

MEETING SUMMARY NOTES
EVALUATION OF STORMWATER GENERAL PERMIT AND LID
(Contract # PS2010-10172)
WORKSHOP 2—JULY 1, 2010; PHOENIX AUDITORIUM

DISTRIBUTION: Attendees and Other Project Partners
DATE: July 12, 2010

The following discussion summarizes the July 1, 2010 Workshop for the Evaluation of Stormwater General Permit and Low-Impact Development held at the Department of Environmental Protection Offices (79 Elm Street, Hartford, CT) in the Phoenix Auditorium.

A list of workshop attendees is provided at the end of this summary.

INTRODUCTIONS

Opening Remarks

MaryAnn Nusom Haverstock opened the meeting. During her opening, she pointed out that the issue of legal authority to require low impact development (LID) as part of the stormwater general permits had been vetted between the Environmental Protection Agency—New England (EPA) and Connecticut Department of Environmental Protection (DEP) and such authority is clearly present in existing state law. MaryAnn asked attendees to introduce themselves around the table. She then turned the agenda over to Fuss & O'Neill.

Introductions around the Table

Jim Riordan of Fuss & O'Neill gave a PowerPoint Presentation, entitled "Introductions, Meetings, and the Web Page." The presentation is available on:

http://www.ct.gov/dep/cwp/view.asp?a=2719&q=459488&depNav_GID=1654

Future Meeting Dates and Locations

Jim reconfirmed the next three meetings and meeting dates, which were set during Workshop 1 (May 26). The dates are as follows:

Project Meeting Dates

Workshop Title	Date to be Held
Partner Workshop 3	Tuesday, August 31, 2010
Partner Workshop 4	Wednesday, October 20, 2010
Partner Workshop 5	Wednesday, December 15, 2010

Note:

All meetings will be held from 9:15 a.m. – 11:45 a.m. in the Phoenix Auditorium at the Hartford, CT DEP Offices.

Web Page

Jim reintroduced the project web page on DEP's website:

http://www.ct.gov/dep/cwp/view.asp?a=2719&q=459488&depNav_GID=1654

The web page will be used to provide project partners and other interested parties with general project information, schedules, and deliverables.

IDENTIFYING ALTERNATIVES AND CRITERIA AND PARTNER INVOLVEMENT IN IMPLEMENTATION (continued)

At the May 26 workshop, a card storming and consensus-building session was facilitated. The session was partially completed. Therefore, the July 1 workshop involved a continuation of the session. Jim led meeting attendees in this continuation (see Photograph 1). Results included recombination of several of the card storming clusters formed during the May 26 workshop and naming of the resulting clusters.



Photograph 1—Results during the July 1 workshop included rearrangement of clustered cards as well as naming of the clusters.

Some of the specific changes included:

- Combining “Practical” and “Flexibility” into “Practicability-Flexibility.”
 - Moving “Conservation” into “Environmental Benefit.”
 - Placing “Legal Administrable” into the parking lot.¹
 - Moving “Regulation” into “Administrable.”
 - Changing “Economic Viability” to “Economic Market Viability.”
 - Naming the cards under the “+” symbol “Clear and Understandable.”

A discussion point was raised about whether the flow management capacity of LID BMPs would be quantifiable and, therefore, could be used to achieve peak flow attenuation requirements. A card was added under the topic of “administrable”:

- Quantifiable-measurable for other permit requirements that might duplicate.

During this session, a point was raised that some of cards and clusters were more closely related to implementation than the actual workshop question of “what are features of good LID policy?” Jim offered to the group that one solution would be to change the workshop

¹ The “parking lot” refers to holding further discussion for now in order to continue forward on other issues in the workshop. Some discussion occurred over the issue of whether or not DEP has legal authority to require LID. DEP has established this authority and intends to document it. DEP intends to document their legal authority. The topic of “administrable” was retained in place of “Legal Administrable.”

question to include implementation. Ultimately, the group decided to leave the workshop question, cards, and clusters without change.

Results of the card storming exercise are shown in Photograph 2 and type written in Attachment 2. Six named clustered resulted:

- Economic Market Viability
- Clear and Understandable
- Practicable Flexibility
- Administrable
- Education
- Environmental Benefit



Photograph 2—Complete results of card storming conducted during May 26 and July 1 workshops.

