultural crops, additional sludge spreading is allowed.

(3) Aquifers located under reclamation sites are not protected from sludge stockpiling. Paragraph V requires incorporating sludge within 48 hours. Paragraph VI permits stockpiling sludge for more than 30 days. Stockpiling encourages pathogen exposure; exposure to airborne sludge contaminants; and groundwater contamination.

Vague language would make enforcing the provisions of HB 1313 difficult. "Rates sufficient only to establish a vegetative cover"; "booster application"; "any biosolids material be isolated and shaped"; and "low-permeable pad" are not defined. Isolating and shaping sounds like stockpiling. Impermeable pads are normally used for stockpiling.

HB 1313 does not prevent the contamination of previously uncontaminated groundwater.

Dr. John Meinhold
P.O. Box 5271
Portsmouth, NH 03802

January 15, 2002

Representative George T. Musler
Chairman, Environment and Agriculture Committee
NH House of Representatives
Concord, NH 03301

RE: HB 1313

Chairman Musler and Members of the E&A Committee:

I do not support HB 1313.

HB 1313 is a special interest bill.

Placing sewage sludge in aquifer recharge areas is placing the people's groundwater at high risk for contamination.

You have been elected to public office and have taken an oath for the sole purpose to protect the people's interest.

Please vote against this special interest bill.

John Meinhold, OD

NEW HAMPSHIRE SIERRA CLUB **HB 1313**

3 Bicentennial Square
Concord, NH 03301

SIERRA CLUB
FOUNDED 1892

January 15, 2002

To Chairman Musler and Members of the Environment and Agriculture Committee:

I am Caroline Snyder representing the NH Sierra Club as well as the national Sierra Club, which is the oldest and largest environmental advocacy group in the nation with over 700,000 members. We urge you to oppose this bill.

One of the reasons the Sierra Club opposes the land application of sludges is because this practice is permitted on environmentally sensitive sites such as spent sand and gravel pits that are located over stratified drift aquifers, reservoirs of uncontaminated drinking water.

Not only the national Sierra Club, but the Cornell Waste Management Institute (which has researched land application for over 25 years) opposes sludge being put on highly permeable soils where there are high water tables. Every environmental group in this state opposes gravel pit sludging. UNH's most prestigious soil scientists and sludge experts warn against ground water pollution from sludge. In 1995 Professor George Estes said that "long term use of biosolids in NH is precluded because of the danger of contaminating ground water." Professor Robert Harter said in 1998 that using sludges to reclaim NH gravel pits " would add a source of contamination to an essentially uncontaminated site." In 1999 the Conservation Law Foundation, testified before this committee that using " septage and sludge for reclamation of these sites is neither prudent nor acceptable."

HB 1313 **weakens** the current rules by no longer requiring ground water monitoring at reclamation sites. It violates EPA guidelines that prohibit any stockpiling on these sites. HB 1313's new definition of "reclamation" actually **promotes** using sludge for reclamation because no pit owner will buy loam when he can get free sludge. HB 1313 precludes the use of less costly and environmentally friendly methods of establishing vegetation that do not require topsoil or sludges. Thus, HB 1313 is a special interest bill.

Finally, even though HB 1313 requires a 4 foot vertical buffer to the high water table, peer reviewed published research has shown that 4 feet of coarse sand is not an adequate buffer to protect ground water at these sites.

The Sierra Club urges the members of this committee to protect New Hampshire's unpolluted stratified drift aquifers by opposing HB 1313.

Caroline Snyder, Ph.D
Environmental Science Committee

Voting Sheets

HOUSE COMMITTEE ON ENVIRONMENT AND AGRICULTURE

EXECUTIVE SESSION on HB 1313

BILL TITLE: **relative to spreading sludge on excavation sites for reclamation.**

DATE: February 19, 2002

LOB ROOM: 303

Amendments:

Sponsor: Rep. Melcher	OLS Document #:	2002	2586h
Sponsor: Rep.	OLS Document #:		
Sponsor: Rep.	OLS Document #:		

Motions: OTP, OTP/A, ITL, Interim Study (Please circle one.)

Moved by Rep. Melcher

Seconded by Rep. Swindlehurst

Vote: 11-8 (Please attach record of roll call vote.)

Motions: OTP, OTP/A, ITL, Interim Study (Please circle one.)

Moved by Rep. Phinizy

Seconded by Rep. Robb

Vote: 10-9 (Please attach record of roll call vote.)

CONSENT CALENDAR VOTE:

(Vote to place on Consent Calendar must be unanimous.)

Statement of Intent: Refer to Committee Report

Respectfully submitted,

Rep. Harold P. Melcher, Clerk

HOUSE COMMITTEE ON ENVIRONMENT AND AGRICULTURE

EXECUTIVE SESSION on HB 1313

BILL TITLE: **relative to spreading sludge on excavation sites for reclamation.**

DATE: 02/12/02

LOB ROOM: 303

Amendments:

Sponsor: Rep. Melcher — OLS Document #: 2002 2586h

Sponsor: Rep. — OLS Document #:

Sponsor: Rep. — OLS Document #:

Motions: OTP, OTP/A, ITL, Interim Study (Please circle one.)

