Introduction

In recognition of the 20th anniversary of the Environmental Justice Executive Order, EPA Region 9 organized a "Teach-In" on March 6, 2014. Over 150 participants representing non profits, community organizations, academia, state and local government and the EPA Region 9 workforce provided input on three key themes: Sustainable Development and EJ; EJ and the Law; and Tools and Task Forces. Notes were taken by volunteers at each small group discussion table, compiled verbatim by EPA and reviewed for accuracy by all participants. Attribution was not captured unless a commenter included attribution in their edit.

The notes below do not necessarily reflect the views of US EPA.

1) What makes this issue compelling; why should we focus on this issue?

- Ability to collect data.
- Greater community involvement.
- Community empowerment, probably not done enough currently.
- Task forces – (1) performance measures (to influence data); HS working so far – time to get it right; is it leading to better enforcement.
- Challenge – data needs to be of sufficient quality in order to be used in regulatory areas.
- Problem solver can identify the trends and understand common problems.
- Ground truth other source of pollution, how can the community/task force feed into updating with correct data.
- Data quality issue – useful data vs. data that meets regulatory requirements.
- How good does it have to be to trigger an investigation? Might have to be a facility of concern.
- Cesar gave overview of the IVAN run penalties.
- EPA support for the networks.
- Good discussion.
- Margaret discussed her Oakland "backpack air monitoring" project (real time monitoring) and truck stop monitoring.
- Donated monitoring equipment, continuous finding on cases.
- Continuous training sessions for new people who wish to learn more.
- Sonan-Sharp Paul: BAAQMD working on first outreach project for agency.
- Kate: Mentioned difficulty for EPA to truly represent a given community, so stressed the need to reach out (she works on drinking water research).
- Manny was in a monitoring group for ARB.
- Cheaper technologies don't generate easier to use, quality data.
- Anecdotal information is valuable but not useful for regulatory actions.
- Questions to be answered by the collected data have to be very specific.
- Work with clinics to do monitoring of black carbon from trucks; helps people educate people about sources.

- Meaningful participation, community members involved in sampling or monitoring conditions or sharing information with agencies. More trust in community data.
- Important for agencies and communities to find methods and approaches to share information to bridge differences in approaches e.g. rural and cultural differences.
- Hawaiian fish ponds – environmental monitoring of non-point source pollution.
- Great way to educate people, especially youth (high risk and troubled kids learn well in this setting.
- Focus on kids, they bring the parents along.
- Citizens are the monitors of their community.
- Nonprofits can work with communities to educate on: terms and concepts of pollution; monitoring methods.
- It comes down to political will and science should not be the enemy of communities.
- Communities can have serious challenges in getting regulatory agencies and industry to pay attention to them.
- Science can in fact harm communities if no sign of pollutant is found but long-term chronic effects are seen. So how to have scientific defensible position and not disempower communities?
- Helps improve communities by communities and decision makers.
- Compelling for youth to raise eco-literacy.
- Bucket Brigades, use as indicator of where to go out.
- How to get issues addressed in complicated bureaucratic environment and get issues before agencies; see what communities are seeking.
- Need communication mechanism with agencies.
- Citizens want a voice but don't know where to put it or how to reach agencies.
- Small grants – the money is lovely but more – the connections, the technical assistance, the ways we leverage that small point of entry into so much more!
- Community expertise costs – and funding that supports those opportunities is so useful.
- Citizen based-monitoring is needed because of a failure of government monitoring.
- Air pollution/other pollution still a big issue.
- Refineries in Contra Costa County.
- Need for more monitoring.
- Ground-truthing.
- Get academics involved and interested in research.
- Tools get better with community input.
- More people on the ground than resources the government can provide.
- IVAN: enforcement focus, open source software; Government (DTSC in Imperial County) and community chair group.
- Expand eyes and ears in the community.
- Expand the involvement of people in everyday life connecting them to environmental issues.
- Takes out the smokescreen and extra steps
- Puts power (general information and real time data) in hands.
- Let committees define their baseline.
- Making sure that some data is scientifically sound, i.e. collecting the most important data.
- Science in community hands.