STORMWATER UTILITY DISTRICTS

Jim gave a PowerPoint presentation regarding the potential role of stormwater utility districts in the implementation of LID. The presentation is available on:

http://www.ct.gov/dep/cwp/view.asp?a=2719&q=459488&depNav_GID=1654

CAROUSEL WORKSHOP

Jim introduced the carousel workshop with a PowerPoint presentation, which included a brief discussion of five implementation alternatives. The presentation is available on:

http://www.ct.gov/dep/cwp/view.asp?a=2719&q=459488&depNav_GID=1654

This included the following:

- 12 minutes each participant lists 5 pros & 5 cons for each of the 5 alternatives and 3 alternatives that haven't been considered.
- Split up into 6 groups and pick a "reporter."
- 5 minutes at each station:
 - List 5 strengths, 5 weaknesses, 5 benefits, and 5 dangers of each of the 5 alternatives
 - At Station 6, list alternatives that haven't been recommended
- Repeat process at other 5 alternatives. You can star or emphasize items you see as critical.
- Reporter presents findings (2 minutes for each reporter) at your group's last alternative.

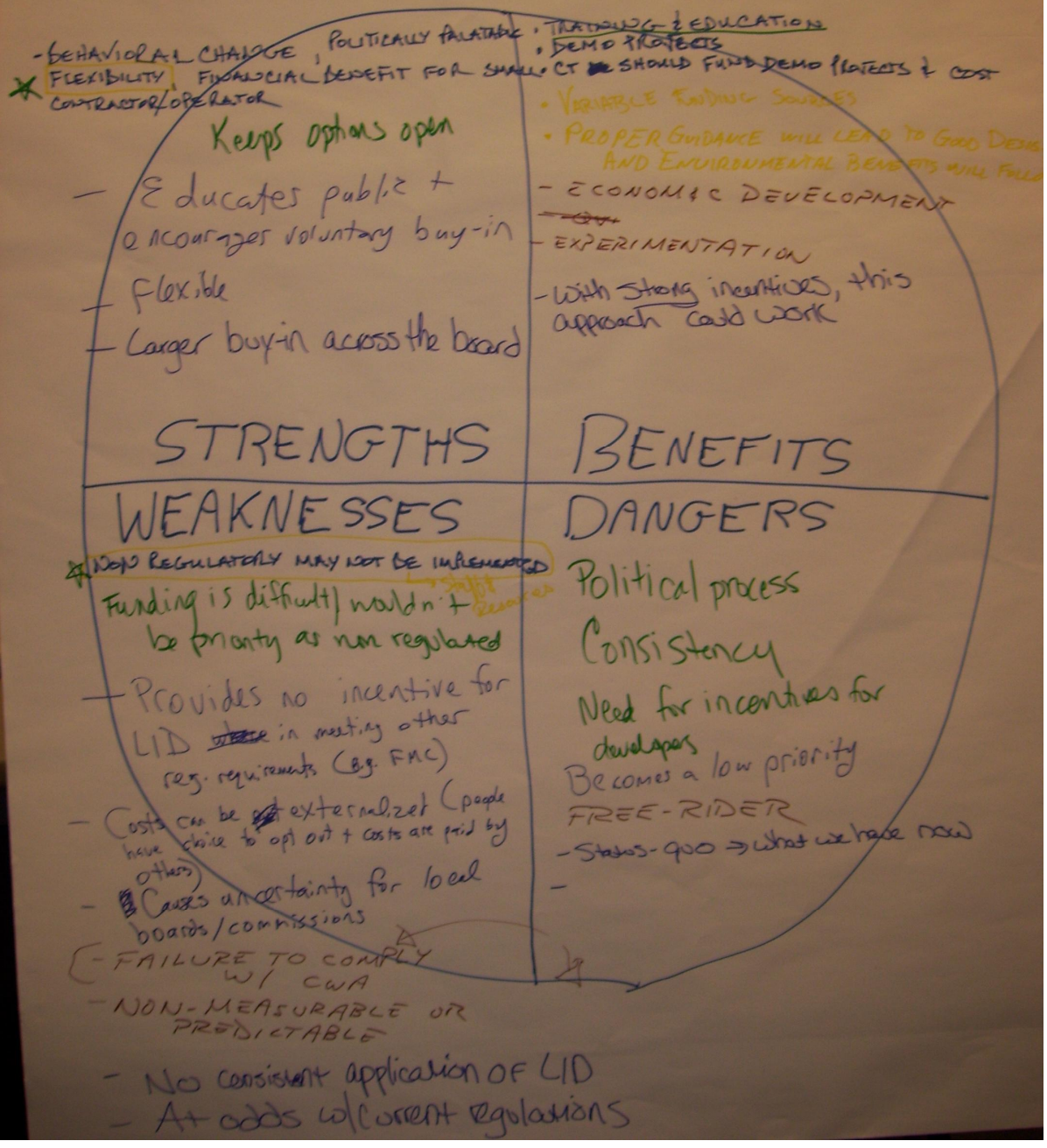


Photographs 3 - 6—Carousel workshop in process.

The results of the carousel workshop are shown in Photograph 2 and type written in Attachment 2.

