

**Quicksilver Caucus (QSC) Action Plan
with Implementation Strategy
for June 2010 through Sept. 2012**

Goal: State, Federal, and International Actions Result in Net Mercury Reductions to the Environment

FIFTH and FINAL VERSION SUBMITTED – Nov. 15, 2011

(Revised to reflect changes in work deliverables due to changes in the budget and other circumstances)

I. State Actions Make A Difference

Guiding Principles

- Preventing environmental degradation and protecting public health are the basis for state action.
- Eliminating mercury contamination in one medium should not result in significant contamination in other media.
- Reducing emissions within a state can set an example and serve as a model for other states and jurisdictions; such actions can reduce trans-boundary transport.
- Working collaboratively and in partnership promotes trust and investments that yield environmental results.
- Eliminating unnecessary uses of mercury where environmentally preferable alternatives exist and safely recycling or sequestering waste mercury provide the basis of state action on mercury-added products.

Framework for State Action Is in Place

- Nine (9) ECOS resolutions provide policy guidance (list appended).
- QSC publications on product stewardship and best management practices provide policy and technical guidance.
- An increasing body of state statutes and regulations and their supporting documents provides a robust technical, policy and regulatory framework and guidance for mercury reduction.
- US EPA's 2008 Elements of Mercury TMDLs Where Mercury Loadings Are Predominantly from Air Deposition provides policy and technical guidance for development of TMDLs.
- The information and principles embodied within US EPA's 2006 Roadmap for Mercury inform QSC—US EPA collaborations.
- States are co-regulators with US EPA. States implement federal-to-state delegated air and water mercury programs.

Key Quicksilver Caucus Actions

Actions and Activities	Key Tasks (What and How)	Participants (Who)	Target Date (When)
A. Strengthen and Support State Capacity to Reduce and Manage Mercury in the Environment			
1. Reassess Status of State Mercury Activities	Update the QSC 2005 Compendium of State Mercury Activities. Gather new state	QSC Members and Staff	March 2012

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	contacts information and supplement with updated programs information contained in the April 2008 ECOS Green Report on State Actions for Managing Mercury in the Environment. Publish on the QSC webpage.		
<p>2. Product Stewardship (with Focus on Dental Amalgam, Thermostats, and Lights)</p> <p>Further work in these areas may be limited because a lower amount of grant funds were awarded than were originally requested. This resulted in a reduction in the amount of funded staff hours available to coordinate work in this area.</p>	<p>a. Continue to implement the recommendations contained in the QSC 2006 Mercury-Added Product White Paper with a focus on thermostats; dental amalgam; and mercury-added lights.</p> <p>b. Facilitate implementation of multi-state approaches.</p> <p>c. Work to develop national mercury reduction programs for products and expand state efforts for these by leveraging existing efforts as appropriate based on stakeholder input and lessons learned from the National Vehicle Mercury Switch Recovery Program (NVMSRP). If necessary, evaluate the efficacy of voluntary vis-à-vis mandatory programs to inform QSC's position.</p> <p>d. Address mercury-added lights, including compact fluorescent lights (CFLs); thermostats and dental amalgam.</p> <p>i. Investigate possible strategies for reducing these sources of mercury.</p> <p>ii. Implement peer-to-peer knowledge transfer on state programs.</p> <p>iii. Work with stakeholders to improve collection and recycling.</p> <p>iv. Continue to work with US EPA and states to address CFL labeling and breakage (and related risk communication issues). This</p>	QSC Members and Staff (Projects to Be Spearheaded by Various QSC Work Group Chairs/ Leaders)	Ongoing