- Community people that learn the scientific skills may not be used in the community.
- We are all part of the public and this community.
- Can make a difference in the way things are (buffer zones for schools).
- How to bridge the gap between community and government?
- Beneficial to talk directly to people in the community rather than just partner with local regulatory agency.
- Government to government consultation may not represent the actions.
- Scholastic view that encompasses history and culture that only community members know.
- It is a myth that community based organizations are not "capable" of conducting scientific research.
- Specialists cannot be everywhere, must rely on community monitoring.
- Issues: getting equipment approved / vetted by EPA is painfully slow, but some communities have state of the art equipment.
- How can we get resources to pay a community monitor for each refinery?
- What are the differences between what hand-held monitors test for and much more expensive monitors that oil companies use?
- Have one EPA grants ombudsman that can help communities figure out what EPA resources they can access.
- Task forces.
- Citizen monitoring – example: Contra Costa County (Pittsburg). There is a crude-by-rail project and the only air monitoring station is 25 miles away. There was an agreed monitoring location that was resolved without consent of community so the only air monitoring is by the citizen group. No cumulative effect data; should be fence line monitoring conducted by citizens, not industry.
- Monitoring is good, but need education, training O&M of equipment. Maybe agencies and municipalities should be responsible. Data gives support for advocacy.
- Also important to show trends; technology evolved so that citizens can monitor effectively.
- Effective monitoring needs to be regular and consistent; but agencies should be responsible.
- BAAQMD has mobile units, but not used regularly.
- South Coast tends to be more responsible.
- In Drinking Water programs, city monitoring is one of the only ways for EPA to engage with communities directly. Also, data collected can be used to engage EPA.
- Local regulation/policies supersede federal/state.
- Educate local decision makers that federal/state laws may be addressing environmental issues.
- Agrees with Henry Clark regarding good local organizations but no funding; needs grants to incentivize organizing local groups, even small grants.
- Tasks forces can be useful if meaningful so time spent is useful and focused. Example of EJ resolution where a task force used tasked to implement EJ goals.
- EPA should consider targeting local organizers/decision makers for support/education.
- If EPA became federal lead for EJ and developed policies, outreach to local level, especially smaller communities, could be useful.
- Task Forces could be codified commissions rather than ad hoc groups.
- Commissions need a board representation.

- EPA typically has policies that are not best, in general, created in vacuum. Local organizations can provide good examples/templates to EPA and disseminate.
- EPA has a good public participation document that she shares with other parties; might be a good place to start to ID who worked on it.
- Sometimes monitoring can fill in the gaps in our knowledge (non-fancy like truck counts).
- Don't need more monitoring to tell us that it's bad to live near roadways, but data could still help with advocacy.
- Citizen monitoring is good at organizing people.
- Can be unfair to ask poorer people to do the adequate science, when it's government's job.
- See community-board monitoring as a little bit of a trap.
- When data is taken, there has to be more than just putting data on the web - need explanation, communication, education, engagement.
- Pending – lot of time on engagement is just as important as taking the data.
- Scoping of the problem and analysis is critical (looking at the wrong thing is dangerous).
- Hard to figure out how to get science to inform decision-making.
- Empowerment to individuals and groups – get the information they want; maybe allow/support getting issues addressed.
- Data will help identify problems that may have been missed or misunderstood.
- Females may not want to talk to males regarding health issues.
- Agency refusal to accept anecdotal information from communities is a problem.
- Recognize community has other obligations, e.g. family.
- People don't know what threatens them – lack of science knowledge – no resources – susceptible communities.
- Need money which communities don't have, e.g. review of one technical document could cost $50K.
- Problems with lack of local information regarding shifting problems; left out of "EIR" by local entity.
- Need to "translate" technical data into understandable language, concepts, etc., which local communities can understand.
- Regulators need people skills and communication ability.
- Timing of meetings, lack of basic accommodations – water.
- Need to allow time for local community members to speak, not just "technical experts".