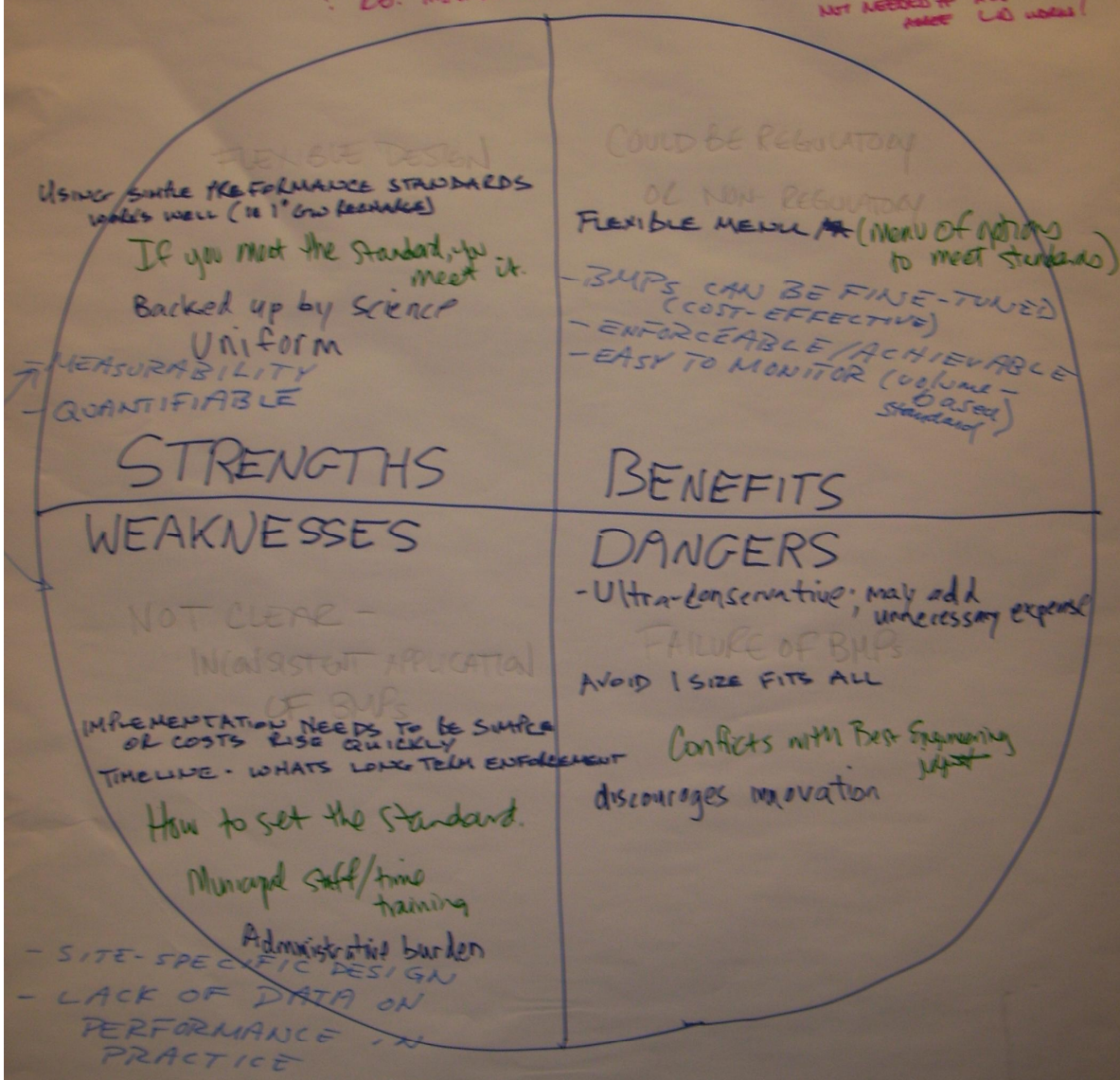


2 NON REGULATORY



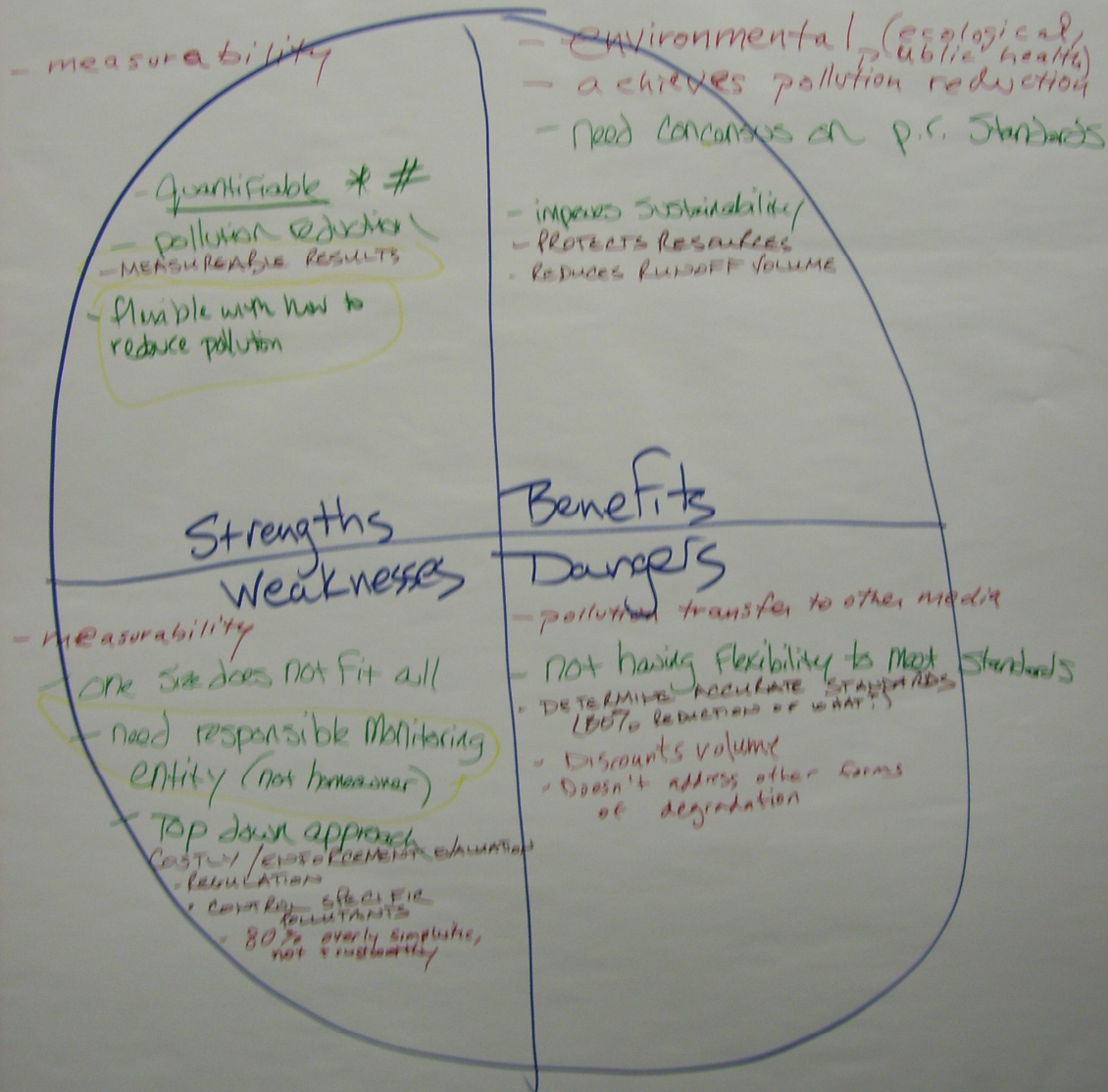
3) PERFORMANCE STANDARDS

? **CG: IMPORTANCE TO NEED FOR MEASUREMENT QUANTIFIABLE MEASURE**
 NOT NEEDED IF ALL MAKE L&S WORK!