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	<p>includes investigating efficacy and safety concerns regarding the use of drum-top crushers (DTCs).</p> <p>e. Address other products as appropriate, including industrial switches, button cell batteries, thermometers and sphygmomanometers. Investigate more comprehensive approaches for preventing Hg release from end-of-life products and newly-patented products.</p>		
<p>3. Peer-to-Peer Knowledge Transfer</p> <p>Further work in these areas may be limited because a lower amount of grant funds were awarded than were originally requested. This resulted in a reduction in the amount of funded staff hours available to coordinate work in this area.</p> <p>Travel funds for trainings and symposia were eliminated due to lower budgets.</p>	<p>a. A webinar will be held to highlight state thermostat recycling programs and legislation.</p> <p>b. Continue to collect and share information on state programs and policies regarding thermostats, lights and switches.</p> <p>c. Develop technical information materials as needed (approx. one topic per year) (eg., best practices, case studies on successes and lessons learned, fact sheets, brochures, etc)</p> <p>d. Hold technical webinars as needed (approx. one topic per year). A webinar on state TMDL development/ implementation will be held.</p> <p>e. Share news and information via e-mail, newsletters and the QSC website.</p>	QSC Members and Staff	<p>a. Feb. 2012</p> <p>b. Ongoing</p> <p>c. As needed</p> <p>d. June 2012</p> <p>e. Coordinated by QSC staff as necessary</p>
4. Mercury Switches in Vehicles	<p>a. Work with US EPA to continue the National Vehicle Mercury Switch Recovery Program (NVMSRP). Continue periodic conference calls with implementation steering committee.</p> <p>b. Continue to implement state responsibilities for NVMSRP.</p> <p>c. Continue working with implementation</p>	QSC Members and Staff (and QSC Consultant)	As appropriate as determined in consultation with US EPA

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	steering committee to develop measures of program progress in meeting goals. d. Continue to participate in program evaluation and communication of program results. e. Provide state input to US EPA regarding the observed efficacy of the Electric Arc Furnace Rule and how vehicle switch collection might be improved nationwide.		
5. Assess State Product Stewardship and Pollution Prevention Efforts, As Well As Use of Life Cycle Analysis	Summarize information on state experiences in these areas including information on the effectiveness of various programs. Sectors may include: auto switches; dental amalgam; thermostats; lights and thermometers. Incorporate newly collected information into the Compendium update.	QSC Members and Staff	As needed
6. Secure Guest Speakers from US EPA Headquarters and Regional Offices – and From Other Federal Agencies – to Share Information Related to Mercury Programming During QSC Conference Calls.	a. Get US EPA regional speakers to comment on what mercury monitoring is being undertaken in their jurisdictions. b. Other topics as necessary.	QSC Staff in Consultation with Members and Federal Officials	As needed
B. Continue to Foster Safe Long-term Management of Elemental Mercury			
1. Coordinate Effective State Participation in the Implementation of the Federal Mercury Export Ban Act and its Safe Storage Provisions.	Work collaboratively with the appropriate federal agencies (including US EPA and US DOE) to communicate state issues and positions and assist in effective and safe implementation of the Act. Achieve information-sharing between state and federal agencies.	QSC Members and Staff	On-going
C. Educate and Engage Key Public and Private Sector Leaders			
Educate and Engage State and Federal and International Environmental Policy Leaders, State	a. Provide updates at appropriate venues. b. Develop fact sheets/ distribute relevant news via e-mail, as necessary.	QSC Leaders, Members and Staff, and ECOS	a-d. On-going as Appropriate e-g. On-going as

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<p>and Federal Legislators, NGOs and Private Industry</p> <p>Engagement with NGOs will be curtailed due to lower budgets.</p> <p>The level of QSC engagement with each of the EPA offices will be commensurate with the level of funding each provided to support the cooperative agreement.</p> <p>Sharing of state mercury efforts to an international audience will be limited to the potential trip to China OITA is working to organize. QSC members' travel to other international conferences will NOT be subsidized with funds from this grant due to lower budgets.</p>	<ul style="list-style-type: none"> c. Send letters. d. Engage members via monthly QSC conference calls. e. Engage US EPA via quarterly QSC-US EPA Mercury Leadership Teams meetings. f. Continue to work with US EPA and the states to decrease use of mercury-containing thermometers in labs. Begin work with US EPA to engage private industry to encourage phase out of use of mercury-containing thermometers (such as those used for measuring oil tank temperatures). g. Continue to engage thermostat manufacturers with US EPA in order to increase pollution prevention. h. Continue to educate state and local policy officials regarding best management practices for amalgam. i. Share information on state mercury efforts at international conferences. j. Continue to work with US EPA's designated liaison to QSC to facilitate QSC-US EPA collaborations/ activities/ quarterly conference calls. 	<p>Officers, Members, and Staff, as Appropriate, in Consultation with US EPA, the U.S. State Department, and Other Federal Agencies as Appropriate</p>	<ul style="list-style-type: none"> Appropriate in Consultation with US EPA h. On-going as Appropriate i. Annually j. As needed
D. Position QSC to Implement Action Plan (and to Update the Action Plan in the Future as Appropriate)			
<p>1. Continue State Leadership Commitment</p>	<ul style="list-style-type: none"> a. QSC leaders seek endorsement by respective member associations for QSC plans, policies and programs. b. QSC members identify actions to be taken to support and enhance QSC plans, policies and programs. 	<p>QSC Leaders and Staff</p>	<p>On-going as Appropriate</p>
<p>2. Continue QSC Outreach</p>	<p>Focus outreach on key actions and activities. Evaluate outreach approaches</p>	<p>QSC Members and Staff</p>	<p>On-going as Appropriate</p>