2.   What are we (collectively) doing well in regard to this issue; what can we do better?

- There have been successes in water and air.
- Need to better integrate public's work into policy and decision making or else there is no point to their work. EPA can provide better guidance as well.
- Greater demonstration of impacts is needed with health and the environment.
- How can EPA support the network and task forces?
- CDPH can offer knowledge because work with data has helped to build capacity.
- EPA should inform citizens in the step-by-step process on how the enforcement decision happens.

- Keeping the momentum and get the right people at the table.
- EPA should have a MOU (or something); you must attend the meetings (tell the agencies they need to attend).
- Collecting data where the people are as well (not just at the facility), e.g. in the home.
- Understand trends and use the data.
- There is an EPA agency site that describes how agency interact on permits (Manny has citation).
- Teach In would be suggestion to do this better.
- Do better: how can we better inform communities of opportunities for public hearing and comment? (Question: Is a hearing required? Is this mandatory for any permit or only if a certain threshold is reached of comment?)
- Do better: Proactive outreach on calendar of upcoming permits or significant actions and how public can engage.
- Do better: A similar Teach In targeting "Next Generation" EPA staff versus all senior level employees e.g. mandatory for all new hires (within last 3 years?).
- Crowd sourcing - local community can download an application and either may serve an environmental violation, or it can be reported via phone; an opportunity to get feedback e.g. bio monitoring program feedback.
- What EPA can do with all the community-based monitoring – put examples in the EPA website so groups can see the different projects, tools, skills.
- Desire to commit an "Environmental /Quality of life" index, but cannot fit into regulatory framework (does not hold up well in cost/effect approach).
- Ongoing efforts in Hawaii of monitoring urban fish pond/stream ecosystem as it is impacted by urbanization and non-point source pollution, and incorporating this into a useable program for school children.
- LA has a new "Toxic Threat Strike Team" proposed (public health, fire department, etc.) today in the news, if RWQB, DTSC fail to act, then locals want to take it on.
- Local level lead for EJ, e.g. LA and Bay Area take this on but Central Valley local governments don't.
- What can we do better? There is a gap between agencies and community; a bucket brigade can bridge the gap.
- Educating community about terms and concepts is happening (PMIO, etc.).
- Different AQ control districts give different levels of respect to citizen monitoring (i.e. San Joaquin Valley).
- Task Force: relationships between regulatory agencies and as well as communities.
- What to do with citizen based science?
- Make sure that we recognize when issues arise so that everyone is educated (agencies and communities) regarding what role we all can play.
- More active participation (border) agencies.
- Task forces can be successful if the focus is narrow and the timeline is short (ancillary benefit, relationship building). But they consume resources for communities and groups. And community members' participation can be overshadowed by industrial contributors.
- Use community monitoring to identify where problems are, know to prioritize urgency. The data may be inconsistent but it tells you where to focus.

- Where we engage community members in local monitoring people become invested in the results and are taking action.
- KEEN/LACEEN: heard good things. The staff from agencies engaged have to be people who have the authority to act.
- On getting input – we (agencies) need to think about what information we need and the best way to get that information.
- Community based groups.
- Do better: Get the word out more
- Technology isn't easy enough to use or need for capacity building.
- Make the "IVAN" model statewide/bigger than the county level.
- Marketing.
- Engage at the right level with citizens.
- Incorporate community monitoring.
- Good: "Problem solver" in the task force; Bilingual in "IVAN"
- Task force at the county level is right size to engage the appropriate regulator.
- Issues: Funding needed to help keep up with technology.
- Need a person in government committed to help be the problem solver/co-chair for follow-up (e.g. DTSC, Water board. Local problem solvers (county) may be harder to find or more vulnerable to political concerns locally.
- Problem-solver is concern or not necessarily the person who lives or addresses all the problems.
- Could develop software for a base system for other communities to use at approximately 10K for base systems, but need community leadership to be successful!
- "Problem-solver" was incentive to increase relationships.
- Some communities that are opposing fracking have expressed interest.
- Collaborate more with community groups.
- Community Global Monitor, Bucket Brigade; provide more sources.
- BIA clinics; do they collect asthma data?
- Doing well: Documenting community issues?
- Communities partnering with organizations that have scientific staff.
- Rental of scientific equipment
- Educate people at a young age
- Forums to use information collected by community monitoring
- Transparent reporting of environmental complaints
- Go directly to communities – consider cultural concerns of rural areas.
- Help them to be part of solution with more guides.
- We are getting CBOs to go in this area.
- Partners help with state, federal agencies.
- Monitoring sampling
- Communities are beginning to take control of collecting their own data and using it to strengthen their cases. EPA could help support this work.
- How can we use the successes that exist to replicate those actions to the communities struggling against polluters and abusing use of monitoring and data?