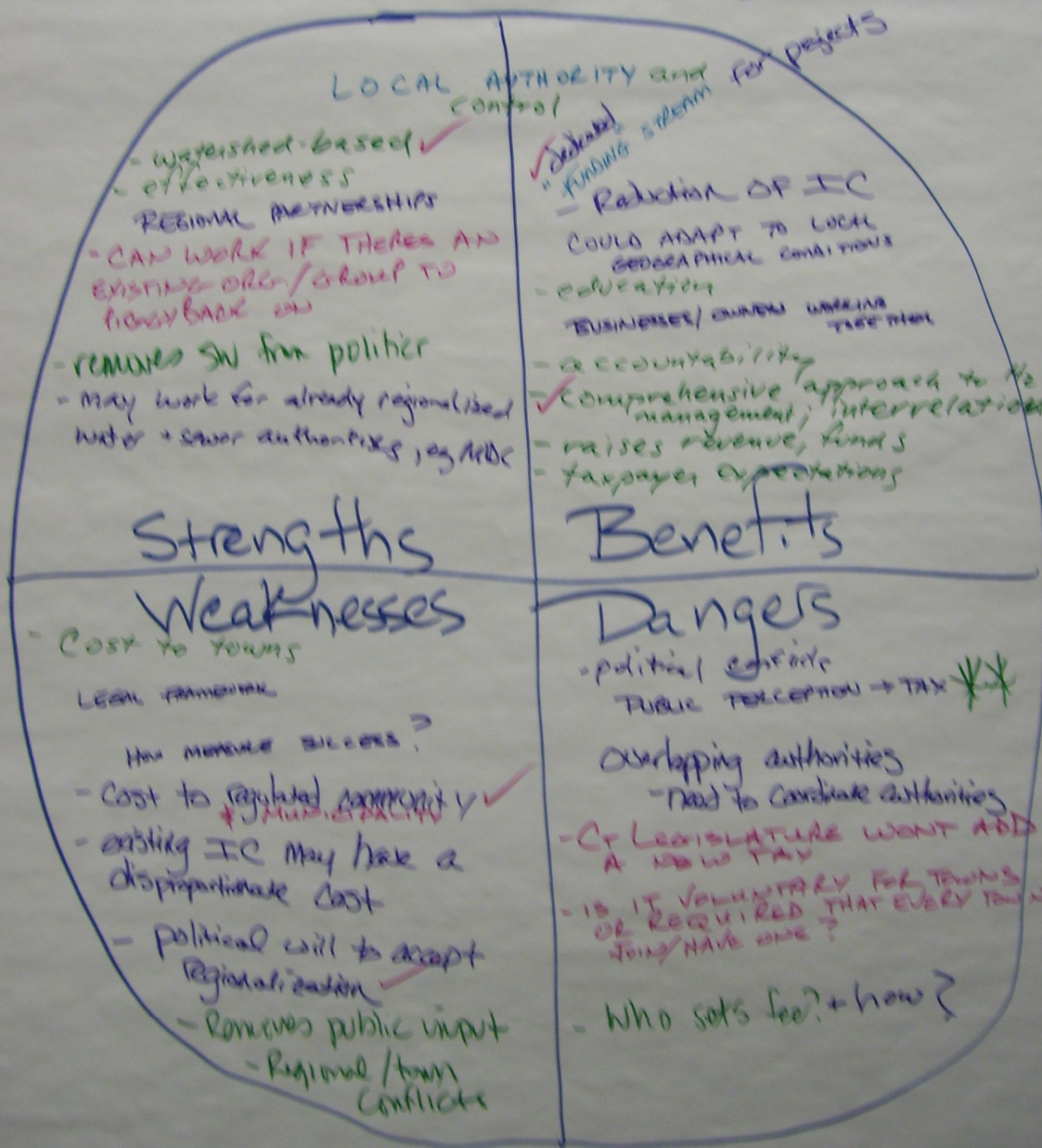


4

Pollution Reduction



Storm water Utilities



ADDITIONAL ALTERNATIVES

No idea

HYBRID OF "S" ALTERNATIVES -

CURRENT APPROACH DOES NOT TRANSLATE
TO ~~STATE~~ LOCAL LEVEL
(SIMILAR TO HOW WETLANDS)

BOTTOM UP - DRIVEN BY TOWN

- COMPLIANCE w/ H₂O-QUALITY STANDARDS
- PUBLIC PARTICIPATION
- MANDATING RETROFITS
- EDUCATIONAL COMPONENT / PROGRAM
 - (officials, public)
- OTHER NON-STRUCTURAL CONTROLS
(eg, street sweeping)
- STRICTER ENFORCEMENT
- make all P+Z follow same rules for stormwater management
- IC cap and trade
- Incentivize water reuse (ie. on water bill)

NEXT STEPS

The next workshop will be held on August 31 in the Phoenix Auditorium from 9:15 to 11:45 a.m. This meeting will focus on alternatives for implementation. In preparation for the meeting Fuss & O'Neill will develop two technical memoranda regarding: (a) information gathered from partner interviews and other states; (b) the role of stormwater utilities. Fuss & O'Neill will also develop a summary document of alternatives for LID implementation and criteria for selection based on workshops 1 and 2.

ATTENDEES

Attendees of the July 1 workshop are listed below in alphabetical order by affiliation.

Attendee	Affiliation
Eric Brown	CBIA
Virginia Mason	Council of Governments Central Naugatuck Valley
Jim Langlois	Connecticut Concrete