Actions and Activities	Key Tasks (What and How)	Participants (Who)	Target Date (When)
	for their effectiveness if necessary.		
3. Organize QSC Members	a. Foster existing work groups, and form additional work groups as necessary to serve as research and implementation teams for various QSC initiatives. b. Provide logistics support for QSC teams.	QSC Members and Staff	On-going
4. Develop and Obtain Funding for QSC 2012-14 Action Plan	a. Develop new grant proposal and Action Plan update for submission to US EPA.	QSC Leaders, Members and Staff	a. Jan. 2012

II. Implementing US EPA's Roadmap for Mercury

Guiding Principles

- Interim storage and long-term management of elemental mercury (eg. in public stockpiles and from closures and collections) is a federal responsibility.
- US EPA's Roadmap for Mercury informs the framework for state-federal collaboration.
- US EPA, in consultation with the states, develops a comprehensive national implementation plan for their Mercury Roadmap in order to facilitate effective actions.
- Mercury in the environment is a global issue and requires United States leadership in developing reduction strategies.
- The U.S. federal government should lead by example.
- State environmental agencies act as co-regulators with US EPA.
- State policy and technical leaders add significant value to the mercury reduction effort and should be consulted in developing national and international policy and programs.
- The states stand ready to assist US EPA and the U.S. State Department to develop and implement comprehensive approaches for reducing mercury in the environment.

Key Elements of a Federal Framework

- US EPA Roadmap for Mercury, including:
 - Regulatory actions, policies and programs for managing air, water, and land releases.
 - Product stewardship programs.
 - Managing commodity grade mercury, including development of interim solutions for storing and managing federal and private mercury stockpiles.
 - Risk communication.
 - International sources.
 - Research and development programs.
- US DOD's interim solution for storing and managing its mercury stockpile.
- The Mercury Export Ban Act of 2008 and the resultant designation of US DOE as the lead agency for identifying and implementing safe storage solutions for mercury stockpiles in concert with US EPA and state permitting authorities.

Key Quicksilver Caucus Actions

Actions and Activities	Key Tasks (What and How)	Participants (Who)	Target Date (When)
A. Continue to Support National Leadership Approaches to Reduce and Safely Manage Mercury in the Environment			
1. Continue to Support Safe Long-Term Storage of US DOD and US DOE Mercury Stockpiles per Export Ban Act of 2008	Monitor US DOE actions for implementing the Mercury Export Ban Act of 2008. Consult with US DOE and US EPA regarding RCRA permitting options/ location siting of mercury storage facilities.	QSC Members and Staff	On-going as Appropriate
2. Assess and outline emerging	A report outlining the difficulties resulting	QSC Members and Staff	July 2012

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issues.	from mercury being added to new products (such as wheel weights, nanomaterials, and emerging technologies) will be written.		
B. Implement Roadmap Through QSC-US EPA Partnership			
1. Support Development of Detailed Implementation Plan	<ul style="list-style-type: none"> a. Form QSC team to work with US EPA. b. Continue to develop key contacts with US EPA Roadmap leaders. c. Engage with US EPA during quarterly conference calls or hold a fly-in summit to review US EPA's Mercury Roadmap and determine whether the document needs to be updated. Review the document's goals and relevance. Work with US EPA to develop and implement comprehensive approaches for reducing mercury in the environment. Work with US EPA to pursue any remaining or newly determined shared goals as may be appropriate. Assist in facilitation of any state-federal cross-media initiatives. 	QSC Members and Staff	<ul style="list-style-type: none"> a. Ongoing b. Ongoing c. June 2010 as Appropriate in Consultation with US EPA
2. Enhance States Engagement in Development of Federal Rules, Regulations, Policy, Guidance, and Programs to Reduce Mercury Releases <ul style="list-style-type: none"> a. Air Releases (from source categories such as electric utilities; medical, municipal, and sewage sludge incinerators; cement plants; electric arc furnaces; and iron and steel foundries and mills) b. Water Releases and Impairment of Waters and Fish 	<ul style="list-style-type: none"> a. Air Releases <ul style="list-style-type: none"> i. Continue to participate in NACAA, NPPR and ECOS policy position development and dialogue with US EPA. ii. Collaborate with NACAA to facilitate information-sharing and collaboration across states. Provide information to US EPA regarding development of state implementation plans (SIPs) as able. iii. Engage US EPA in periodic meetings as appropriate to advise on development/ amendment of air rules. b. Water Releases <ul style="list-style-type: none"> i. Participate in policy position development with ACWA, ASDWA, NPPR, ASTSWMO and ECOS regarding 	QSC Members and Staff	Ongoing with Some Specific Issues and Dates Determined In Concert with US EPA