- (Agencies) are seeing the problem wrong – not about effect of nitrates on particular crops, but about farm workers.
- We sometimes collect data, but don't spend the time working with people to understand it.
- Community-based science is a way to bring people together to tell a story, and facilitates better engagement and commutation with all parties.
- Workers at the source have to be considered part of the "citizens" in this citizen-based science.
- Sometimes there is bias in who is taking the sample, so the answers can be intentionally misleading.
- Frustration and lot of money being put into community-based monitoring but not funding adequate instrumentation to either define pollutants or give enough information to support regulatory action.
- Our science on public health exposure is really in the dark ages.
- Small grants are available (?) (from DTSC?) to support non-regulatory monitoring.
- It would help to have students and faculty to help with QA/QC. Maybe fund these folks? Or organize as non-profit. Data quality documentation important.
- Need grants to be more formalized.
- Allow community input into data collection, etc. sampling protocols.
- Need to bring in more than science to the equation.
- Need to build capacity.
- Have agency/community meetings regularly – small is better.
- Don't educate community members (don't use "jargon" without explanation).
- Regulators need to think about what they're saying; "would you spend your Saturday listening to this?"
- Need to meet community needs (food, day care).
- Need to understand EJ.

3. What specifically can EPA do in this area within the next two years?

1. **AGENCY MONITORING AND REPORTING SYSTEMS**
   1.1. Government needs to do better job on fence line monitoring.
   1.2. Government should do more monitoring.
   1.3. Monitoring with more integrity.
   1.4. Double check the monitors that refineries use.
   1.5. What will be done if monitors show problems – have environmental results based on monitoring.
   1.6. Get small monitoring platforms throughout EJ area.
   1.7. Push for data quality reviews even of places under other jurisdictions.
   1.8. Can all of the different agencies consolidate reporting systems?
   1.9. Consolidated environmental reporting systems statewide.
   1.10. Streamline all reporting and complaint systems.
   1.11. Transparent reporting of environmental complaints.

2. **FUNDING AND GRANTS**

2.1.   Funding!
2.2.   More community monitoring funding.
2.3.   More continuous funding for community-based efforts.
2.4.   More funding for public based science/monitoring/reporting.
2.5.   EPA can provide funding.
2.6.   More funding for citizen based monitoring.
2.7.   Facilitate providing grants that meet community needs.
2.8.   Use a percentage of funds to support citizen monitoring (like DTSC, Board SEPs).
2.9.   Allow more time between grant RFP and application deadline.
2.10. How to get grants for monitoring?
2.11. Can we direct state money to fund community monitoring that could ground both state programs/data/findings and to fill in gaps in the state inventory where EJ communities are interpreted?
2.12. Build on successes of projects to fund other projects to do similar work.
2.13. Help fund those projects/networks.
2.14. Issue with money (from enforcement) not going back to community when damage was done.
2.15. Target SEP settlement funds to community monitor groups.
2.16. Change/re-examine SEP policy: (1) to facilitate above type of settlement; (2) to increase "corporate death" Death penalty – three strikes you're out!
2.17. Expand TASC [technical assistance support for communities] to other discussions.