Matthew Hallssey	Connecticut Construction Industries
Jessica Morgan	Connecticut Department of Environmental Protection
Mary-Beth Hart	Connecticut Department of Environmental Protection OLISP
Chris Malik	Connecticut Department of Environmental Protection/NPS Program
MaryAnn Nusom Haverstock	Connecticut Department of Environmental Protection/NPS Program
Chris Stone	Connecticut Department of Environmental Protection- Water Permitting
Nisha Patel	Connecticut Department of Environmental Protection- Water Permitting
Eric McPhee	Connecticut Department of Public Health
Paul Corrente	Connecticut Department of Transportation—Environmental Planning
Roger Reynolds	Connecticut Fund for the Environment
John Carrier	Connecticut Home Builders
Mike Girard	Connecticut Home Builders
Darin Overton	Connecticut Home Builders

Bruce Wittchen	Connecticut Office of Policy and Management
Judy Rondeau	ECCD
Johanna Hunter	EPA Region 1
Jim Riordan	Fuss & O'Neill
Phil Moreschi	Fuss & O'Neill
Bill Ethier	Home Builders Association of Connecticut
Terrance Gallagher	Luchs
Greg Sharp	Murtha Cullina, LLP
John Hudak	Regional Water Authority
Kenneth Wieland	Rivers Alliance
Michael Dietz	University of Connecticut—Nonpoint Education for Municipal Officials


ATTACHMENT 1
RESULTS OF CARD STORMING FROM JULY 1, 2010 (WORKSHOP 2)


Card Storming Question:
What are the features of good LID policy?