Moved by Rep. Melcher

Seconded by Rep. Swinglehurst.

Vote: 11-8 (Please attach record of roll call vote.)

Pfeiffer Interim Study. Robb

Motions: OTP, OTP/A, ITL, ~~Interim Study~~ (Please circle one.)

Moved by Rep. Pfeiffer

Seconded by Rep. Robb.

Vote: 10-9 (Please attach record of roll call vote.)

CONSENT CALENDAR VOTE:

(Vote to place on Consent Calendar must be unanimous.)

Statement of Intent: Refer to Committee Report

Respectfully submitted,

Rep. Harold P. Melcher, Clerk

OFFICE OF THE HOUSE CLERK 2002 SESSION

ENVIRONMENT AND AGRICULTURE

Bill #: HB 1313 Title: sludge in excavation sites as reclamation

PH Date: 01/15/02 Exec Session Date: 02/19/02

Motion: Amendment #: 2586h

MEMBER	YEAS	NAYS
Musler, George T, Chairman		
Babson, David L, V Chairman	✓	
Messier, Irene M		✓
Pratt, Leighton C	✓	
Philbrick, Donald R	✓	
Dunlap, Patricia C		✓
Cobb, John S	✓	
Brewster, Richard P		✓
O'Connell, Timothy D	✓	
Dunne, Christopher H	✓	
Swindlehurst, John R	✓	
Williams, Burton W	✓	
Liebl, George J		✓
Owen, Derek		✓
Hall, Betty B		✓
Melcher, Harold P, Clerk	✓	
Phinizy, James G	✓	
Robb, Amy E	✓	
Solow, Martha S		✓
Allen, Peter H		✓
	11	8
TOTAL VOTE:		

Printed: 12/19/2001

OFFICE OF THE HOUSE CLERK

2002 SESSION

ENVIRONMENT AND AGRICULTURE

Bill #: HB 1313/A **Title:** _____

PH Date: ____/____/____ **Exec Session Date:** 02/19/02

Motion: Interim Study **Amendment #:** _____

MEMBER	YEAS	NAYS
Musler, George T, Chairman		
Babson, David L, V Chairman		✓
Messier, Irene M	✓	
Pratt, Leighton C		✓
Philbrick, Donald R		✓
Dunlap, Patricia C	✓	
Cobb, John S		✓
Brewster, Richard P	✓	
O'Connell, Timothy D		✓
Dunne, Christopher H		✓
Swindlehurst, John R		✓
Williams, Burton W		✓
Liebl, George J	✓	
Owen, Derek	✓	
Hall, Betty B	✓	
Melcher, Harold P, Clerk		✓
Phinizy, James G	✓	
Robb, Amy E	✓	
Solow, Martha S	✓	
Allen, Peter H	✓	
	10	9
TOTAL VOTE:		

Printed: 12/19/2001

INTERIM STUDY
EXECUTIVE SESSION

COMMITTEE: ENVIRONMENT AND AGRICULTURE

BILL NUMBER: HB 1313

BILL TITLE: relative to spreading sludge on excavation sites for reclamation.

DATE: October 1, 2002

MOTION
(Please circle one)

RECOMMENDED **NOT RECOMMENDED**

Moved by: Rep. Betty B. Hall

Seconded by: Rep. George T. Musler

Vote: 7-9 **VOTE FAILED**

RECONSIDERATION

MOTION
(Please circle one)

RECOMMENDED **NOT RECOMMENDED**

Moved by: Rep. Harold P. Melcher

Seconded by: George T. Musler

Vote: 11-5

Rep. Harold P. Melcher
Clerk

Original: Committee Bill File

OFFICE OF THE HOUSE CLERK 2002 SESSION

ENVIRONMENT AND AGRICULTURE

Bill #: HB 1313 Title: rel to spreading sludge on excavation sites

PH Date: ____/____/____ Exec Session Date: 10/1/02

Motion: ITL Recommend Amendment #:

MEMBER	YEAS	NAYS
Musler, George T, Chairman		
Babson, David L, V Chairman		
Messier, Irene M	✓	
Pratt, Leighton C		✓
Philbrick, Donald R		✓
Dunlap, Patricia C	✓	
Cobb, John S		✓
Brewster, Richard P	✓	
O'Connell, Timothy D		✓
Dunne, Christopher H		
Swindlehurst, John R		✓
Williams, Burton W		✓
Liebl, George J		✓
Owen, Derek	✓	
Hall, Betty B	✓	
Melcher, Harold P, Clerk		✓
Phinizy, James G		✓
Robb, Amy E		
Solow, Martha S	✓	
Allen, Peter H	✓	
	7	9

TOTAL VOTE:
Printed: 12/19/2001

OFFICE OF THE HOUSE CLERK

2002 SESSION

ENVIRONMENT AND AGRICULTURE

Bill #: HB 312 **Title:** relative to spreading sludge on ~~reclamation~~ excavation sites for reclamation