3. **USING COMMUNITY COLLECTED DATA**
3.1.   Expand information considered for decisions such as public comments on permits; new technologies and tools.
3.2.   EPA can use [community-collected data] as supplemental data to guide their monitoring; would need to build in QA/QC checks/protocols.
3.3.   Could improve and inform our permit-writing if we used the community based science data in the permitting process.
3.4.   Take advantage of task forces to facilitate understanding of the bi-national issues and share information with both sides on all different government levels.
3.5.   Fill in data gaps, specifically in drinking water data; citizens can ground truth or supplement monitoring, especially in impacted Commerce.
3.6.   Make sure we are tracking/communicating results of task forces.
3.7.   What's the next phase of CalEnviroScreen? Ground truth or monitor as part of that effort.
3.8.   App-based tools for data-collection; could be student project; could be done by NGO.
3.9.   If we put ??? into the IVAN model, do the agencies have true resources to follow up?

4. **TWO WAY COMMUNICATION RE DATA (EPA AND COMMUNITIES)**
4.1.   Need people in EPA that care about community.
4.2.   More collaboration between technical staff and communities to develop "soft" skills.
4.3.   Researchers and data- crunchers need to have compassion and understand where EJ communities are coming from.

4.4. EPA can review community-collected data and help them find data problems.
4.5. Help data collectors correctly define their questions, and help them analyze and interpret data correctly.
4.6. EPA can advise on where monitoring/science could help decision-making; can help figure out what questions need to be asked.
4.7. Technical assistance on analysis of data – what does it mean?
4.8. What information do institutions have that is not relayed to communities? Need better links to environmental factors and diseases.
4.9. Look at better ways to collect information and ideas from the public.
4.10. Hold another teach-in to describe how all agencies feed into the permit process (who has jurisdiction, how does each agency connect to the permit, authorities).
4.11. Find ways to work together and support community based monitoring, discuss methodologies and be open to using data in different ways.
4.12. Different levels of threshold for actions – discuss it up front. Be open to what the data might mean and how it can be used.
4.13. Experiment with community based participatory research projects that are framed from a precautionary, rather than a risk-based, regulatory point of view.
4.14. Why is it the case that the (draft) technical guidance for analysis of EJ in rulemaking cannot or will not be used at the regional level?
4.15. Have a "who's on first" website to show who has which piece of permitting process on any issue (i.e., truck idling).
4.16. Work with communities to figure out how to get credibility for air monitoring by citizens.
4.17. Expand partnerships to work with US EPA specialists to serve as liaisons, advisory to communities.
4.18. Liaison from each community to EPA.
4.19. Role of EPA - convener.
4.20. Need forums to use the information collected by community monitoring.
4.21. Dialogue between EPA and Industry workgroup?
4.22. Better understanding of pollution distribution and health impacts.
4.23. Tools to better educate people such as planning officials.
4.24. Review Indigenous Peoples workgroup's advice to EPA and staff.
4.25. Reach out to EJ database in Indigenous People's workgroup report.

5. **BE VOCAL IN SUPPORT FOR COMMUNITY DRIVEN EFFORTS**
   5.1. Vocal EPA support for community work.
   5.2. EPA could help share success stories on where this has worked.
   5.3. EPA could acknowledge good citizen monitoring and validate the work with state or local districts to get them to work with citizen science.
   5.4. EPA needs to find a way to get the Air district to work with the community.
   5.5. Talk to SJV Air District about why they don't participate at the county level in FERN.
   5.6. Encourage local agencies to embrace these approaches.