Objective Card Storming Aim:
Identify criteria [for determining alternatives]


Experiential Card Storming Aim:
Identify similarities [in participants ideas of good LID policy]

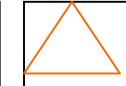
-  **Economic Market Viability**
- Cost effective options, not regulations
 - Enough incentive to achieve success
 - Recognize market demands for different development types (LID may not be for all)
 - Funding for implementation
 - Market/demand sensitivity
 - Effectiveness can be verified and maintenance is not cost prohibitive

-  **Education**
- Education component
 - Knowledgeable design engineers training, train
 - Use good science and knowledgeable people to make decisions
 - Public acceptance—meaning willingness to act a local/residential scale
 - Greatest behavior change Promote policies (regulatory and/or voluntary) that result in greatest behavior change

-  **Clear and Understandable**
- Clarity
 - Uniform statewide (standardized)
 - Make any guidance and/or standards simple. Make process certain.
 - LID policy at the local level to adopt, enforce, implement

-  **Practicability-Flexibility**
- Practical to implement and maintain
 - Not burdensome to individuals, easy to comply with
 - Maintenance required
 - Flexible
 - Consider site constraints
 - Consider project type
 - Flexible
 - Room for innovation
 - Performance based (about objective, not technique)
 - Bottom-up site specific approach, not top down.

-  **Legal Administrable**
- Easy to administer
 - Aligning municipal zoning subdivision regulations (with LID)
 - Encouragement TPZ, cons[ervation] subdivision regulations
 - Available support structure mechanism for contractors/homeowners implementing LID
 - Compatible with other regulations and goals that are necessary i.e., ADA, mosquito control, public safety, public health
 - Legal
 - Oversight from local and state agencies
 - Enforceability
 - Treats stormwater runoff with the same strict criteria that are required of on-site septic systems
 - Quantifiable-measurable for other permit requirements that might duplicate
 - Should be expected and standard operating procedure not as the exception

-  **Environmental Benefit**
- Manages soil erosion
 - Reduction of impervious materials
 - Remediates already built areas
 - Promotes GW recharge
 - Water quality & water quantity (groundwater (in-stream recharge) flow techniques)
 - Reduces runoff
 - Minimize impervious cover
 - Fix impairment
 - Resource based design (e.g., soils)
 - Allow soil microorganisms to work
 - Shift focus from engineering to conservation

Low Impact Development and Stormwater General Permit Evaluation

1. REGULATORY

STRENGTHS	BENEFITS
<ul style="list-style-type: none"> •Experience •No free-rider/fairness •Effectiveness •People know clarity/uniformity (consistent standard) [Fix what you have] •Helps municipalities to justify requiring LID •Mandatory 	<ul style="list-style-type: none"> •Invest in LID where you get the most benefit to fix the biggest problem •Ensure most LID use •Quantifiable (e.g., drainage calculations, apply to flood management) •Avoids externalizing costs •Public health – flood mitigation •Accountability •Transparency •Quick goal attainment •It will get LID implemented
WEAKNESSES	DANGERS
<ul style="list-style-type: none"> •Lack of experience •Flexibility for industry/towns •Problems for implementation at existing facilities (Retrofitting Qs) •Enforcement (staff) is a weakness •Difficult to be uniform – urban, suburban •How ensure compliance at local level? •Mandatory •Bureaucracy/cost •Not market viable 	<ul style="list-style-type: none"> •State/municipal conflict ✓ •Municipal ability to implement/knowledge •If permit – applicant knowledge •Carved into marble •Hard to modify if flaws identified •Limited enforcement •If not enough flexibility, will get resistance ✓ •Not applicable on every site

2. NON REGULATORY

STRENGTHS	BENEFITS
<ul style="list-style-type: none"> •Behavioral change •Politically palatable •Flexibility, Financial Benefit for small contractor/operator •Keeps options open •Educates public and encourages voluntary buy-in •Flexible •Larger buy-in across the board 	<ul style="list-style-type: none"> •Training and education •Demo projects •CT should fund demo projects and cost •Variable funding sources •Proper guidance will lead to good design and environmental benefits will follow •Economic development •Experimentation •With strong incentives, this approach could work
WEAKNESSES	DANGERS
<ul style="list-style-type: none"> •Non regulatory may not be implemented (Staff and resources) •Funding is difficult/wouldn't be priority as non regulated •Provides no incentive for LID in meeting other regulatory requirements (e.g., FMC) •Costs can be externalized (people have choice to opt out and costs are paid by others) •Causes uncertainty for local boards/commissions •Failure to comply with CWA •Non-measurable or predictable •No consistent application of LID •At odds with current regulations 	<ul style="list-style-type: none"> •Political process •Consistency •Need for incentives for developers •Becomes a low priority •Free-rider •Status quo – what we have now •Failure to comply