PH Date: ____/____/____ **Exec Session Date:** 12/1/02

Motion: Rehrmann, **Amendment #:**

MEMBER	YEAS	NAYS
Musler, George T, Chairman		
Babson, David L, V Chairman		
Messier, Irene M	✓	
Pratt, Leighton C	✓	
Philbrick, Donald R	✓	
Dunlap, Patricia C	✓	
Cobb, John S	✓	
Brewster, Richard P		✓
O'Connell, Timothy D	✓	
Dunne, Christopher H		
Swindlehurst, John R	✓	
Williams, Burton W	✓	
Liebl, George J	✓	
Owen, Derek		✓
Hall, Betty B		✓
Melcher, Harold P, Clerk	✓	
Phinizy, James G	✓	
Robb, Amy E		
Solow, Martha S		✓
Allen, Peter H		✓
	11	5

TOTAL VOTE:
Printed: 12/19/2001

INTERIM STUDY
EXECUTIVE SESSION

COMMITTEE: ENVIRONMENT AND AGRICULTURE

BILL NUMBER: HB 1313

BILL TITLE: relative to spreading sludge on excavation sites for reclamation.

DATE:

MOTION
(Please circle one)

1

RECOMMENDED

NOT RECOMMENDED

Moved by: Rep Hall

Seconded by: Nadeau

Vote: 7-9
(Note: Attach record of roll call vote)

Harold Parker
Clerk

Original: Committee Bill File

(2) Reconsider

re-vote

11-5

Committee Report

COMMITTEE REPORT

COMMITTEE: **Environment and Agriculture**

BILL NUMBER: **HB 1313**

TITLE: relative to spreading sludge on excavation sites for reclamation.

DATE: February 19, 2002 CONSENT CALENDAR YES ☐ NO ☒

☐ OUGHT TO PASS

☐ OUGHT TO PASS WITH AMENDMENT

☐ INEXPEDIENT TO LEGISLATE

☒ REFER TO COMMITTEE FOR INTERIM STUDY
(Available only in second year of biennium.)

STATEMENT OF INTENT
(Include Committee Vote)

The basic premise of this legislation is sound; however, further work is necessary to clarify certain definitions and references. While the Interim Study is being completed, "EPA" and the "The McDowell" Report will be published and will aid completion of this Interim Study.

Vote 10-9.

Rep. James G. Phinizy
FOR THE COMMITTEE

Original: House Clerk
cc: Committee Bill file

USE ANOTHER REPORT FOR MINORITY REPORT

Environment and Agriculture

HB 1313, relative to spreading sludge on excavation sites for reclamation. **REFER TO COMMITTEE FOR INTERIM STUDY**

Rep. James G. Phinizy for Environment and Agriculture: The basic premise of this legislation is sound; however, further work is necessary to clarify certain definitions and references. While the Interim Study is being completed, "EPA" and the "The McDowell" Report will be published and will aid completion of this Interim Study. **Vote 10-9.**

HB 1313

Refer to Interim Study.

THE BASIC PREMISE OF THIS LEGISLATION IS SOUND; HOWEVER, FURTHER WORK IS NECESSARY TO CLARIFY CERTAIN DEFINITIONS AND REFERENCES. WHILE THE INTERIM STUDY IS BEING COMPLETED, "EPA" + "THE McDOWELL" REPORT WILL ~~BE Completed~~ BE PUBLISHED AND WILL AID COMPLETION OF THIS INTERIM STUDY.

James Phinizy to The Committee.

DHP

INTERIM STUDY
COMMITTEE REPORT

COMMITTEE: **Environment and Agriculture**

BILL NUMBER: **HB 1313**

TITLE: relative to spreading sludge on excavation sites for reclamation.

DATE: October 1, 2002

☒ RECOMMENDED

☐ NOT RECOMMENDED

STATEMENT OF INTENT
(may be handwritten)

The value of restricting landspreading of sludge in accordance with current science at the University of New Hampshire outweighed the supposed fears of those opposed.

Vote: 11-5.
(Note: Attach record of roll call vote)

LSR Number: TBA.
(If legislation if already filed, please list LSR number)

Rep. Rep. Harold P. Melcher
Chairman/Clerk

Original: House Clerk
Copy: Committee Bill file

Environment and Agriculture

HB 1313, relative to spreading sludge on excavation sites for reclamation. **RECOMMENDED**

Rep. Rep. Harold P. Melcher for Environment and Agriculture: The value of restricting landspreading of sludge in accordance with current science at the University of New Hampshire outweighed the supposed fears of those opposed. **Vote 11-5.**

INTERIM STUDY
COMMITTEE REPORT

COMMITTEE: **Environment and Agriculture**

BILL NUMBER: **HB 1313**

TITLE: relative to spreading sludge on excavation sites for reclamation.

DATE:

(2) [X] RECOMMENDED

[X] NOT RECOMMENDED

STATEMENT OF INTENT
(may be handwritten)

The value of restricting landspreading of sludge in accordance with current regs at UNH outweighed the supposed pros of the proposed.

Vote 3-2.
(Note: Attach record of roll call vote)

LSR Number _____.
(If legislation if already filed, please list LSR number)

Chairman/Clerk

Original: House Clerk
Copy: Committee Bill file