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<p>c. Land Impairments d. Toxic Release Inventory (TRI)</p> <p>The level of QSC engagement with EPA offices will be commensurate with the levels of funding each contributed to support the cooperative agreement.</p> <p>QSC review of air, water, and product stewardship-related rules (and submission of support letters for such efforts) will also be commensurate with the level of support received from corresponding EPA offices.</p> <p>A paper will be written investigating ways to improve the process for states to provide input on developing EPA rulemakings in the air, water, and waste arenas—target date Sept 2012. This paper will chronicle past state involvement in EPA rulemakings and lay out successes and areas where improvement might be possible.</p>	<p>water and waste issues and undertake information/ technology-transfer opportunities.</p> <p>ii. Coordinate with US EPA on developing and implementing federal programs that assist in achieving Clean Water Act goals.</p> <p>iii. Emphasis should be placed on achieving Clean Water Act goals through development of TMDLs and/or watershed plans and implementing programs that are aimed at achieving loading goals and targets that have been identified by states. Areas of focus should include:</p> <ol style="list-style-type: none"> 1. Utilizing federal Clean Air Act programs, such as an appropriate mercury rule that is designed to reduce atmospheric deposition of mercury to levels where fish consumption advisories can be eliminated. 2. Examining how existing stormwater controls and TMDL implementation plans are addressing stormwater contributions of mercury to surface water systems and sediments. 3. Development of federal regulations pertaining to appropriate mixing zones that prevent accumulation above water quality standards in sediments and address bioavailability of contaminated sediment from mixing disturbance. This may include 		

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	<p>further restrictions on polluted discharges from activities such as silviculture and agriculture to reduce increased bioavailability of mercury.</p> <p>4. Periodically review best available data to follow status of fish tissue loadings.</p> <p>5. Identify other sources of contributions to air/water pollution such as sewage sludge incinerators, medical and municipal waste combustors, etc, and develop/ evaluate control methods for these sources as appropriate.</p> <p>c. Land</p> <p>i. Continue to participate in ASTSWMO, ACWA, NACAA, ASDWA, NPPR and ECOS policy position development and dialogue with US EPA as relates to impairment of lands by mercury deposition, product breakage, mining, etc.</p> <p>ii. Support US EPA's development of specific approaches to address mining.</p> <p>d. TRI</p> <p>i. Advocate for emissions reporting to be as detailed as is economical and necessary for ensuring achievement of protection goals and for revealing ground truth to inform any re-evaluation of program protectiveness.</p>		
3. Sustain State Momentum in Reducing Hg in Products and Processes By Encouraging US EPA to Collaborate With the	a. Continue to consult with US EPA regarding how to implement the recommendations in the 2006 QSC Mercury-Added Product White Paper.	QSC Members and Staff	Ongoing