3. PERFORMANCE STANDARDS

STRENGTHS	BENEFITS
<ul style="list-style-type: none"> •Flexible design •Using simple performance standards works well (i.e., 1" GW recharge) •If you met the standard, you meet it •Backed up by science •Uniform •Measurability •Quantifiable 	<ul style="list-style-type: none"> •Could be regulatory or non-regulatory •Flexible menu ** (menu of options to meet standards) •BMPs can be fine-tuned (cost-effective) •Enforceable/achievable •Easy to monitor (volume-based standard)
WEAKNESSES	DANGERS
<ul style="list-style-type: none"> •Not clear - Inconsistent application of BMPs •Implementation needs to be simple or costs rise quickly •Timeline – What's long term enforcement •How to set the standard •Municipal staff/time training •Administrative burden •Site-specific design •Lack of data on performance in practice •Measurability 	<ul style="list-style-type: none"> •Ultra-conservative; may add unnecessary expense •Failure of BMPs •Avoid one size fits all •Conflicts with best engineering judgment •Discourages innovation

4. POLLUTION REDUCTION

STRENGTHS	BENEFITS
<ul style="list-style-type: none"> •Measurability •Quantifiable *# •Pollution reduction •Measureable results •Flexible with how to reduce pollution 	<ul style="list-style-type: none"> •Environmental (ecological/public health) •Achieves pollution reduction •Need consensus on p.r. [pollution reduction] standards •Improves sustainability •Protects resources •Reduces runoff volume
WEAKNESSES	DANGERS
<ul style="list-style-type: none"> •Measurability •One size does not fit all •Need responsible monitoring entity (not homeowner) •Top down approach •Costly/enforcement evaluation – regulation •Control specific pollutants •80% overly simplistic, not trustworthy 	<ul style="list-style-type: none"> •Pollution transfer to other media •Not having flexibility to meet standards •Determine accurate standards (80% reduction of what?) •Discounts volume •Doesn't address other forms of degradation

5. STORMWATER UTILITIES

STRENGTHS	BENEFITS
<ul style="list-style-type: none"> •Watershed based ✓ •Effectiveness •Regional partnerships •Can work if there's an existing organization/group to piggyback on •Removes stormwater from politics •May work for already regionalized water and sewer authorities , e.g., MDC 	<ul style="list-style-type: none"> •Dedicated "funding" stream for projects •Reduction of IC [impervious cover] •Could adapt to local geographical conditions •Education •Businesses/owners working together •Accountability •Comprehensive approach to water management; interrelationship •Raises revue, funds •Taxpayer expectations
WEAKNESSES	DANGERS
<ul style="list-style-type: none"> •Cost to towns •Legal framework •How measure success? •Cost to regulated community ✓ and municipality •Existing IC may have a disproportionate cost •Political will to accept regionalization ✓ •Removes public input •Regional/town conflicts 	<ul style="list-style-type: none"> •Political conflicts •Public perception – tax** •Overlapping authorities – Need to coordinate authorities •CT legislature won't add a new tax •Is it voluntary for towns or required that every town join/have one? •Who sets fee and how?

6. ADDITIONAL ALTERNATIVES

<ul style="list-style-type: none"> •Hybrid of "5" alternatives – current approach does not translate to local level (similar to how wetlands) Bottom up- driven by town. •Compliance with water quality standards •Public participation •Mandating retrofits •Educational component/program (officials, public) •Other non-structural controls (e.g., street sweeping) •Stricter enforcement •Make all P+Z [planning and zoning] follow same rules for stormwater management •IC [impervious cover] cap and trade •Incentivize water reuse (i.e., on water bill)
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