6. **SUPPORT COMMUNITY BASED DATA PROJECTS**
    6.1.   Support an EJ task force for local governments.
    6.2.   IVAN should be expanded and made accessible to other states like Arizona where the state and local government officials don't seem to care about what the community cares about.
    6.3.   Local website to report issues in community.
    6.4.   EPA should bring in consultants to help communities support science-based community effort; only hire EJ-literate consultants.
    6.5.   EPA can provide epidemiologist, geologists, etc.
    6.6.   Consider power dynamics and how science, education, access to monitoring are getting validated.
    6.7.   Help with assembling third party technical assistance to small communities for SRF applications.
    6.8.   Host a web site? Get a NGO to do this; include education, check lists.
    6.9.   Cell phone photos in documentation in app? GPS information, too, plus commentary check lists.
    6.10.   Need a clearinghouse to report issues.
    6.11.   Cal EPA can make the FERN model statewide; can EPA ask?

7. **DATA COLLECTION PROTOCOLS, QA/QC**
    7.1.   EPA should standardize/develop QA/QC on citizen-data collection practices so data is usable.
    7.2.   There are rules for sample protocols and chain of command.
    7.3.   EPA can help define SEPs/QAPPs – make it easier to rely on data.
    7.4.   Involve community in sampling design and protocol development.

    COMMENT: EPA Region 9 wrote a letter about Bucket Brigade Community Monitoring following the EMPACT project, but we have requested an updated review of our expanded toolkit of monitoring/protocols as we have addressed ALL previous and new issues from dealing with various delegated agencies/air districts. This should be done ASAP as the old letter is now seriously out of date! (Global Community Monitor, Denny Larson).

8. **TRAINING**
    8.1.   EPA can help educate communities, can help evaluate data.
    8.2.   EPA can provide training.
    8.3.   Training for agency people to understand their inherent biases, learn skills to communicate scientific principles.
    8.4.   EPA can provide training to communities.
    8.5.   Educate.
    8.6.   Need an educational/outreach effort so citizens know how to use these tools.
    8.7.   We need basic primers for communities on what these laws processes are and how to engage. If there are toolkits we can't easily find them!
    8.8.   How can we educate communities of what is illegal activity that needs to be reported?
    8.9.   Education about what a violation is to improve program/system.

8.10.   Educate people at a young age/all ages on science.

9. **LENDING LIBRARY/WAREHOUSE**
    9.1.   Monitoring loaning network.
    9.2.   Do better – rental of scientific equipment.
    9.3.   Help with technology gap.
    9.4.   COMMENT: EPA Lending library for community groups to borrow water/air/soil testing equipment.

10. **LEVERAGING ACADEMIA**
    11. Need more academic partners – communities should help ID issues.
    12. Can we leverage academia to collect and analyze information?

    13. COMMENT: We asked EPA specifically to adopt a set of principles drafted by community/EJ groups who have been actively engaged in environmental monitoring for more than a decade. Before we can proceed with anything - we need a set of principles that guide ALL that follows. (Denny Larson)

    Here are the principles for EPA consideration and formal adoption in policy:

    Principles of Community - EPA/Delegated Agencies Air monitoring and Cooperation
    1. Monitoring programs should be transparent, verifiable and participatory for all stakeholders.
    2. Impacted communities and their experts have the right to fully and equally participate in the monitoring of their communities, including hands on community monitoring, design of monitoring plans, choice of equipment and all aspects.
    3. The purpose of monitoring programs should be to investigate and verify the experience of the community being impacted and should assist in identifying opportunities for pollution reductions and prevention. This is consistent with the mission of the EPA and all environmental agencies.
    4. Monitoring programs should incorporate the experience of the community in the design and implementation of such programs.
    5. All data and information, including raw data, generated by monitoring programs should be made equally available to all stakeholders as soon as possible.
    6. The EPA and delegated agencies must understand that they are not the sole entity that is qualified to interpret monitoring data and that qualified experts chosen by impacted communities can make valid interpretations of data. The EPA must recognize that the precautionary principle of reducing and eliminating potential exposures better protects communities who have not been effectively protected by the agency's policies and regulations.
    7. Plans and details for monitoring should be presented in writing to the community in advance of discussions in order to ensure accountability. Global Community Monitor and community partners.   denny@gcmonitor.org (Denny Larson)