Actions and Activities	Key Tasks (What and How)	Participants (Who)	Target Date (When)
States in Developing National Approaches	<ul style="list-style-type: none"> b. Facilitate implementation of multi-state approaches and work with US EPA to develop new strategies for dental amalgam and thermostats. Develop national mercury reduction programs for these sources based on stakeholder input, and applying lessons learned from the NVMSRP. c. Engage with US EPA to provide input on any federal efforts to reduce/ ban mercury in products through ChAMP, TSCA 5(a)(2), TSCA 6(a) or other means. 		
<p>4. Inform U.S. Positions and Enhance Federal Resources to Promote Reduction of Mercury in the International Arena</p> <p>Member travel to meet with the U.S. State Department and EPA regarding UNEP treaty and partnership efforts has been eliminated due to lower budgets. But travel funding to support the State Resources Network for a possible trip to China organized by EPA/OITA remains available in the budget.</p>	<ul style="list-style-type: none"> a. Support U.S. positions by providing early and on-going consultation and advice to US EPA and the U.S. State Department. b. Engage with US EPA and the U.S. State Department to provide input regarding development of the international treaty on mercury. c. Participate with US EPA in UNEP mercury program implementation, including partnership areas. d. Maintain and enhance network of state official mercury experts (the "State Resources Network") as consultants available to aid the U.S. government, UNEP, and foreign governments as is determined to be appropriate based on consultation with US EPA and/ or the U.S. State Department. 	QSC Members and Staff (Spearheaded by the QSC International Work Group)	Ongoing with Some Issues and Dates Determined in Consultation with US EPA and Other Agencies
5. Foster the Development of a National and International Framework that Ensures Current and Potentially Growing Supplies of Commodity Grade Mercury Are Used For "Essential" Uses Only	<ul style="list-style-type: none"> a. Partner with US EPA to have a national forum that engages interested parties in dialogue. b. Partner with US EPA to create U.S. markets that reduce use of products containing mercury. c. Encourage tracking of international trade, 	QSC Members and Staff	a-e. Ongoing with Specific Issues and Dates Determined In Consultation with US EPA

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Work in this area will be limited due to lower budgets.	<p>use, recovery and disposal of mercury (as part of treaty development).</p> <p>d. Encourage development of international policies and techniques for long-term storage.</p> <p>e. Continue to share information between US EPA and the states regarding development/ use of mercury-free alternative devices.</p> <p>f. A paper will be written investigating ways to improve the process for states to provide input on developing EPA rulemakings in the air, water, and waste arenas. This paper will chronicle past state involvement in EPA rulemakings, and lay out successes and areas where improvement might be possible.</p>		and Other Agencies f. Sept. 2012
6. Support Increased Resources for Existing US EPA Research and Monitoring to Improve Data and Information	<p>a. Provide input to US EPA regarding how research programs might be improved.</p> <p>b. Encourage US EPA to evaluate new treatment technologies and discuss findings with QSC and others.</p> <p>c. Encourage expansion of the mercury deposition monitoring network.</p> <p>d. Work with US EPA to support USGS monitoring and reporting of commodity mercury.</p>	QSC Members and Staff	Ongoing with Specific Issues and Dates Determined in Consultation with US EPA
7. Participate in Budget Discussions Regarding National Mercury Programs Implementable by the States	Participate in budget discussions with US EPA regarding federal-to-state delegated programs (such as Clean Air Act Section 105 and Clean Water Act Section 106) and other mercury-related programming, including any new state-implementable mercury programs that US EPA might initiate or expand (such as any possible expansion of the national mercury monitoring network, for example).	QSC Members and Staff in Consultation with Member Associations	As Appropriate in Consultation with US EPA

APPENDIX

FIGURE – List of ECOS Mercury Resolutions*

Resolution #	Title	Date	Expiration
11-4	On Chemicals Prioritization and the Safer Chemistry Challenge Program	Sept. 26, 2011	Sept. 26, 2014
11-3	Urging Creation of a Dental Amalgam Separator National Review Committee	Sept. 26, 2011	Sept. 26, 2014
08-5	Beyond EPA's Clean Air Mercury Rule	March 29, 2011	March 29, 2014
10-9	Review and Reconsideration of Endorsement of the National Vehicle Mercury Switch Recovery Program Memorandum of Understanding (MOU)	Aug. 30, 2010	Aug. 30, 2013
10-2	Comprehensive National Mercury Monitoring	March 24, 2010	March 24, 2013
07-1	Implementing a National Vision for Mercury	March 24, 2010	March 24, 2013
03-7	The Need for a National Mercury Reduction Implementation Strategy and Global Actions to Further Progress on Atmospheric Mercury Total Maximum Daily Loads (TMDLs)	Sept. 22, 2009	Sept. 22, 2012
06-7	Endorsement of the National Mercury Switch Recovery Program Memorandum of Agreement that Reduces Mercury in the Environment and Provides Flexibility to the States	March 23, 2009	March 23, 2012
09-2	Mercury Reduction, Stewardship, and Retirement	March 23, 2009	March 23, 2012

*The full texts of ECOS policy resolutions are available at: <http://www.ecos.org/section/policy/resolution>